

Assessing Labour Market Vulnerability among Young People

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Labour market performance in Pakistan has improved markedly in recent years. This paper examines the extent to which young people have benefited from this improvement, using the labour market vulnerability framework that was recently introduced by the ILO. This framework can be used to assess the difficulties young people face on the road to decent employment, and may also serve as a basis for the development of appropriate policies and interventions. Drawing on empirical evidence from various surveys, in particular the Labour Force Survey, we conclude that vulnerability among the youth has generally been reduced since 1999–2000. Vulnerability of women has been reduced through higher enrolment rates in education, and unemployment among both men and women has declined. Far less progress has been made in reducing vulnerability among the employed, and youth still face numerous obstacles that hamper the attainment of decent employment. The paper offers recommendations on the role of labour market information in reducing youth vulnerability.

JEL classification: J40, J13

Keyword: Labour Market; Youth; Pakistan

1. INTRODUCTION

Youth are an important segment of the population for various reasons. From an economic point of view, the youth represent a source of creativity, energy and talent which constitutes the basis for the future development of nations and countries. From a labour market point of view the youth can be expected to remain active for a long period, and returns on investment in education and training are therefore relatively high. However, given their limited labour market and economic experience, young people are also vulnerable, and lack of appropriate economic and social opportunities at a youthful age may comprise one's prospects over an entire lifespan. For these and other reasons many countries have special policies and programmes in place that target the youth. Recent publications and policy statements also point to the increasing international emphasis that is being placed on the creation of full and productive employment and decent work for youth.¹

In Pakistan, due to the progressing demographic transition (the change from a situation of high fertility and mortality to one of low fertility and mortality), the share of

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Authors' Note: The views expressed in this paper are the authors' only, and should not be attributed to any institution or organisation. We are grateful for the constructive comments provided by an anonymous referee. All remaining errors or omissions are the responsibility of the authors only.

¹See e.g., the *Ministerial Declaration of the high-level segment of the 2006 United Nations Economic and Social Council*, which states that '...We reaffirm our commitment to develop and implement strategies that give youth everywhere a real and equal opportunity to find full and productive employment and decent work. In this respect, noting that almost half of the unemployed people in the world are young people, we are determined to mainstream youth employment into national development strategies and agendas; ...'(ECOSOC, E/2006/L.8, paragraph 11; <http://www.un.org/docs/ecosoc/jump2ods.asp?symbol=E/2006/L.8>).

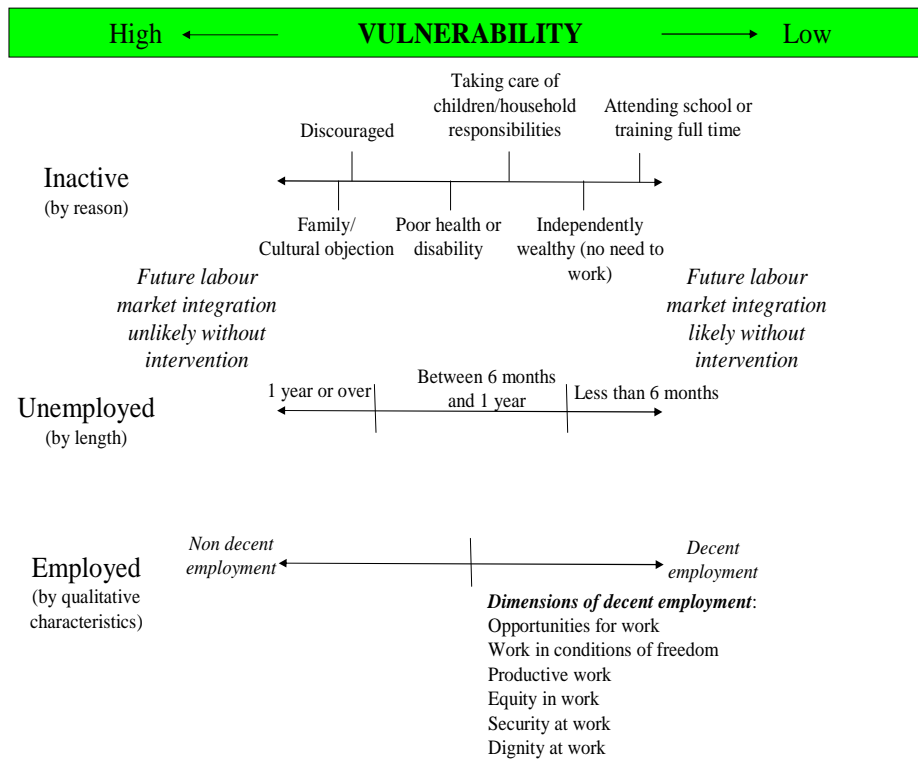
the population of non-working age is declining and the country has therefore entered the 'demographic bonus' phase. This means that the share of youth, like in most developing countries already a very significant part of the overall population, is increasing and is projected to reach its peak around 2010 [Arif and Chaudhry (2007)]. The extent to which this demographic bonus will be translated into an economic and labour market bonus depends on opportunities for youth to find productive employment and decent work. If such opportunities are not available, or not sufficiently available, the demographic bonus may become an economic and labour market burden.

This paper examines the opportunities for youth in securing decent employment using a framework for the assessment of labour market vulnerability that was recently introduced by the International Labour Organisation [ILO (2006), see Figure 1]. In this framework, a vulnerable youth can be defined as one whom, 'due to socioeconomic (and sometimes political) circumstances, is vulnerable to facing difficulties in the process of labour market integration or, if working, is vulnerable to working under inadequate conditions' [ILO (2006), p. 33]. This framework allows for an assessment of the youth labour market that goes beyond an exclusive focus on youth unemployment, and broadens the analysis to cover the spectrum of current inactivity/activity as well as the potential for future labour market integration.

Figure 1 classifies the youth into three groups: those not participating in the labour market (the economically inactive), the unemployed and the employed. For each group certain characteristics can be used to assess their vulnerability, namely the reason of inactivity, the length of the period of unemployment and the qualitative characteristics of employment, respectively. In the upper left corner are those youth who are highly vulnerable because they face barriers to labour market entry, for example cultural barriers, or have become discouraged in their search for labour market opportunities. In the lower right corner are those who are fully employed, and enjoy working conditions associated with decent employment. Following Anker, *et al.* (2003), the definition of decent employment includes the six dimensions as listed in the figure, which in turn can be translated into a set of statistical indicators.²

²Anker, *et al.* (2003) suggests eleven measurement categories which are linked to the six dimensions of decent work listed in Figure 1. The measurement categories, including some examples of indicators, are as follows:

1. Employment opportunities (e.g. labour force participation rate, unemployment rate, time-related underemployment rate).
2. Unacceptable work (e.g. children not in school by employment status, children in wage employment or self-employment activity rate).
3. Adequate earnings and productive work (e.g. inadequate pay rate, average earnings in selected occupations).
4. Decent hours (e.g. excessive hours of work).
5. Stability and security of work (e.g. tenure less than one year, temporary work).
6. Balancing work and family life (e.g. employment rate for women with children under compulsory school age).
7. Fair treatment in employment (e.g. occupational segregation by sex, female share of employment in managerial and high-level administrative occupations).
8. Safe work environment (e.g. fatal occupational injury rate, labour inspection).
9. Social protection (e.g. share of economically active population contributing to a pension fund).
10. Social dialogue and workplace relations (e.g. union density rate, collective wage bargaining coverage rate).
11. Economic and social context of decent work (e.g. education of adult population).

Fig. 1. Determining Vulnerability among Young People

Source: ILO (2006), Figure 4.4, p. 35 (adapted).

The plan of the paper is as follows. Section 2 reviews recent changes in the position of youth in the labour market in the light of overall labour market developments. Section 3 reviews a number of statistical indicators that can be used to assess youth vulnerability in accordance to the framework in Figure 1. Section 4 offers some explanations of youth labour market vulnerability. Section 5 concludes and suggests how youth vulnerability can be reduced in Pakistan, focusing on the role of labour market information.

2. LABOUR MARKET DEVELOPMENTS AND THE POSITION OF YOUTH

Economic growth has been robust in recent years, and the last four years witnessed economic growth rates above the average during the 1990s of 4.6 percent. After registering growth below four percent between 1999 and 2002, growth accelerated to 4.7 percent in 2002-03 and to more than six percent since 2003-04 [see Ministry of Finance (2006)]. In such a high growth environment labour market improvements can be expected as well. Based on labour force survey data, Table 1 underlines that this has indeed been the case for a number of labour market indicators. The upper panel in the table shows that for the population aged 15 and above the labour force participation rate increased by 2.6 percentage points, the employment-to-population rate by 2.9 percentage points and the

Table 1
Selected Labour Market Indicators (%)

Population Aged 15+	1999- 2000	2001- 2002	2003- 2004	2005- 2006	Change 1999- 2000 to 2005- 2006 (Percentage Point)
Labour Force Participation Rate					
Both Sexes	50.4	50.5	50.7	53.0	+2.6
Males	83.2	82.7	82.7	84.0	+0.8
Females	16.3	16.2	18.0	21.1	+4.8
Employment-to-population Rate					
Both Sexes	46.8	46.5	47.0	49.7	+2.9
Males	78.6	77.6	77.6	79.6	+1.0
Females	13.7	13.6	15.6	19.0	+5.3
Unemployment Rate					
Both Sexes	7.2	7.8	7.4	6.1	-1.1
Males	5.5	6.2	6.2	5.2	-0.3
Females	15.8	16.4	12.9	9.6	-6.2
Share of Employees in Total Employment					
Both Sexes	35.9	40.4	38.5	38.4	+2.5
Males	36.4	40.9	39.8	41.2	+4.8
Females	33.1	37.1	31.5	26.6	-6.5
Share of Family Workers in Total Employment					
Both Sexes	19.5	18.8	22.0	23.9	+4.3
Males	14.5	14.3	16.2	16.2	+1.7
Females	49.9	46.1	51.4	57.0	+7.1
Share of the Employed					
Working 50 hours or more					
Both Sexes	41.9	41.0	43.1	41.5	-0.4
Males	46.7	45.6	49.2	48.8	+2.1
Females	13.0	13.5	11.8	9.6	-3.3
Population Aged 15-24					
Labour Force Participation Rate					
Both Sexes	40.5	43.4	43.6	45.9	+5.4
Males	69.3	70.2	70.5	72.2	+2.9
Females	10.2	14.8	16.1	18.6	+8.4
Employment-to-population Rate					
Both Sexes	35.1	37.6	38.5	42.0	+6.8
Males	61.6	61.8	62.7	66.1	+4.5
Females	7.2	11.8	13.7	16.8	+9.6
Unemployment Rate					
Both Sexes	13.3	13.4	11.7	8.6	-4.7
Males	11.1	12.0	11.0	8.4	-2.7
Females	29.3	20.5	14.9	9.6	-19.7
Share of Employees in Total Employment					
Both Sexes	39.6	44.0	40.6	40.3	+0.7
Males	39.5	44.3	42.0	43.0	+3.5
Females	40.8	42.4	33.8	29.3	-11.5
Share of Family Workers in Total Employment					
Both Sexes	39.5	36.7	40.4	41.1	+1.6
Males	38.9	34.8	37.4	36.7	-2.2
Females	45.5	46.8	54.6	59.0	+13.6
Share of the Employed Working 50 hours or more					
Both Sexes	41.9	38.7	40.5	39.0	-2.9
Males	44.9	43.1	46.3	46.0	+1.1
Females	15.1	14.2	13.5	9.8	-5.3

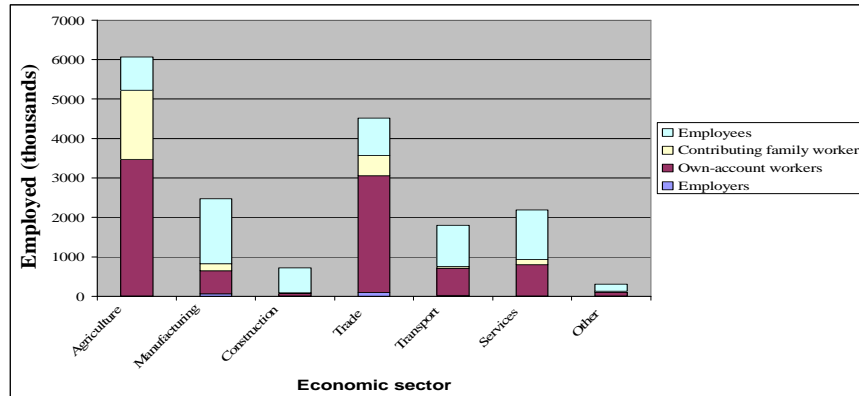
Source: FBS (Various Years) *Pakistan Labour Force Survey*.

unemployment rate decreased by 1.1 percentage points between 1999-00 and 2005-06. Most of the change in the value of these indicators occurred in the most recent survey year (2005-06). Women benefited in particular from the improvement in labour market conditions, with the female unemployment rate registering single digits for the first time in 2005-06. There are marked differences in the development of these three indicators if provincial and rural/urban breakdowns are taken into account, but labour force survey data suggest that the pattern of improvement since 1999-00, using these three indicators, mostly holds for Pakistan as a whole.³ Nationally, an average annual employment growth rate of more than four percent was achieved between 1999-00 and 2005-06, which exceeds the targeted growth rate of the Medium Term Development Framework for the second half of the present decade (projected at around three percent).

The three indicators speak to one dimension of decent employment in particular (employment opportunities, see Figure 1), and the labour market picture in recent years becomes less rosy if other dimensions are considered. Even though the share of the employment status group of wage and salaried employees increased by 2.5 percentage points, this share decreased by 6.5 percentage points for females (Table 1). Given that wage and salaried employees are often thought to be more likely to enjoy working conditions associated with decent employment than own account workers or unpaid family workers,⁴ this indicator suggests that the inflow of women in the labour market in numerical terms is not necessarily matched by a commensurate expansion in decent employment.

A clear indicator for the lack of decent employment for large groups of workers is the proportion of the employed working 'excessive' hours (following common practice defined in this paper as 50 hours or more per week). This proportion slightly decreased between 1999-00 and 2005-06, due to the inflow of female workers who are less likely to work excessive hours, but rose for males, who constitute the large majority of workers, to almost half of the employed (48.8 percent). Figure 2 shows that in terms of economic

Fig. 2. Employed Working Excessive Hours by Sector and Status, 2005-06



Source: FBS (2006) *Pakistan Labour Force Survey 2005-2006*.

³See Ministry of Labour, Manpower and Overseas Pakistanis (2007) as well as Arif and Chaudhry (2007) for more detailed accounts highlighting geographical and other variations in labour market developments in recent years.

⁴The fourth employment status group, employers, accounts for less than one percent of the employed.

sector the bulk of those working excessive hours are active in agriculture and trade. Together, these two sectors account for 10.6 million out of the 18.1 million employed who are working excessive hours in 2005-06. The largest single employment status group working excessive hours consists of own account workers, and this group makes up almost half of all the employed working excessive hours. Contributing family workers are concentrated in agriculture, while the manufacturing, trade, transport and services sectors have large concentrations of the status group employees working excessive hours (around one million workers or more), indicating that wage and salaried employment (or any other employment status group) should not be equalised with decent employment.

The very large proportion of the employed working excessive hours is closely related to the phenomenon of working poverty, low productivity and other conditions that characterise non-decent work in Pakistan. The very high employment growth rates in recent years suggest that improvements in productivity have been modest at best, and more or better investment is needed to balance future productivity growth and employment growth.⁵

The lower panel in Table 1 shows the same indicators for the youth, defined in line with a widely accepted statistical convention as the population aged 15-24. The youth constituted almost 36 percent of the population, and almost 31 percent of the labour force aged 15 and above in 2005-06 (up from less than 27 percent of the labour force at the beginning of the decade). The first three indicators in the table highlight that the youth contributed significantly to recent labour market developments, as changes in labour force participation rate, employment-to-population rate and unemployment rates for the youth exceeded the changes in these indicators for the overall population. In other words, in terms of overall employment and unemployment the position of 'adults' (aged 25 and over) and youth are converging since 1999-00.⁶

At the same time the observations made before regarding the attainment of decent employment in terms of other dimensions than employment opportunities can be reiterated for the youth. The share of the status group of wage and salaried employees in female employment decreased rapidly (by 11.5 percentage points between 1999-00 and 2005-06), and that of unpaid family workers increased by 13.6 percentage points to 59 percent of all female workers in 2005-06. The proportion of employed youth working excessive hours is very high, at comparable levels as employed workers of all ages, and only decreased because of the inflow of female workers. The proportion of male employed youth working excessive hours, the large majority of all workers, increased by around one percentage point between 1999-00 and 2005-06.

⁵Productivity growth in Pakistan has been modest since 1993 [see ILO (2005), pp. 50-51]. It was negative from 2000 to 2002, recovered since 2003 but has remained volatile [see ILO (2007), pp. 800-801]. Average annual productivity growth in Pakistan during 2000-2005 was 1.9 percent, which may be compared to India (4.9 percent) and Bangladesh (3.3 percent).

⁶Another way of looking at this convergence is to consider (1) the ratio of the youth unemployment rate to the adult unemployment rate; (2) youth unemployment as a proportion of total unemployment; and (3) youth unemployment as a proportion of the youth population. All three ratios show a downward trend since 1999-00.

3. YOUTH VULNERABILITY: AN EMPIRICAL ASSESSMENT

Despite the convergence in the labour market position of youth and adults in recent years, a number of characteristics of the youth warrant separate investigation. In particular, the labour force participation rate of youth is much lower than that of adults (Table 1), or, in other words, the inactivity rate (100 percent minus the labour force participation rate) is higher among youth. Possible reasons are reflected in the upper row in Figure 1. Among these reasons, attendance of school or training can be expected to prepare youth for future labour market integration without interventions (in the next section we will consider research that looks into the extent to which this is indeed the case). As shown in Table 2, if the youth population who are enrolled is taken out of the inactive population, a very low proportion of young men and a very high proportion of young women are found. Part of these women will be independently wealthy without the need to work, but a far greater part is inactive due to other reasons, such as taking care of family members or facing objections to labour force participation. This segment of the youth population is particularly vulnerable as they are not directly preparing for entry into the labour market and, in the absence of gaining labour market experience, are likely to have difficulties doing so at a later age.

If we add the *unemployed youth*, another vulnerable group, to the youth who are neither enrolled in education nor economically active, we arrive at the so-called NEET rate (neither in education nor employment), which is a broad measure of the untapped labour potential in the youth population. Although on a declining trend since 1999-2000, the NEET rate in Pakistan, around 36 percent in 2005-06, is very high in comparison with other regions, both at the low-end of the income per capita range, such as sub-Saharan Africa (27 percent), and at higher levels of income per capita such as Central and South America [21 percent, see ILO (2006)].⁷

Not all of the unemployed youth are seeking work, as some are not available for work due to illness or due to the fact that they will take up employment soon, among other reasons. The proportion of the unemployed youth not available for work due to illness was around 13.4 percent, and the proportion of youth seeking work 41.1 percent of the unemployed in 2005-2006 (Table 2). It is interesting to note that the latter proportion, though subject to large year-on-year variations, has decreased by almost ten percentage points since 1999-2000. This could be taken as a signal that the search for work is paying off better in improving labour market conditions, but given such labour market conditions the proportion may also be pushed upward if more people consider it worthwhile to search for work. The two opposing effects are probably responsible for the large year-on-year variations in the proportion of the unemployed seeking work, with the former effect dominating in the case of males (given the high male labour force participation rate) and the latter effect in the case of females (given the increase in female labour force participation in recent years).

The same observations can be made regarding the length of the search period in Table 2. The large year-on-year variations may be the result of downward effect on the search period due to improving labour market conditions as more unemployed find work.

⁷The female NEET rate in Pakistan would be reduced, because more women would be counted as employed, if the list of probing questions aiming 'to net-in marginal economic activities' in the labour force survey would be taken into account [FBS (2006), p. 7].

Table 2

Selected Youth Labour Market Vulnerability Indicators (%)

Population Aged 15+	1999- 2000	2001- 2002	2003- 2004	2005- 2006	Change 1999- 2000 to 2005- 2006 (Percentage Point)
<i>Economically Inactive</i>					
Share of youth who are neither in education nor economically active					
Both Sexes	36.5	34.9	33.9	32.3	-4.2
Males	2.8	2.8	3.2	3.2	+0.4
Females	71.9	69.3	65.2	62.5	-9.4
Share of youth who are neither in education nor employment (NEET)					
Both Sexes	41.9	40.7	39.0	36.3	-5.6
Males	10.5	11.2	11.0	9.3	-1.2
Females	74.9	72.3	67.6	64.3	-10.6
<i>Unemployed</i>					
Proportion of the unemployed not available for work due to illness					
Both Sexes	13.7	14.1	11.5	13.4	-0.3
Males	8.6	9.3	6.7	9.8	+1.2
Females	27.6	28.5	27.3	25.9	-1.7
Proportion of the unemployed seeking work					
Both Sexes	50.8	45.4	50.5	41.1	-9.7
Males	60.2	52.2	56.9	44.2	-16.0
Females	25.2	25.3	29.2	30.2	+5.0
Distribution of the unemployed seeking work by length of search period					
<i>1 year or over</i>					
Both Sexes	37.5	25.0	30.4	35.6	-1.9
Males	40.3	23.5	30.2	36.3	-4.0
Females	15.1	39.0	31.7	32.0	+16.9
<i>Between 6 months and 1 year</i>					
Both Sexes	16.1	14.4	16.8	16.8	+0.7
Males	13.5	13.9	15.6	16.4	+2.9
Females	36.3	19.2	25.7	18.5	-17.8
<i>Less than 6 months</i>					
Both Sexes	46.5	60.5	52.8	47.7	+1.2
Males	46.2	62.6	54.2	47.3	+1.1
Females	48.7	41.9	42.6	49.6	+0.9
<i>All Lengths</i>					
Both Sexes	100.0	100.0	100.0	100.0	
Males	100.0	100.0	100.0	100.0	
Females	100.0	100.0	100.0	100.0	
<i>Employed</i>					
Proportion with less than one year formal education					
Both Sexes	40.8	39.4	40.7	39.0	-1.8
Males	37.9	36.2	36.1	34.5	-3.4
Females	66.2	57.8	62.7	57.5	-8.7

Source: FBS (Various Years) Pakistan Labour Force Survey.

Favourable labour market conditions may however also encourage people to continue looking for work and remain 'unemployed' for longer periods as opposed to dropping out of the labour market altogether and joining the 'discouraged'.

A very rough pattern between 1999-2000 and 2005-2006 seems to be that around half of the unemployed seeking work have done so for less than six months, around one third for at least a year, and the remainder for between six months and one year. Among these three groups those that have been searching for work for more than a year are highly vulnerable, as they are more likely to become 'discouraged' and to be in need of interventions assisting them on the road to (decent) employment.

A comprehensive assessment of the extent to which the *employed youth* are vulnerable to working under inadequate conditions (the bottom row in Figure 1) would require information and analysis with regard to all six dimensions of decent employment.⁸ Even though such a comprehensive assessment is beyond the scope of this paper, the indicators discussed before point to the limited attainment of decent work conditions for large parts of the employed youth, in particular with respect to productive work. Low productivity work is also suggested by the educational attainment of the employed youth. The proportion of employed youth with less than one year of formal education is on a slightly decreasing trend, but was still 39.0 percent in 2005-2006 (Table 2). This also means that a large proportion of the youth is likely to encounter problems in terms of trainability and therefore is vulnerable in the sense of being unduly limited in their labour market options.⁹

Apart from the large proportion of employed youth working excessive hours, there is also a substantial proportion of the youth working part time. Shahnaz (2006) shows that part-time work varied between 6.6 and 11.4 percent of the youth labour force between 1990-91 and 2003-04, with a consistent gap between females and males of around 20 percentage points. However, using the strict ILO definition (working less than 35 hours (because of involuntary reasons), available for more work and seeking work)), she shows that the time-related underemployment rate remained below one percent of the youth labour force throughout the period. Adopting a broader definition of underemployment (youth working less than 35 hours and available for work) would raise this range to between 1.2 and 2.7 percent. Thus, the high proportion of females working part-time accentuates the gender gap in the labour market, but many females seem to prefer this situation above working full-time or are facing constraints in finding an appropriate balance between work and other responsibilities.

No comprehensive information is available with respect to work in conditions of freedom (e.g. forced labour), security at work and dignity at work from labour force surveys. With regard to security of work, it can be noted that the employment status group of wage and salaried employees is made up of sub-groups, including not only 'regular paid employee with fixed wage' but also 'casual paid employee' and 'paid worker by piece rate or work performed'. The latter two are unlikely to benefit from formal job security, and even in the case of regular paid employees, who account for 55 percent of all wage and salaried employees in 2005-2006, nothing is known about the existence or nature of an employment contract.

⁸ See footnote no. 5.

⁹ See ILO (1998, Chapter 3) on the positive interaction between education and training.

4. EXPLAINING YOUTH VULNERABILITY

There can be little doubt that explanations of youth vulnerability in Pakistan, especially the vulnerability of the female youth population, should start by considering the role of institutions in a broad sense (including formal rules and regulations, the institutions of governance but also social norms, customs, culture and so on). A careful examination of institutions could help explain the enormous gender gap in the share of youth who are neither in education nor economically active. Such an examination is beyond the scope of this paper, however, and we will focus on explanations of youth vulnerability at the level of measurable characteristics of the youth and their family background.

Khalid (2006) investigates enrolment in education, achievement in education as well as employment of teenagers (aged 13 to 19 years) using the 2005 Pakistan Social and Living Standards Measurement Survey (PSLM). He concludes that the number of siblings and the education of the mother are the best predictors of teenage enrolment and achievement in education as well as the probability of teenage employment. The number of siblings was negatively correlated with years of schooling, and also negatively affected the probability of enrolment in school and teenage employment, while it positively affected the probability of repetition and dropout. The education of the mother had positive effects on educational achievement and negatively affected the probability of teenage employment. Teenage income contributed significantly to the family income (averaging 22 percent, which rose with educational level).

The education of the mother is a well-known explanatory factor of educational attainment of children [e.g. Parker and Pederzini (2000); Patrinos and Psacharopoulos (1995)], which has also been found important in Pakistan before [Sathar and Lloyd (1994)]. Assuming that teenage labour market vulnerability is reduced with years of education, Khalid's findings support the case for more equity in education as this would not only benefit the education of females directly, but also benefit both young women and men through the intergenerational benefits of the mother's education at a later stage.

Is labour market vulnerability of youth in Pakistan indeed reduced through more education and training? The role of investment in education and training as a requirement for sustained economic growth and development at the national level is of course well-established. This instrumental function of education is reinforced by the emergence of the knowledge economy, and many countries have adopted the concept of lifelong learning to shape education and training strategies in this new international context. Among the skills that are needed for the knowledge economy are not only information and communication technology skills, problem solving and analytical skills, but also numeracy and literacy [see e.g. European Commission (2000); ILO (2002); World Bank (2003)].

The importance of education and training in a lifelong learning framework notwithstanding, the relation between education/training and employment is not such that more education and training automatically leads to more employment. Much depends on the quality of education and training that is acquired, and on the demand for education and training (skills) in the labour market. In a study of education and structural change in India, Indonesia, Philippines and Thailand, the Asian Development Bank found that education provision seemed out of step with structural change in these countries. In particular, educational attainment increased more rapidly than seemed warranted on the basis of historical employment patterns, and rising unemployment went together with an

increasing educational attainment of the unemployed [ADB (2007)]. In the case of youth the relation between skills development and labour market status may be particularly complex, as many youth (aged 15-24) may not yet have completed their education and training, are working or seeking employment to fund their education and training, or may frequently change their labour market status for other reasons.

In Pakistan, the large positive difference between the proportions of the employed and the unemployed with one year or less of formal education is one indication that there is no straightforward relation between skills development and labour market status (see Table 3). Similarly, at the other end of the educational spectrum, the proportion of degree holders is higher among the unemployed than among the employed. Clearly, other factors are important in explaining labour market status besides education and training. Apparently contradictory findings regarding the role of education and training in explaining youth labour market outcomes have also been reported elsewhere. A recent study by several international agencies examined the complexities of the school-to-work transition in 13 countries in Sub-Saharan Africa, and found that higher educational attainment (secondary and tertiary education) did not lead to lower unemployment rates for youth [Guarcello, *et al.* (2005)].

We used a probit model to examine the role of education and training in explaining employment and unemployment among youth and adults in Pakistan during 1999-2000 to 2005-06.¹⁰ The results (in Tables 4 and 5) show that education generally increases the likelihood of being unemployed for both youth and adults, although the relation is weaker in the case of the latter with smaller marginal effects. Nevertheless, the results suggest that factors such as the need to accept any kind of work to secure a livelihood, regardless of whether the work matches skills or not, are important.

Given that there is evidence of a stronger relation between employment in the formal economy and education and training [see e.g. Mello, Filho, and Scorzafave (2006), for a labour market review of Brazil], we used the probit model to analyse the relation between education and labour market status for the employment status group of wage and salaried employment separately. The results (in Tables 5 and 6) suggest that, in the case of youth, there is not much difference and education continues to increase the likelihood of unemployment. In the case of adults, however, the estimates show a far more diverse picture, with education and training more likely to reduce the likelihood of unemployment. Nevertheless, only in the case of adults with a degree we find a consistent and significant negative effect of education level on unemployment.

A different angle on the role of education and training in the assessment of labour market vulnerability is to consider the occupational/wage distribution of the employed. As shown in Table 3 the proportion of the employed in 'highly skilled' occupations is steadily increasing,¹¹ which can be expected in view of the structural change in the

¹⁰The probit model employs the conventional explanatory variables in the estimating equations, including not only education and training, but also age, age squared, household head status, etc. We limit the analysis here to education and training, full estimates are available on request from the authors.

¹¹In the absence of information on (the demand for) skills, information on occupations is often used to proxy the demand for skills in economies [see Strietska-Ilina and Tessaring (2007)]. In this paper we use a simple three-way classification of occupations into 'highly skilled', 'skilled' and 'unskilled'. 'Highly skilled' occupations consist of major groups (1), (2) and (3) in the Pakistan Standard Classification of Occupations [FBS (1994)]. These are (1) Legislators, senior officials and managers; (2) Professionals; and (3) Technicians and associate professionals. 'Unskilled' occupations are major group (9) Elementary occupations, while the remaining occupational groups make up 'skilled occupations'.

Table 3

Selected Labour Market and Education Indicators (%)

	1999- 2000	2001- 2002	2003- 2004	2005- 2006	Change 1999- 2000 to 2005- 2006 (Percentage Point)
Population Aged 15+					
<i>Employed</i>					
Proportion with less than one year education					
Both Sexes	53.8	48.6	47.8	46.5	-7.3
Males	49.0	44.6	42.6	40.4	-8.6
Females	82.9	72.7	74.3	72.6	-10.3
Proportion with a degree					
Both Sexes	4.7	5.3	5.9	5.8	+1.1
Males	4.9	5.4	6.1	6.0	+1.1
Females	3.5	4.8	5.2	4.9	+1.4
Proportion in highly skilled occupations (major groups 1-3)					
Both Sexes	18.1	19.1	19.3	19.9	+1.8
Males	19.3	19.8	20.6	21.7	+2.4
Females	11.2	14.8	13.0	12.1	+0.9
<i>Unemployed</i>					
Proportion with less than one year education					
Both Sexes	46.0	42.5	38.5	41.9	-4.1
Males	34.1	31.9	28.1	31.7	-2.4
Females	68.3	64.2	62.2	64.6	-3.7
Proportion with a degree					
Both Sexes	4.3	5.8	7.2	6.8	+2.5
Males	5.0	6.4	7.1	6.9	+1.9
Females	2.9	4.4	7.3	6.6	+3.7
Population Aged 15-24					
<i>Employed</i>					
Proportion with less than one year education					
Both Sexes	40.8	39.4	40.7	39.0	-1.8
Males	37.9	36.2	36.1	34.5	-3.4
Females	66.2	57.8	62.7	57.5	-8.7
Proportion with a degree					
Both Sexes	1.6	2.0	2.2	2.5	+0.9
Males	1.3	1.6	1.9	1.9	+0.6
Females	4.3	3.9	3.4	4.6	+0.3
Proportion in highly skilled occupations (major groups 1-3)					
Both Sexes	13.8	13.7	13.7	14.5	+0.7
Males	13.5	13.5	14.3	15.1	+1.6
Females	16.1	15.2	11.2	12.3	-3.8
<i>Unemployed</i>					
Proportion with less than one year education					
Both Sexes	28.6	27.1	22.0	24.2	-4.4
Males	23.1	21.9	18.2	21.0	-2.1
Females	43.6	42.7	34.4	35.5	-8.1
Proportion with a degree					
Both Sexes	3.9	4.4	6.3	5.4	+1.5
Males	3.7	4.1	4.7	4.5	+0.8
Females	4.5	5.5	11.3	8.4	+3.9

Source: FBS (Various Years) Pakistan Labour Force Survey.

Table 4

Probit Estimates of the Role of Education/Training in Determining Youth Labour Market Status from 1999-00 to 2005-06

Population Aged 15–24	1999-00			2001-02			2003-04			2005-06		
Variables	Co-efficient	z-value	Marginal Effect	Co-efficient	z-value	Marginal Effect	Co-efficient	z-value	Marginal Effect	Co-efficient	z-value	Marginal Effect
Training	0.036	0.37	0.0078	0.136	1.33	0.0317	0.119	1.44	0.0250	0.197	**2.18	0.0336
Primary	0.211	**3.98	0.0479	0.123	**2.60	0.0279	0.136	**2.84	0.0283	0.197	**5.38	0.0319
Middle	0.386	**6.97	0.0942	0.315	**6.40	0.0765	0.414	**8.58	0.0957	0.159	**3.87	0.0256
Matric	0.465	**8.41	0.1162	0.475	**9.72	0.1219	0.619	**13.00	0.1537	0.479	**12.45	0.0896
Intermediate	0.531	**6.63	0.1423	0.723	**10.24	0.2110	0.739	**10.64	0.2031	0.623	**10.75	0.1334
Degree	0.831	**8.45	0.2499	0.787	**8.52	0.2372	0.875	**10.12	0.2549	0.770	**11.35	0.1790
Number of Observations	7,749			9,663			10,622			19,453		

Dependent variable: '0' if employed and '1' if unemployed.

*Significant at 10 percent level.

**Significant at 5 percent level.

Table 5

Probit Estimates of the Role of Education/Training in Determining Adult Labour Market Status from 1999-00 to 2005-06

Population Aged 25+	1999-00			2001-02			2003-04			2005-06		
Variables	Co-efficient	z-value	Marginal Effect	Co-efficient	z-value	Marginal Effect	Co-efficient	z-value	Marginal Effect	Co-efficient	z-value	Marginal Effect
Training	-0.023	-0.30	-0.0018	-0.013	-0.16	-0.0012	0.106	1.53	0.0111	-0.034	-0.41	-0.0026
Primary	-0.002	-0.05	-0.0002	0.053	1.12	0.0051	-0.034	-0.72	-0.0032	0.033	0.91	0.0027
Middle	0.158	**2.66	0.0141	0.090	*1.65	0.0088	0.072	1.40	0.0073	0.143	**3.52	0.0127
Matric	0.109	**2.10	0.0093	0.105	**2.20	0.0104	0.133	**2.98	0.0140	0.134	**3.67	0.0117
Intermediate	0.135	*1.85	0.0119	0.055	0.82	0.0053	0.215	**3.69	0.0243	0.193	**3.97	0.0179
Degree	0.081	1.35	0.0068	0.122	**2.29	0.0123	0.049	0.99	0.0049	0.124	**3.06	0.0109
Number of Observations	21,478			23,295			24,622			44,639		

Dependent variable: '0' if employed and '1' if unemployed.

*Significant at 10 percent level.

**Significant at 5 percent level.

Table 6

*Probit Estimates of the Role of Education/Training in Determining Youth Labour Market Status
(Paid Employment) from 1999-00 to 2005-06*

Population Aged 15–24	1999-00			2001-02			2003-04			2005-06		
Variables	Co-efficient	z-value	Marginal Effect	Co-efficient	z-value	Marginal Effect	Co-efficient	z-value	Marginal Effect	Co-efficient	z-value	Marginal Effect
Training	–0.082	–0.77	–0.0270	0.092	0.79	0.0314	0.127	1.31	0.0420	0.116	1.16	0.0325
Primary	0.236	**3.74	0.0822	0.156	**2.74	0.0530	0.164	**2.84	0.0541	0.217	**4.96	0.0609
Middle	0.432	**6.48	0.155	0.407	**6.91	0.1442	0.497	**8.54	0.1736	0.260	**5.27	0.0746
Matric	0.557	**8.36	0.2024	0.523	**9.01	0.1877	0.696	**12.08	0.2483	0.591	**12.78	0.1827
Intermediate	0.609	**6.45	0.2268	0.716	**8.70	0.2676	0.724	**8.88	0.2661	0.632	**9.35	0.2053
Degree	0.719	**6.70	0.2712	0.733	**7.11	0.2755	0.777	**7.95	0.2882	0.699	**9.17	0.2318
Number of Observations	3,984			5,143			5,295			9,037		

Dependent variable: '0' if employed and '1' if unemployed.

*Significant at 10 percent level.

**Significant at 5 percent level.

Table 7

*Probit Estimates of the Role of Education/Training in Determining Adult Labour Market Status
(Paid Employment) from 1999-00 to 2005-06*

Population Aged 25+	1999-00			2001-02			2003-04			2005-06		
Variables	Co-efficient	z-value	Marginal Effect	Co-efficient	z-value	Marginal Effect	Co-efficient	z-value	Marginal Effect	Co-efficient	z-value	Marginal Effect
Training	-0.132	-1.51	-0.0204	-0.062	-0.68	-0.0106	0.032	0.42	0.0063	-0.120	-1.30	-0.0178
Primary	-0.012	-0.19	-0.0021	0.026	0.46	0.0047	-0.048	-0.83	-0.0090	-0.026	-0.59	-0.0042
Middle	0.138	*1.96	0.0249	0.055	0.86	0.0101	0.011	0.19	0.0022	0.072	1.50	0.0121
Matric	0.003	0.06	0.0006	-0.024	-0.45	-0.0043	0.143	0.28	0.0027	0.0008	0.02	0.0001
Intermediate	-0.042	-0.52	-0.0069	-0.144	*-1.93	-0.0236	0.003	0.05	0.0006	0.0130	0.24	0.0021
Degree	-0.179	** -2.78	-0.0276	-0.144	** -2.49	-0.0238	-0.216	** -3.95	-0.0378	-0.149	** -3.37	-0.0223
Number of Observations	9,192			10,520			10,801			1,9015		

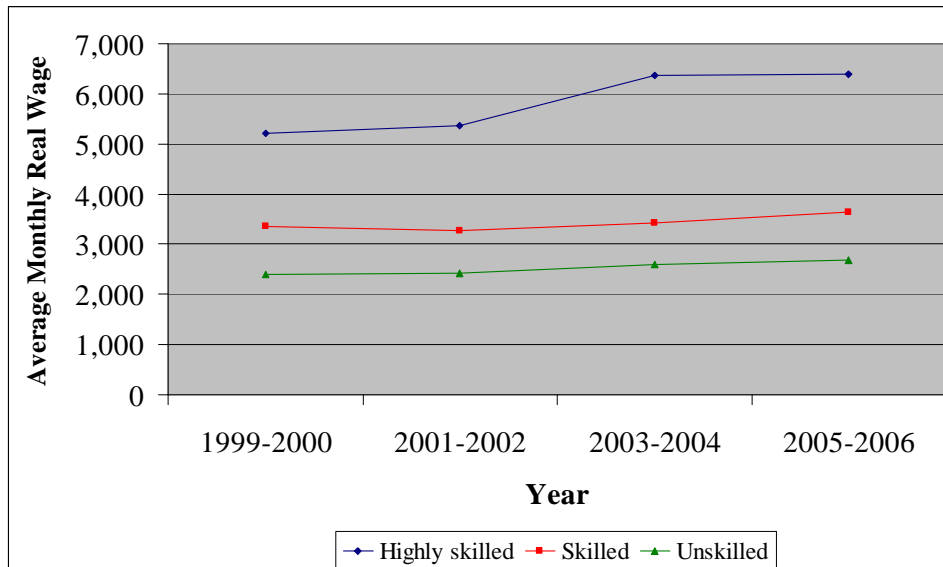
Dependent variable: '0' if employed and '1' if unemployed.

*Significant at 10 percent level.

**Significant at 5 percent level.

Pakistani economy in which the traditional role of the agricultural sector in employment creation is diminishing. Figure 3 shows that average real wage rates in highly skilled occupations diverge sharply from those of skilled and unskilled occupations. The overall increase in real wage rates in highly skilled occupations between 1999-00 and 2005-06 amounted to 22.7 percent, as opposed to 8.1 and 11.6 percent in skilled in unskilled occupations, respectively. These data refer to the employment status group of wage and salaried employees only, but nevertheless illustrate that a 'decent wage' or a 'living wage' requires skills, and more so if economic development becomes more skill-intensive.

Fig. 3. Wages of Employees (15+) by Aggregated Major Occupational Groups

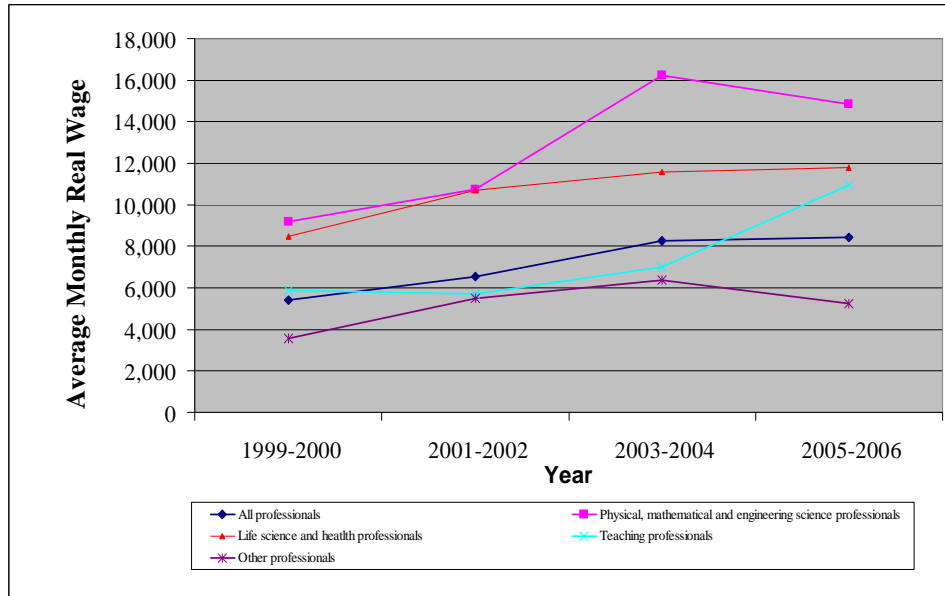


Source: FBS (Various Years) *Pakistan Labour Force Survey*; real wages in 1999-2000 rupees.

However, much depends on which skills have been acquired, as highlighted in Figure 4. Among generally well-paid professionals, the highest paid sub-major group (physical, mathematical and engineering professionals) commands an average real wage 2.8 times as high as the lowest paid sub-major group, up from 2.6 in 1999-2000, 2.0 in 2001-2002, and again 2.6 in 2003-2004, suggesting skills shortages which drive up wage rates in the sectors in which these skills are needed. The diverging pattern in Figure 4 is confirmed by Sadiq and Akhtar (2006). Using data from the Pakistan Integrated Household Survey 2001-2002 and the Pakistan Social and Living Standards Measurement Survey 2004-2005, they find rising earning disparities within each major occupational group (across all employment status groups).

The relatively low proportion of females in highly skilled occupations, more pronounced among adults but also evident among youth, can be attributed at least in part to gender gaps in education and training. At the same time, the relatively high proportion of female youth with a degree suggests that other factors are important as well, including institutions in the broad sense and gender discrimination [see e.g. Nasir (2005); Siddiqui, *et al.* (2006)].

Fig. 4. Wages of Professionals (Employees, 15+) by Sub-major Occupational Groups



Source: FBS (Various Years) *Pakistan Labour Force Survey*; real wages in 1999-2000 rupees.

What do these findings mean for the vulnerability of youth? For youth to function in an increasingly knowledge intensive economy, numeracy and literacy is a necessity. More generally, a completed general education, at least at primary level, is an essential preparation for labour market integration, and to ensure trainability and career development later in life. When moving closer to the labour market, however, the evidence including the probit estimates indicate that it becomes more important that education and training meet specific labour market demands. Skills development decisions, at the individual as well as the enterprise level, should be based on adequate labour market information as education in itself does not guarantee a job, not for adults and certainly not for youths.

5. CONCLUDING REMARKS

One way to arrive at an overall estimate of the proportion of youth that is vulnerable as defined in the introduction of this paper is to aggregate the vulnerable segments of the youth population in accordance with Figure 1. If we add the youth neither enrolled in education nor economically active, the unemployed youth and the youth lacking decent employment in terms of working excessive hours, we arrive at 52.5 percent of the youth population in 2005-2006, down from 56.5 in 1999-2000. The decrease is mostly due to the proportion of vulnerable women (a decrease of more than 10 percentage points), in turn driven by the reduction in the proportion of women neither in education nor economically active. In the case of males the overall proportion of vulnerable youth increased with 1.5 percentage points, mostly due to the increase in the proportion of male youth working excessive hours.

An overall estimate cannot be more than an approximation of the ‘true’ proportion of vulnerable youth, as not all those neither enrolled in education nor economically active are necessarily vulnerable. Furthermore, the estimate is sensitive to the criterion that is used to assess the proportion of youth in decent employment. For example, if we would consider the employed with one year of formal education or less to be vulnerable, and ignore other dimensions of decent employment, the proportion of both vulnerable female and male youth would show a decrease during the period under review. We would nevertheless still find that more than half of the youth are vulnerable in Pakistan.

What can be done to reduce youth vulnerability? The high proportion of the labour force with one year or less of formal education underlines the ill-preparedness of the Pakistani economy for the knowledge economy, and raising enrolment rates at the primary level is a very good starting point for policies to reduce vulnerability and to raise productivity over time. The data show that progress has been made in this regard, especially for the female population. It also seems likely that the improvements in female labour market indicators can be attributed, at least in part, to gradual institutional changes in the Pakistani society and economy. Such changes need to be reinforced if the gender gap in labour market vulnerability is to be closed.

As argued before, policies to raise the educational attainment of the labour force beyond primary levels should be based on proper labour market information. At least three broad, complementary approaches can be distinguished to generate such information [see e.g. Government of South Africa (2003); Sparreboom (2004)].

- (1) Labour market analysis (e.g. an analysis of shifts in sectoral and occupational distributions, changes in wages and earnings).
- (2) Economic sector level skills assessments (demand and supply, quantitative and qualitative).
- (3) Specialised studies (e.g. tracer studies, econometric studies, policy evaluations).

Labour market analysis can draw on various sources, but the labour force survey stand out because it allows for a comprehensive analysis of the labour market based on one consistent dataset. In Pakistan, the labour force survey is underutilised and more can be done to use this source to generate labour market information. More analysis is needed in particular of sectoral changes in employment, shifts in the occupational distribution, and changes in employment status, complemented by establishment-based data on occupations, wages and earnings.

Although the labour force survey allows for a distribution of the employed by employment status, this distribution could be refined if contractual arrangements would be captured in the questionnaire. The survey could then be used as an instrument in assessing how an appropriate balance can be struck between labour market flexibility and job security. Similarly, the questionnaire can be slightly modified to capture more information on the school-to-work transition of youth. Information on the pathways youth follow between work, education and other activities, would be helpful in assessing the role of education and training in securing decent employment.¹² Similarly, a thorough analysis of the duration of job search and job search activities can inform policies to

¹²Options for modifying the questionnaire along these lines are being considered by the FBS.

reinvigorate employment services and other active labour market policies aimed at reducing unemployment.

More information is also needed on the supply and demand for skills in economic sectors. Internationally, more and more attention is given to the role of sector bodies in generating labour market information that informs skills policies, and in particular information that can complement national sources such as labour force surveys. Although sector studies are available in Pakistan, there are few systematic attempts to generate such information consistently over time. Similarly, few, if any, systematic tracer studies are available which could shed light on the usefulness of education and training programmes from a labour market perspective. In all cases the information that is being generated should find its way to the users, and networks of institutions involved in the skills development should be created in the context of the education and training reforms that are underway.

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