

Transition in Primary and Secondary Schooling in Pakistan: Gender and Age Cohort Analysis

NAUSHIN MAHMOOD

This study assesses the changing pattern of school attendance through age cohort analysis for both males and females in Pakistan. Based on the 1998 census data on educational attainment, the results indicate a profound rise in school attendance among younger age cohorts contributing to elimination of gender gap in primary-level schooling in urban areas only.

The disadvantaged situation of rural females is reflected by a combination of low school entries/attendance to begin with, and high chance of discontinuing education before completing primary levels. The pattern of school transition reveals that among those few who have completed Class Five, the chances of staying through the secondary level are much higher—after which dropout accelerates rapidly. Two overall conclusions emerge from these results. First, the bulk of the deficit from universal primary education comes from females population, especially in rural areas. Second, the key to reducing dropouts and gender gap in school attendance lies in actions that raise the demand for schooling of girls, with equally matched availability of quality primary- and secondary-level schools. It appears that achieving universal primary education by 2015, as mandated in the Millennium Development Goals (MDGs), remains a tall order for Pakistan.

INTRODUCTION

The analysis of education data has great relevance for assessing educational progress, for planning manpower requirements, and for accounting its relation to socio-economic and demographic change in a country. It is well-documented that primary education and its continuation up to the secondary level is a potent means of reducing poverty and income inequality with marked benefits for the poor segments of society [United Nations (2003); Behrman (1995); Birdsall, Ross and Sabot (1993)], and that raising the enrolment of the poor, especially of females, is the key to achieving universal basic education in many developing countries [Filmer and Pritchett (1999)]. In Pakistan, the crucial role of education as a prerequisite of human development has been duly recognised at both policy and planning levels, with special emphasis on achieving universal primary-level enrolment. Ensuring that new generations of children receive at least primary education, and that sufficient proportions of them continue schooling to the secondary and higher levels, is an

Naushin Mahmood is Joint Director, Pakistan Institute of Development Economics, Islamabad.

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important goal of Pakistan's education policy and viewed by the government as a critical component of the social and economic development and poverty-reduction strategy [Pakistan (2003)]. Moreover, in the context of the Millennium Development Goals (MDGs), of which Pakistan is a signatory,¹ the need to achieve universal primary education has been re-emphasised and given a priority in educational development programmes [UNDP (2003); Pakistan (2004)].

Pakistan's education profile, however, reflects large inequalities in literacy and school participation rates by gender, region, and income group. It also indicates that the transition in primary and secondary schooling has been slow-placed, with poor chances of children entering and even completing the primary level of education, when compared with educational achievement and net primary enrolment ratio of other Asian countries [UNDP (2003); Mahmood (1999, 2003); Sathar and Lloyd (1994)]. Based on the estimates of the 1998 census, literacy rate at the national level is about 45 percent—65.5 percent for males and 32.6 percent for females. Rural females are even more disadvantaged, with a literacy rate as low as 20 percent [Population Census Organisation (2001)].

The overall net enrolment rate was only 46 percent as reported in the 1998-99 Pakistan Integrated Household Survey (PIHS), and the gap between school participation of males and females still remains large [Federal Bureau of Statistics (2000)]. In view of the wide gender gap in literacy and the marked pace needed to raise enrolment, the target set for adult literacy rate towards achieving the MDG goal is 59.5 percent—70 percent for males and 49 percent for females for the year 2005-06. Similarly, the target of net enrolment ratio to achieve universal primary education is 58 percent for 2005-06 and 91 percent for year 2011 [Pakistan (2004)].

Although a larger proportion of children of younger age cohorts are attending school than those in older age cohorts, evidence shows that a significant proportion discontinues education before completing the primary levels. The challenge for educational development of Pakistan, therefore, is not only to raise levels of enrolment, given the rapid population increase in school-age population, but also to ensure that larger proportion of children entering school complete at least primary and secondary schooling. In this context, the need for an accurate assessment and monitoring of trends and differentials in educational attainment is self-evident—to review past progress and to plan future requirements of the education system.

¹The Millennium Development Goals (MDGs) emanate from the Millennium Development Declaration adopted through the United Nations System by 147 Heads of State and Government (including Pakistan) in September 2000. At present, 191 countries subscribe to this Declaration, which sets forth eight major development goals as a cornerstone of the global agenda for development. These goals include the Eradication of extreme poverty and hunger, achieving universal primary education, promote gender equity and empowering women, reducing child mortality, combating HIV/AIDS, malaria and other diseases and ensuring environmental sustainability. The endorsement of the MDGs by the Government of Pakistan makes it obligatory for the state to comply with the process of achieving the targeted goals, of which universal primary education is a national priority.

The few studies undertaken to examine the trends and correlates of educational attainment in Pakistan reveal that the estimates of the primary- and secondary-level enrolment vary between different sources of data and raise questions about the comparability and accuracy of reported information at a given point in time [Khan, Mahmood, and Siddiqui (n.d.); Burney and Irfan (1991); Sathar and Lloyd (1994); Arif, Saqib, and Zahid (1999); Mahmood (2003)].² To deal with this situation, measures of educational attainment for birth cohorts, defined as age groups at a given time, provide a more appropriate basis to determine the actual transition in schooling and to check the consistency in reported information between different sources over a span of time. Such measures can be derived from information on the highest grade completed for various age groups as reported in censuses or surveys.

This study assesses the changing pattern of educational attainment and school attendance through age cohort analysis for both males and females in Pakistan. The analysis focuses not just on enrolment or current school attendance but on the entire educational attainment pattern, including those children who ever attended school and showing the transition from primary to secondary school and the proportion of dropouts within these educational levels. This would indicate what proportion of every age/birth cohort completed primary school and continues on to the middle or matric level of education. The analysis would be extended to urban and rural areas to capture gender differences in the educational attainment pattern between the two types of settings.

DATA AND METHODS

Population census is a systematic data collection effort that provides national-level statistics on major socio-economic and demographic characteristics of the population, including literacy status, educational level completed, and current school attendance. These data disaggregated by age, sex, and place of residence give additional value to the analysis in terms of assessing gender gaps in schooling and in studying historical trends.³

The present study relies primarily on the 1998 census data on educational attainment at and beyond the usual age of entrance into formal school system that gives the number and proportion of population who have passed at least Grade 1.⁴ The education estimates analysed are based on the questions: Has the person ever attended school or is he/she still in school? If he/she has attended or is currently attending school, what is the highest level/grade attained? Using 1998 census data on

²Besides population censuses, some demographic and household sample surveys also provide data on enrolment and education attainment for different years. Due to variability in the methods of data collection and differences in the concepts and definitions applied to educational levels, there are problems of direct comparability and assessment of actual trends across different sources of information.

³The censuses provide an enumeration of the whole population disaggregated by sex and age with detailed geographic distribution from national to sub-national levels. These provides the possibility of creating birth/age cohorts to study trends and differentials.

⁴The utility of analysing census data on education is that it gives a complete enumeration of the population and educational attainment that can be analysed to assess historical trends and differentials down to the district level and can be compared retrospectively with earlier censuses.

these questions, attainment profiles for different birth cohorts are prepared, which show the proportion of individuals with a specified completed level of education over the past decades. A major limitation of the cohort educational attainment measures is that the final completed level of education is not known for persons still in school. Hence, their current completed education will not reflect their eventual completed level, especially among the younger-age cohorts who have a greater likelihood of being in school than the older ones. However, estimates of educational attainment for age/birth cohorts within a cross-section are useful and more realistic indicators for examining changes over time, as they do not suffer from weaknesses of age distributions in different censuses and surveys and their interpretation is relatively straightforward and free from the problems that characterise the continuation or progression ratios.⁵

Apart from the influence of any conscious or unconscious enumeration biases that may arise from the question being asked on educational attainment, the census data results, especially on age and sex distribution of population are likely to be affected by changes in the levels of fertility, mortality, and international migration among different birth cohorts. An evaluation study of the 1998 census data, however, has revealed that the survival ratios show an improvement in age-sex reporting between the censuses of 1972, 1981, and 1998, with some evidence of misreporting of age for less than 10 and more than 50 years [Ali and Sultan (2003)]. Moreover, a close agreement between the reported and the projected total population for the 1998 census is found (132.4 and 132.1 million persons, respectively) which suggests that errors in the estimated levels of fertility, mortality, and international migration are unlikely to account for more than a small portion of the discrepancy in the results [Feeney and Alam (2003)], and that seasonal migration least affects the proportionate shares of population at the provincial and national levels [Chaudhry (2003)].

In addition, an evaluation exercise carried out to assess the consistency in reporting of literacy and educational attainment information for birth cohorts in the mid-1930s to the late 1980s has revealed that the reported literacy levels are well-matched and consistent between the 1981 and 1998 censuses, especially for females; whereas some discrepancies in reporting are observed for males, especially those born later than 1940s. Overall, the results encourage confidence in the use of the data on literacy and educational attainment, with some distortions acknowledged in age reporting for very young and older age groups [Mahmood (2003)]. Given the evidence of some improvement in the coverage and quality of the 1998 census data, it appears that these sources of selectivity bias may not affect the findings significantly.

Given the fact that a large proportion of children in the Pakistani educational system leave school before completing primary level or discontinue education in

⁵Continuation or progression ratios relate the number of students enrolled in a particular grade in a given year to the number enrolled in the prior grade in the previous year, and are influenced by the proportions repeating or skipping grades or by transfers of students in and out of an area. However, the census data do not provide information on students for each grade, thereby limiting the analysis to the levels attained.

transition from the primary to the start of the next level, it is important that information on education attained is available for each grade and each age, so as to be able to estimate progression ratios or dropout rates to a certain magnitude of exactness. The 1998 census, however, provides information on completed levels of below-primary, primary, middle, matric, intermediate, degree, and higher education that could be used to measure the transition over time, within each level of education. This is important because going through the educational system in Pakistan involves a sequence of critical transitions between levels, and a large number of children get screened out of the system between the completion of the primary and the start of the next level, and so on.

EDUCATIONAL ATTAINMENT PATTERN

Based on the 1998 census results, the educational attainment pattern of both the male and female population is presented in Table 1, which shows the percentage distribution of persons who ever attended school (aged 10 years and above) with each level of education completed. It is evident from Table 1 that only 43.5 percent of population aged 10 years and above have been exposed to formal schooling, leaving about 56.6 percent in the “never attended” category. Of those who have attended school, a majority has completed only primary school education (30 percent), followed by those with middle school education (21 percent). The proportion reaching the secondary level (matric or equivalent) is only 17.4 percent, indicating substantial attrition and much lower attainment thereafter.

Table 1

Percentage of Population (Aged 10 Years and above) who Completed Various Levels of Education, by Sex and Urban-Rural Areas, 1998

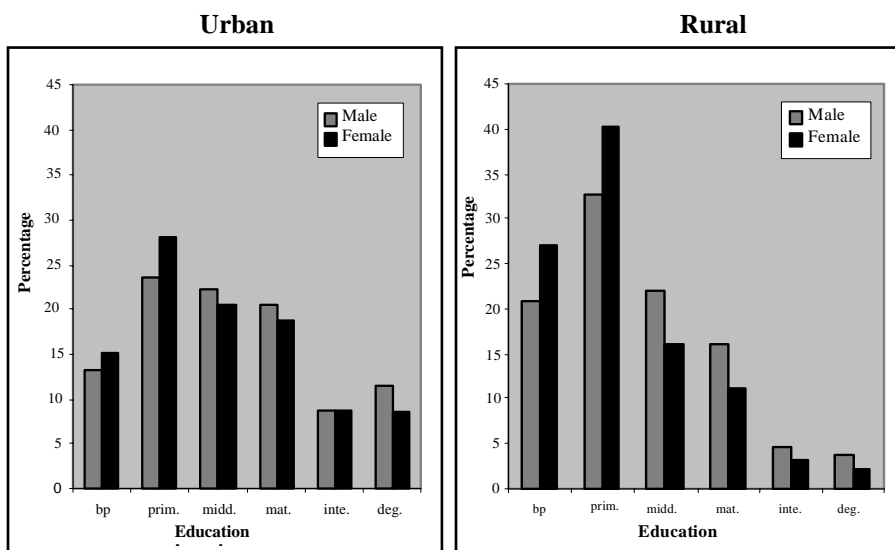
| Sex/Area | Total Formal Literates (000s) | % of Population (10+) | Education Levels Completed | | | | | |
|--------------------|-------------------------------|-----------------------|----------------------------|---------|--------|--------|---------------|-------------------|
| | | | Below Primary | Primary | Middle | Matric | Inter-mediate | Degree and Higher |
| Pakistan | | | | | | | | |
| Both Sexes | 39,085 | 43.5 | 18.4 | 30.0 | 21.0 | 17.4 | 6.8 | 6.4 |
| Male | 25,521 | 54.4 | 17.3 | 28.6 | 22.6 | 18.2 | 6.8 | 6.5 |
| Female | 13,564 | 31.6 | 20.1 | 33.0 | 18.7 | 15.6 | 6.6 | 6.0 |
| Urban Areas | | | | | | | | |
| Both Sexes | 19,646 | 62.6 | 14.1 | 25.4 | 22.0 | 19.8 | 8.9 | 10.2 |
| Male | 11,659 | 69.6 | 13.2 | 23.7 | 22.2 | 20.6 | 8.8 | 11.4 |
| Female | 7,986 | 54.6 | 15.2 | 28.0 | 20.6 | 18.7 | 8.9 | 8.6 |
| Rural Areas | | | | | | | | |
| Both Sexes | 19,438 | 33.2 | 22.6 | 34.9 | 20.2 | 14.7 | 4.2 | 3.3 |
| Male | 13,861 | 46.0 | 20.8 | 32.7 | 21.9 | 16.1 | 4.6 | 3.8 |
| Female | 5,577 | 19.7 | 27.0 | 40.2 | 16.0 | 11.2 | 3.3 | 2.3 |

Source: *The 1998 Census Report of Pakistan* (Table 12).

With respect to gender differences in educational attainment, the disadvantaged situation of females is evident from the proportions completing primary and secondary levels. As Table 1 shows, only 31.6 percent of females (aged 10 years and above) have been exposed to formal schooling as against 54.4 percent of males. Of the total educated females, more than half have completed either below-primary (20.1 percent) or primary levels (33 percent), and about 34 percent have reached either middle or matric levels (18.7 percent and 15.6 percent, respectively), leaving a small minority to continue education beyond the secondary levels. Compared to this, 17.3 percent and 28.6 percent of males have completed below-primary and primary levels, respectively, and 40.8 percent have reached the middle and matric levels of education. This indicates that among the much smaller group of educated females, a larger proportion ends up attaining only primary level of education, whereas a greater proportion of males than females completes secondary levels.

Gender differences in educational levels attained are more conspicuous in rural than in urban areas. About 27 percent of the few formally-educated females in rural areas have completed only below-primary education as compared with 20.8 percent of males, and 40.2 percent of females have attained primary levels as compared to 32.7 percent of males. This is indicative of a reversal in gender differentials favouring females in schooling up to the primary level, after which males again exhibit higher proportions of educational attainment (Figure 1).

Fig. 1. Educational Levels Attained, by Sex and Urban/Rural Areas, 1998.



Source: Table 1.

Abbreviations used: bp = below primary; prim = primary; midd = middle; mat = matric; inte = intermediate; deg = degree.

As Figure 1 shows, only about 16 percent of rural females have reached the middle level and only 11.2 percent the matric level as compared with 21.9 percent and 16.1 percent, respectively, of rural males. In the urban areas, on the other hand, 39.3 percent of females and 42.8 percent of males have completed the middle and matric levels, indicating a greater proportion of males and females continuing education beyond primary levels with gender less gender gap. These trends clearly indicate a large concentration of both urban and rural females staying through primary education, beyond which males again outnumber females, especially in the rural areas. Although males are somewhat more likely than females to have begun secondary school, (middle and matric levels), gender differentials in educational attainment in the urban areas are relatively less striking than in the rural areas (Figure 1).

AGE COHORT PROFILE OF EDUCATIONAL ATTAINMENT

The aggregate estimates of the levels attained obscure the variability in the educational experience of older cohorts who attended school in the distant past as compared to those who were born more recently and could still be completing some level. A better interpretation of the educational attainment data would be to look at the age cohorts whose educational experience spans the period of mid-1930s to 1980 across the education levels completed—to capture historical trends and the entire pattern of educational transition. Since the cut-off age for literates is 10 years, which is also the expected age for completing primary schooling, the most recent birth cohort of the 1998 census belongs to the year 1988 in the age cohort profile. The proportions of male and female population with completed levels of at least primary (Class 5 and above) and secondary (Class 10 and above) education by age, along with birth cohorts corresponding to each age group, are shown in Table 2 for total urban and rural areas.

Assessing the educational attainment data by age cohorts, it appears that there has been a profound increase in levels attained over the past fifty years or so. Among persons of school-entering age during 1930s (aged 60-64 years in the 1998 census), there were about 24.6 percent of males and only 7.0 percent of females who reported as having attained primary and above education. By the 1980s (aged 15-19 years at the time of the census), this percentage increased to 60.3 for males and 41.3 for females, indicating about four-times increase for males and about six-times increase in the case of females with completed levels of at least primary education (Table 2).

Over roughly the same period, the proportions of population completing secondary and higher education have also risen considerably, from 10.1 percent to 19.1 percent for males and from as low as 2.2 percent to 13.8 percent for females. These percentages are almost half of those completing primary education, indicating more than fifty percent attrition between the primary and the secondary levels of education. For example, in the 15-19 age cohort, about 60.3 percent of males and 41.3 percent of females have attained at least primary education, whereas only 19.1 percent of males and 13.8 percent of females have reached secondary education and

Table 2

Percentage of Age/Birth Cohorts Completing Primary and Secondary or Higher Educational Levels, by Sex for Total and Urban-Rural Areas, 1998

| Age Group | Corresponding Birth Cohorts | Primary and Higher | | Secondary and Higher | |
|--------------------|-----------------------------|--------------------|--------|----------------------|--------|
| | | Male | Female | Male | Female |
| Pakistan | | | | | |
| 10-14 | 1984-88 | 58.6 | 27.8 | – | – |
| 15-19 | 1979-83 | 60.3 | 41.3 | 19.1 | 13.8 |
| 20-24 | 1974-78 | 58.1 | 33.2 | 30.8 | 18.0 |
| 25-29 | 1969-73 | 51.1 | 26.5 | 27.4 | 13.9 |
| 30-34 | 1964-68 | 47.2 | 23.5 | 22.8 | 11.0 |
| 35-39 | 1959-63 | 47.3 | 21.9 | 22.4 | 9.8 |
| 40-44 | 1954-58 | 44.9 | 17.3 | 21.6 | 7.4 |
| 45-49 | 1949-53 | 40.2 | 13.7 | 19.5 | 5.7 |
| 50-54 | 1944-48 | 34.8 | 11.0 | 15.5 | 4.0 |
| 55-59 | 1939-43 | 33.1 | 9.1 | 14.4 | 3.0 |
| 60-64 | 1934-38 | 24.6 | 7.0 | 10.1 | 2.2 |
| Urban Areas | | | | | |
| 10-14 | 1984-88 | 47.4 | 46.6 | – | – |
| 15-19 | 1979-83 | 70.8 | 65.3 | 27.5 | 27.0 |
| 20-24 | 1974-78 | 70.6 | 58.5 | 43.5 | 37.5 |
| 25-29 | 1969-73 | 67.0 | 50.7 | 41.1 | 30.8 |
| 30-34 | 1964-68 | 63.6 | 45.7 | 35.5 | 25.0 |
| 35-39 | 1959-63 | 63.9 | 43.3 | 35.6 | 22.5 |
| 40-44 | 1954-58 | 62.2 | 36.8 | 35.7 | 18.1 |
| 45-49 | 1949-53 | 59.1 | 31.5 | 35.1 | 14.9 |
| 50-54 | 1944-48 | 53.9 | 26.0 | 30.2 | 10.7 |
| 55-59 | 1939-43 | 51.4 | 22.0 | 28.5 | 8.0 |
| 60-64 | 1934-38 | 42.8 | 17.5 | 22.8 | 5.9 |
| Rural Areas | | | | | |
| 10-14 | 1984-88 | 29.6 | 17.9 | – | – |
| 15-19 | 1979-83 | 54.3 | 27.8 | 14.3 | 6.1 |
| 20-24 | 1974-78 | 50.5 | 19.9 | 23.1 | 7.8 |
| 25-29 | 1969-73 | 41.4 | 14.0 | 19.9 | 5.1 |
| 30-34 | 1964-68 | 36.9 | 11.6 | 14.8 | 3.4 |
| 35-39 | 1959-63 | 36.7 | 9.8 | 13.9 | 2.6 |
| 40-44 | 1954-58 | 34.1 | 7.1 | 13.0 | 1.8 |
| 45-49 | 1949-53 | 29.5 | 5.1 | 10.8 | 1.2 |
| 50-54 | 1944-48 | 25.1 | 3.8 | 8.0 | 0.8 |
| 55-59 | 1939-43 | 23.9 | 3.1 | 7.3 | 0.7 |
| 60-64 | 1934-38 | 16.6 | 2.4 | 4.6 | 0.6 |

Source: *The 1998 Census Report of Pakistan* (Table 12).

Note: The lower proportion of at least primary education in the 10-14 age group and at least secondary education in the 15-19 age cohort reflects that many persons between these ages are still in the process of completing primary and secondary level, as compared to the older cohorts who are past the age of completing that level of education, and thus are an underestimate due to truncation effects. Hence, the majority of the persons aged 20 and above are expected to have completed primary and secondary schooling.

above levels (Table 2). Hence, the difference between the proportions that completed Class 5 or higher and those that completed Class 10 or higher is an estimate of the proportion of population that dropped out between the two levels of education. However, this is not the usual dropout rate because the denominator is total population in each age group, as opposed to those reaching Class 5, and thus represent the vertical drop between the two levels of education.⁶

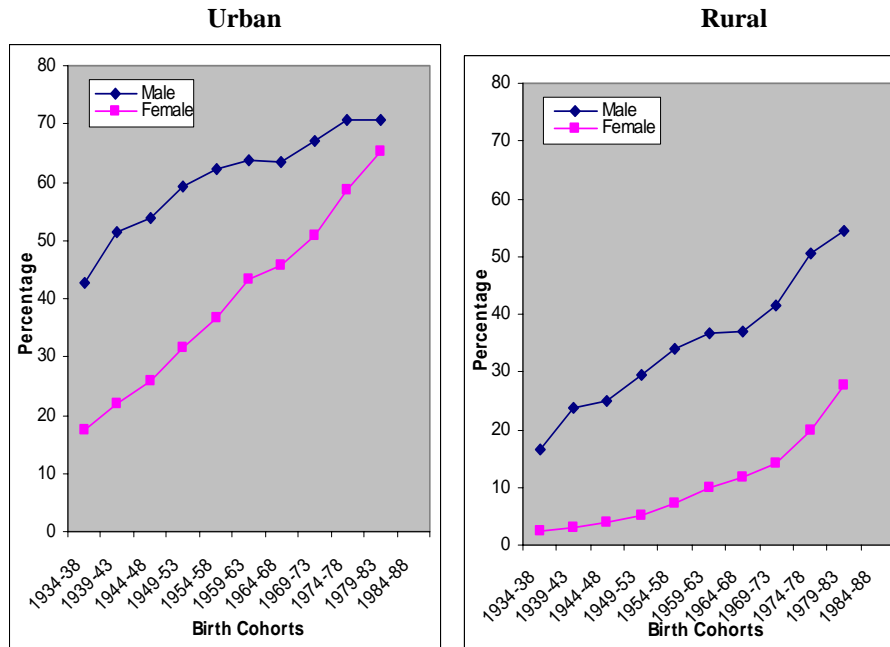
Similar differences are also apparent in educational attainment cohort measures of urban and rural populations, showing however larger proportions completing primary and secondary education in the urban than the rural areas (Figures 2 and 3).⁷ As we can see from Figure 2, there has been rapid acceleration in attainment of primary and higher levels among urban females relative to males in younger cohorts born in the 1970s or in later years. This has resulted in reducing the gender gap to the minimum in urban areas, with nearly 70.8 percent of males and 65.3 of females attaining at least primary education in the 15-19 age cohort. A significant rise in school completion status of females may partly be attributed to the expansion of private schools in urban areas and the recently-adopted policies and reform actions to promote girls' enrolment to reduce gender imbalance.

Figure 2 further shows that in rural areas, both males and females have experienced significant gains in attaining at least primary education among recently-born cohorts, but the gender gap has persisted over the years, showing about 54.3 percent of males with completed primary education as against 27.8 percent of females in the 15-19 age cohort. The recent increase in education attainment of rural females has enabled them to some extent to catch up with their male counterparts, yet they remain almost half way that of males even among younger-age cohorts.

Although educational achievements of females relative to males indicate a significant rise among younger cohorts, it is worth noting that urban-rural differences still remain wide as portrayed in Figure 2. It is clearly evident from the figure that rural females in the latest cohort have attained primary schooling at a level commensurate with their urban counterparts born about 30 years ago. Similarly, rural males who have shown a marked increase in educational achievement among recent cohorts still remain at a level comparable to their urban counterparts about two decades ago. This implies that the pace needed to catch up with urban educational attainment even at primary levels is quite important. As urban schooling

⁶This does not indicate an individual's progression through the school system but a cross-section of attainment among different age cohorts.

⁷Data on educational attainment levels in the 1998 census was compared with the 1981 census retrospectively through the creation of birth cohorts series to check accuracy and consistency in the reported information. The exercise showed well-matched and consistent figures for each cohort except for somewhat higher figures reported for completed primary level among rural males in the 1998 census, especially those born later than 1940s. Overall, birth cohort estimates matched in the interval between the two censuses give us confidence about consistent reporting on educational attainment, and thus the 1981 census figures are not plotted here.

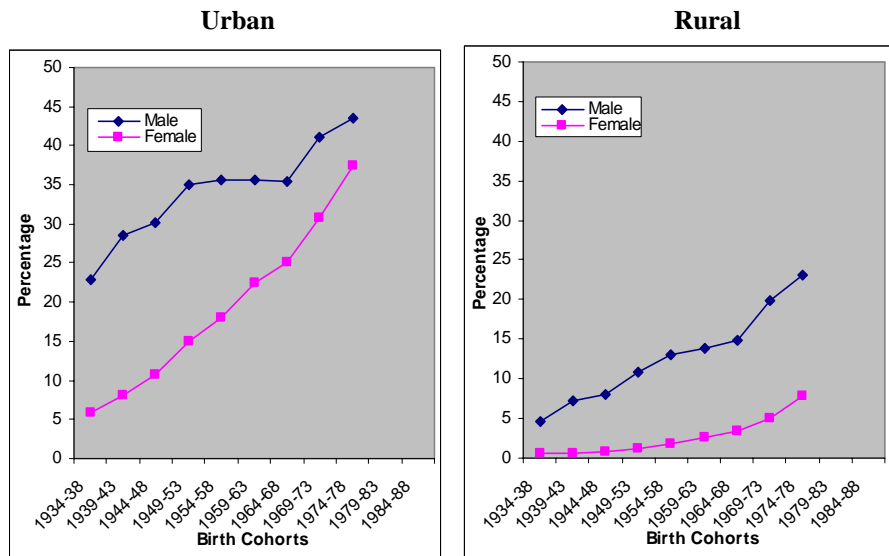
Fig. 2. Primary and Higher Levels Completed by Birth Cohort Series, 1998.

Source: Table 2.

differentials by gender at primary level have reduced considerably among younger cohorts, it appears that elimination of gender gap is possible if special efforts are made to improve schooling opportunities in rural areas.

Figure 3 shows the proportions of males and females with completed secondary and higher levels for birth cohort series for the urban and rural population. It is evident that urban males are somewhat more likely than females to have begun and stayed through secondary school. However, younger cohorts of urban females born during the 1970s and in later years have shown relatively greater increase than males in attaining at least secondary level of education, resulting in diminishing the schooling gender gap in urban areas in recent years.

In rural areas, the rise in proportions completing secondary education is more rapid among younger cohorts of males than females resulting in the widening of the gender gap. For example, the percentage completing at least secondary education is 23.1 for rural males as against only 7.8 for rural females in age cohort of 20-24, indicating almost three times difference in male-female secondary-level attainment. It is evident from Figures 2 and 3 that the urban-rural differences in educational achievement are much greater for secondary and higher levels for both males and females than those observed at primary levels. This suggests that some focused

Fig. 3. Secondary and Higher Levels Completed by Birth Cohort Series, 1998.

Source: Table 2.

interventions need to be undertaken to improve access to secondary-level schools in rural areas, especially for females, in conjunction with creating an enabling environment to motivate them to stay on through these levels.

AGE PATTERN OF ENROLMENT

The proportions of both male and female population attending an educational institution among different age cohorts are presented in Table 3 for total—urban and rural—areas. These proportions specified by age can be a close approximation of net enrolment rates, although the exact level of school attendance is not specified by these data.⁸

As expected, enrolment rates decline sharply by age, with the largest proportion of students attending school in the age cohort of 10-14 years and 15-19 years. For example, 58.4 percent of males and 44.8 percent females of ages 10-14 are attending school which is normally the age for completing the primary and middle level of education. These proportions declined to 37.7 percent for males and 24 percent for females for age cohort of 15-19 years, implying that education beyond primary and middle levels is not pursued by many children eligible for attending secondary school (Table 3).

⁸The 1998 census data provides information on students for ages 5 and above with the highest grade attained, and not on the level they are currently attending which limits the possibility of estimating gross or net enrolment rates by levels of education.

Table 3

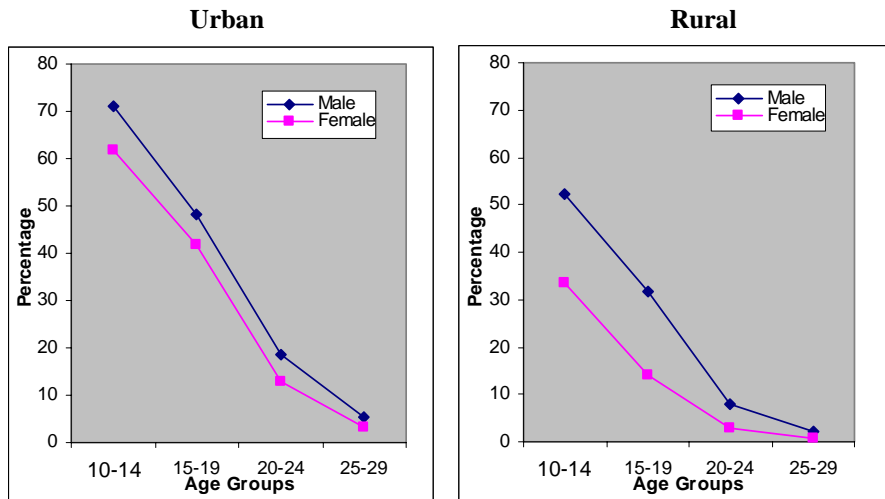
*Percentage Currently Attending School by Age Cohorts and Sex:
for Total, Urban and Rural Areas, 1998*

| Age Group | Total | | | Urban | | | Rural | | |
|-----------|------------|------|--------|------------|------|--------|------------|------|--------|
| | Both Sexes | Male | Female | Both Sexes | Male | Female | Both Sexes | Male | Female |
| 5-9 | 41.3 | 45.0 | 73.3 | 58.0 | 59.1 | 57.0 | 33.8 | 38.3 | 28.8 |
| 10-14 | 52.0 | 45.4 | 44.8 | 68.8 | 71.1 | 61.9 | 43.5 | 52.1 | 33.5 |
| 15-19 | 31.1 | 37.7 | 24.0 | 45.1 | 48.1 | 41.8 | 23.2 | 31.8 | 14.0 |
| 20-24 | 9.2 | 12.1 | 6.3 | 19.9 | 18.5 | 13.0 | 5.4 | 8.1 | 2.8 |
| 25-29 | 2.4 | 3.3 | 1.5 | 4.3 | 5.3 | 3.1 | 1.4 | 2.1 | 0.7 |

Source: *The 1998 Population Census Report* (Table 15).

Another notable feature of Table 3 is that the percentage of population in age cohort 5-9 years is lower than that of 10-14 years age group. This can be explained partly in terms of later entries of children in school than the officially designated age of five years, which results in greater concentration of students in the 10-14 years age group, especially in rural areas. The evidence supporting the attendance of over-age children at the primary level is available from the 1998-99 Pakistan Integrated Household Survey (PIHS) data, which shows that among those children currently enrolled in Grade 1, the age ranges between 4 and 10 years, which is normally the age for attending the 1st Grade through the 5th Grade. While the officially designated age of attending primary level is 5-9 years, the PIHS data indicate that 66 percent of 10-year-olds, 53 percent of 11-year-olds, and 33 percent of 12-year-olds are reported as attending various grades at primary level, and these percentages are even higher for females, which distort the real estimates of enrolment at primary and secondary levels [Federal Bureau of Statistics (2000)]. The much lower level of school attendance for age 20 and above indicates substantial attrition of students beyond secondary levels who have either discontinued education or are past school enrolment age.

Gender differentials in school attendance are apparent in all age cohorts, with larger gaps in the rural than the urban areas. For example, among 10-14 years old children, about 71 percent of males and 61.9 percent of females are reported as currently attending school in urban areas as against 52.1 percent and 33.5 percent in rural areas. This indicates that the gender gap in school attendance of younger children in urban areas has been bridged to a great extent, whereas rural females still lag behind, with large proportions never exposed to schooling. This reinforces the need to raise school enrolment, especially of girls in rural areas, to achieve the objective of universal primary education (Figure 4).

Fig. 4. Percentage Enrolled, By Sex and Urban/Rural Areas, 1998.

Source: Table 3.

TRANSITION IN SCHOOL ATTENDANCE

Selecting the cohort of 15-19-year-olds who ever attended school (including those currently attending), the proportions completing primary (Class 5), secondary (Class 10), and higher secondary (Class 11-12) education are presented in Table 4. Assuming that most students tend to complete primary and secondary levels by ages 15-19 years, we expect to get a good measure of their average educational attainment. The upper secondary (intermediate level) is chosen because the transition from primary and secondary to higher levels is critical for many in terms of the large expenditures involved and the access or physical availability of those schools in proximate areas. Research evidence increasingly shows that financial costs and physical presence or absence of adequate schooling facilities are important factors in determining the expansion of enrolment, increasing attainment, and improving cognitive and life skills, particularly for the rural and poor segments of the population [Sathar and Lloyd (1994); Alderman, *et al.* (1996); Arif and Saqib (2003)].

Table 4 shows that only 28.4 percent of 15-19-year-olds completed primary level among the ever-enrolled students (56.7 percent), reflecting a combination of low school attendance and substantial dropout. The proportion with completed primary level can be an underestimate as some of those persons may still be attending middle or secondary levels and are in the process of completing their education, especially those who enter schools later than the officially designated age

of five years as observed earlier in the age pattern of enrolment. However, among those who have begun school and completed Class 5, the chances of completing secondary level (Class 10) are much higher. For instance, about 77.4 percent of those who completed primary level stay on through secondary school, but thereafter the dropout accelerates rapidly, leaving only 27.3 percent of those who completed Class 10 or so (Table 4).⁹

Table 4

Proportions Attending and Completing School Education and the Transition between Educational Levels for Age Cohort 15-19 Years, 1998

| Area/Sex | Age Cohort 15-19 | | | | |
|------------------------------------|---------------------|---------------|--|---|--|
| | Currently Attending | Ever-attended | Completed Primary of those who Ever-attended | Completed Matric of those who Completed Primary | Completed Intermediate of those who Completed Matric |
| Pakistan | | | | | |
| Both Sexes | 31.0 | 56.7 | 28.4 | 77.4 | 27.3 |
| Male | 37.7 | 66.7 | 27.4 | 80.7 | 25.0 |
| Female | 24.0 | 46.0 | 30.0 | 72.7 | 31.0 |
| Gender Gap (Male-Female) | 13.7 | 20.7 | -2.6 | 8.0 | -6.0 |
| Urban Areas | | | | | |
| Both Sexes | 45.0 | 73.4 | 22.0 | 96.0 | 33.6 |
| Male | 48.0 | 76.4 | 22.1 | 97.0 | 31.3 |
| Female | 41.8 | 70.0 | 22.0 | 95.0 | 36.0 |
| Gender Gap (Male-Female) | 6.2 | 6.4 | 0.1 | 2.0 | -4.7 |
| Rural Areas | | | | | |
| Both Sexes | 23.2 | 47.2 | 34.0 | 52.2 | 19.0 |
| Male | 31.8 | 61.2 | 31.2 | 61.6 | 18.8 |
| Female | 14.0 | 32.5 | 39.8 | 37.7 | 19.0 |
| Gender Gap (Male-Female) | 17.8 | 28.5 | -8.6 | 23.9 | -1.1 |

Source: The 1998 Population Census Data.

Table 4 further shows that although larger proportions of males aged 15-19 years ever attended school, the transition percentage between the primary and secondary level completion is to some extent different from that of females. For instance, of about 66.7 percent of males who ever attended school, only 27.4 percent reported completing the primary level. Of these, about 80.7 percent stayed through Grade 10, and thereafter only 25 percent completed the upper secondary level,

⁹The dropout rates are simulated as we are deriving the value implied from the cross-section of 15-19-year-olds. For example, the simulated dropout rate of primary level is the ratio of the completion of Grade 5 to the completion of the next Grade/Level, and so on.

indicating about 20 percent of dropouts after completing primary levels and substantial decrement of students after completing secondary (Class 10) education. Compared with this, 46 percent of females in age cohort of 15-19 years ever attended school, and 30 percent completed primary level schooling. Of these, about 72.7 percent attained the secondary level, and thereafter 31 percent continued through the upper secondary/intermediate level of education. A noteworthy finding to emerge from these results is that the transition percentage of the upper secondary level is higher for females than for males (31 percent vs. 25 percent). To interpret these results, it appears that as fewer females than males ever attended school (46 percent vs. 67 percent), the ones who began schooling and continued through secondary levels are a more select group with greater than average motivation and ability to attain higher education.

In urban areas, gender differences in transition percentages are almost non-existent, with large proportions continuing through secondary levels. In rural areas, on the other hand, not only lower proportions of females ever attended school; the dropout chances in the initial primary school years are much higher for them at both primary and secondary attainment levels than that of males. These results reinforce the findings from other studies, which show high percentages of both male and female students leaving school without completing even primary levels.

ISSUES IN REACHING UNIVERSAL PRIMARY-LEVEL ATTAINMENT

The policy goal to achieve universal educational attainment through primary or even elementary education has a high priority in Pakistan's development agenda. An important question to be addressed in this context is about what remains to be accomplished to realise this goal. Examining the attainment profiles in Figures 1-3 makes it clear that it is mostly the female population that shows low school entries to begin with, and shows lower chances of completing primary and secondary levels of education. However, previous evidence from Pakistan shows that the shortfall in universal attainment (value of 100) of primary-level education varies across different socio-economic sub-groups of population [Federal Bureau of Statistics (2002); Arif, Saqib, and Zahid (1999); Sathar and Lloyd (1994)]. The attainment deficit problem in Pakistan's educational system is essentially related to low enrolment accompanied by low retention at primary level, especially of girls in rural areas. In this regard, a thorough analysis of local conditions and school environment that contribute to low educational attainment is needed to draw firm conclusions for a given situation. The age cohort attainment profiles, nonetheless, give initial insights into the issues of reaching universal primary-level attainment and provide the guidelines for policy action.

Because of absence of legislation for compulsory primary schooling, or for lack of enforcement wherever enacted, the chances of opening up of new schools and

obtaining the required financial and managerial inputs are obscure. Moreover, the substantial school costs prevent many parents from either enrolling or retaining their children in school. Evidence suggests that the bulk of the deficit comes from poor families, especially in case of decisions relating to girls' schooling [Holmes (2003); Arif, Saqib, and Zahid (1999); Sathar and Lloyd (1994)]. These studies suggest that most girls tend to drop out, or are withdrawn in initial years of schooling for both economic and socio-cultural reasons. Among economic reasons, besides direct schooling costs such as fees, uniform, books etc., opportunity costs of sending female children to school in the rural areas are high due to their low labour market returns and increased time and travel costs involved in escorting them to middle or high schools at distant places [Holmes (2003); Sathar and Lloyd (1994)]. Moreover, the lack of single-gender schools at middle and secondary level in nearby places has been reported as a major deterrent to girls' continuation beyond primary level education [Alderman, *et al.* (1996)].

Hence, the key to achieving universal primary enrolment and closing the gender gap in educational attainment are actions that may raise the demand for schooling for girls, especially among rural and poor families. At the same time, the availability and access to quality schools can not be ignored; it is an important ingredient needed to motivate and retain children in school. For instance, in urban areas, where accessibility to schools is higher, children are more likely to enter primary and secondary education; in the rural areas, children need to travel long distances to access schooling. Further on from these factors, however, the question of improving school availability/access or raising the demand for schooling requires more research at micro level to ascertain what specific actions would bring more positive education outcomes in terms of reaching universal attainment and closing the gender gap.

CONCLUSIONS

Age cohort analysis of the 1998 census data on school attendance and educational attainment reveals that there has been a substantial rise in school attendance and educational attainment among younger age cohorts of 10-14 and 15-19 years, contributing to an improvement in the overall level of literacy since mid-1980s. However, wide gender differences in educational attainment of primary and secondary levels still persist across all age cohorts in rural areas, whereas such differences have almost disappeared in younger age cohorts in urban areas. A rapid acceleration in educational attainment of primary and secondary levels of urban females relative to males among more recently born cohorts has contributed to bridge the gender gap, while rural females still remain almost half way that of males for age cohort of 15-19 years. Improvement in urban schooling differentials by gender also suggests that elimination of gender gap is possible if concerted efforts are made to increase rural school enrolment.

The pattern of school transition in terms of the percentages completing primary and secondary school reveals that among those who have begun school and completed Class Five, the chances of staying on through secondary level are much higher, but thereafter the drop out accelerates rapidly, particularly for rural females. The disadvantaged situation of females is reflected by a combination of low school entries/attendance to begin with, and high chances of discontinuing education before completing primary levels. These results confirm the findings of the earlier studies indicating substantial drop outs after completing primary (Class 5) and secondary (Class 10) levels, with more distinct attrition in the rural than the urban areas.

Two overall conclusions emerge from these results. First, the bulk of the deficit from universal primary education comes from female population, especially in rural areas, where the majority of the population lives. Second, the key to reducing the gender gap in school attendance and educational attainment lies in actions that raise the demand for schooling of girls with equally-matched availability of quality schools at the primary and secondary levels.

From the policy point of view, focusing only on raising the demand for schooling, especially of girls, will not be enough to achieve the desired results; improving access and quality of schools are equally important to retain both males and females in school. It appears that Pakistan needs to go a long way to achieving universal primary level education. Reaching this goal by 2015 as mandated in the Millennium Development Goals (MDGs) seems to be a tall order. The task requires substantial increment of financial allocations to primary education in order to increase the number of all-girls schools, especially for secondary level in rural areas, and to reduce the relative economic and social costs of school attendance for the rural and poor segments of the population.

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