UNEMPLOYMENT AND YOUTH INSERTION IN THE LABOR MARKET IN EGYPT

Ragui Assaad
Working Paper No. 118
February 2007

The author gratefully acknowledges the excellent research assistance provided by Niveen El-Zayat in the preparation of this paper.

Abstract

Using data from the recently released Egypt Labor Market Panel Survey (ELMPS) of 2006, the study shows that there has been a decline in both the relative and absolute size of unemployment in Egypt in the period from 1998 to 2006. This study presents detailed evidence in support of this assertion, including the process of labor market entry for youth. Three explanations are provided for the decline in unemployment: (i) the slow-down in the growth of the working age population and the shift of the age structure of the youth population away from the 15-19 age group, which had the highest unemployment rates in 1998; (ii) the slowdown in government hiring, which reduced the incentive of female graduates to remain unemployed while queuing for government jobs and withdraw instead from the labor force; (iii) the acceleration of employment growth in the private sector, leading to earlier transitions into employment, at least for young male new entrants.

ملخص

استنادا إلى نتائج "البحث التتبعي لدراسة خصائص سوق العمل في جمهورية مصر العربية لعام ٢٠٠٦"، توضح هذه الدراسة أن البطالة في مصر، سواء بحجمها المطلق أو النسبي، قد شهدت انخفاضا خلال الفترة من عام ١٩٩٨ إلى عام ٢٠٠٦. وتعرض هذه الدراسة بالتفصيل الأدلة المؤيدة لهذه النتيجة، بما فيها الشواهد المتعلقة بعملية دخول الشباب إلى سوق العمل. وتطرح الدراسة ثلاثة تفسيرات لهذا التراجع في معدلات البطالة. أولا، بطء النمو السكاني لمن هم في سن العمل، والتحول في الهيكل العمري للسكان الشباب بعيدا عن الفئة العمرية ١٥-١٩ سنة، والتي كانت تعاني من أعلى معدلات البطالة في عام ١٩٩٨. ثانيا، بطء التوظيف الحكومي، مما قلل من الحافز لدى الخريجات لأن يبقين بدون عمل أملا في الحصول على الوظائف الحكومية، ودفعهن بدلا من ذلك إلى الانسحاب من سوق العمل. وثالثا، تسارع نمو التوظيف في القطاع الخاص، مما قلل من فترة الانتظار للحصول على فرصة عمل، على الأقل بالنسبة للداخلين الجدد إلى سوق العمل من الشباب.

1. INTRODUCTION

It is well-established by now that the unemployment problem in Egypt is essentially one relating to the labor market insertion of a growing and increasingly educated youth population. The vast majority of the unemployed are under the age of 30, educated at least up to the intermediate level, and have never worked before. An analysis of the dynamics of unemployment in Egypt must, therefore, focus on the process of labor market entry and examine the demographic, economic and institutional factors that shape this process.

Using data from the recently released Egypt Labor Market Panel Survey (ELMPS) of 2006, the study shows that there has been a decline in both the relative and absolute size of unemployment in Egypt in the period from 1998 to 2006. This result is puzzling to many and understandably has been met with a degree of skepticism, if not outright rejection. It thus requires some detailed scrutiny and, if confirmed, some explication. This paper presents detailed evidence in support of a declining rate and level of unemployment in Egypt, as well as supporting evidence on the process of labor market entry for youth. It also presents what is regarded as a credible explanation for these trends on the basis of demographic, institutional and economic arguments.

With regards to unemployment indicators, the paper relies essentially on international recommendations to define unemployment and economic activity, but presents estimates based on some variations in definitions that are still consistent with international recommendations. The main variations have to do with the operationalization of the active search requirement in determining who is unemployed and the use of the market or extended definition of economic activity in determining who is employed. The picture of declining unemployment is essentially robust to these changes in definitions, although the levels and rates themselves clearly change according to the definition used.

After examining the evidence of unemployment rate, the number of unemployed, and the pattern of unemployment by sex, urban/rural location, age and education, the paper examines the reasons for unemployment in an attempt to determine whether unemployment is voluntary or involuntary. It then moves to a detailed examination of the process of labor market insertion, including an analysis of how the duration of unemployment has changed over time and how the duration from school to work has changed. It finds that for young men, labor market insertion is occurring faster in 2006 than it was in 1998. Both the period of

transition from school to work is shorter in 2006 than in 1998, and the unemployment durations are shorter as well. For young women, the reduction of unemployment appears to be at least partly due to greater withdrawal from the ranks of the unemployed into economic inactivity rather than to more rapid entry into employment. This contrast along gender lines is quite important and requires careful analysis and interpretation. In either case, however, the change in the labor market insertion process for both males and females is consistent with falling unemployment rates.

To gain further understanding of the process of labor market insertion and how it is changing over time, the study moves to an examination of the trend in the number and composition of new entrants over time and of the labor market prospects that they face. This is made possible by an innovation in the ELMPS 06 that allows us to identify not only the timing of entry into the labor market, but also the detailed characteristics of the first job (that lasted more than six months) for everyone in the survey that has ever worked before, irrespective of their current labor market status. Because this information is available for people who entered at different times, it allows us to characterize the labor market facing new entrants from as far back as 1975 to the latest full year covered by the survey, 2005.

In terms of explicating the trend of falling unemployment at a time when it seems so counterintuitive to so many, this paper offers the following explanation. Unemployment in Egypt is essentially driven by three essential factors: (i) the growth and age composition of the working age population, (ii) the institutional distortion introduced by government hiring policies that induce queuing for government jobs among educated workers, and (iii) the rate of economic growth that drives the growth of employment in the private sector. In terms of all three of these factors, the situation in 2006 has objectively improved over what it was in 1998. Demographically, the growth of the working age population has slowed and the age structure of the youth population has shifted away from the 15-19 age group, which experienced the highest unemployment rates in 1998, to the 20-24 age group. This resulted in a compositional shift away from the ages with the highest levels of unemployment and a drop in unemployment among younger youths. Institutionally, the government has significantly slowed its hiring, reducing the incentive of graduates, especially female graduates, to remain unemployed while queuing for government jobs. The removal of this incentive to queue actually resulted in many female graduates, whose reservation wage was above the private sector wage but below the government's overall compensation package, to simply withdraw

from the labor market rather than continue to declare themselves to be unemployed. This essentially explains the observed drop in participation rates among technical secondary and post-secondary graduates in the 1998-2006 period. Finally, economically, the pickup in growth rates in the 2003-2006 period has resulted in an acceleration of employment growth in the private sector, leading to earlier transitions into employment, at least for young male new entrants.

The remainder of this paper will present a brief description of the data used in this analysis, examine the trend in youth unemployment, the characteristics of the unemployed, and the search strategies they utilize, and finally attempt to lay out the evidence supporting the argument laid out above regarding the factors behind the decline in youth unemployment.

2. THE EGYPT LABOR MARKET PANEL SURVEY OF 2006 (ELMPS 06)[1]

The Egypt Labor Market Panel Survey (ELMPS 06) is a follow-up survey to the Egypt Labor Market Survey of 1998 (ELMS 98), which was carried out in November-December 1998 by the Economic Research Forum (ERF) in cooperation with the Egyptian Central Agency for Public Mobilization and Statistics (CAPMAS)—the main statistical agency of the Egyptian government. ELMS 98 was carried out on a nationally-representative sample of 4,816 households[2] and was designed to be comparable to the special round of the Egyptian Labor Force Sample Survey carried out in October 1988 (LFSS 88). The ELMPS 06 is the second round of what is intended to be a periodic longitudinal survey that tracks the labor market and demographic characteristics of the households and individuals interviewed in 1998, any new households that might have formed as a result of splits from the original households, as well as a refresher sample of households to ensure that the data continue to be nationally-representative. The field work for ELMPS 06 was carried out from January to March 06.

Sample

The final sample of 8,349 households is made up of 3,684 households from the original ELMS 98 survey, 2,167 new households that emerged from these households as a result of splits, and a refresher sample of 2,498 households. Of the 23,997 individuals interviewed in 1998, 17,357 (72 percent) were successfully re-interviewed in 2006, forming a panel that can

[1] The Labor Force Sample Survey (LFSS) 1988 and ELMS 1998 are described in some detail in Assaad (2002)
[2] The five border governorates of Matruh, New Valley, Red Sea, North and South Sinai were excluded from the original sample due to their remoteness and limited populations.

be used for longitudinal analysis. The 2006 sample contains an additional 19,743 "new" individuals. Of these 2,663 individuals joined the original 1998 households, 4,880 joined the split households, and 12,200 were part of the refresher sample of households.

The original sample of the ELMS 1998 was selected from 200 primary sampling units (PSUs) across Egypt. Urban PSUs were over-sampled and constituted 140 of the total and rural PSUs made up the remainder. The 1998 sample was a two-stage stratified random sample selected from a master sample prepared by CAPMAS. The PSUs included in the master sample were selected according to the probability proportional to size (PPS) method. The refresher sample of 2,500 households was selected from an additional 100 PSUs randomly selected from a new master sample prepared by CAPMAS, of which 46 were urban PSUs and 54 were rural PSUs.

The attrition that occurred in the original 1998 sample was mostly random in nature since it resulted from the loss of records containing identifying information for the 1998 households at CAPMAS. Of the 1,115 households that could not be re-interviewed, 615 are due to loss of records and the remainder is made up of expected losses due to total relocation of the household, death of all household members, or refusal to participate in the survey.[3]

Questionnaire

The questionnaire for the ELMPS 06 is closely based on that used in the ELMS 98 to ensure comparability of the data over time, but adds to the earlier questionnaire several critical modules that would permit a more in-depth study of marriage dynamics in Egypt. The questionnaire is composed of three major sections: (i) a household questionnaire administered to the head of household or the head's spouse that contains information on basic demographic characteristics of household members, movement of household members in and out of the household since 1998, ownership of durable goods and assets, and housing conditions, (ii) an individual questionnaire administered to the individual him or herself containing information on parental background, detailed education histories, activity status, job search and unemployment, detailed employment characteristics, migration histories, job histories, time use, earnings, fertility, a module on costs of marriage, and a module on women's work, (iii) a household enterprise and income module that elicits information on all agricultural and non-

[3] For more details, see Barsoum (2006).

agricultural enterprises operated by the household as well as all income sources, including remittances and transfers.

For the purpose of this paper, one of the main innovations of the ELMPS 06 questionnaire is the collection of data on the detailed characteristics of the first job. Combined with information on the timing of labor market entry, this information can provide an excellent description of the labor market conditions facing new entrants over time. Although the previous two surveys included job histories as well, the histories contained information on the current job and the two jobs (or labor market statuses) previous to it, which may or may not include the first job. Since the information on first job is now collected for all those who ever worked before, including those who have currently retired or withdrawn from the workforce, it does not suffer from the problem of selective exit from the sample, except due to reasons of death or migration abroad. It is however subject to the same recall problems that all retrospective questions suffer from.

In an addition to the unemployment module of the survey, several questions on the use of fixed and mobile phones, the internet, and personal computers in job search were added.

3. The Evolution of Unemployment in the Egyptian Economy

Unemployment is clearly a major concern in Egypt and it is therefore essential to ensure that, at least the trend in unemployment, if not the level itself, is measured accurately. According to six different estimates based on various definitions of unemployment and of economic activity, unemployment has declined across the board in the 1998-2006 period, after having risen significantly in the 1988-98 period. Although the decline is fairly broad, cutting across urban and rural areas, and across regions, rural areas appear to have experienced a sharper decline in unemployment than urban areas, and most surprisingly the decline is greatest in rural Upper Egypt. The study will examine these various estimates after a brief discussion of the definitions used to obtain them.

3.1 Definitional Issues

This study uses three definitions of unemployment—standard, broad, and narrow—with the main difference between them being the way in which the search requirement is operationalized. I also use two definitions of economic activity—the market and extended definitions—which differ in whether production and process of primary goods for own

consumption is treated as economic activity or not. The combination of these two sets of definitions leads in all to six estimates of the number of unemployed and the unemployment rate. The market definition of economic activity is not available in the LFSS 1988, so any comparisons with 1988 involve the extended definition only.

All three definitions of unemployment we use require that the individual not to have worked a single hour or to have been attached to a job during the week prior to the interview, to have desired work and been available to start work within two weeks of getting a job offer. The differences among them lie in the way the active search requirement is operationalized. The *standard* definition requires that the individual have engaged in some search activity, but, in keeping with previous Egyptian practice, some of this search activity need not be limited to a three-month reference period prior to the interview. Specifically, if the individual had signed up to the centralized graduate employment queue or registered in a public employment office, they are considered to be searching even if such an application or registration was prior to the three-month reference period. Other methods of searching must have occurred within the three-month reference period for the individual to be considered searching for work. The *narrow* definition requires that the individual engage in active search by a method other than registering in a public employment office during the three months prior to the interview. The *broad* definition drops the search requirement altogether and thus includes the discouraged unemployed among the ranks of the unemployed. All that is needed for someone to count as unemployed under the broad definition is to be not working, desiring to work and to be available for work within two weeks of getting an offer. Hence, among the three definitions the broad one provides an upper bound, the narrow definition a lower bound and the standard definition falls somewhere in between.

Under the *market* definition of economic activity, only work for the purpose of producing goods and services for market exchange counts as work, so that subsistence workers can be considered unemployed if the rest of the definition of unemployment applies to them. Under the *extended* definition, any work for the purpose of producing or processing primary goods for own household consumption—i.e. subsistence work—also counts as economic activity. As such, a person engaged in such subsistence economic activity would not count as unemployed even though they may be desiring, available, and searching for market work. Thus, the use of the extended definition of economic activity reduces the estimate of the number of unemployed compared to the market definition. More importantly,

it reduces the estimate of the unemployment rate even more because it significantly increases the estimate of the labor force, which is in the denominator of the unemployment rate.

3.2 Estimates of Aggregate Unemployment

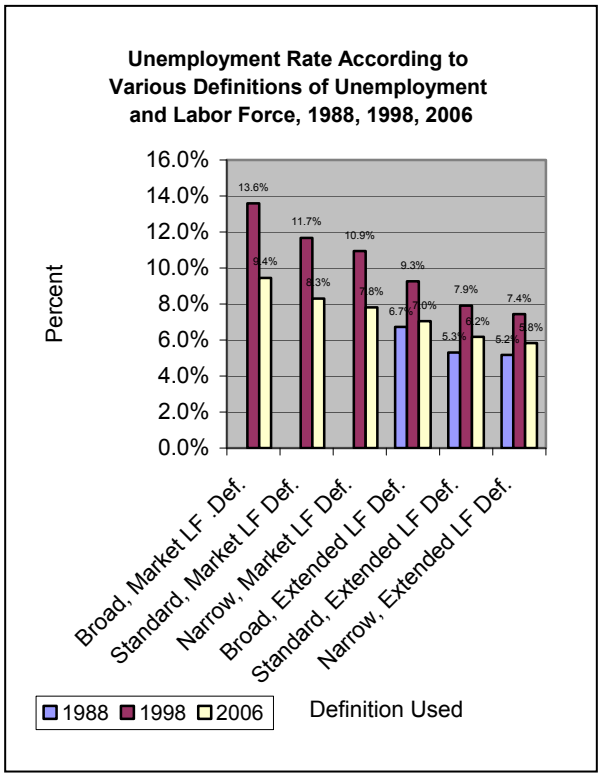
As shown in figures 1a and 1b, the rate of unemployment and the number of unemployed have declined or remained the same between 1998 and 2006, according to all six estimates used. Within the market definition of economic activity, the standard definition of unemployment shows that the rate of unemployment has fallen from 11.7 percent in 1998 to 8.3 percent in 2006, a 30 percent relative decline. The absolute number of unemployed has decreased from 2.0 million to 1.9 million in the same period. The other estimates using the market LF definition show similar declines.

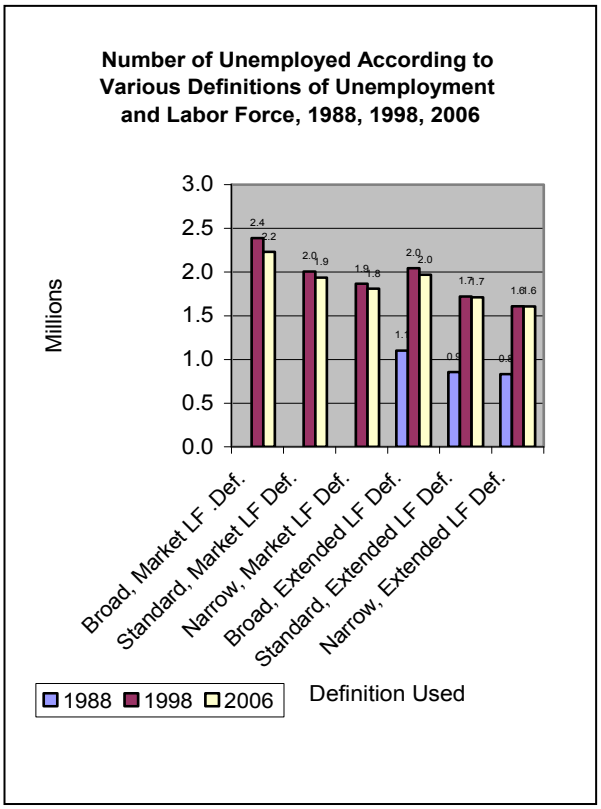
The estimates based on the extended definition of economic activity can be compared to 1988 and can therefore give us a trend across a longer period. The main pattern here is that unemployment rates in 2006 have essentially gone back to close to what they were in 1988, although the number of unemployed has clearly increased significantly compared to 1988. The magnitudes of relative decline in the unemployment rates between 1998 and 2006 using the extended definition are slightly lower than those found using the market definition and the number of unemployed shows stability rather than decline with this definition.

As mentioned above, the difference between the broad and standard definitions is made up of the discouraged unemployed who did not engage in any search activity, although they report desiring to work and being available for it. By the market definition of economic activity, the number of discouraged unemployed has gone from 381 thousand in 1998 to 296 thousand in 2006, a 22 percent relative decline. The numbers are slightly lower based on the extended definition, but the trend is the same. By this definition, there are slightly more discouraged unemployed in 2006 than there were in 1988 (259 thousand vs. 246 thousand).

The difference between the standard and narrow definitions is made up of people who have done no other search activity except register in a public employment office or with the centralized graduate employment scheme. This is a fairly good indicator of those who are exclusively searching for a public sector job. The number of "government-only" searchers by the market labor force definition has also declined from 1998 to 2006 from 141 thousand to 125 thousand, a rate of decline of 11 percent.

Figure 1b





3.3 The Pattern of Unemployment by Sex, Urban/Rural Location, and Region

The detailed results on the pattern of unemployment by sex and urban/rural location according to all six definitions of unemployment used and for the discouraged unemployed and the "government-only" searchers are shown in Appendix tables 1 and 2. The following discussion will focus on the results for the standard definition of unemployment using the market and extended definitions of the labor force, and will refer to the estimates obtained from the other definitions only if they add to the analysis.

As shown in figure 2a, men started with significantly lower unemployment rates than women, but their rates declined at about the same relative rates, going from 7.0 percent to 4.7 percent as compared to women's, which went from 27.6 percent to 18.6 percent, maintaining a female to male ratio of unemployment of about 4:1. The decline in unemployment was proportionally greater in rural areas, which went from 12.2 percent to 7.0 percent, than in urban areas, which went from 11.0 percent to 10.0 percent. Both men and women in rural areas experienced a near halving of their unemployment rates.

As shown in figure 2a, the highest rates of unemployment in 1998 were recorded for rural females (33.3 percent). Their rates were about 50 percent higher than those for urban

females and nearly five times as high as those of urban males if the standard definition is used. By 2006, rural female unemployment rate had dropped significantly from 33.3 percent to 17.4 percent, and is now lower than that of urban females, which is 20.0 percent. This sharp decline in rural female unemployment rates requires further analysis because it is unlikely that labor markets for educated rural women, who are the ones most likely to report unemployment, has improved this much.

While we will get back to this issue later, suffice it to say that the sharpest drop in the number of rural female unemployed was among the "government-only" searchers, i.e. women who did nothing but register in a government employment office. Their absolute numbers decline from 86 thousand in 1998, or 14 percent of rural female unemployed, to 59.5 thousand in 2006, or 10 percent of rural female unemployed. This is a clear indication that many educated rural women who were queuing for government jobs in 1998 have given up hope of getting such jobs and are now simply not seeking work at all. They are not even among the discouraged unemployed, because the number of the latter has declined. Many of them have left the labor force altogether as indicated by falling participation rates among educated women.

The sex and urban/rural patterns of unemployment are quite similar if we use the extended definition of economic activity, but now we are in a position to compare with 1988. As shown in figure 2b, the downward trend between 1998 and 2006 holds for all subgroups using the extended definition, but, in this case, the reduction for women is relatively less than for men because the extended female labor force did not grow at the same pace as the market female labor force.

The observed broad-based decline in unemployment rates in the 1998-06 period comes after a period of fairly widespread increases in unemployment in the previous decade. According to the estimates based on the extended definition, which are the only ones available for 1988, standard unemployment is still higher in 2006 (6.2 percent) than it was in 1988 (5.3 percent) (see figure 2b). This result holds for both males and females and for urban and rural areas. It is only for urban females that unemployment, according to the extended definition of economic activity, is actually lower in 2006 than it was in 1988.

Figure 2a

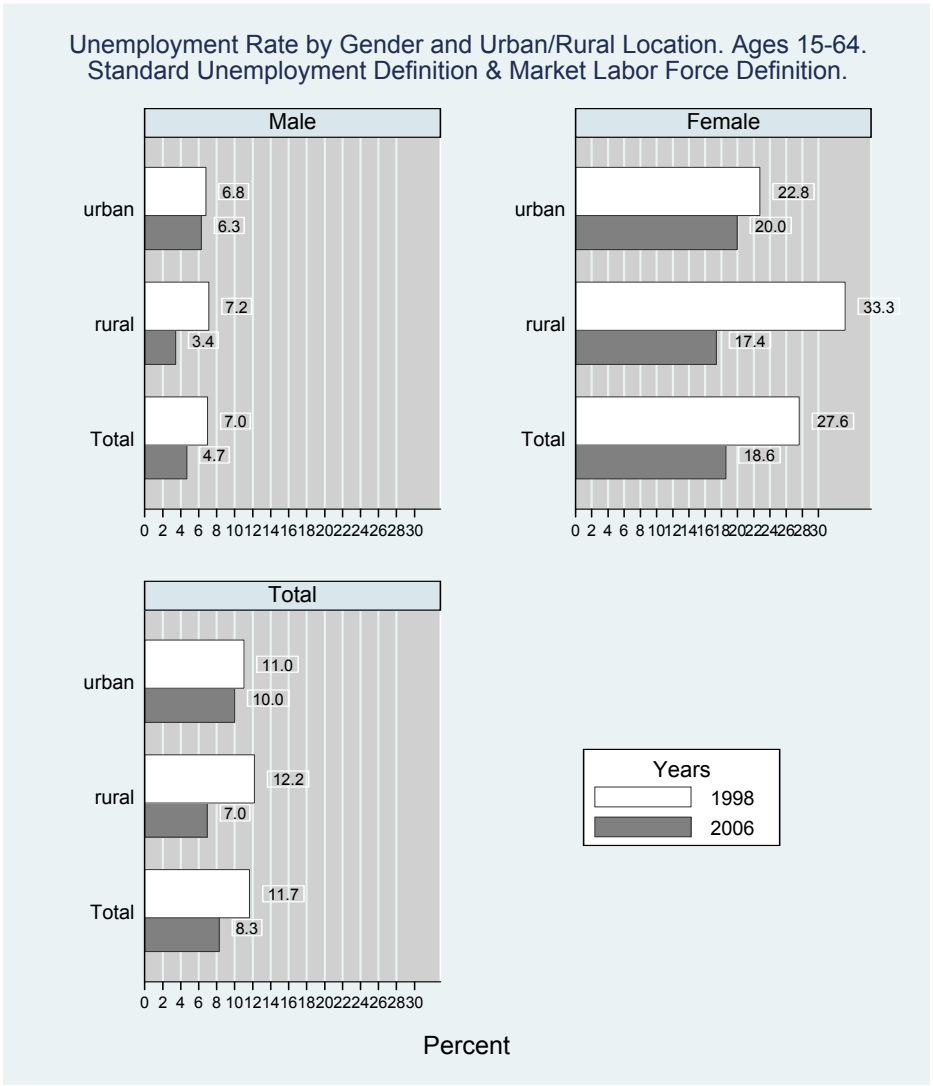
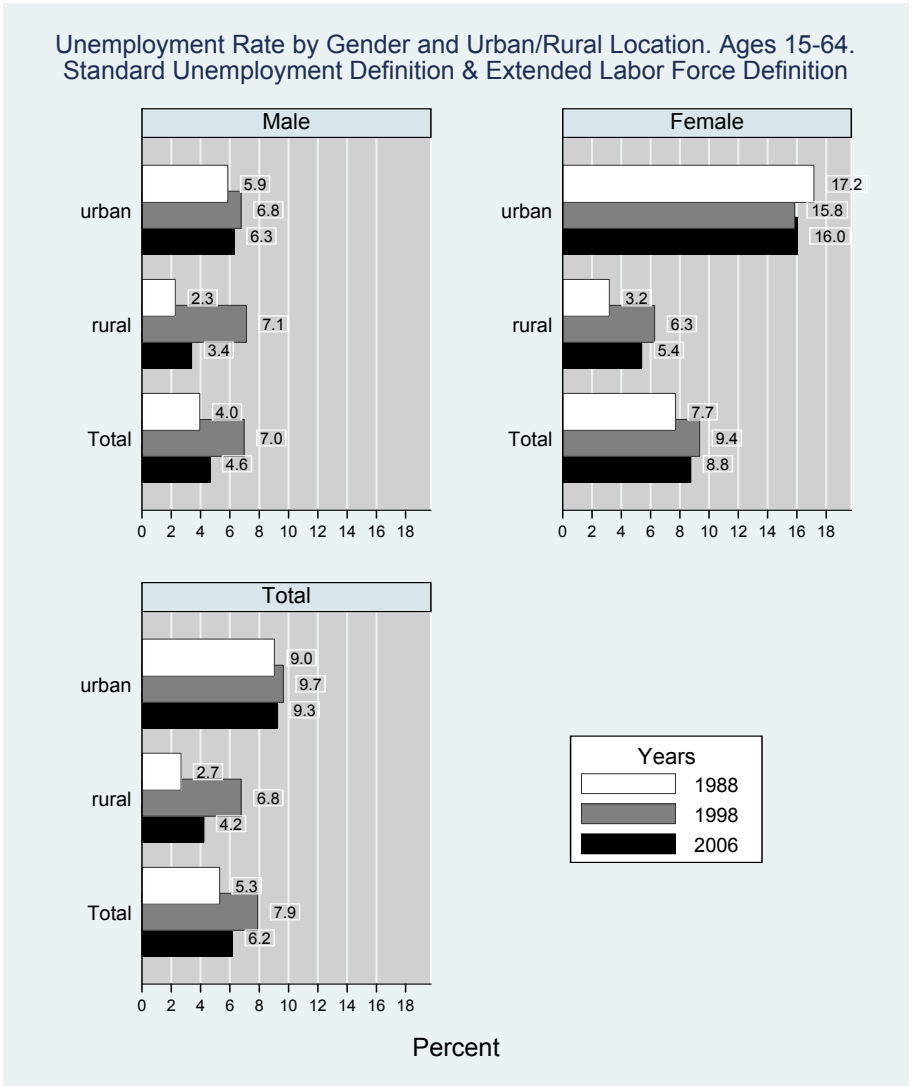


Figure 2b



The regional pattern of unemployment is shown in figures 3a and 3b according to the standard definition of unemployment and the market and extended definitions of economic activity, respectively. Again, the study will focus the discussion on the standard definition using the market definition of economic activity, but the observed patterns are generally consistent across definitions. Greater Cairo is the only region that saw no decline in unemployment in the 1998-2006 period, although it started out at fairly low levels compared to the national average. In fact, the unemployment rate in Greater Cairo increased for males from 5.4 percent to 6.9 percent, leading to an increase in the overall unemployment rate. The decline was fairly even in relative terms in all the other urban regions, which include Alexandria and the Suez Canal Cities, as well as urban Upper and Lower Egypt. The greatest decline in unemployment was in the two rural regions, where it declined by 39 percent in rural Lower Egypt and 45 percent in rural Upper Egypt.[4]

Lower Egypt, with both its urban and rural sub-regions, was the region with the highest unemployment rates in 1998. Urban Lower Egypt continues to be the highest unemployment region in 2006, but unemployment rates in rural Lower Egypt are now below those of all urban regions except for that of urban Upper Egypt. Female unemployment rates in Lower Egypt remain particularly high at 31 percent in urban areas and 26.5 percent in rural areas of the region. These persistently high unemployment rates among women in Lower Egypt reveal an increasing desire to seek work among an increasingly educated young female population, but with suitable work opportunities for these young women being still fairly limited.

[4] It should be noted that by the extended measures the decline in both standard and broad unemployment was greater in rural Lower Egypt than in rural Upper Egypt.

Figure 3a

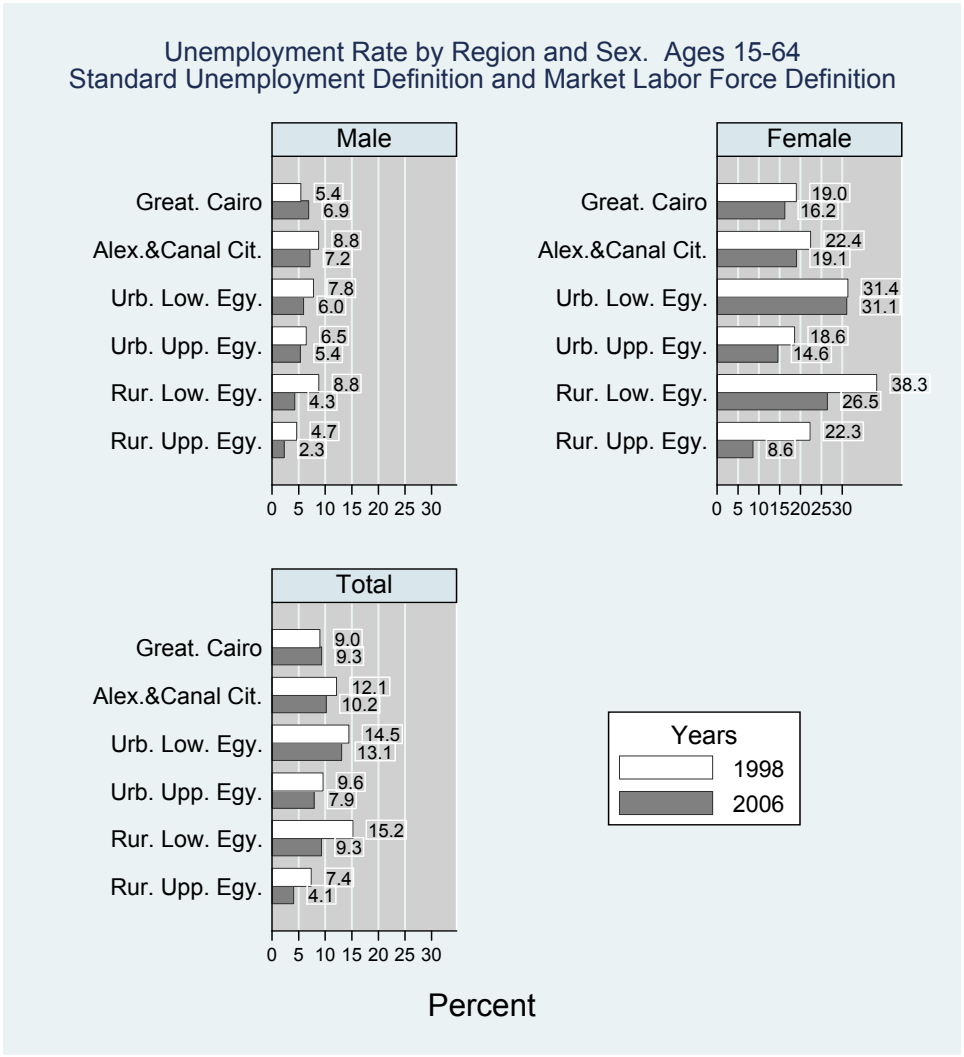
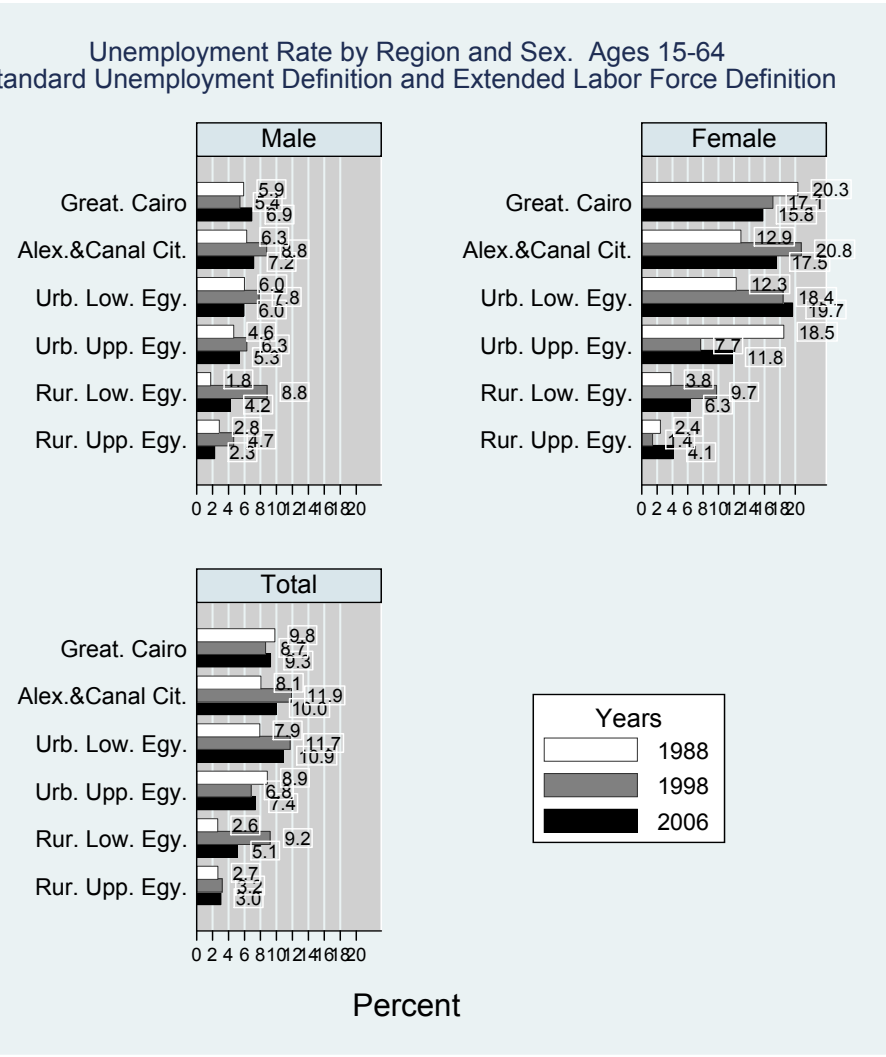


Figure 3b



3.4 The Age Pattern of Unemployment

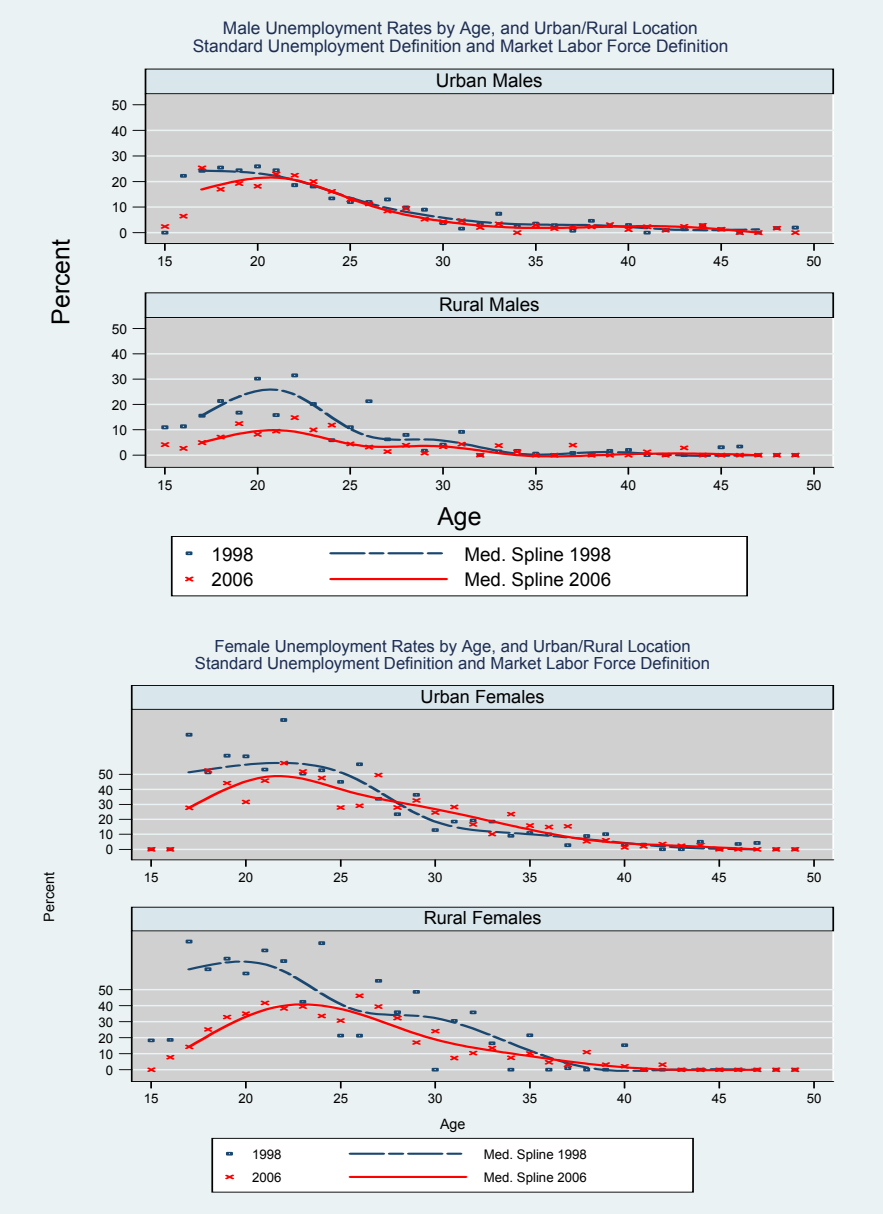
It is well-established that unemployment in Egypt is essentially a labor market insertion phenomenon, meaning that it essentially affects youth. As the youth bulge ages, we would expect unemployment rates to decline unless the age pattern of unemployment changes and rates increase at older ages as the bulge moves into these ages. This has fortunately not been the case in Egypt over the 1998-06 period, at least for males. As shown in figure 4, the highest unemployment rates are reached during the age interval 18-23, the age of completion of secondary school and university degrees and, therefore, first labor market entry. Peak unemployment is at a slightly older age for females than for males. Moreover, urban females are the only group for which unemployment seems to be shifting to older ages as the youth bulge ages. For other groups the age profile is either stable or shifting downward.

In urban areas unemployment rates for very young male youths (15-18) have declined, as their share of the population declined. In rural areas, all young males have experienced a sharp decline in unemployment. Comparison with 1988, using the extended definition of economic activity, shows that male youth unemployment is just slightly higher in 2006 than in 1988.

For females, the lower left-hand corner of figure 4 shows that unemployment rates using the market definition of economic activity have declined for urban females under the age of 27, with the more significant declines experienced by those 15-19 years old. There is evidence of an increase in female unemployment rates in urban areas for women between the ages of 27 and 35, an indication that unemployment is shifting to older ages among urban females. In rural areas, the decline in female unemployment is larger and extends all the way to age 35. The picture for women using the extended definition of unemployment is not much different (lower right quadrant of figure 4). While unemployment rates in 2006 are lower for 15-19 year-old women than in 1988, they are higher than in 1988 for women 25-34. Thus it appears that the aging of the youth bulge is negatively affecting young adult women in this age range.

To understand how the age pattern of unemployment translates into changing overall unemployment rates, we need to analyze it in light of the changing age structure of the population. Figures 5a and 5b show the age distribution of the population from 1988 to 2006 in urban and rural areas. What is immediately apparent from these figures is that a child bulge

Figure 4


Male Unemployment Rates by Age, and Urban/Rural Location
Standard Unemployment Definition and Market Labor Force Definition
Urban Males
Rural Males
Percent
Age
1998
2006
Med. Spline 1998
Med. Spline 2006
Female Unemployment Rates by Age, and Urban/Rural Location
Standard Unemployment Definition and Market Labor Force Definition
Urban Females
Rural Females
Percent
Age
1998
2006
Med. Spline 1998
Med. Spline 2006

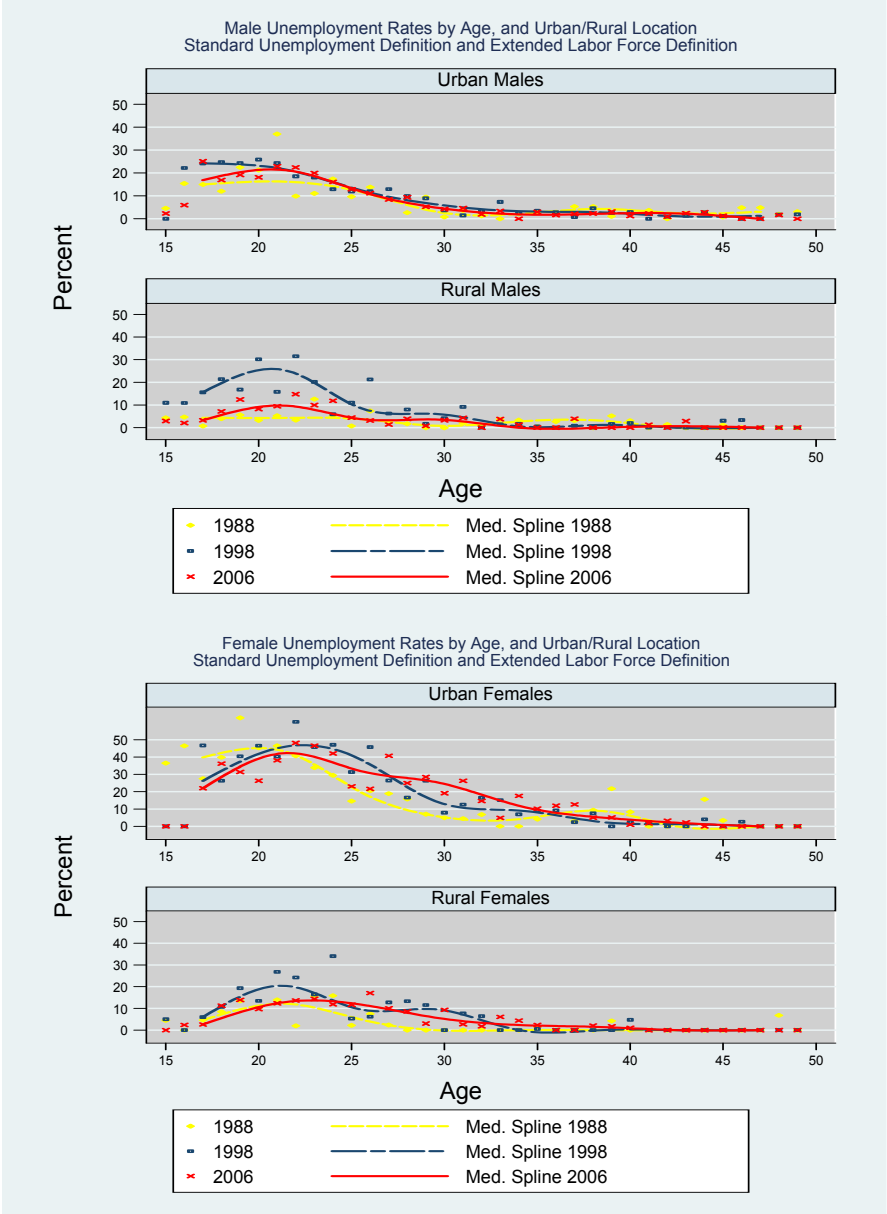

Male Unemployment Rates by Age, and Urban/Rural Location
Standard Unemployment Definition and Extended Labor Force Definition
Urban Males
Rural Males
Percent
Age
1988
1998
2006
Med. Spline 1988
Med. Spline 1998
Med. Spline 2006
Female Unemployment Rates by Age, and Urban/Rural Location
Standard Unemployment Definition and Extended Labor Force Definition
Urban Females
Rural Females
Percent
Age
1988
1998
2006
Med. Spline 1988
Med. Spline 1998
Med. Spline 2006

Figure 5a

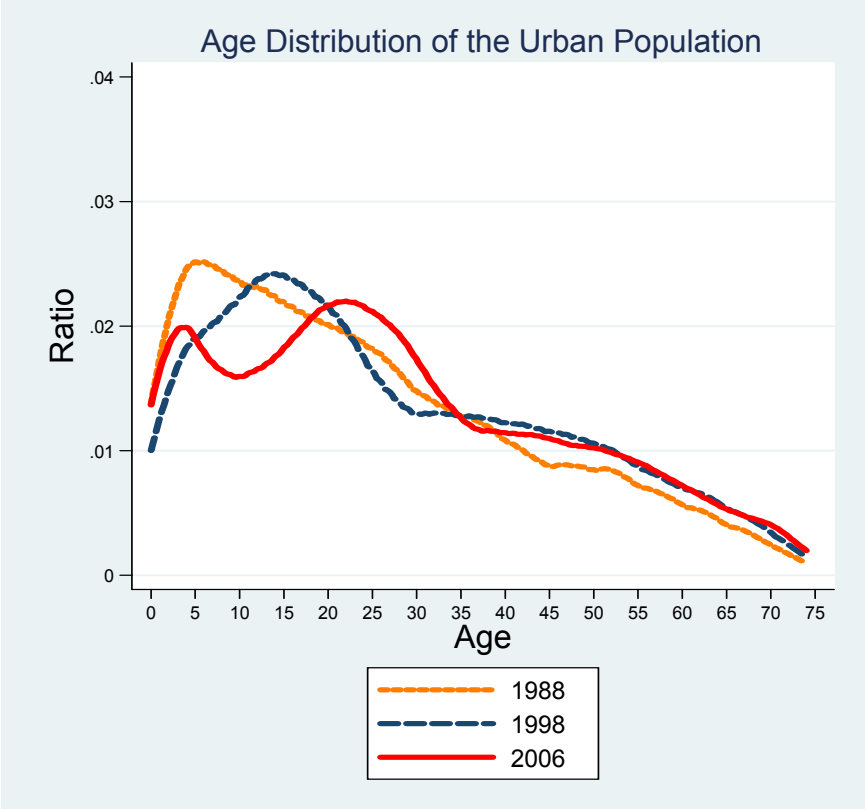
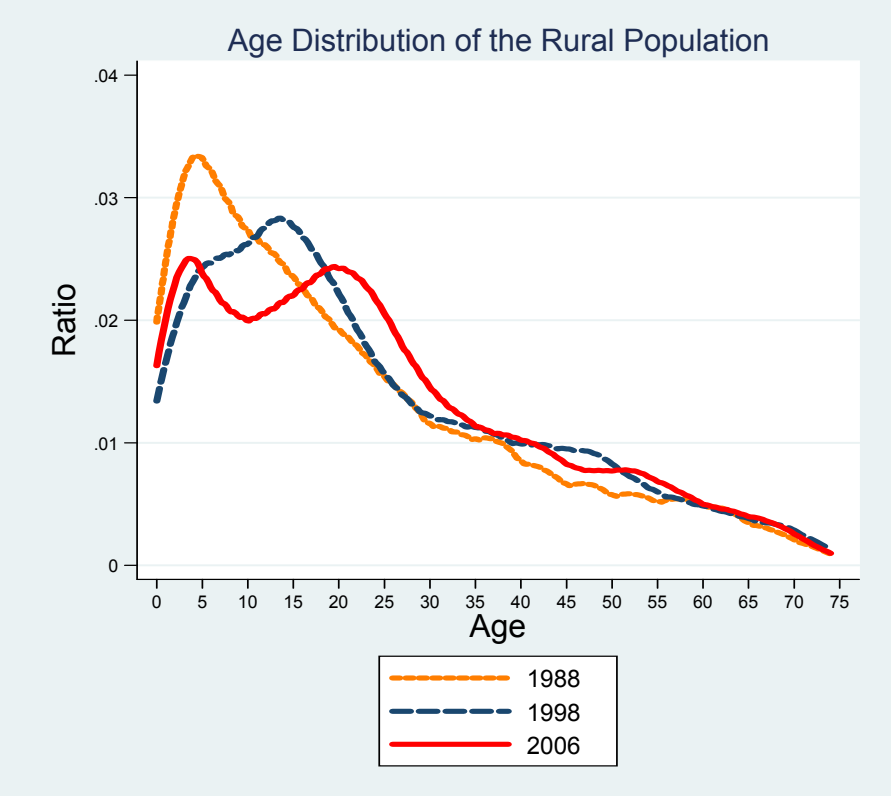


Figure 5b



observed in 1988, and centered around age 4, has turned into an adolescent bulge in 1998 centered around age 14, and into a youth bulge in 2006 centered around age 22. A new child bulge is emerging in 2006, which is the result of the large number of potential young mothers, a clear manifestation of the so-called population momentum phenomenon. The urban and rural age structures are fairly similar, except for more pronounced child and adolescent bulges in 1988 and 1998, respectively, in rural areas where fertility rates are higher.

Combining the age structure information with the age pattern of unemployment, we can see that the drop in the proportion of young working age adults (15-19) between 1998 and 2006 was also accompanied by a fall in their unemployment rates in both urban and rural areas. This portends the beginnings of a period of reduced pressure on the labor market brought about by the ageing of the youth bulge. This trend is further reinforced by a drop in unemployment rates among older youths (20-24) in rural areas that is happening despite the rapid demographic growth of that group.

3.5 The Educational Pattern of Unemployment

In contrast to the relative stability of the age pattern of unemployment from 1998 to 2006, the pattern of unemployment by education has exhibited some important changes during this period. As shown in the left hand side of figure 6, unemployment rates in 1998 were low at low levels of education, increased sharply for technical secondary graduates and then fell off again for post-secondary institute and university graduates.[5] In 2006, unemployment rates remain low for people with lower levels of education, increase for technical secondary graduates, but increase even more, for post-secondary and university graduates, in most cases. In fact, university graduates are the only educational group to have experienced an increase in unemployment between 1998 and 2006. All other groups have seen a decline in unemployment; in many cases quite large declines. Rural-based technical secondary graduates had the highest unemployment rates in 1998 and experienced some of the most significant declines (from 16 percent to 6 percent for males and from 63 percent to 41 percent for females). Nevertheless, unemployment rates among female graduates with technical secondary degrees remain extremely high. As we will show below, much of the drop in unemployment may be due to exit from the labor force due to discouragement rather than to an increase in employment rates.

[5] The results for general high school graduates should be interpreted with caution since very few such graduates actually join the labor force. Most simply go on to higher education.

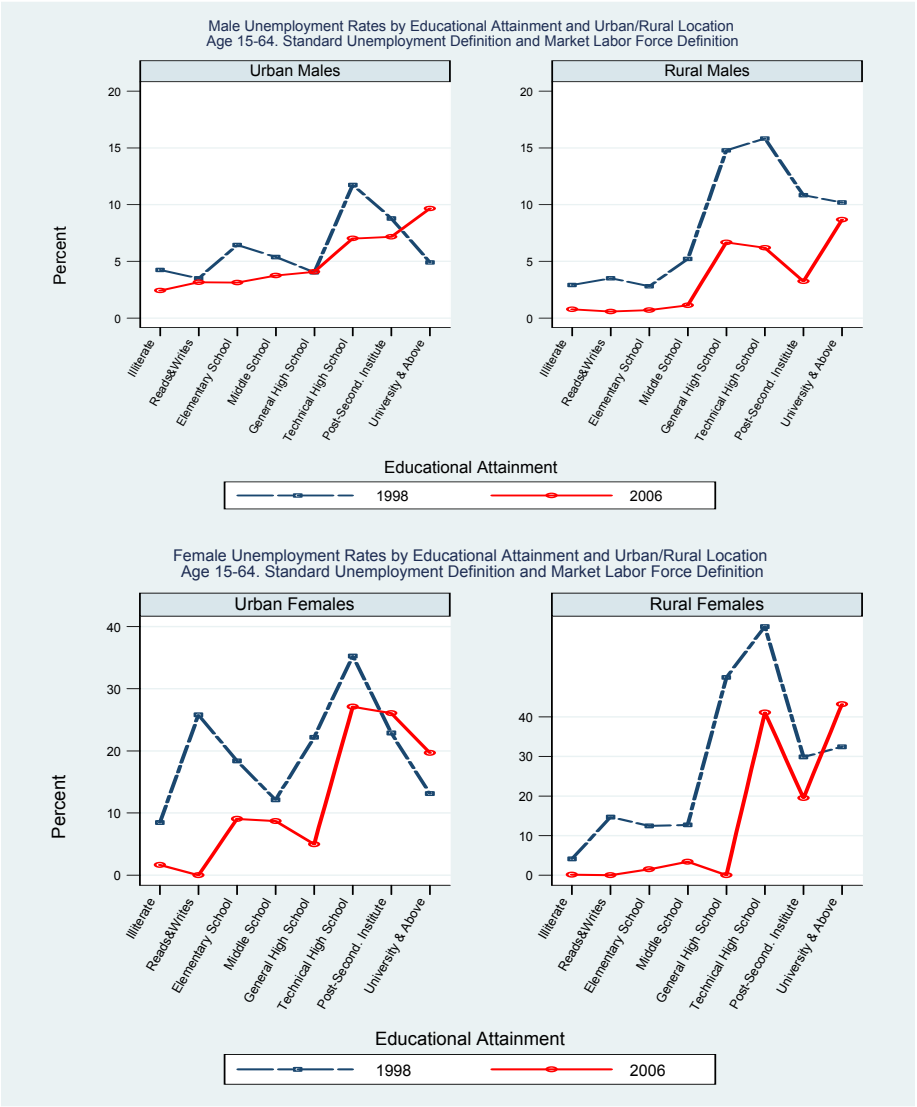
An examination of the right-hand side of figure 6, which shows the educational pattern of unemployment using the extended labor force definition, allows us to compare to the situation in 1988. The pattern in 1988 was roughly similar to 1998, with unemployment being highest for technical secondary graduates.[6] Unemployment rates at different education levels in 2006 are either similar to or below their levels in 1988, except for university graduates where they are noticeably higher.

To understand the impact of the educational pattern of unemployment on overall unemployment, one must consider it in conjunction with the changing distribution of the population by educational attainment, which is shown in figures 7a and 7b. The most important development in the educational arena is the sharp rise in the proportion of technical high school graduates in the working age population, mostly at the expense of the proportion of illiterates and literates without a diploma. Technical secondary graduates now make up over 30 percent of the male working age population in both urban and rural areas, up from about 20 percent in 1998. They also make up over a quarter of the female working age population up from about 15 percent in 1998. The proportion of university graduates has also increased, but from a much smaller base and mostly in urban areas.

Given the significant jump in unemployment as educational attainment moves from a middle school certificate to a technical secondary certificate, we would have expected overall unemployment to increase due to this compositional effect had there been no change in the educational pattern of unemployment over time. In actual fact, the unemployment rates of technical secondary graduates have dropped sufficiently, so that the overall rate of unemployment declined despite the rapid expansion in the number of graduates. This is particularly true of rural technical graduates, whose unemployment rates have declined significantly despite the rapid growth in their numbers. This decline alone accounts for most of the large declines we noted earlier in the rural unemployment rate. The increase in unemployment among university graduates has countered the trend of falling unemployment among secondary school graduates, but since they are fewer in number, it had a smaller overall impact. The smaller decline in unemployment in urban areas is partly due to a lesser decline in unemployment among urban technical graduates than among their rural counterparts and the larger proportion of university graduates in the urban working age population.

[6] Unemployment rates in 1988 were also unrealistically high for lower educated urban females, probably due to some measurement problem.

Figure 6


Male Unemployment Rates by Educational Attainment and Urban/Rural Location
Age 15-64. Standard Unemployment Definition and Market Labor Force Definition
Urban Males
Rural Males
Percent
0
5
10
15
20
Illiterate
Reads&Writes
Elementary School
Middle School
General High School
Technical High School
Post-Second. Institute
University & Above
Educational Attainment
1998
2006
Female Unemployment Rates by Educational Attainment and Urban/Rural Location
Age 15-64. Standard Unemployment Definition and Market Labor Force Definition
Urban Females
Rural Females
Percent
0
10
20
30
40
Illiterate
Reads&Writes
Elementary School
Middle School
General High School
Technical High School
Post-Second. Institute
University & Above
Educational Attainment
1998
2006

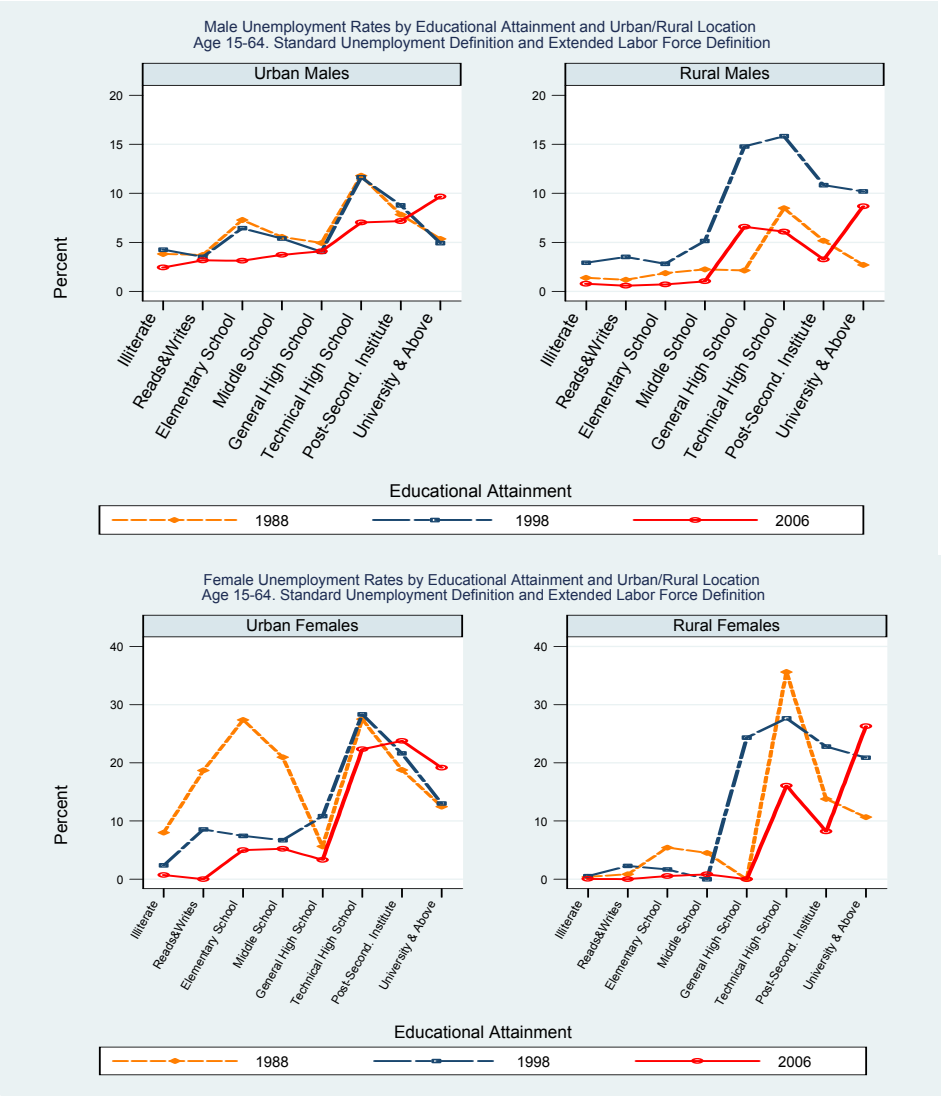

Male Unemployment Rates by Educational Attainment and Urban/Rural Location
Age 15-64. Standard Unemployment Definition and Extended Labor Force Definition
Urban Males
Rural Males
Percent
0
5
10
15
20
Illiterate
Reads&Writes
Elementary School
Middle School
General High School
Technical High School
Post-Second. Institute
University & Above
Educational Attainment
1988
1998
2006
Female Unemployment Rates by Educational Attainment and Urban/Rural Location
Age 15-64. Standard Unemployment Definition and Extended Labor Force Definition
Urban Females
Rural Females
Percent
0
10
20
30
40
Illiterate
Reads&Writes
Elementary School
Middle School
General High School
Technical High School
Post-Second. Institute
University & Above
Educational Attainment
1988
1998
2006

Figure 7a

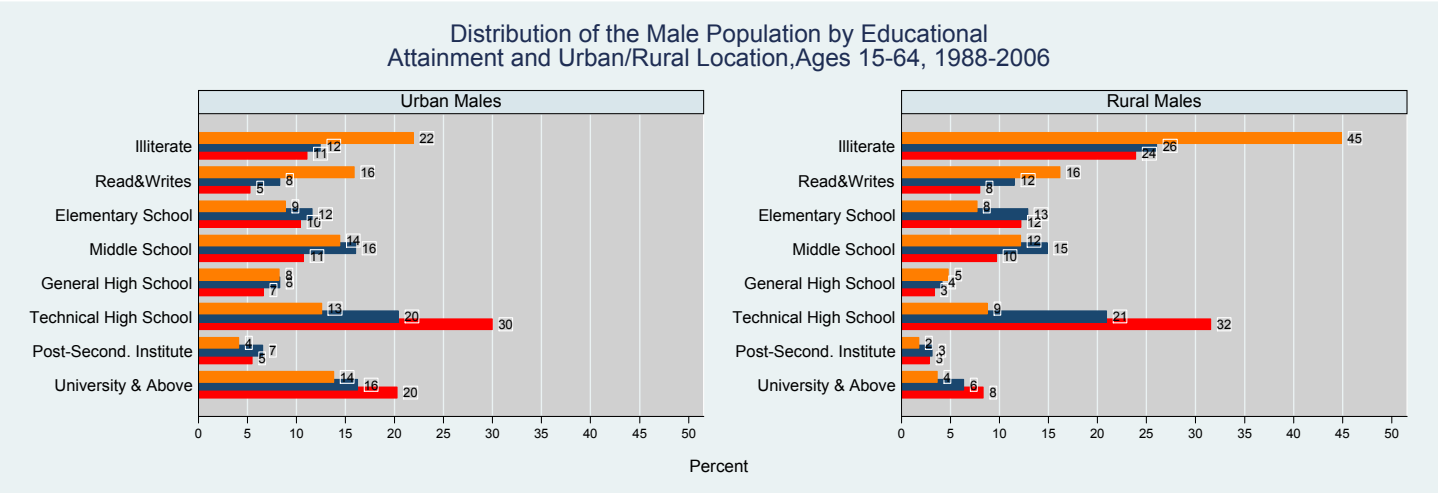
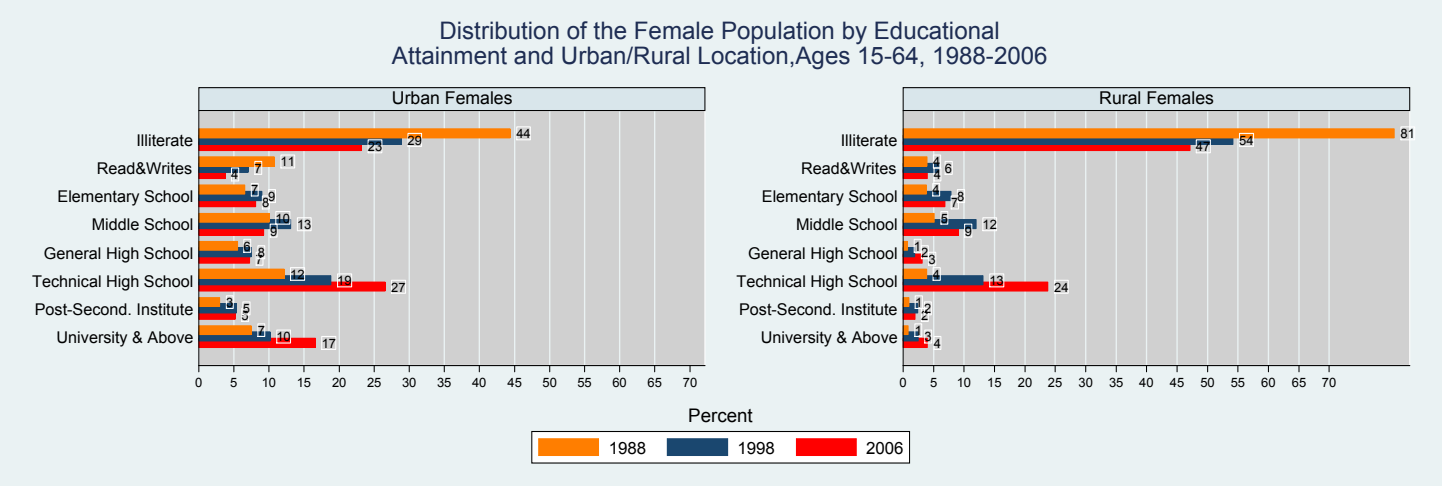


Figure 7b



3.6 Recapping the Explanations for the Decline in Unemployment in the 1998-2006 period

There are three potential explanations for the decline in unemployment in the 1998-2006 period in Egypt, which can be roughly categorized as demographic, institutional, and economic. On the demographic side, the slower growth of the 15-19 age group, a group with traditionally high unemployment rates, has resulted in both a drop in their unemployment rates as well as a compositional shift in favor of lower unemployment. This group constituted 20.9 percent of the working age population in 1998, but only 17.4 percent in 2006. This shift can be clearly seen in figures 5a and 5b and the accompanying drop in their unemployment rates can be seen in figure 6. Unemployment did not shift to older ages as the youth bulge shifted, because unemployed

young people, after a given period of searching, eventually adjust their expectations to the realities of the labor market and accept the jobs that are on offer to them. As a labor market insertion phenomenon, unemployment in Egypt is essentially the result of educated young people searching for jobs that meet certain minimum initial expectations. That is why unemployment rates are highest closest to the age of entry, which is 18 for most new entrants now. As the search process lengthens, they not only gather more information about the labor market that they face, but they also adjust their expectations downward, eventually accepting some sort of employment, even if such employment would have been deemed unacceptable to them at first.

On the institutional side, the dramatic slowdown in government hiring in the 1998-2006 period has finally sent a clear message that it is no longer worthwhile to queue for government jobs. In many cases the lack of an incentive to queue may mean a more rapid entry into private sector work, and as we will see below, this could well be the case for males. In others, the lack of queuing may result in simply not declaring oneself to be seeking employment and therefore be captured among those who are outside the labor force. This may well be what is happening among educated young women whose reservation wages (or opportunity cost of time) lies above the prevailing private sector wage rates, and the total value of the government compensation package. Faced with wages in the private sector that are much lower than those obtained by their male counterparts, these women may prefer to leave the workforce rather than accept these low-paid private sector jobs. In the past, because there was a positive probability of getting government employment, they would declare themselves as seeking employment and therefore were counted among the unemployed. Now that the probability of government employment is drastically lower, there is little incentive to continue seeking such jobs.

Evidence for this proposition can be inferred by looking at the pattern of female employment in government by educational level over time and comparing it to the pattern of female labor force participation by education level. These two patterns are shown in figures 8 and 9. It is clear from figure 8 that employment rates in the government have fallen significantly for educated women between 1988 and 2006. For instance, the proportion of working age technical high school graduates employed in government declined from 30 percent in 1988 to 23 percent in 1998 to 15 percent in 2006. The proportion of other graduates working in government also declined but at a somewhat slower pace. Figure 9 shows that these declines are directly reflected in the participation rates of

educated women. The participation rate of working age technical high school graduates, according to the extended definition of the labor force, was 80 percent in 1988, of which 22 percent was unemployment and 30 percent was government employment. It fell to 68 percent in 2006, of which 9 percent was unemployment, and 15 percent government. Thus, falling government employment rates for that group was accompanied by increasing employment outside government (from 28 percent to 44 percent) and increasing non-participation (from 20 percent to 32 percent), but not by increasing unemployment.

The third reason for the fall in unemployment is the increase in the pace of private sector employment growth from 1998 to 2006. As shown in figure 10, the growth rate of private wage employment was 5.3 percent per annum as compared to 4.6 percent per annum for total employment and 3.5 percent per annum for the market labor force as a whole. Private non-wage work has also grown rapidly, especially in rural areas. Overall it grew at 7.4 percent per annum, and in rural areas it grew at 8.7 percent per annum.

The rapid growth of non-wage work in rural areas is probably the main reason for the much larger drop in unemployment there.[7] Non-wage work constituted 45 percent of total employment in rural areas in 2006, up from 35 percent in 1998. Among males, its share grew from 33 percent of total employment to 39 percent.

A closer examination of non-wage employment in rural areas reveals that it is mostly concentrated in agriculture, with trade occupying a distant second place. The proportion of non-wage employment in agriculture increased from 61 percent in 1998 to 69 percent in 2006 and that of trade dropped from 23 percent to 16 percent in the same period. Among males, the proportion engaged in transport and construction has increased significantly. The share of males in transport has grown from 3.1 percent to 4.6 percent of total non-wage employment in rural areas from 1998 to 2006. The share in construction has increased from 1.7 percent to 3.4 percent in the same period. Despite the growth of these sectors for males, the rural non-wage economy remains dominated by agriculture and what happens in this sector determines the health of the rural economy.

[7] Although there is some question about the rate of growth of female non-wage work in rural areas because of measurement problems, the rate of growth of rural male non-wage work, which does not suffer from these problems, was a healthy 6.1 percent per annum.

Figure 8

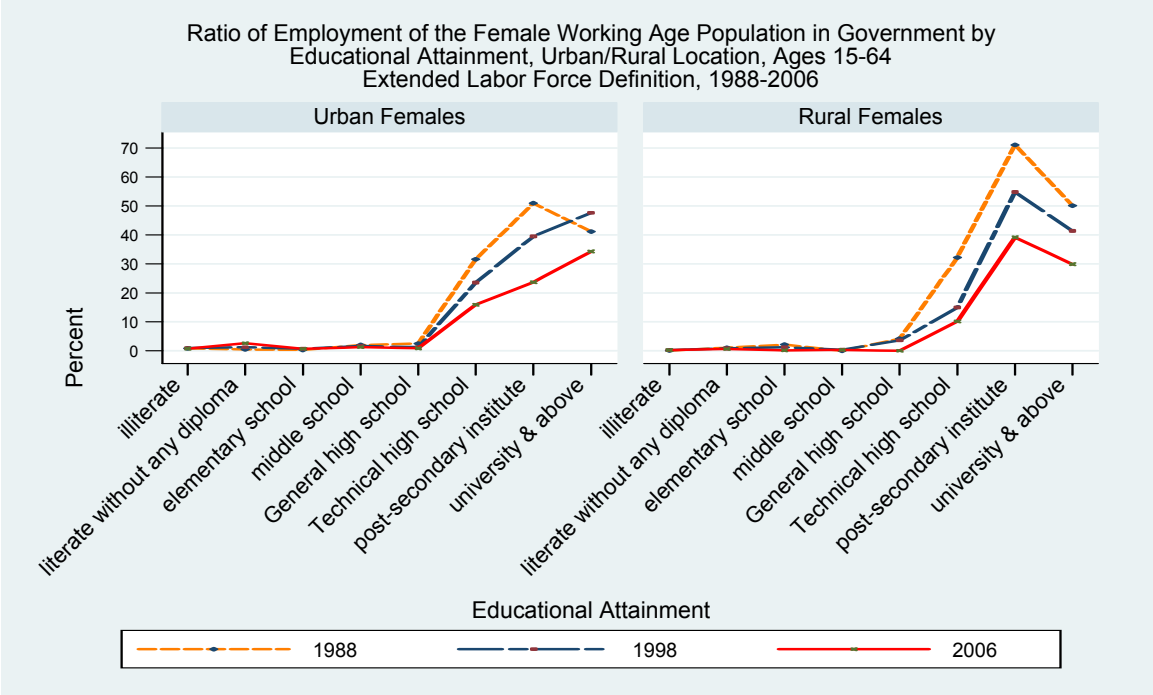


Figure 9

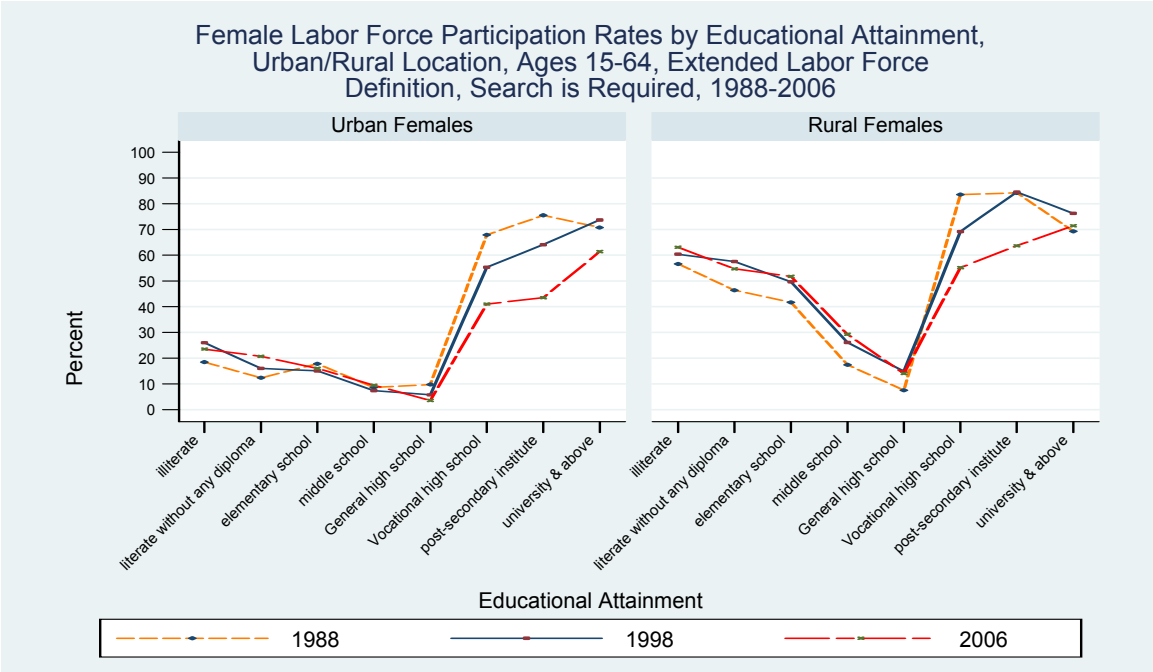
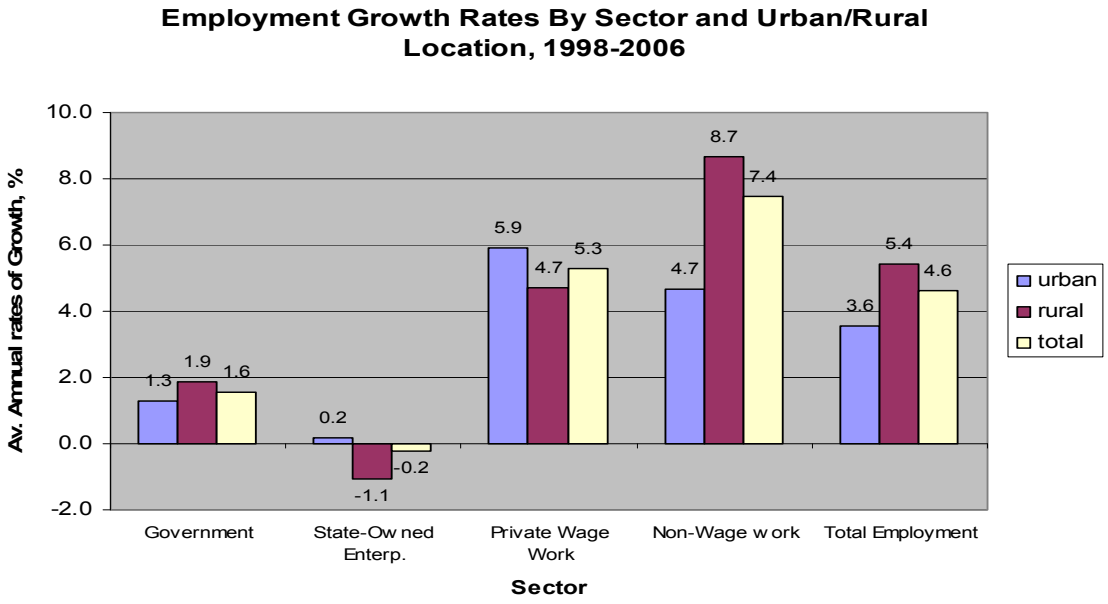


Figure 10



4. CHANGES IN THE REPORTED REASONS FOR UNEMPLOYMENT

Unemployment is often classified as voluntary and involuntary depending on the reason the individual provides for being unemployed. All three surveys inquired about the reason for being unemployed, with one of the reasons listed being inability to find any job opportunities whatsoever, which could be interpreted as involuntary unemployment. Other reasons referred to inability to find a job that is appropriate along various dimensions, which could be interpreted as involuntary. These dimensions include qualifications, pay, workplace, location, as well as an "other" category. We should be aware, however, that there is still a degree of individual choice among people responding that they are totally unable to find any job. Most of the unemployed in Egypt are educated, because most uneducated people simply cannot afford to remain unemployed and thus either find or create jobs for themselves—jobs that most educated people, with their higher expectations, would find unacceptable. The openly unemployed are therefore all people who are unwilling to take any job and are able to invest some time searching for a job with minimum attributes.

As shown in Appendix table 3a, the proportion of the unemployed (according the standard unemployment definition and market labor force definition) claiming to be unable to find any

jobs has declined from 62 percent in 1998 to 53 percent in 2006, suggesting that unemployment is becoming more voluntary. This decline is observed among both males and females, but is sharper among males. It is also apparent in both urban and rural areas, but is more pronounced in rural areas. The proportion of "involuntary unemployed" was larger among males than among females in 1998 but that order has now been reversed. It was also much higher in rural than in urban areas and is now only slightly higher.

Among those responding that unemployment was for lack of an appropriate job, 52 percent said in 2006 that they could not find jobs that matched their qualification, which is unchanged from the proportion in 1998 (see Appendix table 3b). Twenty one percent said that there were no jobs at an acceptable level of pay, up from 12 percent in 1998. Eighteen percent said that the job was not at an appropriate workplace, down from 22 percent in 1998. It is noteworthy that the proportion of women who gave that reason in 2006 (22 percent) was much higher than that of males (13 percent). This confirms that social appropriateness of the workplace is a much more important factor for women than for men. Not finding a job at a suitable location was also a reason more frequently mentioned by women than by men.

These results on reason of unemployment confirm that a great deal of unemployment in Egypt results from a mismatch between the expectations of graduates in terms of the kind of job they should be getting and what the labor market has to offer them.

We repeated the analysis of reported reason for unemployment for the discouraged unemployed. The results show that the rate of involuntariness actually increased among the discouraged from 59 percent in 1998 to 65 percent in 2006. Thus, those who stopped searching truly feel that their chance of finding any job is limited. The vast majority of the discouraged (68 percent) are women who have probably stopped searching because they believe that the only job they are likely to get is a government job.

5. THE LABOR MARKET INSERTION PROCESS

Since unemployment in Egypt is essentially a problem of labor market insertion of first time new entrants in the labor market, it is important to understand how the process of insertion has changed over the study period. We begin by establishing that unemployment in Egypt is, in fact,

a new entrants' phenomenon then move to an examination of the duration of unemployment and how it varies across groups and over time, go on to a brief examination of the school-to-work transition process and then end with an analysis of the changing labor market environment facing new entrants over time.

5.1 The Proportion of New Entrants among the Unemployed

As shown in figure 11a, the proportion of new entrants among the unemployed has continued to climb, confirming that unemployment in Egypt is essentially a problem of youth insertion in the labor market. The proportion of new entrants increased from 74 percent in 1998 to 82 percent in 2006. It is slightly higher in rural areas than in urban areas, but much higher among women than among men. The increase is across the board, but most pronounced for urban males, followed by urban females. As a result, the urban/rural differences in the proportion of new entrants have narrowed over the study period. Figure 11b shows the same information using the extended definition of the labor force, thus allowing us to compare to 1988. It confirms that the proportion of new entrants has continued to rise steadily since 1988. It went from 57 percent in 1988 to 80 percent in 2006 according to this definition. Most of the increase from 1988 to 1998 in the proportion of new entrants was in rural areas, unlike the situation in 1998 to 2006. It therefore appears that the proportion of new entrants among the unemployed increases more when the improvement in the unemployment situation is more limited.

5.2 The Duration of Unemployment

We examine in this section changes in the median and 75th percentile of duration of unemployment by sex and urban/rural location from 1998 to 2006. We do so for the three definitions of unemployment laid out above but for only the market definition of the labor force. This sort of analysis must be interpreted with some caution because it does not take into account the fact that all the durations we are actually observing are censored. In other words, we only observed unemployment durations for those who are currently unemployed, but not for those who were unemployed and later became employed. We also don't take into account the change in the proportion of those who did not experience any unemployment over time. It is quite possible for durations as measured in this way to increase with improving labor market conditions if the

Figure 11a

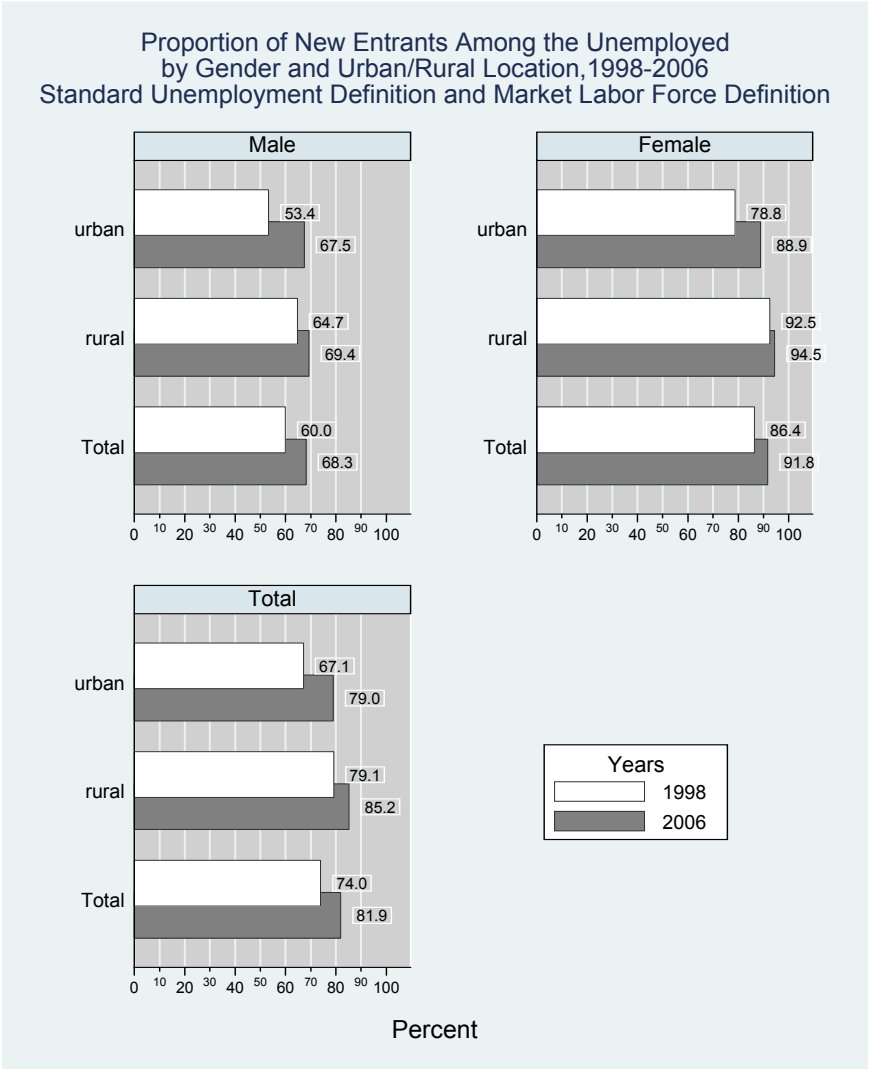
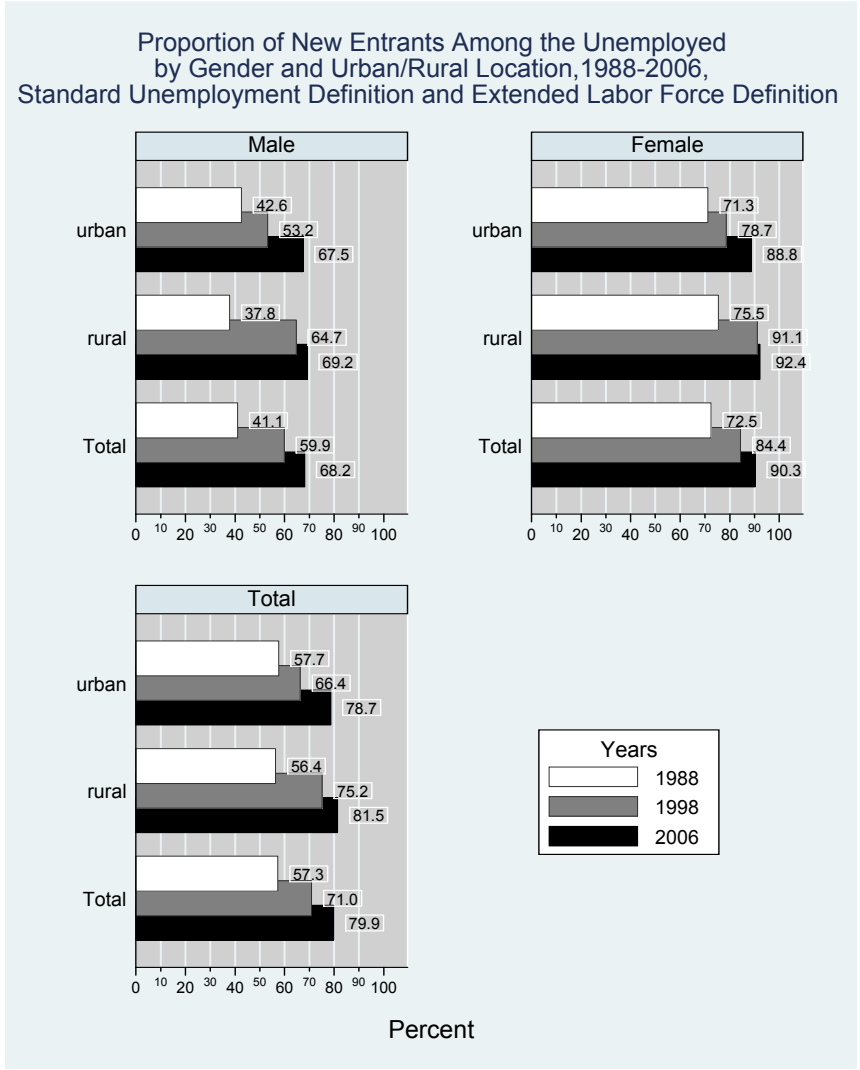


Figure 11b



short-duration workers get jobs first, leaving behind the truly hard to employ. A fuller analysis that takes into account the censoring problem is beyond the scope of this paper.

As shown in Appendix table 4, it appears that the median duration of unemployment (using the standard, market definition) has stayed the same at 24 months from 1998 to 2006. However, this masks some compositional changes, because the median duration has increased for both males and females. For males, it went up from 12 to 18 months and for females it increased from 24 to 36 months. The 75th percentile duration has not changed, however, for both males and females, and stands at 36 and 72 months respectively. There appears to be no systematic differences in duration of unemployment between urban and rural areas, although unemployment durations for females in rural areas appear to have lengthened significantly.

Women who only used government search mechanisms have the longest median duration in 2006 at 84 months, up from 48 months in 1998. This group is made up for the most part of women who are primarily seeking government employment and are willing to queue for such employment for extended periods of time. The dramatically shorter durations for men in this category in 2006 indicates that this category now includes primarily men who have just started searching and have not yet had a chance to use other search mechanisms. Those in the long-term queue for government jobs among men have presumably already given up and accepted work in the private sector.

While the pattern of change across time is somewhat inconclusive because of the censoring problem discussed above, we can still glean useful information about the gender and urban/rural pattern of unemployment duration.

5.3 The Duration of the Transition from School to Work

Because we have information on the time the individual left or finished school and the time they started work, we can study the transition from school to work independently of the unemployment status of the individual. Since we have durations in this case for those who already started work as well as those who did not, we can correct for censoring by using survival analysis and Kaplan-Meir failure charts. The main limitation here is that duration is measured in discrete increments of one year rather than weeks, so that we are unable to obtain a very fine

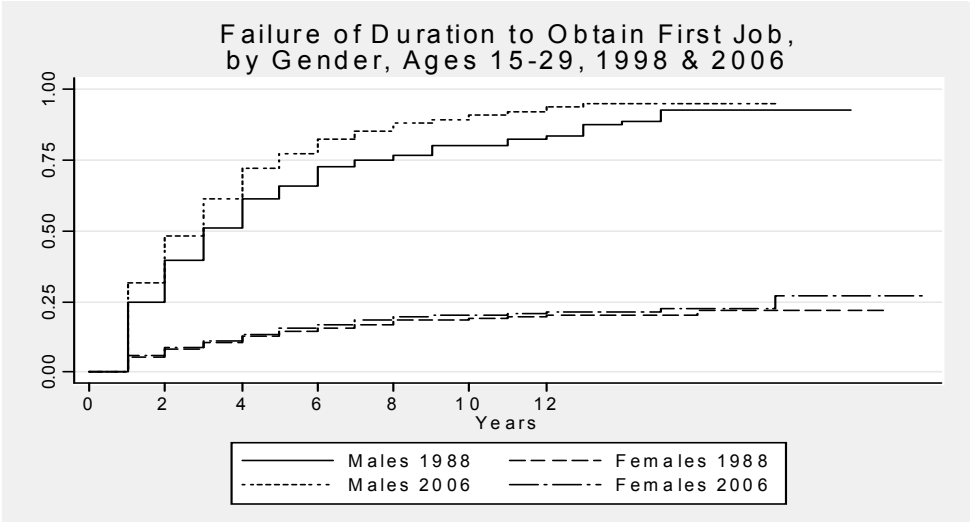
grained picture of transition from school to work. As shown in figure 12, these charts provide the cumulative probability of having obtained a first job by year since the individual left school.

Figure 12 shows that young male new entrants are entering their first job earlier in 2006 than in 1998, but that young females are entering at the same rate as before. In 1998, 50 percent of male school leavers had found their first job within 2 years of leaving school, down from three years in 1998. Seventy five percent found jobs in 2006 within 5 years of leaving school, whereas in 1998 it would have taken nearly 8 years for that proportion to find jobs. The female rates of transition from school to work are much lower and don't exceed 25 percent even after 15 years. There is no perceptible improvement in the transition time from 1998 to 2006 for women.

5.4 The Evolution and Changing Composition of New Entrants

The ELMPS 06 data allow us to study the pattern of labor market entry across time by exploiting a question to all individuals, irrespective of their current employment status, about whether or not they had worked before (for a minimum duration of at least six months), and, if so, when they had started work and what were the characteristics of their first job. Aside from problems associated with recall, the main problem associated with these data has to do with the possibility of selection out of the sample due to death or migration abroad. Since those who entered since 1975 are less likely to have died, we limit our period of analysis to the 1975-2005 period. Because of potential problems with recall, no particular significance should be given to year-on-year fluctuations, but only to general trends. Accordingly, we present a four-year moving average to abstract away from these annual fluctuations.

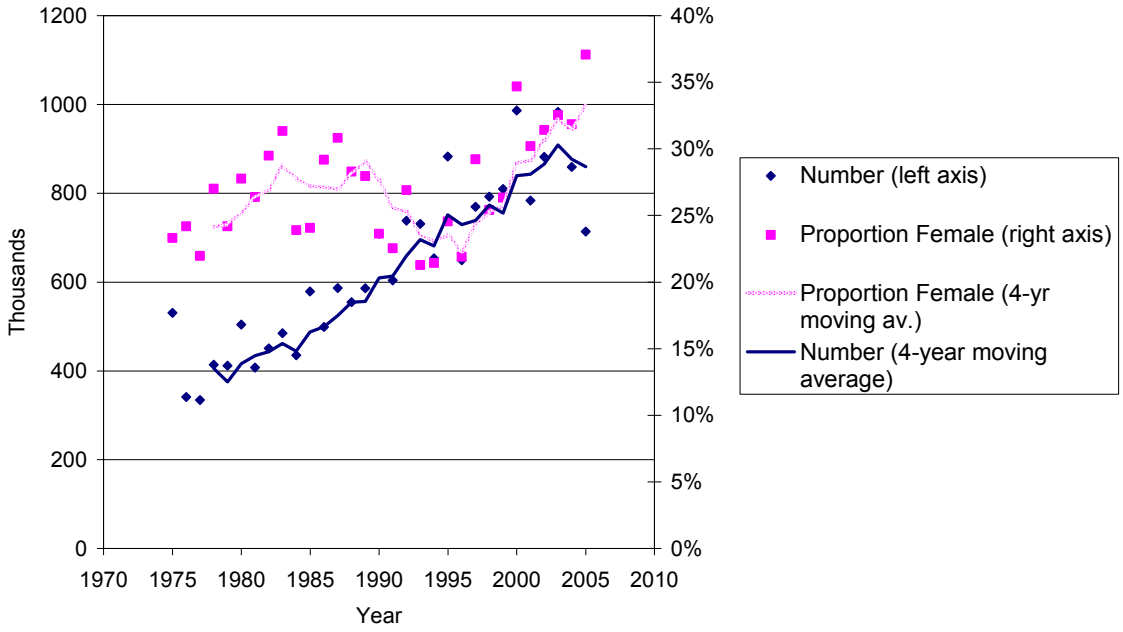
Figure 12



As shown in figure 13, the number of new entrants has climbed steadily from about 400 thousand per year in the mid 1970s to about 900 thousand in the first half of this decade. It should be kept in mind that this is the gross number of new entrants and not the net increment to employment, which was about 680 thousand per year in the 1998-2006 period. As shown in the figure, the proportion of females among new entrants increased from about 23 percent in the mid-1970s to 30 percent the early1980s, a time when the government workforce was expanding rapidly. It then stagnated at this level until 1990, only to decline back to 23 percent by 1996. This period is characterized by slower growth government hiring and de-feminization in non-governmental wage work (See Assaad 2006a). The period since 1996 saw a rapid rise in the proportion of women among new entrants, so that by 2005 it had reached nearly 35 percent. This is in line with other data that show a rapid increase in female employment in the private sector, especially in textiles and garments and food processing manufacturing, and in white collar service jobs.

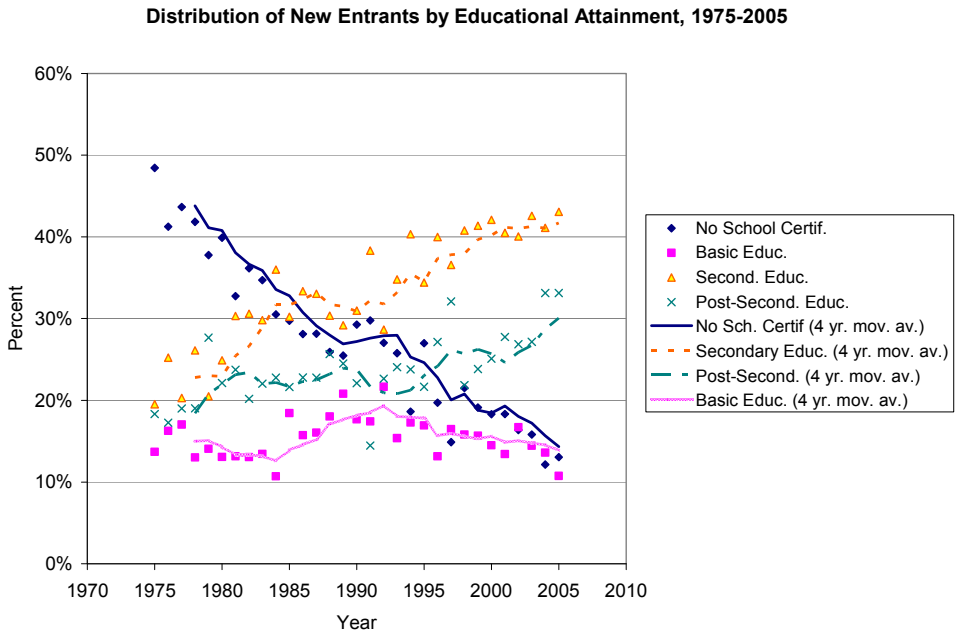
Figure 13

Evolution of the Number of New Entrants and their Distribution by Sex, 1975-2005



The educational composition of new entrants has also changed significantly over time as reflected in figure 14. The proportion of those without any educational credentials dropped from close to 45 percent in the mid-1970s to about 15 percent in 2005. This secular decline was matched by a dramatic increase in the share of new entrants with secondary educational credentials, which went from nearly 20 percent in 1975 to over 40 percent in 2005. The vast majority of these secondary degree holders are technical secondary graduates since nearly all of general secondary graduates continue onto post-secondary degrees. The share of those with only elementary or preparatory education (classified here as basic education) increased somewhat in the 1980s but then declined again the 1990s and 2000s.

Figure 14



The share of post-secondary graduates, most of whom are university graduates, was more or less stable at a little less than 25 percent from the late 1970s to the mid 1990s, but then started to increase significantly after that. This dramatic change in trend corresponds to a shift in policy a few years earlier when the number of admissions to university was increased significantly after a period of relative stability (see Assaad 2006b). This rapid increase in the number of new entrants with university degrees in the 1998-2005 period could well be responsible for the fact that

unemployment rates among this group have increased during this period. This contrasts to the relative stability in the share of secondary school graduates during the same period, a group that has seen its unemployment rates decline.

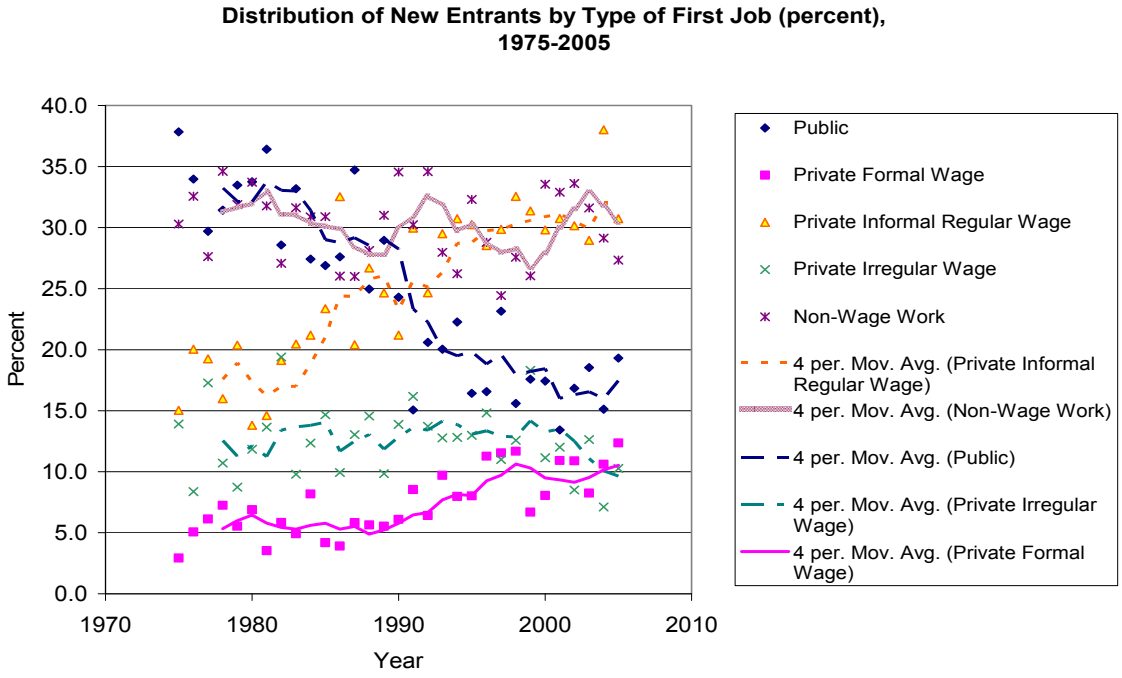
What sort of jobs are these new entrants getting? We classify jobs along a rough job quality scale, starting with the most secure to the least secure, although there are clearly other dimensions to job quality beside the level of security. At the top we have public sector jobs, which include jobs in the government and the state-owned enterprises, followed by formal jobs in the private sector. These are regular jobs covered by legal contract and/or social insurance coverage. These are followed by informal, but regular, jobs in the private sector. These are jobs where the individual has regular employment but does not benefit from either a legal contract or social insurance. Irregular wage employment comes next. These are made up of intermittent and seasonal wage employment in the private sector, which is almost always without social protection. Finally, we end up with non-wage employment, which technically includes employers, self-employed and those working for their family enterprise at no wage. In actual fact, non-wage employment for a new entrant is almost entirely as unpaid family workers, with a small fraction as self-employed.

It can clearly be debated whether irregular wage employment in the private sector is more or less secure than non-wage work. Non-wage work is probably a rather heterogeneous category that includes highly lucrative stable jobs as well as very marginal work. We therefore don't take a particular position about the ordering of these two categories at the moment.

The distribution of new entrants by the type of first job they obtain is shown in figure 15. As indicated, the share of the public sector in first jobs has dropped steadily from about a third in 1975 to nearly 15 percent by 2005, with the steepest drop occurring in the early 1990s. The share of private formal employment was fairly low and stagnant through the 1980s, began increasing in the 1990s, stagnated in the early 2000s and picked up again since 2003. Overall, the share of the private formal sector rose from about 5 percent in the mid 1970s to about 10 percent in the mid 2000s. The type of employment that has truly taken over from the public sector in the distribution of first jobs in the past three decades is private, informal, but regular wage employment. Its share increased dramatically in the 1980s from around 15 percent to 25 percent. Its increase slowed a

bit in the late 1980s and early 1990s but resumed in the mid 1990s, only to slow down again in the late 1990s and early 2000s. Nonetheless, it now constitutes over 30 percent of all first jobs. A comparison of the rates of growth of formal and informal regular employment among first time entrants since 1990 reveals that formal employment has grown more rapidly at 4.4 percent per annum compared to informal regular employment, which has grown at 3.3 percent per annum, although formal employment is clearly growing from a much lower base.[8]

Figure 15



Irregular wage work, a type of work closely associated with construction and agriculture, and also highly associated with poverty, provided somewhere between 10 and 15 percent of first jobs throughout the period. It appears, however, that this type of employment, which is also associated with lower levels of education, is starting to decline in recent years.

Non-wage employment continues to be a very important source of jobs for new entrants. It has essentially provided around a third of all first jobs since 1975, with periodic fluctuations

[8] If the comparison is started in 1975 instead of 1990, the rates would be 6.1 percent per annum for formal employment vs. 5.6 percent per annum for informal regular employment.

around that level. The period of very rapid increase in the share of informal regular employment in the 1980s saw a decline in non-wage employment. This happened again in the mid to late 1990s. Starting at about 2000, non-wage employment started to increase again. We should note that nearly half of non-wage jobs in 2006 are in agriculture, so that an increase in non-wage employment is probably a mark of employment growth in this sector.

6. CONCLUSION

In light of the review of trends and patterns of unemployment since 1998, this study concluded that there was indeed a widespread decline in unemployment over that period that affected men and women equally, but that was more marked in rural than in urban areas. This declining trend is robust to various changes in the definition of employment and of economic activity and affects both the rate of unemployment as well as the absolute number of unemployed. The only groups to have been left out of this declining unemployment trend are urban women between the ages of 28 and 34 and university graduates. The increase in unemployment for university graduates could well be due to the rapid acceleration in the number of new university graduates entering the labor market since 2000.

In explicating this declining unemployment trend, the study put forth three sets of explanations. A set related to demographic shifts, focused primarily on the relative size of the 15-19 age group, a set related to the slowdown of government hiring and its impact on job search and queuing behavior especially among educated females, and a set related to employment growth in the private sector, and the growth of non-wage employment in rural areas. Although the slowdown in government hiring has reduced the incentive to queue for government jobs, and therefore lower unemployment, this effect is obtained mostly through reduced labor force participation among educated women—the ones eligible for government employment—rather than through increased employment. These are the women whose reservation wage (or opportunity cost of time) is higher than the very low wages the private sector is currently offering young female new entrants with secondary and post-secondary qualifications, leading them to stay out of the labor market altogether. On the employment front, much of the expansion is in non-wage jobs on family farms and in family enterprises. It is not yet clear what sort of incomes this type of activity is able to generate. It can be clearly seen from the labor market entry data that

public employment plays an increasingly limited role in the absorption of new entrants. Private sector formal employment is growing, but from a very low base. The increasingly educated new entrants are mostly finding work in informal, but regular, jobs in the private sector, as well as in non-wage employment. Irregular wage employment, which is associated with high vulnerability to poverty, appears to be declining. The main question that remains then is the quality of the jobs that are being created in the informal regular segment of the labor market and in the non-wage segment, and whether earnings from these jobs allow people to support a decent standard of living.

Appendix Table 1
Number of Unemployed and Unemployment Rate by Sex and Urban/Rural Location, Ages 15-64, Market Labor Force Definition, Using Different Search Criteria, 1998-2006

		Urban				Rural				All Egypt			
		1998		2006		1998		2006		1998		2006	
Broad Definition:		'000s	%	'000s	%	'000s	%	'000s	%	'000s	%	'000s	%
	Male	485.20	8.2%	519.30	6.9%	641.40	8.5%	378.50	3.8%	1,126.7	8.4%	897.9	5.2%
	Female	562.00	25.7%	653.90	22.8%	699.30	36.9%	680.30	19.9%	1,261.3	30.9%	1,334.2	21.2%
	Total	1,047.20	12.9%	1,173.20	11.3%	1,340.70	14.2%	1,058.80	8.0%	2,387.9	13.6%	2,232.1	9.4%
Standard Definition:													
	Male	396.90	6.8%	469.40	6.3%	533.50	7.1%	337.90	3.4%	930.4	7.0%	807.3	4.7%
	Female	478.40	22.8%	552.80	20.0%	598.20	33.3%	575.60	17.4%	1,076.6	27.6%	1,128.4	18.6%
	Total	875.30	11.0%	1,022.20	10.0%	1,131.80	12.2%	913.50	7.0%	2,007.0	11.7%	1,935.7	8.3%
Narrow Definition:													
	Male	383.20	6.6%	454.80	6.1%	522.50	7.0%	323.80	3.3%	905.7	6.8%	778.6	4.5%
	Female	448.80	21.7%	516.40	18.9%	511.90	29.9%	516.20	15.9%	960.7	25.4%	1,032.5	17.3%
	Total	832.00	10.5%	971.10	9.6%	1,034.40	11.3%	840.00	6.4%	1,866.4	10.9%	1,811.1	7.8%
Government Search Only:													
	Male	13.60		14.70		11.10		14.10		24.7		28.7	
	Female	29.60		36.40		86.30		59.50		115.9		95.9	
	Total	43.30		51.10		97.40		73.60		140.6		124.6	
Discouraged Unemployed:													
	Male	88.40		49.90		107.90		40.60		196.3		90.5	
	Female	83.50		101.10		101.10		104.70		184.6		205.8	
	Total	171.90		151.00		209.00		145.30		380.9		296.3	
	Employment												
	Male	5434.2		6974.4		6928.3		9469.4		12362.5		16443.8	
	Female	1621.2		2216.5		1197.7		2732.5		2818.9		4948.9	
	Total	7055.4		9190.8		8126		12201.9		15181.3		21392.7	

Appendix Table 2

Unemployment by Gender and Urban/Rural Location, Ages 15-64, Extended Labor Force Definition, Using Different Search Criteria, 1988-2006

	Urban						Rural						All Egypt					
	1988		1998		2006		1988		1998		2006		1988		1998		2006	
Broad Definition:	'000s	%	'000s	%	'000s	%	'000s	%	'000s	%	'000s	%	'000s	%	'000s	%	'000s	%
Male	356.5	7.3%	483.8	8.2%	519.3	6.9%	179.9	3.2%	638.7	8.4%	376.1	3.8%	536.4	5.1%	1,122.5	8.3%	895.5	5.1%
Female	388.5	20.0%	501.6	18.0%	617.5	18.4%	176.9	4.5%	420.0	7.3%	456.9	6.4%	565.4	9.6%	921.7	10.7%	1,074.4	10.2%
Total	745.0	10.9%	985.4	11.3%	1,136.9	10.5%	356.9	3.7%	1,058.7	7.9%	833.1	4.9%	1,101.9	6.7%	2,044.1	9.3%	1,969.9	7.0%
Standard Definition:																		
Male	282.4	5.9%	395.4	6.8%	469.4	6.3%	126.7	2.3%	533.5	7.1%	335.5	3.4%	409.1	3.9%	928.9	7.0%	804.9	4.6%
Female	321.5	17.2%	430.9	15.8%	523.1	16.0%	125.4	3.2%	361.0	6.3%	382.5	5.4%	446.9	7.7%	791.9	9.4%	905.6	8.8%
Total	604.0	9.0%	826.3	9.7%	992.5	9.3%	252.1	2.7%	894.6	6.8%	718.0	4.2%	856.0	5.3%	1,720.9	7.9%	1,710.6	6.2%
Narrow Definition:																		
Male	282.4	5.9%	381.8	6.6%	454.8	6.1%	126.7	2.3%	522.5	7.0%	321.4	3.3%	409.1	3.9%	904.2	6.8%	776.2	4.5%
Female	308.0	16.6%	406.2	15.1%	487.8	15.1%	116.5	3.0%	299.1	5.3%	343.0	4.9%	424.5	7.4%	705.3	8.4%	830.9	8.1%
Total	590.5	8.9%	787.9	9.3%	942.6	8.8%	243.2	2.6%	821.6	6.3%	664.4	3.9%	833.6	5.2%	1,609.5	7.4%	1,607.1	5.8%
Government Search Only:																		
Male	0.0		13.6		14.7		0.0		11.1		14.1		0.0		24.7		28.7	
Female	13.5		24.7		35.3		8.9		61.9		39.5		22.4		86.7		74.8	
Total	13.5		38.4		49.9		8.9		73.0		53.6		22.4		111.4		103.5	
Discouraged Unemployed:																		
Male	74.1		88.4		49.9		53.2		105.2		40.6		127.3		193.6		90.5	
Female	67.0		70.7		94.4		51.5		59.0		74.4		118.5		129.7		168.8	
Total	141.1		159.1		144.3		104.8		164.2		115.0		245.8		323.3		259.4	
Employed																		
Male	4,525.3		5,435.7		6,979.0		5,422.7		6,937.8		9,556.7		9,948.0		12,373.5		16,535.7	
Female	1,551.8		2,288.6		2,740.3		3,793.4		5,372.5		6,698.4		5,345.2		7,661.1		9,438.7	
Total	6,077.1		7,724.2		9,719.3		9,216.1		12,310.3		16,255.1		15,293.2		20,034.6		25,974.5	

Appendix Table 3a
Reasons of Unemployment By Gender, Urban/Rural Location, Ages 15-64.
Standard Definition of Unemployment. Market Labor Force Definition, 1998-2006

	Urban				Rural				All Egypt			
	1998		2006		1998		2006		1998		2006	
	'1000s	%	'1000s	%	'1000s	%	'1000s	%	'1000s	%	'1000s	%
Absolutely no Job Opportunity												
Male	238.73	60.3%	240.92	51.3%	368.52	69.8%	174.00	51.5%	607.25	65.7%	414.92	51.4%
Female	228.82	48.2%	288.21	52.1%	395.33	66.1%	322.12	56.0%	624.15	58.2%	610.33	54.1%
Total	467.55	53.7%	529.13	51.8%	763.85	67.8%	496.11	54.3%	1231.40	61.7%	1025.25	53.0%
No Appropriate Job Opportunity												
Male	157.02	39.7%	228.50	48.7%	159.54	30.2%	163.91	48.5%	316.56	34.3%	392.40	48.6%
Female	246.26	51.8%	264.55	47.9%	202.89	33.9%	253.51	44.0%	449.15	41.8%	518.06	45.9%
Total	403.27	46.3%	493.05	48.2%	362.43	32.2%	417.42	45.7%	765.70	38.3%	910.47	47.0%
All Unemployed												
Male	395.74	100.0%	469.42	100.0%	528.06	100.0%	337.90	100.0%	923.80	100.0%	807.33	100.0%
Female	475.08	100.0%	552.76	100.0%	598.22	100.0%	575.63	100.0%	1,073.30	100.0%	1,128.39	100.0%
Total	870.82	100.0%	1,022.19	100.0%	1,126.28	100.0%	913.53	100.0%	1,997.10	100.0%	1,935.72	100.0%

Appendix Table 3b
Reason for Unemployment Among those Unable to Find Appropriate job Opportunities By Gender, Urban/Rural Location, Ages 15-64.
Standard Definition of Unemployment. Market Labor Force Definition, 1998-2006

	Urban				Rural				All Egypt			
	1998		2006		1998		2006		1998		2006	
	'1000s	%	'1000s	%	'1000s	%	'1000s	%	'1000s	%	'1000s	%
No work corresponding to qualifications												
Male	62.21	39.6%	103.78	45.4%	81.72	51.2%	89.25	54.4%	143.93	45.5%	193.03	49.2%
Female	126.45	51.3%	148.42	56.1%	120.44	59.4%	127.01	50.1%	246.89	55.0%	275.43	53.2%
Total	188.67	46.8%	252.20	51.2%	202.16	55.8%	216.25	51.8%	390.83	51.0%	468.45	51.5%
No Work at Acceptable Pay												
Male	24.75	15.8%	58.55	25.6%	29.78	18.7%	48.32	29.5%	54.53	17.2%	106.87	27.2%
Female	14.98	6.1%	31.74	12.0%	19.40	9.6%	55.66	22.0%	34.38	7.7%	87.41	16.9%
Total	39.72	9.9%	90.29	18.3%	49.18	13.6%	103.98	24.9%	88.90	11.6%	194.27	21.3%
No Work at Suitable Organization												
Male	39.36	25.1%	35.40	15.5%	29.09	18.2%	14.63	8.9%	68.45	21.6%	50.03	12.7%
Female	66.02	26.8%	64.56	24.4%	35.23	17.4%	47.47	18.7%	101.26	22.5%	112.03	21.6%
Total	105.38	26.1%	99.97	20.3%	64.32	17.7%	62.09	14.9%	169.70	22.2%	162.06	17.8%
No Work at Suitable Location												
Male	11.11	7.1%	8.26	3.6%	6.71	4.2%	7.72	4.7%	17.82	5.6%	15.98	4.1%
Female	27.79	11.3%	15.96	6.0%	11.15	5.5%	17.72	7.0%	38.95	8.7%	33.68	6.5%
Total	38.91	9.6%	24.22	4.9%	17.86	4.9%	25.44	6.1%	56.77	7.4%	49.65	5.5%
No Work Available for Other Reasons												
Male	19.58	12.5%	22.52	9.9%	12.24	7.7%	3.99	2.4%	31.82	10.1%	26.51	6.8%
Female	11.01	4.5%	3.87	1.5%	16.66	8.2%	5.66	2.2%	27.67	6.2%	9.52	1.8%
Total	30.60	7.6%	26.38	5.4%	28.90	8.0%	9.65	2.3%	59.50	7.8%	36.03	4.0%
All those with no Appropriate Job Opportunity												
Male	157.02	100.0%	228.50	100.0%	159.54	100.0%	163.91	100.0%	316.56	100.0%	392.40	100.0%
Female	246.26	100.0%	264.55	100.0%	202.89	100.0%	253.51	100.0%	449.15	100.0%	518.06	100.0%
Total	403.27	100.0%	493.05	100.0%	362.43	100.0%	417.42	100.0%	765.70	100.0%	910.47	100.0%

Appendix Table 4

Unemployment Duration (in Months); Median and Third Quartile by Gender and Urban/Rural Location, Ages 15-64, Market Labor Force Definition, Using Different Search Criteria, 1998-2006

	Urban				Rural				All Egypt			
	1998		2006		1998		2006		1998		2006	
	q50	q75	q50	q75	q50	q75	q50	q75	q50	q75	q50	q75
Broad Definition:												
Male	12.0	25.0	18.0	36.0	12.0	36.0	12.0	36.0	12.0	36.0	15.0	36.0
Female	24.0	72.0	36.0	60.0	24.0	60.0	48.0	84.0	24.0	60.0	36.0	72.0
Total	24.0	48.0	24.0	48.0	24.0	48.0	36.0	60.0	24.0	48.0	24.0	60.0
Standard Definition:												
Male	12.0	24.0	24.0	36.0	12.0	40.0	15.0	36.0	12.0	36.0	18.0	36.0
Female	24.0	84.0	36.0	72.0	24.0	60.0	48.0	84.0	24.0	72.0	48.0	84.0
Total	24.0	60.0	24.0	60.0	24.0	48.0	36.0	66.0	24.0	60.0	36.0	60.0
Narrow Definition:												
Male	12.0	24.0	24.0	36.0	12.0	36.0	18.0	36.0	12.0	36.0	18.0	36.0
Female	24.0	84.0	36.0	66.0	24.0	60.0	48.0	84.0	24.0	60.0	42.0	72.0
Total	24.0	48.0	24.0	60.0	24.0	48.0	36.0	60.0	24.0	48.0	36.0	60.0
Government Search Only:												
Male	48.0	60.0	8.0	24.0	168.0	168.0	6.0	12.0	60.0	168.0	6.0	12.0
Female	84.0	84.0	60.0	108.0	48.0	96.0	84.0	120.0	48.0	96.0	72.0	108.0
Total	60.0	84.0	24.2	78.0	48.0	108.0	60.0	96.0	48.0	96.0	48.0	96.0

REFERENCES

Assaad, Ragui. 2002. The transformation of the Egyptian labor market: 1988-1998. In *The Egyptian labor market in an era of reform*. Ragui Assaad (Ed.) Cairo, Egypt: American University in Cairo Press, pp. 3-64.

Assaad, Ragui. 2006a. Why did economic liberalization lead to feminization of the labor force in Morocco and de-feminization in Egypt? In *Gender impact of trade liberalization in the MENA region*. Tunis: Center for Arab Women Training and Research.

Assaad, Ragui. 2006b. Institutions, household decisions and economic growth in Egypt. In *Explaining growth in the Middle East*. Hashem Pesaran and Jeffrey Nugent (Eds.). Amsterdam: North Holland Elsevier.

Barsoum, G. 2006. Egypt labor market panel survey 2006: Final Report. Cairo, Egypt: The Population Council.