

Chapter IV

The Transformation of Female Labor Market

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Introduction

In previous chapters, we covered social and political and economic context of pre- and post-revolutionary Iran. In this chapter we will focus on census data and quantitative analysis of this transformation. Much of previously published work on female employment argues that because of the process of "Islamization," women's employment declined in the aftermath of the 1979 Revolution (V. Moghadam 1991, 1995, F. Moghadam, 1994, Moghissi 1996, Afshar, 1997, Alizadeh 2003, Behdad and Nomani, 2006). Some academics have argued that Islamization may have in fact facilitated education, mobilization, and participation in public life for women who came from low income families or religious backgrounds (Paidar 1995, Kian 1997, Hoodfar 1999, Poya, 1999, Mehran 2003). Meanwhile, many factors other than Islamization—e.g., demographic change, formation of new institutions, as well as internal and external shocks—have also been at work in complex and dynamic ways, influencing labor market conditions and interacting with the Islamization process. We make an effort in this chapter to sort out these issues to the extent that the census data permits.

The census data is available from the Statistical Center of Iran (SCI), www.sci.org.ir, in tabulated form on a decennial basis from 1956 to 2006. We will pay particular attention to the 2006 census data which has become available recently and has not been used in the past studies of female labor market in Iran (e.g., Mehryar et al., 2004, Behdad and Nomani, 2006). Some studies have gone beyond the 1996 census, using Household Expenditure and Income Surveys (HEIS) and Socio-economic Characteristics of Households (SECH) datasets produced by SCI (e.g., Salehi-Isfahani, 2005b; Salehi-Isfahani and Marku, 2006). However, those surveys are more recent and do not allow comparisons with pre-Revolution times. Also, the surveys are based on somewhat dated samples which do not match the recent census results. Of course, using census data has its own limitations. In particular, some of women's labor market activities

may have gone unnoted in the process of data collection, especially in the earlier censuses. Also, in 1976 and 1986 censuses, the seasonally unemployed were categorized as unemployed, while they were treated as employed in other censuses. We will try to take account of these shortcomings in our analysis of the census data.

The rest of this chapter is organized as follows. We first examine the broad trends and sectoral shifts in the economy and in the female labor market. Then, we highlight the role of demographic factors, especially age structure of the population, in the observed pattern of change in female labor force. In the next section, we discuss the educational developments that seem to have played key roles in women's labor force participation (LFP). This is followed by focuses on the structure of female employment in terms of occupations and positions. The last section is devoted to the unemployment problem, which is a major concern particularly for young women in Iran.

Women's LFP and Employment in Iran: Trends and Complexities

a) The Overall Picture

Over the past five decades, Iran's 10 years and older female labor force has grown more than six fold, from 0.57 million to 3.62 million (see Table 1). This growth was much faster than the 3.6 fold increase in the male labor force. There is a huge literature on under reporting of women's participation in the labor force, especially in rural areas (International Labour Review 2008) and the problem is likely to have been more serious in earlier decades. However, focusing on urban areas, where undercounting may have been less serious, reveals even a more dramatic picture. Female labor force in urban areas was 0.19 million in 1956 and 2.5 million in 2006, an increase of 13.5 times, compared to the 7.9 fold increase for men. As a result, the share of women in urban labor force rose from about 10 percent in 1956 to almost 16 percent in 2006 (Figure 1). This trend has persisted in recent decades, with a major exception during the 1976-1986 period, when the urban labor force increased by 1.5 times for women and 1.6 times for men, lowering the share of women from 11.3 percent in 1976 to 10.6 percent in 1986 (Table 1 and Figure 1). This may be explained to some extent by the fact that many women worked as volunteer (Poya 1999). The 1976-1986 decade also saw a striking decline in the rural female labor force of 41.5 percent (this is particularly noticeable when compared to men

in rural areas, whose participation increased 14.8 percent Table 1). As a result, the share of women in rural labor force dropped from 17.6 percent in 1976 to 9.8 percent in 1986 (Figure 1). This sharp decline in the 1980s is what is often attributed to the rise of Islamism after the Revolution in many academic writings. But, as we have argued in Chapter 2 and will show further below in light of census data, the phenomenon is complex and seems to have been caused by a host of factors besides Islamism.

A very puzzling aspect of female labor market in Iran is the low participation rate of women (see Table 1). In fact, for urban women, the LFP rate declined steadily between the mid-1960s and mid-1980 from 9.9 percent to 8.1 percent. In rural areas, the LFP rate continued to rise in the 1960s and most of the 1970s, reaching 16.7 percent in 1976. But, then it dropped sharply after the Revolution, reaching 7.9 percent in 1986, before it started to recover steadily in the past two decades. To develop a better sense of the how low these rates are, one can compare them with the LFP rates of developed countries, which are in the order of 60 percent. Another comparison to make is with the male LFP rates. The middle row of Table 1 shows that the ratio of female to male urban LFP rates was about 0.14 during most of the past four decades. This means that the probability that a randomly selected women in Iran would be participating in the labor force was only 14 percent of a randomly selected man. This relative probability declined somewhat to 13 percent in the 1980s and has jumped up recently to 19 percent. For rural women, the relative probability had risen to 21 percent in the 1970s, dropped sharply to 11 percent in the 1980s, and has recovered to 17-18 percent in the 1990s and 2000s (see the bottom row of Table 1).

The generally low LFP rate has been partly attributed to possible undercounting something well established in gender and development literature particularly by pioneer work of Marlyn Warning (1990) and partly to cultural factors that have discourage women's economic activity outside home for centuries (Salehi-Isfahani, 2005a). Furthermore, gender and development literature has documented that the impact of development has been inverse, this has in fact happened in Iran between the 1960s and 1990s. Some of this decline in Iran, may well be related to the decline of urban women's LFP rate between the 1960s and 1970s, probably due to an additional combination of inter-related factors: the rise of oil revenues and urban family incomes and the increases

in schooling opportunities and in the number of children per adult woman. These factors seem to have jointly reduced the value of participation in the labor market relative to schooling, child rearing, and homemaking (Karshenas, 2001). This is in fact not an unusual pattern, men's LFP can increase during a period of intense modernization while that of women does not and even declines. During this period, the share of women in the labor force declined despite the fact that at the time the economy was booming and there was significant shortage of labor. It should also be noted that the high demand for labor before the Revolution meant that for those who wanted to work, finding jobs was relatively easy. As a result, the decline in the female LFP rate at the time cannot be explained by difficulties of finding jobs, during this time, it is possible that structural changes were unfavourable towards women's employment. However, after the Revolution, women of particularly urban middle and upper classes were initially discouraged (in some cases forced) from participating in the labor market. As we will see below in Table 12, urban unemployment rates were low in the 1960s and 1970s and the share of women in employment closely tracked their share in labor force (compare the urban employment share graph in Figure 2 with its counterpart in Figure 1).

The situation in rural areas was different. There, incomes were not rising as fast and the growing carpet and weaving industry (see Figure 3) could compete more easily with other alternatives for girls and young women. Migration of rural men in search of better paid urban jobs also vacated positions in agriculture that were filled by women. As a result, the share of women in rural labor force rapidly rose from 9.3 percent in 1956 to 17.6 percent in 1976 (Figure 1). The share of women in rural employment did not rise as fast and their unemployment is recorded as high in 1976 (see Table 12 below). But, that is likely to be due to the fact that the census data was collected during the fall and many seasonally unemployed women were recorded as unemployed, whereas in prior years they had been categorized as employed. In any event, the expansion of female labor force in rural Iran during the 1960s and 1970s was similar to the experience of developing countries where many men migrate out and growth occurs largely through mass employment of women in labor-intensive, export-oriented activities.

The more controversial part of the decline in Iran's female LFP rate is the developments during the 1980s. The rise of Islamism after the Revolution has been

widely cited as a major factor in that decline. But, a closer look at the data reveals a more complicated picture. The first issue to note in this regard is that the recorded drop in female LFP rate between 1976 and 1986 based census data is largely a rural rather than urban phenomenon (see Table 1). In urban areas the decline appears as a continuation of pre-Revolution trend. In fact, increased demands of child rearing on the time of adult women may have played a role in the decline because fertility rose in the first decade after the Revolution. In addition, the economic hardship and the severe shortages during the Iran-Iraq war forced women to spend a great deal of their time obtaining rationed goods in markets and taking care of many household needs that were not adequately met by markets.

However, there were two other factors that worked in the opposite direction (i.e., encouraged female LFP). First, the new cohorts of women entering the urban job market were far more educated than those who retired. Since, as we show below, women with higher education have a greater propensity to participate in the labor market, this factor must have pushed up LFP rates. Second, because universities were closed in the early 1980s and operated with limited capacity in the rest of the decade, schooling in urban areas had diminished and there were fewer alternatives to participation in the labor market (see below for more detailed discussion of education trends). In other words, because most young women could not attend universities, they had more time that they could allocate to the labor force if they did not face other obstacles to participation. There were yet other factors that had mixed effects of their own. During most of the 1980s, the war with Iraq was waging, Iran faced economic sanctions that affected its trade, and its oil revenues were dwindling. This caused significant deterioration in the economy. GDP per capita declined by one-third between 1978 and 1988 (Esfahani and Pesaran, 2009) and Iran's carpet exports, the most important source of employment for female labor in the country, fell by more than 70 percent. These developments limited job opportunities for women and discouraged them from seeking jobs. On the other hand, declining family incomes are likely to have increased women's need to hold jobs. In addition, the fact that many men had been drafted by the armed forces to fight the war must have had a positive effect on the demand for women's labor. In the context of all these differing forces, the Islamization process discouraged secular urban middle class women from participating in

the labor force, but at the same time attracted others to fill the vacated positions as well as the newly created jobs in segregated services for female clients. The data presented in Table 1 and Figure 1 indicate that the net effect of all these factors was not very large in urban areas. Overall, between 1976 and 1986 the share of women in urban labor and their LFP rate dropped by 0.6 and 0.7 percentage points, respectively.

The combined impact of the above factors on women's share in total urban *employment* was larger. It dropped from 11.2 percent in 1976 to 8.8 percent in 1986 (Figure 2), implying that unemployment became a much more important problem for women than men (see Table 12 and Section 5 below). However, these figures may not portray an adequate picture because in the mid-1980s many young men had been drafted to military service and were, therefore, counted as employed, while there was no such mandatory employment position for women. To conclude, the role of Islamization in the decline of female LFP rate is unlikely to have been large, especially when considering that in rural areas people were not secularized under the Shah and had remained Islamic and the revolution has not made a major change in their way of life. It did drive some women out of the urban labor force, but it also created opportunities for others to enter. The net effect may have indeed been negative. However, it seems to have been relatively small compared to the effects of other factors, which shaped the overall picture mostly through shifts in rural employment.

The prevalence of economic forces over the ideological and political factors during the 1980s becomes particularly clear when one examines the rural segment of women's labor market. In rural areas, as mentioned above the population was already quite compliant with the relevant norms. Yet, female LFP rate dropped very sharply. Some undercounting may have been a problem. Some of these factors have been discussed in the chapter by Olmsted. Added to that there are other problems such as what occurred during the 1986 census, where seasonally unemployed workers were recorded as unemployed or non-participant in the labor market. But, this was similar to the pattern of census in 1976. If anything, the departure of many young men who were drafted by the military forces during the war should have brought more women into positions that are recognized as participation by the collectors of labor statistics. As we will see below, this was in fact the case in agricultural activities, where many women replaced men who had

left their villages during the war and, as a result, female employment increased sharply. So, undercounting cannot sufficiently account for the sharp drop in female LFP rate in the 1980s. More plausible explanations are increased schooling of rural girls (see below for a discussion the evidence) and, more importantly, the disruption of economic activities that typically employed women in rural areas, particularly carpet weaving (see Figure 3). The decline of unpaid family jobs, which was the bulk of rural female employment in 1976, further confirms these points (see below).

Interestingly, the recovery of carpet production and similar economic activities during the 1990s (Figure 3) indeed helped revive female LFP rate in rural areas, but not so much in urban areas, where those industries played a small role. The participation rate of women in the urban labor market remained low in the 1990s because of the continued high demands on parents' time and the increased schooling for the young population born in the 1970s and 1980s. These factors reversed in the later 1990s as the consequences of reduced fertility manifested themselves and the graduates entered the work age and, unlike their less educated predecessors, started to demand jobs.

b) Sectoral Shifts

In the previous section we saw that economic changes and have had important impacts on the female labor market. To explore this issue further, we start with an overview of sectoral shifts over the past half century. In the 1960s and 1970s, as oil revenues and family incomes increased, it became more difficult to attract most urban dwellers in Iran to the labor market for producing tradable goods at wage rates that would keep the products competitive with those from the rest of the world. As a result, the urban labor force shifted towards activities that did not face much competition from abroad, particularly services, and moved away from agriculture and manufacturing, except in case of products that received subsidies and especial attention from the government. Note that the shift from agriculture and manufacturing does normally take place in higher stages of economic development. But, in Iran this happened early on and was driven by inflow of oil revenues, as opposed to economic development and increased productivity that enabled the smaller shares of the labor force to meet the demands of the population as a whole for agricultural and manufacturing products. In any event, the shift in the

structure of urban labor market in Iran can be seen clearly in Figure 4. The trend accelerated after the Revolution because of the disruption in foreign trade and imposition of economic embargo which badly affected intermediate and capital good flows and hampered manufacturing production in particular. There was a reversal of the latter effect in the 1990s, but the overall trend of shift from agriculture and manufacturing to services in the urban sector seems to have continued into the 2000s.

The picture of structural change in the rural sector was somewhat different before the Revolution (see Figure 4). Manufacturing employment in rural areas in fact grew rapidly until the mid-1970s essentially because of the expansion of the market for Persian carpets around the world. However, as we show below, the workers employed in that activity were mostly teenage girls, often working as unpaid family workers. The disruption of trade in the 1980s due to the Revolution, war and economic embargo sharply reversed that process. Since then, rural manufacturing employment has recovered somewhat, but like urban areas, overall employment has shift away from agricultural employment and towards the service sector.

The sectoral composition of women's employment more or less followed the pattern for the labor force as a whole during the 1960s and 1970s. However, in rural areas, manufacturing remained by far the largest employer of women, mostly in carpet weaving and handicraft production. As Table 2 shows, this concentration was on the rise over time and by 1976 reached almost two-thirds of the female employment in rural areas. Similar activities were also dominant in urban areas in the 1960s, but then rapidly diminished in the 1970s. Cottage industries that were the largest employers of women in urban areas moved to the rural areas and were replaced by the service sector. After the Revolution, the decline of women's manufacturing jobs accelerated, in both urban and rural areas, as the impediments to its production proliferated. In the urban labor market, service sector jobs came to comprise about three quarters of women's employment. The role of service sector also grew in the rural job market for women. But, the main shift in that market was a substantial increase in women's employment in agriculture, from about 29 percent of female employment in 1976 to over 54 percent in 1986. As argued before, this must have been due to departure of many men from rural areas as a result of draft or migration in search of better incomes, leaving women to attend the land. The end of the

war and economic recovery in the early 1990s seems to have returned the rural economy to its pre-revolution pattern for a while. As the military recruits were demobilized, the men who returned to rural areas took back many of their agricultural jobs and women again focused on cottage industry. However, that situation did not last long. Between 1996 and 2006, the role manufacturing in the rural female labor market declined and agriculture and services gained substantially.

A final observation regarding the structure of female labor market in Iran over the past few decades is the steady increase in women's presence in sectors that did not use to offer many jobs to women, such as sales, finance, transportation and communication, tourism, and utilities. The aggregated share of these sectors in female employment is shown in the "Other Sectors" row in Table 2. Between 1976 and 2006, this share rose from 8.1 to 15.3 percent in urban areas and from 1.8 to 7.7 percent in rural areas.

Female LFP and Employment: The Role of Age Structure

Age structure of the population is a key determinant of the pattern of female LFP and employment, both at the aggregate and sectoral levels. In this section we first focus on the role of teenagers in LFP and employment and then examine the overall picture for the entire age spectrum.

a) Teenage LFP and Employment

In the 1950s when access to schooling was limited and poverty was high, teenagers participated in the labor force similar to adults. In urban areas, the shares of women 10-19 years of age in the female labor force and female population were practically the same (see Figure 6), but in rural areas, teenagers were over-represented in the labor force. Due to the post-World War II baby boom, the share of young women in total population increased substantially between the mid-1950s and mid-1970s. Meanwhile, in urban areas, this group started to attend school more often. As a result, its share in labor force did not raise as fast as its population share. In fact, the share of youngsters in female labor force dropped during 1966-1976 (Figure 6). In rural areas, on the other hand, the presence of teenagers in labor force increased sharply, well beyond

the increase in their population share. Between mid-1960s and mid-1980, women in the 10-19 year age group comprised more than 40 percent of female labor force in rural areas, far above their corresponding population share. This trend was reversed after 1986 and the share of youth in labor force dropped sharply in both rural and urban areas. Their population share also declined, following the drop in fertility rates in the 1990s.

Figure 7 shows that shares of young women in rural and urban female employment followed similar patterns. However, the sectoral pattern of teenage employment was highly concentrated in manufacturing. Indeed, in 1966, women aged 10-19 years comprised well over 40 percent of manufacturing employment in both rural and urban areas (Figure 7). This share declined after the Revolution in urban areas, but rose sharply to 50 percent in 1976 and 60 percent by 1986 in rural areas. The type of manufacturing that young women were employed was largely carpet weaving and cottage industry. As we will see below, most of these positions were unpaid family labor. These types of jobs and teenage employment in general have been quickly declining since the 1980s (Figure 7).

b) Age Structure of Female LFP

Beyond the 10-19 years old group, the role of age in LFP has changed a great deal among Iranian women. In the 1950s, the LFP rate of urban women across different age groups was relatively flat, with women in the child bearing ages of 20-35 years old participating at somewhat lower rates than those in other age groups. This can be seen in Figure 8, which graphs the female LFP rates of different age groups in urban areas in selected census years. The graph for 1956 shows that the LFP rate of urban women in the 20-34 age groups was about 8.2 percent, while those 35-59 years old participated at rates of 11.5-12.0 percent and younger women had participation rates of about 10 percent. It is notable that the LFP rate remained in the same range for women above 60 as well, largely because of lack of any retirement or social security system for the kinds of low skill jobs that most women held at the time. A similar age profile of LFP rate existed in rural areas in 1956, but its peak belonged to the 15-19 year old age group (see Figure 9).

Two decades later, the age pattern of LFP rate had dramatically changed. As the graph for 1976 in Figure 8 shows, LFP rates of urban women in the 20-34 age groups had

doubled, while the rates for teenage women and those above 35 had fallen by half. This was largely a consequence of increased female education and expansion of skilled formal sector jobs in urban areas. The 2006 data further shows that these effects have clearly strengthened in recent decades. Compared to 1976, now LFP rates are much higher for the 20-49 age groups and lower for both younger and older generations.

In rural areas, between 1956 and 1976, LFP rates had risen sharply for all age groups below 60, especially for the younger women (Figure 9). It seems that working opportunities in rural manufacturing, mostly carpet weaving, had brought more women of all ages to the market, prevailing over schooling as an alternative for girls. By 2006, this is no longer the case since LFP rates has fallen sharply for women below 20 years of age. Participation rates are also visibly lower for women in the 35-59 age groups. One explanation for the latter trend is that improvement in incomes and education may have reduced the incentive to work in menial jobs, which are the main opportunities in rural areas. This has been elaborated in Zahra Karimi's chapter. Also, the wage rates in such jobs have also been kept low by the rise of competition in international markets and by the presence of Afghan women who have much lower reservation wages.

The progression of LFP rates from 1976 to 2006 was by no means linear. The social and economic disruptions in the first decade of the Revolution had major adverse effects on the labor market. We have seen that female LFP rates declined sharply between 1976 and 1986. Here we examine the age pattern of that decline to shed more light on what happened to the female labor market in the aftermath of the Revolution. In particular, we make an attempt to estimate the extent to which LFP rate had declined as a result of the political change and war.

Figure 10 compares female employment and LFP rates in urban areas in 1976 and 1986 across age groups. The first notable fact in this figure is that the LFP rate of the 20-24 year cohort in 1986 was 13.5 percent, which was 2.5 percentage points lower than its 16 percent counterpart in 1976. If the trends before the Revolution had continued, the LFP rate for this cohort would have probably remained around 16, as was the case in 2006 when participation rates for most other cohort had increased compared to 1976. The reason is that while the 20-24 age group in 1986 might have had a greater disposition to

participate in the labor market compared to its counterpart in 1976, it is likely to have had higher enrollments in higher education as well. Next, note that the 20-24 year old cohort in 1976 had the highest LFP rate at the time (16 percent) and, based on the trends before the Revolution, it is likely to have increased its participation when it reached 30-34 years of age in 1986. However, the actual LFP rate for this group in 1986 was 14 percent. The comparison between the two figures in 1976 and 1986 suggests that the LFP rate of that cohort of women could have been at least 2 percentage points higher if the pre-Revolution trends had continued and the disturbances caused by the Revolution and its concomitant events had been absent. A similar argument applies to older cohorts as well and suggests for most cohorts of Iranian women, urban LFP rate may have been curtailed by about 2.5 percentage points, possibly higher for some groups, especially those in the 45-60 age group. This is a substantial effect. It means that the female LFP rate in urban areas could have reached 11 percent in 1986, compared to the 8.4 percent rate actually observed. Despite the large drop for individual cohorts, the overall LFP rate of urban women dropped by only 0.7 percentage points between 1976 and 1986 (see Table 1). This was because the new cohorts that entered the labor market in the 1960s and 1970s had higher participation rates than the older generations at the time and formed a significant proportion of the female labor force. The large negative effect on individual cohorts may be partly attributed to the rise of Islamism. But, as we have argued before, the economic disruptions caused by the Revolution and the war are likely to have been far more important. This is further confirmed by the pattern of broad and sharp decline in women's LFP in rural areas (Figure 11), where Islamism did not bring about much change, but economic disruptions had visible adverse effects. In rural areas, the pre-Revolution trends are unlikely to have increased female LFP rates beyond those achieved in 1976 because rising incomes and the expansion of schooling are likely to have eventually constrained the carpet industry and limited the jobs that it could offer. However, the drops of about 8-12 percentage points for younger rural women could have been avoided.

Education and Women Labor Force Participation

A major force behind the transformation of the female labor market in Iran is education. The female literacy rate in urban areas was growing rapidly before the Revolution and maintained its pace afterwards, ranging around 51 percent in 1976 and reaching 85 percent in 2006 (Table 3). By comparison, urban male literacy rose from 72 percent to 92 percent during the same period. Rural areas had also seen growth in female literacy rates before the Revolution, but the level remained very low: As of 1976, only about 12 percent of women in rural areas were literate. This situation changed significantly after the Revolution and the literacy rate quickly climbed to more than 30 percent in 1986 and over 67 percent by 2006. The pace was much faster than the trend in rural male literacy, which climbed from about 37 percent to 80 percent between 1976 and 2006. Another indication of proliferation of female education in rural areas after the Revolution is the literacy rates among the rural youth. As of 1976, only 13.4 percent of women aged 15-24 years were literate, while the rate 45.7 percent in 1986 and almost 92 percent in 2006 (Table 3). Female youth literacy in urban areas has long become almost universal.

Female education at secondary and tertiary levels has similarly progressed and had served as a foundation for improved employment opportunities for women. Table 4 shows that between 1986 and 2006, the share of women with secondary education in female population aged 10 years and older has increased from about 3 percent to 17 percent. Meanwhile, the share of higher education degree holders in female population 20 years and older has jumped from 1 percent to 8.3 percent. Women now comprise well over 50 percent of university students, and have been quickly catching up with men in terms of educational attainment.

These achievements have had important consequences for the female labor market in Iran. As Salehi-Isfahani (2005b) has shown based on survey data, increased education leads to higher LFP rates and better employment opportunities. This can also be seen in the census data. In Table 5, we summarize the association between education levels and LFP rates in 1976 and 2006. Among women in 2006, higher levels of education are clearly associated with higher LFP rates and the differences are quite notable. While the

rate is 6.3 for illiterate women and 8.8 percent for women with elementary schooling, it is 13.4 percent for those with high school education and 39.2 percent for those with tertiary education. This relationship does not hold for men, who have higher participation rates when they have only elementary education. The relationship is also much weaker in rural areas.¹ It held quite strongly in 1976 among literate women, though the LFP rate for illiterate women was higher than those with elementary education in that year largely because the rural female labor force that lacked education significantly outweighed the urban one.

More insights regarding the role of education can be gained by examining the ratio of the LFP rates for women and men reported in Table 5. This ratio compares the probability of participation for women relative to the probability for men at each educational level. The figures in Table 5 show that this relative probability has a even clearer positive association with the level of education both in 1976 and 2006. While the probability of participation for women with elementary education was only 12-13 percent of that for men in the same category, for those with tertiary education that relative probability was 60 percent in 2006 and 76 percent in 1976. A similar association also holds in both urban and rural areas separately (data not reported here). Note that for the more educated population, the LFP rates of women were closer to those of men in 1976 compared to 2006. The reason for the increase in the difference in 2006 is not clear. However, it may be the result of the limited supply of educated women in earlier decades, which made it easier for them to find jobs and encouraged more of them to participate in the labor market. We will explore this issue further below when we examine the unemployment problem.

An additional piece of evidence concerning the role of education in female labor market is the educational attainments of employed women. As can be seen in Table 4, in 2006, women with secondary education comprised over 60 percent of total female employment, much higher than their population share. It was also much higher than the corresponding employment share (3.5 percent) in 1976. Women with higher education

¹ Separate data for rural and urban areas for 2006 is not shown to save space. Disaggregate rural-urban data for 1976 is not available.

had a share of more than 40 percent in female employment (for the population of 20 years and older), five times their share in the population and, also, five times the corresponding employment share in 1976. Below, we will present further evidence of the favorable impact of education on women's occupations and positions in the labor market.

Although the LFP rate tends to rise with the level of education, it declines when a large part of the population is attending school. Indeed, the latter effect was an important factor in the decline and slow recovery of women's LFP in the last three decades of 20th century. To demonstrate the significance of this factor, in Figure 12 we present the share of students in female population aged 10 years and over. This share had been on the rise since the 1930s, but made a major jump and passed 10 percent in the 1970s largely because of expansion of education in urban areas. After the revolution, the rate of female school attendance experienced a decline in urban areas, but rose strongly in rural areas such that the overall share of students to population increased. This is notable because, contrary to the observation made by Behdad and Nomani (2006: 130), it suggests that female schooling may have had an important impact on LFP rate in the 1980s, as it increased sharply in rural areas where the drop in LFP was particularly large.

The decline in urban schooling of women may be related to Iran-Iraq war during 1980-1988, when there were disruptions in the economy and many young women volunteered to support the effort.² However, a more important factor seems to have been the closure of universities in the early 1980s because of the Cultural Revolution.. Although the universities were reopened after a few years, their capacities remained limited for some more years. Many women did not return or did not seek to enter universities at the time because by then they had children or were committed to other activities. Also, quite a few young people had left the country. In fact, the census data shows that the decline in the share of students in the population was entirely due to the decline in enrollment of young people 20-24 years of age. In fact, the share of female students in that age group in total population fell by more than 25 percent. (The drop was much sharper for men that age group because many of them were either drafted to go to

² Though this was an important contribution to the country, it was not recorded as LFP because volunteer work is not included in the formal definition of employment.

war or left the country.) These observations also explain why the drop in schooling had an urban focus because universities are located in urban areas and rural women's education was more concentrated in primary and secondary levels rather than tertiary. It is interesting to note that after the reopening of the universities and end of the war, the share of women attending school rapidly increased again in both rural and urban areas. Of course, there was also a huge cohort of baby boomers born after the Revolution that entered the school age at that time. As a result of these factors, the share of students in female population aged 10 years and over jumped from 16.6 percent in 1986 to 22.6 percent in 1996, partly accounting for the slow rise of female LFP rate. This trend, however, has reversed in a major way since 1996, as those students have graduated and many of them are now seeking jobs, as we have seen in Table 1 and Figure 1.

The increased education of women and their increased entry into the labor force has also had a favorable interaction with a visible decline in their fertility rates since the late 1980s. As education and social services expanded, women lowered their fertility rates and found more time to attend school and join the labor force. Moreover, they have managed to help their children acquire better education, hence setting in motion a virtuous circle of increased human capital, low fertility, and high economic growth (Salehi-Isfahani, 2005a).

Occupational Characteristics of Female Employment

We have seen that women in Iran are enjoying higher levels of education and have increased their participation in the labor market, especially in the service sector. This pattern is not too different from those observed in many other developing countries, especially in the Middle East and North Africa region. But, in many of those cases, it is the government that employs the majority of educated women in a limited range of occupations with relatively low salaries. Therefore, a key question is to what extent Iranian women's employment relies on government positions? What are the types of occupations and positions that employed women hold? Has the range of occupations and positions held by women expanded or shrank under the Islamic Republic? What role has increased education played in the past changes? What are the likely future trends in the

quality of female job market in Iran? How do government policies influence the outcomes?

To address these questions, we start by examining the role of public sector in women's labor market in Iran. As can be seen in Table 6, the share of public sector in total female employment used to be small in the 1950s, but grew rapidly in urban areas to the point where in 1976 it accounted for almost half of urban women's employment. However, it is remarkable that government employment of women in rural areas remained quite limited. After the Revolution public employment of women jumped up sharply as many firms were nationalized and the revolutionary regime recruited many women to manage segregation and to help with new functions of taken up by the government, particularly sexually segregated schooling. The share of public sector in total female employment rose to 70 percent in urban areas and 8.5 percent in rural areas in 1986. Since then, the share has slowly risen in rural areas, reaching almost 11 percent in 2006, but it has quickly declined in urban areas, returning to its 1976 level (48.6 percent) by 2006. On the whole, the public sector does not seem to be the main source of new employment for women. The government has been creating about one-third of the new jobs occupied by women over the past two decades in both rural and urban areas. If this trend continues, the share of public sector in female employment will continue to drop rapidly in the coming couple of decades.

According to a general pattern of female employment throughout the world, the public sector has a greater propensity than the private sector to employ women. In the case of Iran, this is especially true in the high education categories. This can be seen in Table 7 where we present the share of women in public and private sectors, disaggregated by the educational levels. However, a more important observation in this respect is that the private sector has been catching up fast with the public sector, particularly in absorbing women with higher education. Between 1996 and 2006, the number of women with higher education employed in the private sector rose by almost 8.5 times, while the same indicator in the public sector was 2.2 times and for men in the private sector it was 4 times. This had led to an almost doubling of the share of educated women in the private sector workforce. Interestingly, this growth has been even stronger in rural areas (Table 7).

Along with the change in the educational pattern of private employment, the positions held by women in the sector have also changed dramatically. In the 1950s, over 72 percent of urban women with jobs were private sector employees and another 11 percent were self-employed. There were very few female employers. As a result of public sector expansion, by 1976 private employees were only 30 percent of total female employment in urban areas. Self employment also fell below 9 percent. On the other hand, the rise of carpet industry had added quite a few unpaid family workers to the female urban workforce (11 percent of the total). After the Revolution, female employment in the urban private sector shrank to very low levels. By 1986, only the self-employed seemed to have maintained their share. However, since then, women's positions as private employees, self-employed, and employers in urban areas have expanded significantly, with unpaid family workers positions remaining quite low. The increase in the share of female employers (almost eight fold) and the doubling of the share of self-employed women is particularly notable (Table 8). In rural areas, the prevalent positions for women have been self-employment and unpaid family work. But, even there the role of women as employers has been rising rapidly and no longer negligible. The share of private employees in total female employment in rural was relatively high in the 1950s, but started to decline in the 1960s and has not recovered much since reaching a low point in the 1980s.

Education seems to be a major vehicle for women to reach entrepreneurial positions in the private sector. As Table 9 shows, in 2006, the share of women among employers with higher education was 15.7 percent, while it was 8.5 and less among employers with lower education. Some of these women may well be those employed in the informal sector. In the chapter by Fatemeh Moghadam, we get a picture of the extent to which middle class educated women are engaged in the labour market in well paid professions and as entrepreneurs. The pattern among the self-employed is also similar, though less pronounced. Women with higher education are also over-represented among private sector employees. As we will see below, these tend to be more professional and technical occupations. This is in sharp contrast with unpaid family labor, a category which largely consists of uneducated workers, predominantly women—82 percent of illiterate unpaid family workers are women.

We now turn to the trends in occupational structure of the women's jobs, summarized in Table 10. In the 1960s, well over 60 percent employed women could be categorized as production workers, which, as have seen, were mainly engaged in carpet weaving and similar handicrafts. In the 1970s, this share dropped in urban areas as the role of professional, technical, and service occupations in female employment expanded rapidly. The table shows that this trend continued strongly after the Revolution, suggesting that during the crisis years of the 1980s, women in professional and technical occupations maintained their jobs much better than production workers. This is an important observation because it happened despite the fact that many women who were forced to leave their jobs because of compulsory dress codes after the revolution were among the professional and technical worker. It suggests that loss of female jobs in manufacturing because of economic decline may have been a much bigger force in shaping the fate of working women than the codes of conduct under the new regime. In any event, since the 1980s clerical and production jobs have grown, but professional occupations still engage almost half of the female workforce in urban areas. At the same time, the share of women working in executive, administrative, and managerial occupations has tangibly increased from 0.3 percent to 4.5 percent of all urban occupations pursued by women.

In rural areas, handicraft and agricultural occupations have remained predominant until recent years. However, there was a major shift from manufacturing production to agriculture jobs in the 1980s, which was later largely reversed. At the same time, there has been a robust rise in the share of professional, technical, and service occupations among employed rural women.

Education, again, had been instrumental in the transformation of occupational structure of female employment, far more than its role in male employment. This can be seen in Table 11, where we present the share of women in employment by occupation and educational attainment. The figures suggest that women's share in more skilled occupations generally rises with the level of education. For example, among rural professional and technical personnel in 2006, women's share was only about 12 percent in the subgroup with elementary education, compared to almost 40 percent in the

subgroup with higher education. Similar patterns can be observed in executive, administrative, and managerial as well as clerical occupations.

To conclude, since the 1980s, the composition of female employment in Iran has shifted strongly towards private sector jobs that require greater education, entrepreneurship, and professional skills. Furthermore, census data clearly suggests that education has been an important vehicle for Iranian women to move to such positions and overcome the higher barriers that they have faced in the labor market compared to men.

The Unemployment Problem

Our analysis so far highlights the important role of education in expanding the employment opportunities and the quality of jobs held by women. However, this process has been associated with higher rates of unemployment among women. As a result, many observers have wondered whether increased education has contributed to increased unemployment, or the association has been coincidental. Many other questions have also emerged. What are the factors that account for the rise of female unemployment? Has unemployment grown more for women than men? Have education and government policies affected the likelihood of female and male unemployment differently? In this section, we make an effort to address these questions to the extent that the available census data permit.

Table 12 shows the history of unemployment rates in urban and rural areas based on census data since 1956. Note that as in most countries with very low income, unemployment was not a major issue in Iran during the 1950s. In those conditions, most people could not afford to remain unemployed and often took whatever job offered to them. In the case of women, in particular, homemaking is viewed as the default option when jobs cannot be found, hence the negligible rates of female unemployment in the 1950s in both rural and urban areas. As incomes increased in Iran in the 1960s and 1970s, unemployment rate among most groups except urban men grew. Part of the increase in between 1966 and 1976 may be due to the differences in the treatment of the seasonally-unemployed workers between the two censuses. However, some increase in unemployment rate of women can be observed even after accounting for this factor and treating all seasonal workers as employed.

After the Revolution, female unemployed jumped by a significant margin in urban areas. The ratio of female to male unemployment rates presented in the third row of Table 12 highlights the difference between women and men in this respect. In 1986, this ratio was 2.1, which means that at the time the probability that a female participating in the labor force remained unemployed was 2.1 times the probability for a male participant in the labor force. This ratio dropped in the 1990s after the economy had recovered from the war and unemployment rates had declined. However, the female unemployment rate and its ratio to male unemployment rate have risen sharply in recent years. In 2006, the probability of unemployment for women in urban areas stood at 2.3 times that of men. In rural areas, the relative probability remained constant at 1.7 between 1970s and 1990s, but has increased to 2 in 2006. (See Table 12.)

To examine the possible role of education in relatively high unemployment rates for women, in Table 13 we summarize the pattern unemployment by education level for women and men in 1976 and 2006. The first notable fact in this table is that in both years and for both sexes, the unemployment rates for those with tertiary education is lower than the rates for labor force participants with less education. However, the unemployment rate for those with high school degrees tends to be higher than those with lower levels of education. This suggests that the supply and demand imbalance at the secondary level of education may be significant, but education does not in general lead to increased unemployment. In addition, education does not seem to affect women's unemployment any more than it affects that of men. This can be seen in the third and last columns of Table 13, which show the relative probability of unemployment for women across education levels. Note that in 2006, this variable was practically the same (about 2.45) for all literate groups, implying that education did not have any differential impact on women at the time. Interestingly, in 1976 that relative probability was declining with education and was in fact less than one for those with secondary and tertiary education. This suggests that in the 1970s, education may have worked in favor of women who sought jobs and lowered their unemployment rates below those of men with similar degrees. The reason for this pattern may be the relative scarcity and novelty of women with higher education in the 1970s. In contrast, in 2006, women were graduating from high schools and universities at the same rates as men, hence uniformity of their unemployment

experiences across educational levels. However, this does not by any means explain the substantially higher unemployment rate of women compared to men (2.5 times). That phenomenon is likely to reflect unfavorable labor market conditions for women and significant biases against them. It may also reflect other factors, such as the role of age structure and differences in educational fields among women and men. We explore these two factors in the rest of this section.

Table 14 shows unemployment rates of women in 1976 and 2006 across age groups. It is clear from the figures in this table that female unemployment was not a problem in urban areas. The youth (aged 15-24) did experience unemployment rates of about 10 percent. But, this is still quite low for this age group, which includes of many low-skill new entrants to the job market. Indeed, women in this age group faced a lower unemployment rate than men, as can be seen from the ratio of female to male unemployment rates in the second row of Table 14. This ratio was rather high for women aged 35 years and over because the rate of unemployment for men was extremely low at the time. The 2006 situation was dramatically different. Female youth unemployment rate was almost 50 percent and twice as much as the rate for males in that age group. Furthermore, female unemployment rate was substantially lower for those beyond their twenties and its ratio to male unemployment rate was closer to one. It seems that the new cohorts of women that arrived at the urban labor market in 2000s faced much higher risks of unemployment and were at a greater disadvantage compared to men. In the higher age groups, women either had found jobs already or were discouraged or retired and left the labor market, hence the relatively lower unemployment rates. The latter factor was partly caused by a government policy to facilitate retirement for women and expand the pension program. It was also partly the result of active discouragement or dismissal of women who were viewed as reluctant to accept the new rules under the Islamic Republic. In addition, the phenomenon commonly known as the "glass ceiling," which prevents women from progressing in their careers towards well-paid and highly professional jobs, exacerbated after the Revolution. From our field work we have observed that many women in Iran complain about the fact that they are excluded from managerial positions. This is critical in the public sector which is the part of the economy where normally women find it easier to march to the top. Islamism and patriarchal values may add to the

general and global discrimination that exists against having women in managerial positions.

The pattern of female unemployment in rural areas in 1976 was quite different from the urban one. Incorrect treatment of seasonal workers contributed to the high unemployment figures in rural areas, as shown in Table 14. But, after controlling for data problem female unemployment rate still turns out to be high, both in absolute value and relative to men, across all age groups in 1976. The situation in 2006 was different. Unemployment rate was relatively high, especially for the youth, very similar to the urban pattern of unemployment. It seems that compared to 1976, there has been notable convergence between rural and urban areas in recent years.

A final consideration regarding the pattern of unemployment is its connection with the field of study among those with higher education. It is often asserted that graduates of "softer" subjects such as social sciences and especially arts and humanities are not prepared to meet the requirements of employers and, therefore, tend to swell the ranks of educated unemployed. However, the unemployment data by field of higher education compiled in Table 15 contradicts this view. We find that in fact in 2006, it was the graduates of agriculture, engineering, and production fields that suffered the highest unemployment rates, among both men and women and in rural as well as urban areas which may be related to glass ceiling. The lowest unemployment rates were experienced by the graduates of education, health and welfare fields, followed by art, humanities and services fields. The reason may be the relatively low expectation of the people in these fields that induces them to take jobs with lower pay more readily. It should be noted that women are well represented in these fields. As a result, their relative position compared to men in terms of the ratio of unemployment rates (the relative probability of unemployment for a woman in the labor force compared to a man) is the weakest among fields. Women's relative unemployment measure is lowest in agriculture, engineering, and production fields, where they are an absolute minority.

To conclude, female unemployment has risen sharply in recent years, but this is an economy-wide problem that has been exacerbated by the massive entry of young cohorts into the labor markets. Increased education does not seem to be a cause of higher

unemployment or to have a clear relation with the gender bias in the unemployment risk. Finally, women's preferences for some fields of study more than others do not seem to contribute to their higher unemployment rates. Rather, cultural and policy biases may have driven up female unemployment rate to over twice that of the male labor force.

Conclusion: Complexities and Nuances

New cohorts of Iranian women have started entering the labor market at unprecedented rates. They are seeking more professional, managerial, and entrepreneurial jobs and capturing such positions at faster rates than their male counterparts. Over the coming decades, these trends are bound to spin profound forces in the Iranian society and bring about major economic, social, and cultural change to the country. The surge in women's participation in the labor force has been delayed over the past three decades due to a variety of factors. Although most of those factors were somehow associated with the Revolution of 1979, they are not necessarily rooted in the Islamic ideology of the new regime, as it is often asserted in the journalistic and even academic literature. While Islamism may have played a role particularly with regard to economic activity among secular middle and upper class women, for the majority of Iranian women a much wider range of adversities undermined LFP. The major change in Iran's politics and institutions after the Revolution, the internal and external political tensions and the war with Iraq in the 1980s all caused major disruptions in economic activity and trade. These in turn had significant negative consequences for job opportunities of Iranian women. At the same time, the economic and socio-political conditions in the early years of the Revolution entailed a decline in higher education and a rise in fertility for a while, which further hampered women's ability to enter the job market. As the turmoil in political and economic conditions subsided later in the 1980s, fertility declined and schooling increased dramatically. A decade later, the large cohort of young women raised and educated after the Revolution began to make its presence felt in the job market.

Our analysis of census data in this chapter shows that besides demographic change, sectoral shifts from agricultural and manufacturing to services have played crucial roles in women's LFP and employment. A significant part of the rise in female employment before the Revolution was due to the expansion of carpet industry, which

relied largely on uneducated female labor, especially girls in rural areas. But, that type of manufacturing has become less viable due to a combination of factors. As a result, women's employment has shifted towards service sector jobs, especially professional, technical, and clerical positions that require more education. This is very promising for women's enhanced role in the economy because many of them have heavily invested in education, positioning themselves to take advantage of the expanding demand for professional services. Indeed, we find that education has not only enabled women to move into better jobs, it has served as an important vehicle for women to overcome social and cultural biases against them and outcompete men in the markets for many high quality jobs. Of course, women continue to face major challenges in breaking into the old boys club, and the restrictions on their social and economic activities, such as the renewed emphasis on dress codes in recent years, cannot be overlooked. Nevertheless, education has been an important means for women to diminish the impact of prejudices against them. Also, education at higher levels seems to lower the unemployment rate, which has become a major concern with the relatively weak performance of the economy and the entry of the post-Revolution baby-boomers into the labor market. Unemployment is a much more serious problem for women than for men due to the existing obstacles and social biases against women's participation in the economy.

To improve the labor market conditions for women, some have argued in favor of encouraging export-oriented manufacturing—a strategy that has worked well in some East Asian countries and in some MENA countries, especially Tunisia (V. Moghadam, 1995). Such types of employment have been heavily criticized by gender and development literature because of its potentially exploitive impact. Apart from that these type of export-oriented industries are unlikely to thrive in Iran because of the substantial oil income has raised the wages of Iranian workers, rendering them uncompetitive with their counterparts in other low income countries in the tradable sectors. This is an important reason why Iran's labor force has shifted towards services and other non-tradable sectors, where remunerations could rise. However, as globalization brings more competition to all corners of each economy, focusing on non-tradables increasingly restricts the options of the workforce. A good way to escape this fate is to invest the oil revenues in improved quality of human capital and, thereby, match the higher wages with

greater productivity. This means shifting the economy towards the production of high-quality product with high quality labor, along the lines of the shift towards high-end products in Italian clothes industry. The educational successes of Iranian women in recent decades seem to point in that general direction and can serve as a pivotal means of achieving economic development with greater gender equity. However, to ensure that the path is indeed followed effectively, there is a need for significant enhancement of the educational system and the labor market institutions.

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Table 1
Female Labor Force, 1956-2006

Year	1956	1966	1976	1986	1996	2006
Female Labor Force (10 years and over, in millions)	0.6	1.0	1.4	1.3	2.0	3.6
<i>Growth Rate of Female Labor Force in Prior Decade</i>	<i>n.a.</i>	<i>5.8%</i>	<i>3.4%</i>	<i>-1.0%</i>	<i>4.4%</i>	<i>5.8%</i>
Female LFP Rate - Urban Areas	9.3	9.9	9.0	8.4	8.1	12.6
<i>Ratio of Female to Male LFP Rates – Urban</i>	<i>0.12</i>	<i>0.14</i>	<i>0.14</i>	<i>0.13</i>	<i>0.14</i>	<i>0.19</i>
Female LFP Rate - Rural Areas	9.2	14.3	16.6	7.9	10.7	12.3
<i>Ratio of Female to Male LFP Rates – Rural</i>	<i>0.11</i>	<i>0.17</i>	<i>0.21</i>	<i>0.11</i>	<i>0.17</i>	<i>0.18</i>

Source: Statistical Center of Iran.

Table 2
Sectoral Composition of Female Employment
Percent of Total Female Employment

Census Year	1956	1966	1976	1986	1996	2006
Urban						
Agriculture	4.1	3.1	2.3	2.4	2.1	2.0
Manufacturing	39.6	45.7	31.2	11.8	19.2	18.3
Social, Personal, and Financial Services	52.5	45.6	58.4	73.6	68.7	64.5
<i>Education, Healthcare, and Social Services</i>	<i>n.a.</i>	<i>33.4</i>	<i>37.8</i>	<i>52.7</i>	<i>53.0</i>	<i>43.1</i>
Other Sectors	3.8	5.6	8.1	12.1	10.0	15.3
Rural						
Agriculture	35.0	32.1	28.9	54.2	35.0	43.5
Manufacturing	52.7	61.1	65.9	33.6	51.0	35.7
Social, Personal, and Financial Services	11.1	4.9	3.7	8.2	9.3	13.1
<i>Education, Healthcare, and Social Services</i>	<i>n.a.</i>	<i>1.9</i>	<i>2.5</i>	<i>5.6</i>	<i>7.1</i>	<i>8.7</i>
Other Sectors	1.2	1.8	1.6	4.1	4.7	7.7

Source: Statistical Center of Iran.

Table 3
Literacy Rate
(Percent)

Census Year	1956	1966	1976	1986	1996	2006
Female Population (aged 10+ years)						
Urban	20.6	36.0	51.1	61.4	79.9	85.0
Rural	1.0	3.4	12.2	30.5	58.2	67.2
Female Youth Population (aged 15-24 years)						
Urban	26.3	50.3	68.5	80.9	95.6	98.1
Rural	1.4	4.1	13.4	45.7	82.4	91.9

Source: Statistical Center of Iran.

Table 4
Iranian Women's Educational Attainment and Employment
(Percent)

Census Year	1956	1966	1976	1986	1996	2006
Literacy Rate						
Female Population 10 Years and Over	7.3	16.1	30.9	47.6	71.7	80.3
Employed Female Population 10 Years and Over	n.a.	11.5	31.2	63.9	79.9	87.7
Share of Women with Secondary Degree in						
Female Population 10 Years and Over	0.2	1.1	2.9	7.0	12.1	16.8
Employed Female Population 10 Years and Over	n.a.	3.6	17.5	40.8	43.2	60.4
Share of Women with Higher Education Degree in						
Female Population 20 Years and Over	0.04	0.3	1.0	1.5	3.4	8.3
Employed Female Population 20 Years and Over	n.a.	1.5	8.0	14.6	26.6	40.4

Source: Statistical Center of Iran.

Table 5
Education and Labor Force Participation, 1976 and 2006

	1976			2006		
	Female	Male	Ratio of Female to Male LFP Rate	Female	Male	Ratio of Female to Male LFP Rate
All Country	12.9	70.7	0.18	12.4	65.6	0.19
<i>Illiterate</i>	13.3	90.8	0.15	6.3	67.3	0.09
<i>Literate</i>	12.1	53.9	0.22	14.0	65.4	0.21
Elementary	7.5	59.6	0.13	8.8	71.3	0.12
High School	22.7	57.0	0.40	13.4	64.4	0.21
Tertiary Education	52.5	69.3	0.76	39.2	65.3	0.60

Source: Statistical Center of Iran.

Table 6
Share of Public Sector in Total Female Employment

Census Year	1956	1966	1976	1986	1996	2006
Urban Areas	13.5	17.6	48.6	70.0	63.2	48.6
Rural Areas	1.4	0.5	3.0	8.5	9.3	10.9

Source: Statistical Center of Iran.

Table 7
Education and the Share of Women in Private and Public Employment, 1996 and 2006
 (Share of Women as Percent of Total Employment in Each Group)

	Private		Public	
	1996	2006	1996	2006
Urban	6.1	9.9	18.7	22.5
<i>Illiterate</i>	6.2	8.6	7.0	7.8
<i>Literate</i>	6.0	10.1	19.2	22.8
Elementary	4.9	5.4	3.7	5.0
High School	6.7	11.2	22.4	15.4
Higher Education	13.8	25.1	31.3	35.0
Rural	14.4	8.6	7.9	7.8
<i>Illiterate</i>	14.2	16.7	9.6	12.4
<i>Literate</i>	14.5	11.5	7.7	11.0
Elementary	15.1	13.6	4.0	5.8
High School	6.4	8.8	9.5	9.0
Higher Education	5.9	14.9	16.9	21.8

Source: Statistical Center of Iran.

Table 8
Distribution of Female Employment Across Private Sector Positions
 (Percentages of Total Female Employment in Each Area)

Census Year	1956	1966	1976	1986	1996	2006
Share of Private Sector in Female Employment – Urban Areas	86.3	78.9	50.0	20.4	31.2	48.8
As Employers	0.8	1.01	0.59	1.04	0.92	4.61
As Self-Employed	10.9	12.8	8.7	9.2	12.7	16.6
As Private Employees	72.5	59.5	29.8	7.8	13.1	25.3
As Unpaid Family Workers	2.1	5.6	11.0	2.4	4.4	2.3
Share of Private Sector in Female Employment – Rural Areas	98.5	98.6	96.2	87.1	86.5	85.2
As Employers	0.5	0.44	0.35	1.79	0.92	2.82
As Self-Employed	28.5	26.5	12.1	28.8	28.6	34.6
As Private Employees	44.1	41.3	24.6	12.8	15.6	15.9
As Unpaid Family Workers	25.4	30.3	59.2	43.8	41.5	31.9

Source: Statistical Center of Iran.

Table 9
Education and the Share of Women in Private Sector Positions, 2006
 (Share of Women as Percent of Total Employment in Each Group)

	Employers	Self-Employed	Private Employees	Unpaid Family Workers
All Educational Levels	7.4	8.3	11.4	45.8
<i>Illiterate</i>	<i>6.5</i>	<i>9.7</i>	<i>10.0</i>	<i>82.4</i>
<i>Literate</i>	<i>7.5</i>	<i>7.9</i>	<i>11.6</i>	<i>37.2</i>
Elementary	3.6	7.5	6.4	50.2
High School	8.5	8.5	12.9	21.0
Higher Education	15.7	13.7	31.6	26.8

Table 10
Distribution of Female Employment by Occupational Categories
 (Percents of Total Female Employment in Each Area)

Census Year	1966	1976	1986	1996	2006
Urban Areas					
Executive, Administrative, and Managerial	0.1	0.3	0.3	3.9	4.5
Professional and Technical	13.2	36.9	59.9	52.8	49.3
Administrative Support, Clerical, Services, and Sales	4.7	14.7	15.8	15.9	21.8
Farming, Forestry, and Fishing	2.3	2.2	2.4	1.7	1.2
Industrial Production, Transportation, and Simple Labor	60.7	30.6	13.5	21.7	19.3
Rural Areas					
Executive, Administrative, and Managerial	0.0	0.01	0.02	0.4	0.6
Professional and Technical	0.6	2.4	6.1	5.6	9.0
Administrative Support, Clerical, Services, and Sales	0.3	0.4	1.5	3.1	5.7
Farming, Forestry, and Fishing	31.7	28.8	54.3	30.7	35.8
Industrial Production, Transportation, and Simple Labor	65.4	66.5	34.8	57.0	45.1

Source: Statistical Center of Iran.

Table 11
Education and Occupational Structure of Female Employment, 2006

Sector	Share of Women in Employment of Those with Educational Level:				
	<i>Illiterate</i>	<i>Total Literate</i>	Elementary	High School	Higher Education
1976					
All Occupations	16.0	10.6	6.2	18.9	23.3
Executive, Administrative, and Managerial	<i>1.2</i>	<i>3.5</i>	<i>0.6</i>	<i>2.9</i>	<i>5.5</i>
Professional and Technical	<i>13.7</i>	<i>34.6</i>	<i>17.5</i>	<i>42.2</i>	<i>29.7</i>
Administrative Support, Clerical, Services, Sales	<i>10.9</i>	<i>8.6</i>	<i>3.3</i>	<i>15.6</i>	<i>16.9</i>
Farming, Forestry, and Fishing	<i>8.6</i>	<i>3.1</i>	<i>4.3</i>	<i>1.1</i>	<i>0.9</i>
Industrial Production, Transportation, Laborer	<i>26.5</i>	<i>7.0</i>	<i>8.3</i>	<i>3.0</i>	<i>5.4</i>
2006					
All Occupations	13.7	13.6	9.0	11.9	30.8
Executive, Administrative, and Managerial	<i>3.1</i>	<i>15.5</i>	<i>2.3</i>	<i>10.2</i>	<i>21.0</i>
Professional and Technical	<i>3.8</i>	<i>34.5</i>	<i>11.7</i>	<i>27.1</i>	<i>39.6</i>
Administrative Support, Clerical, Services, Sales	<i>9.6</i>	<i>13.7</i>	<i>6.9</i>	<i>14.9</i>	<i>23.7</i>
Farming, Forestry, and Fishing	<i>14.1</i>	<i>7.7</i>	<i>8.7</i>	<i>4.8</i>	<i>4.3</i>
Industrial Production, Transportation, Laborer	<i>13.3</i>	<i>7.6</i>	<i>9.4</i>	<i>7.0</i>	<i>7.6</i>

Source: Statistical Center of Iran.

Table 12
Unemployment Rates in Urban and Rural Areas, 1956-2006
(Percent)

Census Year	1956	1966	1976	1986	1996	2006
Urban Areas						
Female	0.5	3.8	5.9	29.1	12.5	22.5
Male	4.9	6.0	5.0	13.6	8.4	9.8
<i>Ratio of Female to Male Unemployment Rates</i>	<i>0.1</i>	<i>0.6</i>	<i>1.2</i>	<i>2.1</i>	<i>1.5</i>	<i>2.3</i>
Rural Areas						
Female	0.3	10.9	21.7	20.6	14.3	25.5
Male	1.9	11.2	12.6	12.1	8.6	12.9
<i>Ratio of Female to Male Unemployment Rates</i>	<i>0.1</i>	<i>1.0</i>	<i>1.7</i>	<i>1.7</i>	<i>1.7</i>	<i>2.0</i>

Source: Statistical Center of Iran.

Table 13
Education and Unemployment, 1976 and 2006

	1976			2006		
	Female	Male	Ratio of Female to Male Unemployment Rate	Female	Male	Ratio of Female to Male Unemployment Rate
All Country	16.4	9.1	1.80	23.3	10.8	2.16
<i>Illiterate</i>	<i>19.2</i>	<i>10.0</i>	<i>1.92</i>	<i>10.3</i>	<i>8.2</i>	<i>1.26</i>
<i>Literate</i>	<i>9.4</i>	<i>7.9</i>	<i>1.19</i>	<i>24.9</i>	<i>11.2</i>	<i>2.23</i>
Elementary	14.4	6.9	2.09	21.3	8.5	2.51
High School	7.7	10.6	0.73	34.9	14.1	2.47
Tertiary Education	3.0	4.4	0.70	16.7	6.8	2.44

Source: Statistical Center of Iran.

Table 14
Age and Female Unemployment Rate, 1976 and 2006
(Percent)

Age	15-24	25-29	30-34	35-39	40 & over
Urban					
1976 Unemployment Rate	10.0	2.9	2.2	2.5	3.8
<i>1976 Ratio</i> *	<i>0.9</i>	<i>1.0</i>	<i>1.5</i>	<i>2.2</i>	<i>1.7</i>
2006 Unemployment Rate	49.0	25.4	11.2	5.5	2.9
<i>2006 Ratio</i> *	<i>2.0</i>	<i>2.2</i>	<i>1.9</i>	<i>1.4</i>	<i>0.9</i>
Rural					
1976 Unemployment Rate	18.3	23.2	25.3	29.2	30.5
<i>1976 Ratio</i> *	<i>1.4</i>	<i>2.5</i>	<i>2.7</i>	<i>2.9</i>	<i>2.5</i>
2006 Unemployment Rate	40.1	28.2	15.9	8.0	2.5
<i>2006 Ratio</i> *	<i>1.6</i>	<i>2.0</i>	<i>1.9</i>	<i>1.3</i>	<i>0.6</i>

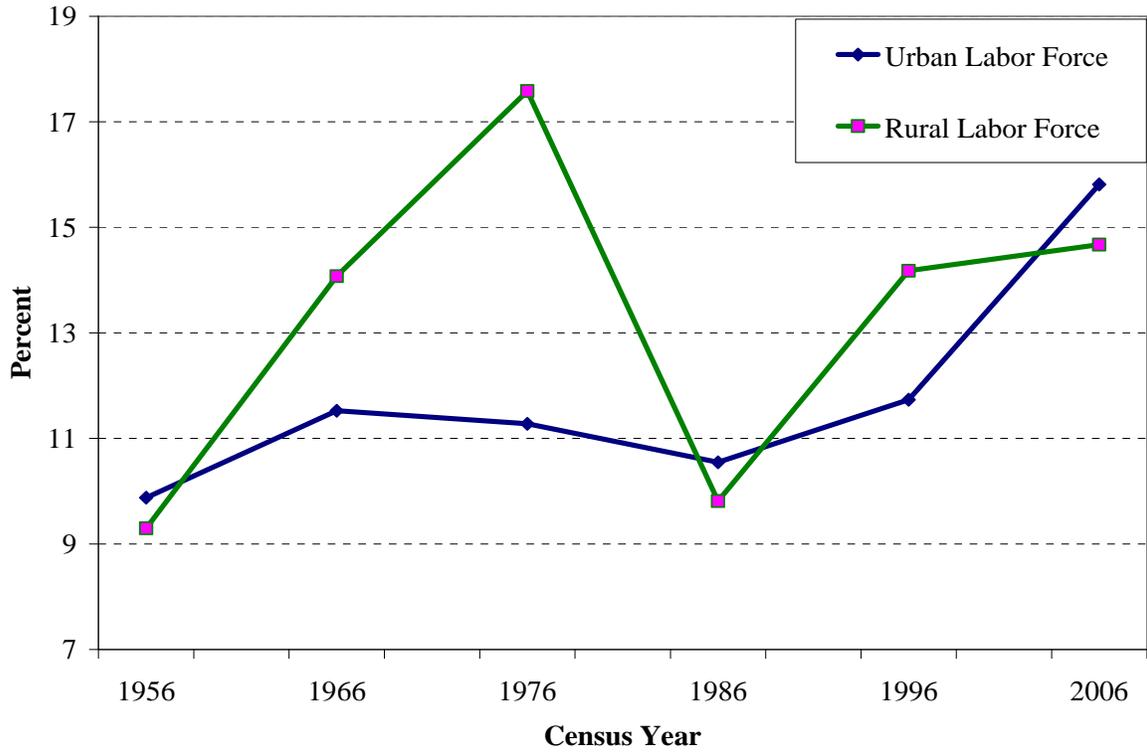
* Ratio of unemployment rate of women to men.

Source: Statistical Center of Iran.

Table 15
Field of Study and Unemployment Among Population with Higher Education, 2006
 (Percent)

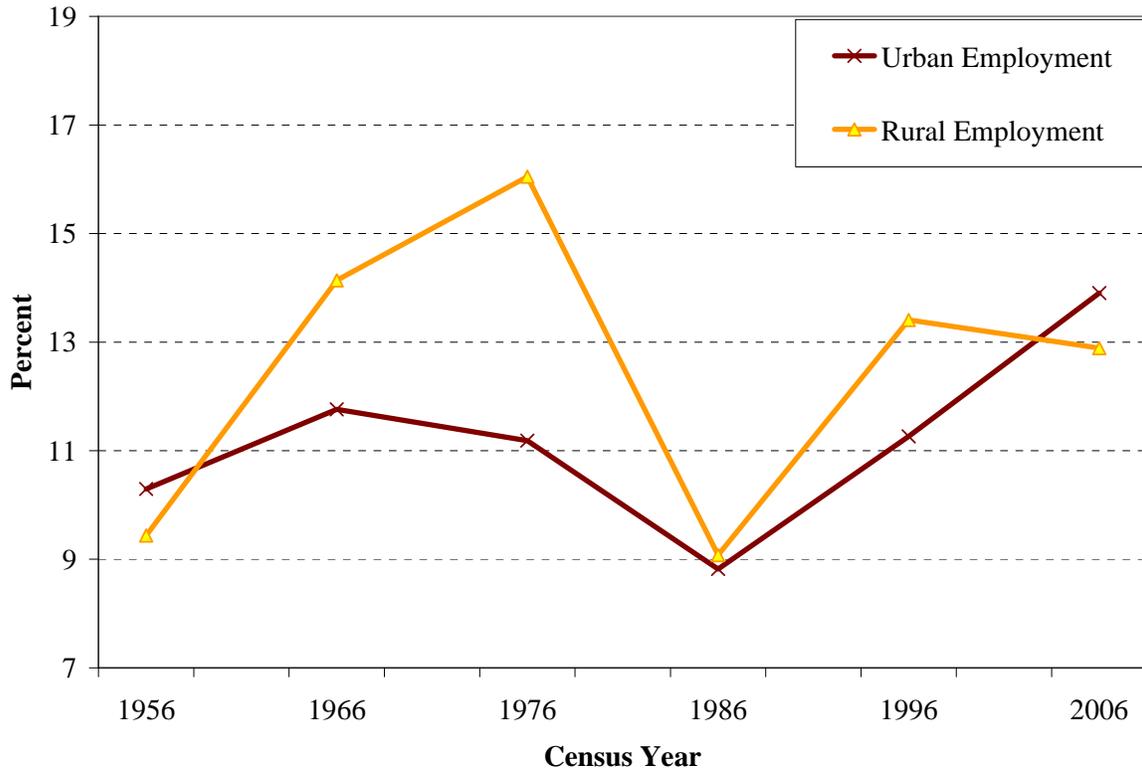
Field of Study	Unemployment Rate		Ratio of Female to Male Unemployment Rate
	Female	Male	
Urban	15.9	6.3	2.5
Education, Health and Welfare	8.2	2.1	3.8
Art, Humanities and Services	15.8	4.2	3.8
Sciences, Social Sciences, Law, and Business	19.9	5.4	3.7
Engineering and Production	24.5	9.1	2.7
Agriculture	37.3	11.2	3.3
Rural	29.4	11.9	2.5
Education, Health and Welfare	15.9	4.6	3.4
Art, Humanities and Services	32.5	9.3	3.5
Sciences, Social Sciences, Law, and Business	37.7	14.2	2.6
Engineering and Production	41.4	14.5	2.9
Agriculture	40.7	20.7	2.0

Figure 1
Share of Women in Labor Force



Source: Statistical Center of Iran.

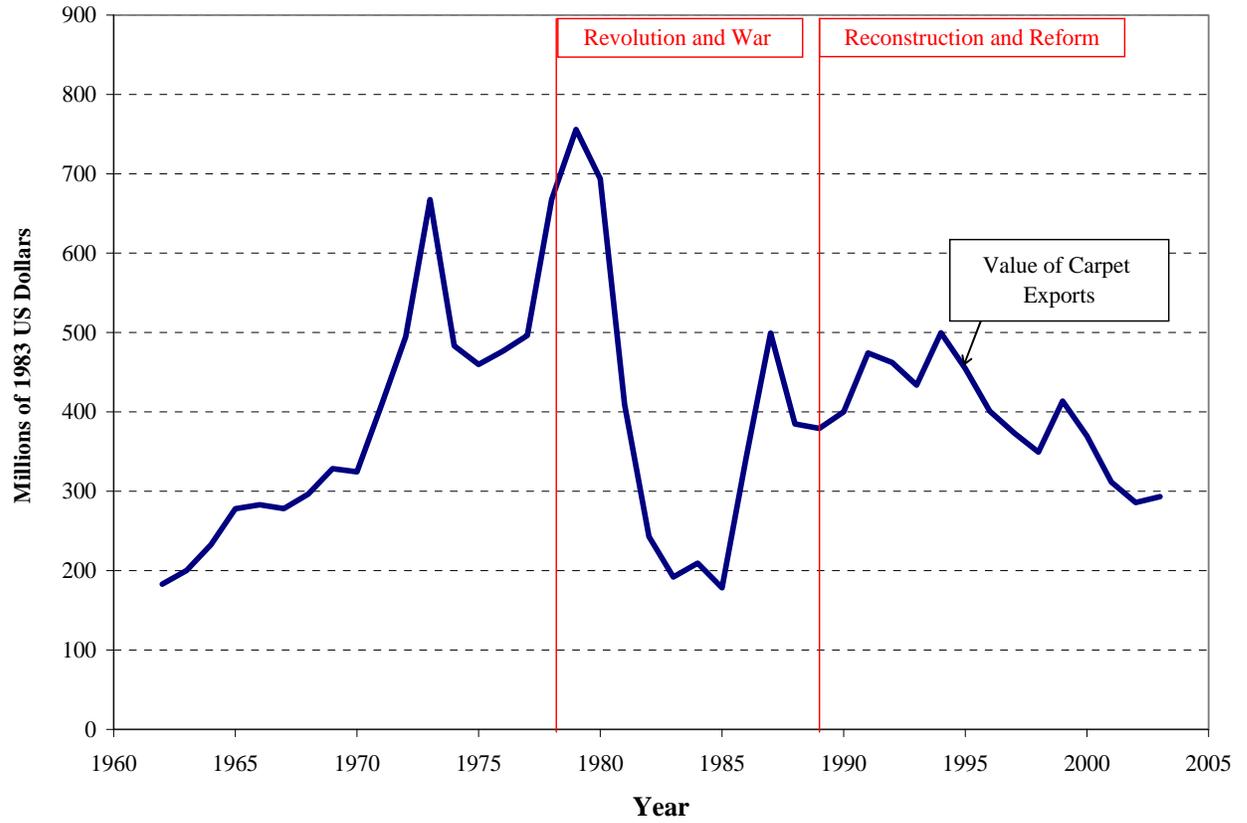
Figure 2
Share of Women in Employment



Source: Statistical Center of Iran.

Figure 3

Value of Iran's Carpet Exports in Constant 1983 US Dollars



Source: NBER-United Nations Trade Data; Customs Administration, Islamic Republic of Iran.

Figure 4

Employment Shares of the Main Economic Sectors in Urban Areas

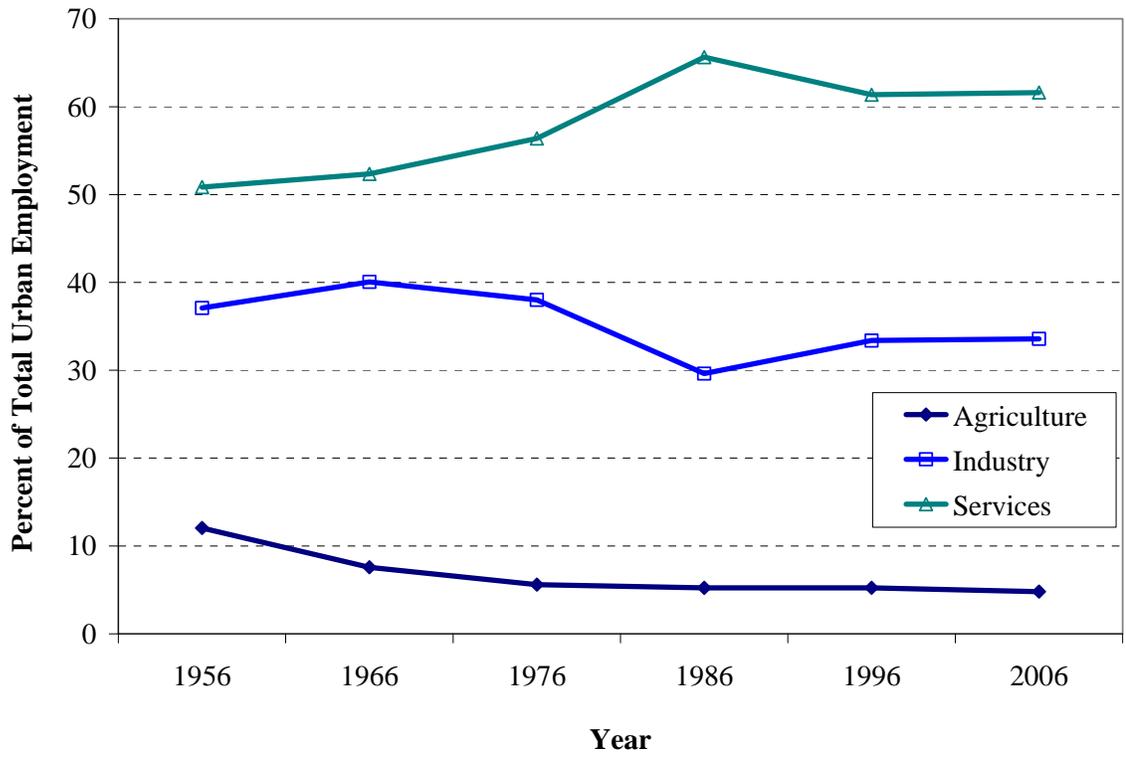
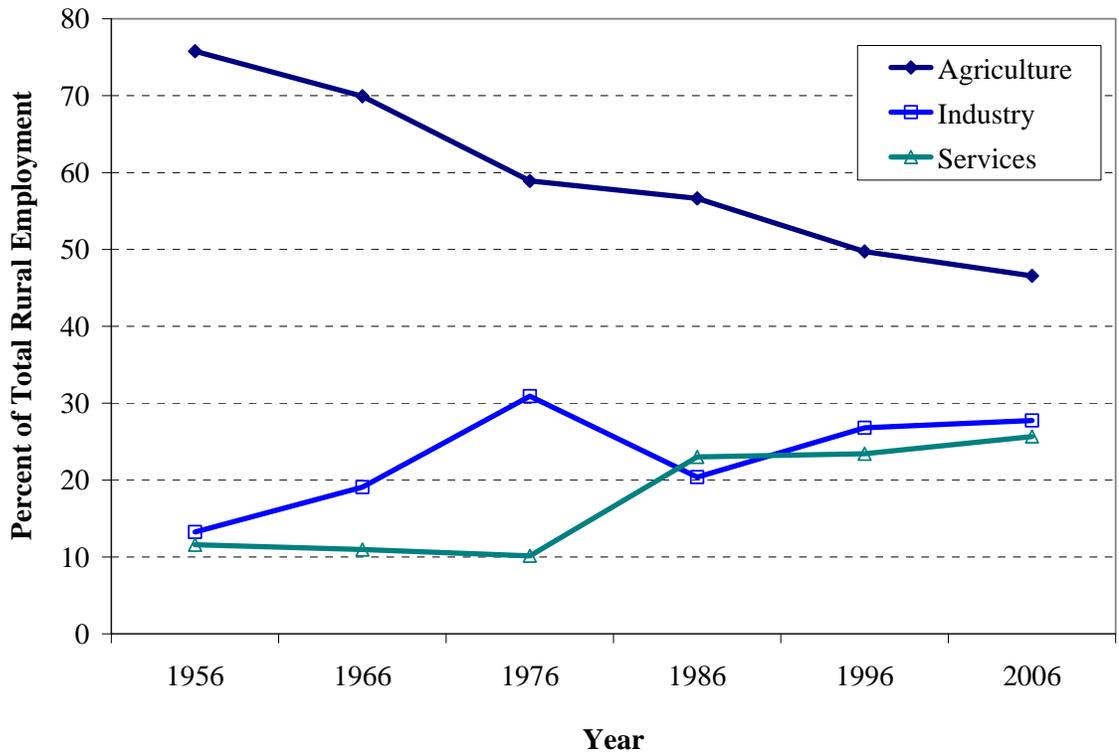


Figure 5

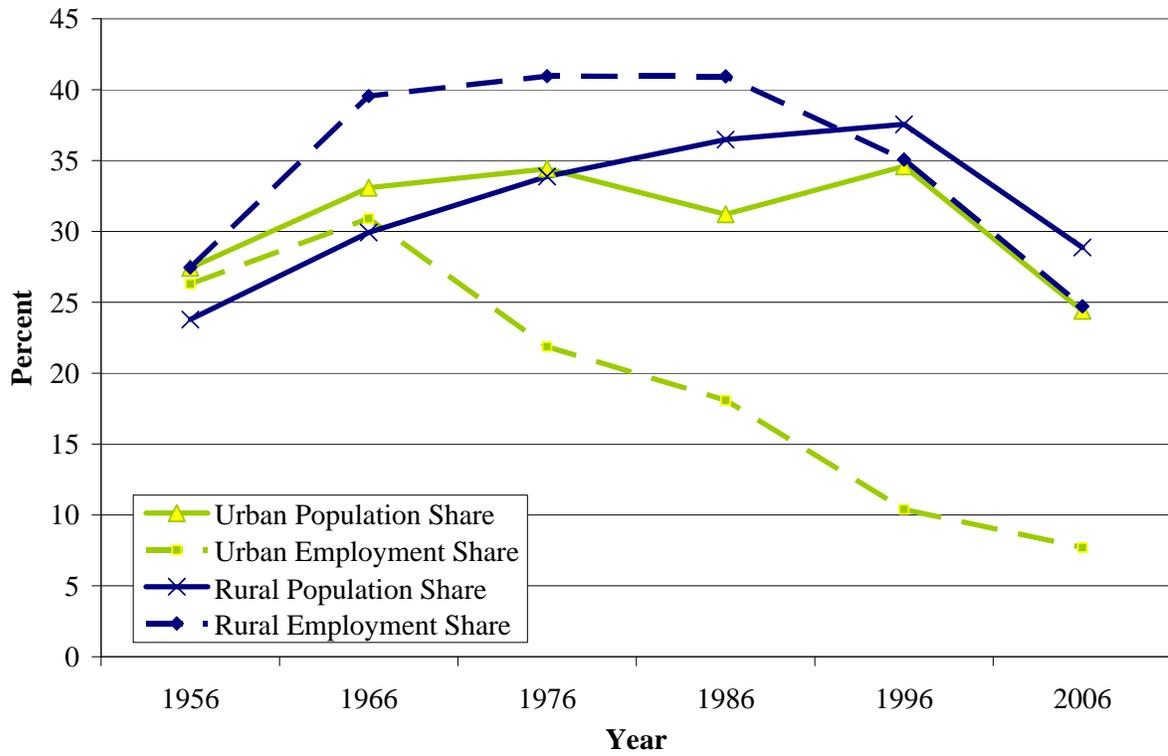
Employment Shares of the Main Economic Sectors in Rural Areas



Source: Statistical Center of Iran.

Figure 6

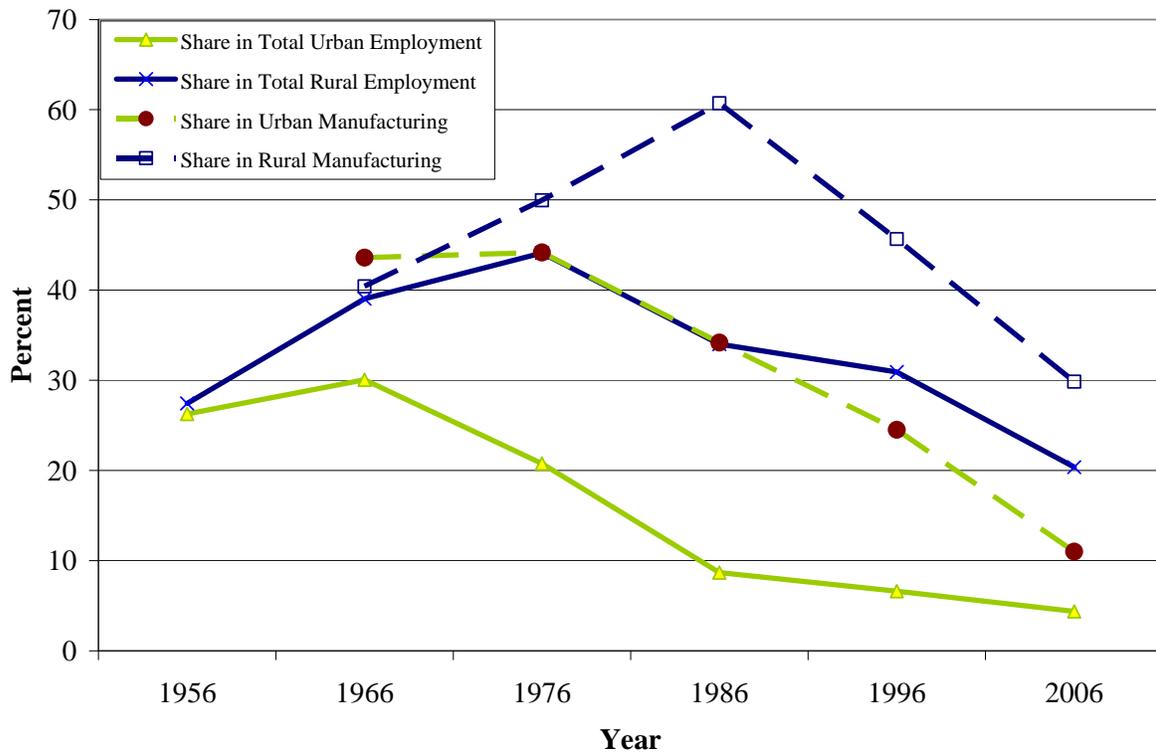
Share of Women Aged 10-19 in Female Employment and Population



Source: Statistical Center of Iran.

Figure 7

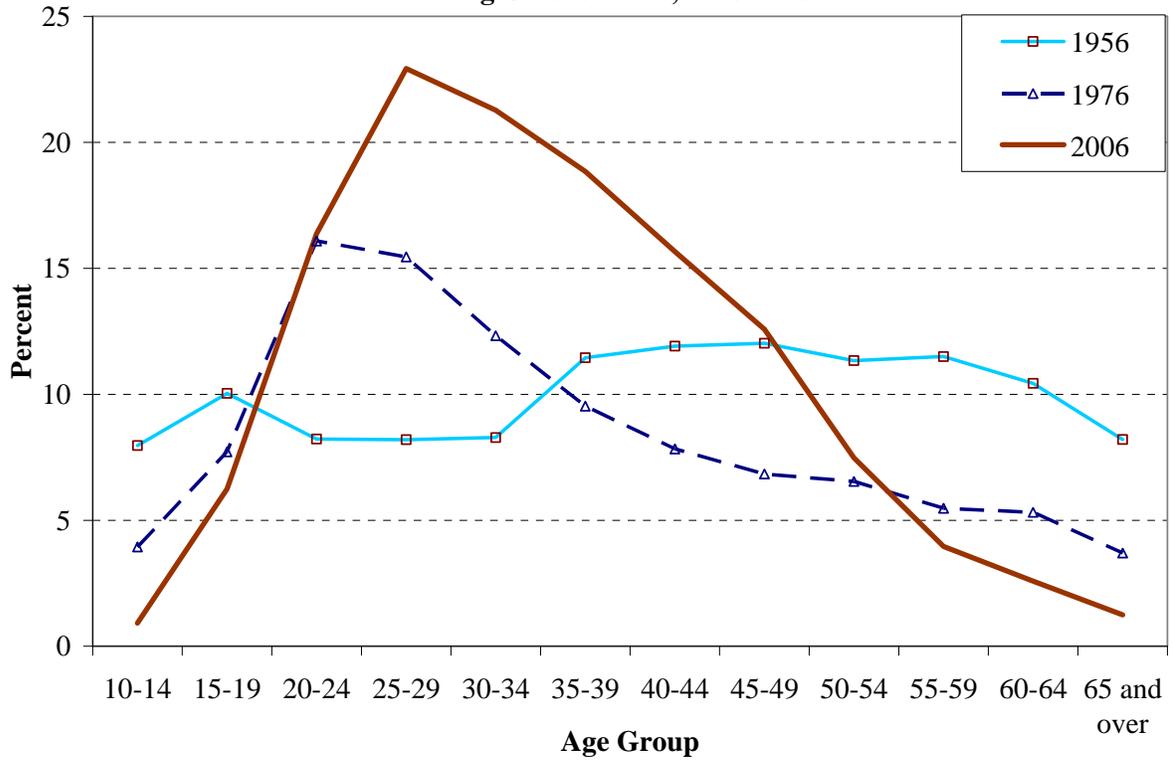
Share of Women Aged 10-19 in Female Employment



Source: Statistical Center of Iran.

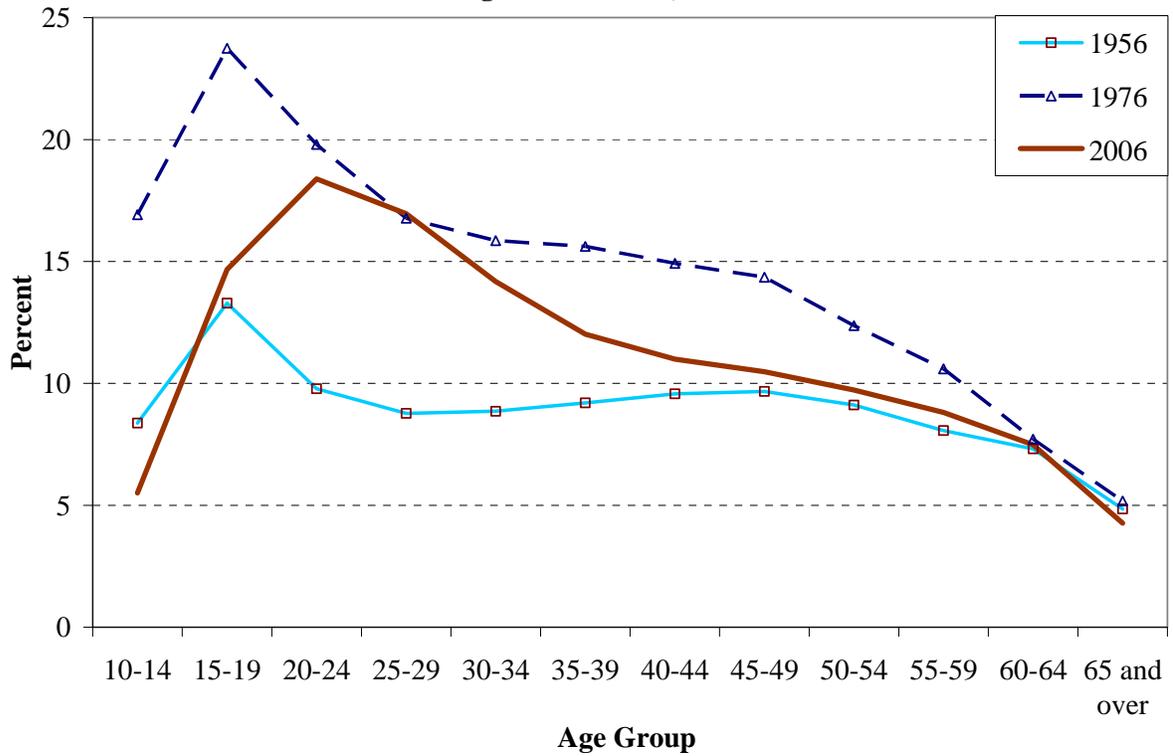
Figure 8

Age Pattern of Female Labor Force Participation Rate in Urban Areas during Census Years, 1956-2006



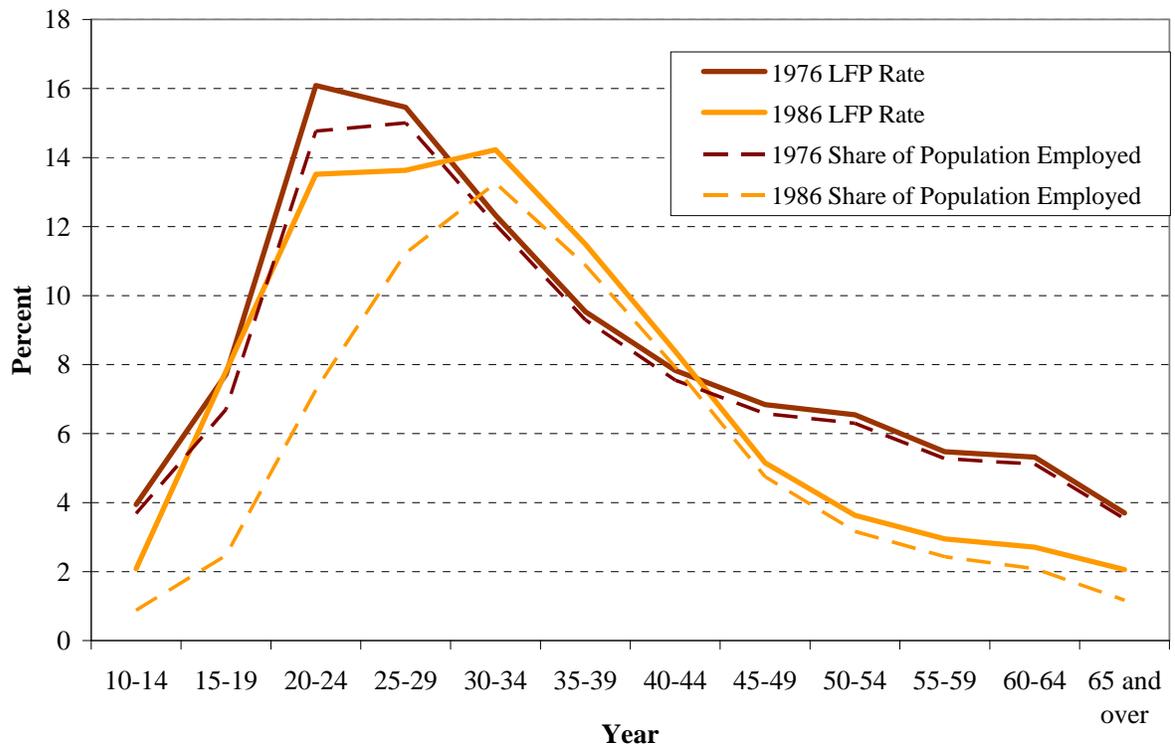
Source: Statistical Center of Iran.

Figure 9
Age Pattern of Female Labor Force Participation Rate in Rural Area
during Census Years, 1956-2006



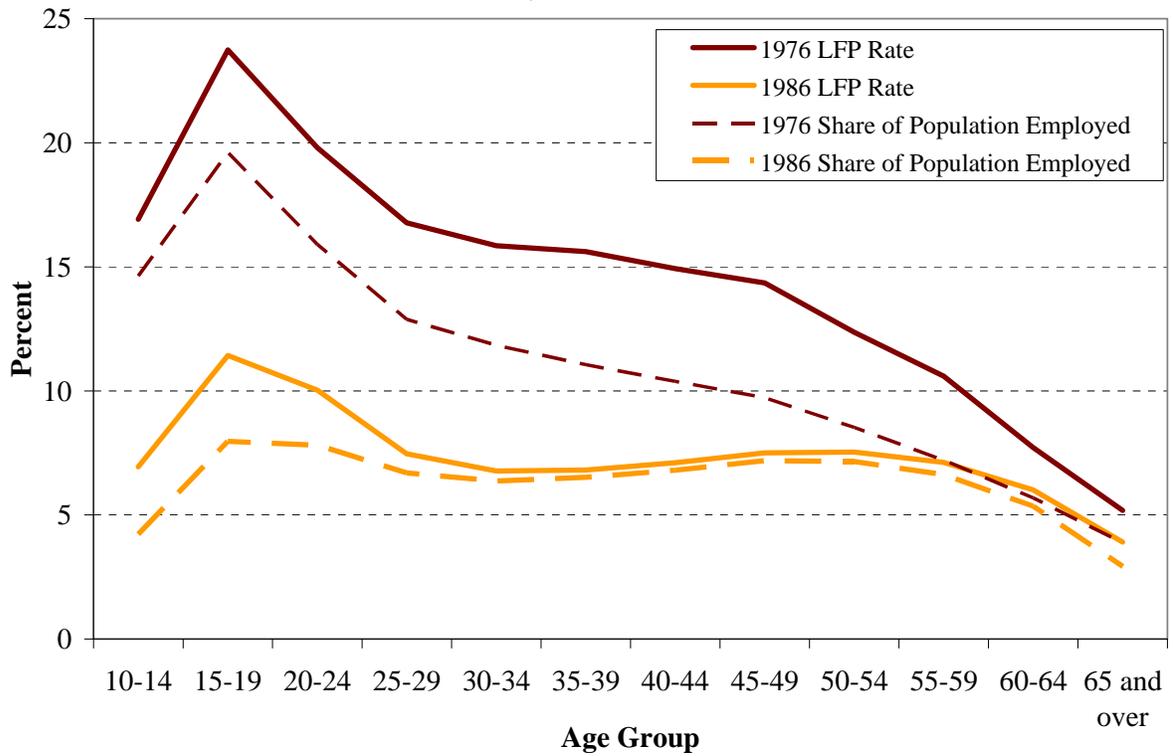
Source: Statistical Center of Iran.

Figure 10
Age Pattern of Female Employment and Labor Force Participation Rate
Urban Areas, 1976-1986



Source: Statistical Center of Iran.

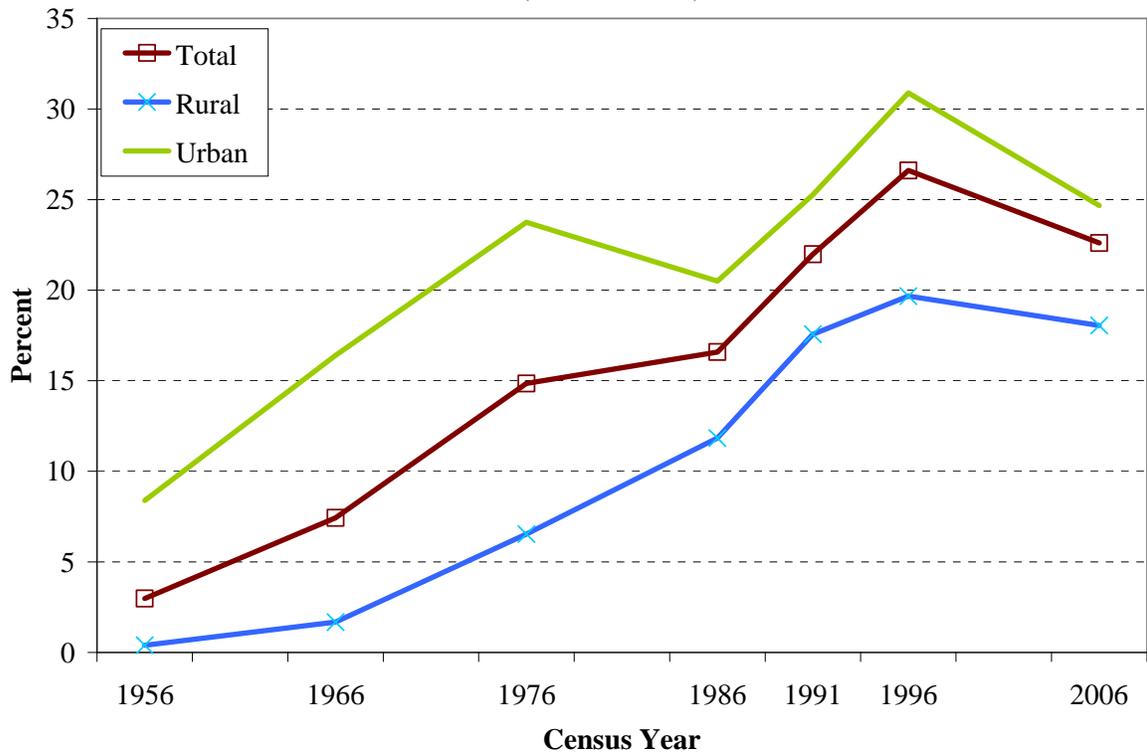
Figure 11
Age Pattern of Female Employment and Labor Force Participation Rate
Rural Areas, Census Years 1966-1986



Source: Statistical Center of Iran.

Figure 12

Share of Students in Female Population
(10 Years and Over)



Source: Statistical Center of Iran.