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## The State of Education, Employment and Family Formation

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THE MIDDLE EAST YOUTH INITIATIVE  
**WORKING PAPER**



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# YOUTH EXCLUSION IN IRAN

“I didn’t study for 17 years to do this. I can’t marry on this salary. The government can solve all our problems if they set their minds to it. All they need to do is give us loans for marriage and to buy a house.”

—A 25-year-old university graduate selling fruit from a stall<sup>1</sup>

## EXECUTIVE SUMMARY

With output and consumption growing at about 5 percent a year for over a decade, the Iranian economy today seems quite robust overall. Investment levels remain quite high and the road, electricity, water and natural gas infrastructures are well maintained. But the legal and institutional infrastructure remains underdeveloped. Much needed legal reform to deal with the requirements of a modern contractual economy has been overshadowed in recent years by political skirmishes over other aspects of legal improvements, including reform of the penal code and laws governing the freedom of the press. Property rights and the incentives for long-term private investment have been undermined by corruption and an unfavorable business environment.

Amidst this macro-economic setting, a demographic burst, caused by high fertility rates in the late 1970s and early 1980s, has created new choices and challenges for today’s youth in Iran. Traditional Iranian society offered a smoother and more predictable transition from youth to adulthood. But with the gradual disappearance of traditional society and rapid social and economic change, predictable tran-

sitions from youth to adulthood have given way to uncertainty and unpredictability. The unusually large cohort of youth today has led to overcrowding in schools, gender imbalance in the marriage market and increased pressure on Iran’s rigid formal labor market. Iran can take better advantage of this demographic dividend by turning the increased investment in the health and education of this youth cohort into higher productivity and economic growth by providing it with better opportunities for learning and employment.

Using conceptual frameworks relating to social exclusion literature and life transitions, the inclusion of youth and their successful transition to adulthood is analyzed by looking at three dimensions: acquiring skills for productive employment, finding a job and setting up a family. In Iran, long spells of unemployment, measured in years rather than months, which deny young men and women the ability to marry and set up a home, have created conditions for exclusion of youth despite a low overall incidence of poverty and relatively high education. Special attention is paid to the difference

in experiences of men and women and rich and poor individuals in transition to adulthood.

### THREE CRUCIAL DIMENSIONS OF INCLUSION

This paper focuses on three crucial transitions facing youth in Iran: education, employment, and family formation.

#### Education

There has been a dramatic rise in educational attainment for Iranian youth throughout the country in the last twenty years, driven by rising enrollment rates.

However, similar to many other countries in the Middle East and North Africa, the formal labor market in Iran offers disproportionately high rewards for those with university degrees and thus has led to the creation of an educational system that is focused on producing diplomas rather than training individuals. There is a limited supply of spots in universities, and improvements in educational attainment may mean little because the population bulge has dramatically increased the difficulty of being admitted to a university. Though policymakers have begun to reform this system by introducing alternatives to university education, such as programs that teach vocational skills and give on-the-job training, these programs are still heavily stigmatized as rejected by the formal schooling system.

Despite universal provision of free primary and lower secondary education, educational attainment seems to be much more strongly affected by household income or location than gender. Wealthier individuals have greater opportunities for attending upper secondary schools or universities. The effect of income is particularly strong for both urban and rural women because those in the upper quintile have 50% higher average attainment than the lowest quintile by the time they finish education.

The largest attrition from school appears to occur after the first year of high school, at about age fifteen. This is also the age when compulsory education ends and the grade in which all students are evaluated and directed onto separate tracks – namely the theoretical/academic track, technical and vocational track or Kardanesh which teaches basic skills through on-the-job training.

Because the opportunity for a university education was closed to students in the vocational tracks, it is therefore likely that many youth failing to qualify for the theoretical track dropped out of school completely. Responding to demands made by parents, and to induce students to continue with the non-theoretical tracks, the government recently has made it possible, with some restrictions, for Kardanesh graduates to participate in the entrance exams and maintain the option of university education.

But of the nearly 1.5 million youth who take the concour exam for university admittance each year, only about 20 percent score high enough to enter either a public or private university. The impact on the 1.2 million youth who fail this exam is significant. Our evidence suggests that youth failing this exam have considerably worse labor market outcomes in terms of risk and length of unemployment, indicating that this exam may function as a signaling device for employers.

#### Employment

After completion of schooling, Iranian youth face several obstacles in making the transition to employment. Recent graduates face high unemployment rates and, in addition, long durations of unemployment. Iran's rigid formal labor market is ill-prepared to assist the growing number of young people to find suitable employment. Unemployment rates among women steadily have increased so that it is now twice that of men, with nearly half the women in their early twenties unable to find work. The difficult transition from school to work is emphasized by the long spells of unemployment. Those who do not have jobs upon graduation face unemployment durations of nearly three years, and youth with upper secondary education face much longer durations than their peers with either or lower education levels.

Labor market rigidity is particularly important because the labor force is expanding at a rate of 3 to 4 percent a year, with nearly 1.2 million youth entering the labor market annually and only 300,000 workers retiring. Iran's formal labor market is one of the most rigid in the developing world because of the "social contract" which developed during the Islamic Revolution to provide jobs and has been

detrimental to the economy's capacity for job creation. Since the mid-1990s, some reforms to the "social contract" have been pursued to increase the competitiveness of the economy, though progress has been slow. Rigid labor markets prevent parents and schools from preparing the young for today's jobs for which creativity, teamwork, and self-confidence are essential.

### **Family Formation**

Family life in Iran has gone through dramatic changes in the last two decades. In addition to falling fertility rates, both men and women are waiting longer to get married. The percentage of unmarried men and women between the ages of 25-29 has increased rapidly, rising from 8 percent to over 25 percent for women and from 20 percent to nearly 40 percent for men. Youth are increasingly delaying the move out of their parental home because they stay longer in school and they cannot afford a home of their own.

The proportion of men aged 20-29 who live with their parents increased from about 50 percent in 1984 to about 75 percent in 2005; for women, it increased from 20 percent to about 48 percent.

The rise in the age of marriage may be a positive phenomenon. In particular, it may reflect a growing desire of both men and women to defer creating a family and having children in order to invest more in education. But it also may signal a new problem in the transition to adulthood. Delayed marriage may reflect inflexibility in the marriage market because the cost of marriage, buying a home, and raising a family have increased. The flexibility of the marriage market is a particularly important issue because the youth bulge is now creating an imbalance in the marriage market as more men than women are of a marriageable age.

### **TACKLING YOUTH EXCLUSION: FUTURE POLICY RESEARCH**

We identify several areas of policy research that can help us better understand the existing mechanisms that govern the markets for education, labor and marriage, and guide policy aimed at improving the existing institutions and in designing better mechanisms that provide the right incentives.

In education, we identify the central role of the university admission policies, centered on a big national test, which has an enormous influence on curriculum in secondary schools. Changing university admission policies to increase the incentives for writing, problem solving, creative thinking, and teamwork, can go along way to change the culture of memorizing and (multiple choice) test taking. Research to measure the impact of university admissions on learning secondary and post-secondary schools would be the first step in improving the design of incentives in education.

We also emphasize the links between reform in education and the labor market. We argue that job security in the formal sector, especially public sector, is a reason why employers prefer university graduates which select on the basis of certain abilities, as well as the source of attraction of university diplomas for youth. To increase the value of less observable skills, formal sector employers must have more discretion in deciding how much and how long to reward individual workers. Such reform would give a boost to technical and vocational schools that currently recruit from the bottom of the education ladder and thereby stigmatize productive skills. Policy research to understand the role of job protection in defining formality in Iran's labor markets, to measure its value to young workers, and the extent of job turnover during a worker's life cycle, is among the high priority areas for research.

Successful labor market reform would, in turn, require the reform of the social insurance system, which currently heavily favors those currently employed. To reduce job protection, well-designed social insurance mechanisms must be in place that not only make such reform politically possible, but also increase the value of jobs in the informal sector, which by nature are more short-term. Designing a better social insurance system requires policy research to evaluate the existing system from the point of view of the incentives it creates for informality and seeking secure jobs.

Transition from school to work is another area where research can illuminate the possibilities for policy intervention. We know that more than 90 percent of youth who are currently unemployed



will find jobs by age 30. We do not know how they acquire the jobs that they have when they are older – whether they engage in retraining, use family networks, or just wait for their turn. Future work looking at this process and the role played by social networks and other mechanisms in mediating it may provide important insight in designing policies for tomorrow.

Policies to improve the working of the marriage market, increase access to housing loans, and generally ease the process of family formation are naturally harder to find and implement. Little is known about why the cost of marriage is so high in Iran. To what extent is it related to the risks of betting on the future of an unemployed person? Divorce and inheritance laws can affect marriage contracts. Iran's family laws were changed substantially after the Revolution, but little is known about how the changes have affected family formation in post-revolution Iran. What are the links between social insurance and the risks, especially for women, of divorce? Owning a house, like having a permanent job, can be a good signal of what a young man can

bring into the marriage. To what extent are marriage contracts sensitive to home ownership vs. jobs, and are young couples willing to sacrifice independent living in order to get married?

## CONCLUSION

As stressed throughout this paper, while the youth bulge has exacerbated the challenges that Iran's youth face, it is not the root cause. We identify the inefficient structure of incentives and rigidity in the country's education system, labor market, and marriage institutions as more fundamental. The youth bulge provides an opportunity to correct the adverse structure of incentives and the outdated institutions that promote acquisition of the wrong type of skills, encourages youth to seek diplomas and then queue a long time for permanent jobs in the formal sector. Social norms which are also part of the institutional set up of the country, similarly raise the cost of marriage. Behavior in various spheres of social and economic life should be seen as connected to each other, and institutional reform to influence behavior is a more productive direction should take account of these interrelations.

## I. GROWING UP IN IRAN

Youth in Iran have become a major force on the Iranian social and political scene. Their sheer large size has made them the target of electoral campaigns and a decisive voting bloc in recent elections. Iranian youth reportedly have played a pivotal role in the landslide victory of both the reformist president Mohammad Khatami in 1997 and 2001 and the 2005 election of his very different successor, President Mahmoud Ahmadinejad.<sup>2</sup> Political factions reached out to youth during the 2005 presidential election, and they have since clashed over the voting age, which was raised from fifteen to eighteen after the election. Supporters of Ahmadinejad are now busy promoting a bill to lower it back to fifteen.<sup>3</sup> The malcontent of Iranian youth has caught the attention of political observers outside Iran and is the subject of several recent books on Iran.<sup>4</sup>

The youth issue in Iran in its present form is a new phenomenon. A demographic burst, caused by the high fertility rates in the late 1970s and early 1980s, coupled with rapid social and economic change, has created new choices and challenges for today's youth. Traditional Iranian society offered a smoother and more predictable transition from youth to adulthood. Children generally were expected to adopt the profession of their parents or inherit the family business. Family networks helped the young get married and set up a new family and individuals inherited both the assets and reputation of their family. The family and the community thus played a central role in these transitions. But with the gradual disappearance of the traditional society, predictable transitions from youth to adulthood have given way to uncertainty and unpredictability.

In this paper, we analyze the transitions from youth to adulthood in Iran drawing from the conceptual frameworks set out in the social exclusion literature (Silver 2006) and in the National Academy of Sciences study, *Growing Up Global* (Lloyd 2005). In particular, we focus on three crucial transitions facing youth in Iran: education, employment, and family formation. In discussing these transitions, we describe the mechanisms that help or hinder youth transitions and explore the impact that these mechanisms have had on youth. This approach will allow us to address two issues that are highlighted in

*Growing Up Global*: how societies help prepare their young for adult roles and the obstacles youth face in making successful transitions to adult roles.

The concept of social exclusion has been used mostly in the European context to describe the multiple dimensions of the lack of access to the means to produce individual welfare education, jobs, and income. Poverty and unemployment can cause social exclusion but should not be equated with it (Atkinson 1998). Indeed, while the temporarily poor or unemployed may not feel excluded, those with long spells of poverty and unemployment would feel excluded.

The young occupy a special position in that their inclusion is predicated on a successful transition from youth to adulthood, the main elements of which are acquiring the skills for productive employment, finding a job, and setting up a family. In this sense, the exclusion and transition approaches to understanding the difficulties that youth in the Middle East face are complementary. Both frameworks stress the multidimensionality of the youth experience. Those growing up in poor families naturally face greater obstacles in all aspects of the transition: education and employment, marriage, and home ownership. Failure to succeed in one increases the probability of failure in other dimensions and the risk of social exclusion. As we show below, in Iran, long spells of unemployment, measured in years rather than months, which deny young men and women the ability to marry and set up a home, have created the conditions for exclusion of youth despite a low overall incidence of poverty and relatively high education.

We pay special attention to the difference in experiences of men and women and of rich and poor individuals in transition to adulthood. The gender dimension of youth exclusion has obvious relevance for Iran, where Islamic codes of *hejab* and jurisprudence confine and inhibit women in many ways. The separation of men and women in schools, workplaces, and other public spaces, and their asymmetric treatment under the law imply differences in the feeling of exclusion. Women who fail to obtain sufficient education to find a white collar job or who are unable to marry may feel a greater sense of exclusion be-

cause of their spatial confinement. Similarly, the poor often face very different educational and employment choices – whether to take a job at an early age to support their families or stay in school – and are disadvantaged because, for example, they may be unable to afford the necessary preparation for the fateful university entrance exams.

We devote most of our effort in this paper to explaining the current state of youth and how they fare in the transition from school to work and from youth to adult life. We note the significant gains they have made in the past twenty years, mainly in education and in the narrowing of gender differences therein, but we also show that these gains have not succeeded in making Iranian society more inclusive of the young. To the contrary, their frustration in finding a job and forming a family has increased in the past ten years and they therefore may feel more excluded than ever. We show that the much larger size of the current cohort of youth is putting considerable pressure on the traditional mechanisms that sort individuals into schools and jobs and assist them in marriage and family formation.

Understanding the key institutions that facilitate these youth transitions – schools, the labor market

and social norms regarding marriage – is another important part of our analysis. We conclude that these institutions have failed to rise to the challenge of Iran's demographic transition. The markets for labor and marriage appear inflexible and unresponsive to the needs of the young. The relatively long stretch of economic growth since 1999, aided by a huge inflow of oil revenues, though it has moderately reduced unemployment rates for youth, has done little to help them set up families of their own. We briefly discuss various policies, mostly *ad hoc* and unconnected, that have been discussed or adopted in recent years that affect youth exclusion.

The paper is organized as follows: The next section will describe the demographic burst underlying today's youth problem in Iran. Section III will briefly review the macroeconomic setting followed by a discussion of poverty and income inequality in Section IV. Section V examines the transition through education. In Section VI, we discuss the transition from school to work, describing in detail the extent of youth unemployment and duration by gender and education. Section VII considers marriage and family formation, focusing on those aspects of the marriage market that our survey data can illuminate. Section VIII concludes.

## II. THE YOUTH BULGE

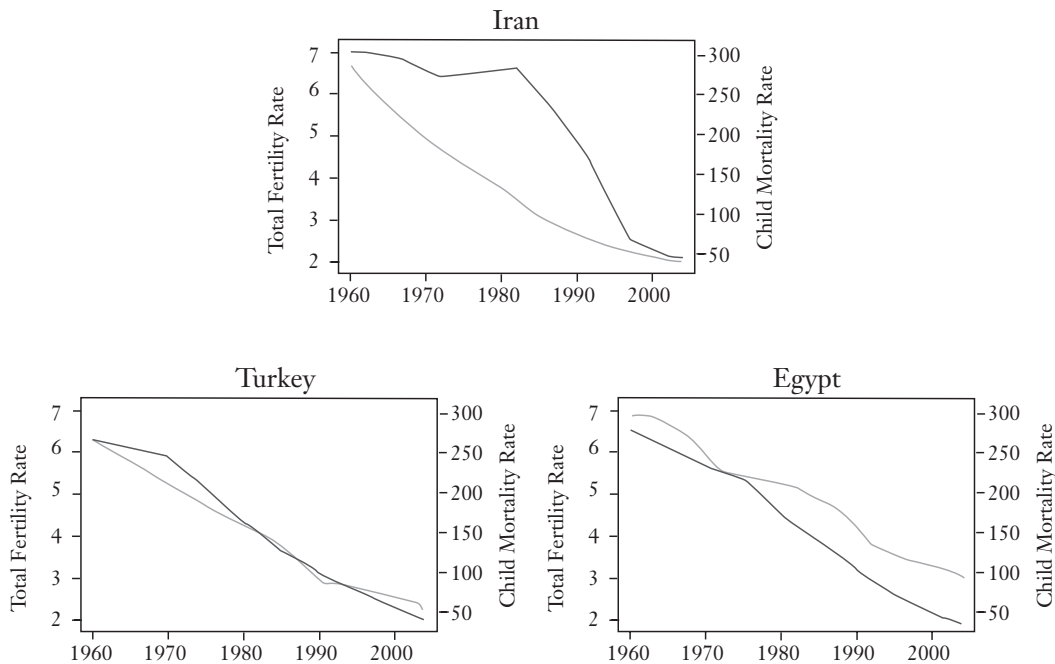
Beginning in the 1970s and continuing into the 1980s, Iran experienced a period of extraordinarily high fertility in the midst of falling child mortality rates. The unusually large cohort of youth today resulting from this baby boom has led to overcrowding in schools, gender imbalance in the marriage market and increased pressure on Iran's rigid formal labor market. In this section, we describe the youth bulge by comparing the experience of Iran with that of other large countries in the region. We also briefly discuss the implications of the rapid fall in fertility rates experienced toward the end of the 1980s and 1990s – a demographic transition – for the next generation of Iranian youth.

The baby boom, and subsequent bust, is illustrated in Figure 2-1, where we compare fertility and child mortality rates in Iran since the 1960s with those of Egypt and Turkey, the two other large countries of the Middle East and North Africa.

All three countries experienced a similar monotonic decline in child mortality throughout the period. But while the fertility rates in both Egypt and Turkey decreased secularly throughout the period, the fertility rate in Iran increased during the early 1980s before falling precipitously. Toward the end of the 1990s, following several years of rapid decrease, Iran's fertility rate reached the level of Turkey and below that of Egypt. Today, the fertility rates in Iran are the lowest in the region (Roudi-Fahimi 2003).<sup>5</sup>

The resulting youth bulge in Iran today is illustrated in Figure 2-2. Here we construct age pyramids for Iran, Egypt, and Turkey in 1990 and 2005 using five-year age groups, where the bars on the right side of the pyramids represent the female population and those on the left the male population. Comparing the pyramids for Egypt and Turkey between 1990 and 2005 demonstrate the more

Figure 2-1: Total Fertility and Child Mortality Rates in Egypt, Iran, and Turkey



Source: (World Bank 2005)

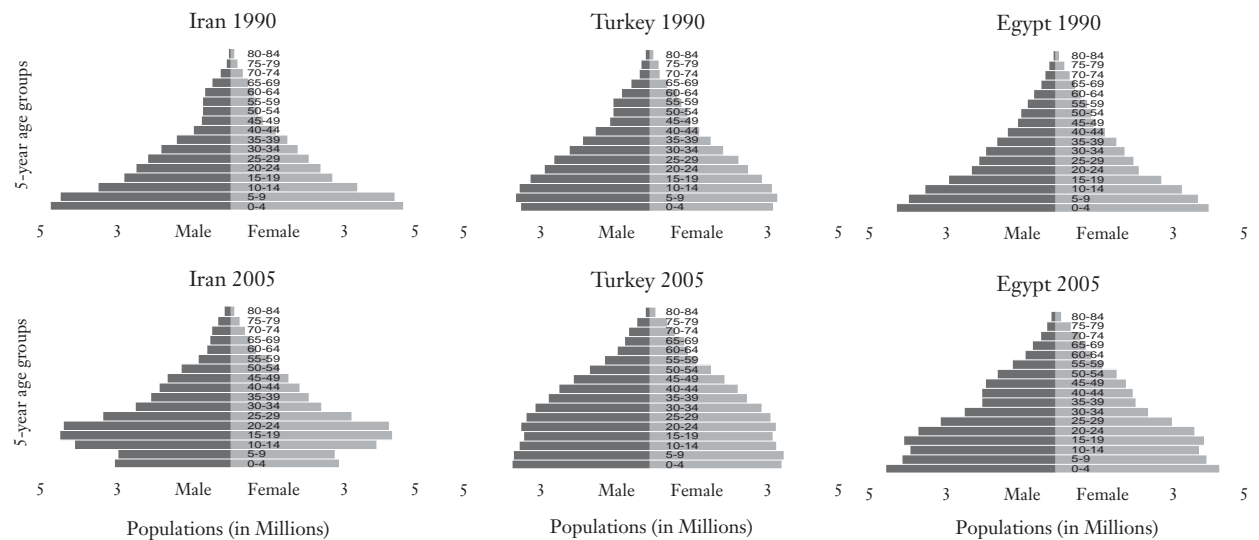
typical gradual narrowing of the bases resulting from a steady fall in fertility rates. But for Iran, there is a large bulge in the figure for 2005 for the four five-year age groups spanning the ages 10-29 that represent the impact of the fertility boom and bust.

Though population growth in Iran has slowed to about 1.3 percent a year, the youth bulge has resulted in rapid labor force growth that began in the mid-1990s and will continue through 2010. In order to demonstrate the effect of this youth bulge, in Figure 2-3 we compare the changing size of four different age groups over the 1960-2020 period using Turkey as a baseline. The 15-19 year old age group represents youth of high school or university age, the 20-24 and 25-29 groups are individuals entering the labor market, and the final 15-19 category is included to describe the overall bulge. The sharp upward turn in each of these lines relative to Turkey, with the same total population of about 70 million, indicates the effect of the fertility swing in Iran. Ten years ago, Iran had as many people in the 15-29 age group as Turkey, but in 2005 there were about five million more.

Roughly speaking, Turkey would be experiencing Iran's youth bulge if it suddenly had to absorb five million new young immigrants. Significantly, by 2020, Iran is projected to have fewer people in this age group than Turkey. So, while for the next decade the challenge Iran faces to accommodate its youth bulge is greater than Turkey's, by 2020 the situation will be reversed because Iran will have fewer people in this age group than Turkey.

In this study, we focus on the aspects of the youth bulge that have created challenges for Iran and its youth. There are obvious disadvantages from belonging to the largest cohort ever of Iranian youth, which will be explored throughout the rest of this paper, and, as Easterlin (1968) has shown for the United States, it is likely that the effect of these disadvantages may persist for a long time. But the more recent fall in fertility rates is reminiscent of the demographic transition that took place among the "Asian Tigers" during the mid-1970s and led to the "demographic gift" that is believed to have played an important role in the success of these countries (Barlow 1994, Bloom and Williamson 1998).

**Figure 2-2: Changing Age Structure**



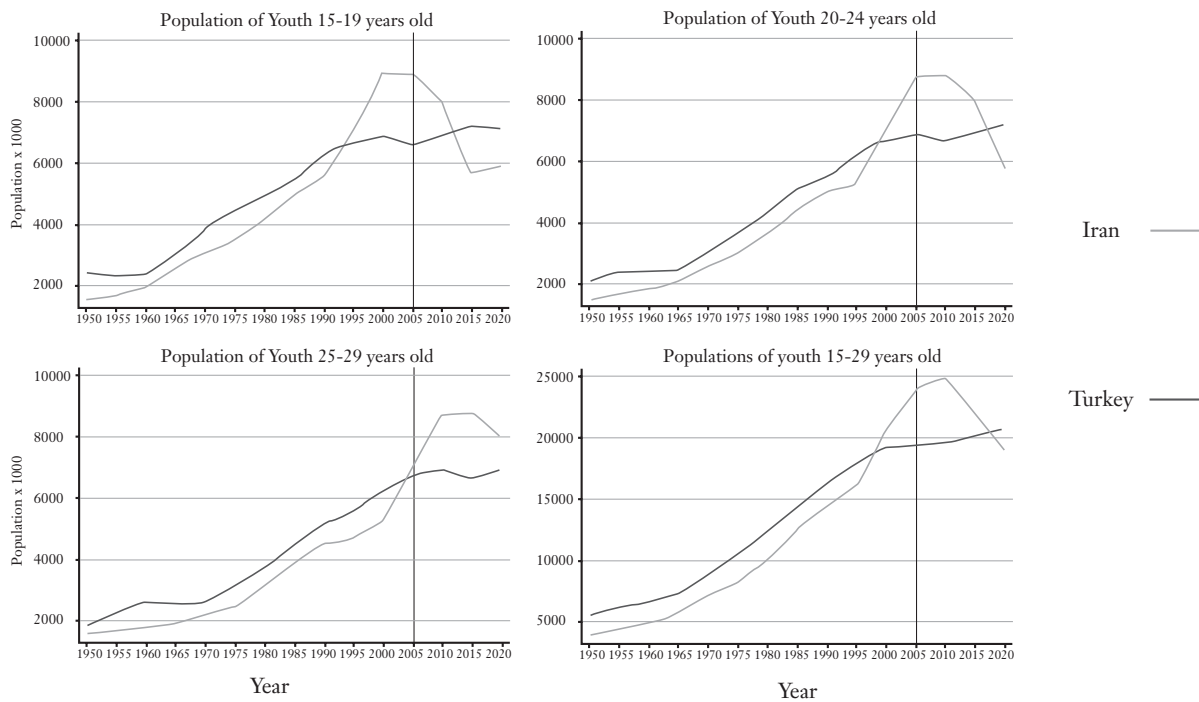
Source: UN Population Projections, 2004

The one-time benefits of the demographic transition – the gift – accrue as a growing labor force drives economic growth in the short term and, in the long term, the decline in fertility creates increased investment in human capital for the generations growing up in smaller families. Indeed, in Iran the ratio of adults aged 20-54 to children aged 0-14 has more than doubled from its historic value of less than one and is projected to exceed two by 2010 (Salehi-Isfahani 2005). This effect is likely to be even more pronounced in rural, and typically poorer, areas where the fertility decline has been relatively greater; total fertility rates in rural areas fell by six births between 1985 and 2000 as compared with four for the urban areas. Although the effect of the rise in adult-child ratios on investment in the health and education of the current

cohorts of young people has not been examined systematically, one can without much hesitation attribute the improved health and education outcome of this generation to the demographic gift.

On balance, the pressures and benefits for the youth of today that stems from past demographic behavior need not be negative. In the right economic and social environment, the benefits can exceed the costs. Throughout the remainder of this paper, as we discuss the challenges that the youth bulge presents, we suggest policies that could help Iran take better advantage of its demographic dividend. It can do this by turning the increased investment in the health and education of this youth cohort into higher productivity and economic growth by providing it with opportunities for schooling and employment.

Figure 2-3: Following the Youth Bulge



### III. THE MACROECONOMIC SETTING

With output and consumption growing at about 5 percent a year for over a decade, the Iranian economy today seems quite robust overall. Investment levels remain quite high and the road, electricity, water and natural gas infrastructures are well maintained. But the legal and institutional infrastructure remains underdeveloped. Much-needed legal reform to deal with the requirements of a modern contractual economy has been overshadowed in recent years by skirmishes over other aspects of legal improvements, including reform of the penal code and laws governing the freedom of the press. Official corruption and authoritarian rule have undermined property rights and the incentives for long-term private investment. Here we outline the progress of the Iranian economy over the past 30 years and discuss some of the major reforms being considered as well as the political and economic difficulties facing these reforms.

After unprecedented economic growth in the 1960s and 1970s with an average GDP per capita growth of more than 6 percent a year that trebled the standard of living in just one generation, the Iranian economy collapsed quite suddenly and dramatically in the 1980s.<sup>6</sup> Following the 1979 revolution and the start of the Iraq war the following year, the economy reversed course and began a steady decline. The 1986 oil price collapse, which ended more than a decade of high oil prices, deepened this decline so that by 1988 per capita GDP was only one-half of its 1977 level.

During the 1980s, strong anti-market and pro-state ownership sentiments prevailed in Iranian society. In accordance with these sentiments, the constitution of the Islamic Republic mandated state ownership of key industries, allowing the government to quickly nationalize the banks and take the control of large enterprises away from their private owners (Nomani and Behdad 2006). In addition, as the wealthy elite connected to the shah departed, many of their establishments were absorbed by state-owned foundations that today serve as massive holding companies.

The end of the Iran-Iraq war in 1988 brought with it renewed optimism, and the government of Presi-

dent Hashemi Rafsanjani (1989-1997) soon embarked on an ambitious program of reconstruction, which received a boost in the early 1990s from a brief oil boom resulting from the 1991 Gulf War. Fixed capital formation, which had collapsed by about three-quarters from 1979 to 1989, slowly picked up in the 1990s as Rafsanjani started to give markets and the private sector a greater role in the economy.

The pro-market reforms continued under Rafsanjani's successor, President Khatami (1997-2005), despite the left-leaning politics of his administration and the Majlis. As a result, the private sector expanded its role gradually, increasing its share in wage employment from about 40 to 60 percent (Salehi-Isfahani 2005). The high rate of investment of about one-third of GDP, aided by rising oil prices beginning in 1999, resulted in robust growth and by 2005 returned per capita incomes to their pre-revolution peak. But job creation is still quite weak despite high average incomes and high investment rates, which is an important issue that we will return to later when we discuss the high rates of youth unemployment.

The recent election of the populist President Ahmadinejad has put the fate of some of these reforms in doubt, though privatization of state-owned enterprises remains on course. A major piece of economic reform in recent years was to permit the establishment of private banks. But restrictions on the rate of interest that banks can charge that were imposed in 2006 has put the fate of private banking in doubt.

The leadership of the Islamic Republic recognizes the importance of privatization for the creation of a more competitive economy capable of providing jobs for the young and expanding the private sector beyond its current focus in agriculture, services, and construction. It is not clear if the recent political shift following Ahmadinejad's election will delay or derail the fundamental reforms process. But even before Ahmadinejad's election, two factors impeded the move toward privatization of state assets and greater competition. First, because of the acute lack of transparency and accountability in Iran's economic and political system, the government has had

*The high rate of investment of about one-third of GDP, aided by rising oil prices beginning in 1999, resulted in robust growth and by 2005 returned per capita incomes to their prerevolution peak. But job creation is still quite weak despite high average incomes and high investment.*

difficulty in finding an appropriate mechanism for transferring ownership of public assets efficiently and without creating the impression of corruption. Second, private buyers are less willing to buy state firms because of Iran's existing labor laws and the tight regulation of the formal labor market. These make it difficult for the new owners to dismiss workers from the overstuffed, inefficient public

firms and generally weaken the position of private managers vis-à-vis workers in large firms.

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#### IV. POVERTY AND INEQUALITY

The authors of the report, “Growing up Global,” conclude that “poverty is the greatest enemy of successful transitions” (Lloyd 2005, 4). Indeed, lack of hope among youth in Iran, widely reported in the Western press, often is linked to widespread poverty and a desperate economic situation.<sup>7</sup> In this section, we briefly examine the extent to which poverty and inequality are obstacles in the transitions of youth to adulthood in Iran. As poverty rates are quite low, we argue that poverty only plays a relatively small role in disrupting these transitions while inequality, which has remained steady at a relatively high level, may have a more important effect.

In the last 15 years, poverty has fallen significantly in Iran, as shown in Figure 5-1.<sup>8</sup> Today, Iran has one of the lowest poverty rates among the developing and transition economies.<sup>9</sup> Thus, poverty is less likely to be an impediment to successful transitions in Iran as compared to many other countries. But poverty may indeed be a significant impediment in rural areas, where it is significantly higher, as evidenced by the lower educational attainment for rural women in particular.

The Islamic Revolution identified the poor as its main source of social support and the object of its social and infrastructure programs.<sup>10</sup> A vast system of subsidies after the revolution was designed to reach out to the poor and to poor rural regions. While these subsidies often were not well targeted and benefited many more than the poor, improvements in electricity and water infrastructure as well as family health education in the 1980s and family planning in the 1990s has done much to lower infant mortality, reduce fertility, and increase education for the poor. Further, construction of schools and improvements in poor urban neighborhoods, such as in southern Tehran, also have had a positive effect in raising the quality of life for the poor and reduce certain forms of social exclusion (Salehi-Isfahani 2006b).

Though these programs seem to have succeeded in reducing poverty, they seem to have done lit-

tle to affect inequality, which remains quite high. Inequality has stayed relatively high and stable over the last two decades, despite the expansive rhetoric in favor of equality and the policies mentioned above. As high inequality is likely to limit the access of certain socioeconomic groups to schools and jobs, this may be the explanation for the large gender gap in education in rural areas discussed below. Thus, in the case of Iran, inequality and not poverty may be an important impediment to social inclusion.

Another aspect of inequality – inequality between generations – is relevant to the youth experience in Iran. Comparing lifetime earnings of various cohorts born since the 1930s, Marku and Salehi-Isfahani (2006) find that all cohorts born after 1960, and which entered the labor market during the terrible decade of the 1980s, suffered a significant loss of earnings relative to the cohorts born earlier. In Figure 4-1 we reproduce a figure from these authors who estimate the effect of an individual’s cohort on lifetime earnings. Those cohorts entering the labor market in the 1980s (the 1965-1970 birth cohorts) show a 15 percent drop in earnings relative to those born a decade earlier and a very large drop as compared with the trend plotted based on the experience of earlier generations. As we discuss in Section VII, falling lifetime incomes for these cohorts that are the parents of today’s youth may have a direct effect on the ability of their children to get married and set up families and homes.

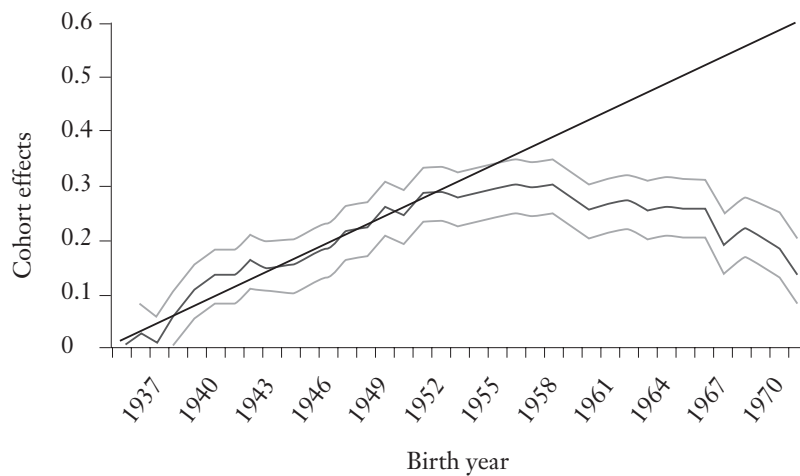
Indirectly, by growing up with disappointed parents, youth may lack the necessary optimism to face their own future. This may be especially poignant for the large proportion of youth who live with their parents well into their late twenties and thus feel their parents’ disappointment, not only with their own achievements in terms of lifetime income but also with their inability to find a job, form a family, and move out of the house.

Persistence of poverty across generations, or intergenerational transmission of poverty, also may be an important exclusionary mechanism

and has been suggested by both Machin (1998) and Silver (2006). In the case of Iran, this is difficult to estimate using available data because we can only match incomes of children still at home with that of their parents.<sup>11</sup> However, following Kremer (1997), we estimate the intergenerational transmission of education as a proxy for

poverty and find that this measure decreases secularly over the 1990-2005 period for which we have comparable data. Interestingly, estimates for 2005 suggest that there is less transmission of poverty (via education) in Iran than in the United States.<sup>12</sup>

**Figure 4-1: Unfulfilled Expectations: Falling Cohort Income Effects**



*Notes: The cohort effects measure the change in average lifetime earnings of a cohort. The blue lines indicate 95 percent confidence intervals for the point estimate and the trend line is based on the cohort effects for 1935-50. For details see (Marku and Salehi-Isfahani 2006).*

## V. EDUCATION

There has been a dramatic rise in educational attainment for Iranian youth throughout the country in the last twenty years, driven by rising enrollment rates. In this section, we document this expansion of education and elaborate how it has differentially affected women, the poor, and those in rural areas. An important part of our discussion will focus on the weaknesses of the current education system, which has been criticized for its failure to prepare the young for the labor market, and possible reforms.

Similar to many other countries in the Middle East region, the formal labor market in Iran offers disproportionately high rewards for those with university degrees and thus has led to the creation of an educational system that is focused on the production of diplomas rather than training individuals. There is a limited supply of spots in universities, and these improvements in attainment therefore may mean little because the population bulge dramatically has increased the difficulty of being admitted to a university. Though policymakers have begun to reform this system by introducing alternatives to the university track education, such as programs that teach vocational skills and give on-the-job training, these programs are still heavily stigmatized as rejects of the formal schooling system. Further, acceptance to a university, which functions as a signaling device to employers of high quality individuals, is currently mediated by an exam that measures capacity for memorization rather than ability.

### RISING ENROLLMENTS AND ATTAINMENT

Basic and secondary education in Iran has expanded significantly in the last twenty years. Indeed, despite the rapid growth in the size of the youth population, enrollment rates have increased substantially, with particularly large gains for female students. Average years of education have nearly doubled within a generation, with those born in the 1980s enjoying more than nine years of schooling compared to less than five years for those born 25 years earlier. The rise in average years of schooling also has narrowed the gender gap in urban areas, though that gap still persists in rural areas.

Today, educational attainment in Iran is slightly higher among women than men in urban areas,

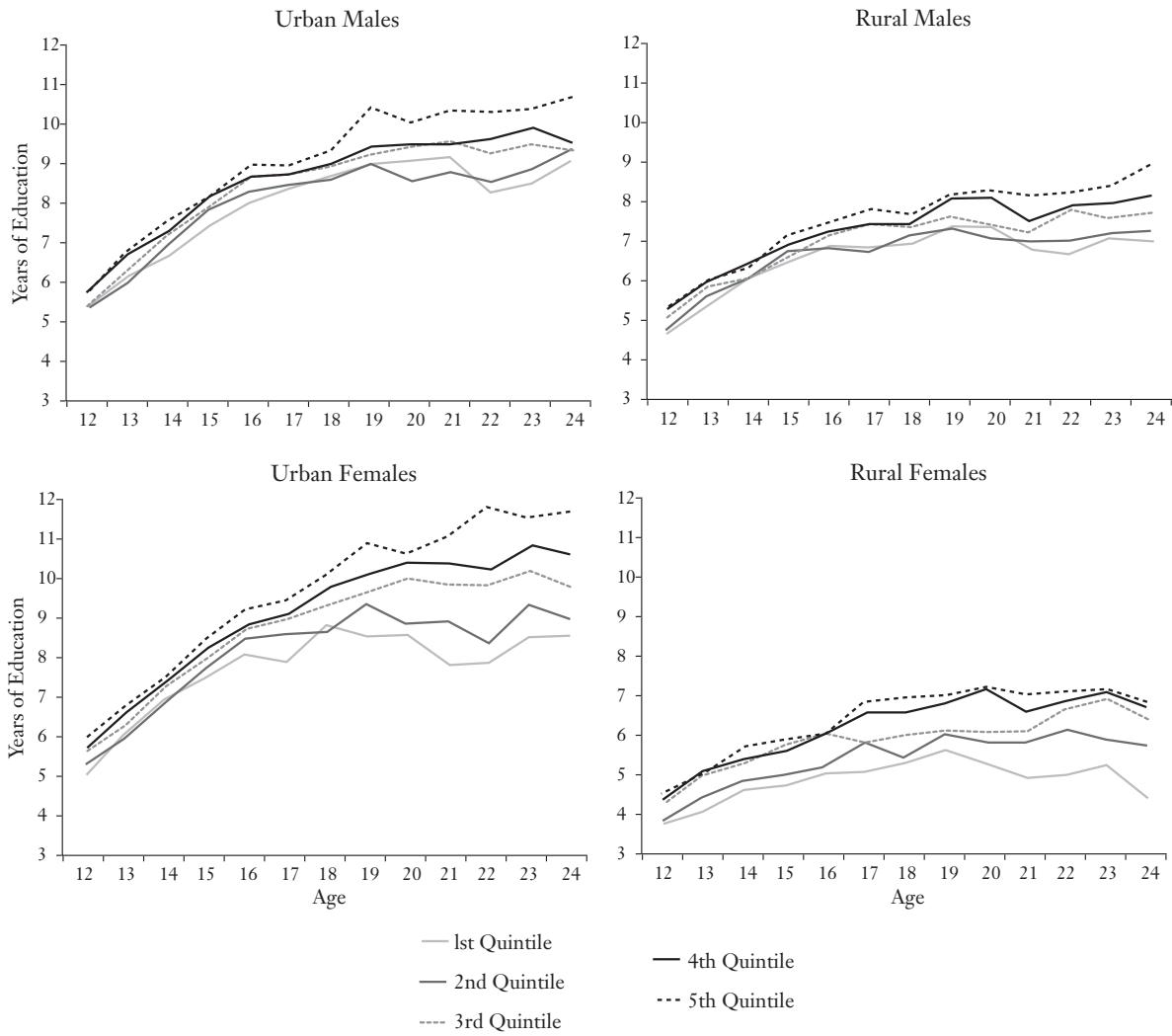
though the gender gap still persists in some regions. Despite slightly lower enrollment rates in lower secondary education, female enrollment is higher in upper secondary schools and universities. This persistence through secondary school education combined with a much higher rate of matriculation into tertiary programs explains the higher ratio of urban women with upper secondary and tertiary degrees compared to their male counterparts. In 2005, over 60 percent of urban women aged 18-30 had an upper secondary degree or above vs. just over 50 percent for urban men.<sup>13</sup>

Indeed, despite the universal provision of free primary and lower secondary education nationwide, educational attainment seems to be much more strongly affected by household income or location than by gender. In Figure 5-1, we disaggregate the educational attainment of the 1979-1981 cohorts by income quintile and urban-rural residence. These cohorts, that we follow beginning at age 12, when they enter lower secondary school, were selected because they are part of the baby boom and have reached their mid-twenties by the time of our most recent data and have therefore completed their schooling.<sup>14</sup>

From Figure 5-1 we can see that income quintile has a very strong effect on educational attainment. Though this effect becomes more pronounced as the cohort becomes older, because wealthier individuals have greater opportunities for attending upper secondary schools or universities, a difference of nearly a year of education between the richest and poorest quintile is evident as early as age 14. The effect of income is particularly strong for both urban and rural women because those in the upper quintile have 50 percent higher average attainment than the lowest quintile by the time these women finish their education.

The disadvantage of being born into a rural household is also clearly illustrated in this figure. Rural women from the wealthiest quintile have lower attainment than even the poorest of their urban counterparts beginning at a young age, reflecting much lower rural enrollment rates (for a discussion of the apparent drop in attainments, see discussion in footnote fifteen). Because the urban-rural gap is

Figure 5-1: Average Educational Attainment for 1979-81 Cohorts by Age and Income Quintile



Source: Authors' calculations HEIS, 1984-2004

much smaller for men, this effect probably results from the lower availability of schools and teachers for girls. Schools are segregated and male teachers typically are not assigned to girls' schools. But gender segregation may have helped increase female schooling, because it enabled girls with conservative parents to attend school, so on balance the enforcement of Islamic rules in schools may have been good for female education.

An important caveat to the results presented in this subsection is that overcrowding of schools may reduce the quality of each year of education. The rising pupil-to-teacher ratio over the past 20 years, with the ratio for secondary schools rising from about fifteen in 1982 to nearly 30 by 2002, provides suggestive evidence for this effect (UNICEF 2007). Indeed, as the size of the group aged five to nine surged from 5.8 million in 1980 to over 9 million in 1990, the lack of resources to build additional schools forced many schools to shift to two or sometimes even three shifts. At the same time, the educational system started to gravitate toward a system based on multiple-choice tests that are much cheaper and offer a more objective criterion for evaluation. But this new system has been criticized for encouraging rote memorization rather than the development of a range of productive skills, including analytic and writing skills.

Both the overcrowding and shift toward evaluation based on multiple-choice exams have been blamed for what is perceived to be falling levels of human capital among new job market entrants. But since the direct relationship between classroom size and achievement still is tenuous, it is unclear what has been the direct impact of this overcrowding.<sup>15</sup> Further, as the pupil-to-teacher ratio began to fall for both primary and secondary students in 2004, which may be driven by either the aging of youth in the bulge (see Figure 2-3 above) or increased hiring of teachers, this effect may be less important in the future than it is today.

#### TRACKING IN SECONDARY SCHOOLING

The largest attrition from school appears to occur after the first year of high school, at about age 15. This is also the age when compulsory education ends and the grade in which all students are evalu-

ated and directed onto separate tracks. There are three tracks into which students may continue for the rest of their high school career: *Nazari*, which is the theoretical or academic curriculum; *Fanni-Herfei*, or Technical and Vocational Education (TVE); and *Kardanesb*, which teaches more basic skills through on-the-job training. Students with weaker academic records are typically only eligible for the latter two tracks.

The logic of this tracking system is compelling for at least two reasons. First, most students only pursue *Nazari* in the hope of entering university, and it is unlikely that weaker students will be able to pass the onerous *concour* that would permit them to enter university (discussed below). Second, because a major complaint from the private sector in Iran has been the lack of practical skills among recent graduates, both the TVE and *Kardanesb* programs may well be suited to the Iranian economy. Indeed, evidence from a variety of developing and transition countries suggests that on-the-job training programs may be more effective than classroom training (see Betcherman, Olivas, and Dar [2004] for a discussion of the redeployment of unemployed workers).

But it appears that tracking causes many students to drop out of school. Because upper secondary school is not obligatory, we would expect those who need to work, such as students from poor families, to leave school at the end of lower secondary school. But, as illustrated in Table 5-1, a large number of youth leave school after the first year of upper secondary education when they are assigned to tracks. Though we do not have data on the percentage of youth assigned to each track, the low number of students enrolled in TVE or *Kardanesb* as compared to *Nazari* suggests that those assigned to either of these less preferred tracks are more likely to drop out. As an example, consider the progress of the cohort of female students who begin their upper secondary education in 2003-04, which is highlighted in Table 5-1. For this group, nearly one-third of the students drop out between the first and second year of school and the resulting TVE and *Kardanesb* shares are both less than one-quarter the size of those left in *Nazari*.

Table 5-1: Secondary School Enrollments by Track and Grade

School Year	Female			Male		
	<i>1st</i>	<i>2nd</i>	<i>3rd</i>	<i>1st</i>	<i>2nd</i>	<i>3rd</i>
<b>2001-02</b>						
Nazari	742112	444502	505793	859658	305622	381926
TVE	0	47769	56658	0	89622	132297
Kardanesh	0	86546	79045	0	122770	121452
<b>Total</b>	<b>742112</b>	<b>578817</b>	<b>641496</b>	<b>850658</b>	<b>518014</b>	<b>635675</b>
<b>2002-03</b>						
Nazari	726028	433952	441644	852067	304647	313212
TVE	0	56915	44591	0	108629	94355
Kardanesh	0	94400	89700	0	129406	134758
<b>Total</b>	<b>726028</b>	<b>585267</b>	<b>575935</b>	<b>852067</b>	<b>542682</b>	<b>542325</b>
<b>2003-04</b>						
Nazari	730377	418987	422362	857234	298412	299135
TVE	0	60316	55364	0	112395	107169
Kardanesh	0	94115	91773	0	136777	130161
<b>Total</b>	<b>730377</b>	<b>573418</b>	<b>569499</b>	<b>857234</b>	<b>547584</b>	<b>536465</b>
<b>2004-05</b>						
Nazari	697444	382691	376879	781468	249947	251204
TVE	0	55696	51931	0	107480	104007
Kardanesh	0	80587	86299	0	123445	122693
<b>Total</b>	<b>697444</b>	<b>527974</b>	<b>515109</b>	<b>781468</b>	<b>480872</b>	<b>477904</b>
<b>2005-06</b>						
Nazari	702400	431548	401048	824212	311533	283614
TVE	0	62558	61068	0	115933	112729
Kardanesh	0	95277	91623	0	136283	130471
<b>Total</b>	<b>702400</b>	<b>589383</b>	<b>553739</b>	<b>824212</b>	<b>563749</b>	<b>526814</b>

Source: Ministry of Education Annual Reports, various years.

*Of the nearly 1.5 million youth who take the concour each year, only about 20 percent score high enough to be admitted to either a public or private university. And the impact on the 1.2 million youth who fail this exam is quite significant. Our evidence suggests that youth failing this exam have considerably worse labor market outcomes in terms of risk and length of unemployment, indicating that this exam may function as a signaling device for employers (discussed below).*

This potential exclusionary effect of tracking is likely caused by both the low quality of instruction in the vocational tracks and the lure of university education. Until recently, only theoretical (*Nazari*) track students were eligible to sit for the national university entrance examinations, the *concour*. Because the opportunity for a university education was closed to students in the vocational tracks, it is therefore likely that many youth failing to qualify for the theoretical track dropped out of school completely. Responding to demands made by parents, and to induce students to continue with the non-theoretical tracks, the government recently has made it possible, with some restrictions, for *Kardanesh* graduates to participate in the entrance exams and maintain the option of university education.

#### UNIVERSITIES AND THE CONCOUR

The lure of tertiary education in Iran is driven by the high private returns to university education. These returns are reflected in a large wage premium for those with college degrees and increased job security.<sup>16</sup> In particular, the public sector, which offers both good job security and good pay, is by far the largest employer of tertiary educated Iranians. That a university education is a minimum requirement for many desired public sector jobs is a major component of the high expected return from passing the national university entrance examination.

But of the nearly 1.5 million youth who take the *concour* each year, only about 20 percent score high enough to be admitted to either a public or private

university. And the impact on the 1.2 million youth who fail this exam is quite significant. Our evidence suggests that youth failing this exam have considerably worse labor market outcomes in terms of risk and length of unemployment, indicating that this exam may function as a signaling device for employers (discussed below). Additionally, there is a significant social stigma within Iranian society from being among the *concour* rejects, or *rofozebehaye concour*, as if the test has revealed that these individuals are of low ability.

This system of selection into universities may also be responsible for lowering the quality of education for the average student. Because the *concour* and most other exams are multiple-choice and rely heavily on memorization, the country's educational system has gravitated toward rote memorization. The result is that students are ill-prepared to be productive in the workplace except for graduates of a few elite engineering and medical schools. Though this system may have a positive effect on motivation, it likely only has a positive effect on the quality of education for a very select number of students.

Evidence of the disparities created by this system is apparent in the divergence between the performance of Iranian students in international competitions such as math or science Olympiads vs. the Third International Mathematics and Sciences Competition (TIMSS), which tests knowledge of math and sciences for a random group of students. While Iran consistently has performed relatively well in both of these Olympiads, it performed poorly

ly in the TIMSS in 1995, 1999, and 2003 (Mullis, Martin, and Foy 2005). In addition to being among the countries with the lowest scores, Iran was one of the few countries whose average mathematical achievement fell between 1995 and 2003.<sup>17</sup>

Iran's educational system thus suffers because it only rewards the high achievers. In order to move forward, a serious effort must be made to identify and use the myriad talents possessed by youth. We will conclude our discussion of education in Iran by discussing some of the recent policies that seek to change the focus from producing only this small group of "fleeing geniuses" (Ali Hassouri, quoted in Salehi-Isfahani [2002]).

### EDUCATIONAL REFORMS

The wide gap between what is learned in the classroom and what skills are needed to be productive on the job – the skill mismatch – is an issue that Iranian policymakers are well aware of. The TVE and *Kardanesb* programs designed to compensate for this skill mismatch rely on a network of public training centers, which often use old equipment and fail to keep up with rapidly changing technologies. The government is considering a major reform of these training centers with financial and technical advice from the World Bank.

A major component of this reform may be the replacement of public training centers with centers run by the private sector. Indeed, privatization of these centers may improve both the efficacy and efficiency of these programs since private sector training centers have been shown to outperform government-run ones in a variety of developing countries (Betcherman, Olivas, and Dar 2004). But reform of the current system is unlikely to be sufficient to convince students to choose the TVE and *Kardanesb*

tracks over the path that offers the possibility of a university education.

To increase performance of these students and enrollment in the TVE and *Kardanesb* programs, the government should create incentives for employers to hire the graduates of these programs. Because layoffs are quite costly because of rigid labor laws, employers hesitate to hire individuals from these programs because their only measure of ability are multiple-choice exams. Unlike in Germany, where considerable resources are spent on evaluating TVE graduates, students have little else other than these exams to prove their ability to prospective employers.

An important issue for policymakers is thus to provide these students with a mechanism to accurately signal their abilities and address the uncertainty about the quality of their education. Another potential policy would be to provide exemptions from the labor law for TVE graduates, which might increase returns to their education because small- and medium-sized employers would be more likely to hire them (see the discussion of labor market policies below).

Policymakers in Iran have begun to recognize some of the negative effects of the *concour*, as discussed above, and there have been suggestions to reduce its role in selection into universities. In particular, adding high school grades to the selection criteria for universities, as a number of other countries with similar examinations such as Japan already have done, has been under discussion for some time (Salehi-Isfahani 2002). The 2007 *concour* is the first of these examinations to reflect these reforms because the final *concour* grade will be affected by the student's grades in the third year of secondary school.<sup>18</sup>



## VI. TRANSITION FROM SCHOOL TO WORK

After the completion of schooling, Iranian youth face several obstacles in making the transition to employment. Recent graduates face high unemployment rates and, in addition, long durations of unemployment. Iran's rigid formal labor market is ill-prepared to assist the growing number of young people entering the labor market to find suitable employment.

The total unemployment in Iran, at about 10-11 percent, is quite similar to that of Egypt or Turkey but quite a bit higher than the 3 percent found in other transition economies such as South Korea or Mexico. Steady economic growth has reduced overall unemployment rates by nearly 5 percent since 2000, though unemployment still remains quite high among youth, as identified in Table 6-1. Indeed, the average unemployment rate for those who are 30 years and older is below 5 percent as compared to the more than 20 percent unemployment rate for those between fifteen and thirty. While rigidity in the Iranian labor market is likely responsible for this high youth unemployment, youth unemployment rates of about two or three times the national average are not uncommon in transition economies.<sup>19</sup>

Falling unemployment rates from recent economic growth seem to have disproportionately benefited men and the least educated. Indeed, unemployment rates among women steadily have increased so that it is now twice that of men, with nearly half the women in their early twenties unable to find work. But measuring the unemployment rate for women is complicated because only a very small number, under 20 percent, report being in the labor market, which is an important issue that we will return to. And though those with upper secondary education still have the highest levels of unemployment, as shown in Table 6-2, rates for males with a secondary education or below have fallen dramatically. Tertiary education, which once substantially reduced the risk of unemployment, now has a much lower unemployment premium. This change likely was caused by the rapid expansion of higher education and decline in its quality.

The difficult transition from school to work is emphasized by the long spells of unemployment following graduation. In Figure 6-1 we use employment surveys to calculate the expected duration of unemployment facing recent graduates who are en-

**Table 6-1: Unemployment Rates by Gender and Age (percent)**

Age Group	1997		2000		2004	
	Male	Female	Male	Female	Male	Female
15-19	33.5	30.6	33.9	30.5	18.8	33.7
20-24	28.2	28.9	33.6	36.2	22.2	42.5
25-29	14.0	13.1	17.3	18.3	12.0	23.3
30-34	7.0	6.7	8.3	7.1	5.6	7.2
<b>Total</b>	12.8	14.9	14.4	16.6	9.2	17.8

*Source: Authors' calculations using Housing Employment and Expenditure Surveys (HEUS) data 1997-2000.*

tering the labor force.<sup>20</sup> The graph on the left reports expected length of unemployment at the time of graduation and the second reports the same statistic for those who are unemployed immediately after graduation; in each case, we disaggregate our results by the type of education. Two striking results emerge from these graphs. First is the nearly three years of unemployment expected for those who do not have jobs at the time of graduation. Second is the much longer duration of unemployment faced by those with upper secondary education, reflecting the difficulty that these graduates face in finding their first job.

Queuing time in unemployment also appears to be related to previous sector of employment. Youth who were previously employed in the public sector have a 50 percent longer expected unemployment duration than those employed by a private employer, though this difference is muted by those with tertiary education. While this may be indicative of greater inflexibility in the public sector, this difference may also reflect the short-term contracts that prevail in the private sector (see below). Interestingly, while we see a big difference between public

and private unemployment, we do not see a significant difference between the type of previous occupation (for example, industrial vs. clerical work). Finally, turnover seems to be much higher for women than men, though the small sample of women reporting themselves as labor force participants may be biasing our results.<sup>21</sup>

Figure 6-2 provides another description of the transition from school to work, where we show the percentage of youth who are not in school as compared with the number who are working. We plot these shares by age for two years, 1995 and 2005, where the gap between the two lines for each year is the share that are either unemployed or homemakers. In the graph for rural males, the curve plotting the “Left School” share has shifted right between 1995 and 2005 for individuals over eighteen, indicating falling educational attainment as more of these youth leave school. And this shift has translated into increased unemployment for these youth because it has not been accompanied by a shift in the share of urban males working. Urban males were similarly affected during this period, though the effect was a bit more muted.

**Table 6-2: Unemployment Rates by Gender and Education (percent)**

Education level	1997		2000		2004	
	Male	Female	Male	Female	Male	Female
Illiterate	17.4	14.1	18.8	6.0	8.2	4.3
Primary	19.7	13.0	20.7	7.8	10.4	7.5
Lower secondary	24.6	25.2	26.7	21.0	15.5	19.2
Some upper secondary	27.9	30.7	32.3	42.7	21.5	39.6
Upper secondary	33.9	56.2	37.6	63.2	23.6	56.8
Tertiary	14.5	14.9	24.7	31.0	22.5	43.2
Total	12.8	14.9	14.4	16.6	9.2	17.8

Source: Authors' calculations using HEUS data, various years.

For women, there is the opposite effect. Among rural women, there is a large shift in the “Left School” curve, which is consistent with the expansion of secondary education in rural areas discussed above. Similarly, there is a noticeable decrease in the percentage of urban women who leave school about age nineteen to twenty-two, presumably to attend college. Despite these seeming improvements in the situation for women, employment rates have fallen over this period by a larger share than that explained by increases in school attendance. This indicates that an increasing number of women are either unemployed or homemakers, though the interpretation of this result is complicated by whether women accurately report their work status (see below).

Differences in the average age for youth at their first job clarify the different schooling and unemployment experiences of men and women and between rural and urban areas. The age at first job is highest among urban women, indicating that urban women entering the labor market are on average more educated than the other groups. This group also has had the fastest increase in average age, most likely a result of the increased educational attainment dis-

cussed above. Rural women, however, begin work at a very young age, which is a likely explanation for their low educational achievement. Though the gap has decreased substantially over the past decade, women in rural areas still join the labor force before men, which reflects family decisions to invest in the human capital of male over female family members.

#### RIGIDITY OF THE FORMAL LABOR MARKET

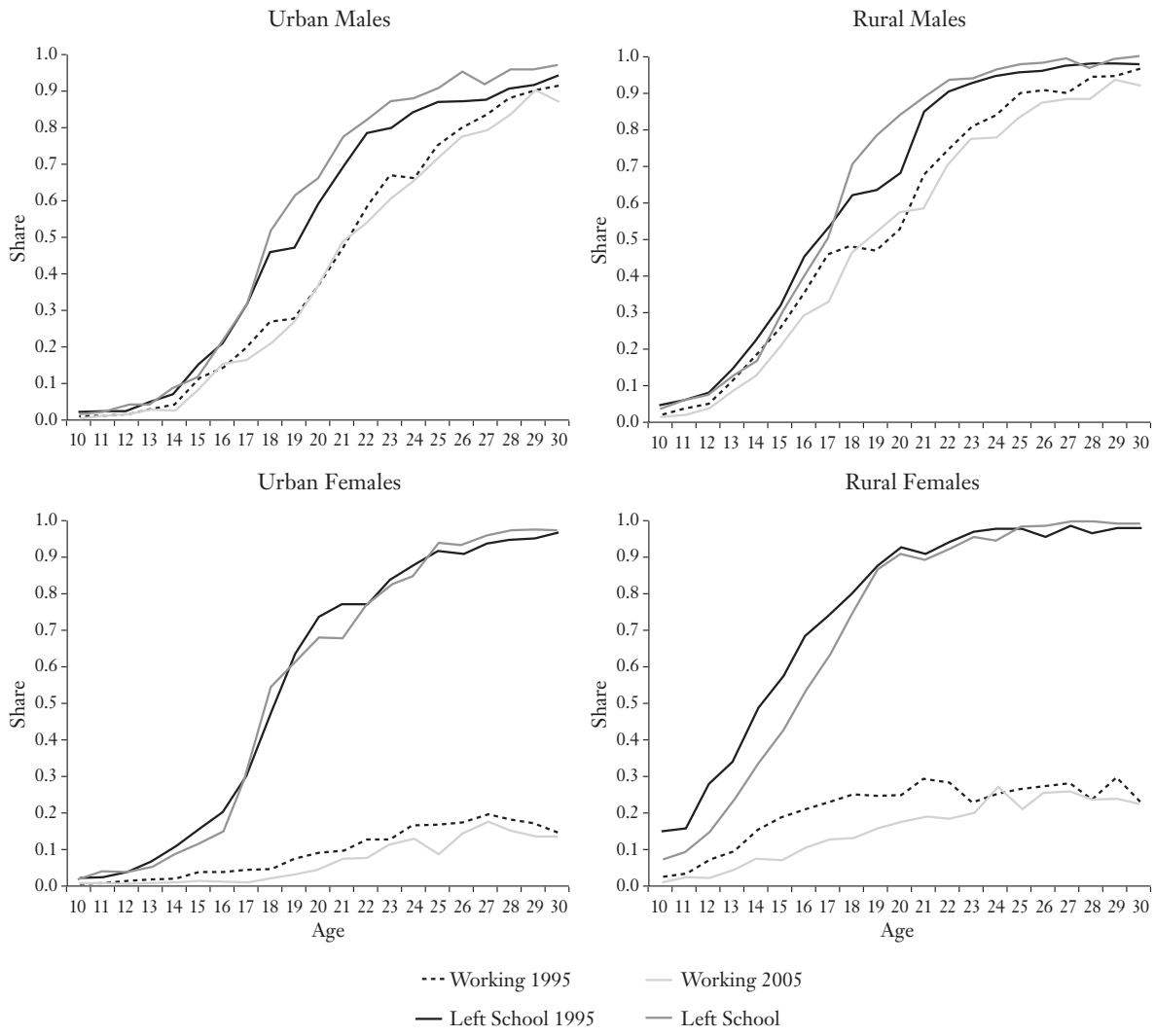
Labor market rigidity is a key determinant of social exclusion for the young (Atkinson 1998). A dynamic and flexible labor market in which new vacancies are created by both job creation and turnover is crucial in creating employment opportunities for new entrants. In Iran, this is particularly important because the labor force is expanding at a rate of 3 to 4 percent a year, with nearly 1.2 million youth entering the labor market annually and only 300,000 workers retiring.<sup>22</sup> Iran’s labor market is one of the most rigid in the developing world because of the “social contract” developed during the revolution (see Salehi-Isfahani [2005] and Salehi-Isfahani [2006a]). This contract, which is analogous to those in the Middle East and North Africa countries, is a

**Figure 6-1: Expected Duration of Unemployment**



Source: Authors' calculations HEUS, 1997-2005

Figure 6-2: Shares of Youth Not in School vs. Share Employed (in 1995 and 2005)



Source: Authors' calculations HEIS, 1995 and 2005

government commitment to provide jobs and has been detrimental to the economy's capacity for job creation.<sup>23</sup> Since the mid-1990s, some reforms to the "social contract" have been pursued to increase the competitiveness of the economy though progress has been slow.

The Labor Law of 1990 makes it difficult for private employers to lay off workers. In order to avoid the heavy penalties imposed by the government for dismissing workers, many employers now rely primarily on short-term contracts, which create the "marginal" jobs that are likely to have a deleterious effect on youth who are forced to accept them (Atkinson 1998). In addition to increasing uncertainty for employees who have no choice other than these short-term contracts, higher turnover for new workers also may have negative effects on firm productivity. Though there are no reliable data on the proportion of new private sector jobs that are short-term, estimates as high as 50 percent have been quoted.

In addition to limiting the ability of the economy to create long-term employment opportunities, these restrictions lead to low turnover in the formal labor market. At a simple level, low turnover hurts youth because new labor market entrants are prevented from competing for jobs held by those already employed. At another level, it leads to distorted incentives in learning and skill acquisition. Firms are compelled to select workers based on *a priori* verifiable skills, and degrees in particular, rather than potential productivity because it is costly to lay off employees after their true productivity is revealed (Salehi-Isfahani and Murphy 2004). This encourages students to invest in degrees rather than a more balanced set of skills that would be useful in the labor market.

Recognizing the benefits of a university education in landing a job, not to mention its social prestige and value in the marriage market, these students focus on the rote memorization needed to pass the test rather than developing useful skills. Instead of learning to cooperate and work with a team, they train for fierce competition. And instead of building self-confidence, they are constantly reminded of the high risks of failure. Indeed, the large majority

of youth who cannot signal their narrow but documentable set of skills by graduating from a good public university – that is, those who either failed the university entrance exam or paid exorbitantly for a lesser known branch of the private Islamic Azad University – are branded and excluded from the labor market. In short, rigid labor markets prevent parents and schools from preparing the young for today's jobs for which creativity, teamwork, and self-confidence are essential.

The post-revolution "social contract" still enjoys wide support among Iranians, as demonstrated by the landslide election of a populist president in June 2005, though attempts at its reform have been made since the early 1990s under both Rafsanjani and Khatami despite their different ideological persuasions. A major part of these reforms has been policies to reduce the size of the public sector payroll by freezing salaries and restricting hiring. As a result of these efforts, the share of public sector wage and salary employment has fallen from 53 percent in 1997 to 45 percent in 2004. However, many desirable public sector positions still require a university degree, which continues to encourage ambitious youth to obtain the right credentials for these positions rather than the skills necessary for them. Despite these reforms of the public sector, nearly 80 percent of recent university graduates found employment in the public sector, though this rate has declined substantially from 93 percent in 1997.

#### INFORMAL LABOR MARKET

As noted earlier, a rigid formal labor market pushes new employment onto the informal sector. Any discussion of the informal labor market is complicated by the need to provide a clear definition of what this term means. For the purposes of this discussion, we will use the definition developed by the Iranian Statistical Research and Training Center: "[The] informal sector consists of unincorporated enterprises, with fewer than five workers in urban areas, engaged in sectors other than the agricultural and technical sectors" (Bagheri, Yazdi, Banouie, and Varmazyar 2002). Because 57 percent of total enterprises in the country have only one employee and 95 percent of industrial enterprises have less than 10 employees, it is clear that the informal sector in Iran is quite large (Etmnan and Chaker-ol-Hossei-

*Family life in Iran has gone through dramatic changes in the last two decades. In addition to the falling fertility rates discussed above, both men and women are waiting longer to get married. The percentage of unmarried men and women between the ages of twenty-five and twenty-nine has increased rapidly, rising from 8 percent to over 25 percent for women and from 20 percent to nearly 40 percent for men.*

ni 2007). However, because it may be appropriate to include short-term contractual employees as part of the informal labor market, since they typically do not have insurance or social security, estimates reported here for the size of the informal labor market may be biased downward.

Estimates of the total size of the informal labor market in terms of the number of employees vary widely. Official estimates put the size in 1996 at 17.9 percent of the total labor force while other estimates suggest that it was closer to 50 percent as of 2002.<sup>24,25</sup> Amuzegar (2003) uses a slightly different definition and estimates the total size of the “underground economy” as 30 to 35 percent of the total economy.<sup>26</sup> An important aspect of the informal labor market that we discuss further is that it represents an overwhelming majority of female unemployment – nearly 90 percent – according to official estimates.

Our surveys do not allow us to identify youth working in the informal labor market separately, so we are unable to estimate its direct implications on individuals.<sup>27</sup> Existing literature suggests that there are advantages and disadvantages to having an informal labor market of this size. One important advantage in economies with rigid formal labor markets such as Iran’s is that informal sector employment generally expands in economic downturns. While formal firms cannot afford to hire new employees at the prevailing wage rate, wages in the informal market are flexible and can adjust downward temporarily, which allows firms in this sector to continue hir-

ing new employees.<sup>28</sup> But a major disadvantage is that, despite guarantees in the constitution for “universal” coverage, many of the individuals in this sector do not have insurance or social security (Eminan and Chaker-ol-Hosseini 2007). Efforts to encourage small firms to join the formal market as a way of dealing with this second issue are discussed further below.

#### **FEMALE EMPLOYMENT**

Despite a significant rise in the share of the female workforce employed in large industries, from 6 percent in the early 1990s to 12 percent in 2001, the majority of women are employed in the informal sector. And many other women who are not “employed” in a standard sense are actively involved in work with nongovernmental organizations, foundations, or as tutors for their children, either to help with their schoolwork or compensate for the lack of sports and other extracurricular education at schools (Povey 2005).

Understanding the labor market faced by today’s young women, therefore, requires an analysis of these informal labor markets, which is not currently feasible for reasons mentioned above. Any analysis is additionally complicated because many women with jobs in the informal sector are likely to declare themselves to survey interviewers as homemakers rather than as unemployed or employed (Singerman 1996, Singerman 1998). Preliminary evidence for this under reporting of labor market participation by women is suggested by the large number of

families in Iran that report more than one homemaker. To give a sense of the magnitude of this under reporting, if we recode all unmarried women aged 15-24 whose mother reports being a homemaker as unemployed, female youth unemployment rates increase from 23 to 59 percent in urban areas and from 54 to 71 percent in rural areas.<sup>29</sup>

In general, though there are still limited formal employment opportunities for women, the “culture of work” is changing so that it is becoming increasingly accepted for female family members to work in public spaces. And though formal discrimination against women is still prevalent as evidenced by the March 2004 order of the interior minister banning women from working as coffee shop waitresses, women’s important role in the labor market is highlighted by some employers preference for women who “remain in one place and work harder” (Povey 2005).

#### **LABOR MARKET POLICIES**

In June 2006, Ahmadinejad promised that 180 trillion rials (about PPP US\$60 billion) worth of bank loans would be available to medium- and large-sized enterprises for job creation schemes. Official reports in early 2007 indicated that banks already had allocated 250 billion rials (PPP US\$83 million) to over one-third of the 313,000 loan applications, which is anticipated to lead to the creation of nearly a million new jobs.<sup>30</sup> Khatami’s government had initiated a similar program in 2004 by allocating 6 trillion rials (about PPP US\$2.2 billion) to the employment of young college graduates at private firms. Unfortunately, this program was poorly designed because it likely reinforced the existing distortions in the labor market discussed above and, since it did not include an evaluation component, it is impossible to estimate its efficacy.

A nationwide network of employment centers has been created in order to ease access to information about employment opportunities and as focal points for information for employment promotion and skills development programs. The premise of this policy is that, in addition to the skill mismatch discussed above, an important cause of youth unemployment is difficulty in matching firms with employees. The impact of these centers is not yet known.

Repeated administrations also have tried to ameliorate the negative effect that the Labor Law of 1990 has on small- and medium-sized employers (see discussion above). The government finally passed legislation in 2003 exempting firms with fewer than five workers from this law. The government also recently permitted exemption for firms with fewer than 10 workers conditional on the negotiation of a three-way agreement by the government, employer, and workers. In this way, the government has been able to maintain this law, which is an important part of the social contract, while providing small employers with much needed flexibility by allowing them to operate outside its restrictive rules. Though the number of potentially affected workers is large because roughly 95 percent of wage workers are employed by firms with fewer than 10 workers, the effect of this program on job creation is not known.

In February 2007, the Iranian parliament announced that it would support a number of amendments to increase the flexibility of the labor law, noting that it has been detrimental to both employers and workers.<sup>31</sup> But because there is significant opposition to these amendments from groups of lawmakers, managers, and workers, it is not clear how successful these reforms will be.<sup>32</sup>

## VII. MARRIAGE AND FAMILY FORMATION

Family life in Iran has gone through dramatic changes in the last two decades. In addition to the falling fertility rates discussed above, both men and women are waiting longer to get married. The percentage of unmarried men and women between the ages of twenty-five and twenty-nine has increased rapidly, rising from 8 percent to over 25 percent for women and from 20 percent to nearly 40 percent for men. Youth are increasingly delaying the move out of their parental home, which is typically recognized as a sign of independence and maturity, because they stay longer in school. And though marriages still largely are arranged, the role of women in the household is shifting even in traditional social groups as the level of female education steadily increases.

Though both men and women are delaying marriage, less than 10 percent of either group are unmarried by age 35. Indeed, while the age distribution of unmarried youth has shifted to the right in Figure 7-1 for more recent cohorts, the distributions converge for ages over 31. It is too early to predict if the most recent cohorts, those born between 1974 and 1984, will converge with previous cohorts, though they appear to be following the same path. The

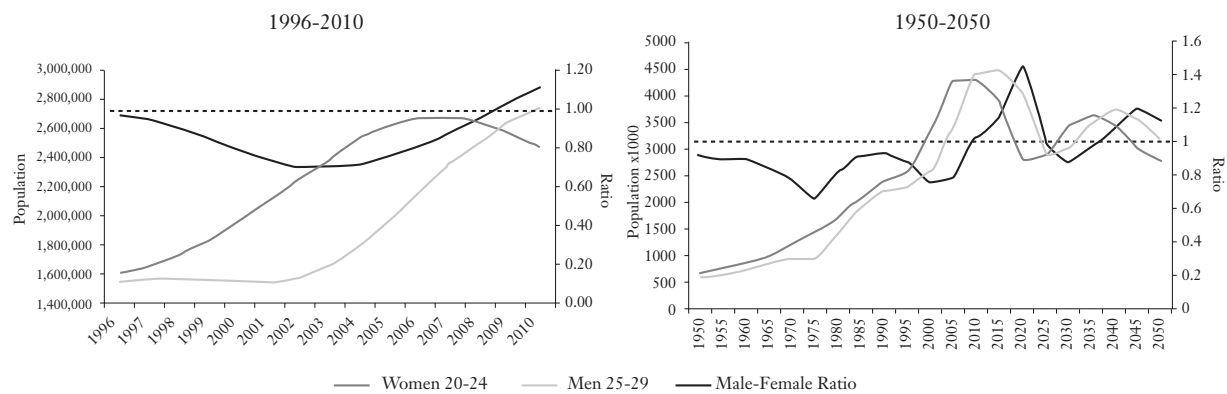
number of unmarried women has increased at all ages, as illustrated by the clear rightward shift of the curves on the chart. But the effect seems to be strongest among older men.

The rise in the age of marriage may be a positive phenomenon. In particular, it may reflect a growing desire of both men and women to defer creating a family and having children in order to invest more in education. But it also may signal a new problem in the transition to adulthood. Delayed marriage may reflect inflexibility in the marriage market because the cost of marriage, buying a home, and raising a family have increased. The flexibility of the marriage market, which we discuss below, is a particularly important issue because the youth bulge is now creating an imbalance in the marriage market as more men than women are of a marriageable age.

### THE MARRIAGE MARKET

Marriage in Iran is recognized as a contract between both the couple as well as the two families. Today's rising age of marriage combined with recent imbalances in the ratio of marriageable aged men to women is likely to compel the standard terms of this

Figure 7-1: Marriage Imbalance--Ratio of Men 25-29 to Women 20-24



Source: Left panel, authors' projections based on 1996 census data and age specific mortality and fertility rates. Right panel, United Nations Population Projections, 2004 revision.



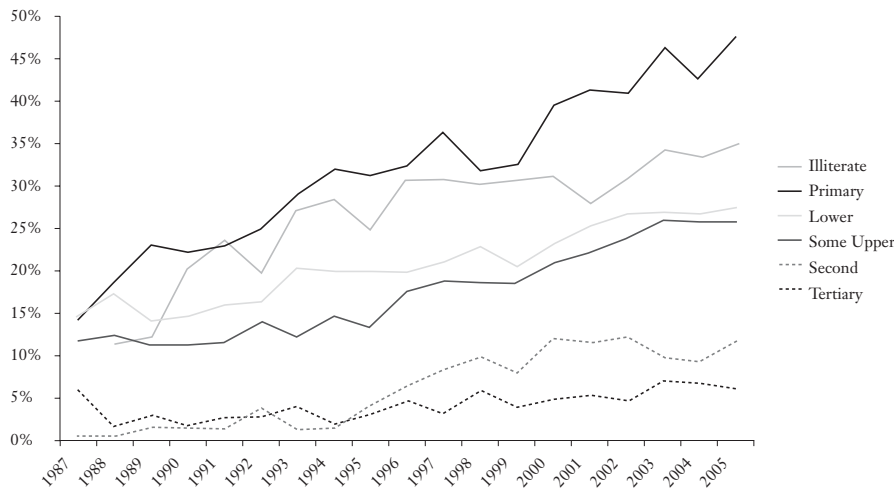
contract to change. Fewer eligible men may make it easier for men to “marry up” and marry more educated women or those from higher social classes. Or the traditional five-year age gap that is driving this imbalance may itself change. Or perhaps women will bring larger dowries or demand a smaller *mahr-rieh*, a sort of marriage insurance for the wife. Here we examine how marital institutions have adjusted to these recent stresses. This topic is of tremendous importance because the ratio of men to women will flip dramatically when the men of the youth bulge reach their late 20s and begin looking for wives.

Traditionally, Iranian women marry men about five years older than themselves. Today, as the women of the youth bulge reach their early- to mid-20s, this has created a large imbalance in the labor market. In particular, as shown in the left panel of Figure 7-1, the ratio of men aged twenty-five to twenty-nine relative to women aged twenty to twenty-four has fallen from 1.0 in 1995 to nearly 0.7 in recent years. Similarly low ratios occurred in the 1970s, as shown in the right panel of Figure 7-1, which, perhaps not coincidentally, also was a period of social and political change, which began with student pro-

tests and ended with the Islamic Revolution. This imbalance is about to dramatically reverse itself as the ratio of men to women in these age groups will surpass 1.4 by 2020. To what extent such shifts in the gender ratio disrupt social life depends on how quickly the marriage market can adjust.

The most obvious form of adjustment is for the age gap to change. There is no evidence of shrinkage in the age gap as a result of the most recent increase in the number of women over men; the age gap between spouses has remained relatively constant at about six years. But one sign of flexibility in the marriage market is that women seem to be increasingly willing to marry men with a lower education than their own. In Figure 7-2, we show that an increasing number of recently married men are able to “marry up.” While this trend partially reflects the increasing educational attainment of women, it is interesting that the number of men with a primary education who marry a more educated woman has increased so dramatically. Women choosing to marry less educated men also likely reflects the preference for women to marry men who have left school and already have stable employment.<sup>33</sup>

**Figure 7-2: Share of Young Couples with a More Educated Wife (by husband education) †**



Source: HEIS 1987-2005

† Includes couples where wife is under 35 years old.

## MARRIAGE AND HOUSING

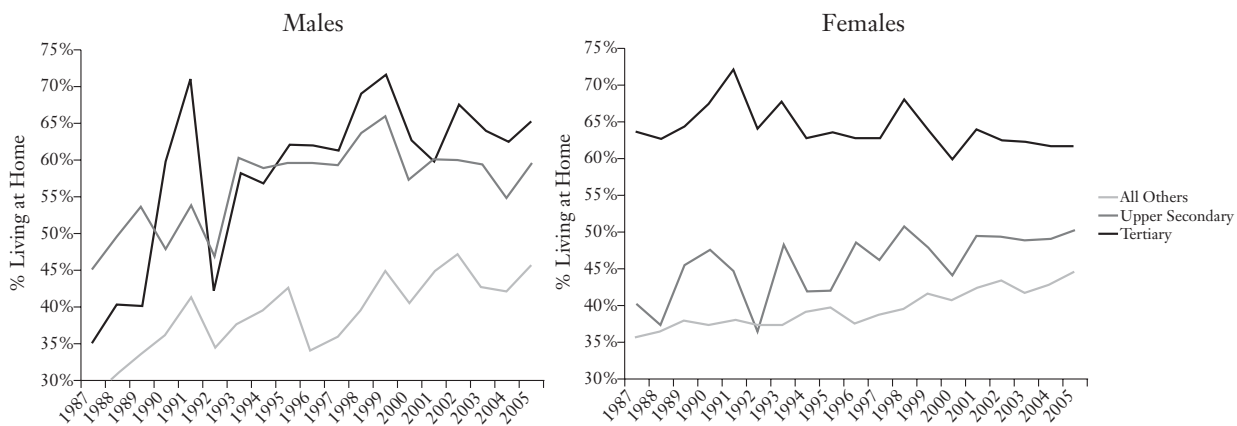
Increased difficulty moving out of the parental home is a likely impediment to the ability of men to marry and of couples to start a family. The proportion of men aged 20-29 who live with their parents increased from about 50 percent in 1984 to about 75 percent in 2005; for women, it increased from 20 percent to about 48 percent. Disaggregating by level of education in Figure 7-3 demonstrates that this phenomenon is more pronounced for those with upper secondary and university education. Today, nearly two-thirds of men in this age group with upper secondary or university education are staying at home. Because the number of university educated women has risen rapidly over the past 20 years, the stable 50 percent rate of these highly educated women staying at home is quite remarkable and has been a source of concern for some policymakers, as discussed below.

That the likelihood of staying at home is inversely related to education suggests that, at least for men, the inability to live independently is a function of employment rather than lifetime income potential. As we noted earlier, unemployment rates are lower

for the less educated. Further, since the current gender ratio of youth favors men, the only explanation for why men with reasonable income potential cannot afford to marry or live independently is the inability to pay rent or buy a home. Lack of sophistication of financial institutions in Iran, the mortgage market in particular, prevents young men from owning a home by borrowing against their future earnings. The development of financial markets in Iran has been very slow, in part because, until recently, all banks were government owned and had little incentive to venture into new territory. Only a few private banks operate at present, but at least one – Bank Parsian – has announced plans to launch a mortgage lending program.

There are obvious links among the three markets of labor, marriage, and housing. To marry, young men need to have a job or a house. In order to borrow for a house, they would need a job. And married men with mortgage obligations are more likely to invest in careers. Clearly, without a job to start with, even in a well-developed financial market, young men would find it very difficult to borrow for marriage and housing. But for those who can find a job,

Figure 7-3: Less Educated Children are More Likely to Leave Home



Source: HEIS 1987-2005

the ability to turn future income into a home might help them get married and settle. For young men in a society with a developed mortgage market, the prospect of owning a home adds to the reward of finding a job. And once they have a job and a mortgage, they are more willing to work hard to hold on to both.

**MARRIAGE MARKET FLEXIBILITY: DOWRY AND MAHRIEH**

An important source of marriage market flexibility may be in the change in the value of dowries provided by the brides' families. Though a falling male-to-female ratio would suggest that dowries should rise as a smaller number of men are eligible for marriage, our estimates in Table 7-1 suggest that the share of the dowry in total expenditures has fallen between 1995 and 2003.<sup>34</sup> Since the size of the dowry is affected by multiple factors, including the relative income potentials of the bride and groom, we cannot conclude that the marriage market is inflexible. The falling share is consistent with a rising male-female ratio and falling incomes of men relative to women who marry. More careful analysis of the data is needed before we can deduce inflexibility in the institu-

tion of marriage from the falling share of dowries in expenditures.

Interestingly, the poor seem to contribute a smaller proportion of their total expenditures to dowries than the rich. But the size of these contributions is still large for those in the lowest quintile since the average family in this quintile would spend about \$400 on a dowry, which is equivalent to nearly three months' wages for some in this group. And it is likely that our estimates are seriously downward-biased for this group because we do not include expenditures on durables such as furniture, which make up a significant part of the dowry for low-income families.<sup>35</sup>

While the dowry reflects the cost of marriage to the family of the bride, the groom and his family face the cost of the wedding ceremony and *mabrieh*. Though we do not have estimates of expenditures on wedding ceremonies, typically the groom's family is expected to spend an amount commensurate with the dowry provided by the bride's family. The *mabrieh*, which is a prenuptial agreement in which the husband promises to pay a fixed sum or a specific asset value in case of divorce, does not con-

**Table 7-1: Predicted Share of Total Expenditures Spent on Dowry by Expenditure Quintile (percent)**

Year	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
1995	13.2	14.0	14.7	15.4	16.9
1996	13.2	14.2	14.8	15.5	17.2
1997	13.7	14.4	14.9	15.6	17.4
1998	13.0	13.9	14.2	15.0	16.7
1999	14.1	14.5	14.8	15.2	16.7
2000	12.2	12.7	12.7	13.3	14.9
2001	10.5	11.3	11.8	12.2	14.0
2002	11.0	11.8	12.2	12.9	14.4
2003	11.7	12.1	12.5	13.4	14.6

Source: Authors' calculations using HEIS data, 2005.

stitute an immediate cost for the groom. But when the marriage contract is signed and he agrees to a specified *mabrie*, he must have these assets at his disposal. The rising education and employment potential of women during the 1990s is purported to have increased the size of the *mabrie*, making it a significant impediment in family formation (Habibi 1997).<sup>36</sup>

## UNMARRIED WOMEN

As the age of marriage for women continues to rise, it is becoming socially acceptable for women to be single into their late 20s and early 30s. While many of these single women live with their parents, they are increasingly autonomous. And among the educated and in urban areas in particular, many women own property and live independently. Indeed, the rapidly rising number of women working in the formal labor market documented above has created many new opportunities for these women.

Efforts to improve the independence of rural women also are underway. In an effort to improve rural women's access to information and training and to provide opportunities for earning an income, the Ministries of Agriculture and Reconstruction Crusade in conjunction with the United Nations Food and Agriculture Organization funded the establishment of women's cooperatives. Though small in number – only 100 cooperatives were operating as of 2002 – there is anecdotal evidence suggesting that these clubs have been quite effective. These anecdotes suggest that, in addition to providing women with a small income, these organizations are empowering young rural women because they give them “an identity separate from individual young women waiting to be married” (Povey 2005).

A variety of other programs that either emphasize cooperation among women or offer opportunities for income generation also exist. Examples include the Mehr Foundation, which offers small grants to women according to their needs and abilities, rural women's banks which function analogous to microfinance banks, and a communal project to protect the environment (Povey 2005).

## POLICIES REGARDING MARRIAGE AND FAMILY FORMATION

The increase in the age when people marry is widely recognized and has been identified as a sig-

nificant problem by a number of political and religious leaders. Often these leaders identify rigid social customs as a major reason for the delay because they involve a major economic cost. One effort to help young couples deal with these costs and reduce the age at which people marry is a recent program promoted by Ahmadinejad which provides loans to low-income couples. This *Mehr-e Reza* Fund was endowed initially with about \$300 million and is designed to help the targeted young couples with marriage, housing, and employment. Permanent offices in 336 cities are eligible to allocate loans as large as 10 million rials (PPP US\$3,500) per couple. Less than a 4 percent interest rate is charged and borrowers are expected to repay the loan in 36 installments.<sup>37</sup> The efficacy of this program is still unknown though the small number of applicants by the third month of the program and anecdotes suggesting that couples often have to wait for months to get marriage loans suggest that it has not been very successful.<sup>38,39</sup>

A variety of other policies also have been proposed to deal with this problem. Recognizing the high cost of weddings as an impediment to marriages, some universities have offered mass weddings as an option.<sup>40</sup> But other policies designed to encourage youth to get married at younger ages, such as a cap on dowries and a controversial proposal to limit women's access to universities, have been rejected. Similarly, a recent proposal by Interior Minister Mostafa Pour-Mohammadi to encourage temporary marriages for those who cannot afford the high costs of a regular marriage has been rejected by the government.<sup>41</sup>

One important point that is often missed in discussions of marriage costs is that the expense may serve as screening devices or performance bonds. Tough conditions for getting married, just as for easy divorce, can be rules that protect the parties in view of information asymmetries that are more prevalent in urban and modern living compared to rural and tribal societies where the rules originate. For example, the purported rise in *mabrie* may be a response to lack of security for women under the *shariab*, which gives men the right to divorce. If this is the case, making *mabrie* illegal would not be Pareto improving, for women would lose an impor-

tant instrument with which to discourage men from going for unilateral divorce, as well as lose a source of income in case of separation or divorce. In a similar vein one could argue that both the high cost of the wedding ceremony and the *mabrie* may be indicators of a young man's quality as a provider and

a disincentive to remarry. Subsidies for marriage, such as mass government ceremonies or interest-free marriage loans, which weaken such signals, may produce adverse unintended consequences, in this case for women.

## VIII. CONCLUSION

Today's youth in Iran face a variety of difficult transitions. Traditional Iranian society, though much poorer, celebrated youth and welcomed them to take over farms, professions, and businesses from the older generation while they set up their families. Modern Iranian society instead offers competitive schools, inflexible labor markets, difficulty forming families and many opportunities for perceived failure. The transitions to adulthood are thus often filled with anxiety and unhappiness, and many youth struggle with drug abuse and depression.

The challenges faced by Iran's youth are in part the result of the baby boom of the 1970s and 1980s. But Iran's education system, labor market, and marriage market have failed to adequately adjust to ease the impact of this youth bulge. While demographic transitions often bring with them larger cohorts of youth who have to compete for jobs and resources, they also confer economic benefits in terms of a faster growing labor force and greater potential for human capital accumulation. To take advantage of these benefits, the institutions of the society must be flexible and able to adjust to the changing demographic realities. Our assessment of Iran's relevant institutions – schools, the formal labor market, and marriage – is that they are not sufficiently flexible to take advantage of Iran's "demographic gift."

There is much to praise about Iran's system of universal education that provides free education through high school and promotes students based on merit and objective criteria. Here we documented its positive impact on enrollments and attainment across regions and income groups in Iran. But it is flawed in that it is too competitive and rewards only a small proportion of the population. Further, because the education system relies on multiple-choice exams which reward memorization, ignores the arts, and does not encourage students to develop writing skills, high school graduates typically are unprepared for the labor market. The formal labor market is similarly more concerned with objective measures of productivity – diplomas and years of experience – than subjective employer evaluations. It thus complements the education system by hiring its winners and rejecting the losers of the education race. Together the schools and the formal labor market form a system

of exclusion that leaves out the vast majority of educated youth.

The failure of this system manifests itself in several ways, some of which we discussed in this paper. The most obvious is the high rate and the long duration of unemployment for the young. We showed that even youth with tertiary education suffered unemployment rates in excess of 20 percent and waited several years before they found their first job. Without a job, many stay unmarried and have to live with their parents for much longer than they would wish. The increasing age of first marriage, which is a sign of falling fertility and rising investment in human capital in some countries, is partly a sign of poorly functioning social and economic institutions in Iran.

Long unemployment spells early in life not only deplete a person's human capital, they can also dash hopes, reduce self-esteem, and even cause depression. One manifestation of this phenomenon in Iran is drug abuse among the young. According to UNICEF, Iran has one of the highest rates of drug abuse in the region.<sup>42</sup> And a survey of drug users revealed that the majority were young people.<sup>43</sup>

The more talented choose to leave the country. Iran's brain drain has received wide attention in Iran and abroad.<sup>44</sup> In addition to those who leave, many more dream of leaving and sometimes fail to make a good effort at building their lives inside Iran.

We have discussed some policy options that address the needs of youth, including those currently under consideration by the government. There is an attempt to move the education system away from reliance on a single test and in the direction of collecting and using more information about student abilities. This would affect student learning strategies and could result in the average graduate acquiring better skills. There is also a move to allow employers to exercise greater independence in judging an individual's productivity. This, too, could affect students' incentives to learn a wider variety of skills than schools currently promote and firms reward. Policies to improve the working of the marriage market are naturally harder to find and implement and, not surprisingly, we found little that is focused on fundamental reform. One example of public action that would operate at a more fundamental

level is to promote financial institutions that could help the young and educated individuals borrow against their future income to buy a house. A better developed mortgage market could help with marriage and family formation, but little has been done to promote such a market.

The role of social networks has been discussed by Silver (1998) and De Haan (1999), and exploring the role they play in mediating these transitions may be an important part of a future research agenda. Their role in education, employment, access to credit, marriage and family formation has been demonstrated in the case of Egypt (Singerman 1996, Singerman 2002), but little is known about Iran. As some social networks form around ethnicity, this issue may be particularly relevant in Iran, where several ethnic groups, while maintaining their Iranian identity, have maintained a separate language from Persian. Belonging to an ethnic minority may be a source of exclusion, but it may also help youth

feel they belong to a group or a neighborhood that can help them in their quest for a stable adult life. We did not discuss ethnic issues, but clearly they should have a place in a more extensive discussion of youth exclusion.

While in this report we have been relatively successful in mapping out the transitions through different education levels, from school to work and family formation, we have not been able to throw much light on how youth negotiate the years between when they leave school and when they find steady employment and are able to form a family. We do not know how they acquire the jobs that they have when they are older – whether they engage in retraining, use family networks, or just wait for their turn. Future work looking at this process and the role played by social networks and other mechanisms in mediating it may provide important insight in designing policies for tomorrow.

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## ENDNOTES

- \* Contact author: Salehi-Isfahani (salehi@vt.edu). Prepared for presentation in the Wolfensohn Center and Dubai School of Government Forum, Youth Exclusion in the Middle East: Towards New Knowledge and Solutions, February 23-24 2007, Dubai. We thank for comments Navtej Dhillon, Tarik Yousef, and the participants in the Dubai Forum.
1. Quoted in The Independent newspaper, 1 September 2005.
  2. Muhammad Javad Rooh, cited by (Basmenji 2005)
  3. Extracted from <http://www.presstv.ir/detail.aspx?id=8391&sectionid=351020101> on 6/21/07.
  4. Varzi (2006), Basmenji (2005), Khosravi (2003)
  5. For a more extensive discussion of fertility trends in Iran see Abbasi-Shavazi and McDonald (2006).
  6. In reporting economic figures, we use a single Georgian calendar year to refer to the Iranian year, which begins on March 21 and ends on March 20 of the following year.
  7. Molavi attributes the rise of “extremist politics” in Iran, signaled by the election of president Ahmadinejad in 2005, to “frustration with widening income gaps” and “widespread poverty.” Afshin Molavi, The New York Times, November 3, 2005. See also Amuzegar (2005).
  8. See Salehi-Isfahani (2006b) for more details
  9. Only seven countries in this group had lower poverty rates as measured by the percentage of people living on less than \$2 a day (World Development Indicators, 2006).
  10. Bayat (1997) provides a slightly different interpretation of events suggesting that the poor may have been largely unrepresented.
  11. In addition to selection issues this introduces, most studies also try to compare parent-child incomes measured at the same age.
  12. Authors’ calculations available upon request. Our point estimate is 0.15 for Iran while Kremer reports 0.39 using PSID for the United States.
  13. For a further discussion of women’s education in Iran, see Mehran (1999).
  14. Our estimates for youth over eighteen are biased by attrition because the survey does not record the education of children who do not live with their parents. Though this effect is likely driving the fall in educational attainment observed for older rural females (the other possibility is measurement error), in general we do not know the direction of the bias because both the more educated and the less educated tend to leave home to either attend college or find work, respectively.
  15. As an example see Angrist and Lavy (1999) who use Israeli data to show that reducing class size has a positive effect for fourth and fifth graders but not third graders.
  16. Preliminary calculations from household survey data on Iran using a Mincer-like approach show that returns to basic education is very low, upper secondary graduates earn a 70 percent premium over illiterates, and university graduates 140 percent.
  17. In both math and sciences, Iran ranked near the bottom of the group for fourth graders, far below countries such as Taiwan, Cyprus, and Singapore, beating only the Philippines, Morocco and Tunisia. For eighth graders, Iran placed in the bottom one-third. Further, Iran was among the eleven countries that showed a significant decline in achievement in mathematics.
  18. Iran Daily 2/6/07. Extracted from <http://www.iran-daily.com/1385/2775/html/panorama.htm#s207222> on 6/23/07.
  19. A similar ratio is found in Egypt, South Korea, Mexico and Turkey.
  20. An appendix to this paper describing the approach used to create these figures is available from the authors upon request.
  21. Authors’ calculations based on the data files of HEUS, 1997-2004.
  22. An increase of about 900,000 in a labor force of about 25 million.
  23. See (Yousef 2004) for more details.
  24. Official estimates from ILO using official national data. Downloaded on 6/28/07 from <http://www.ilo.org/public/english/bureau/stat/download/comp2a.pdf>.

25. Larger estimated size of the informal labor market from Etmninan and Chaker-ol-Hosseini (2007).
26. Roughly speaking, his definition of the “underground economy” includes all non-taxed parts of the economy.
27. Proposals to include a question about the size of the firm that an individual works in has been proposed by the Iranian Statistical Research Center of Iran as a way of identifying those in the informal sector.
28. See World Bank (2007) for a discussion of the informal labor market in the countries of Latin America.
29. Further analysis of our data might allow us to identify whether these homemakers are more likely to be informally employed or unemployed. In particular, regional variation in economic performance and the corresponding changes in the size of the male and female labor force may reveal if informal workers or the unemployed are being undercounted.
30. Iran Daily 1/09/07, downloaded on 6/26/07 from <http://irandaily.ir/1385/2753/html/focus.htm>.
31. Iran Daily 2/21/07. Downloaded on 6/26/07 from <http://iran-daily.com/1385/2787/html/economy.htm#s210945>.
32. Iran Daily 2/03/07. Downloaded on 6/26/07 from <http://iran-daily.com/1385/2772/html/economy.htm#s206880>.
33. As suggested by (Singerman 2002) these differences in educational attainment may have a significant impact on household bargaining. Future work exploring the impact of the educational differential on intra-household allocation could prove quite interesting.
34. HEIS data separately report dowry expenditures only for 1995-2003. Estimates are generated by regressing the share of a dowry on log of real household expenditures and urban and province dummies (with interactions) using the 6,000 households that reported non-zero expenditures for a dowry. The coefficients from these regressions are then used to predict the share for the entire population (for which quintiles could be more clearly defined). These figures do not say that the average household spends this much on a dowry each year. Rather, we would expect it to spend this much if it did have a wedding.
35. The questionnaire notes that part of dowry expenditures may be recorded under durables. But because we cannot disaggregate expenditures for durables for the family vs. the dowry, we do not include these in our estimates.
36. Though the evidence on rising *mabrieb* is largely anecdotal, it has been discussed in the press. See *The Independent* newspaper, September 1, 2005 for an example.
37. Iran Daily Newspaper, July 18, 2006. Downloaded on 6/28/07 from <http://irandaily.ir/1385/2613/html/panorama.htm#s159471>.
38. Newsweek, Sept. 11, 2006.
39. Iran Daily 5/14/07. Downloaded on 6/28/07 from <http://iran-daily.com/1386/2842/html/economy.htm>.
40. The Independent newspaper, 1 September 2005. Downloaded on 6/28/07 from [http://news.independent.co.uk/world/middle\\_east/article309422.ece](http://news.independent.co.uk/world/middle_east/article309422.ece).
41. This was a proposal criticized by a variety of different groups. Iran Daily 6/09/07. Downloaded on 6/28/07 from <http://iran-daily.com/1386/2862/html/national.htm>.
42. Posted at <http://www.unicef.org/infobycountry/iran.html>.
43. Houman Naranjiha, project leader, “A rapid assessment of drug use and addiction in Iran,” University of Social Welfare and Rehabilitation, Tehran 2005 (in Persian).
44. See the BBC report posted Monday, 8 January 2007: [http://news.bbc.co.uk/2/hi/middle\\_east/6240287.stm](http://news.bbc.co.uk/2/hi/middle_east/6240287.stm). Reference to an IMF report available at <http://www.imf.org/external/pubs/ft/fandd/1999/06/carringt.htm>.

## ABOUT THE MIDDLE EAST YOUTH INITIATIVE

### Our Mission

*To develop and implement a regional action plan for promoting the economic and social inclusion of young people in the Middle East.*

### Creating Alliances for Maximum Progress

The Middle East Youth Initiative's objective is to accelerate the international community's ability to better understand and respond to the changing needs of young people in the Middle East. By creating an international alliance of academics, policymakers, youth leaders and leading thinkers from the private sector and civil society, we aim to develop and promote a progressive agenda of youth inclusion.

The Middle East Youth Initiative was launched in July 2006 by the Wolfensohn Center for Development at the Brookings Institution in partnership with the Dubai School of Government.

### Connecting Ideas with Action

The initiative blends activities in an attempt to bridge the divide between thinkers and practitioners and utilizes robust research as a foundation for effective policy and programs. The initiative has three complementary pillars:

#### Research and Policy: Pathways to Inclusion

With this initiative, cutting-edge research advances the understanding of economic and social issues affecting young people. The main target group is youth 15 to 29 years old, with a special focus on young men and women who live in urban areas and have secondary or post-secondary education. In addition to addressing needs of older youth, the initiative will also focus on strategies for promoting development of youth 15 years and under in areas such as primary education, skills development and community participation.

The research framework focuses on youth making two major transitions to adulthood: i) the transition from education to employment; and ii) the transition to household formation (marriage and family). Research will concentrate on strategies to achieve inclusion in:

- Quality education
- Quality employment

- Marriage
- Housing
- Civic participation

Our goal is to examine the relationship between economic and social policies and generate new recommendations that promote inclusion.

### Advocacy and Networking: Creating Vital Connections

The initiative aspires to be a hub for knowledge and ideas, open to all stakeholders who can make change happen. Strong partnerships with policymakers, government officials, representatives from the private sector and civil society organizations, donors and the media will pioneer forms of dialogue that bridge the divide between ideas and action. By bringing in the voice and new perspectives of young people, the initiative will revitalize debate on development in the Middle East.

### Practical Action: Life-Changing Impact

Outcomes matter. With a focus on areas with the greatest potential for innovation and impact, the initiative will mobilize partners for practical action that can improve young people's lives. The initiative will help develop policies and program interventions which provide youth with skills, expand opportunities for employment and facilitate access to credit, housing and civic participation.

## ABOUT THE WOLFENSOHN CENTER FOR DEVELOPMENT

The Wolfensohn Center for Development at the Brookings Institution was founded in July 2006 by James D. Wolfensohn, former president of the World Bank and member of the Brookings Board of Trustees.

The Wolfensohn Center for Development analyzes how resources, knowledge and implementation capabilities can be combined toward broad-based economic and social change in a four-tier world.

The following principles guide the center's work:

- A focus on **impact, scaling-up and sustainability** of development interventions
- Bridging the gap between **development theory and practice** to bring about action
- Giving **voice** to developing countries, with high-level policy engagement and
- broad networking
- A **rigorous, independent research** approach that draws from multiple disciplines
- Working in **partnership** with others

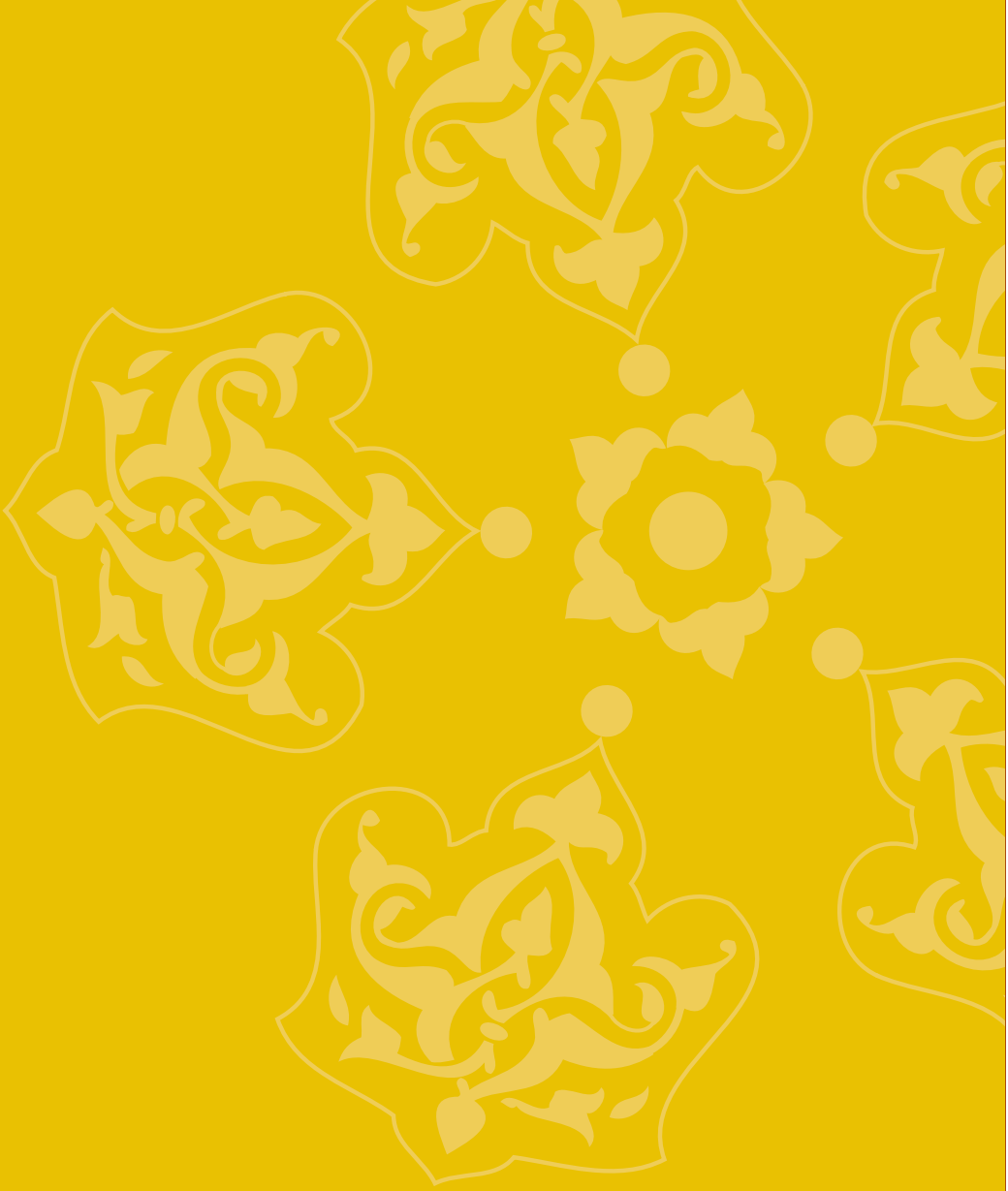
## ABOUT THE DUBAI SCHOOL OF GOVERNMENT

The Dubai School of Government is a research and teaching institution focusing on public policy in the Arab world. Established in 2004 under the patronage of HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the United Arab Emirates and Ruler of Dubai, the school aims to promote good governance by enhancing the region's capacity for effective public policy.

Toward this goal, the Dubai School of Government collaborates with international institutions such as Harvard University's John F. Kennedy School of Government and the Lee Kuan Yew School of Public Policy in its research and training programs. In addition, the school organizes policy forums and international conferences to facilitate the exchange of ideas and promote critical debate on public policy in the Arab world.

The school is committed to the creation of knowledge, the dissemination of best practice and the training of policy makers in the Arab world. To achieve this mission, the school is developing strong capabilities to support research and teaching programs including:

- Applied research in public policy and management
- Masters degrees in public policy and public administration
- Executive education for senior officials and executives
- Knowledge forums for scholars and policy makers



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