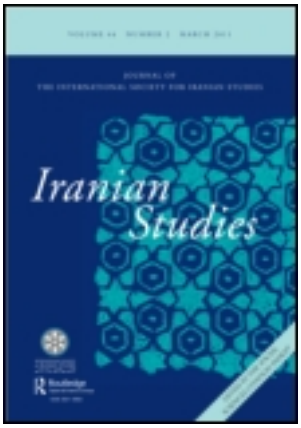

Iranian Studies
Publication details, including instructions for authors and subscription information:
http://www.tandfonline.com/loi/cist20

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Available online: 24 Oct 2011

To cite this article: Djavad Salehi-Isfahani (2011): Iranian Youth in Times of Economic Crisis, Iranian Studies, 44:6, 789-806

To link to this article: http://dx.doi.org/10.1080/00210862.2011.570510

Iranian Studies, volume 44, number 6, November 2011

Djavad Salehi-Isfahani

Iranian Youth in Times of Economic Crisis

Young people play an important role in shaping Iran's politics but have only a marginal role in its economy. Youth (ages 15–29) are more than one-third of the country's population and are better educated than the generation they are replacing, while accounting for more than two-thirds of the unemployed. Demographics have thrown the marriage market out of balance, with a "shortage of men" of about 25 percent, while economic pressures have reduced the ability of youth to get married and form families. The higher education system has expanded to absorb ever greater numbers of youth but because education quality is low this has not helped in reducing unemployment. The demographic pressures have amplified since 2008 when the economy entered a period of stagnation. The economic crisis has hit Iran's youth particularly hard, especially those from lower economic backgrounds because the country's rigid formal labor market preserves jobs for older workers. The record number of youth entering the labor market has to wait longer for a regular job or has to take up part-time and informal jobs. In either case, their difficulties in marriage and family formation are intensified.

Introduction

Young people in Iran have emerged as important players on the country's political scene but remain marginal on its economic scene. They were a vital part of President Khatami's political base and contributed to his landslide victories at the polls, in 1997 and 2001. In June 2009 they again played a key role, this time in challenging President Mahmoud Ahmadinejad's controversial re-election, which led to massive anti-government protests in the nation's largest cities. A year later the political crisis appears to have subsided, but the economic crisis that has engulfed the country since early 2008 has deepened, and with it the crisis facing Iran's youth. Youth unemployment is at record high levels and, for the majority of youth, marriage and family formation are increasingly becoming challenges to overcome rather than celebrations of reaching adulthood.

The economic recession has drastically reduced the economy's ability to absorb new workers just as the number of young people entering the labor market reached its highest level ever. While the challenges facing youth are at an all time high, the

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ISSN 0021-0862 print/ISSN 1475-4819 online/11/060789–18

http://dx.doi.org/10.1080/00210862.2011.570510

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major policy initiatives pushed by the Ahmadinejad administration address issues that have little to do with youth—reforming energy subsidies, offering incentives for families to have more children, and amending the family laws to tighten the conditions governing temporary marriage. These initiatives and a general form of policy paralysis following the political upheavals of summer 2010 have prevented the government from addressing young people's problems.

Studies show that Iranian youth face difficult transitions through school, from school to work, and to marriage and family formation.[1] These and other studies of Iranian youth have documented how the period between adolescence and adulthood has over time become longer and filled with more frustration and anxiety, a condition common enough in the Middle East to have been dubbed "waithood."[2] Iranian youth wait increasingly longer to find their first job after school, get married, and leave their parents' home. The old panacea of more education that promises youth greater access to jobs no longer seems to work in Iran, where educated youth often find transition to employment, and therefore to independent living, more difficult than less educated youth. Unfortunately, these long periods of waiting are not spent in building human capital, saving for a home, or other activities that signal hope. For many youth with means these periods are largely spent in idleness, seeking degrees and diplomas that do not add much to their productive skills, or in preparing for greener pastures abroad. Those without the means to pursue these options often leave school earlier to take up temporary jobs that neither provide stepping stones to future careers nor improve their chances of marriage and family formation.

In this paper I review the most recent evidence on youth transitions to show how the economic crisis since 2008, coinciding with the largest cohort of youth in Iran's history, has affected Iranian youth, and how youth transitions differ by family background and by region of residence – rural and urban. I find that, predictably, youth unemployment has worsened as the labor market conditions for youth have deteriorated, but that flexibility in the marriage market has ameliorated the involuntary increase in the age of marriage. I also find that "waithood" is a phenomenon that cuts across social classes in Iran; disadvantaged youth sometimes face greater challenges in transitions to employment and marriage.

[1]Djavad Salehi-Isfahani, "Growing up in Iran: Challenging Times for the Revolution's Children," *The Brown Journal of World Affairs*, 15, no. 1 (Fall/Winter 2008): 63–74; Djavad Salehi-Isfahani and Daniel Egel, "Youth Exclusion in Iran: The State of Education, Employment and Family Formation," Middle East Youth Initiative, Brookings Institution, Washington, DC (2008), http://www.brookings.edu/papers/2007/09_youth_exclusion_salehi_isfahani.aspx; Djavad Salehi-Isfahani and Daniel Egel, "Beyond Statism: Toward a New Social Contract for Iranian Youth," in *Generation in Waiting: The Unfulfilled Promise of Young People in the Middle East*, ed. by Navtej Dhillon and Tarik Yousef (Washington, DC, 2009), 39–66; Daniel Egel and Djavad Salehi-Isfahani, "Youth Transitions to Employment and Marriage in Iran: Evidence from the School to Work Transition Survey," *Middle East Development Journal*, 2, no. 1 (2010): 89–120.

[2]Diane Singerman, "The Economic Imperatives of Marriage: Emerging Practices and Identities Among Youth in the Middle East," *Middle East Youth Initiative, The Brookings Institution WP*, 6 (November 2007); Navtej Dhillon and Tarek Yousef, eds., *Generation in Waiting: The Unfulfilled Promise of Young People in the Middle East* (Washington, DC, 2009).

The next section begins with a presentation of Iran's rapidly changing demography, which is a major influence on young peoples' lives. Thanks to a baby boom in the early years of the Islamic Revolution, roughly around 1979–84, the cohorts of young people reaching adulthood in the last few years have been by far the largest in Iran's history. Iran boasts the highest share of 15–29 year olds in total population of any country in the world. Even a well functioning economy would have difficulty absorbing new cohorts into the labor market when they outnumber the retiring cohorts six to one. Iran's peculiar demography has also affected the marriage market in adverse ways. The baby boom women of Iran have reached marriage age several years before the men from the same cohorts, thus facing the smaller older cohort of marriage-age men, causing a classic "marriage squeeze," or a shortage of men – about four men for every five women of marriage age. The sections that follow present an analysis of the transition from school to work and to marriage.

Iran's Changing Demography and Youth

The most obvious factor affecting youth transitions in Iran is cohort size. It is well known that larger cohorts face adverse labor market conditions because supply tends to grow faster than demand.[3] They also face a challenging marriage market because of a gender imbalance caused by the fact that the larger cohorts of women reach marriage age several years (depending on the marriage age gap) ahead of the corresponding cohorts of men.[4] These women are then matched against the older but smaller cohorts of men. How much difficulty the imbalances in the markets for labor and marriage create for the large cohorts of youth transitioning to adulthood depends on the flexibility of these markets. An inflexible labor market that gives priority to older workers, and a marriage market in which the age difference remains rigid, exacerbate "waithood."

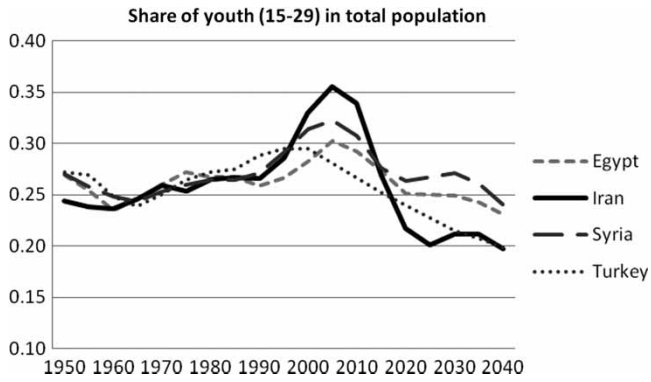
As noted above, the current group of Iranian youth is the largest in the country's history. In 2005, the age group 20–24 was 62 percent larger than it was ten years earlier, 9.1 million compared to 5.6 million, pushing the ratio of youth, which I define as those aged 15–29, to total population to 35 percent, the highest recorded ratio in any country.[5] Figure 1 shows that Syria has the second highest youth ratio (32 percent) while Turkey's is considerably lower, about 27 percent, having passed its peak of nearly 30 percent in the 1990s. By 2020, Iran's youth ratio will decline considerably, to less than 25 percent, the level observed in advanced countries. This is because the youth population is predicted to fall in absolute terms; for example, the 20–24 age group is expected to shrink by 75 percent in 2015, to 5.2 million. The reason for Iran's high youth ratio and its fluctuations is a baby boom in the early

[3]Richard Easterlin, *Birth and Fortune: The Impact of Numbers on Personal Welfare*, 2nd edition (Chicago, IL 1987); Finis Welch, "Effects of Cohort Size on Earnings: The Baby Boom Babies' Financial Bust," *The Journal of Political Economy*, 87, no. 5 (1979): S65–S97.

[4]Robert Schoen, "Measuring the Tightness of a Marriage Squeeze," *Demography*, 20, no. 1 (1983): 61–78.

[5]See Figure 1 and Salehi-Isfahani and Egel, "Beyond Statism."

Figure 1. The Share of Youth in Total Population



Source: United Nations Population Prospects, 2008 edition.

1980s, when the revolutionary government was pro-natal, followed by a sharp decline in fertility in the 1990s, when it reversed this policy.[6]

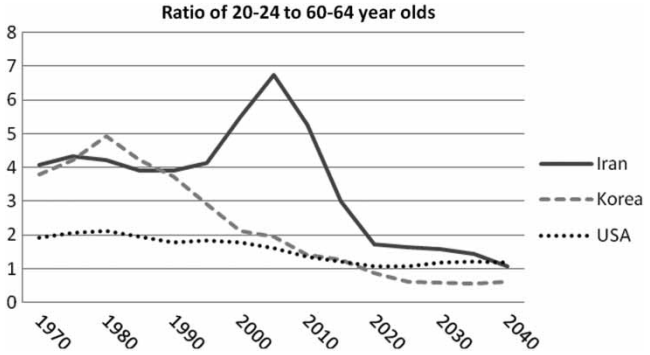
The influx into the labor market has increased even more rapidly in recent years because, in addition to the rising size of the entering cohorts, women's rate of participation in the labor force has increased. Thus, in 2010 about twice as many people entered the labor market as they did a decade before. Figure 2 shows the imbalance between entry and exit rates into the labor market stemming from demography alone, excluding changes in the labor force participation rates. In Iran, the ratio of the population of 20–24 year olds, who are entering the labor market, to 60–64 year olds, who are retiring, has grown by 50 percent in the last ten years, from about 4 to 6. This is a very high number when compared to the same ratio, for example, for Korea, which experienced a ratio of 5 in the 1980s but is now at about 1.5, the same as the United States. A high ratio of young entrants to those who retire is generally considered a positive force for economic growth.[7] Yet, in the case of Iran, because the economy is sluggish and cannot absorb the entrants into employment as fast as they arrive, the high ratio is a source of social and political instability.

The youthfulness of Iranian society has changed drastically over time. From the 1950s to the mid-1990s, Iran's age structure resembled that of a typical fast growing population, with 45 percent of the population under age fifteen (children), while youth (ages 15–29) and adults (30–54) each made up about a quarter of the population, and those older than fifty-five accounted for less than 10 percent (see Figure 3a). A visitor to Iran in the 1980s would have easily noticed the prevalence of children in the population. After 1995 the share of youth began increasing,

[6]Mohammad Jalal Abbasi-Shavazi, Peter McDonald and Meimanat Hosseini-Chavoshi, *The Fertility Transition in Iran: Revolution and Reproduction* (New York, 2009).

[7]David E. Bloom and Jeffrey Williamson, "Demographic Transitions and Economic Miracles in Emerging Asia," *World Bank Economic Review*, 12, no. 3 (1998): 419–456; Robert Fogel, "123,000,000,000,000," *Foreign Policy* (January/February 2010): 70–75.

Figure 2. Ratio of Entering (20–24) to Retiring (60–64) Age Groups



Source: United Nations Population Prospects, 2008 edition.

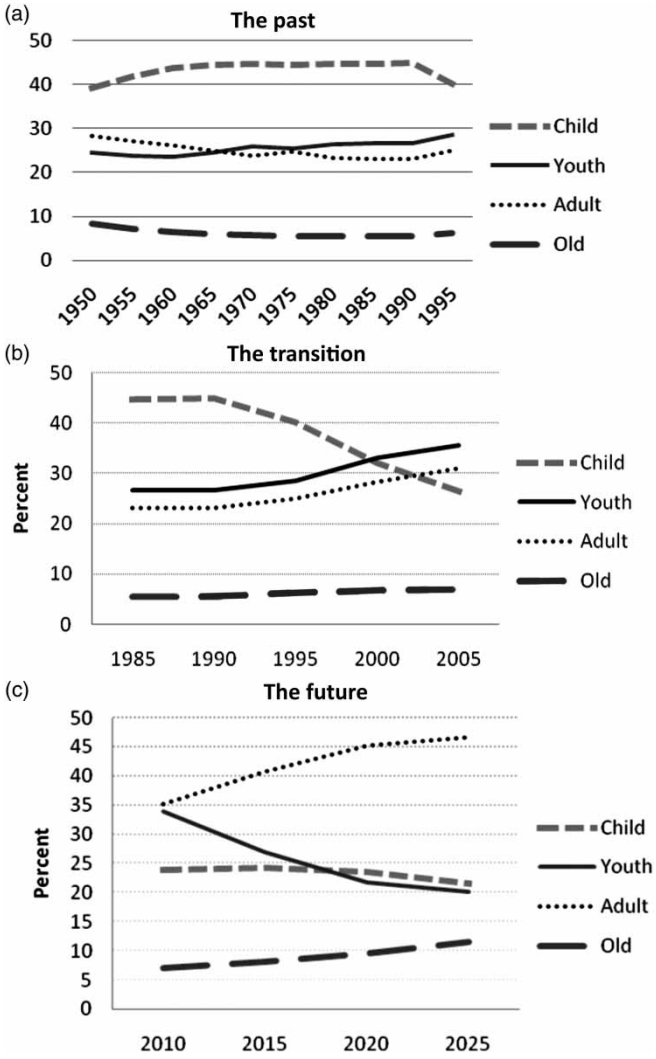
outnumbering both children and adults after 2000 (Figure 3b). The older population was still less than 10 percent. To a visitor today, youth instead of children would be the most noticeable in Iran's streets. The usual identification of a young population with a high share of those under 30 misses this distinctive aspect of Iranian demography. (In Iran in both periods this share was the same, about 60 percent.) The significant shift in age structure that took place in the late 1990s, reducing the share of children and raising the share of youth to a record 35 percent of the population, is a direct result of the fertility revolution a decade earlier, whose implications will last well into the future. Starting in 2010, as the smaller cohorts born in the 1990s and later reach youth ages, the share of youth will begin to decline, eventually to about 20 percent, as in most advanced countries. The share of adults, who would then form the majority of the working population, will increase steadily to over 45 percent. This increase can help balance the rising ratio of the older population who will be retiring in larger numbers.

The more important consequence of the coming demographic shift, i.e. the rise of the adult population, would be rapid economic growth but only if—a big if—the youth of these generations had accumulated the right skills, acquired positive attitudes toward work, and were ready to lead the country. The pure numbers are very striking: the current generation of youth who will be in their mid-careers by 2025 equal in number the adult population now in charge of running the government and the economy. Unfortunately for the country, the attitudes of the generations that are poised to lead it are shaped in large part by "waithood"—long waiting times for a first regular job, for marriage and for living independently.

The Employment Experience of Youth

During the inter-census decade 1996–2006, Iran's working age population (ages 15–64) grew at a shocking 3.9 percent per year, more than twice the rate of growth of the

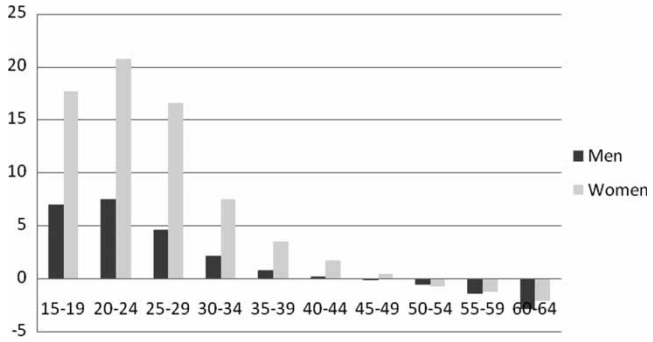
Figure 3. Age Structure in Three Periods



Source: United Nations Population Prospects, 2008 edition.

general population. The labor force grew at a slightly slower rate of 3.7 percent per year, as increasing numbers of youth stayed in school longer, delaying their entry into the labor force. Although the economy enjoyed robust growth during this period, it was unable to keep up with the rapid inflow of new workers. The economy grew by about 5 percent per year and created 5.9 million new jobs (4.8 million male and 1.1 million female jobs) but the overall unemployment rate increased from 9.8 percent to 12.7 percent.

Figure 4. Increase in Unemployment Rates by Age, 1996–2006 (Percent)



Source: Census of Population, 1996 and 2006, the Statistical Center of Iran.

These are high rates of unemployment by international standards, but they hide an even worse employment situation that Iran's young men and women face. Young people under the age of thirty account for about 70 percent of the unemployed and more than 80 percent of the increase in the number of unemployed during this period. Figure 4 shows the change in the rate of unemployment by age for men and women between the census years of 1996 and 2006. While economic growth during this period managed to keep the adult unemployment rate at about 5 percent, youth unemployment was nearly five times as high. Young women's experience in the labor market was even worse, their unemployment rates reaching as high as 50 percent. Besides the strong pressure from the supply side, the main reason for the increase in the burden of unemployment borne by the young is the rigidity of Iran's formal labor markets. Older workers enjoy job tenure, while younger workers experience frequent job changes.[8]

The evolution of unemployment in the last two decades presented in Table 1 shows in more detail the deterioration of employment prospects for youth, especially women and rural men, since the 1980s.[9] Young men's unemployment rate increased gradually from 13.7 percent in 1984 to 19.2 percent in 2007, and then increased to 23.4 percent in 2008, when the economy deteriorated. For women, unemployment rates more than doubled during the same period, from 16.9 percent in 1997 to 37.9 percent in 2007, and shot up to 46.3 percent in 2008. The increases up to 2007, a period of robust economic growth, can be attributed to the rising youth bulge, and the sharp increase in 2008 to recession. The recession began in early 2008, when Iran's Central Bank contracted credit in order to fight the oil boom-induced inflation, and was much worsened by the collapse of the price of oil and the tightening of the international econ-

[8]Egel and Salehi-Isfahani, "Youth Transitions."

[9]In this and other tables in this paper I use micro data from Household Expenditure and Income Surveys (HEIS), supplied by the Statistical Center of Iran, to offer more detail on the employment and marital situation of youth.

Table 1. Youth Unemployment Rates by Gender (Ages 20–29)

	Men			Women		
Year	Rural	Urban	Total	Rural	Urban	Total
1984	7.6	17.7	13.7	3.6	26.1	16.6
1997	13.4	20.2	17.6	5.4	28.1	16.9
2007	15.8	21.0	19.2	22.9	45.9	37.9
2008	17.9	26.1	23.4	28.2	54.7	46.3

Source: Author's calculations from Household Expenditure and Income Surveys (HEIS) data files provided by the Statistical Center of Iran.

omic sanctions against Iran. Women and youth were especially hard hit by the slowdown in economic growth.

The asymmetry of the employment experiences of youth and adults reflects the rigidity of Iran's formal labor markets, which give preference to older, already employed workers while new entrants must wait long periods, years rather than months, before securing their first job. Salehi-Isfahani and Egel report long average durations of unemployment after graduation, about three years for those who do not find a job immediately after graduation.[10] Retrospective data from an International Labour Office survey of Iranian youth in 2005 shows an average duration of unemployment after graduation of about 1.25 years for men and 3 years for women.[11] About 60 percent of the young men in the survey found a job within a year after graduation, 40 percent of the remainder did so the following year, but quite a few had to wait several years.

The same survey also revealed the extent of the segmentation of labor markets for youth and adults. Whereas adult jobs tend to be permanent and low in turnover, youth jobs are often temporary, with youth switching frequently between the formal and informal sectors.[12] This segmentation is the result of labor laws that protect jobs for older workers by raising the cost of layoff but allow employers to avoid those costs by offering young workers contracts of less than a year. The flexibility offered by the short-term contracts is welcome from the point of view of employers, who need hiring and layoff flexibility as their costs change. However, since not all jobs are suitable for short-term contracting, youth who do not find regular jobs at graduation are forced into less formal jobs, such as urban transportation and tutoring, that lack the long-term prospects that can help young men get married and form a family to complete their transition to adulthood.

The labor markets for men and women are also segmented. Social norms in Iran consider the most important responsibility of women to be motherhood and

[10]Salehi-Isfahani and Egel, "Beyond Statism."
[11]Egel and Salehi-Isfahani, "Youth Transitions."
[12]Egel and Salehi-Isfahani, "Youth Transitions."

homemaking. Among jobs outside the home, only some are deemed appropriate for women, such as teaching, nursing and other white collar work. As a result, women's participation in the labor market is about one-fourth that of men's. However, younger cohorts have been increasing their participation.[13] The rapid increase in young women's unemployment in 2008 was most likely because, with the recession, government and other white collar jobs became scarcer.

Is Education Helping Youth Find Jobs?

In most societies, young men who are unable to find jobs are advised to obtain an education. This advice no longer seems to work for a large portion of Iranian youth who are both educated and unemployed. Iran has experienced a rapid increase in education in the last two decades. Aided by lower fertility and encouraged by the expansion of government employment after the revolution, families began investing in their children's education. The egalitarian principles of the Islamic Revolution and its emphasis on the less privileged was especially important for families from the lower urban strata and rural areas to join the race to educate their children. This is clearly seen in the rapid increase in the average years of schooling of different cohorts of men and women aged 22–29 (those with completed education) presented in Figure 5. The youngest cohorts, born after 1980, especially women, have gained tremendously in education compared to their parents, born in the 1960s. However, while education has on average resulted in higher wages, its benefits in terms of employment have not panned out.[14] Table 2 shows the unemployment rates for youth 20–29 years old by education level and gender. The worst off group are high school graduates, with unemployment rates in 2007 of 23.1 percent and 50.7 percent for men and women. During 1997–2007, employment outcomes deteriorated most for college graduates; the unemployment rate for men increased by 4.2 percentage points and for women by an astonishing 34.1 percentage points. Neither does education help to reduce the length of time to first job for youth. Waiting time for the first job is lowest for the primary-educated and highest for the high school-educated young workers.[15]

The low productivity of education in Iran is in large part due to schools being geared to train students for the public sector rather than for the emerging private sector. What students learn in school is not what the private sector needs. As a result, Iran's education system resembles more a giant diploma mill than a dynamic sector that trains workers in skills needed by the global economy. Consider the fact that the proper teaching of English and computer skills is an extra-curricular activity for most students and available only to those whose parents can afford to pay for evening and summer courses in private institutions. The response of the formal

[13]Roksana Bahramitash and Hadi Salehi Esfahani, "Nimble Finger No Longer: Women's Employment in Iran," in *Contemporary Iran*, ed. by Ali Gheissari (Oxford, 2009), 77–124.

[14]Djavad Salehi-Isfahani, Insan Tunali, and Ragui Assaad, "A Comparative Study of Returns to Education in Egypt, Iran, and Turkey," *Middle East Development Journal*, 1, no. 2 (2009): 145–87.

[15]Salehi-Isfahani and Egel, "Beyond Statism."

Figure 5. Average Years of Schooling by Birth Cohort

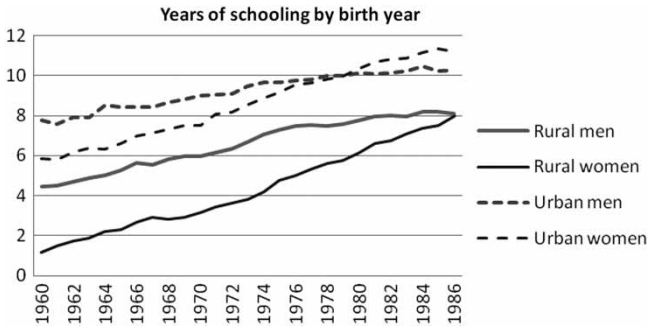


Table 2. Youth Unemployment by Education Level (Percent)

	1997		2007	
	Male	Female	Male	Female
Read/write	14.1	7.3	17.4	6.6
Primary	14.8	6.3	15.1	8.2
Middle school	16.8	21.2	18.0	30.7
High school	29.5	40.9	23.1	50.7
College	18.2	18.5	22.4	52.6
Total	18.0	16.6	18.7	37.9

Note: To compare college with other education levels, youth in this table are defined as 20–29 years old.
Source: Author's calculations from HEIS data files.

education sector to rapid growth in the supply of educated but unemployable youth has been to build more institutions of higher education to absorb them, so that in the last ten years the number of those entering institutes of higher education at the undergraduate level has more than doubled. Furthermore, because of rising unemployment among college graduates, demand for graduate education has ballooned. The applicants for the national entrance exams into post-graduate education in 2010 numbered 830,000 (of which only 6 percent were accepted).[16] This is 46 percent higher than two years ago, and twice what it was five years ago. At this rate the applicants to graduate schools will soon equal those for undergraduate studies (about 1.3 million in 2010), and the game of education would have been ratcheted up even more. Unless the economy returns to rapid growth and demand for graduates picks up in earnest, all

[16]Mehr news, http://www.mehrnews.com/fa/NewsDetail.aspx?NewsID=1035510 [in Persian], accessed 28 August 2010.

that this education expansion will have accomplished is to turn the unemployed college graduates of today into the unemployed post-graduates of tomorrow.

Unemployment and Economic Status

One of the most vexing questions raised by high youth unemployment in Iran, and in other oil-rich Middle Eastern countries, is the effect of high reservation wages, which is what economists call the minimum wage for which a person is willing to work. If youth have the means to support themselves, for example through transfers from their parents or the state, they will have high reservation wages, and therefore less incentive to work. High reservation wages can thus induce long waits or active search for the right job to come along. Thus, the question naturally arises whether the high unemployment rates of youth in oil-rich countries, especially in the Persian Gulf states that import labor, might be caused by high reservation wages.[17] Ross has advanced a similar hypothesis to explain the low participation of women in the labor markets of oil-rich countries in the Middle East.[18] A high reservation wage can also be a consequence of the willingness of parents to support their children late into their twenties, as has been argued in the case of Italy.[19] In Iran, the proportion of men and women living with their parents has increased over time (see Table 3), suggesting that changing economic circumstances, rather than parental preferences, has caused children to live with their parents longer. In 1997, 44.3 percent of men 25–29 years old lived with their parents, compared to 56.2 percent in 2008; for women, these proportions are 16.3 percent and 29.8 percent, respectively. The rise in the proportion of men living with their parents between 2007 and 2008, also noted in Table 3, is most likely related to the worsening economic conditions in 2008.

Evidence has shown that a high reservation wage, measured by father's education standing for parental resources, delays the transition from school to work and to marriage.[20] To establish a closer link between economic status and unemployment, I use per capita expenditures (pce) for the household in which youth live, as head or dependent child.[21] Table 4 presents a comparison of unemployment rates for youth living in families classified as poor and lower middle class versus middle class and above, using a

[17]Paul Dyer and Tarik Yousef, "Will the Current Oil Boom Solve the Employment Crisis in the Middle East?," in *The Arab World Competitiveness Report 2007*, ed. by Margareta Drzeniek Hanouz, Sherif El Diwany and Tarik Yousef (April 2007); Mohamed Hassan and Cyrus Sassanpour, "Labor Market Pressures in Egypt: Why is the Unemployment Rate Stubbornly High?," *Journal of Development and Economic Policies*, 10, no. 2 (July 2008); Susan Razzaz and Farrukh Iqbal, "Job Growth without Unemployment Reduction: The Experience of Jordan" (The World Bank, April 2008).

[18]Michael L. Ross, "Oil, Islam, and Women," *American Political Science Review*, 102, no. 1 (2008): 107–23.

[19]Marco Manacorda and Enrico Moretti, "Why Do Most Italian Youths Live with Their Parents? Intergenerational Transfers and Household Structure," *Journal of the European Economic Association*, 4, no. 4 (2006): 800–29.

[20]Egel and Salehi-Isfahani, "Youth Transitions."

[21]Because survey data excludes institutional residences, this method misses youth living in university dormitories who are neither head or dependent.

Table 3. Urban Youth (25–29 Years Old) Living with Their Parents (Percent)

	1984	1997	2005	2006	2007	2008
Men	33.9	44.3	51.8	52.9	50.5	56.2
Women	11.8	16.3	26.0	29.6	28.6	29.8

Source: Author's calculations from HEIS data files.

Table 4. Youth Unemployment by Economic Status of the Household (Percent)

	Men		Women	
	Poor/lower mc	Middle class	Poor/lower mc	Middle class
1984	13.4	12.5	10.0	13.5
1997	22.8	13.2	15.3	12.5
2007	23.9	16.0	23.8	37.9
2008	27.5	21.0	31.6	46.1

Source: Author's calculations from HEIS data files.

threshold of $10 per day in 2005 Purchasing Power Parity (PPP) dollars.[22] In 1984, youth of both genders and living in families of different backgrounds had similar probabilities of being unemployed, about 10–13 percent. However, by 1997, the unemployment rate for both young men and women living in lower income families had increased by about 50 percent, whereas for higher income groups it had remained essentially unchanged. After 1997, as the unemployment rate increased for all groups, for men the disadvantage of the lower income group persisted. In the case of women, however, the unemployment rate rose more rapidly for those living in upper income families, increasing three-fold during 1997–2007, from 12.5 percent to 37.9 percent. The explanation for why women of middle class background should have higher unemployment than those from poorer backgrounds must be sought in the balance of supply and demand in the labor market. First, as noted earlier, there is a fair amount of segmentation in the markets for men and women. Second, as noted earlier, the labor force participation rate of educated women of middle class background, especially single women, has been increasing over time as the more desirable government jobs could not expand indefinitely. Finally, the economic recession of 2008 appears to have dealt a blow to the labor market prospects of all four groups.

[22]This is within the range that Banerjee and Duflo use to define middle class status; see Abhijit V. Banerjee and Esther Duflo, "What is Middle Class about the Middle Classes around the World?" *Journal of Economic Perspectives*, 22, no. 2 (Spring 2008): 3–28. PPP adjustments equalize the purchasing power of a dollar in Iran and the US.

Youth from lower economic strata have inferior employment prospects in the long run because they acquire less education. Although education has lately not been an advantage in terms of easier transition to employment, in the long run it is a definite asset. Equality of opportunity in education has declined in recent years, despite the fact that public education in Iran is free, from kindergarten to university, because of the rising influence of private schools and private tutoring in the competition for limited spaces in public universities. Evidence shows that the likelihood of entering university (public or private) increases with parental education, which is a proxy for family resources.[23] To the extent that over the lifetime college education improves wages and employment prospects for youth, those from lower backgrounds, who may have quicker transitions to jobs after leaving school, will be in a disadvantage later in life.

Marriage

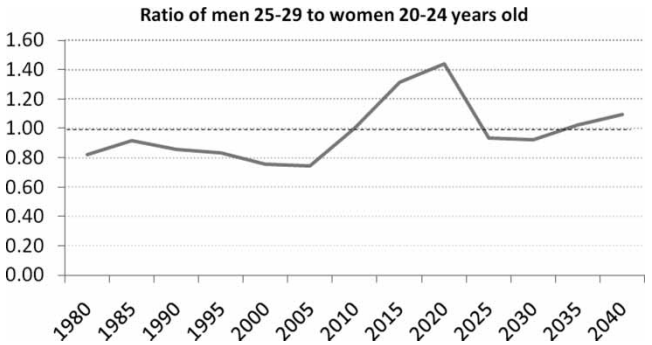
Iran's peculiar demography has affected the marriage market in a way that exacerbates the difficulties of youth transitions. In Iran, as in other Middle Eastern countries, the norm in marriage is for men to be several years older than their wives. As a result, the cohorts of baby boom women reach marriage age before their male counterparts. This is most dramatically seen in the case of women born during the baby boom of 1979–83, who in the 2006 census of population numbered nearly 4 million. If these women were to marry men who are, say, five years older than them, they would be matched against a smaller cohort of men of only 3 million born a few years before the baby boom, thus facing a 25 percent shortage of men. Using population projections prepared by the United Nations (2008),[24] and assuming a five-year age difference in marriage, Figure 6 depicts the ratio of marriage-age men (ages 25–29) to marriage-age women (ages 20–24), which shows remarkable variation over time. As the graph shows, the "marriage squeeze" of recent years is actually the peak of a condition that has lasted for decades because of rising birth rates. Interestingly, the rapid fertility decline in the 1990s will shortly reverse this situation: the 20 percent shortage of men in 2010 is expected to change to a 40 percent shortage of women by 2020!

The increasing age imbalance in the marriage market during the last decade has most likely contributed to the rising age at marriage, especially for women. Figure 7 shows the proportion of men and women married by birth cohort and age. For example, 73.7 percent of men born during 1960–64 were married by age twenty-five, compared to about 40.1 percent for those born during 1980–84, a decline of 34 percentage points. For the same cohorts of women there was a smaller decline of 20 percentage points in the proportion married by age twenty-five, from 85.8 percent to 65.5 percent.

As previously noted, the delay in marriage is closely related to two major changes in the lives of Iranian women in the last two decades: lower fertility and more education. The important question is how much of the rise in age at first marriage is due to these

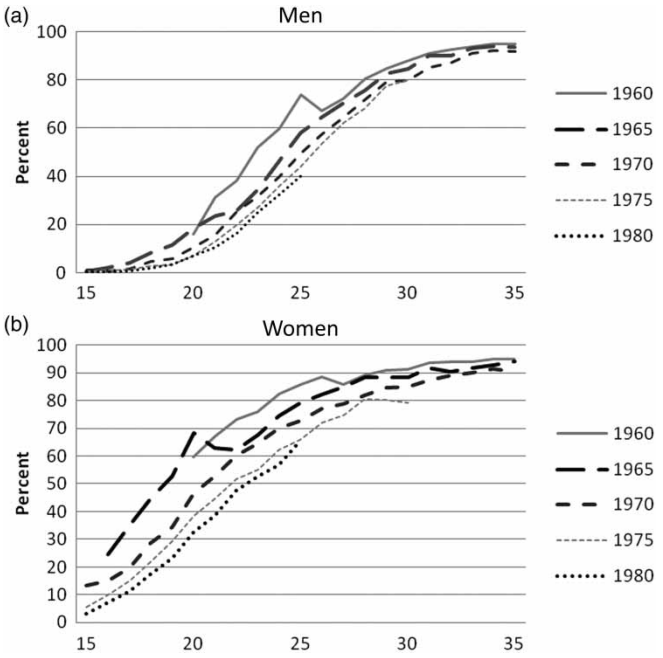
[23]Egel and Salehi-Isfahani, "Youth Transitions."
[24]United Nations, *World Population Prospects: The 2008 Revision*.

Figure 6. Imbalance in the Marriage Market: A Shortage of Men



Source: United Nations Population Prospects, 2008 edition.

Figure 7. Delay in Marriage: Percentage Married by Cohort and Age



Source: Author's calculations using HEIS data files.

changes, which can be considered voluntary or even favorable, and how much is due to constraints imposed by the age imbalance, lack of jobs, and lack of housing, which would be considered as involuntary and therefore a source of hardship. In view of the persisting age difference of couples at marriage, there should be little doubt that the "shortage of men" has hurt women's chances to marry, so the delay in marriage

for women is certainly in part involuntary. However, the evidence on the role of economic factors is mixed. Egel and Salehi-Isfahani offer evidence that having a good job (defined as a formal sector position with unlimited duration) increases the likelihood of marriage for young men.[25] But employment has the opposite effect for women—reducing the likelihood of getting married. Furthermore, they found no evidence indicating that family background—father's education—affects the timing of marriage.

Evidence from the Household Expenditure and Income data also indicates that there might be a relationship between marriage age and family resources. Table 5 compares the share of unmarried youth aged 25–29 living (as head or child) in households in different quintiles of per capita expenditures.[26] In 1984, before the youth bulge, men from richer families married later, perhaps because they wanted to pursue more education. This pattern disappeared by 2007, at the height of the youth bulge. Today, young men from all income groups delay marriage longer but the differences between those from poor and rich backgrounds seem to have disappeared.

As with unemployment, the situation for women is different than for men. In 1984, except for the highest quintile, there is no evidence that the timing of marriage and family background are related. Women in all income groups married early so that less than 10 percent of women remained unmarried in their late twenties. By 1997, the proportion of women who were unmarried by age thirty had doubled, but the difference between the poor and the rich was small. However, by 2007, an inverse relationship had emerged between the proportion of unmarried women and their income quintile; more than 36 percent of women in the bottom quintile were unmarried compared to 27.4 percent in the top quintile. Since the age imbalance in the marriage market affects all women equally and changes in education and fertility were also similar across income groups, the fact that poorer women marry later suggests that economic factors contribute to the difficulty of transition to marriage for women.

The marriage market has proven more flexible than the labor market in responding to the youth bulge. The age gap, which is the most important reason for the imbalance in the marriage market, has shrunk significantly in recent years. The most recent data published by the Office of Vital Registrations in Iran indicates that the most frequent marriages registered in the first nine months of 1388 (first three quarters of 2009) are those with zero age difference.[27] More systematic data on the age gap is presented in Figure 8, which shows the age gap of couples by the birth year of the husband. Couples married in the 1960s (husband born around 1940) had on average 6 years of age difference in urban and 5.5 years in rural areas. This gap has narrowed by about 3 years in both areas, thanks to forces of modernization and the persistent age imbalance.

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[25]Egel and Salehi-Isfahani, "Youth Transitions."

[26]This is very similar to the division by middle class status in analysis of unemployment. In both cases I use per capita expenditures to classify youth into 2 and 5 income groups.

[27]http://www.sabteahval.ir/Upload/Modules/Contents/asset0/AmarHayati/eb-1388-p09.pdf, accessed 16 November 2010.

Table 5. Marriage and Family Resources: The Proportion of Unmarried Youth 25–29 Years Old (Percent)

	1984		1997		2007	
Quintile	Male	Female	Male	Female	Male	Female
1	12.7	8.6	23.4	17.3	39.3	36.3
2	18.7	8.9	25.4	19.1	45.6	36.6
3	19.7	9.6	27.2	19.1	46.7	29.1
4	24.6	8.3	34.3	16.2	43.6	32.7
5	29.4	12.1	40.2	21.9	40.8	27.4
Total	23.2	9.8	32.1	19.0	43.3	31.7

Source: Author's calculations from HEIS data files.

Conclusion

Nobel Laureate economist Robert Fogel recently wrote, "Because younger workers are a major source of new ideas, slowing down the ascendancy of the next generation may retard the pace of technological change."[28] A rapidly expanding youth population can be a blessing, for the reasons noted by Fogel, and for reasons related to the size and quality of the labor force. Bloom and Williamson attribute the rapid takeoff of the East Asian economies in the 1980s to the expanding youth population in these countries.[29] The potential benefits of an expanding labor force are greater if the proportion of the dependent population (not working age) falls at the same time. This occurs when fertility declines rapidly so the population of children diminishes in share before the larger cohorts of youth reach retirement. An additional blessing occurs when, as the growth models of Becker *et al*. and Lucas have shown, declining fertility is coupled with rising investment in child education.[30] When these conditions are met, a country is in an ideal position to reap the benefit of its demographic transition, known as the demographic dividend or gift.[31] Iran is precisely in such a unique position, but, alas, as I have argued in this paper, it is also in the position to lose it all.

Iran's demographic transition has provided it with possibly the world's most rapidly growing cohorts of youth, at a time when the proportion of its dependent population is low, giving youth a historically large share of the population. These youth match the

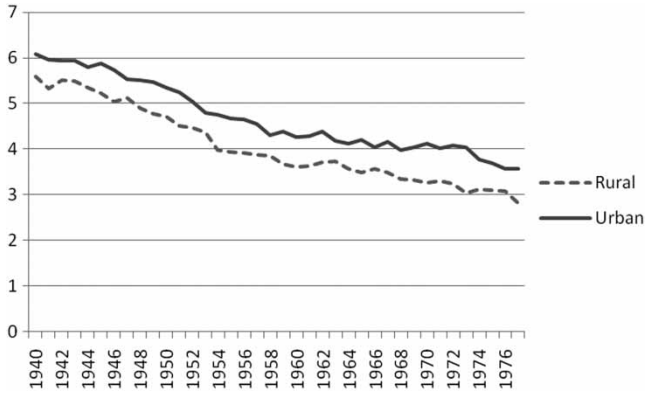
[28]Fogel, "123,000,000,000,000," 75.

[29]Bloom and Williamson, "Demographic Change." See also Figure 2 above for Korea.

[30]Gary S. Becker, Kevin M. Murphy and Robert Tamura, "Human Capital, Fertility, and Economic Growth," *Journal of Political Economy*, 98 (1990): 5; Robert E. Lucas, Jr., *Lectures on Economic Growth* (Cambridge, MA, 2002).

[31]Robin Barlow, "Population Growth and Economic Growth: Some More Correlations." *Population and Development Review*, 20, no. 1 (1994): 153–65; David E. Bloom, David Canning and Pia Malaney, "Demographic Change and Economic Growth in Asia." *Population and Development Review*, 26 (2000): 257–90.

Figure 8. Narrowing of the Age Gap of Married Couples by Birth Year of Husband



Note: The sample is based on 25 surveys for 1984–2008. The cutoff birth year of 1976 is to reduce the influence of censoring (younger individuals not yet married).
Source: Author's calculations from HEIS data files.

current group of prime age workers (30–54) in number and surpass them in education. In the next 15 years, as the current cohorts of youth reach adult ages they will come to dominate, at least in numbers, those who at present are in charge of Iran's economy. But, as argued here, their ascendancy is hampered by several factors that have stalled their transitions to adulthood. One in five youth in their late twenties is unemployed and one in two is unmarried and lives with his or her parents. After spending their school years in grueling preparation for various national exams, they are told they must wait several more years before they can take full advantage of the opportunities that their nation offers its adult citizens and to be able to actively participate in running their country. Demography can be in large part blamed for this bewildering experience of transition that has been aptly called "waithood," followed by Iran's sluggish economy that does not create enough new jobs, followed by the rigid labor markets that prevent youth from competing with older workers for the jobs that already exist. Iran's labor markets are ill suited for absorbing the country's fast growing youth population, as is its marriage market in dealing with the age imbalance.

An important question, one that is beyond the scope of this paper, is how "waithood" shapes the attitudes of Iran's youth about the country's future and their ability to lead and build the nation when, inevitably, they will assume charge of it in the next two decades. As they wait to climb into the driver's seat, are they gaining the necessary experience for the tasks that lie ahead or are they instead slowly losing not only their skills but also their hope and optimism? Among observers of youth in Iran, there are the optimists who see "waithood" as an opportunity for them to bypass "formal institutions and adult authorities," such as government and the corporate world, while discovering and building "horizontal forms of partici-

pation."[32] They see the recent youth participation in the post-election demonstrations, especially their shrewd use of technology, as signs that, barred from the traditional paths in transitions to adulthood, they are finding and constructing new paths into the future. The more pessimistic view, closer to my own, fears the possibility that Iran will lose its opportunity to take advantage of its one-time demographic gift. The pessimism stems partially from the fact that the technology-proficient youth belong to a narrow upper crust of Iran's society,[33] and that there are at least as many examples of youth who resort to destructive methods of coping with their predicament, such as drugs, as there are those who seek positive ways to challenge and change the status quo.

For its part, the Iranian government seems powerless to stop the dissipation of the nation's vast demographic gift, most of which is the fruit of wise policies by the previous Islamic governments, in education, health and family planning.[34] The Ahmadinejad administration has tried to improve employment and marriage outcomes for youth but with little success. The main thrust of its employment policy has been to offer bank credit for employment and marriage. A vast credit program for the so-called "quick returns" projects, which gave preference to those that created jobs, has been in operation since 2006. However, we know very little about its scope or effectiveness, except that in its first year, under pressure from the government, public banks provided about $18 billion of subsidized credit to small and medium size firms, most of which is unaccounted for.[35] The program ran out of steam in 2008 as complaints about lack of repayment of the loans mounted and the Central Bank ordered the banks to restrict credit. Reports indicate that the rate of lending has dwindled to about $2 billion per year.[36] As the economy sank into recession in 2008, the prospects for the banks to ever be repaid have dimmed, causing credit to tighten even further. Similar lending programs for marriage and housing have run into difficulty because of administrative problems and tight credit. The areas that now (in late 2010) occupy the attention of the government and the legislators, incredibly, no longer even address youth issues. There are new policy initiatives ranging from the reform of the nation's decades-old subsidies, to amending the family laws, to reviving population growth, not to mention the nuclear standoff with the West, but none that help salvage Iran's demographic gift.

[32]Linda Herrera, "Is 'Youth' Being Addressed in Important and Distinctive Ways in Middle East Studies?," *International Journal of Middle Eastern Studies*, 41, no. 3 (2009): 368–71 (369).

[33]In 2007, the share of urban youth with internet at home living in families in the bottom fifth of the expenditure ladder was 1.3 percent (7.2 percent with computers), compared to 28.2 percent for the top fifth (53.0 percent with computers). Rural youth had considerably worse access all around (Author's calculations using 2007 HEIS data files).

[34]Djavad Salehi-Isfahani, M. Jalal Abbasi, and Meimanat Hosseini-Chavoshi, "Family Planning and Fertility Decline in Rural Iran: A Study in Program Evalution," *Health Economics*, 19, no. S1 (2010), 159–80.

[35]See Djavad Salehi-Isfahani, "Tough Times Ahead for the Iranian Economy," Brookings Institution, http://www.brookings.edu/opinions/2009/0406_iran_salehi_isfahani.aspx.

[36] Reported in *Sarmayeh*, no. 947, 19 Bahman 1387 (7 February 2009), http://sarmayeh.net/ShowNews.php?34266.