Chapter 68

Demographic Transition, Oil, and Institutions:
Lessons from the Global Experience for Iran

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ABSTRACT

We examine political and economic drivers of demographic transition and the moderating role of institutions, macroeconomic instability and oil rents dependency in the final effects of increasing working age population on economic development and internal conflict. Using panel data estimations for more than 100 countries from 1984 to 2012 we find that demographic transition may lead to demographic dividend only if the country enjoys good quality of economic and political institutions, a diversified economy and stable consumer prices. Otherwise demographic dividend is not guaranteed. By contrast, we may expect a demographic curse. These results have important policy implications for the case of Iran which is expecting a significant transition in its population age structure since 1990s. Future of Iran is highly dependent on the proper use of potential demographic rent which can turn against the political stability if the wrong policies and institutions are in place and country dependence on oil rents continues as before.

1. INTRODUCTION

Iran like most other countries in the Middle East and North Africa (MENA) is experiencing a significant demographic transition. Demographic transition is defined as increasing share of working age population (15-64 years of age) in total population. Countries at their initial stages of development have high birth and death rates. Over time by improving health and increasing levels of education, especially for women, the mortality rate falls while birth rate remains constant or falls with delay. In this second stage of development, countries face a baby boom period; i.e., population growth. Increasing young age dependency (% of working-age population) is a main characteristic of this second stage in demographic

transition. Industrialization and modernization of the economy besides higher participation of women in labor market increases the opportunity cost of having more children. The third stage which accompanies with higher stability of political systems reduces the willingness of women to increase the size of family. Birth rates converge to death rates in the third stage. This is an important phase in demographic changes: babies of previous stage now enter into the working age population, increasing pressures on job market. Figure 1 shows the trend of birth and death rate (per 1000 people) in Iran from 1950 to 2100. The largest difference between birth and death rates is observed during 1985-1990 and 1990-1995. Both rates are approaching to each other over time. The projections show that death rate will exceed birth rate from 2060 onwards in Iran. The significant increases in population growth rate in 1980s and 1990s will enter into working age population in coming decades, creating an important source for either economic growth or political instability. Such an increase in working age population, *per se*, is positive news: decreasing age dependency ratio and increasing labor force means more saving and higher investment which consequently can lead to higher economic growth (Lee, Mason and Miller, 2001; Mason and Lee, 2004 and Lee and Mason, 2006). For example, in Iran from 1965-2007, the correlation between the share of working age population and domestic saving rates is 54%. Table 1 provides a summary of key demographic indicators in Iran from 1960 to 2012.

Total age dependency ratio is the ratio of dependents-people younger than 15 or older than 64-to the working-age population-those ages 15-64. Data are shown as the proportion of dependents per 100 working-age population. A high age dependency ratio indicates that the relative number of net consumers (children and elderly) is more than the number of net producers (working age population). This is a burden for the whole economy since more resources should be allocated for schooling and child care. As fertility rate declines, age dependency ratio initially reduces because there are fewer children and more working age population. This demographic window of opportunity closes when the population grows older and the relative share of elderly increases; i.e., higher old age dependency ratio. Age dependency was significantly high before revolution and continued to increase in early years after revolution and war

Table 1. Demographic indicators of Iran (1960-2012)

Indicator Name	1960-1969	1970-1979	1980-1989	1990-1999	2000-2012
Age dependency ratio (% of working-age population)	91.99	87.91	92.42	84.04	46.62
Age dependency ratio, old (% of working-age population)	6.90	5.95	5.76	6.81	7.12
Age dependency ratio, young (% of working-age population)	85.08	81.96	86.66	77.23	39.50
Birth rate, crude (per 1,000 people)	45.15	41.63	41.60	25.73	17.75
Death rate, crude (per 1,000 people)	19.00	13.68	13.73	6.07	5.36
Population growth (annual %)	2.64	2.97	3.83	1.66	1.26
Population ages 0-14 (% of total)	44.31	43.61	45.03	41.82	26.75
Population ages 15-64 (% of total)	52.09	53.22	51.98	54.47	68.38
Population ages 65 and above (% of total)	3.60	3.16	2.99	3.71	4.87
Population, female (% of total)	48.63	48.58	48.68	49.09	49.12
Fertility rate, total (births per woman)	7	6	6	3	2
Mortality rate, infant (per 1,000 live births)	163	106	60	41	27

Note: average of indicators is presented for each time period. Source: World Bank (2013) and author calculations

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