

Achievements of Islamic Republic of Iran: From Establishment to Development

January 2012
Dr. Mohammad Javad Mohammadi – Dr. Yaghoub Entezari
Translated by Dr. Seyed Sadrodin Moosavi

Imam Khomeini:

The most important factors in attaining self-sufficiency and reconstruction, include expansion of scientific and research centers, planning and giving direction to the facilities and all-out encouragement of inventors, innovators and committed professional forces who have the courage to fight against ignorance and have come out of the cocoon of exclusive approach to the West or East for acquiring science and have demonstrated that they can keep the country on its own legs.

Ayatollah Khamenei:

The objective is to turn the country into one of the world' main, first-rate references of science, so that if some body decided to become acquainted with the latest scientific achievements, should learn Persian language.

President:

Preservation of the country's independence and speedily moving towards comprehensive progress and sublimation is the continuous duty of the government. All capabilities of the country should be mobilized through coordination so that dear Iran attains the summits of progress and justice.

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Chapter One: An Analysis of Knowledge Economy Developments in Iran during the Past Three Decades

Abstract

Today, a major part of the behaviors and performance of economic activists in a country in particular, and in the world in general, relates to such activities as production, distribution, transformation and knowledge promotion on one side, and knowledge acquisition and utilization on the other side. The system to regulate, organize and develop these behaviors and activities is called knowledge economy. This paper intends to analyze Iran's knowledge economy developments in five fields of education, innovation, information technology, institutional and motivational regime within the past three decades.

Introduction

Five years after economic stagnation and recurrent decline in per capita income in early 80s, the developed world could experience an increasing economic development from 1985 by boosting investment in production, distribution, transformation as well as knowledge promotion and expansion of knowledge-based world interactions. The year 1985 marks a new era of development for world economy that is called New Economy in general (Pohjia, 2002; Godin, 2004; OECD, 2000) and Knowledge Economy in particular, (OECD, 2004; Cooke, 2002; ITAG, 1999) or Learning Economy (Lundvall and Johnson, 1994; Storper, 1995; Lundvall, 2004 & 1996).

Since that year, advanced countries have put emphasis on knowledge-based production, distribution, and human capital instead of the already practiced physical capital, workforce and natural resources (Romer, 1990). On this basis, policymakers and theoreticians of economic sciences and international organizations refer to these economies as the Knowledge-based Economy (OECD, 1996).

In world economy, knowledge is a winning factor for the countries in international level, and relative winning factor for the companies in national and international level in terms of knowledge-based entrepreneurship and rapid innovation. Economic institutions and

systems will gradually lose life without creating this competitive advantage. The preconditions for gaining this competitive advantage are efficient, effective, and profitable production as well as new knowledge and desirable utilization of this knowledge.

The emergence of world knowledge economy and the growing involvement of advanced economies in this news system, have created new challenges and at the same time offered great opportunities for the developing countries, specially for the Islamic Republic of Iran that was busy with eight years of war with Iraq and under economic sanctions when this fundamental development took place. Since early 90s the development gap between Iran and the advanced countries experiencing knowledge-based economy was constantly widening. To prevent enlargement of the gap, and to reduce it, Iran has no way but to follow knowledge-based development.[1] The prerequisite and the first step for knowledge-based development is the development of learning economy and society. This means the Islamic Republic of Iran must be able to dynamically gain, produce, distribute, transform, promote and use new valuable economic and cultural knowledge by accumulation of learning capacities and sending the obsolete economic and cultural knowledge into oblivion.

This chapter intends to study the endeavors and achievements of the Islamic Republic of Iran in a bid to expand learning capacities as well as the procedures for production, distribution, transformation, promotion and utilization of knowledge. In other words, we will show how far Iranian economy has kept track on the path toward knowledge-based economy.

Developments of Knowledge Economy in Iran

[1] It should be noted that Iranian economy follows an ancient system as old as 3000 years. The goods and services production and distribution system until a century ago was based on the traditional system of production and distribution. It is roughly for a century that modern knowledge production and distribution has been established in Iran and impressed the innovation system, and consequently production and distribution of goods and services.

In this part, we will study developments of knowledge economy in Iran within the past three decades in three areas of knowledge production (research and development or R & D), knowledge distribution (official education), and knowledge innovation, information technology (IT) and government.

Developments in Knowledge Production

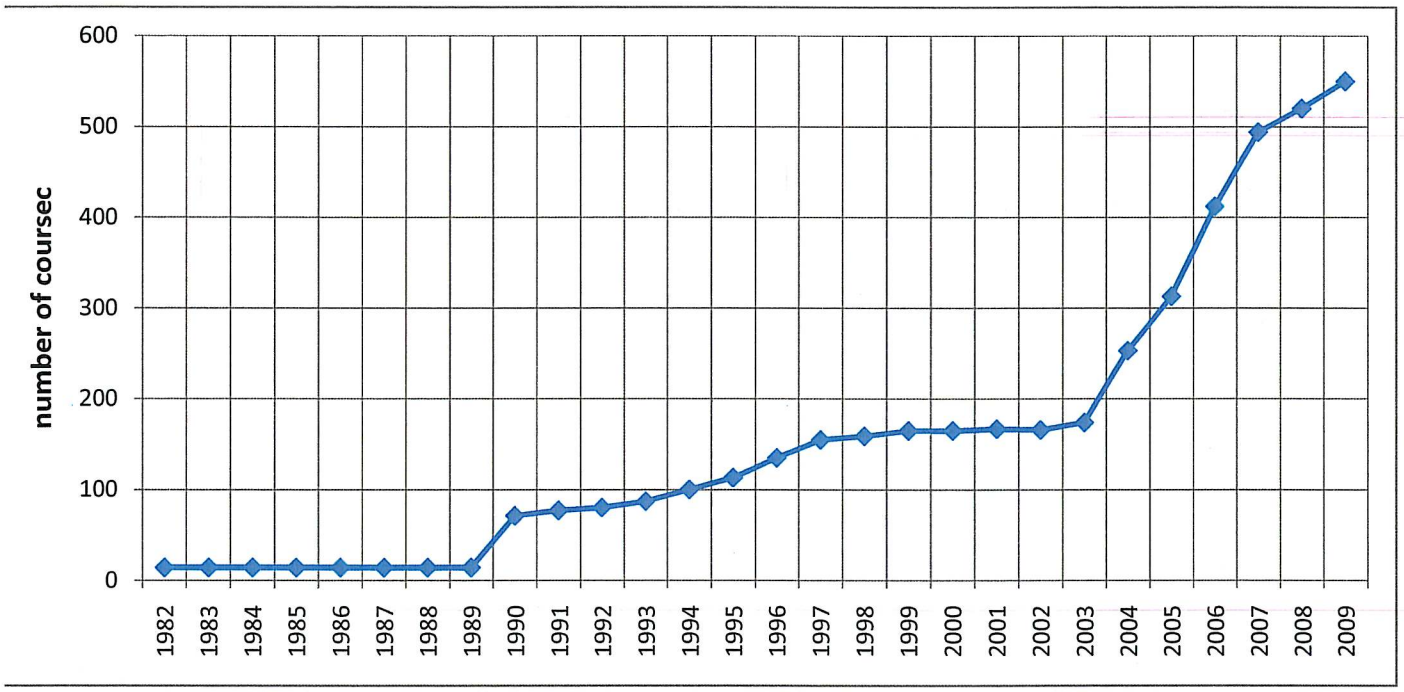
The knowledge producing units with research and development system in Iran fall into the following three groups:

1- Units chiefly involved in production and distribution of goods and services but carrying out research and development ordinarily as auxiliary activities. These units use the outcomes of research and development for improvisation of other products and manufacturing procedures. The research and development centers in these units with no independent management are more like knowledge factories than knowledge institutions.

2- Units chiefly involved in education that carry out research and development as an auxiliary program, such as universities and higher education centers. Since universities are independent scientific centers, their research and development centers may be called knowledge institutions.

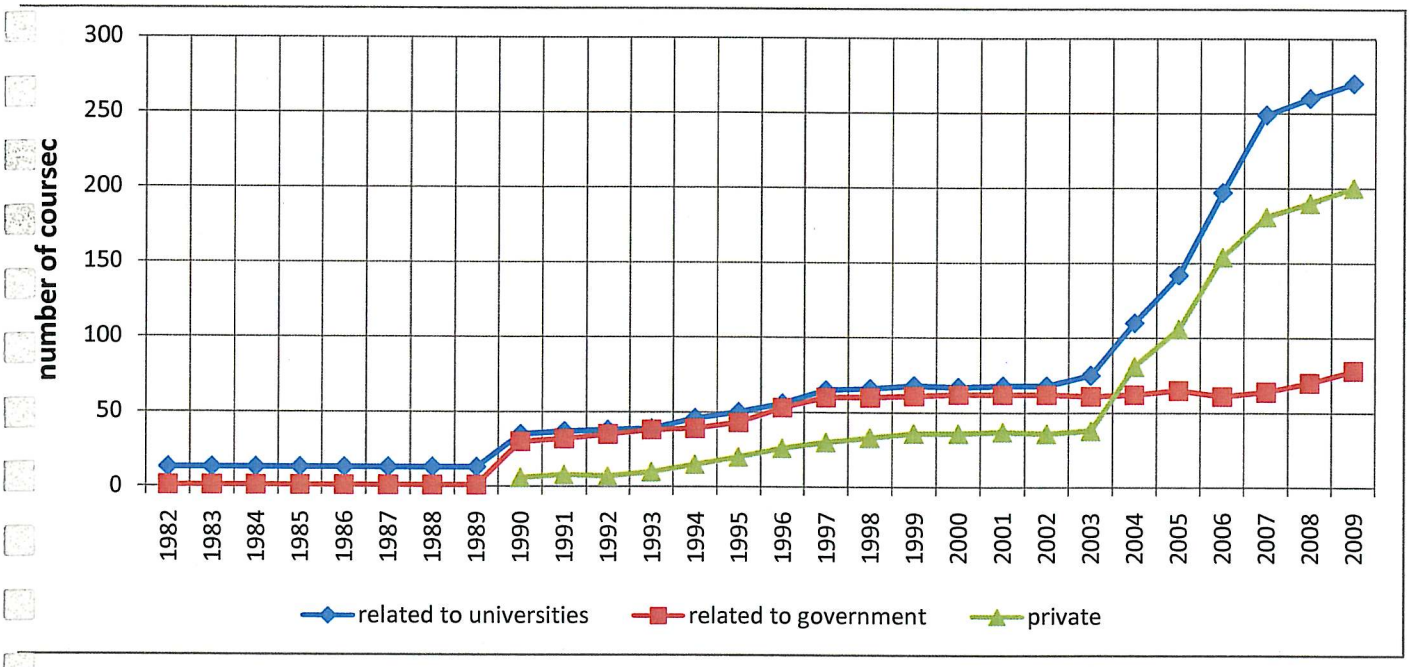
3- Units carrying out research and development as their major activity. These units implement research and development to expand scientific and technological know-how, market the results, or present the achievements to another organization or unit. These economic units can be called knowledge production institutions.

Diagram (1): Developments in the Number of Academic Research Units



Source: Office for Research Study and Evaluation (2002 through 2007), & 2008

Diagram (2): Developments in the Number of Academic Research Units per Affiliation



Source: Office for Research Study and Evaluation (2002 through 2007), & 2008

Registered inventions, explorations and innovations are the three major criteria for knowledge production. Articles with new ideas published in the magazines or presented in the seminars are examples of new knowledge that are used as auxiliary sources in producing the new knowledge. This is because any article may be an elaboration of invention, exploration or innovation.

Table (3): Number and Growth Rate of Inventions, Explorations and Innovations (1996 through 2008)

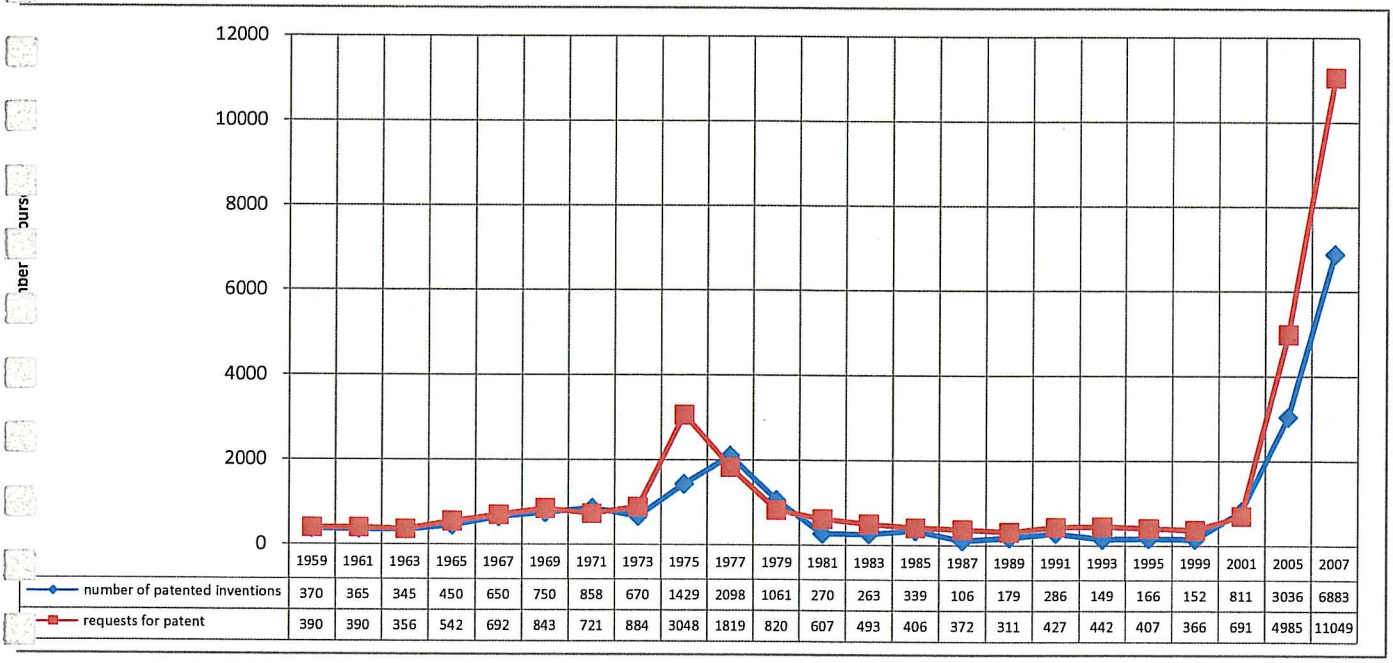
	Number			Percentage of change		
Year	Number of inventions registered by firms	Number of registered explorations	Number of inventions	Number Of innovations	Number of explorations	Number of explorations
1996	128	424	3833			
1999	117	228	2332	-39.16	-46.23	-8.59
2000	144	222	2900	24.36	-2.63	23.08
2002	202	137	1206	-58.41	-38.29	40.28
2004	404	206	1546	28.2	50.4	100.0
2006	1094	172	2131	37.8	-16.5	171
2008	2457	157	3879	82	-8.7	124.5
Average growth				12.5	-9	75

Source: Calculated based on the data on research and development, available on Website of Statistical Center of Iran

The applications for registration of inventions and granting concessions are the most important indicators for technology-based entrepreneurship. The requests for registration of inventions show applications for technology-based entrepreneurship and requests for granting concessions depict potential technology-based entrepreneurship. Diagram (2) shows the number of registered inventions in the country until 1973 was gradually on the rise. Since 1974, the figure has experienced an outstanding growth to jump from 670 units to 2,098 units in 1977. After the victory of Islamic Revolution

in 1979, the number of registered inventions has dropped sharply and stood at 270 units in 1981. The steep fall continued until 1999 but upon the outset of the Third Development Plan in 1999, the number of registered inventions grew substantially. Implementation of the Fourth Development Plan pushed the figure up to 6,883 units in 2007. There is good prospect for steep increase in the figure in the coming years.

Diagram (4): Number of Applications for Invention Registration & Number of Registered Inventions in 1959-2007 Period



	1959	1961	1963	1965	1967	1969	1971	1973	1975	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1999	2001	2005	2007
number of patented inventions	370	365	345	450	650	750	858	670	1429	2098	1061	270	263	339	106	179	286	149	166	152	811	3036	6883
requests for patent	390	390	356	542	692	843	721	884	3048	1819	820	607	493	406	372	311	427	442	407	366	691	4985	11049

Source: WPO until the Year 2001; Registration Organization – Report on Registration of Inventions (from 2001 until 2007)

Table (1) shows that in 1996, there were 23 explorations per 100 fundamental research projects. Also, there were 54 innovations per 100 applied projects, and nine inventions per 100 development projects in the same year. In 2006, the indicators faced rise and fall, i.e. 2.5% fall in explorations, 13.5% fall in innovations and 22.4% rise in inventions. In that period, the abovementioned indicators experienced an annual

average of 22.8 percent and 16.8 percent fall and 37.4 percent rise respectively.

Table (1): Effectiveness of Fundamental, Applied and Developmental Research

	Growth (Percentage)			Number		
Year	Number of inventions in 100 developmental research	Number of innovations in 100 applied research	Number of discoveries in 100 fundamental research	Number of inventions in 100 developmental research	Number of innovations in 100 applied research	Number of discoveries in 100 fundamental research
1996				8.68	53.73	22.82
1999	-55.5	-59.7	-46.2	3.86	21.64	12.27
2000	100.3	34.9	-2.6	7.73	29.20	11.95
2002	5.7	-45.4	-38.3	8.17	15.93	7.37
2004	38.4	-20.3	50.5	11.31	12.70	11.09
2006	98.1	6.3	-77.5	22.5	13.5	2.5
2008	-0.49	-14.73	-60.90	22.29	11.51	0.98
average	31.08	-16.49	-29.17	12.06	22.60	9.85

Source: Calculated based on the data on research and development activities, available on Website of Statistical Center of Iran

In a relatively 10-year period (1996-2008), the number of authored books, translated books, papers published in domestic magazines, and papers published in foreign magazines grew by 59.4, 32, 28.6, and 61.7 percent respectively. Apparently the development is due to the policies to promote publication of papers in ISI magazines (Table (2)).

Table (2): The Growth in Number of Books and Papers within the Past 12-Year Period

	Articles			Books		
Year	International	domestic	Total	Translation	Authoring	Total
1996	61.14	56.37	57.63	115.18	84.28	94.38
1999	44.2	51.1	49.6	15.20	296.66	194.87
2000	-13.0	17.3	10.9	2.08	-75.69	-64.70
2002	49.6	-3.2	5.5	-2.35	15.17	8.01
2004	132.8	67.5	82.8	-2.4	10.9	5.5
2006	95.2	10.1	35.4	63.3	25.3	39.7
2008	38.5	45.9	42.7	0.0	59.2	33.0
Average	58.5	35.5	40.6	27.3	59.4	44.4

Source: Calculated based on the data on research and development, available on Website of Statistical Center of Iran

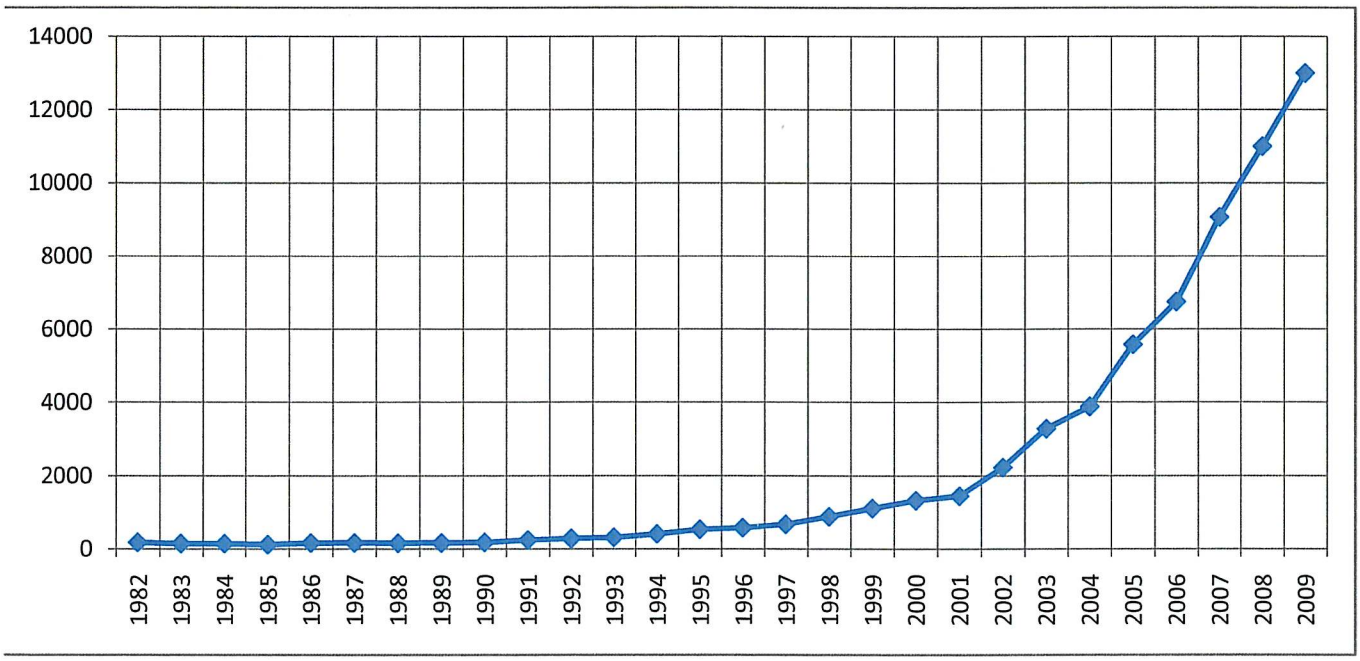
Table (3): Number and Growth Rate of Books and Papers per 100 Researchers

Year	Number of books	Growth rate of books	Number of articles	Growth rate of articles
1996	12.7		53.4	
1999	25.0	97.9	85.8	60.5
2000	45.0	79.5	22.6	-73.6
2002	20.5	-54.5	126.2	458.2
2004	10.5	-48.5	118.0	-6.5
2006	17	61.90	86	-27.12
2008	10.0	-41.32	55.2	-35.77
Average		15.83		62.62

Source: Calculated based on the data on research and development, available on Website of Statistical Center of Iran

In 1970, the total number of Iranian ISI papers stood at 125. The figure jumped to 450 papers in 1978 to show four times growth. The number of papers fell a bit from the culmination of Islamic Revolution in 1979 until the end of war in 1989, when signs of growth appeared gradually. During the recent years there is a steep rise in the number of papers. Science Matrix Website evaluations show that Islamic Republic of Iran has experienced an extraordinary development in the number of scientific and nuclear technology papers published in ISI in comparison with the world figures. The figure has recorded a hundred percent growth in 2009 as compared with the year 1990, while world average roughly stood at two percent. This reality shows that Islamic Republic of Iran has turned into a scientific engine for the Middle East region.

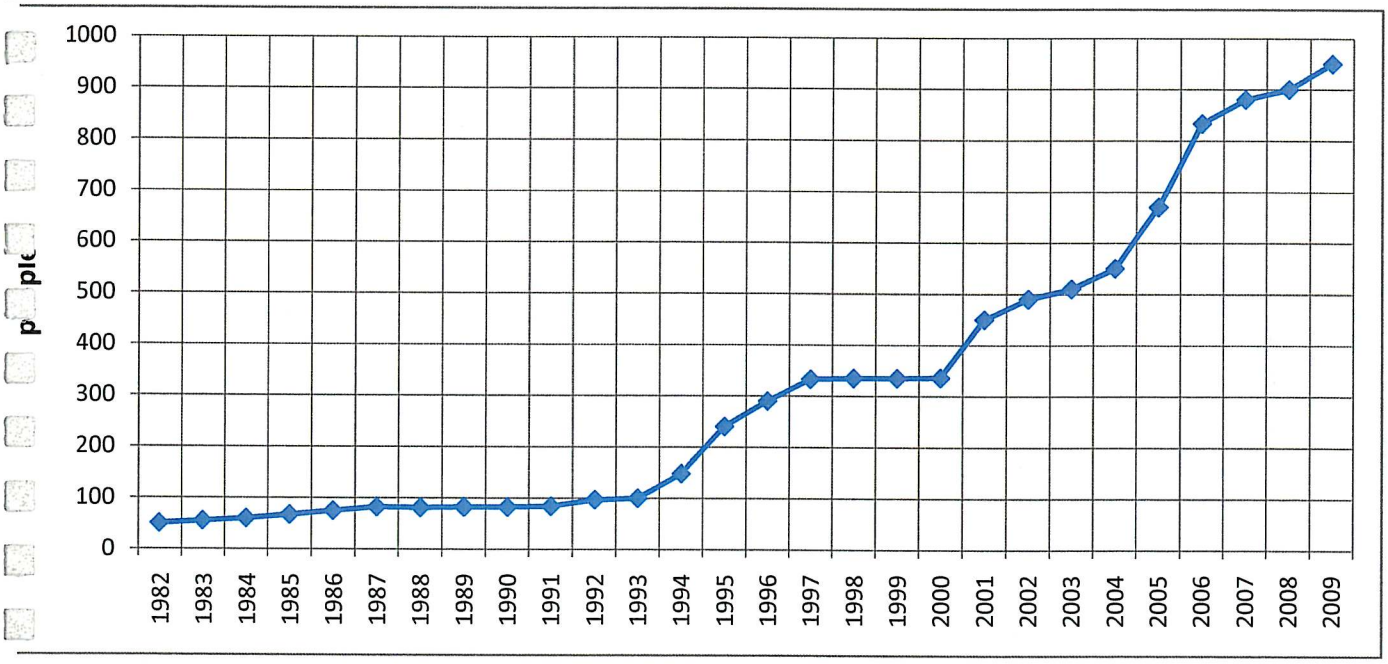
Diagram (5): Developments in the Number of Papers Published in ISI



Source: www.Science-Matrix.com/30years-data.htm, 2010

Research and development manpower grow sharp in the Islamic Republic of Iran with the development of higher education, and highly educated population growth after the Imposed War (specially in MA/MSc. and PhD degrees). This gave a sharp rise to the indicator of "Number of Researcher per One Million Population" since 2004 (Diagram (6).

Diagram (6): Number of Researchers per One Million Population

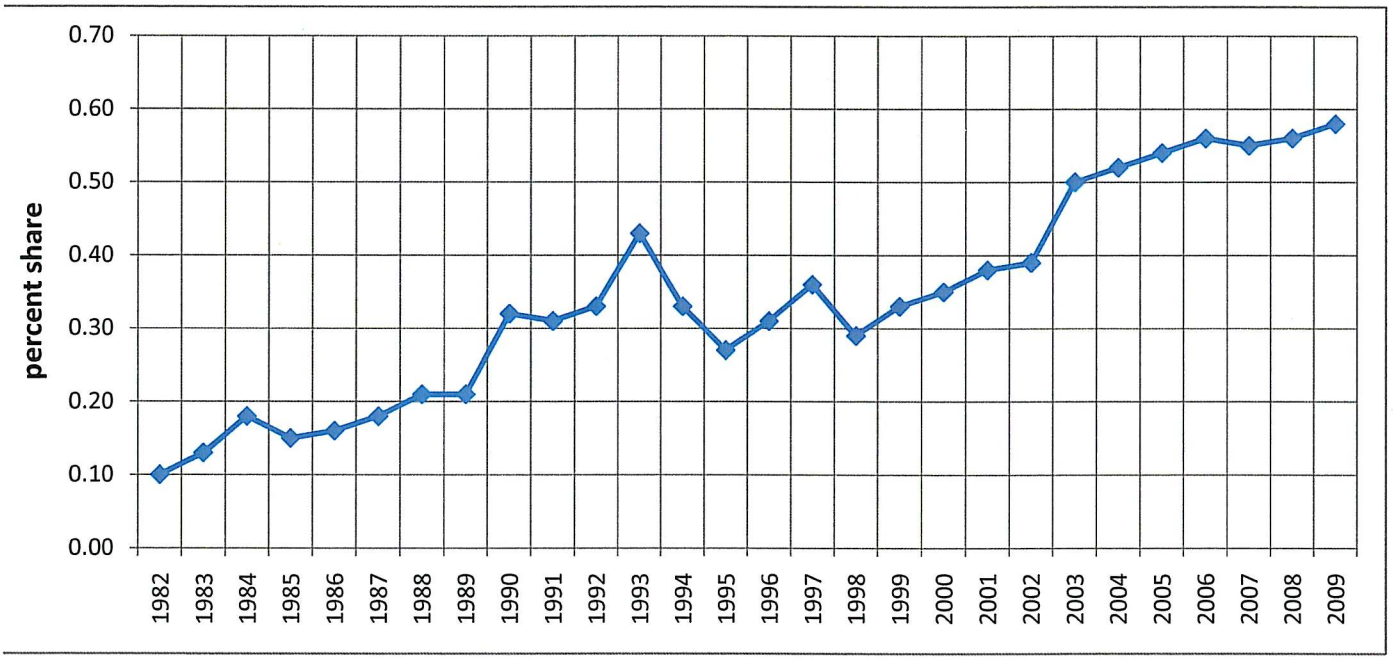


Such indicators as GDP (gross domestic product) and national budget share of research credits are two major indicators that show financial wellbeing of research and technology system and its status among the total existing financial resources and the budget allocation for this sector by the government. The second indicator more specifically shows the priority degree of this sector in contrast and comparison with other sectors in budget allocation by the government. The course of development of these two indicators in the periods of establishment, renovation and sustainable growth of the Islamic Republic of Iran has been shown in the following Diagram (7). This diagram depicts a sort of

financial instability in research and technology system that might have various causes.

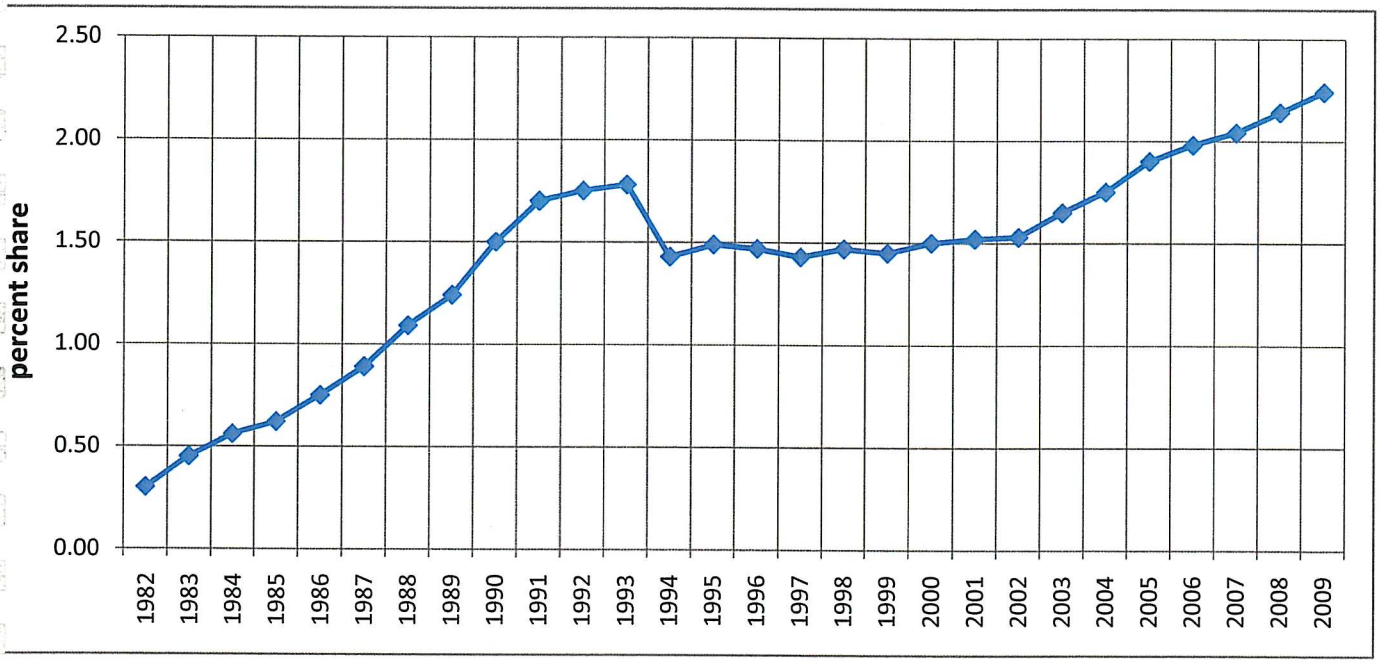
Due to mushroom expansion of state-run research centers in closing years of 40s, GDP and national budget share of research credits was increased. However, with the rise in oil income that gave boost to government budget and GDP in early 70s and due to no increase in budget of research projects, there appeared a decrease in GDP and national budget share of research credits. In late 70s, the then policymakers reviewed the budget and gave a boost to these two indicators.

Diagram (7): GDP Share of Research Budget



Source: Extracted from Annual Budget Laws of Various Years

Diagram (9) National Budget Share of Research Budget



Source: Office for Research Study and Evaluation (2002 through 2007), & 2008

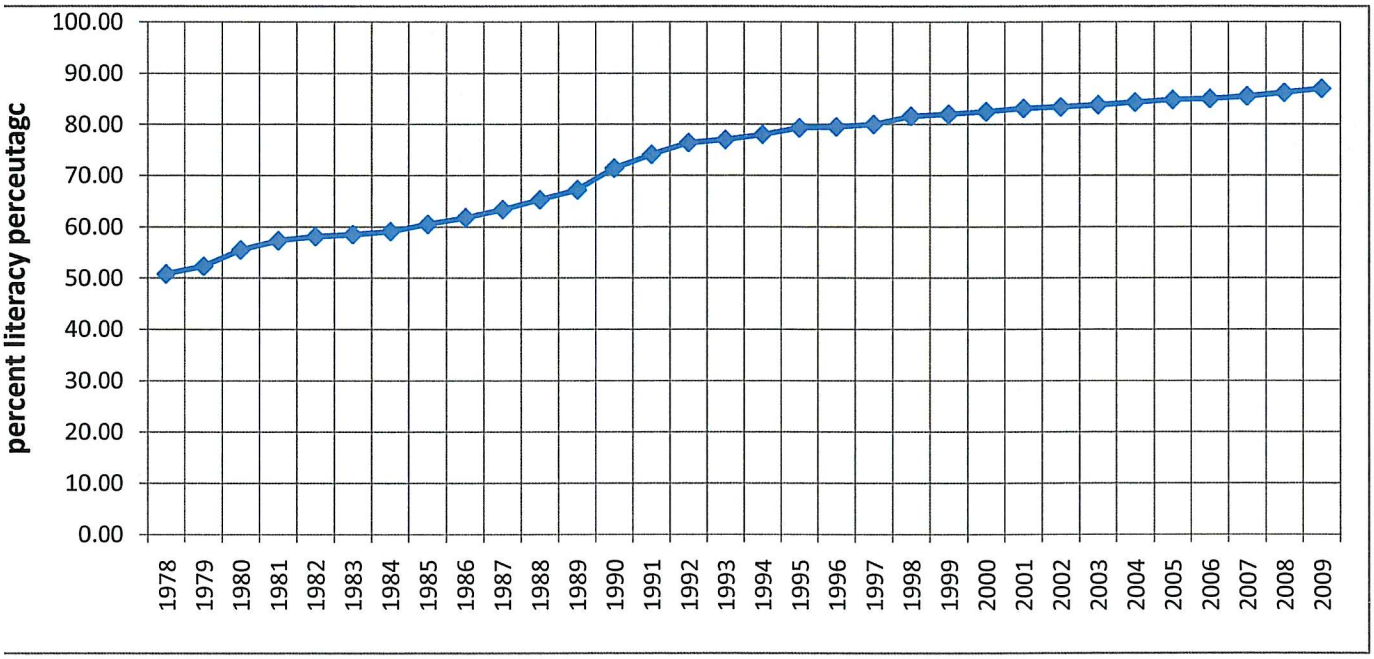
After the victory of Islamic Revolution and the outset of Iran-Iraq War, the GDP and national budget share of research credits fell downward. However, with the end of war and government's attention to economic reconstruction these two indicators enjoyed relative growth until mid 70s when the fall in oil prices and oil revenues imposed another decline for these indicators. During the Third Development Plan these two indicators enjoyed a relatively stable growth.

Developments in Knowledge Distribution Learning Society

Literacy rate and mean schooling years are two important indicators for learning potentials. Literacy rate is calculated based on the number of literate population, divided by above-six population, multiplied by 100. It is one of the most important indicators for understanding about the

quality of population and their learning potentials. This indicator stood at 50 percent in the culmination year of the Islamic Revolution of Iran (1979). After the victory of Islamic Revolution and upon an order by Imam Khomeini, Literacy Movement was established to uproot illiteracy from the face of the country. The program covered illiterate adults and children deprived of education. Therefore, in the first decade after Islamic Revolution the literacy rate grew considerably and stood at 67 percent in 1989, i.e. 17 percent growth. The figure jumped high similarly in the second decade after the Islamic Revolution from 67 percent in 1989 to 82 percent in 1999, i.e. 12 percent growth. Due to a decline in the number of illiterate people in the third decade after the Islamic Revolution, the literacy development rate grew slowly and rose from 82 percent in 1999 to 87 percent in 2009, i.e. only five percent growth.

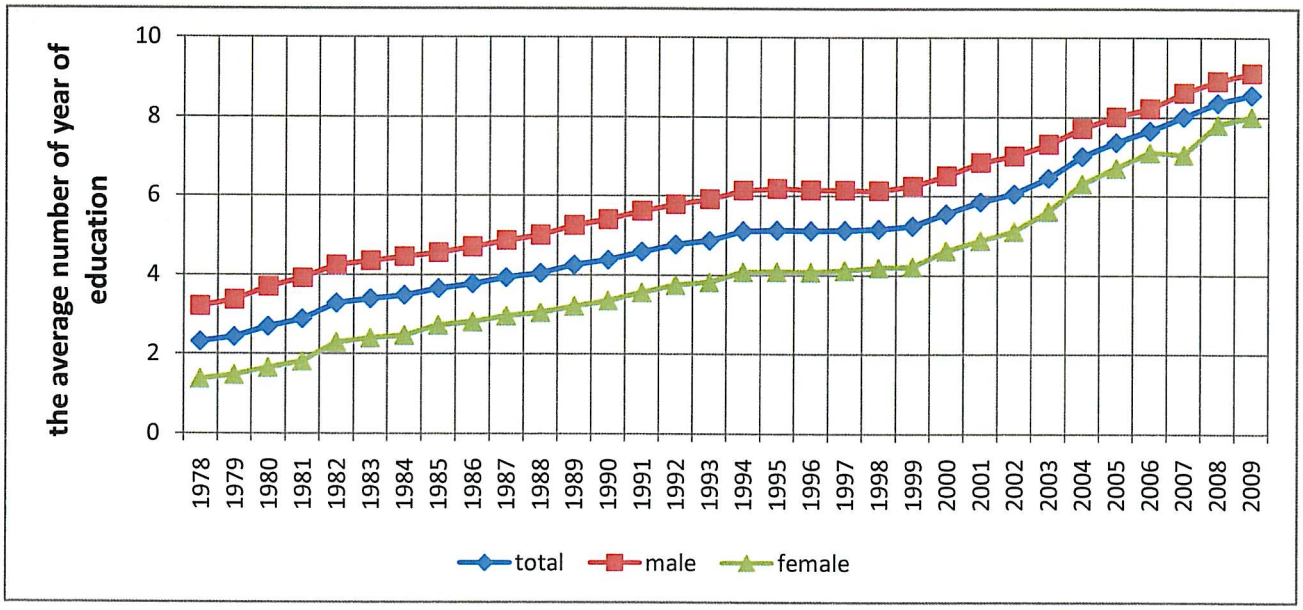
Diagram (10): Trends in Literacy Rate within the Past Three Decades



Source: Central Bank of Iran, Time Series Database on Economic and Social Variables

Another indicator for learning potential relates to mean schooling years that shows the percentage of above-six or above-15 people in education. This indicator showed the percentage of literates in the society indeed. Diagram (9-5) depicts mean years of education for population of 15 years of age and more in Iran ever since the establishment of Islamic Republic in the country (1979) until the year 2009. The indicator enjoyed outstanding growth in the first decade after the revolution due to establishment of the Literacy Movement and encouragement of the illiterate people to educate. The growth rate was steep in the first decade but went down a bit in the second decade (Reconstruction Period). It grew, however, in the third decade from 5.25 years to 8.55 years.
A comparison of mean schooling years of women and men suggests that in the course of time the educational gap between the two has been narrowed. There is also high hope the gap would be still reduced to nil in future.

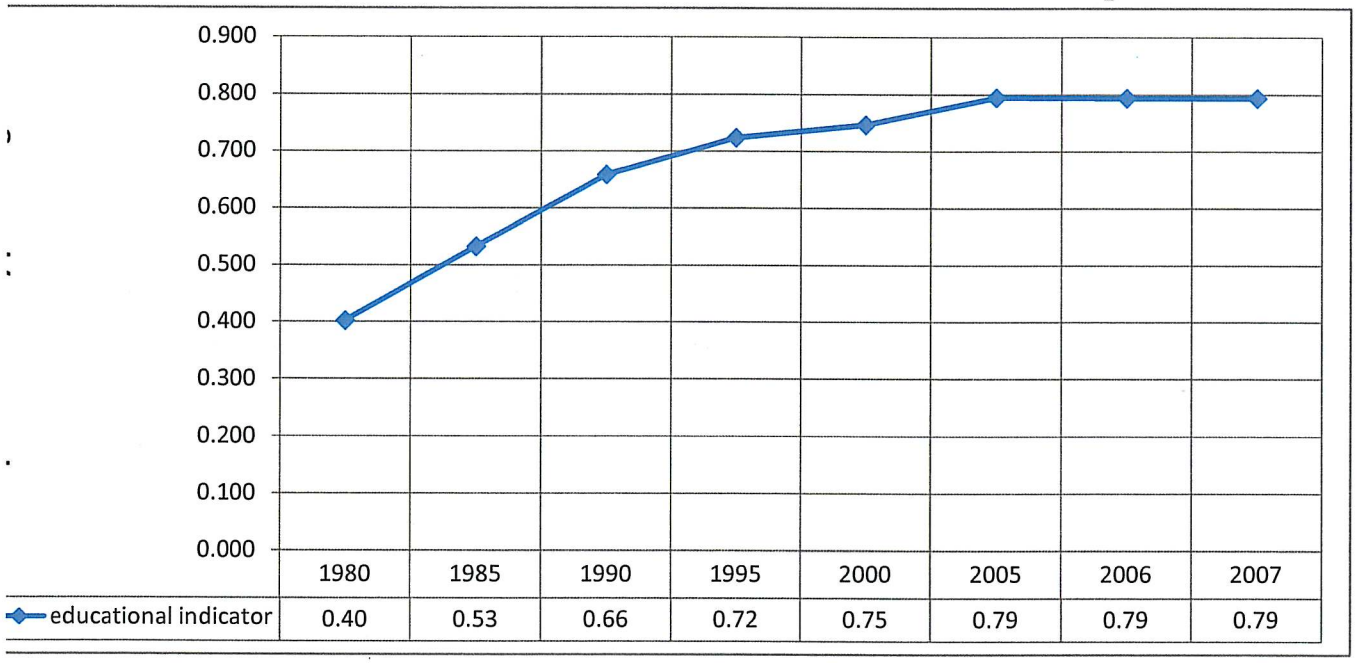
Diagram (11): Trends in Mean Schooling Rate in 15 and above-15 People



Source: Until 2001 extracted from the Economic Researches Quarterly, Issue No. 23, from 2002 until 2009, calculated according to statistical reports of Statistical Center of Iran

The education index, as a combined indicator, is measured by the adult literacy rate (with two-thirds weighting) and the combined primary, secondary, and tertiary gross enrollment ratio as well as relative success of the country in relation with learning capacity.[2] Diagram (12) shows that education index in Iran in the period 1980-2007 has gone up outstandingly.

Diagram (12): Trends in Education Index in the Islamic Republic of Iran



	1980	1985	1990	1995	2000	2005	2006	2007
educational indicator	0.40	0.53	0.66	0.72	0.75	0.79	0.79	0.79

Source: UNDP Human Development Report 2009

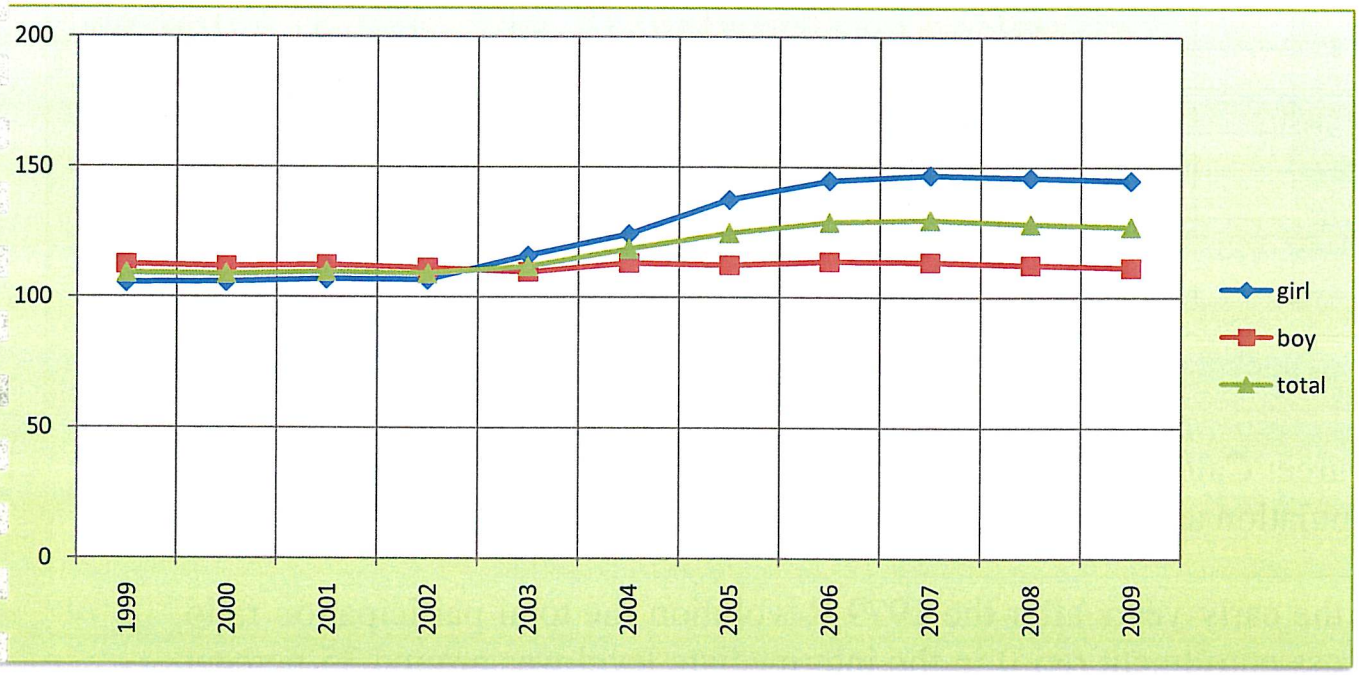
The gross enrollment ratio in each educational level depicts major indicators of learning society and distribution of knowledge and information in the country. In 1978 the gross primary enrollment ratio stood at 93 percent. After the revolution, the rate jumped high to 101

[2] For more information on the formula of this index refer to the website of UNDP: Human Development Report.

percent in 1986. The indicator rose still sharply in the years later to 130 percent in 2006. Due to a reduction in the number of uneducated children in the recent years, the indicator has remained low. With the increase in coverage of educational levels from six to 11 and fixation of net enrollment ratio at 100 percent during the recent years, the indicator is expected to move downward continually.

Until before 80s participation rate of girl students was below the rate of boys in elementary level. In early years of this decade, however, girl's rate put behind the boys so that in 2009 the participation rate of girls was almost 34 percent higher (Diagram 3-5). Such a high growth in participation may be due to two facts: high number of uneducated girl students in the past decades, and abandonment of schools by boys in the closing years of primary education for labor in less developed regions.

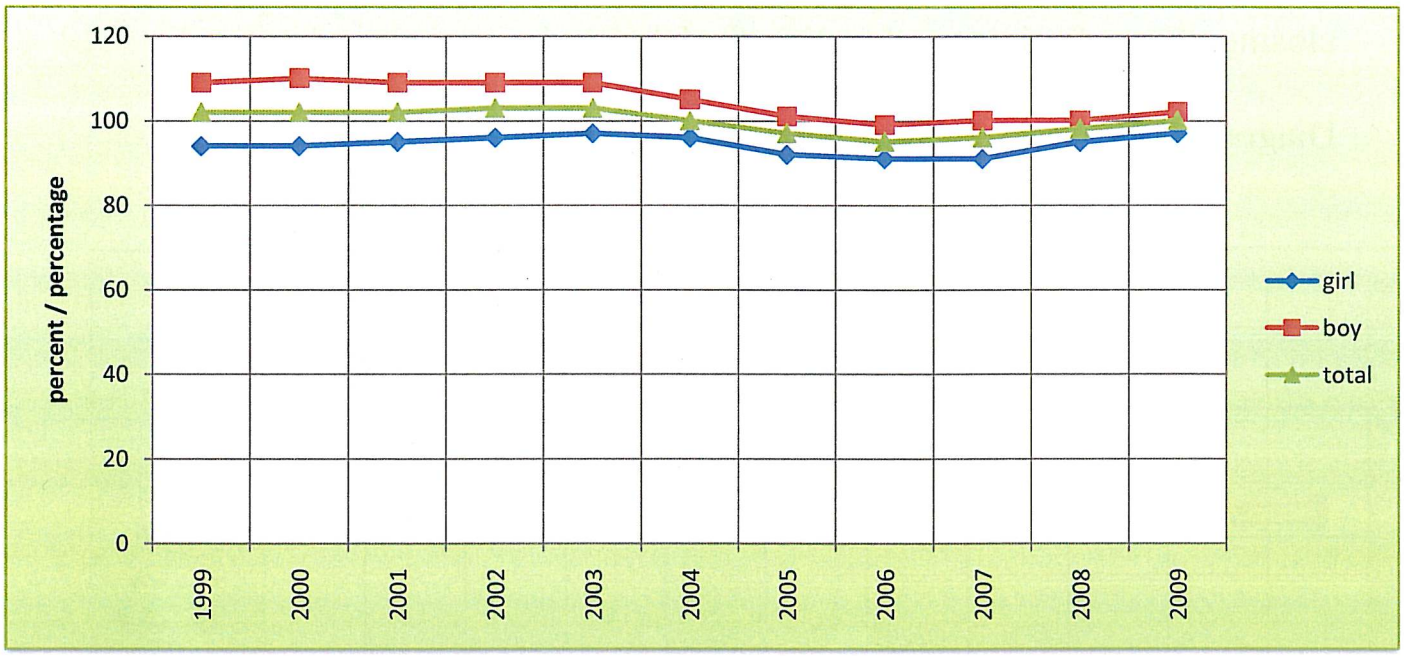
Diagram (13): Gross Primary Enrollment Ratio



Source: Calculated based on Statistical Center of Iran's data on student population and 6-11 years old population

In Iran the gross enrollment rate for secondary school is lower than the gross secondary school enrollment ratio. This is because in many low-income families students leave secondary schools for labor to help the family. In the early years after the establishment of Islamic Republic system in Iran, the indicator was 46 percent that was promoted to 50 percent in 1986. Since then, it has enjoyed an increasing growth to be 100 percent in 1996. During the recent decade it has stood on around 100 percent with minimal ups and downs.

Diagram (14): Gross Secondary School Enrollment Ratio



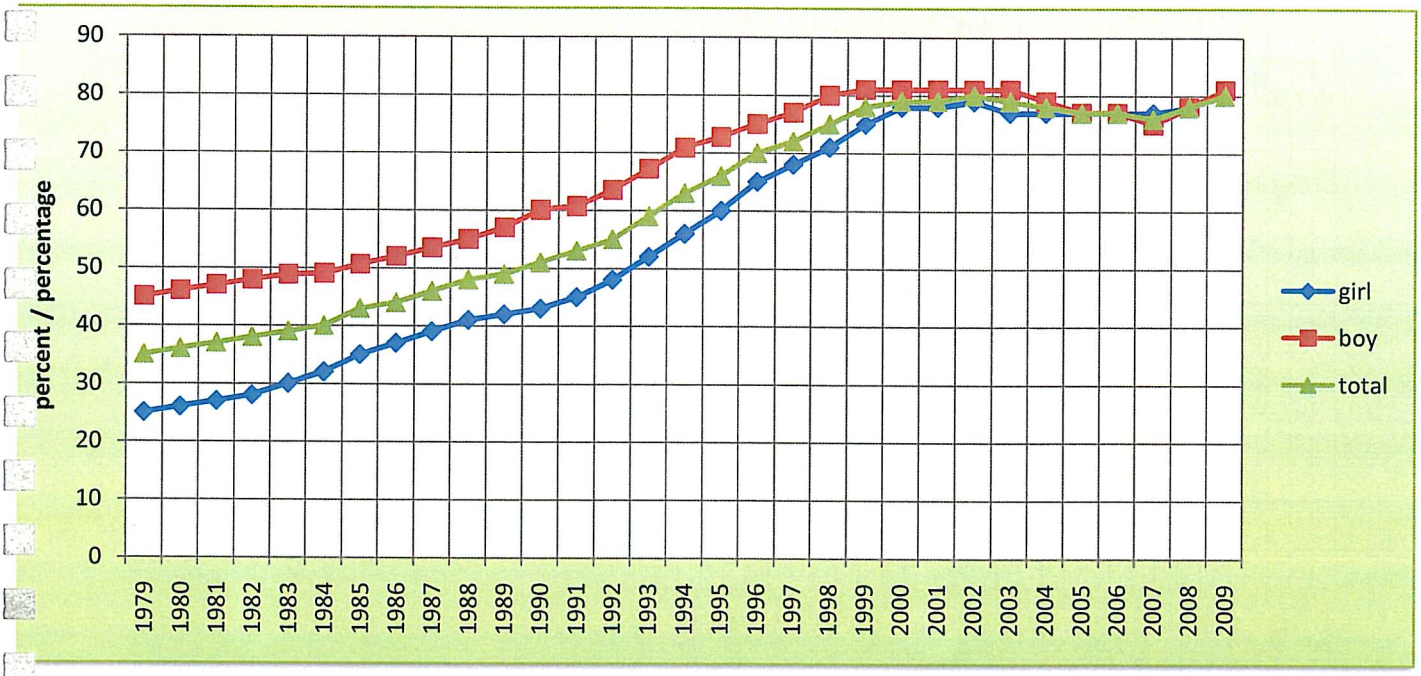
Source: Calculated based on Statistical Center of Iran's data on student population and 11-14 years old population

In the early years after the 1979 Revolution the total participation ratio (gross enrollment ratio) in the intermediate level was around 35 percent in which male student's rates were higher than female participants. This indicator advanced slowly in the first decade after the revolution because of the problems related to the Imposed War. After the war and with the outset of social and economic Reconstruction Period, the figure

rose sharply and the gap between girls' and boys' participation rate was narrowed. In the third decade, the indicator experienced low growth and sometimes reduction, but rose again in the closing years of this decade, i.e. 2009, to 81 percent. In this period there was almost no gap in the participation rate of female and male students.

The net enrollment ratio in the high school level rose from 46 percent in 1989 to 76 percent in 2009. In 1989, the difference in net enrollment ratio between boys and girls was 13 percent in favor of boys. It was reduced in the course of time and became nil in 2009. There is high hope the rate would be improved in favor of female students in future.

Diagram (15): Gross Intermediate Enrollment Ratio

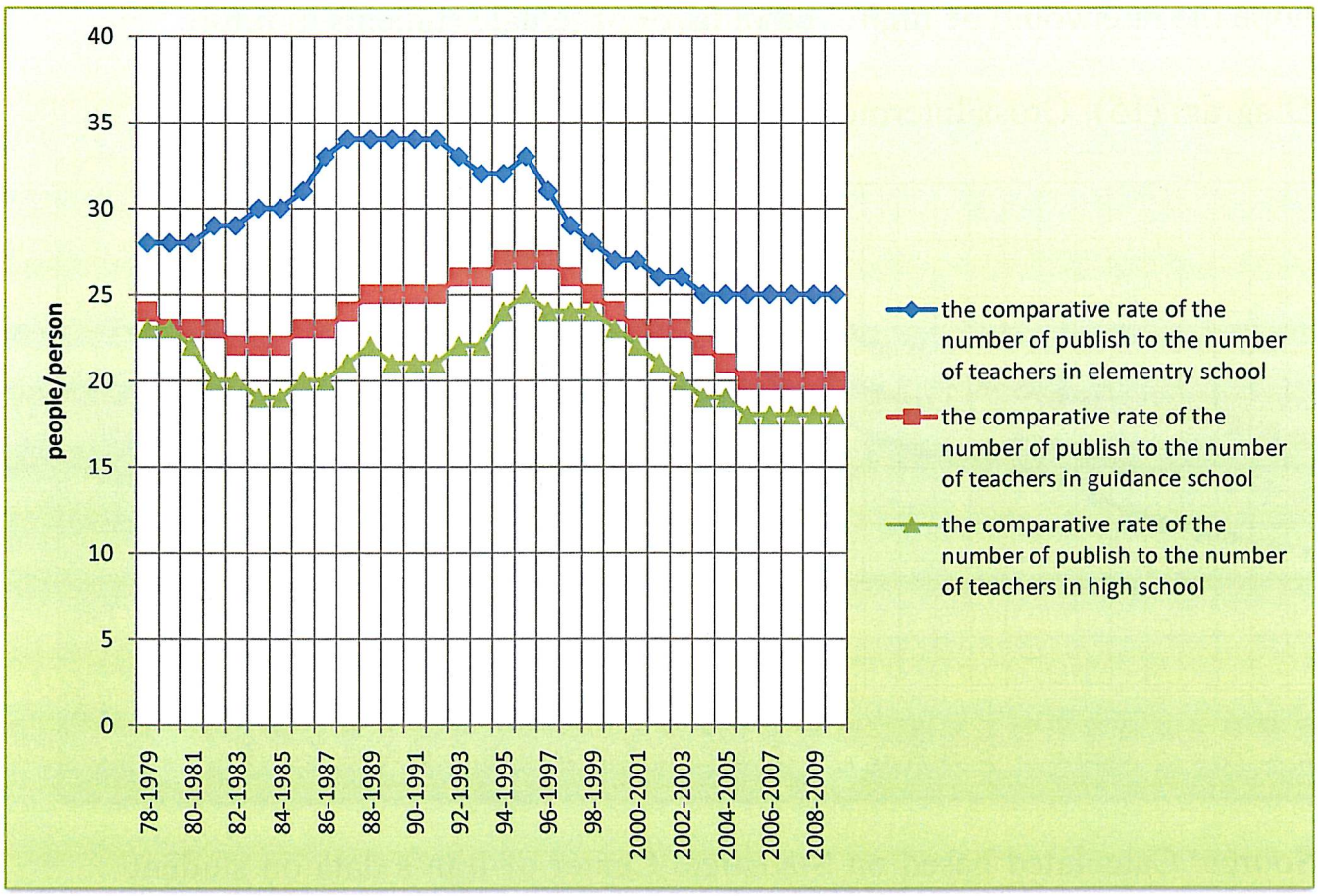


Source: Calculated based on Statistical Center of Iran's data on student population and 11-14 years old population

Statistical surveys suggest that in educational system of Iran during the first decade after the revolution, the student-teacher ratio was a little bit higher in all three levels of elementary, secondary and high schools in favor of students due to problems related to the Imposed War. The figure was respectively 35, 25, and 22 students per teacher in the year

1988. However, in the second decade after the revolution and with the end of war that marked the outset of Reconstruction Period the figures fell respectively to 27, 23 and 21 students per teacher in 1999. The figure rose still higher in the third decade after the revolution and fell from the figures in 1999 to 25, 20 and 18 students respectively (Diagram 16).

Diagram (16): Student-Teacher Ratio



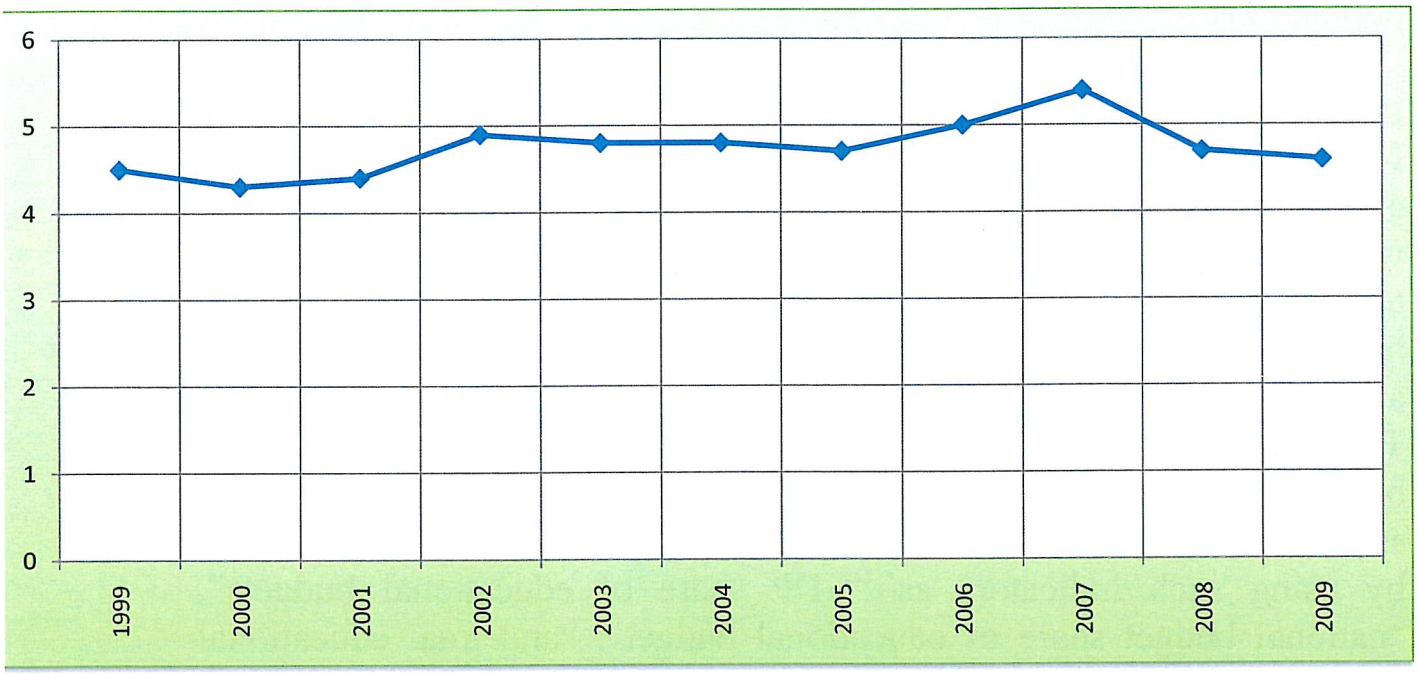
Source: Calculated based on data available on teacher and student populations

In the early years after the establishment of Islamic Republic system in Iran and without considering the problems related to the Imposed War, almost five percent of the teachers and trainers used to be employed without passing preliminary training courses. With the end of war, teacher training centers and universities grew well so that today, a hundred percent of teachers and trainers in all educational levels have already acquired required technical and professional standards.

The developments in financial resources of the educational system can be studied through various indicators. In the following part, we will study developments in financial resources of official educational system by using such indicators as "GDP share of educational budgets", "national budget share of educational budget", "and total educational budget share of each educational level".

In the early years after the establishment of Islamic Republic system in Iran, the GDP share of official educational budget was 7.7 percent. During the war, the figure was reduced to three percent and after the war it rose to touch four percent. In around 1999 it stood at 4.5 percent that moved up a little to reach 5.5 percent in 2007. In the years later, markedly in 2009, it was reduced again to 4.6 percent.

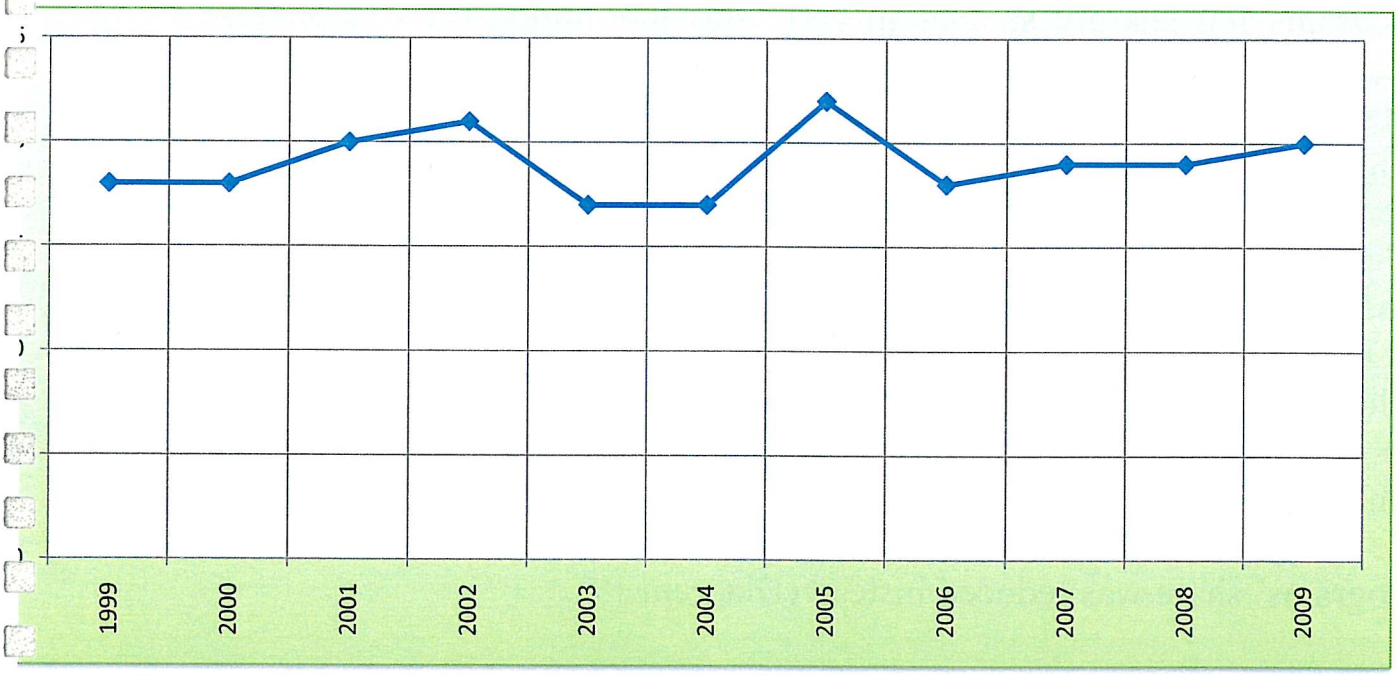
Diagram (17): GDP Share of General Education Budget



Source: Calculated based on Budget Act Data of the years 1999 through 2009

The general education budget enjoyed around 15.7 percent share of the total government expenditures in the early years after the establishment of Islamic Republic of Iran. During the war the figure fell to 13 percent and rose again to 18.6 percent after the war in 1999. The growing trend continued up to 21.7 percent in 2002, and in 2003 and 2004 it fell a little due to financial problems of the government. In the year 2005 it was improved but the following year it experienced a downward trend. During the recent years, of course, the rise in oil income and improvement in government's financial wellbeing have given rise to the figure.

Diagram (18): General Education Budget Share in Total Government Expenditures

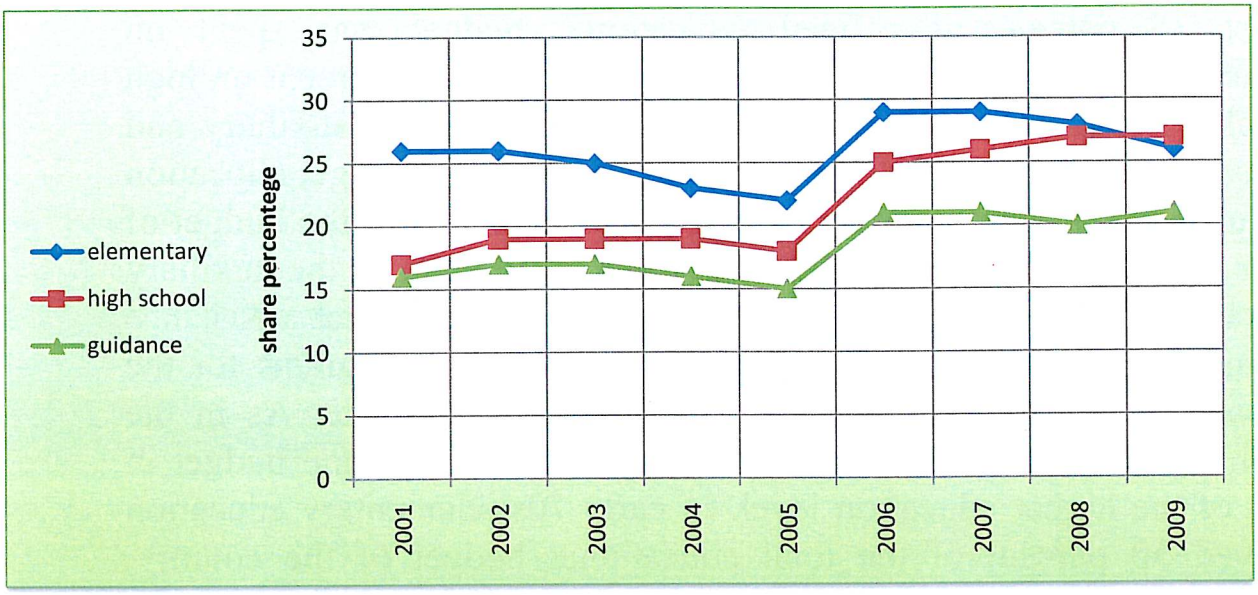


Source: Calculated based on Budget Act Data of the years 1999 through 2009

In the early years after the establishment of Islamic Republic of Iran, almost 35 percent of official educational budget was spent on elementary school, 17 percent on secondary school, 18 percent on high school, 11 percent on higher education and the rest on auxiliary and supportive programs of the educational system. In 60s, budget allocation in educational system underwent a drastic change so that the budget of major activities was reduced and the lion's share went to the auxiliary programs such as teacher training programs, educational assistance program, administrative service program, upbringing programs for the students, healthcare and physical education programs, etc. As in the major educational levels, the low level education lost some budget in favor of the higher education level. In early 70s, elementary education received 30 percent of the total educational budget of the country, followed by 16 percent set aside for the secondary school, 17 percent for the high school, and 14 percent for the higher education. Auxiliary and assistance programs received 23 percent of the budget. In 70s however, the major activities enjoyed lion's share of the budget in higher

education level and the share of elementary education and related programs fell sharply so that in early 80s the composition of shares became 27 percent for the elementary education, 17 percent for low intermediate (secondary school) education, 20 percent for intermediate (high school) education, and 18 percent for the higher education. In the first half of 80s the major educational activities lost another percentage of the share and auxiliary programs received more share instead. Therefore, in 2005, 23 percent of general education budget went to elementary education, 16 percent for low intermediate (secondary school) education, 20 percent for intermediate (high school) education, 14 percent for higher education, and the rest for auxiliary programs. Since 2006, however, a change in government policies gave a boost to the major educational activities share of the budget and auxiliary programs' share was reduced instead (Diagram 19).

(Diagram 19): The Share of Various Educational Levels in Total Educational Budget

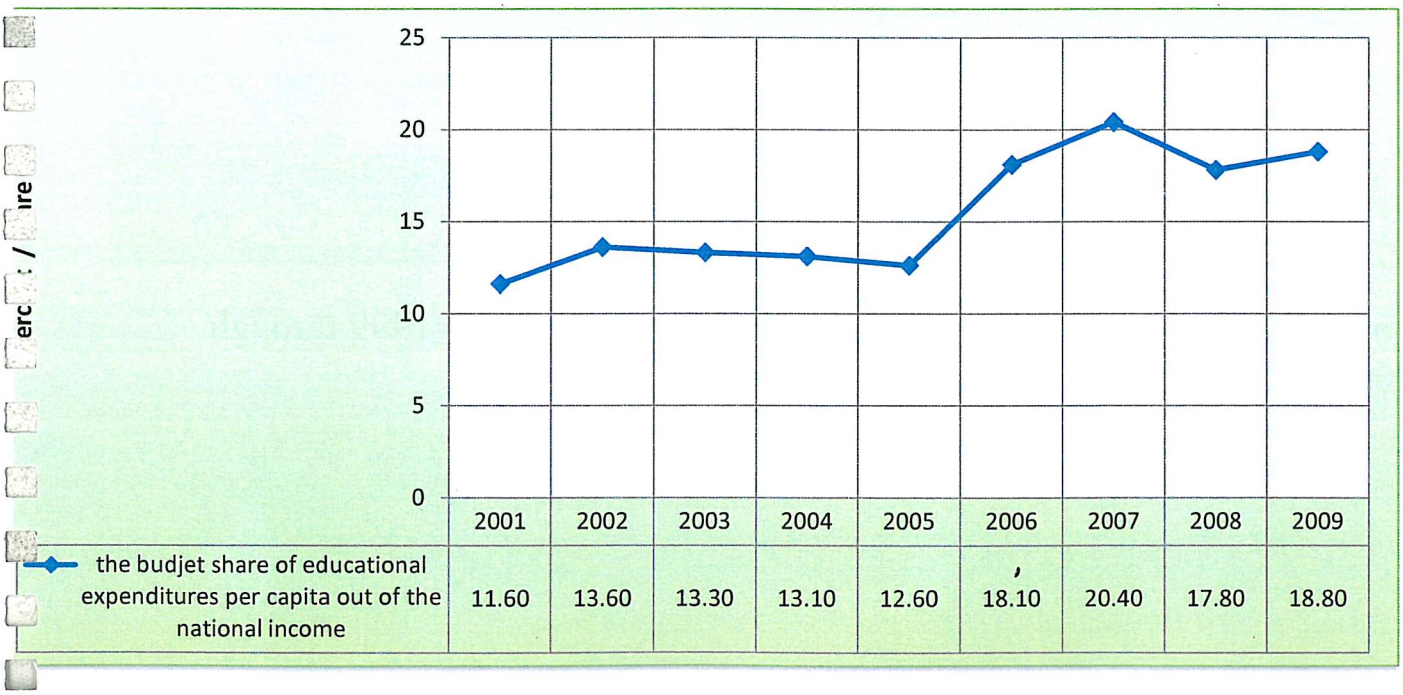


Source: Calculated based on Budget Act Data of the years 1999 through 2009

Another important indicator in educational financial resources is the per capita share from national per capita income that shows the per capita income share spent per pupil or university student. This indicator depicts the intensity of investment a country makes in development of human capital. When it is calculated based on various levels of education, it reduces the relative expenditures and shows special attention of a country to a specific level of education.

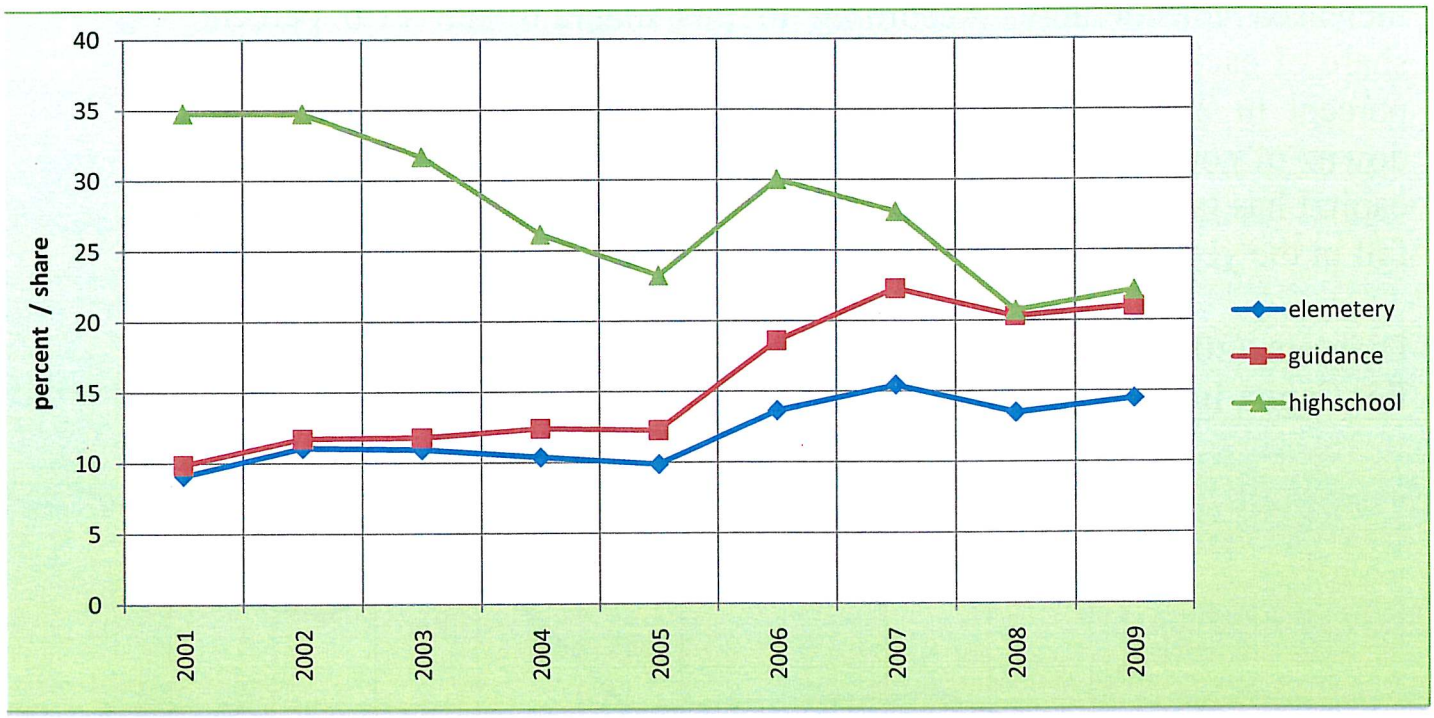
Diagram (20) depicts how during the past decade, the Islamic Republic of Iran's general investment on development of human capital has increased considerably. According to this diagram, the 11.6 percent share of each student (in all levels) in 2001 has been increased to 18.8 percent in 2009. The course of investment has experienced ups and downs of course, but the leap forward in general investment on human capital has taken place in 2006, although it has experienced a minimum fall in the year later.

Diagram (20): Educational Per Capita Expenditures Share of National Per Capita Income



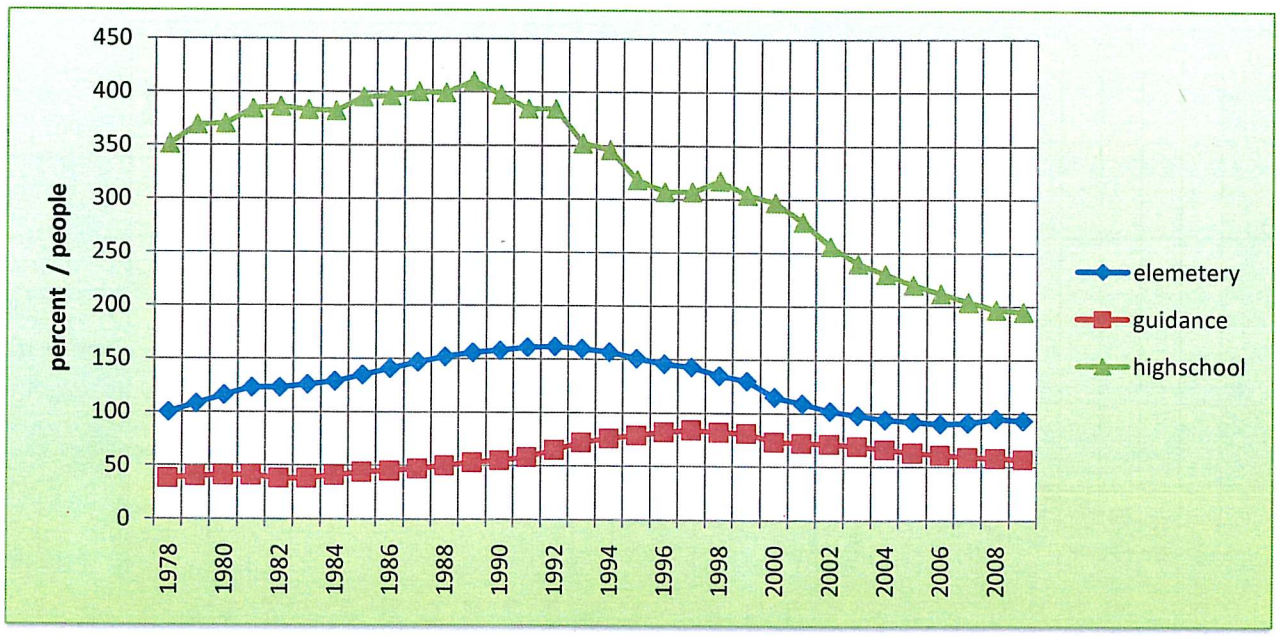
Source: Calculated based on Budget Act Data of the years 1999 through 2009

Diagram (21): Educational Levels Per Capita Expenditures Share of National Per Capita Income



Source: Calculated based on Budget Act Data of the years 1999 through 2009

Diagram (22): Developments in the Size of Schools

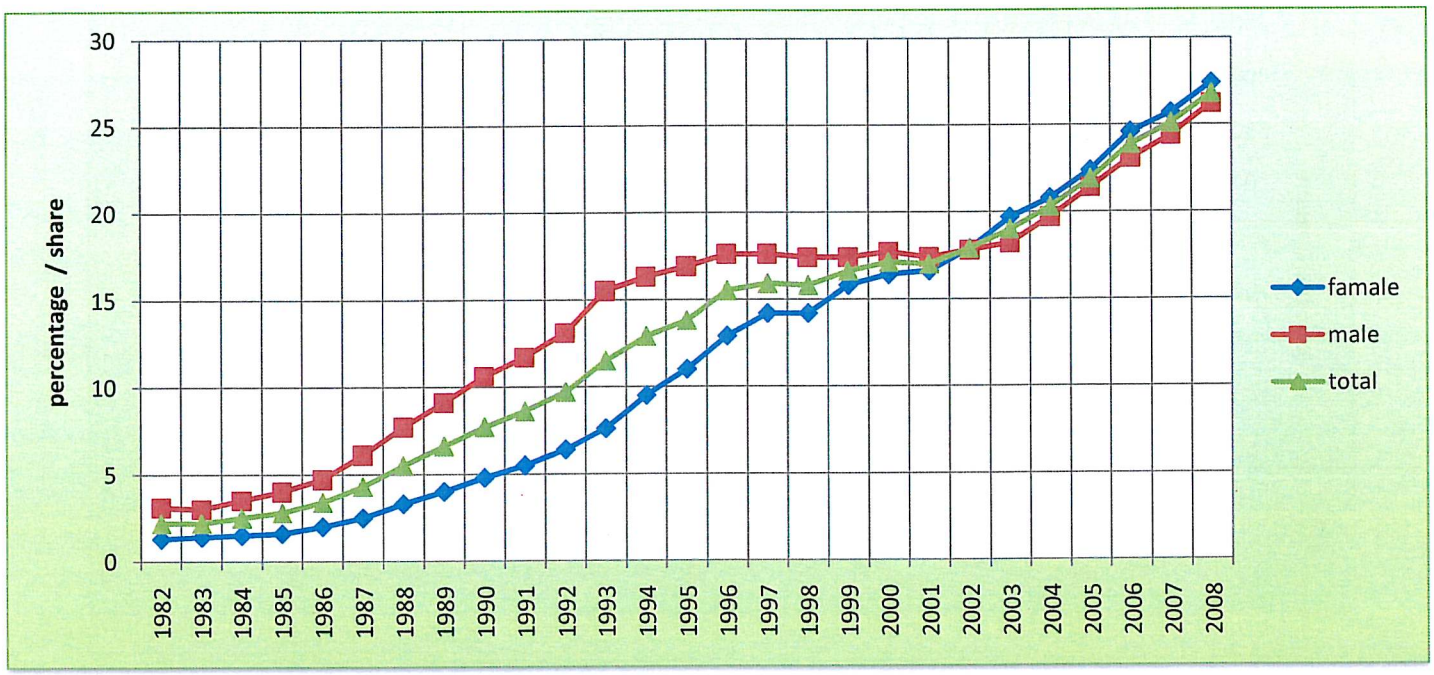


Source: Central Bank of Iran, Economic Time Series Database

The gross enrollment ratio indicator in higher education (the total number of university students divided by population in 18-24 age group) experienced very low growth until the year 1986. However,

student admission by Islamic Azad University gave a boost to the figure. In the next period, the gross higher education enrollment ratio doubled from 7.7 percent in 1990 to 15.5 percent. In the beginning of the period, the men's enrollment ratio in higher education was two-fold stronger than women's gross enrollment ratio, while in the closing year of the period the ratios became almost the same. This shows realization of the gender equity in the higher education level. In the third period there was balanced higher education enrollment ratio between men and women. The figure rose from 15 percent in the beginning of the period to 27 percent in 2008.

Diagram (23): Gross Higher Education Enrollment Ratio

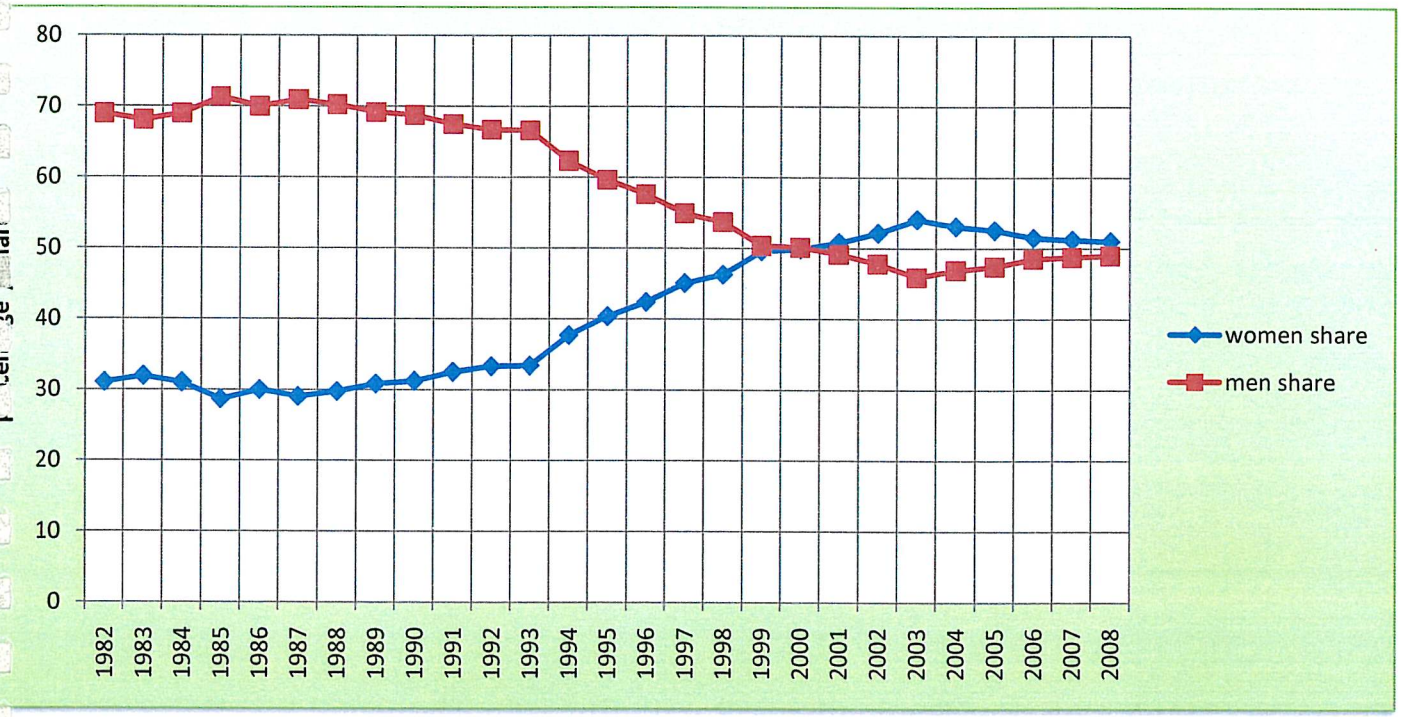


Source: Calculated based on student statistics released by Institute for Higher Education Research and Planning, as well as population statistics in various yearbooks released by the Statistical Center of Iran in 1982-2008 period

In the period marking establishment of national economy women showed less participation in comparison with men. There was no prospect for improvisation of women's participation in higher education either. Their role, however, was more outstanding in the Reconstruction Period. In the beginning of this period, women's share of higher education stood at 47.8 percent that was increased to 50.1 percent in the second year to pass men behind. The total student population of the nation in the academic year 2006-2007 in both governmental and non-governmental sectors reached two million and eight hundred thousand students, 52.4 percent of who were female students.

Similarly in this period, female professors' share of the total academic staff was low with only 17.3 percent. During the period, this indicator was improved by above three percent to be 20.8 percent in the end of the period. The indicator was 16.4 percent in assistant professor level, 10 percent in associate professor level, and 7.5 percent in professor level.

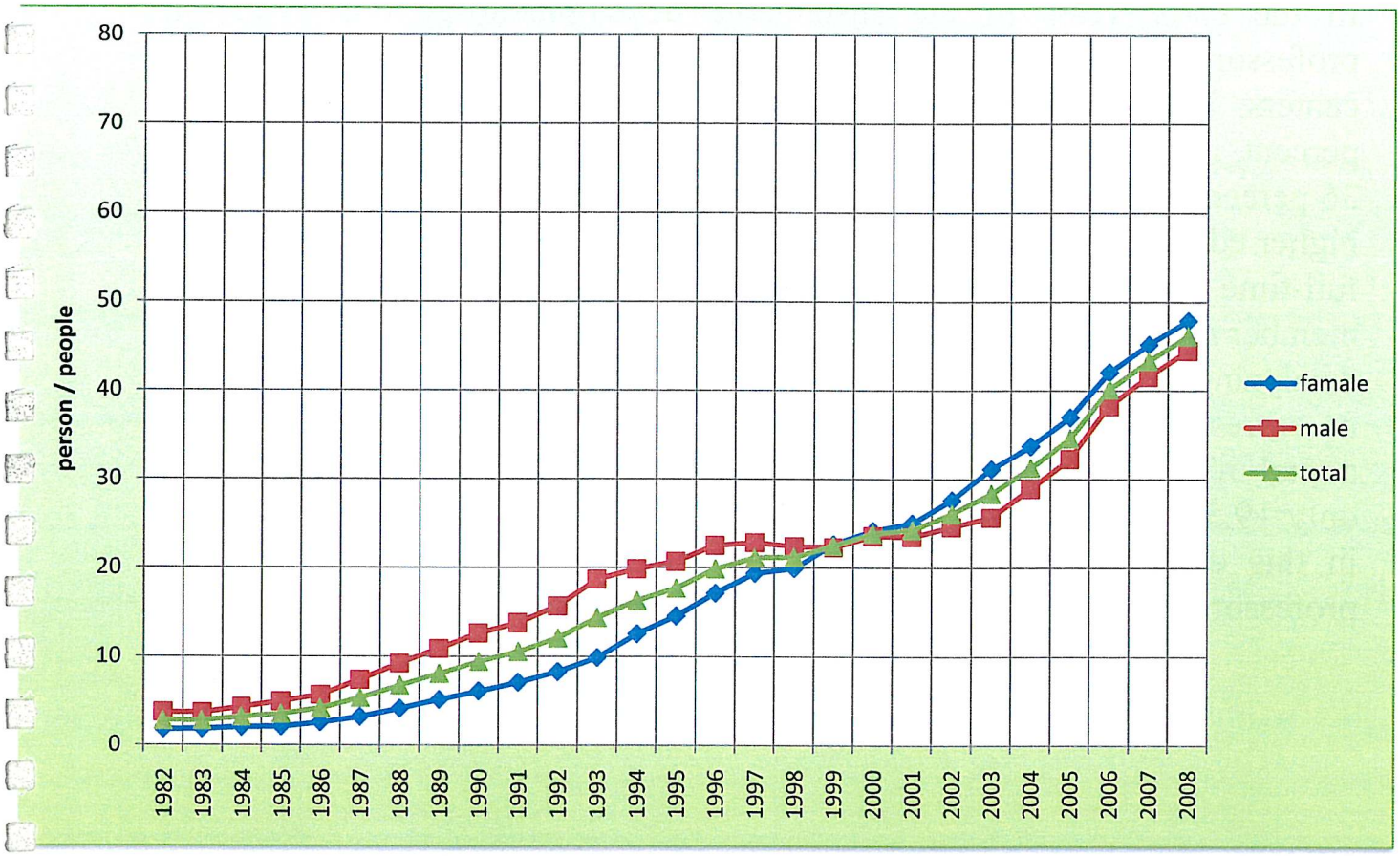
Table (24): Men and Women's Share of Total Student Population



Source: Calculated based on student statistics released by Institute for Higher Education Research and Planning, as well as population statistics in various yearbooks released by the Statistical Center of Iran in 1982-2008 period

In the early years after the establishment of Islamic Republic of Iran the total student population per a thousand people was very low. After the Islamic Revolution the indicator was improved to some extent and stood at six people in the end of the period. During the Reconstruction Period the indicator grew rapidly and reached 23 people in 1999. That was an extraordinary achievement. A comparison of the indicator between men and women shows that in the beginning of the period, the number of male students per a thousand-man population was twice as much the number of female students. During the period the gap was narrowed gradually and became almost nil in the end of the period. This shows the period has managed well to meet gender equity in student admission for higher education.

Diagram (25): Number of Students per Population of a Thousand People



Source: Calculated based on student statistics released by Institute for Higher Education Research and Planning, as well as population statistics in various yearbooks released by the Statistical Center of Iran in 1982-2008 period

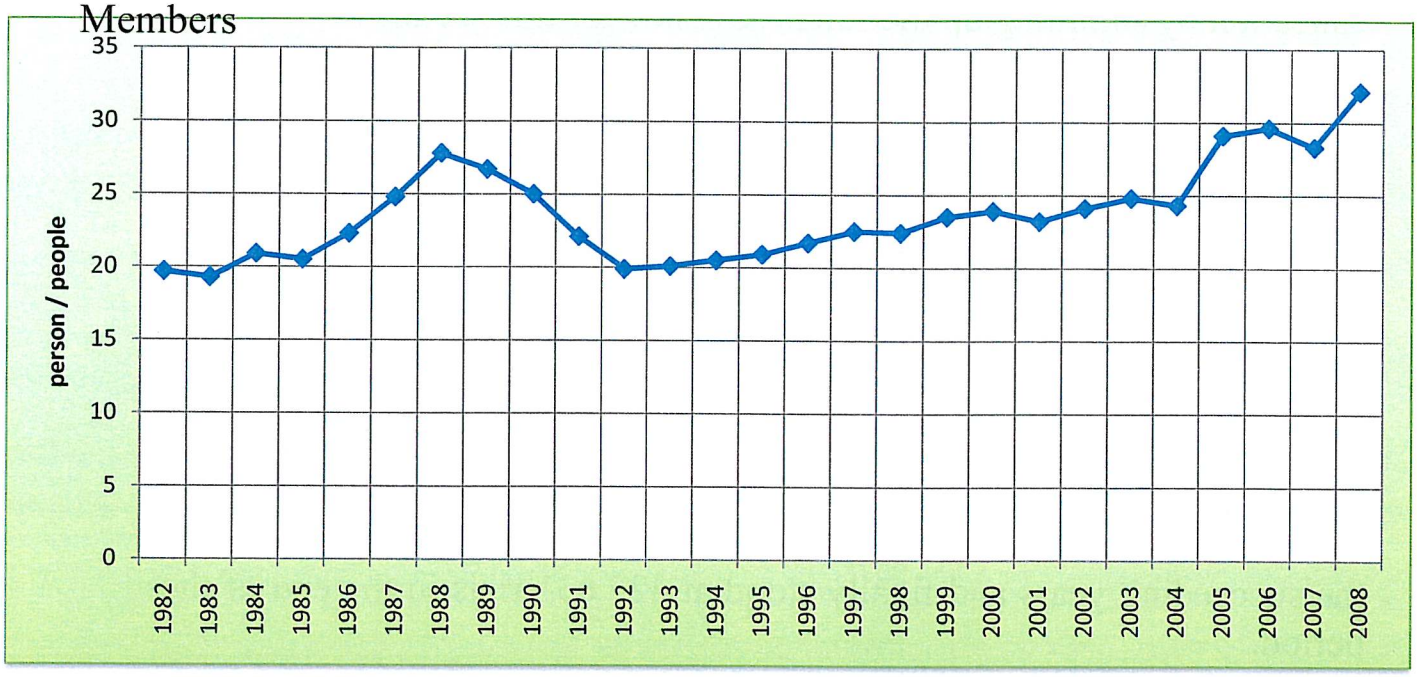
The student-professor ratio is also worthy of analysis both generally and separately according to the universities and the type of academic board. Here, the ratio of students in state-run universities to full-time academic board members and the total number of board members is has been studied. In the early years of establishment of the Islamic Republic of Iran, the student-professor ratio in full-time and total staff categories was relatively low. In this period, these indicators grew high. During the Reconstruction Period the student-academic staff ratio plummeted again. Due to the increasing population growth, the student-professor ratio in full-time category did not improve, even in the next period.

In the early years of the sustainable development period, 69,158 professors were busy teaching in the universities and higher education centers. The total number of academic board members with mean 11 percent, reached 134,928 people in the end of the period, i.e. 2007. Only 36 percent of these professors were busy teaching in the universities and higher education centers full time. In the end of the period, the student-full-time professor ratio stood at 59 and student-total academic board member ratio stood at 21.2 people.[3]

Analyzing this indicator in non-governmental sector, in which there is no correspondence courses, it is a matter of discussion to know that for a total of 1,384,501 students (all under in person instruction) there were only 19,503 full-time professors. Therefore, the student-professor ratio in this category stands at 71 percent. Considering 41,162 flexitime professors, the indicator in its maximum strength stands at 22.8 people.

[3] This calculation has not considered in person and semi-correspondence training.

Diagram (26): Student (State-run Universities) Ratio to Full-time Board Members



The GDP and general budget share of higher education credits are two important indicators for the financial wellbeing of this sector that show its status among the total existing financial resources and the budget appropriated for this sector by the government. The second indicator more specifically shows the priority degree of this sector in contrast and comparison with other sectors in budget allocation by the government.
During the years after the culmination of Islamic Revolution no independent report on credits and financial resources of the universities and higher education centers has been prepared. The only source for access to the income of these institutes is the annual budget report. Until 1982, higher education and research projects had no independent budget line in the general budget of the government. The credits for higher education have come under the educational credits category in the budget plan. Therefore, during the years 1978-1982 the figures on higher education and research programs have been extracted from the educational budgets. Since there was no sorting of figures according to administrative services, educational aids, research projects and the like,

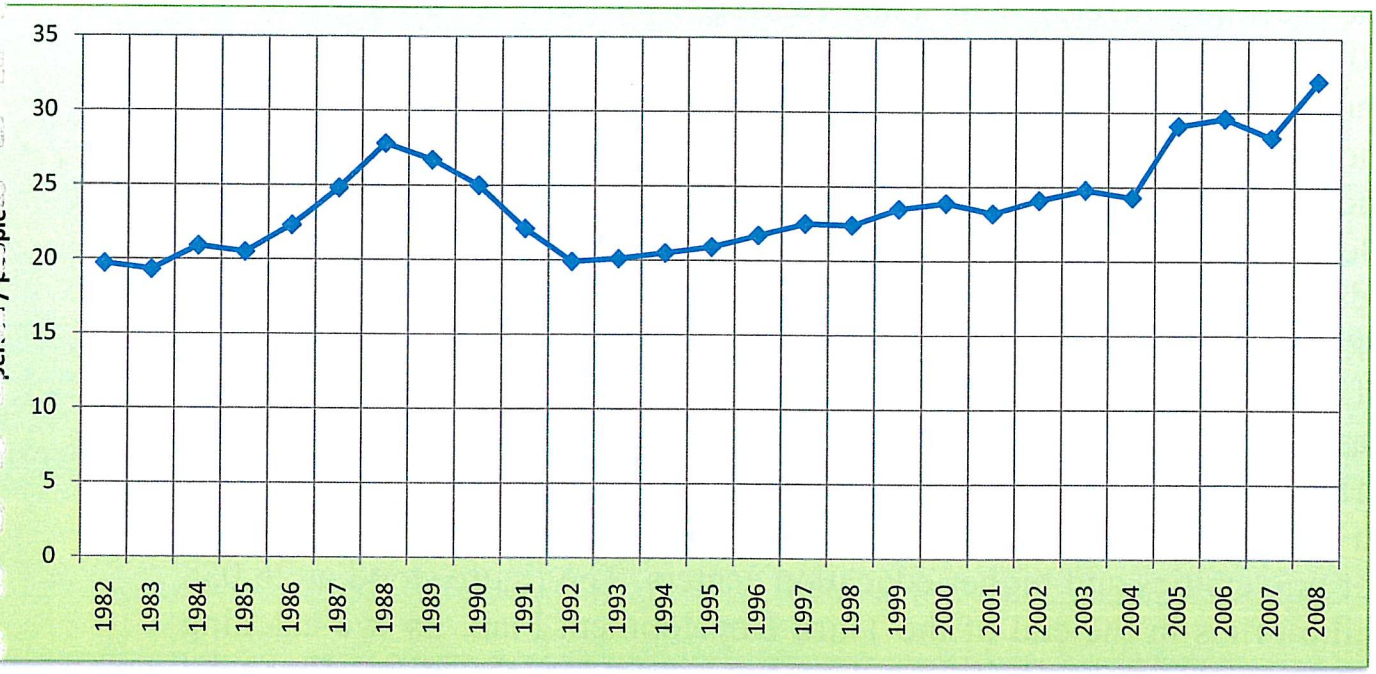
it is only possible to have access to total budget allocated to the higher education by summing up the funds set aside for this sector.

In the early years of this period, when there was no admission due to the soc-called "Cultural Revolution", the credits for universities and higher education centers plummeted in continuation of the years 1980 and 1981, but in 1983 a sudden growth put it at 80.2 billion rials. Most probably the rise in credits was because of the equipment of universities to the required facilities and devices after the Cultural Revolution. Since then, there was steady growth in the credits so that in 1988 the figure touched 150 billion rials.

The maximum student per capita credit in this period in 1982 was 673.991 rials and then from 468.376 rials in the year 1983 it reached 497.706 rials in 1985. The figure experienced some ups and downs in the succeeding years and finally stood at 427.631 rials in the end of the period.

The indicators of this period suggest that GDP share of higher education and research centers have been observed likewise, i.e. sudden growth from 0.54 percent in 1982 to 0.62 percent in 1983 and continuing the growing trend to the end of the period. The general budget share of higher education sector in 1981 fell down from 2.68 in 1980 to 1.9. The figure moved up since 1983 but due to the competition of other sectors it fell down again in the end of the period. The total educational budget share of universities and higher education centers, too, has experienced this trend.

Diagram (27): GDP Share of Higher Education



Source: Annual budget acts related to the years 1982-2009 and reports on national accounts of the years 1982-2009

In the first half of the second decade, higher education credits have been allocated in the form of educational programs (educational groups), research projects, administrative services, and educational aids. In this period, boosting construction credits in the total educational budget was a success in expanding educational capacities (Kayvani and Associates, 1993). The total credits of universities and higher education centers within the years 1989-1993 grew from 370.8 billion rials to 1472.2 billion rials, showing an average 41.2 percent growth. In this period the GDP share of higher education centers was almost stable, so that from 1.48 percent in 1989 the figure stood at 1.47 in 1993 after some ups and downs. This is also true in the case of higher education sector's share of

the general budget of the government. These two indicators, however, experienced sharp fall in the closing years of the period in comparison with the first indicator. Student per capita credits rose from 1.325 million rials to 3.372 million rials in this period that shows 26.3 percent growth.

The higher education sector enjoyed relative growth in credits during the Second Development Plan soaring from 2186.3 billion rials to 7093.1 billion rials (26.5 percent growth) in the end of the period. In the same period, student per capita credits enjoyed 18 percent growth to move up from 4.569 million rials to 10.451 million rials. The financial indicators of this sector during the first three years of the Second Development Plan were always on the rise so that GDP share of higher education sector went up from 1.66 percent to 1.72 percent. However, like the First Development Plan it was plummeted in the closing years of the plan and touched 1994 figures. The change was also true in the case of the shares of higher education sector from the general budget of the government and total educational credits.

In the early years of the third decade, 9,420 billion rials was set aside for universities and higher education centers. The figure stood at 26,058 billion rials in the end of the Third Development Plan. Its eye-catching growth was realized in the last two years of the plan. Financial indicators of this sector show another trend however. Due to competition of other sectors, the GDP share of higher education sector in 2000 was 1.63 percent that moved up to 1.72 percent in 2001 and reached the unprecedented record of 2.01 percent in 2003, but went down again to 1.88 percent in 2004. Competition by other sectors imposed a disagreeable trend on the share of higher education credits from the general budget of the government so that it was plummeted from 7.51 percent in 2000 to 5.67 percent in 2004. Among various educational programs, however, higher education could gain a relative advantage of boosting its credits from 36.9 percent to 47.48 percent.

During the Fourth Development Plan the higher education sector's credits from GDP and general budget of the government were on steady rise. As it is seen in 2008 total credits – irrespective of stable per capita credits – the credits of higher education sector have been on the rise for

three consecutive years. A comparison of growth in the credits of higher education sector with the current and constant prices shows – like the previous years – the reduction of purchasing power parity (PPP) of this sector to a quarter or even less.

Developments in Knowledge Utilization

Any economic utilization of accumulated knowledge is called commercialization of knowledge. The ultimate goal behind knowledge acquisition and accumulation in learning economy is transformation of knowledge into economic value. Knowledge is commercialized both in its raw form and in its codified and transformed form. By commercialization in raw form, we mean offering knowledge in the form of consultation, research contract, cooperation in the research projects and the like. However, a codified and transformed knowledge is used for selling inventions, innovations and entrepreneurship. It should be noted that commercial use of invention, innovation and entrepreneurship for commercialization of the invention is called knowledge-based entrepreneurship.

The policies to develop relationship between research centers and universities on one side, and manufacturing, industrial and agricultural sectors on the other side were made in the First Socioeconomic and Cultural Development Plan of the Islamic Republic of Iran (Paragraph 9, General Policies of the First Development Plan). There is no accurate information, however, on the results of implementation of this policy at hand. The policies for commercialization of researches were continued in the Second Development Plan by a new approach.

Table (4) shows that in the period 1996-2002 the nominal income of knowledge institutions has grown by an average of 96 percent per year. The highest growth rate belongs to the sale of research projects with 176 percent growth per year. The sale of research contracts has enjoyed only 43 percent growth and the research cooperation contracts have gained 93 percent growth for the research centers.

Table (4): The Growth in Incomes of Research and Development Activities

Year	total	Sale of research findings	Research contracts	Research done	Other gains
1996					
1998	106.6	327.6	213.2	18.6	210.0
2000	-15.2	67.2	-43.8	-86.8	88.7
2002	484.4	663.7	87.6	626.7	527.8
total	575.8	1058.4	257.0	558.5	826.6
Average	96.0	176.4	42.8	93.1	137.8

Source: Calculated based on the data on research and development activities – Statistical Center of Iran

Table (5) shows that in 1996, knowledge institutions have earned 7.6 percent of incomes from the sale of research results (inventions and transfer of technical know-how), 20.5 percent from research projects, 59 percent from research cooperation and 13 percent from other resources such as the general budget of the government. Within six years, the income structure of knowledge institutions underwent a drastic change so that in 2002, the notable 40.3 percent of their income came from the sale of research achievements. Research projects earned only 6.6 percent of the total income, while implementation of research works earned the same amount (6.6 percent), while the income by other activities grew substantially (Table 5).

Table (5): Fundraising Trends in Total Receivable Solutions

year	Total	Sale of research findings	Research contracts	Research done	Other gains
1996	100	7.6	20.5	59.0	13.0

1998	100	15.6	31.0	33.9	19.5
2000	100	30.8	20.6	5.3	43.3
2002	100	40.3	6.6	6.6	46.5

Source: Calculated based on the data on research and development activities – Statistical Center of Iran

Table (6): Developments in Obtainable Value Indices in Research and Development Field within Six-Year Period (1996-2008)

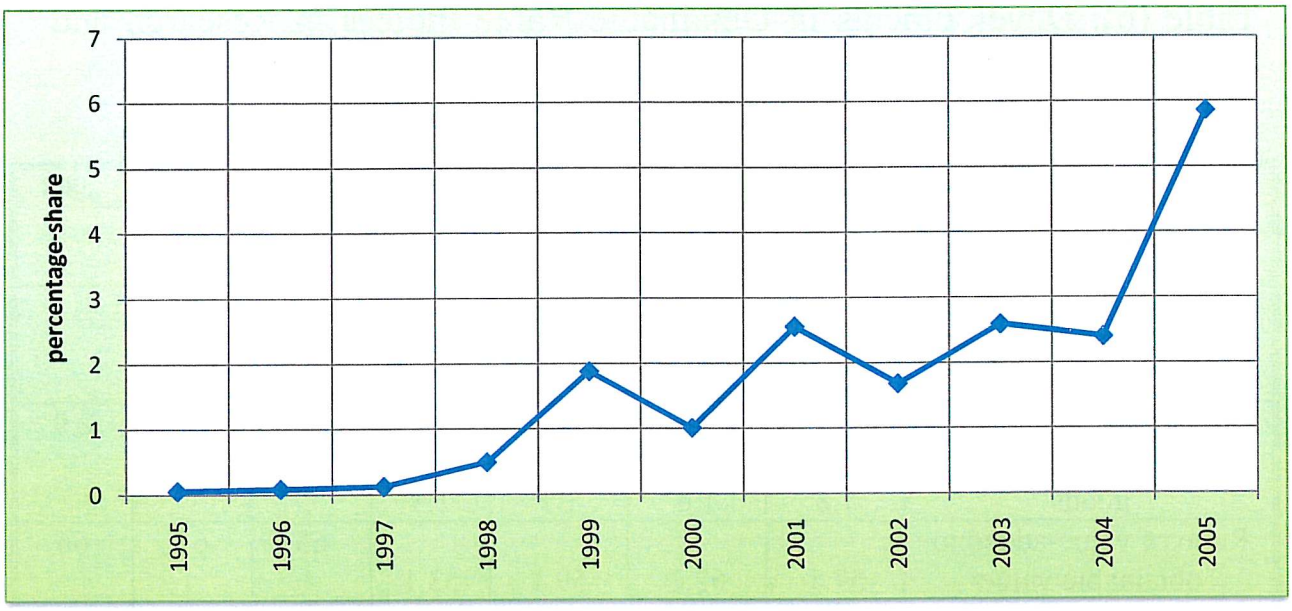
Index	1996	1998	2000	2002	2004	2006	2008
Share of market value of total obtainable value	42.5	44.7	36.0	37.3	37.8	30	
Share of non-market value of total obtainable value	57.5	55.3	64.0	62.7	62.2	70	
Ratio of obtainable value to value of intermediate goods	1.8	1.6	1.7	1.9	2.9	2.6	2.9
Ratio of value-added to obtainable value	57.1	62.1	59.1	53.1	65	61	66
Growth of value added		113.2	0.5	63.3	44	77	18
Value added of each researcher	26.44	57.38	35.11	73.99	50.8	55.9	56
Growth of Value added of each researcher		117.0	-38.8	110.7	-31	10	1.9

Source: Calculated based on the data on research and development activities – Statistical Center of Iran

The sale of knowledge-based and advanced technology-based products is one of the most important indicators for commercialization of accumulated knowledge in a country. In 1996, 0.055 percent of domestically made industries exports related to the export of advanced technology. In 2002, the indicator was pushed up to 2.57 percent and to 5.67 in 2006. A comparison of the export share of advanced technologies in domestically manufactured exportable industries in Iran with a few developed and developing countries shows that the figure has

been twice as much in Tunisia, 20-fold more in South Korea and England, 17-fold more in Japan and 14-fold more in France. Therefore, the Islamic Republic of Iran has more to do in this sector.

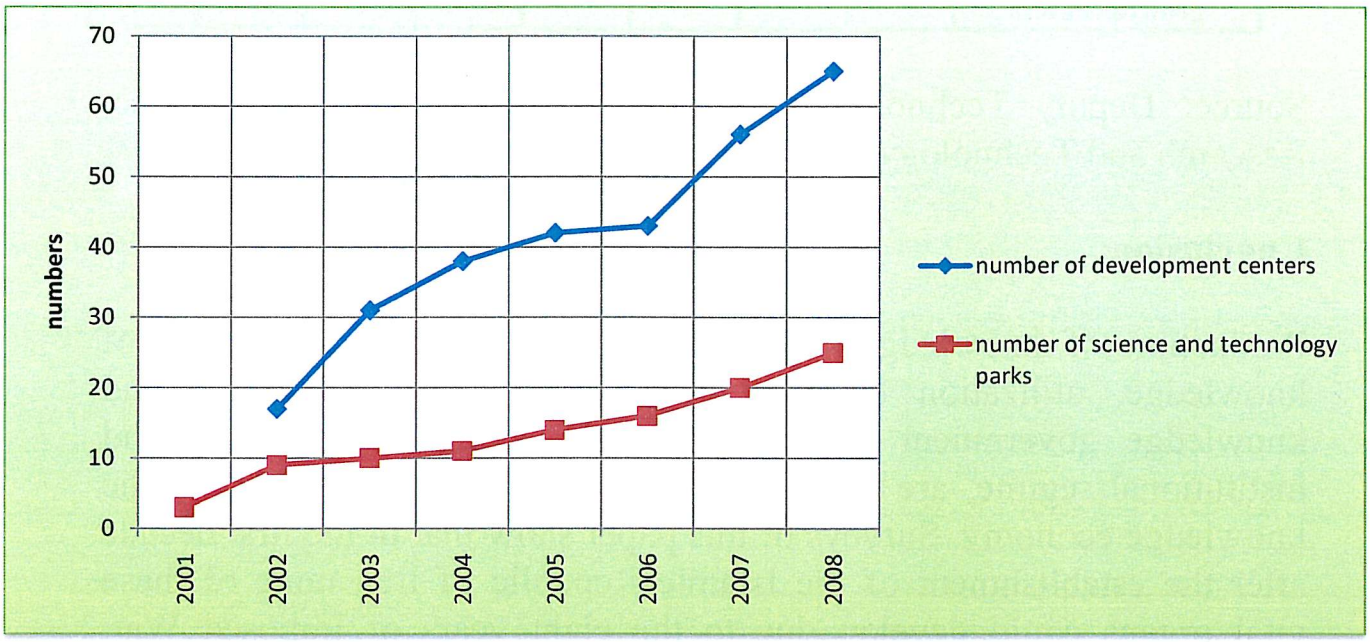
Diagram (28): Export Share of Advanced Technology in Exportable Domestically Manufactured Industries



Source: Databank of World Bank

In 1997, there was only one science and technology part in Iran but in 2004 the number of these parks reached 10. Almost ten knowledge institutions or knowledge-based institutions were active in these ten parks. In 2009, the number of these parks was pushed up to 25.
Also in 1997, there was no development center in the country. Seventeen of them appeared in the year 2002 and grew in number by 56 in the year 2007. In 2009, there were 65 active development centers in the country. The number of institutions stationed in the science and technology parks grew from 575 units in 2004 to 1395 units in 2007, and then to 1500 units in 2009. Also registered inventions grew from 32 cases in 2005 to 250 cases in 2009.

Diagram (29): Number of Science and Technology Parks, and Development Centers



Source: Deputy Technological Affairs of the Ministry of Science, Research and Technology, written reports Website, 2010

Table (7): Research and Technology Infrastructures in the Period 2000-2009

	2001	2002	2003	2004	2005	2006	2007	2008
Number of growth centers		17	31	38	42	43	56	**65**
Number of science and Technology parks	3	9	10	11	14	16	20	**25**

Number of established centers				575	676	824	1395	**1500**
Number of employees					3292	4608	8991	
Number of registered inventions of technology units located in parks and growth centers					**32**	**87**	**205**	**250**

Source: Deputy Technological Affairs of the Ministry of Science, Research and Technology, written reports Website, 2010

Conclusion:

Production of knowledge, distribution of knowledge, promotion of knowledge, utilization of knowledge, information technology and knowledge government in the sense of economic motivation and institutional regime, are the six vital organs and key variables in the knowledge economy. Surveys of this paper show that in the first decade after the establishment of the Islamic Republic of Iran none of these vital organs could develop due to the eight years of Imposed War. Knowledge distribution and promotion began growth and perfection in the second decade after the revolution. This instigated mobility of other organs although they manifested no considerable perfection. In the third decade, developments in knowledge government on one hand, and world development of information technology and communications on the other hand, highly promoted knowledge production incentives and resulted in knowledge production along with developments in distribution, promotion of knowledge in Iran's knowledge economy. In this period, there was no serious development in utilization of knowledge either, but some required infrastructures were created to that end.

Today, utilization of new science and technology is the major flaw with the Iranian knowledge economy.

Theoretical and experimental researches show that at least six factors are responsible for this backwardness. First factor relates to the general disposition of the knowledge commodity that inspires no ambition for private investment in and based on this sector. Insufficient manpower and capital, specially venture capital (VC), and social capital mark the second factor. The third factor relates to lack of academic entrepreneurship culture and academic entrepreneurship infrastructures such as science and technology parts before the revolution and two decades after the revolution, as well as their weakness in the recent decade. The fourth factor considers inefficient competition and opportunities for competition in the economic system of the country. This has been caused by the government's unprincipled, unmethodical and unlimited interference in knowledge and knowledge-based industries. The fifth factor concerns lack of encouraging policies for creating any ambition for entrepreneurship. In Iran, except the early years of establishment of educational system, the government and public sector's share in knowledge production and distribution has been multiple-fold of private sector's share. This has restricted competition of entrepreneurs as well as freedom of exchange and selection (both for producers and consumers) in these areas. The sixth factor is lack of appropriate policymaking by the government that will have negative impact on formation of the entrepreneurship procedure on one hand, and will reduce influence of other factors related to entrepreneurship.

Therefore, the government ought to take the following five steps to develop utilization of knowledge in the country:

1- Reduce authoritarianism in knowledge and knowledge-based industries and make encouraging policies (tax exemption, financial assistance, etc.) to boost investment of individuals and private sector in these industries
2- Design and implement appropriate intellectual ownership system to protect intellectual property of the science activists, scientists and entrepreneurs
3- Help formation of venture capital market and boost venture investment

4- Revolutionize academic culture by enforcement of rules and regulations that necessitate expansion of technological research and academic entrepreneurship
5- Develop academic infrastructures such as science and technology parks and development centers

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Chapter Two: Iran in the Course of Human Development

Introduction

Individual and social welfare of human being has always been the major concern of economists. To that end, they have presented diversified theories for economic progress and development. New theories on development have been developed and presented in the course of time by reviewing the past theories and adding new points. Human development is perhaps the most modern and most expressive theory on the sustainable welfare of human being that was first introduced by Mahbub al-Haq (Pakistani economist) and his close friend and collaborator Amartya Sen (Indian economist). They believe human development is far more important than economic developments such as goods and services production, wealth accumulation growth, income growth, and fair distribution of income. This concept signifies expanded freedom of choice in human being, long and healthy life coupled with wisdom, social equity and security, personal dignity and guaranteed human rights. However, income growth is a vital factor in the meantime, because any development without financial resources will be difficult.

As a result, the United Nations Development Program (UNDP) prepared human development report for the first time in 1990 according to the human development theory. Since then, every year a human development report is developed in world level and several such reports are issued national level. Until 2011, 21 world human development reports have been presented and the 2012 report is about to be released. The report places emphasis on the following five principles:

1- Long and healthy life for all human beings in national and international levels
2- Access of all human beings to sufficient knowledge
3- Desirable living standards
4- Freedom of choice for all human beings in all economic, social, cultural and political aspects
5- Guaranteed human rights and dignity for all human beings

The core of these reports is about calculation of human development index (HDI) in all world countries with respect to the aforementioned

principles. The human development index comprises of a number of indicators such as life expectancy, literacy rate, enrollment ratio in all educational levels, mean schooling years, expected schooling years, per capita income, etc. Today, human development is highly important for the nations and international organizations. Countries compete and work for improvement of their HDI ratio.

In 1999, the Islamic Republic of Iran developed its human development report in cooperation with the United Nations Development Program (UNDP) and Plan and Budget Organization. The report covered important issues as population growth, per capita income, official education, healthcare and medical treatment, environment, women, economic reformation, political development and narcotics. This paper intends to study the socioeconomic developments in the Islamic Republic of Iran within the past three decades from the viewpoint of HDI variables in five sections. In the first section, we will study population developments in lieu of the objective behind human development, and manpower developments as the major factor for human development from two viewpoints of policies and indicators. In the second section, we will study developments in economic welfare as one of the key indicators for human development. The third section analyzes developments in the healthcare system of the country from the viewpoint of healthcare policies as well as health and medical treatment variables. The developments in the knowledge level of the Iranian population via such indicators as literacy rate, mean schooling years, and expected schooling years have been discussed in the fourth section. Finally, the fifth section surveys political developments and social equity and security indicators.

1- Developments in Population and Manpower

People are real assets for a country according to the human development theory because they are both the goal of development and factors of development. Qualitative and quantitative developments come from population development that is the major factor for production of wealth

in a country. The most important population policy of Iran in the first Socioeconomic and Cultural Development Plan was birth control. Ministry of Health and Medical Education (MOHME), as the executive body of this policy, had been obligated to use all its capacities and capabilities to cover an average 24 percent of potentially fertilizable women by the family planning program in between the years 1989 and 1993 in order to prevent one million unexpected births during the plan. The family planning program gave priority to geographical regions and social walks of life that had suffered more socioeconomic and cultural losses by unwanted and chiefly biologic pregnancy. Realization of this policy, in addition to the activities of the family planning program under the Ministry of Health, needed other factors such as improving the literacy rate and general knowledge of the individuals (specially boosting the schooling ratio of the girls at eh age of education), promoting the status of women through generalization of education and boosting participation of women in socioeconomic affairs of the society and family, promoting the healthcare standards in the society and reducing the mortality and morbidity rate in children and mothers, abolishing all encouraging rules and regulations for population growth and making new policies in line with birth control programs.

The Second Development Plan too, had placed emphasis on birth control and improvisation of population quality through three complementary strategies. The first and most fundamental strategy was the development of the knowledge to control and improve the quality of population through education of women in potentially fertilizable age groups. Promoting public awareness of individuals on the detriments and problems of immethodical population growth through the mass media, specially the Islamic Republic of Iran Broadcasting (IRIB) was the second strategy presented in the plan. Training population issues in the high school and university textbooks, carrying out scientific researches to gain knowledge on the degree of awareness, attitudes, performance and problems of families in connection with the family planning program, carrying out applied researches to find appropriate methods and technologies to boost public awareness, family attitudes and performance and to help the family find access to contraceptives

were all part of the third strategy of the plan. The fourth strategy for family planning and birth control necessitated gaining knowledge and carrying out studies to use and develop new methods and technologies to prevent pregnancy in women, supplying and generalizing the use of contraceptives in the target geographical regions, specially in the villages and underdeveloped areas, and allocating part of the activities of the hospitals, clinics, and healthcare centers across the country to offer constant pregnancy control services.

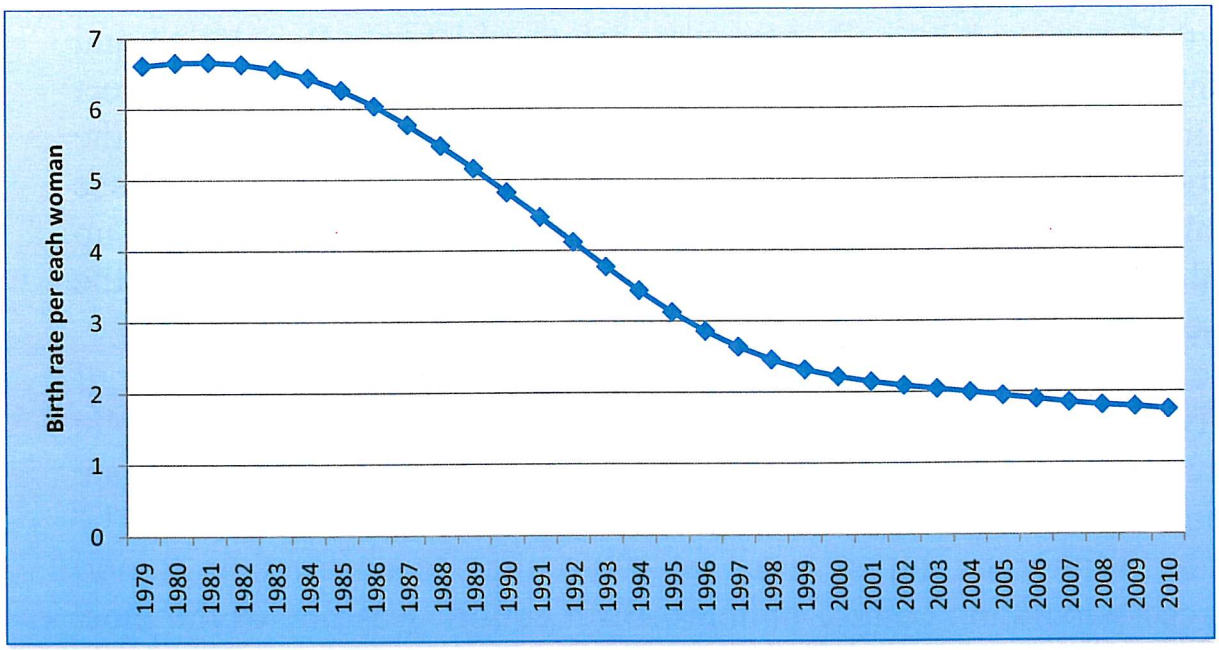
Supplying required financial resources, equipments and manpower to enforce population control policy with respect to the decisive role of population growth in all-out development of the country in such a way to realize the population growth rate anticipated in the plan were all covered in the fifth strategy.

Population growth rate is subject to pregnancy rate of women on one side, and mortality and morbidity rate and migration on the other side. Until before 1921 population growth in Iran was steady due to natural disasters, famine, and deadly contagious diseases. Five years later (1926) population growth experienced a rapid change until 1956, maintaining its 3.1 percent growth rate until the year 1966. In 1976 census, however, population growth programs reduced the speed of growth (however minimal). After the victory of Islamic Revolution and implementation of new population policies (direct and indirect encouragements for more births by the government) on one hand, the outbreak of Imposed War on the other hand, the pregnancy rate rose sharply to seven children in the years 1980 until 1986. This speeded up population growth in the early years of 80s so that in 1986 census the figure jumped to the unprecedented 3.9 percent.

Since 1987, due to economic hardships on one side, and promotion of family planning knowledge and technology as well as increased public awareness of women and families on the other side, the pregnancy rate declined and pushed population growth down in the second half of the decade. With the end of war in 1988, the Reconstruction Period enforced population control policies. Birth control was one of the most important policies of the First Socioeconomic and Cultural Development Plan of the Islamic Republic of Iran. According to this

policy, the government had been obligated to cover an average 24 percent of potentially pregnant women by the family planning program in order to prevent one million unexpected births during the plan. The Ministry of Health, Ministry of Education and IRIB played the pivotal roles in enforcement of this policy. The policy was also continued in the Second Development Plan. Expansion of education and healthcare as well as increased rural services paved the ground for social developments and a change in public attitude the impacts of which became palpable a decade later. This put the total pregnancy rate at 2.1 percent in 2000, and consequently population growth rate fell down. The decreased pregnancy rate in the second and third decades reduced population growth rate accordingly.

Diagram (1): Trends in Pregnancy Rate in Women

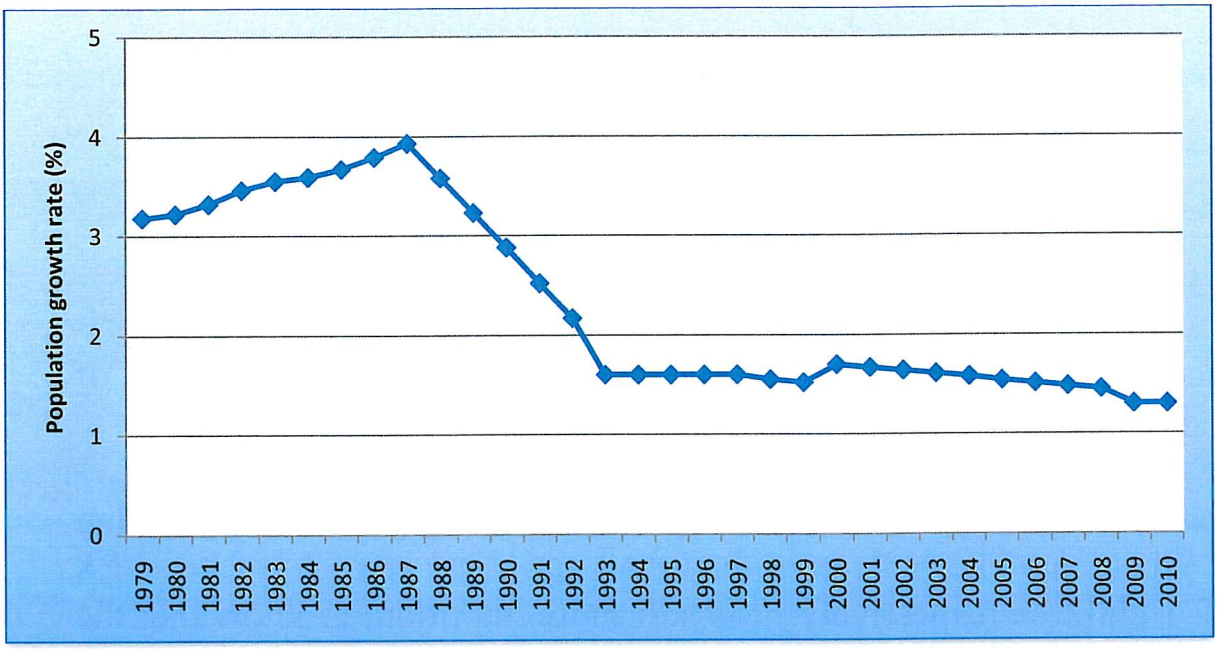


Source: Extracted from and evaluated based on population reports of Statistical Center of Iran

The 2006 census signifies this reality that total pregnancy rate has fallen by 1.9 percent. The indicators for urban and rural areas have been 1.8 and 2.1 children respectively. It is still more important to know that the pregnancy level has become below the standard (total pregnancy rate below 2.1 children) in the country. Even some provinces have experienced very low pregnancy rate. In 2006, four provinces recorded pregnancy rates between 1.2 and 1.6 children and 13 provinces recorded pregnancy rates between 1.7 and 2.1 children. The total pregnancy rate in 12 provinces was between 2.1 and 2.4 but in Hormozgan Province the figure stood at 2.5 children while Sistan-Baluchestan made a record by registering 3.7 children in the country (Abbasi & Others, to be published).

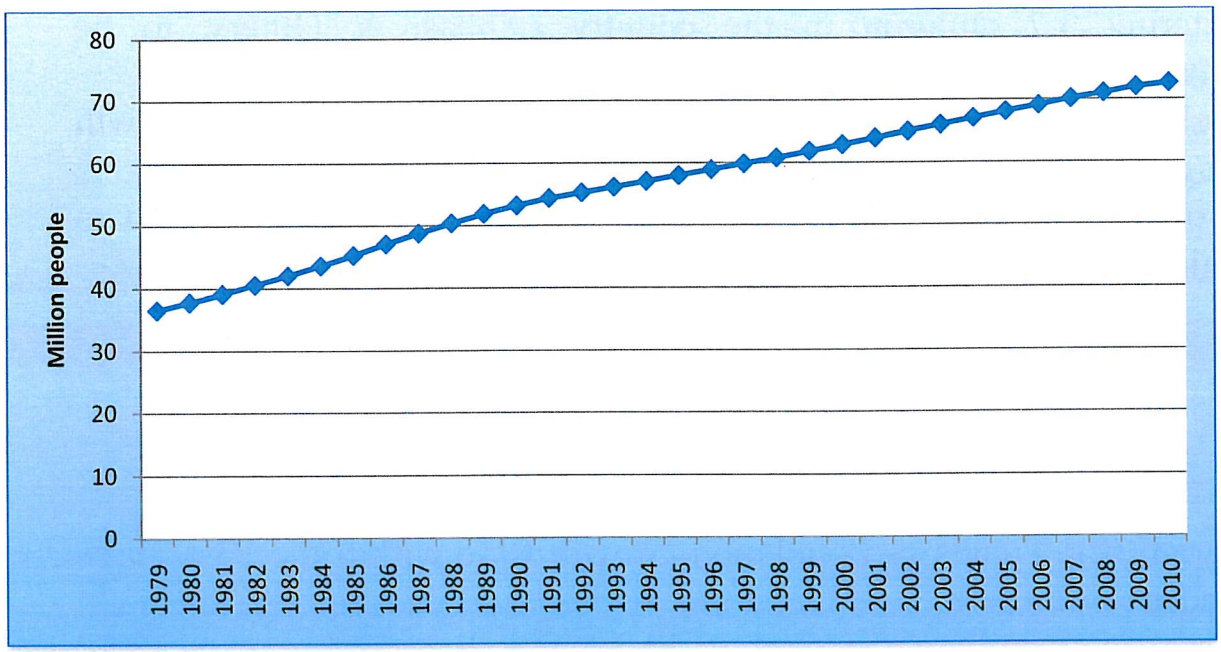
The sharp fall in pregnancy rate and consequently in population growth during the recent years became the major concern of the policymakers and officials of the Islamic Republic of Iran and made them tend to population growth policies.

Diagram (2): Trends in Population Growth Rate within the Past Three Decades



Source: Extracted from and evaluated based on population reports of Statistical Center of Iran

Diagram (3): General Population Growth Rate of the Country within the Past Thirty Years



Source: Extracted from and evaluated based on population reports of Statistical Center of Iran

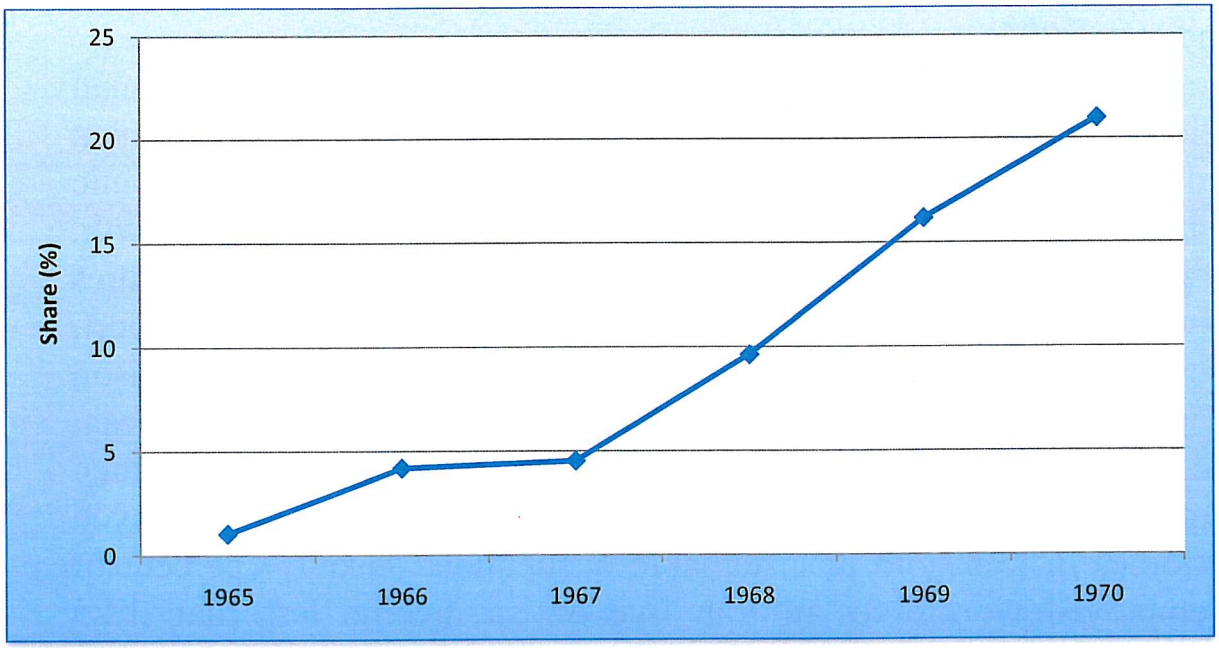
Some surveys suggest that pregnancy rate in Iran has been successfully reduced in all provinces, rural and urban areas. Despite economic and social differences among the provinces, there are many similarities in population demography among the provinces and the rural and urban areas. The trend is indicative of a sort of convergence in pregnancy behavior in the country. (Abbasi Shwazi, 2002). Although there are diversified levels and patterns for pregnancy across the country, the extent of differences has been moderated (Abbasi Shwazi and Associates, 2005).

The United Nations Development Program in its 2010 human development report has shown that in 1991 over 45.9 percent of Iranian population between 15-64 years of age were busy with economic activities. The figure in 2008 stood at 48.9 with four percent growth. This growth signifies acceleration in creation of new job opportunities in contrast with growth in workforce during this period. The report, however, says that Iran has less employed population in comparison with developed nations. From the total employed workforce in Iran, some 56.8 percent are official employees with less percentage of women in comparison with men. Almost 42.7 percent of the total employed workforces in Iran hold unsustainable occupation. Also 1.9 percent of the employed workforces in Iran live on an income less than 1.25 dollars per day.

One of the human capital indicators is the percentage of university graduates in total employment rate of the country. The higher the percentage of university graduates employment rate, the more will be application of knowledge in economic activities and occupations. University graduates are usually employed in instruction, management, data gathering and analysis and information technology occupations. MA/MSc and PhD graduates are called knowledge workers.

In the first decade after the establishment of Islamic Republic of Iran university graduates enjoyed five percent of the total employment market. During the past thirty years, the rate grew steadily to reach 20 percent in 2009, i.e. four-fold increase. The growth rate was low in the first decade because of the lower student admissions. With the creation of new capacities in the second decade the employment rate of university graduates went up in the second and third decades. With respect to the existing student population in the country the university graduates employment rate is also expected to rise considerably.

Diagram (4): Trends in Employment Rate of University Graduates from the Total Employment Rate

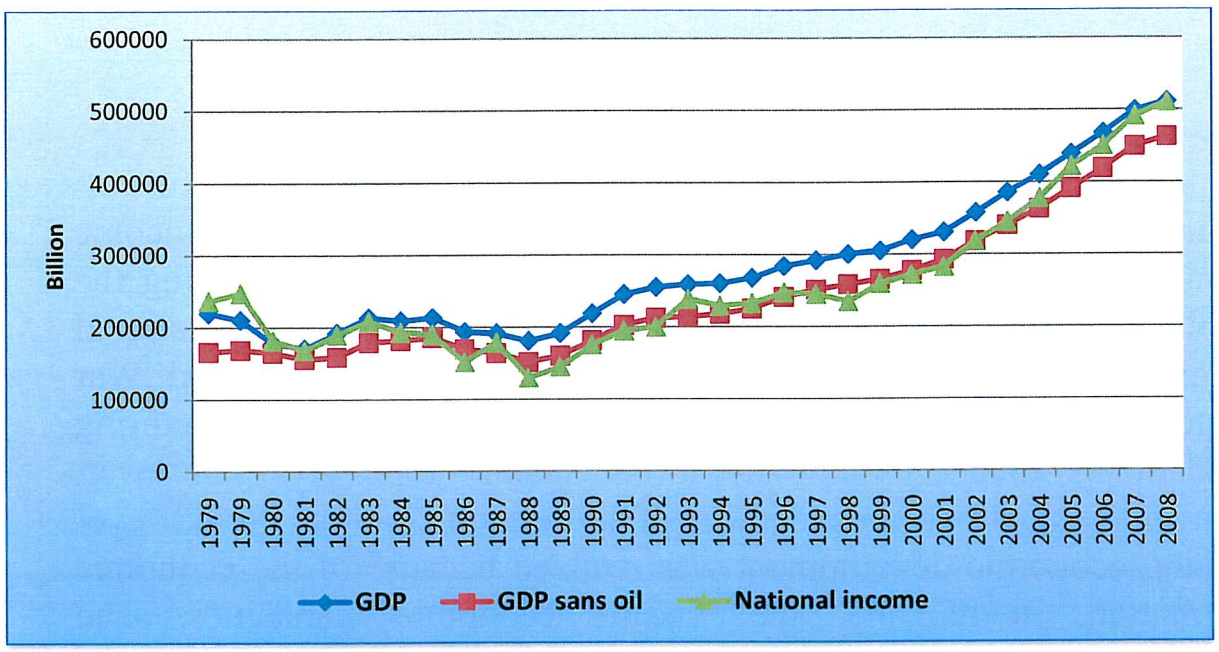


Source: Until 2006, calculated and evaluated based on statistical reports of Statistical Center of Iran; 2004 figure anticipated based on the objectives of the Fifth Development Plan

2- National Income and GDP

A survey of the gross domestic product (GDP) and national income during the past three decades suggests that in the period marking the establishment of the Islamic Republic in Iran, the GDP and national income have experienced ups and downs due to the Imposed War (reduction in capital formation and destruction of manufacturing foundations), and economic sanctions against Iran. After the war, however, with the commencement of the Reconstruction Period, eye-catching economic development was realized because of the economic reformation, revitalizing the vacant economic capacities, and resumption of oil production and exports. Then, as a result, the economic growth slowed down because of no new economic capacities and the emergence of downward factors in production field. In the third decade, economic growth was improved considerably because of economic reformation and development of manufacturing infrastructures in the second decade, as well as improvisation and normalization of economic, social and political relations with the world (specially with the West), and soaring oil prices (Diagram 14-4).

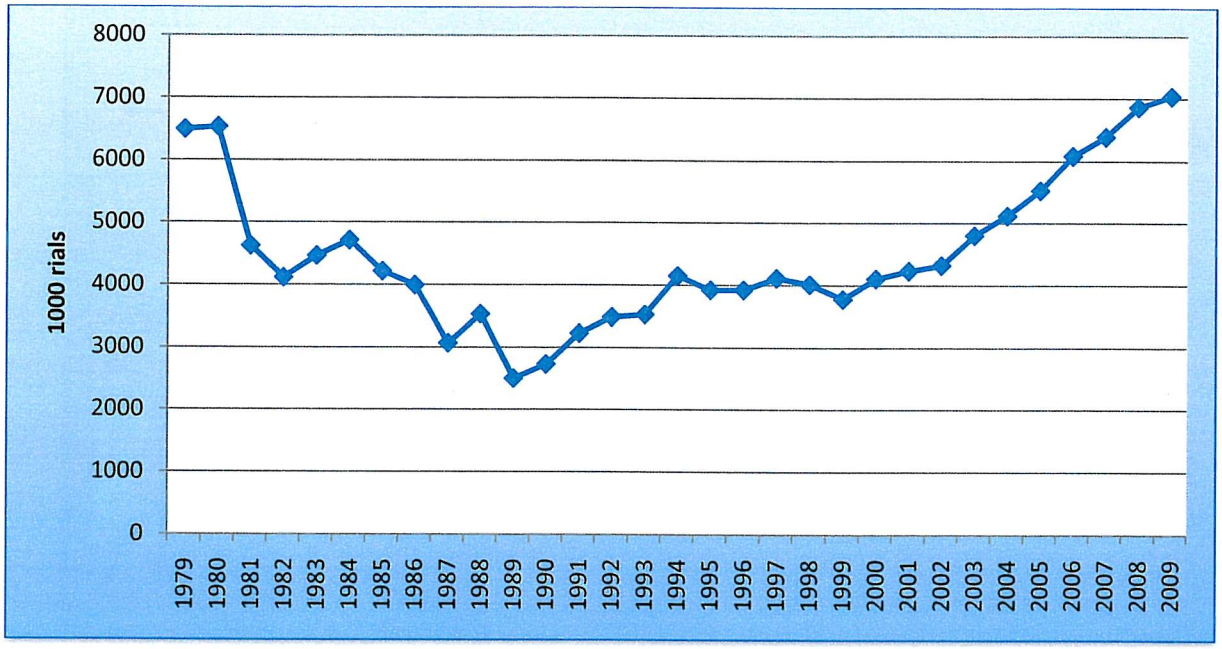
Diagram (5): Trends in GDP and National Income based on 1997 Constant prices



Source: Central Bank of Iran: Economic Time Series Database

The per capita index, meaning national income divided by the total population, follows the trend of these two variables. In the decade marking the establishment of the Islamic Republic of Iran, the reduction in income and increase in population were high. Therefore, the annual per capita income fell sharply and reached two million rials in 1988 from six million rials in 1978 after some fluctuations. In the early years of the second decade, an increase in the national production and decrease in population growth pushed the per capita income up to four million rials in 1993. In 1993-2000 period, due to the decline in oil prices and consequently in oil income, the per capita income's growth was hindered but came back to the growing track in 2002 with the rise in oil income.

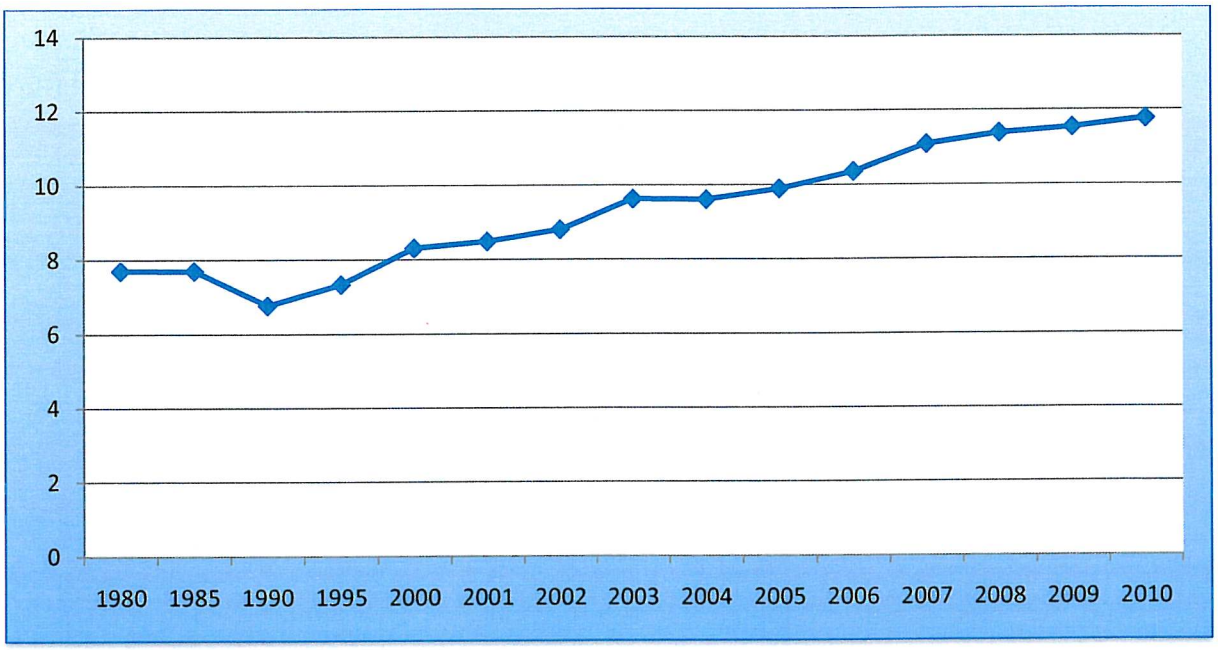
Diagram (6): National Per Capita Income based in 1997 Constant prices



Source: Central Bank of Iran: Economic Time Series Database

Diagram (16-4) depicts Iran's per capita income in international dollar value and the national purchasing power parity (PPP). As it is seen, the national per capita during the Imposed War was very low with its minimum in closing years of 80s. After the war and with the resumption of oil exports the per capita income grew accordingly and it has been on steady rise to date.

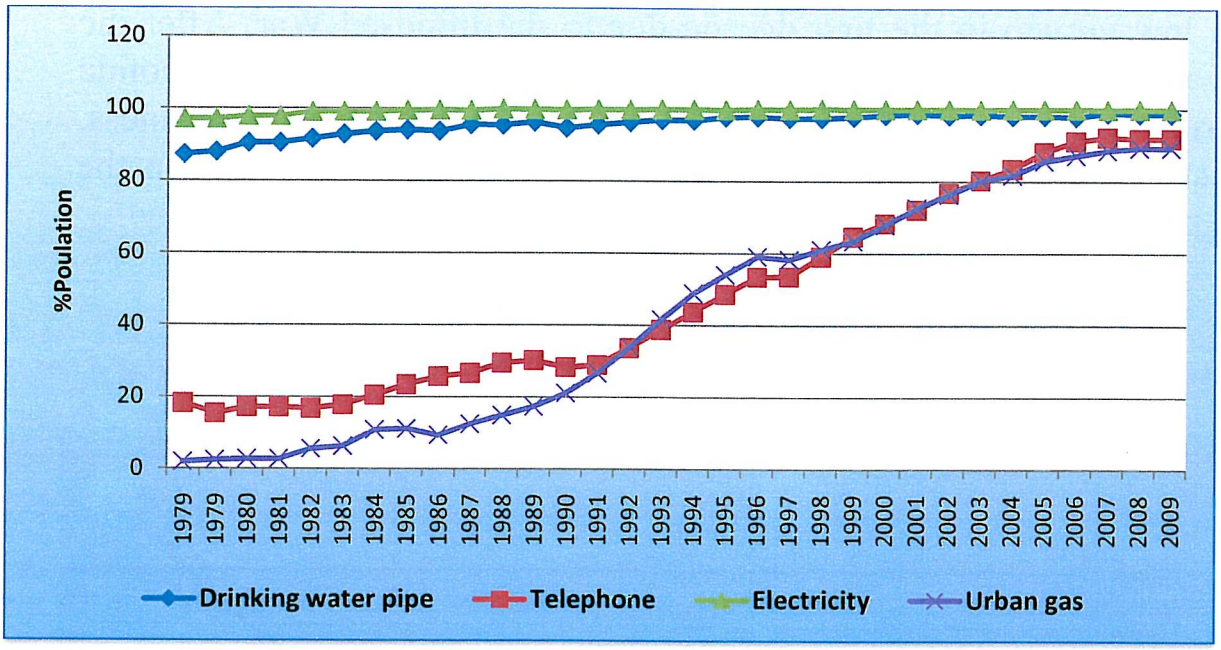
Diagram (7): National Per Capita Income (PPP)



Source: Central Bank of Iran: Economic Time Series Database

Electricity, gas, water supply, telephone and sewage system play an infrastructural role in the manufacturing and distribution system of the country, and form the life facilities for the individuals. The availability of these facilities to the population in a country is an indicative of the welfare level and development in that country. By availability of these services, we mean the percentage of people enjoying these facilities.

Diagram (8): Availability of Physical Life Facilities



Source: Central Bank of Iran: Economic Time Series Database

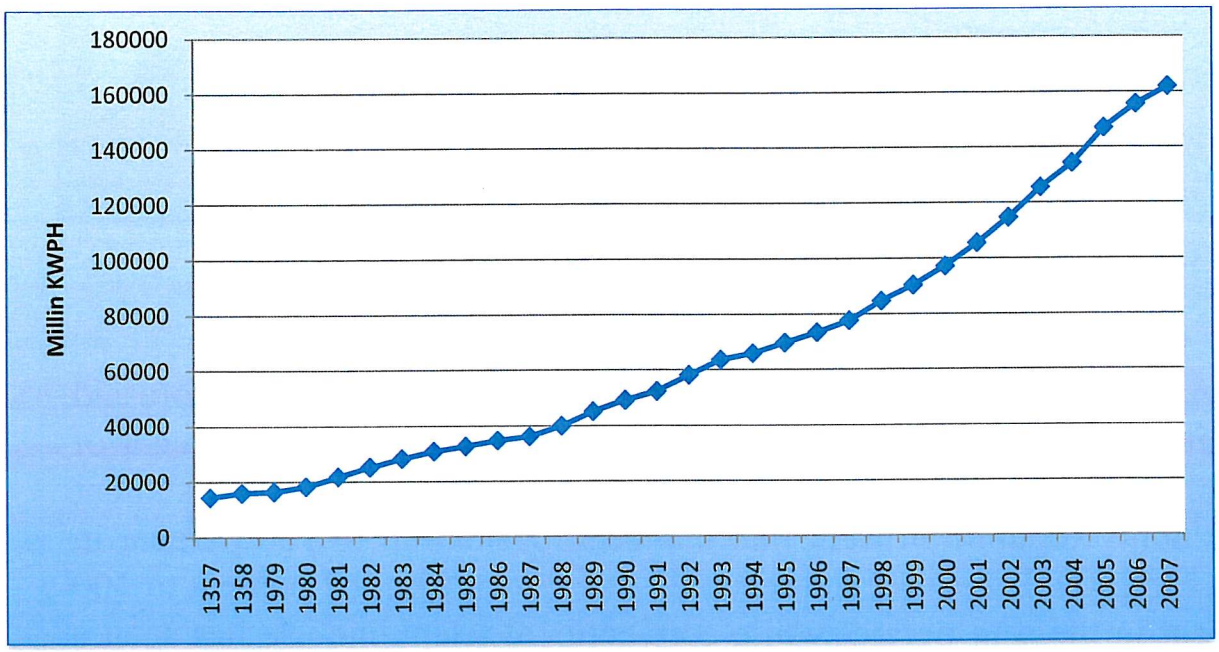
Diagram (7) depicts developments in the availability of the aforesaid facilities for the Iranian population. As it is seen, almost 97 percent of population enjoyed electricity in the early years after the establishment of Islamic Republic in Iran, that has been pushed up to 100 percent in the year 2009. Likewise, water supply has grown from 87 percent to 100 percent in the said period, while conventional telephone use has seen a sharp rise from 18 percent to 92 percent and access to city gas from two percent to 90 percent. This shows a relative improvement in the welfare of Iranian population.

Non-muscular energy is the most important manufacturing source, second only to labor force. The industrial and manufacturing use of energy relates to electricity consumption, oil and derivatives, and gas. Hereunder we will study these energy consuming areas.

As it is seen in Diagram (8) electricity consumption during the past three decades has been on the rise with steady median annual rate of 8.5 percent. Household electricity consumption has always taken the lion's share of power consumption and the figure has always been on the rise with the population growth. Industrial use of electricity comes second

with low growth in the first decade due to the Imposed War. After the war, with the commencement of Reconstruction Period and economic reformation, promotion of national production and private business, industrial use of electricity grew substantially. This is also true in the case of public business and agriculture.

Diagram (9): Trends in Electricity Consumption in the Country



Source: Central Bank of Iran: Economic Time Series Database

3- Trends in Healthcare and Medical Treatment

The healthcare system in Iran is under the influence of other systems such as educational, economic, political, cultural and even social systems. Therefore, development in this sector is a function of

developments in the aforementioned systems. The healthcare system in Iran can be divided into two subsystems of healthcare and medical treatment. These two subsystems assure public health in cooperation with each other. The healthcare and medical systems can be categorized based on geographical regions, as well as payment system, and way of financing each system. This type of categorization – used more commonly today – clarifies financial connections between the involved organizations, type of the existing healthcare and medical organizations as well as the general strategies of the system. The developments in the healthcare system and its subsystems in national and regional levels are evaluated by healthcare and medical indicators.

The healthcare system in Iran works based on an integrated network comprising of the following three levels (Website of Vista Magazine, 2011). The first level includes units that establish the first and vastest contacts of the society with the healthcare service system. These units are health house, healthcare and medical centers in rural and urban areas. People working in the health houses are chiefly health providers and those in the rural and urban centers are general practitioners, health attendants and technicians.

The second level includes units that are capable of offering specialized healthcare and medical services. These units are health clinics and hospitals in the townships. In the health clinics highly trained and experienced general practitioners with a collection of healthcare experts and diagnostic equipment such as laboratory and radiology, dentistry and midwifery offer pertinent services. Hospital is special for hospitalization of patients and treatment of outpatients. In the Islamic Republic of Iran, the collection of units in the first and second level within the geographical limits of a township is called the healthcare and medical network of that township. The third level includes more specialized and highly specialized educational services serving as complementary to the second level. Specialized and highly specialized hospitals in the health centers of the province are placed in this category. In this level, medical and paramedical training is also offered. The mobility of patients in between these levels is carried out by a reference system.

Both public and private sectors are active in the healthcare system of Iran and offer medical and healthcare services to the patients together, although the public sector's share is more. From organizational point of view, the healthcare system of the country falls into two supervisory and executive bodies. The Ministry of Health and Medical Education is one of the supervisory organizations. All public and private universities of medical sciences are under the supervision of this ministry. Over 70.9 percent of medical institutes of the country are affiliated with the universities of medical sciences that are active under direct supervision of the Ministry of Health. Until before 1994, regional departments were responsible for the performance of some medical units but after that year, all these units underwent the control of medical universities. All health and medical centers such as clinics, polyclinics and healthcare centers are fully under the authority of Ministry of Health (Website of Vista Magazine, 2011).

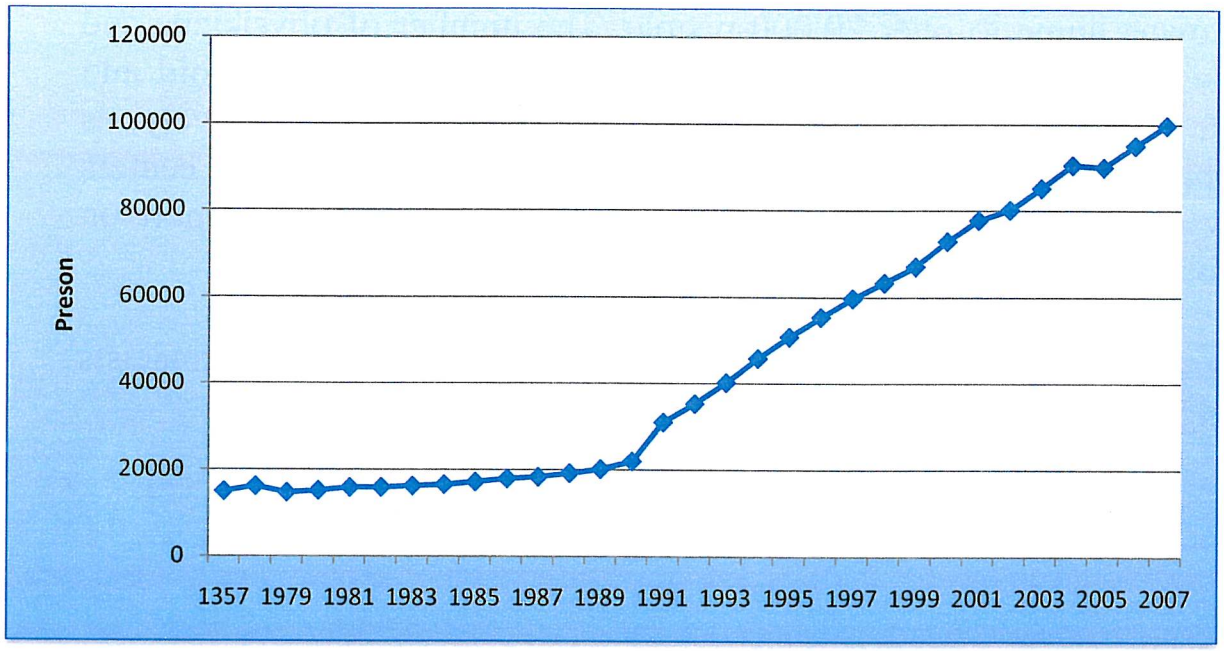
Some 18.8 percent of the total medical institutions in the country belong to the private sector. Similarly, the private sector owns 23 percent of the medical labs and 37.4 percent of radiology centers. In medical treatment sector, the Social Security Organization owns 2.75 percent of medical centers plus 3.2 percent of medical labs and 4.1 percent of radiology centers. In addition to offering healthcare and medical treatment services, the Social Security Organization is also one of the major medical insurance organizations.

It should be noted that 1.9 percent of medical centers belong to the charity foundations such as Martyrs Foundation and the Foundation for the War Handicapped and the Oppressed, and 1.5 percent of medical centers belong to the Welfare Organization. Also 0.9 percent of the total medical centers belong to the Ministry of Oil. Other state-run organizations and institutions own almost 1.07 percent of the medical centers (Website of Vista Magazine, 2011).

Health and medical services in the country are generally financed through three sectors: public sector (government), Social Security Organization and private sector (families). A limited percentage is also financially supported by the charity organizations. The current resources, of course, are not sufficient for development of the health

system of the country and it is difficult for the low-income people to meet their health and medical expenditures. The healthcare and medical manpower, such as the number of physicians, dentists, pharmacists, nurses, nurse's aids, hospital beds and medications are totally considered as the healthcare and medical facilities for a country. Diagrams 5-3 through 7-3 show that in the early years after the establishment of the Islamic Republic in Iran, the health coefficient was low due to the Imposed War and insufficient medical education. After the war, however, with the expansion of medical higher education, an eye-catching growth in the medical and healthcare facilities took place.

Diagram (10): Growing Trend in the Number of Physicians during the Recent Three Decades

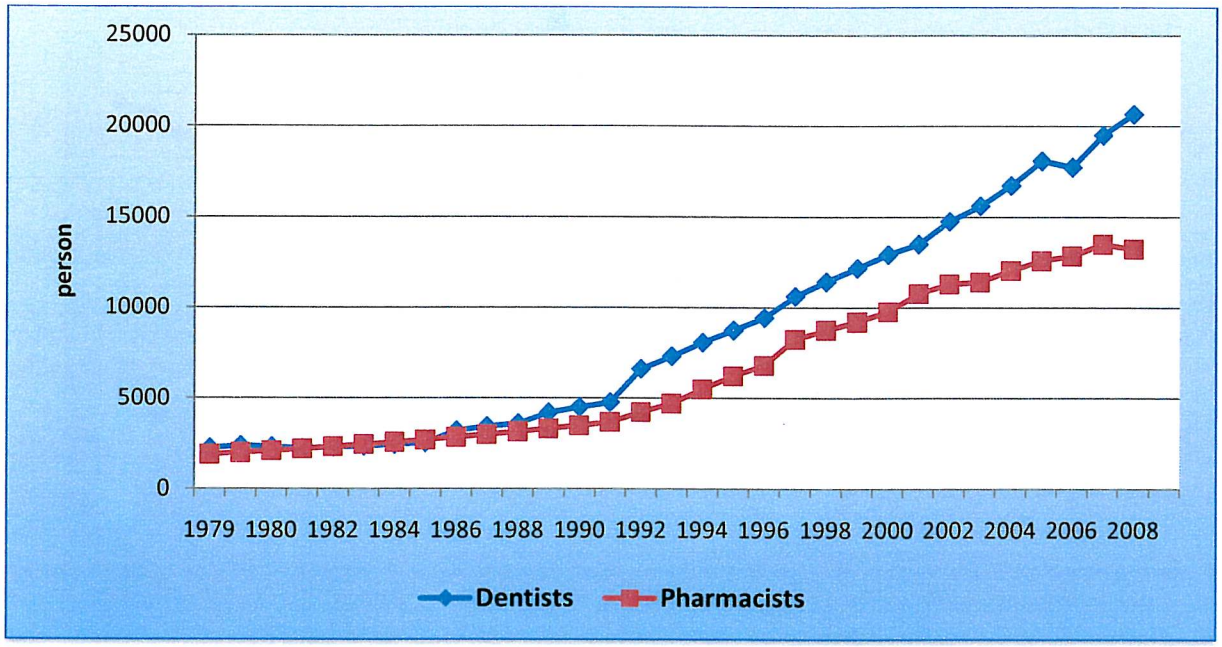


Source: Central Bank of Iran: Economic Time Series Database

In the third decade, unemployment of physicians made the officials pursue the policy of reducing student admission for medical courses. This pushed the number of physicians down during the recent four years. However, in the second half of the third decade, the "family physician plan" was introduced to solve the unemployment problem of the physicians.

During the past four years, the plan has been expanded considerably to cover over 25 million rural population plus people living in the towns below 20,000 population. Steps were also taken to generalize the plan to the towns home to over 20,000 people. The number of physicians and midwives working in the family physician plan grew by 4.4-fold and 2.4-fold to reach 5922 physicians and 4823 midwives respectively, as compared with the year 2005. The medicines in the healthcare centers grew by 4.5-fold to reach 270 items in the same period. (Report on Performance of Ministry of Health, 2009)

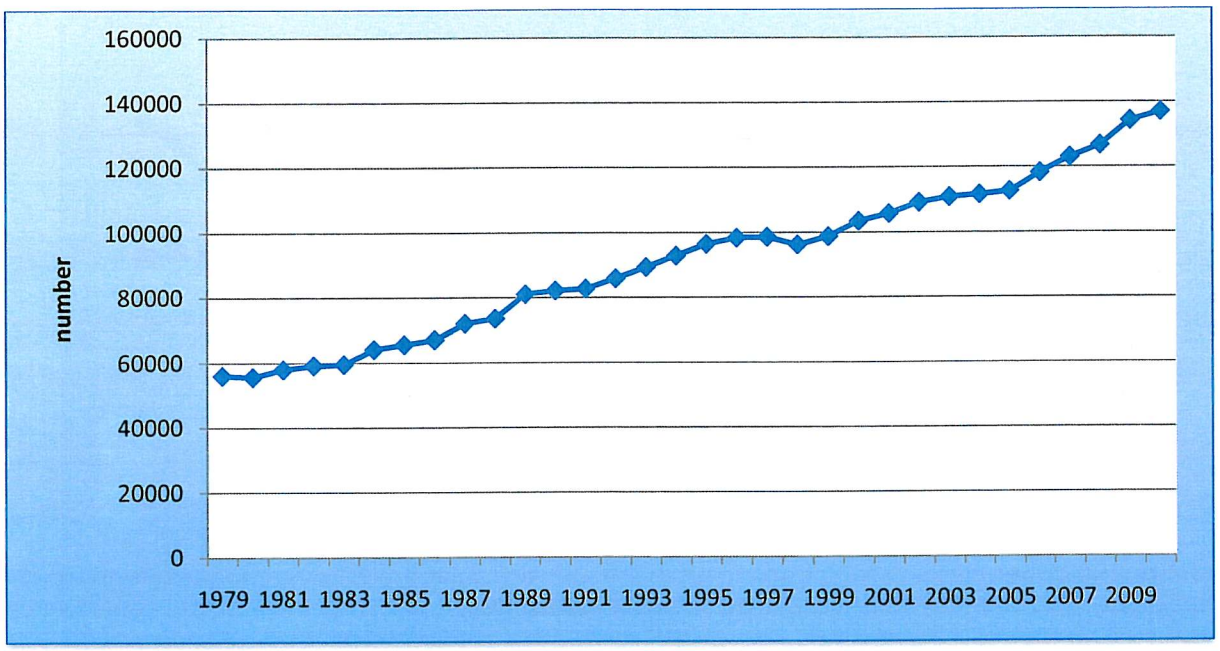
Diagram (11): Growth in the Number of Dentists and Pharmacists during the Past Three Decades



Source: Central Bank of Iran: Economic Time Series Database

Diagram (7-3) shows that the number of hospital beds has been steadily on the rise within the past thirty years, from 60,000 beds in the year 1979 to 140,000 beds in the year 2009. Due to increasing healthcare and medical services, the health coefficient was improved considerably so that the mortality rate in the infants declined from 14.46 percent per live births in 2005 to less than 12 percent per thousand live births in the year 2009. Also maternal mortality rate because of pregnancy and delivery problems fell from 27 percent to 22 percent per thousand live births in the year 2009. The under-five mortality rate, too, fell down from 26 per thousand live births in 2005 to less than 20 children in the year 2009. Also the mortality rate in under-one children was pushed down from 20.84 per thousand live births in 2005 to less than 18 infants per thousand live births in the year 2009. (Report on Performance of Ministry of Health, 2009)

Diagram (12): Trends in the Hospital Beds during the Past Three Decades



Source: Central Bank of Iran: Economic Time Series Database / Statistics of the last two years have been extracted from the Report on Performance of Ministry of Health.

A report by the Public Relations Department General of the Ministry of Health, published by Mehr News Agency says: Since 2005, the majority of health coefficients have been improved. The number of active hospitals in the country has grown from 809 hospitals in 2005 to 856 hospitals in 2009. As a result, the number of hospital beds grew from 97,600 to 114,600 beds (17000 beds in total). In the said period, the number of on-road and urban emergency medical services was increased from 630 to 1630 bases, and similarly the number of 115 Emergency Ambulance Service was pushed up from 1870 to 2880 ambulances. Also the number of medical equipment producers was increased from 350 to 415 companies, and medical equipments from 450 to 520 items. Medical labs, also, grew in number from 4233 to 4677. Health houses were also increased in number from 16,940 in September 205 to 17,370 in April 2009. The urban and rural healthcare and medical centers grew up from 4,560 to 5,100 centers, physicians active in family physician plan from 1,350 to 5,922, midwives in this plan from 200 to 4,823, and

treated patients in the plan from six million to 22 million. The number of people under the mental health program grew from 40 to 60 percent and the access rate of urban and rural population to primary healthcare services moved up from 92 to 94 percent. The coverage rate of screening inborn thyroid deficiency enjoyed a sharp rise from 11 percent to 88 percent, while the number of Drop-in Centers (DIP) soared from 12 to 74 centers. Also the number of mobile medical teams was increased from 20 to 125 teams, and the number of drug abuse centers (governmental) was increased from 27 to 132 centers. Also the coverage methadone maintenance treatment (MMT) (governmental) was augmented from 4,100 to 15,500 people.

The most important financial indicators of healthcare sector are health per capita expenditures, GDP share of health expenditures, general budget share of health expenditures, the share of private health expenditures in the total health expenditures, the share of public health expenditures in the total health expenditures, the share of health foreign resources in total health expenditures, and the share of health security expenditures in total health expenditures. In 80s, the per capita health expenditure in the country was around 65 dollars. The figure went up to 290 dollars in 90s, but in between 2001 and 2011 it was pushed down to 270 dollars in 2009.

The GDP share of health expenditures within the past thirty years has always been on the rise, so that it was increased from four percent in 1986 to almost six percent in 2001, and then to 6.5 percent in 2009. In 1986, the public and private sector financed healthcare in Iran by 55 and 45 percent respectively. In the first half of 2000s the private sector's contribution to healthcare slowed down to 53 percent and the public sector's contribution went up to 47 percent. However, in the second half of the period, the private sector's contribution rose again and public sector's contribution fell again to stand at 61 and 39 percent respectively. Also the health expenditures of the government from the total health expenditures moved up from seven percent in 1986 to 9.6 percent in 2001, and then to 11.5 in 2009. Foreign resources finance a relatively low 0.1 percent of healthcare sector in Iran.

Table (1): Health Financing Indicators

Health financing indicator	1986	2001	2007	2009
Ratio of health expenditure to GDP	4	5.9	6.4	6.5
Share of Govt. health expenditures in total health expenditures	45	37.0	46.8	39
Share of private health expenditures in total health expenditures	55	63.0	53.2	61
Share of Govt. health expenditures in total Govt. expenditures	7	9.6	11.5	11.5
Share of foreign sources of health in total health expenditures	0	0	0.1	0.1
Share of out of pocket expenditures in private health expenditures	97	95.9	95.4	97
Per capita expenditures in US dollars	65	290	253	269

Source: WHO databank

The total mortality and morbidity rate, mortality rate in pregnant women, live birth, infants mortality rate, under-five mortality rate, HIV outbreak, ... are the key health indicators. According to the Economic Time Series Database of World Bank in the year of establishment of Islamic Republic in Iran the mortality rate per 1000 population was 12. The indicator declined in the course of time to stand at six people in 2009. The under-five mortality rate plummeted from 127 people (from 1000 children under five) to 31 children. Also the infant mortality rate declined from 89 (from 1000 live births) to 26 infants.

According to a report Mehr News Agency quoted from the Public Relations Department General of the Ministry of Health: During the years 2005 and 2009, the mortality rate of fertilized women declined from 27 percent (per 1000 live births) to 22 percent, mortality rate of infants from 14.46 percent to less than 12 percent, mortality rate of under-one children from 20.84 percent to less than 18 percent, and mortality rate of under-five children from 26 percent to less than 20 percent (per 1000 live births). In connection with HIV claims in injecting drug users, according to control and screening programs in prisons the HIV spread went down from 3.24 percent to 1.75 percent. In the meantime the number of HIV patients under anti-AIDS program was increased from 156 to 302 people.

According to this report, in medical treatment sector, too, during the past four years, the number of domestically manufactured medicines

was increased from 906 items to 2,416 items. The number of pharmacies increased from 7,3300 to 8.884, natural medicines from 134 items to 386 items, biotechnological medicines from two to nine items, raw materials for medicines from 88 to 133 items, medicinal raw materials manufacturing units from 37 to 44 factories, medicinal and toxicological information centers from 17 to 35 centers, and medicinal export from 47.6 million dollars to 61.3 million dollars.

In medical education sector, the achievements are eye-catching, so that outstanding increases have been observed in: the number of students admitted to all medical courses in all levels from 21,000 to 26,200 students, professional medical doctorate capacities from 2,725 to 4,661 students, PhD students from 192 to 427, medical residency from 1,453 to 1,803, fellowship students from 115 to 187 students, MSc students of medical fields from 817 people to 1309 people, continuing medical education (CME) programs from 4217 to 5503 programs, new, reviewed and ratified educational programs from 13 to 67 programs, student transfer from abroad to Iran from 94 to 163 cases, number of PhD courses from 24 to 39, and number of CME courses for medical society from 2737 to 5502 programs.

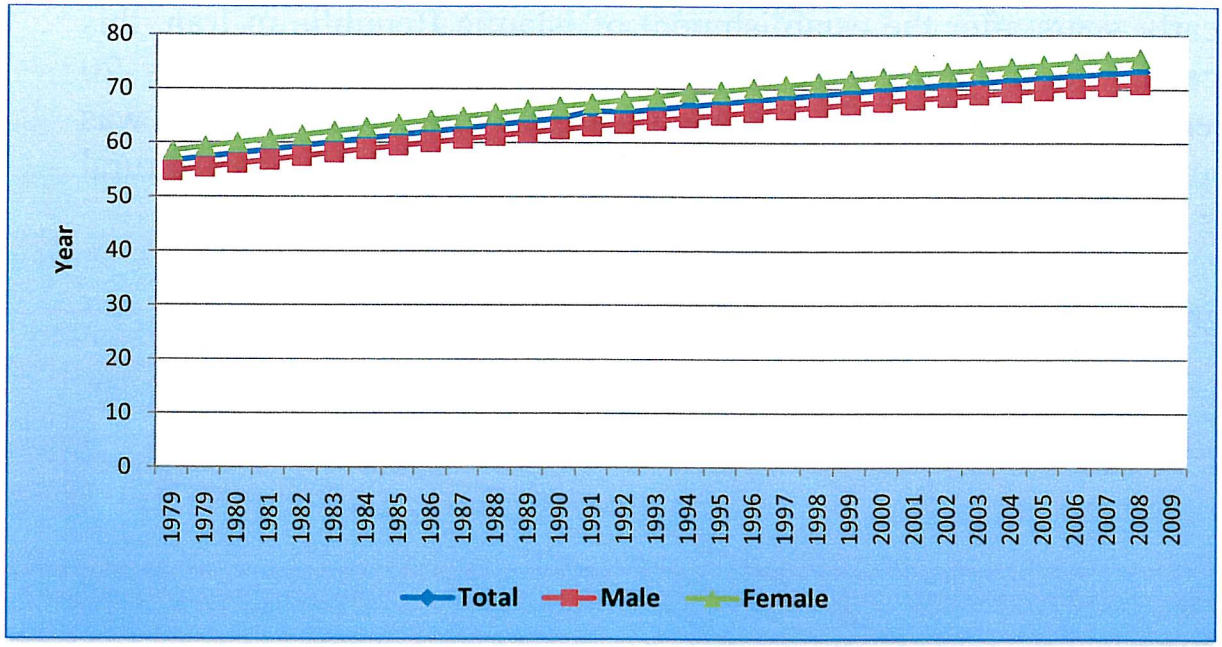
In medical research sector, the number of electronic libraries in the universities of medical sciences went up from 23 to 42 libraries, and other achievements were the growth in number of medical research centers from 115 to 220 centers, research projects from 5564 to 6816 projects, researchers at the universities of medical sciences from 9209 to 11000, medical research networks from eight to 11 networks, GDP share of research budget from 0.1 percent to 0.9 percent, and registered medical inventions from four to 209 cases.

As in student and cultural affairs, the achievements were the following: outstanding increase in the number of mosques and student prayer chapels from 595 to 653 units, open-air students sports per capita from 0.8 to 1.2 square meters, medical students dispatches to minor pilgrimage to Mecca from 1400 to 3000 students, specialized experts at student consultation services from 149 to 216 people, and student consultation workshops and seminars from 502 to 780.

As in management and resources development sector, the healthcare and medical sector increased its share from 6.5 percent to seven percent. Administrative automation grew from 50 percent to 90 percent, on-the-job training of the managers soared from 50,000 to 170,000 people and the number of purchased ambulances increased from 450 units to 750 units.

The quality of population and the general system of health in the country are evaluated by the life expectancy indicator. This indicator shows the average life in a society and the length of time any member of the society normally likes to live. Life expectancy indicator rises with the hike in health and medical indicators. Therefore, life expectancy is another indicator for the quality of population. It is also an indicator for the development or backwardness of countries. Diagram (12) depicts developments in life expectancy indicator for both sexes separately. This diagram shows that in the early years of the establishment of Islamic Republic in Iran, the life expectancy rate in women, men and total population was 57.75, 54.04 and 44.85 years respectively. The indicator rose in the years of establishment of the Islamic government despite the outbreak of war and reached 65.43, 61.21 and 63.29 years in the year 1989. In the second period, life expectancy index enjoyed an accelerated growth due to the improvisation of healthcare standards in Iran standing at 71.2 year for women, 66.66 years for men and 68.87 years in general for both sexes in 1999. In the third decade, like the previous decade, the indicator rose again to be 75.75 years for women, 70.94 years for men, and 73.28 years in general in 2009. Data shows that the difference in life expectancy between men and women, like other countries, has been on steady rise to be 4.81 years in the year 2009.

Diagram (13): Trends in Life Expectancy Indicator, Both Sexes



Source: World Bank Databank

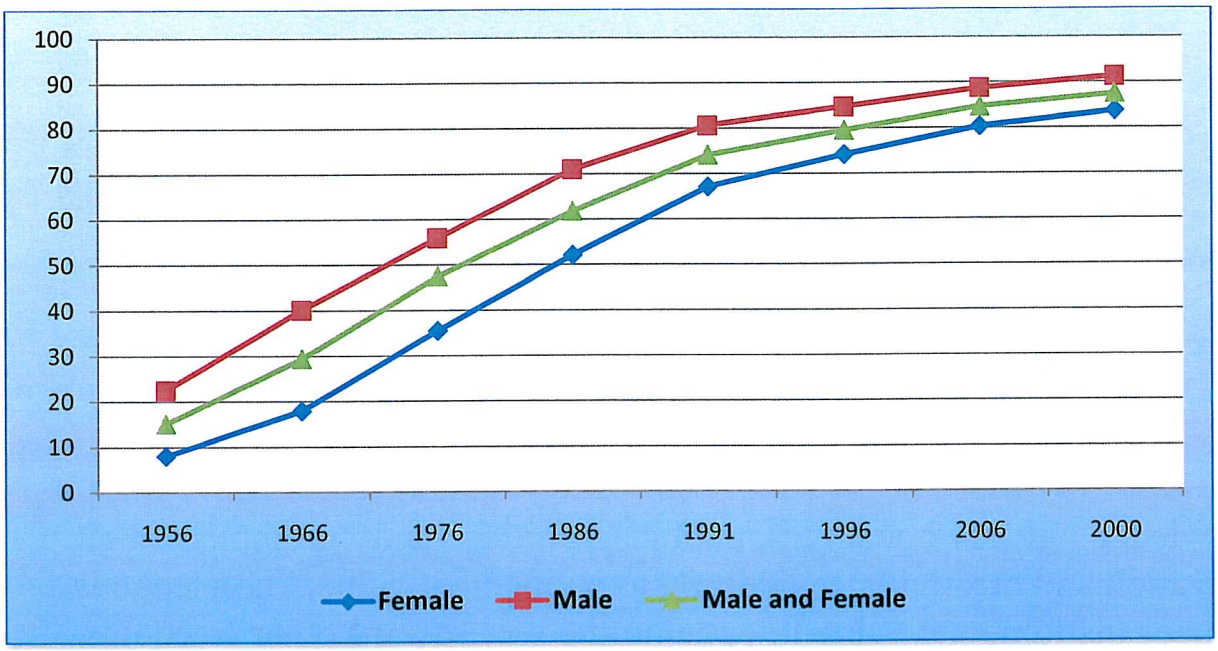
4- Developments in Public Knowledge

Knowledge gives boost to public facilities and promotes their innovation and creativity. In addition to its inherent value, knowledge is of major instrumental value in opening the way toward other freedoms. Learnedness enables people to follow up their interests and tendencies and make utmost use of their opportunities. Learned people know about avoiding hazards and making a comfortable and lengthy life. They are also after a good job with more income. Therefore, the knowledge rate in population of a country is the most important decisive factor in human development in that country. The population knowledge indicator is evaluated based on above-six literacy rate, mean schooling years, restoring hope to education, and the number of people with higher education. In this section we will study developments in knowledge rate of population based on the aforementioned indicators.

The literacy rate (meaning educated population divided by above-six population, and multiplied by 100) is one of the most important indicators for quality of population from the viewpoint of knowledge. In

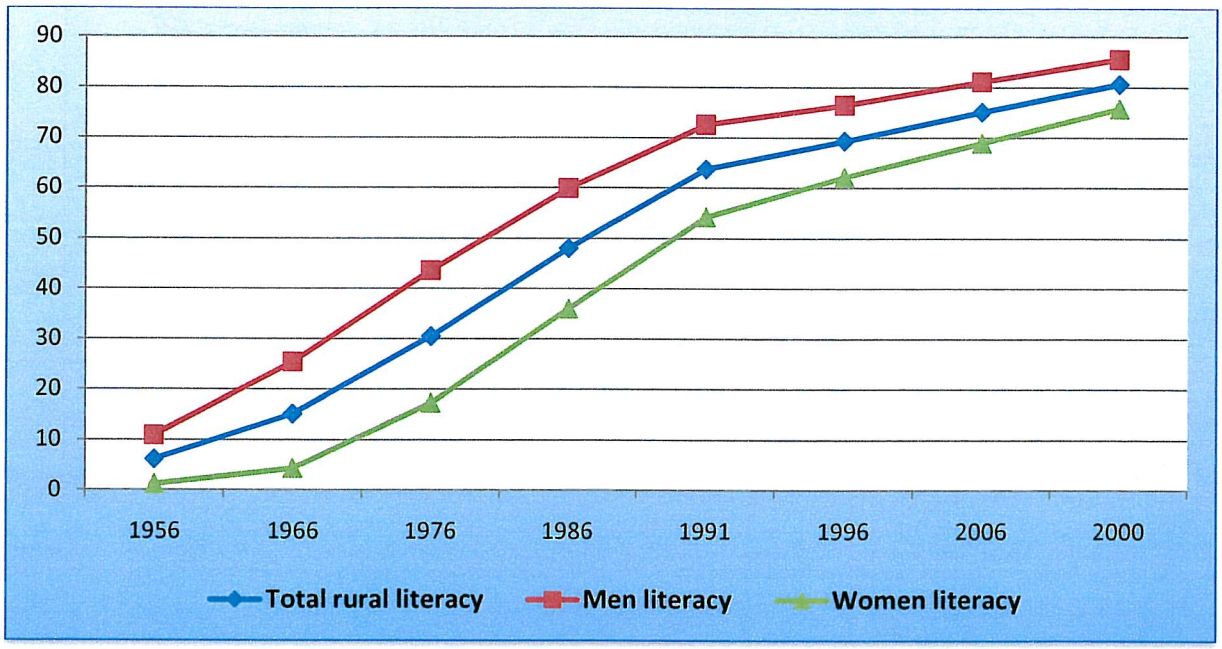
the early years after the establishment of Islamic Republic in Iran, this indicator was around 50 percent. The literacy rate in men was 20 percent above the rate in women and the literacy rate in urban areas was 25 percent above this rate in rural areas. The literacy gender gap in rural areas was higher than the gap in urban areas.

Diagram(14): Trends in Literacy Rate of the Country



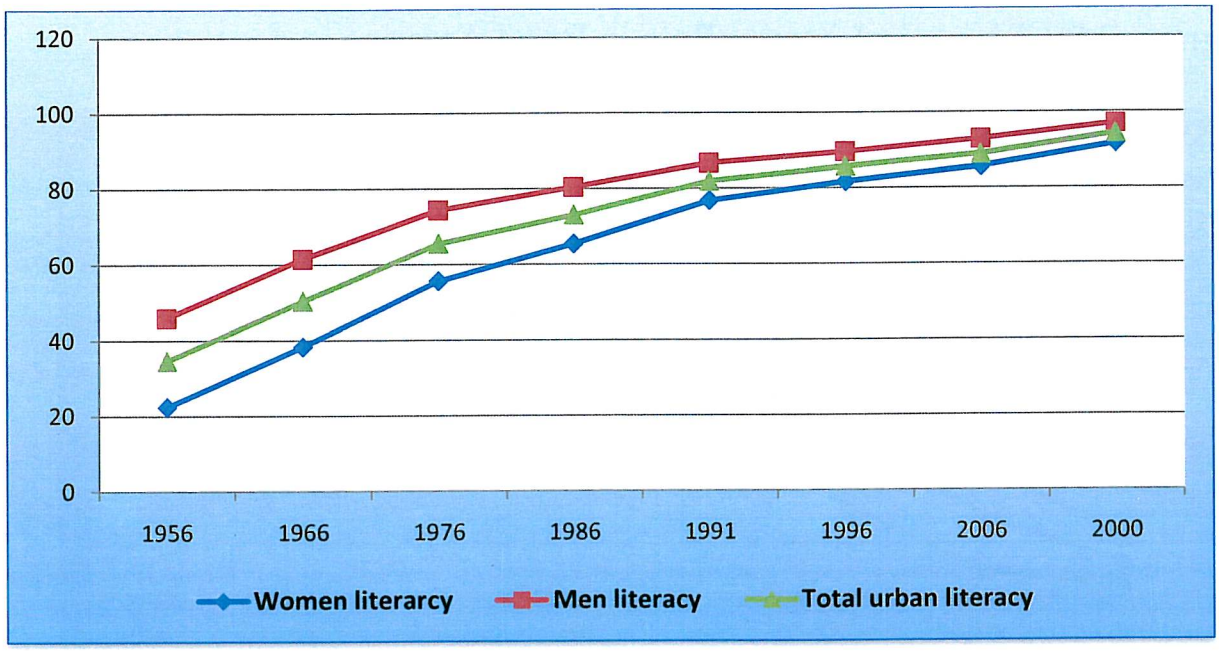
After the victory of Islamic Revolution in Iran, the Literacy Movement was established upon an order by Imam Khomeini to uproot illiteracy. The movement had plans to cover illiterate adults and deprived children. Therefore, the literacy rate was pushed up extensively to 67 percent in 1989 (17% growth) in the decade marked for the establishment of the Islamic government in Iran. Likewise, in the second decade, the literacy rate was increased considerably from 67 percent in 1989 to 82 percent in 1999, showing 12 percent growth. Due to the a reduction in the number of illiterate population in the third decade, the growth rate slowly moved up from 82 percent in 1999 to 87 percent in 2009, showing only five percent growth.

Diagram (15): Trends in Literacy Rate in Rural Areas



Source: Statistical Center of Iran, Databank on Economic and Social Variables

Diagram (16): Trends in Literacy Rate in Urban Areas

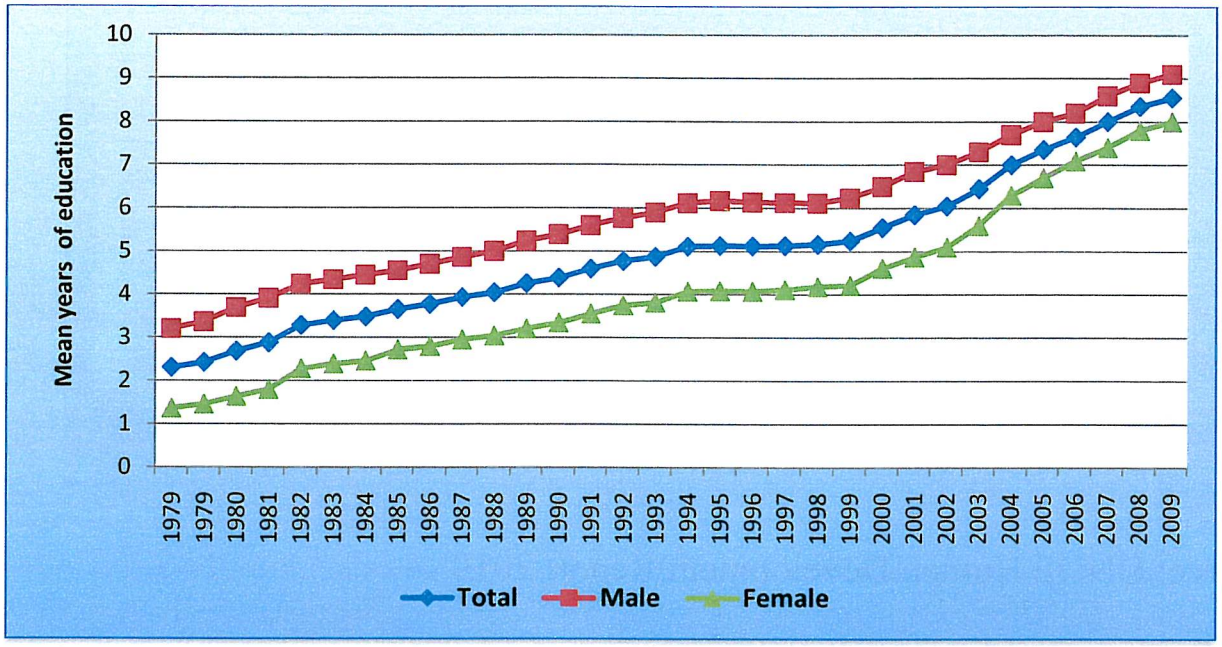


Source: Statistical Center of Iran, Databank on Economic and Social Variables

In 1978 the gross primary enrollment ratio was around 93 percent. After the revolution the figure moved up to 101 percent in 1986. In the following years, the indicator marked an eye-catching growth of 130 percent in 2006. Due to a reduction in the number of deprived children during the recent years, this indicator has fallen. Upon an increase in the educational coverage of children with 6-11 years of age and fixation of the gross enrollment rate at 100 percent, it is expected that the falling trend of the indicator would be continued.

Until before 2000s the participation rate of girls in primary school was lower than boys. After this decade, the equation was changed in favor of the girls so that in 2009 the participation rate of girls was 34 percent above this rate in boys (Diagram 3-5). This may tell about two facts: first, the higher number of deprived girls in the past decades and second, higher number of boys leaving schools for labor in less developed regions in the closing years of primary school.

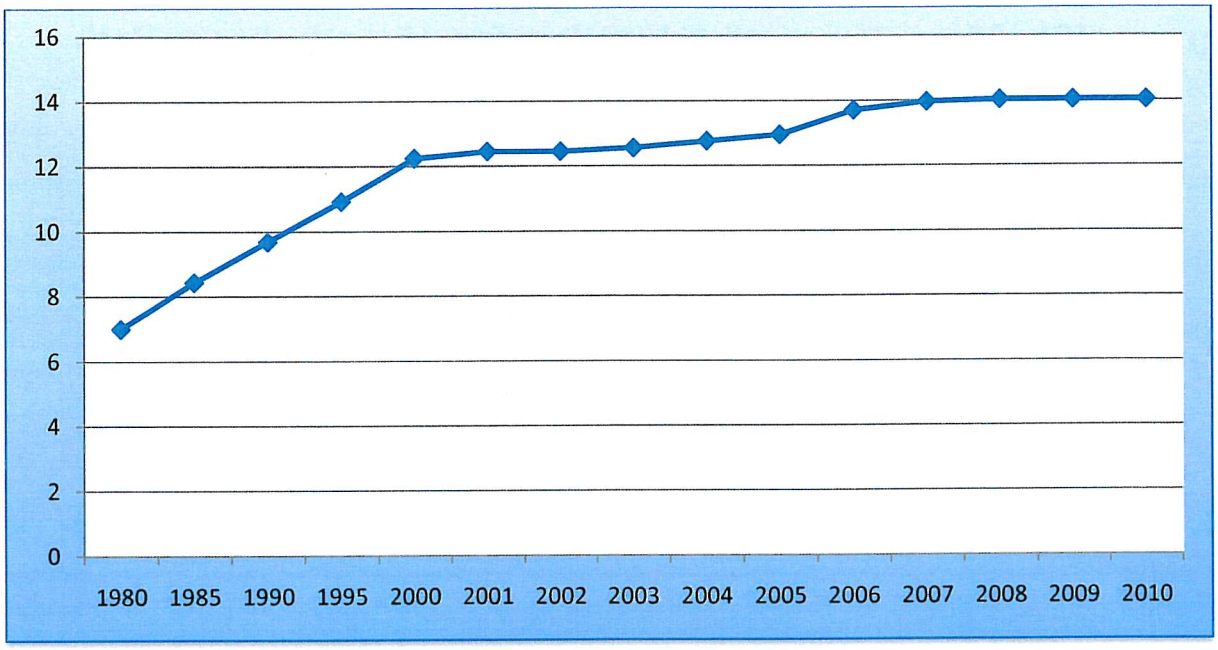
Diagram (17): Mean Years of Education for 15 and above, Both Sexes



Source: Until 2001, extracted from Economic Research Quarterly, Issue No. 23; from 2002 until 2009, calculated based on statistical reports of the Statistical Center of Iran

By expected years of education, we mean the number of years a pre-school child expects to enter the school and continue education in higher levels to gain official educational certificates in his life. This indicator gives the best picture of children's access to education.

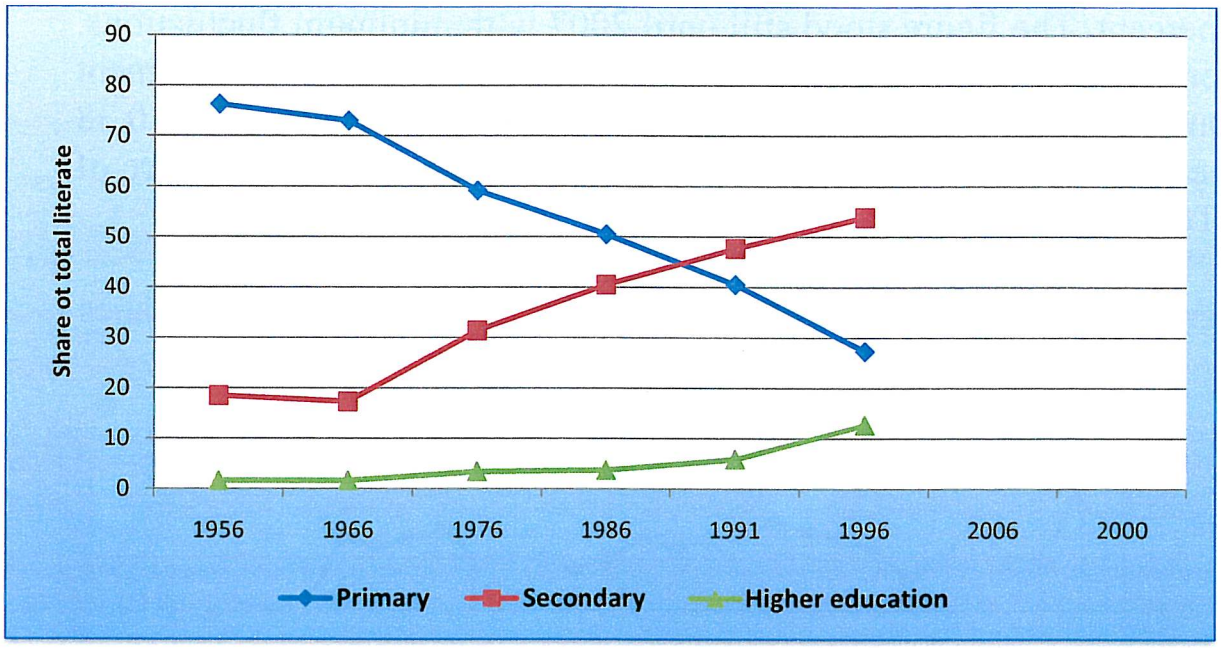
Diagram (18): Expected Years of Education



Source: UNDP Human Development Report 2010

The third indicator in quality of population from the viewpoint of knowledge concerns the number of highly educated population. Diagram (12-4) shows that in the course of time the percentage of primary literacy in the total literacy rate of the country has been diminished gradually and instead, the percentage of people with intermediate and higher education has been increased. However, until 1991, the primary literacy rate was above the intermediate literacy rate. The indicators in 2000s changed and primary literacy was reduced to 27 percent while intermediate literacy grew to 54 percent. The higher education ratio, too, was on steady rise until 1996, when its growth was accelerated and moved up from six percent in that year to 13 percent in 2006. In the year 2010, almost 30 percent of above-25 population held at least diploma of intermediate education. The growth is expected to continue in the coming decades as well.

Diagram (19): Trends in Ratio of Various Educational Levels in Total Literacy Rate



The degree of accumulated knowledge in the population of a country is measured by educational index. This index comprising of adolescent literacy rate and mixed gross enrollment rate in all educational levels measures relative success of a country in its educational system.[4] Diagram (19-5) depicts trends in Iran's educational index in the period 1980-2007. As it is seen, the growth of educational index in Iran in the two decades of 80s and 90s was considerable. However, it did not have notable growth in 2000s.

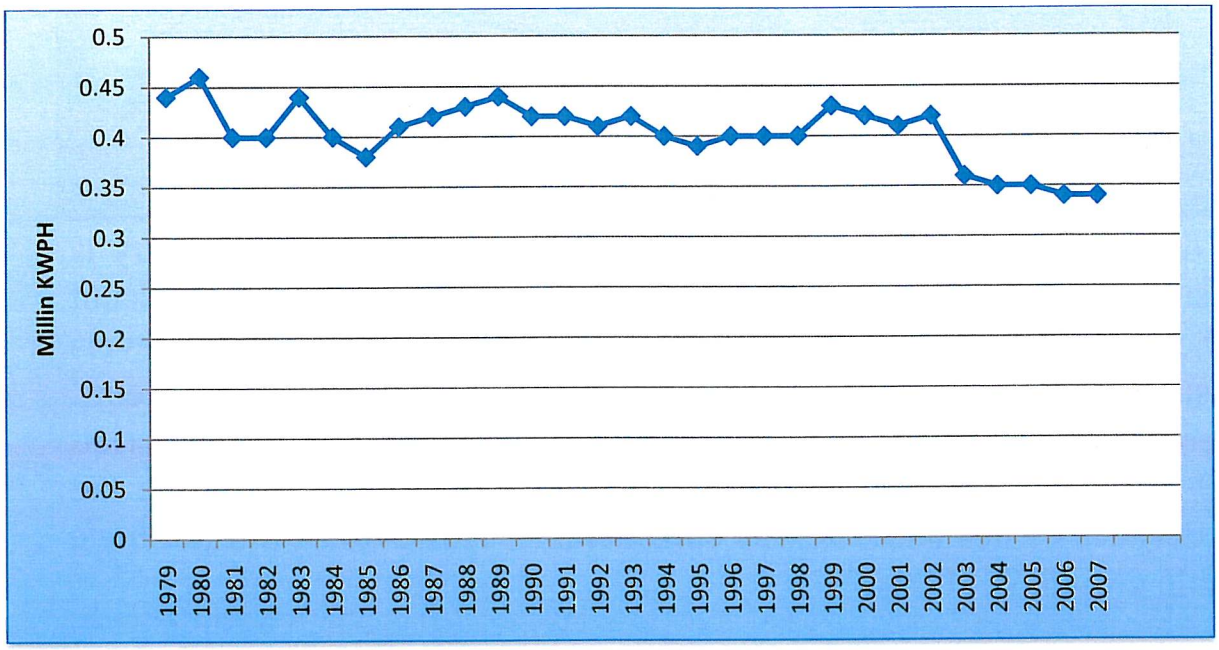
5- Social Development in Iran

Gini Coefficient is the most important indicator for distribution of income and wealth in a country. This indicator trends in domains 1 and zero. Indicator closer to zero means fair distribution and closer to 1 means unfair distribution of wealth. Diagram (24) depicts developments in Gini Coefficient in Iran during the past three decades. As it is seen, distribution of wealth in Iran in the early years after the establishment of Islamic government was disorganized and the coefficient had to experience fluctuations. With the establishment of new distribution policies in the years later, Gini Coefficient fell considerably to below

[4] For more information on way of calculating this index refer to UNDP Human Development Report

0.4 percent. The figure stood still until 2007 with minimum fluctuations. Enforcement of new distribution policies in the Ninth Government income distribution was improved and the coefficient reduced to 0.38 percent. The trend is expected to continue until the end of the tenure of the Tenth Government.

Diagram (20): Trends in Gini Coefficient during the Past Three Decades



Source: Central Bank of Iran, Economic Time Series Database

The UNDP Human Development Report 2010 has put the Gini Coefficient in Iran at 38.3. The figure shows no change in comparison with the previous report of UNDP. From the point of view of Gini Coefficient, Iran has gained the 63rd rank among 146 countries studied in this report. In other words, 62 countries in the world such as Norway

with Gini Coefficient of 25.8, Iceland with coefficient of 34, the Netherlands with coefficient of 30.9 and Sweden with coefficient of 25 have less inequality in income distribution. Of course, some industrial and developed countries such as the United States with Gini Coefficient of 40.8 have marked more income inequality in comparison with Iran.

The United Nations Development Program measures gender inequality in world countries by a criterion known as "gender inequality index". This index reflects the status of women in three human aspects, i.e. fertilization health, empowerment and manpower.

The fertilization health comprises of such variables as (1) pregnancy prevention ratio; (2) pregnancy care; (3) birth in the presence of health specialists; (4) maternal mortality rate; and (5) adolescent pregnancy rate. Empowerment has been considered from the two aspects of political participation (number of seats in the Parliament) and level of education (percentage of above-25 women with at least intermediate education). Contribution to labor market is measured by the workforce contribution indicator. The gender inequality index is variable from 0 to 1. Zero means women are fully equal with men in all indicators. One means women are poorer in all aspects. Therefore, the higher this figure, the more will be inequality between men and women in a country.

According to UNDP Human Development Report 2010, Iran's gender inequality index stands at 0.674, holding 98th rank among 194 world countries. In this category, Iran stands higher than such countries as Egypt with 108th rank, Honduras with 101st rank, Indonesia with 100th rank, Syria with 103rd rank, Morocco with 104th rank, Pakistan with 112th rank, India with 122nd rank, and Iraq with 123rd rank. The first rank belongs to the Netherlands with gender inequality index of 0.174, followed by Denmark and Sweden in the second and third ranks respectively.

According to this report, the maternal mortality rate in Iran during the years 2003 and 2008 was above 140 deaths per 100,000 births. The adolescent pregnancy rate during the years 1990 and 2008 was above 18.3 births per 1000 women of 15-19 years of age. Some 98 percent of pregnant women were under healthcare programs and 97 percent of the women had delivered in the presence of specialized personnel.

In the year 2008 women occupied over 2.8 percent of Parliament seats. According to 2010 statistics, 39 percent of above-25 women held diploma of intermediate education, while the figure for men was 57 percent. The workforce contribution rate for women was 32 against 73 for men.

Another indicator in human development, that is more psychological in nature, concerns the desirability of life or public satisfaction of private life in a society. This indicator comprises of three indicators of well-being, happiness and negative experience. Occupational satisfaction, individual health and living standards are the most important aspects of individual wellbeing. Purposeful life, respectful behavior, and social support network are major elements for happiness. These indicators were missing in the previous Human Development reports of the United Nations Development Programs. However, in its 2010 Human Development Report, this organization has calculated and presented desirability of individual life based on 2006-2009 statistics. The desirability of individual life or public satisfaction over life includes figures from 0 to 10. The higher this number, the better is living standard. This report has put the life satisfaction at 5.6 in Iran that is a little above the average point. Denmark scoring 8.2 owns the most satisfied people in the world. Norway comes second with 8.1, but Iran stands at the 84th rank among 174 world countries.

UNDP Human Development Report 2010 shows that 71 percent of the employed people are quite satisfied with their job; also, 82 percent of Iranians were pleased about their health and 55 percent were satisfied with their living standards. The figures were respectively 94, 84 and 93 percent for Denmark.

From the point of view of happiness, 87 percent of Iranians (according to UNDP statistics) have said they enjoyed a purposeful life and 81 percent have said they have been behaved honorably. The purposeful of life and social respect indicators were the same for both genders.

Also according to the same report, 62 percent of Iranian people enjoy social support networks and women enjoy more supports in comparison with men.

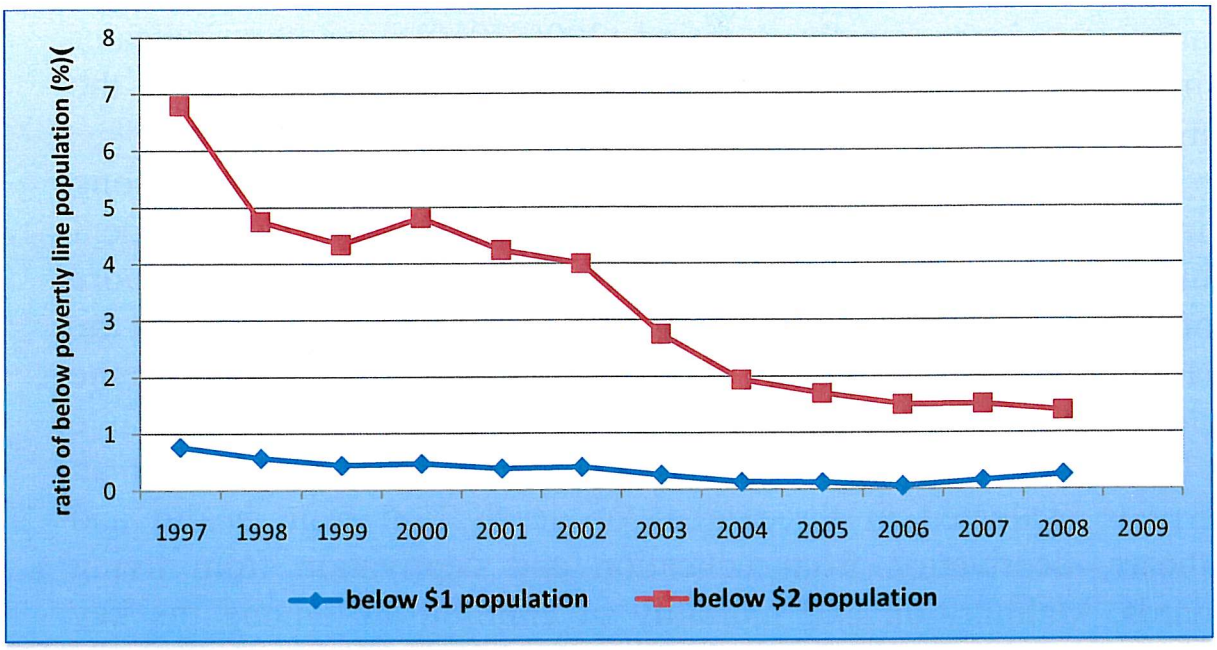
Negative experience is a fixed period (2006-2010) is another indicator varying from 0 to 100. The higher the figure, the less will be the negative experience. In this category Iran has gained 32.

Poor income and human poverty in the developing countries are among the important subjects discussed in the UNDP Human Development Report. In the meantime, the human poverty indicator or HPI is of more importance. It should be noted that human poverty is not included in the human development studies. The human poverty index in the developing countries focuses on a part of population indeed, who live on a level below the HDI or human development index criteria. Human poverty is evaluated in three areas of deprivation from health and healthcare, deprivation from education and deprivation from living standards. Malnutrition and mortality of children are among the key elements in deprivation from health and healthcare category. Deprivation from education is measured by schooling years and enrollment rates. Fuel for cooking, WC, water and power, and appropriate housing make the living standards.

The UNDP Human Development Report 2010 has no information on multi-dimensional human poverty indicator and its constituting indicators in Iran.

The following diagram shows that within the past decade, the percentage of population with below one dollar per day has reduced from 0.77 percent in 1997 to 0.26 percent. The percentage of population with less than two dollars per day has dropped from 6.8 percent in 1997 to 1.39 percent in 2008. The figure is expected to fall further in the coming years. The "Third Millennium Goals 2008 Report" however, that has been published by the United Nations and based on 2004 data, the value of human poverty indicator in Iran was 12.9 percent of the total population. In this category Iran possessed 94th rank among 177 world countries and 30th rank among 108 developing nations.

Diagram (21): Trends in poverty line; below One and Two Dollars Per Day Income



Source: Website of Statistical Center of Iran – MDG Database

According to the evaluations made on annual survey of family income and expenditures by the Statistical Center of Iran for the period of 1985-2000, the poverty census in Iran has dropped from 28 percent in the three-year period of 1985-1988 to 12 percent in the three-year period of 1987-2000. In terms of urban poverty this variable has dropped from 35 to 13 percent in the same period. The similar variables for rural population have been recorded as 20 and 12 percent respectively. The general poverty, however, has dropped from 32.6 percent in the period 1986-1990 to 28.7 percent in the period 1991-1995, showing four percent reduction only. On the other hand, in the period 1996-2000 poverty with a sudden fall stood at 14 percent to show a noticeable 15 percent decrease. In other words, the speed of poverty decline was higher in the period 1996-2000. This achievement was specifically more palpable in the rural communities. The urban poverty index had had the maximum drop in 90s. The eye-catching development in 90s has first been in favor of urban areas and it has reached rural areas in the second period of this decade.

Despite evaluations on absolute poverty line, studies on relative poverty line show that relative poverty in rural areas has moved up from 22 percent in 1992 to 28 percent in 2000. In this period, the indicator has gone up from 19 percent to 27 percent in urban areas.

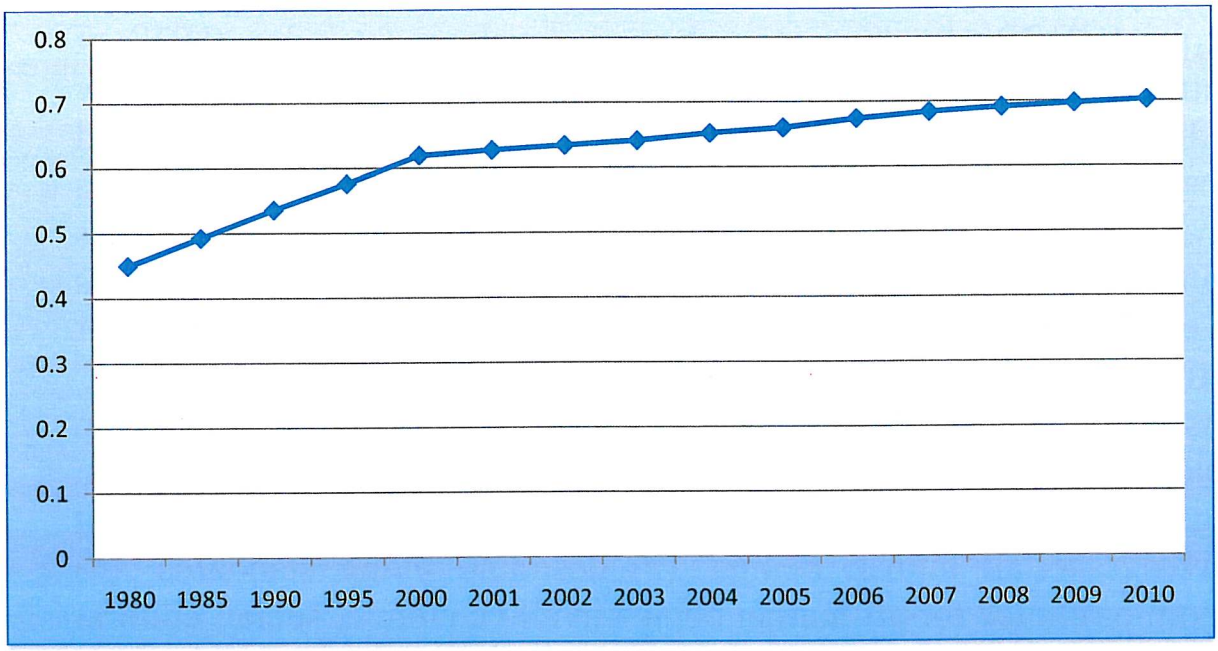
Conclusion

The first problems with development theories and the economic growth model in clarifying development for nations appeared in 1980s. Therefore, the United Nations Development Program published its first human development report in 1990 based on the human development theories. This report analyzed and evaluated the concept of human development based on three fundamental indices of gaining knowledge, access to required material for a better life, and enjoying high life expectancy coupled with health. The human development report is one of the most important and reliable socioeconomic reports of the world that is published every year by the United Nations Development Program (UNDP). In this report, human development index (HDI) of countries is calculated based on such criteria as life expectancy, quality of education, real and per capita income, and national income. All indicators for economic and social development are used to extract this indicator. In other words, it is one of the most comprehensive criterions to compare the degree of development in the countries. All governments as well as scientific and research organizations use HDI as a major criterion to compare the countries.

In its 2010 report, UNDP has constructed the concept of human development on five principles of (1) healthy and long life for all human beings in national and international levels; (2) availability of sufficient knowledge to all human beings; (3) desirable living standards; (4) freedom of choice for all human beings in all economic, social, cultural and political aspects; and (5) enjoying guaranteed human rights and self-respect. This is measured by a criterion called human development index or HDI and its supplementary concepts such as "inequality-adjusted HDI", gender inequality index, and multi-dimensional poverty index.

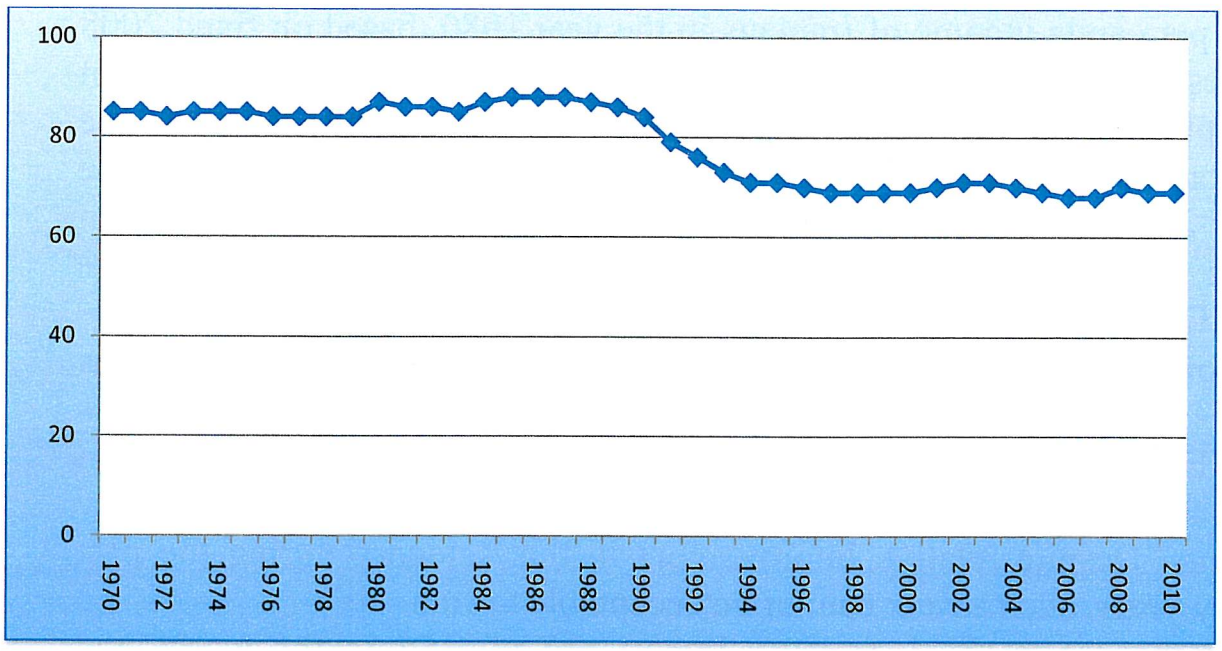
UNDP estimates show that in 1980 the human development index in Iran was 0.450 that was grown gradually to 0.702 in 2010. During the past thirty years HDI rank of Iran reduced by 31 units from 101st rank to be 70th. This promoted Iran from the group of medium human development index to the group of countries with high HDI standing (Diagram 26). Therefore, within the past five years, Iran has experienced the highest HDI rate (except the Republic of Azerbaijan) putting behind some important regional countries such as Armenia and Turkey.

Diagram (22): HDI Trends in Islamic Republic of Iran



Source: Human Development Report 2010

Diagram (23): Trends in Iran's HDI Rank



Source: Human Development Report 2010

According to the UNDP Human Development Report 2010, Iran stood third among 182 world countries in view of the speed of development with 22.1 percent growth in HDI after the victory of Islamic Revolution. Egypt and China stood first and second respectively while Iran had won the fourth rank in 2008.

Such a development in HDI has been realized through fundamental achievements in knowledge, healthcare and per capita income. According to the human development report, the literacy rate in above-15 population in 1977 was below 47 percent, while after the revolution the figure has outstandingly jumped high to over 84 percent.

The mean schooling years, as the traditional indicator for knowledge development, has jumped high from 2.17 percent in 1980 to 7.2 percent in 2010. The expected years of schooling, as the new indicator for knowledge development, has gone high from seven years in 1980 to 14.02 years in 2010, showing a double-fold increase. The life expectancy at birth, as a new indicator of health development, has been pushed up from 58.59 years in 1980 to 72 years in 2010. During the past thirty years, the life period of Iranians has been increased by almost 15 percent indeed (UNDP, 2010).

The per capita income of Iranians in the year 1980, based on fixed 2008 prices, has been almost 7704 USD ($PPP US). The figure fell down sharply during the eight years of war and increased again in the Reconstruction Period after the war to be 12 thousand US dollars in the year 2010 (UNDP, 2010). Access to sanitary potable water has grown from 51 percent of total population in 1977 to over 94 percent in 2009 (UNDP, 2009).

According to UNDP 2010 reports, gender inequality index value was 0.674 in Iran, giving the country 98th rank among 170 world countries (UNDP, 2010). This was because of inequality in political participation and inequality in labor market contributions and maternal mortality factors. Despite relative improvement in this category during the past thirty years, such a rank cannot be acceptable to Iran.

With respect to the increasing importance of HDI in the world, the Islamic Republic of Iran in its Article 24 of the Law of Fifth Development Plan has directly stressed on improving HDI and getting closer to the HDI standing of the developed countries. Of course, according to UNDP Human Development Report 2010, this has been realized to a great deal but it is hoped that government policies would promote Iran's HDI value still further to be among the more developed nations.

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Chapter Three: Cultural Achievements of I. R. of Iran within the Past Thirty Years

Abstract

The most important criteria in strategic management are to identify the existing state of affairs and to analyze the trends governing this state. Without this recognition and awareness, it is practically impossible to plan for the future. The Islamic Republic of Iran is going to celebrate the 33rd anniversary of the victory of Islamic Revolution. Picturing the trends within the past thirty years in cultural area will provide an appropriate ground for planning for the future and for anticipating future developments. This picture will both give a report on the cultural development under the Islamic Republic system in Iran and will realize a comparison on cultural achievements in international level in a bid to present a vivid and real picture of Iran's cultural achievements to the world.

In this research work, we have elaborated on culture in its specific definition and analyzed cultural achievements under the category of cultural sector (including the achievements and performance of the Ministry of Culture and Islamic Guidance) defined and anticipated in the upstream laws and the laws of the five-year development plans of the Islamic Republic of Iran:

- Written culture: including publishing industry such as books, the press, and similar paper works
- Movies and theater
- Music and related fields of activity
- Islamic knowledge and wisdom, including all activities related to education, promotion, and publicity on religious knowledge as well as rites and rituals meant to promote the Islamic sciences and understanding
- Art and related fields of activity

This chapter falls into two major parts. In the first, we will discuss the most important trends in art and culture realized under the cultural management of the nation, therewith, present the most important activities and programs. The second part we will present indicators in each subdivision for studying qualitative and quantitative development based on well-documented statistics and information.
Results show that great achievements have been made in cultural sector during the past thirty years both in qualitative and quantitative areas so that Iran could gain a unique status in the world. An ethical approach to art and culture and special attention to spirituality in these fields are among the outstanding preferences during the past three decades.

Introduction

The Islamic community of Iran during the past 32 years has experienced fundamental developments in many fields. With the establishment of Islamic Republic system of government in Iran in 1979, the political, economic, social, educational, scientific, judicial, defensive and law enforcement systems underwent great changes. Culture is believed to be the centerpiece of developments in all these fields. In another word, it can be said that culture could manifest expected performance in boosting and expanding the revolutionary system through transmitting its messages and values. This is why culture is believed to be the basis for all planning and activities of the Islamic Republic of Iran.
A deeper review of the ideals of the Ministry of Culture and Islamic Guidance will suggest that the cultural sector and administrators of this sector are expected to help the transfer of religious concepts, imaginations, and values to the masses. They are also expected to enliven and promote the revolutionary values. This is because the major reasons behind the establishment of the Ministry of Culture and Islamic Guidance were the growth of ethical merits based on belief and piety, cultural independence, immunity of the society from cultural penetration of foreigners, promoting public awareness on various fields, blossoming of the talents, promoting the spirit of research, innovation and invention

in the society, publicizing Islamic art and culture, awareness of the world over the principles, manifestations, and ideals of the Islamic Revolution, expansion of cultural ties with other nations specially with other Muslim countries and world oppressed, paving the ground for enhanced unity of Muslims, etc.

This report is the story of unified efforts by officials, cultural figures and artists who love and believe in the art and culture of this nation and live their life with an ambition to promote them.

Undoubtedly, it is impossible to cover the detailed compilation and presentation of these efforts and plans in this chapter.

In a plan entitled "Cultural Achievements of 31 Years of Islamic Republic of Iran (Ministry of Culture and Islamic Guidance)" authors tried to analyze the cultural achievements by two approaches. In the first approach the plan tried to study art and culture trends from statistical viewpoint. We tried to identify the most important cultural and artistic indicators related to the responsibilities of the Ministry of Culture and Islamic Guidance and review developments within the past 32 years. Books and book-reading, movies, art (dramatic, visual and music), the press, religious activities (Hajj and pilgrimage, endowments and charity affairs, centers of art and culture in the mosques) and cultural activities of the Islamic Republic of Iran in foreign countries constitute the qualitative sections of this report.

We know access to accurate and updated statistics has been always a serious problem in the cultural sector studies. This report, too, has faced the same problems. However, we have tried to rely on authentic documents and avoid using unauthenticated documents.

In the second approach, we studied the cultural achievements of the Islamic Republic of Iran from qualitative point of view. In this part, the most important activities and programs have been brought under qualitative and conceptual classifications.

1- Cultural Developments in Iran

- Religious Approach in Cultural and Artistic Activities

According to the majority of Iranian and foreign experts, the Islamic Revolution of Iran has a hundred percent cultural and religious nature. Therefore, all other plans and programs in the Islamic Republic of Iran are made based on these two axes. Naturally art and culture have received the greatest influence from the revolution so that from early years after the establishment of Islamic Republic of Iran, the majority of artistic and cultural productions contained Islamic and religious values. Therefore, since then the majority of art and culture works were value-based and religious and it is perhaps inappropriate to set aside an independent part for religious activities.

- **Institutionalization in Religious Arena**

Although before the Islamic Revolution, there were some active religious institutions in the management and organizational chart of the country, they had either no or almost limited religious promotional and publicity programs. The Endowments and Charity Organization and Hajj and Pilgrimage Organization used to work before the Islamic Revolution under a single organization named the Organization of Haj, Endowments and Charity Affairs Organization.
In addition to the responsibilities considered for the Endowments and Charity Organization in the past, after the Islamic Revolution this organization took giant strides toward promoting and publicizing religious and Qoranic culture in the country. Establishment and commissioning of 12 faculties of Qoranic sciences since closing years of 80s, formation of international Qoranic competitions since the final years of 80s and regular holding of these competitions to date, organizing national and provincial Qoranic competitions, translating the Holy Qoran into the majority of live languages in the world, and wide distribution of translated Qoran inside and outside the country for familiarity of the world nations with this Great Book, promoting the culture of endowment by identifying and registering the endowed properties across the country, provincial identification and registration of the endowments since mid 90s are some examples of the

achievements of Endowments and Charity Affairs Organization within the past three decades.
Also, during the past thirty years, establishment of the Endowments Construction Fund could gain public trust and revive the rights of the endowed properties in cooperation with benevolent people. In line with enforcement of Imam Khomeini's decree and the single article on endowments passed on May 18, 1984 In the Islamic Consultative Assembly (Iranian Parliament) thousands of hectares of already endowed properties that had been used in the past regime under Land Reform Plan, were returned to the organization and received certificates of endowments.
Hajj and Pilgrimage Organization became an organization in 1984 at the ratification of the Law on Organization and Authority of Hajj, Pilgrimage and Endowments Organization and in 1991 it was recognized as an independent organization under the Ministry of Culture and Islamic Guidance. The organization since then, is active in administering the affairs of the major and minor pilgrimage to Mecca and pilgrimage visits to the holy shrines in Karbala and Najaf. Hajj and Pilgrimage Organization, as an achievement of the Islamic Revolution, has managed well pilgrimage tours to Mecca and Medina, specially in minor pilgrimage to Mecca, through its privatization plans.

- **Boosting Religious Researches, Religious Activities with Artistic and Cultural Approach**

Supporting and developing fundamental and applied research works on religion with artistic and cultural approach were among the key policies of the Ministry of Culture and Islamic Guidance after the Islamic Revolution. To that end, the ministry established Secretariat of Religious Researchers since mid 90s.
One of the most successful regular programs is the annual festival to select and honor the best research work on religion. The festival has brought about supporting religious researchers and fundamental and applied researches on religion.

At the same time, organizing the National Congress of Religious Researchers since mid 90s in the presence of university professors, ulema, thinkers, researchers and experts of religious sciences from universities and theological schools could lead to the unity of thought and action among the religious researchers as well as development of religious activities in the society. The congress is held annually in Qom by the Secretariat of Religious Researchers.

Another achievement in this sector is the Zakar al-Zakerin Music Festival. Held since mid 90s, the festival studies religious rites and rituals in various regions of the country by music performance.

In addition to the above, there were some other notable achievements such as holding festivals on religious subjects, Festival of Metaphysical World from the Window of Movies, supporting highly conceptual movies and introducing them in international festivals, paving the ground for production and performance of religious theater, material and spiritual support of religious works of art and culture, supporting religious newspapers and periodicals as well as religious press activists, and holding the first Festival of Religious Press in 2003.

The International Holy Qoran Competitions, held incessantly for almost two decades, is perhaps the meeting point of art-culture works with religious-Qoranic activities. The festival is held annually concurrent with the holy month of Ramadan in Tehran. It also displays a large number of works of art and culture in the form of books, visual arts (calligraphy, painting, graphics), traditional arts (illumination, inlaid works, ...), dramatic arts, etc. all with religious themes in various levels from children to adults. Holding specialized religious, artistic and cultural meetings, invigorating and participating the young generation in month-long Qoranic activities, and presenting the latest cultural, artistic, and religious achievements in religion and Qoran are among the other objectives behind holding the competitions. At the same time, concurrent with these competitions, provincial Qoranic contests are also held in the provinces.

The national, international and provincial Qoranic competitions are among the most important Qoranic activities observed from the early years after the revolution until now. The Endowments and Charity

Affairs Organization is responsible for policy-making and organization of the festivals. Year by year, the national, international, and provincial competitions are held better and stronger than before, so that the International Qoranic Competitions in Tehran is now one of the most recognized Qoranic events in the world.

The above is only a speck of achievements in this sector and we tried to introduce and document the most institutionalized activities that are implemented regularly with qualitative and quantitative growth.

Perhaps one of the most important achievements of the Ministry of Culture and Islamic Guidance is the establishment of Secretariat of Supreme Headquarters to Supervise Art and Culture Centers in Mosques in 1993. Mosques, one of the early centers of scientific, artistic and cultural works, had been taken away from principal goals in the course of years, turning into a place of worship only. After the revolution, mosques regained their primary significance by activating and supporting centers for artistic and cultural activities and opening libraries with religious, artistic and cultural works.

Center for Development and Promotion of Qoranic Activities is another institution that was established at the Ministry of Culture and Islamic Guidance after the victory of Islamic Revolution in Iran. Established since late 90s, the center has managed well to fulfill its responsibilities in connection with supporting, directing and promoting Qoranic affairs. At present, holding international, national and provincial Qoranic festivals and exhibitions, supporting non-governmental Qoranic institutions and organizations, and supporting works of art and culture with Qoranic themes are among the most important activities of this center.

It should be noted that, however, the Qoranic and religious publicity and promotional works are not exclusive to these institutions or organizations. Rather, major religious factors have been included in the majority of religious works of art and culture, religious activities and programs within the past thirty years. Therefore, we observe the presence of religion in structuring these activities. It was because of such religious approach that since 90s religious and revolutionary works of art and culture enjoyed material and spiritual supports and notable

subsidies. In this connection, financial supports were offered to movies with religious themes, religious books, and religious books' printing houses, so that production of religious books grew outstandingly in quality and quantity and in titles and circulation after the Islamic Revolution. Supporting religious press, increasing the number of religious information centers and supporting art productions with religious themes are among the incessant activities carried out in this sector.

2- Religious Works of Art and Culture from Statistical Point of View

In early 90s with the establishment of Secretariat of Supreme Headquarters to Supervise Art and Culture Centers in Mosques, serious steps were taken to support scientific and cultural works in the mosques. Statistics in Table (1) are solid evidences for this claim.

According to this table, in 1993 (the year of establishment of Secretariat of Supreme Headquarters to Supervise Art and Culture Centers in Mosques) there were only 14 active centers of art and culture in the mosques, that were increased to 5,067 centers in 2009 with an average annual growth of 48.42 percent. In 1993 there was only 0.3 center per one million population. The figure was increased to over 70 centers in 2008. At the same time, in 1993 these centers had 1,480 members only (23 people per 100,000 population), that was increased to 1,552,000 in 2008. In other words, almost 2,300 new members per 100,000 population have joined these centers.

Libraries in the mosques are important tools for religious works of art and culture. In 1995, there were only 139 active libraries in the mosques that were increased to 2,777 libraries in 2009. The increase shows 23.85 percent annual growth. With respect to the number of population in 1995, there were only 0.3 mosque libraries per 100,000 people. The figure was pushed up to 3.75 libraries in 2008.

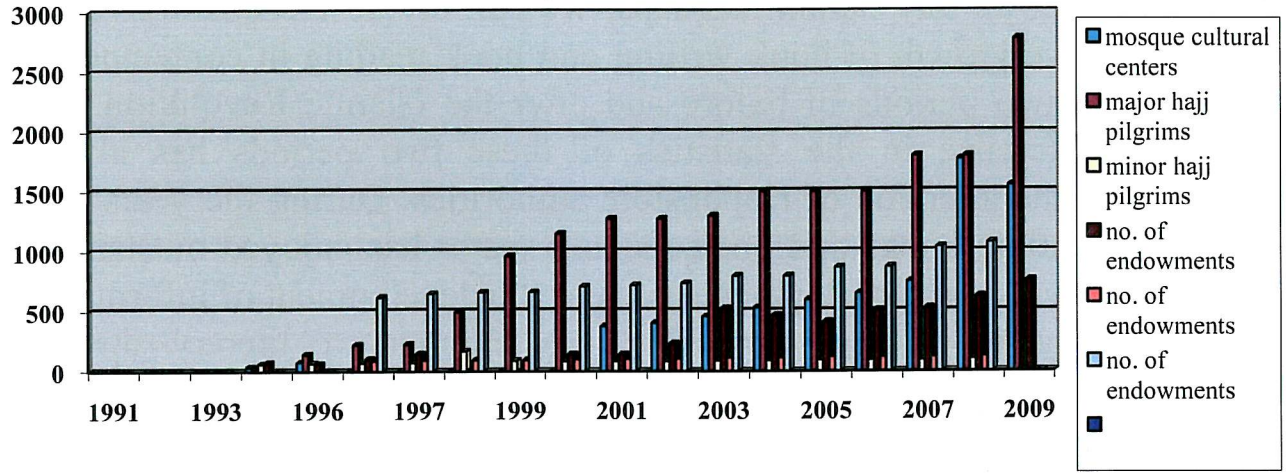
Hajj or major pilgrimage to Mecca is the most important event in the world of Islam. During Hajj Muslims from all over the world gather around the House of God to perform their religious and political rites.

Hajj and Pilgrimage Organization is responsible for dispatching the pilgrims of major and minor pilgrimage to Mecca.
The number of pilgrims of Major Pilgrimage to Mecca dropped from 1992 to 2008 due to Saudi government's quota plan, plummeting from 105,763 pilgrims to 101,937 (0.23% fall). However, since 1998, Hajj and Pilgrimage Organization's officials began negotiations with the Saudi officials and managed to prevent further decrease in the number of pilgrims and instead, push the figure gradually up until 2008. At the same time, the number of pilgrims for minor pilgrimage to Mecca moved up from 58,139 people in 1993 to 760,678 in 2009, showing 17.4 percent increase.
Endowment is of special significance for Muslims in Iran and the world, so that in the majority of Asian and European countries there is an organization for management of endowments and charity affairs. The Endowments and Charity Affairs Organization, in addition to holding Qoranic competitions, is responsible for publication of books into world languages, management of holy mausoleums and shrines, and supporting festivals of religious rites and rituals. Table (1) depicts the number of endowed properties in the country. It should be noted that lack of statistics before 1996 does not mean lack of activities before that year. It means there is no reliable statistics on endowments at hand before the year 1996. The number of endowed properties grew with average annual 3.34 percent from 84,000 in 1996 to 124,525 endowed properties in 2008. Also during this period, the number of endowed mausoleums showed 4.8 percent growth, growing from 617,319 to 1,076,865 mausoleums.
Of course, the religious activities and achievements of the Ministry of Culture and Islamic Guidance do not confine to these nine indicators. There are some other activities and programs implemented every year that must be reviewed from qualitative viewpoint not from quantitative point of view.

3- Books and Book-reading

Producing and publishing books along with related activities such as book fairs and public libraries are important indicators for cultural competence of any nation. Perhaps, we can divide the qualitative and quantitative growth of book writing and book reading in contemporary Iran into two periods of before and after the Islamic Revolution. The sharp difference in the statistics of these two periods has always attracted the attention of responsible authorities. During the years after the revolution, books and book-reading sector has enjoyed outstanding achievements and developments such as the development of information technology on books, increasing the number of literary awards, increasing the number of specialized book fairs, holding Tehran International Book Fair, establishing an institution named Book House, holding Book Week as the most important cultural event in the year, expansion of poetry activities, boosting governmental support of book producers, authors and consumers, development of book activities on religions, sects and faiths, and establishing the first printing town in Iran. In the next pages we will review each achievement in brief.

Diagram (1): Religious Activities Indicators, 1991-2009



A- National and international book events
1- Holding the International Book Fair in Tehran
2- Holding provincial book fairs
3- Increasing the number of specialized book fairs

B- Increasing the number of book awards
1- Holding book of the year and world book awards
2- Holding Jalal Al-e-Ahmad Literary Award
3- Holding Parvin E'tesami Literary Award

C- Books and book-reading financial support programs
1- Supporting consumers of written works
2- Supporting publication of valuable books
3- Supporting production and publication of books
4- Supporting works of poetry

D- Developing information technology on books
1- Establishing Ketab Net (databank of published books in the country = www.ketabnet.org.ir)

2- Creating International ISBN codes for Iran
3- Creating centers for the newly published books
4- Producing and publishing periodicals on information dissemination, literary criticism and review of books

E- Books and Book-reading from statistical point of view

Table (2) depicts statistics on books and book-reading during the years after the Islamic Revolution in Iran. The table, however, has studied and analyzed a few major indicators. As the table shows, in 1979 some 1,860 books were published. The figure in 2009 stands at 60,801 titles and shows 12.3 percent growth annual growth. Given the total number of population (36,388,000 people) in 1979, there was only 0.51 book for 10,000 people in the country, but in 2009 with a population of 73,745,344 people there were 8.2 books per 10,000 people. Despite double-fold increase in the number of population from 1979 to 2009, the per capita of produced books has grown by 15 percent.

Circulation of published books is also an important indicator for book-reading. During the period under discussion, the circulation of published books grew from 683,000 books in 1979 to 206,161,000 books in 2009, showing an average annual 21 percent growth.

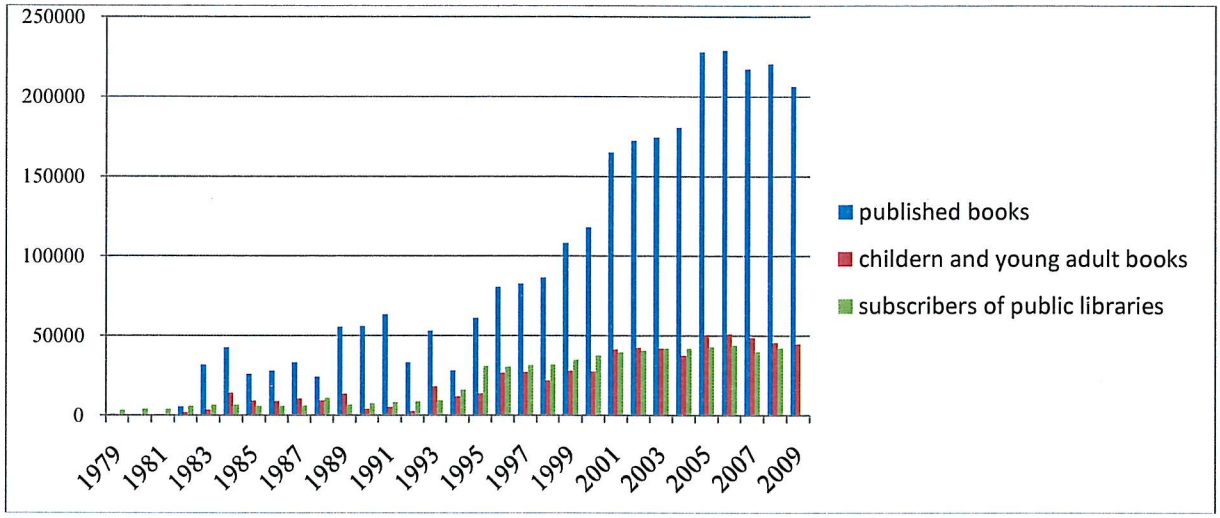
Public libraries in the towns offer free of charge services to the general public and serve to be a place for reading books and exchanging information. They are also important indicators for book-reading. The number of public libraries, too, grew from 368 libraries in 1979 to 2,073 libraries in 2009, showing an average annual growth of 5.9 percent. In the year 1979, there were only 1.01 libraries per 100,000 people, but in 2009 there were 2.8 libraries available for a hundred thousand people.

One of the important and interesting indicators in the period under discussion is the number of references to the public libraries. In 1979, some 3,213,000 people have referred to the public libraries across the country. Given the number of population that time (almost 36 million), there were only 8.8 people per 100 people referring to the

public library. The figure in 2009 went up to 57 people per 100 people, showing over seven-fold growth. Despite almost four-fold increase in the number of public libraries during this period, public references to these libraries have grown by seven-fold. Statistics show that despite emphasis of officials and managers on boosting public use of the public libraries and its eye-catching development after the revolution, figures are yet to cope with the increase in the number of addressees and referrals. In other words, interest of the people in public libraries was high above the speed of construction and establishment of public libraries. This shows the growth in scientific competence, literacy and book-reading interest in the people.

Another important indicator relates to the number of books published for the children and young adults. The number of books published for the children and young adults in 1979 was 95 titles with a circulation of 50,000. This figure jumped high by 16.38 percent annual growth to stand at 9,006 titles and annual growth of 25.43 percent in circulation to be 44,768,000 books in 2009. Governmental supports and policies for production and publication of books on children and young adults highly increased the number of publishers specialized in these books as well as the number of specialized book fairs across the country. On the other hand, a comparison of these statistics with the total number of published books shows its importance in the society. In 1979, there was only one child book per 20 books released, while in 2009 these books constituted 1.5 percent of the total circulation of the books published in the country.

Diagram (2): Book Publication and Book-reading Indicators, 2001-2009



1- Average annual growth from 1979 to 2009
2- Average annual growth from 1992 to 2008
3- Average annual growth from 1994 to 2008
4- Average annual growth from 1996 to 2008
5- Average annual growth from 1979 to 2008
6- Average annual growth from 1987 to 2008

5- The Press

Development is an all-out concept part of which is manifested in the qualitative growth of indicators. The modern day world has accepted this standpoint as a reality that communications play a key role in the development of societies. If participation rate is taken as a component of development, communications will be then necessarily accepted as a prerequisite for contribution and development. In other words, contribution is prerequisite for development and communications is prerequisite for contribution.

This point must be also emphasized that communications can both influence development and be considered as one of the objectives

behind development. At any rate, the following points must be seriously taken into consideration in the process of development: First, modern world community is on the transition toward information community and it is necessary to understand this trend in order to diagnose the demands of information community. Second, cultural imperialism, as an undeniable phenomenon, intends to publicize its culture and paradigm as an active subject through development of information technology. The way to avoid being object of this Western hegemony is accurate understanding of the modern world phenomena (information community), adherence to its principles, respecting national contribution as the only factor for victory and prosperity.

Undoubtedly, a major part of communications industry is manifested in the press. The impact of mass media on public opinion is known to all. The press, are written mass media with bilateral relations with the society. The press influences and receives influence from the institutions and individuals in the society. During the past centuries, this phenomenon has manifested itself in the social life of the society so that no society without press can be imagined. The press is indispensable part of a society. Despite its supervisory role, almost all institutions accept its presence in the society. We have accepted the press as the fourth pillar of democracy, lack of which is not useful for the society. Therefore, we try to use its capabilities and capacities for the progress of the society. This is why the government is planning to develop the press and set aside subsidies from the governmental budget for newspapers and periodicals.

In modern societies, the press has a two-sided relationship with the organizations. The press impresses the course of action in these organizations and they lay influence on production, distribution and consumption of the press.

The government plays a key role in the qualitative and quantitative development of the press and in picturing the future for the newspapers and periodicals according to certain strategies. The degree of influence the government exerts on the press varies according to political and cultural structures. In some countries the

government is highly involved in the planning and policies of the press, while in some other countries government interference is very low. However, almost in all world countries the government plays some role in the course of action of the press.

It should be noted that with respect to the role of the press in shaping public opinion, the governments try to control the press to move according to the values and norms in the society. Therefore, they plan to develop this phenomenon according to the norms and values of the society. The definition of plan has two implied meanings: supervision and information and statistics. This means the government supervises the course of action in the press based on the information and statistics during the plan. These three factors come together to help the government express its deed of performance known as "achievement". This is why achievement always comes after planning in government reports. As a matter of fact, wherever planning is introduced, the result or achievement should come next.

All governments plan for development of the cultural sector, including the press, as they do for development of agriculture and economy and present their achievements in each field. Government decisions on the press and attainment of anticipated goals as a result of enforcement of these decisions are collectively known as the achievements. In the following part we will review government achievements in various fields related to the press.

- **Rules and Regulations**

A- Constitutional Law

The Constitutional Law of the Islamic Republic of Iran contains one direct and three general articles on the press. The most important article on the press in this law is Article 24 on freedom of the press. According to this article, anti-Islam and anti-civil rights practices are the only restricting measures for the press. Article 168, too, says verification of press crimes is special so they must be verified in

justice administration courts in the presence of jury members. The following articles in the Constitutional Law are about the press:

Article 3 – The government of the Islamic Republic of Iran is bound to use all its facilities to implement the following in a bid to realize the objectives anticipated in Article 2.

- Promoting public awareness in all fields by accurate use of the press, mass media and other tools
- Offering political and social freedom within the context of law

Article 15 – Persian (Farsi) is the official and common language spoken and written by the Iranian people. All documents, official letters, texts and textbooks must be written in this language, but it is free to use local and tribal language in the press and mass media or teach them in schools in addition to Persian language.

Article 24 – The press and periodicals enjoy freedom of pen and expression unless they act against the Islamic tenets and civil rights the interpretation of which is on the law.

Article 168 – Verification of political and press crimes should be carried out in an open court in the presence of jury members at the justice administration courts. Way of selection, rules and regulations, authority of the jury and definition of the political crime will be determined based on Islamic precepts.

- **Quantitative Development of the Press**

The press, as part of the written culture of the society, is another indicator for the degree of development in a society. Such indicators as circulation, per capita paper consumption and the number of magazines and newspapers are among the most important HDI indicators in cultural sector. In this part, we will review the quantitative growth of the press in the Islamic Republic of Iran after the 1979 Revolution. There are, however, in sufficient statistics on the number of the press, newspapers, certified periodicals, applicants for certificates, and circulation of newspapers during three decades after the revolution.

There were ups and downs in the number of the press within three decades after the Islamic Revolution. In the beginning, the growth in the number of newspapers and periodicals was skyrocketing but it was plummeted in summer 1980. In early 80s the trend was almost fixed, but after 1984 the number of press increased. In 1985, concurrent with the ratification of the Law of the Press, the number of the press reached 309 with 15 newspapers. After the end of war, concurrent with the establishment of the Deputy Office for the Press and Advertising Affairs at the Ministry of Culture and Islamic Guidance, the number of the press increased substantially. Statistics show that in 1990, there were 323 periodicals with 21 newspapers. The increase was slow in the first half of 90s, but the social demands inside the country (increase in the literacy rate, young population, development of urbanization) as well as regional and international developments (communications revolution, information explosion, emergence and penetration of Internet as a new mass media) called the attention for the press and mass media once again. Therefore, in the coming years more licenses were issued for the periodicals and newspapers. With respect to the above-said developments and the mottoes of Reconstruction Period, communications in general and the newspapers and periodicals in particular accompanied other sectors in development. In the second half of 1997, the press became dominant in Iran's communication technology to respond to the social demands, converge with the world community and advance developments in the communications arena. In that period, the number of newspapers became outstandingly large. The trends continued even after 1997, so that in 1998 the number of periodicals reached 797 and the newspapers became 51 in number. The growth in quantity of newspapers and periodicals kept on continuing. In 2000 a large number of newspapers were banned from publication but the quantitative growth of the newspapers did not stop. In 2007 there were 2,266 periodicals and 145 newspapers.

With respect to the above, the number of the periodicals and newspapers will be presented in a table separately for the years in between 1972 and 2007.

In 1981 political conflicts subsided and political stability was observed since September. The periodicals and newspapers remaining from the early years of the Islamic Revolution continued publication according to the revolutionary atmosphere. The reduction in the number of periodicals in 1981 in comparison with previous years and continued reduction in the coming years show that after the Islamic Revolution the quantitative growth in early 80s (reduction in the number of newspapers) was an accident not a procedure.

Table (1): Number of Newspapers and Periodicals Published between 1979 and 2009 (Collected from Various Sources)

Year	Publications	Newspapers
1979	427	9
1980	444	43
1981	200	45
1982	85	7
1983	102	8
1984	117	9
1985	156	12
1986	309	15
1987	315	15
1988	332	-
1989	183	12
1990	186	9
1991	323	21
1992	408	18
1993	314	13
1994	408	13
1995	486	12
1996	570	27
1997	657	32
1998	850	35
1999	897	51
2000	699	89
2001	801	94
2002	953	98
2003	1173	108
2004	1472	123
2005	1729	134
2006	1705	137
2007	2120	143
2008	2260	145

The above table shows that in 1980 there is reduction in the number of the press but from 1984 a gradual growth happens. After a two-year stop, the number of the newspapers published in closing months of the year 1989 – except 1992 and 1993 – has been increased. The growing trend has continued to date after the year 1995.

- **Some achievements concerning the press:**

1- Establishment of guild and professional centers
2- Press festival and exhibition
3- Financial support of the press

A- Press subsidies
B- Social Security and Medication Insurance of the journalists
C- Credit Fund to Support Authors, Journalists and Artists
D- The plan to classify journalism among difficult and dangerous jobs
E- Conducting first national census on news agencies and newspapers

- **Newspapers from Statistical Point of View**

As it is seen in the Table, the number of the press after the Islamic Revolution has been on the rise so that from 21 titles in 1979, it has been pushed up by 17.4 percent growth to 2,200 in 2008. In other words, the press per capita in 1979 has been six newspapers per 10 million people. The relative growth of 50-fold has improved the per capita for 303 newspapers for 10 million population in 2008. It should be noted that the growth in the press has been accelerated since 90s so that in 1993, the press per capita for 10 million people has been 51 titles.

Unfortunately there is no clear-cut statistics on the circulation of the newspapers in Iran during the closing years of 70s and through 80s. The tables on circulation of newspapers and periodicals contain figures since 1993. The total circulation of the press in 1993 has been 649 copies that was promoted to 1,280,000,000 copies in 2008 with an average growth rate of 4.6 percent. A review of this indicator shows that in 1993 there were 10.9 copies per year per one person while in 2008, the figure was increased to 17.6 copies per year. Since the growth in the number of the press in 1993 is more and faster than the growth in circulation, we see an imbalance between the per capita

growth in quantity and per capita growth in circulation of the newspapers and periodicals. In other words, the growth in quantity of the press is faster than the growth in circulation of the newspapers and periodicals.

The number of newsstands also has grown from 2,250 in 1994 to 4,000 in 2008, showing 4.2 percent growth. In other words, in the year 1994 there were 36.6 newsstands per a population of one million people. The figure was promoted to 55.1 newsstands in 2008.

One of the important indicators in this sector is the number of newspaper titles. Statistics available since 1988 show growth from 12 in this year to 145 titles in 2008, manifesting 13.3 percent growth. At the same time, the number of foreign press offices in Iran jumped high from 30 offices in 1993 to 126 offices in 2008, showing an average annual growth rate of 10 percent. This increase shows the importance of Iranian issues for foreign press on one hand, and on the other hand suggests there is good atmosphere for the foreign press to work in Iran. In 1996, some 438 foreign reporters took a trip to Iran. In 2008, the figure reached 722 foreign reporters.

Diagram (3) - **Indicators of the press, 1979-1990**

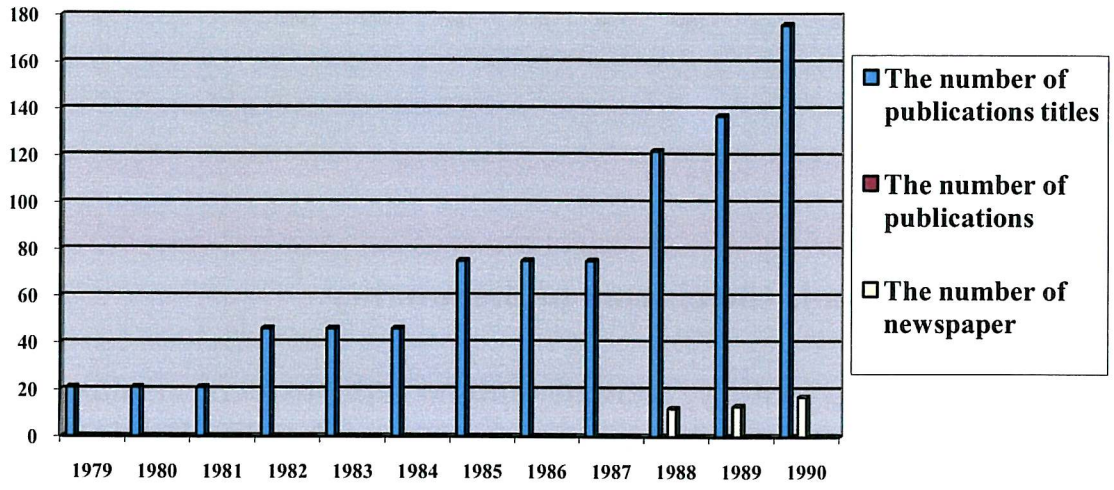


Diagram (3-1): **Indicators of the press (newspapers), 1991-2000**

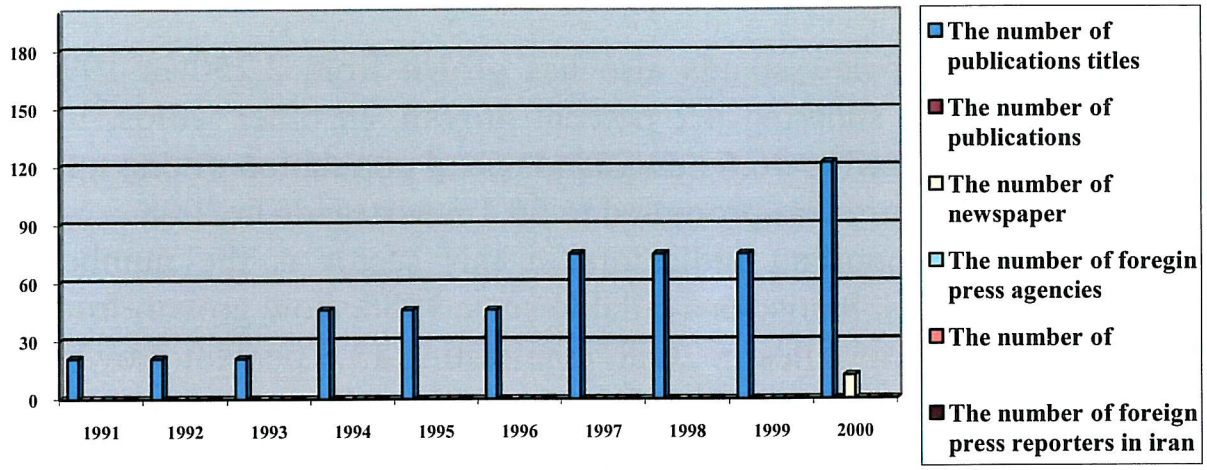
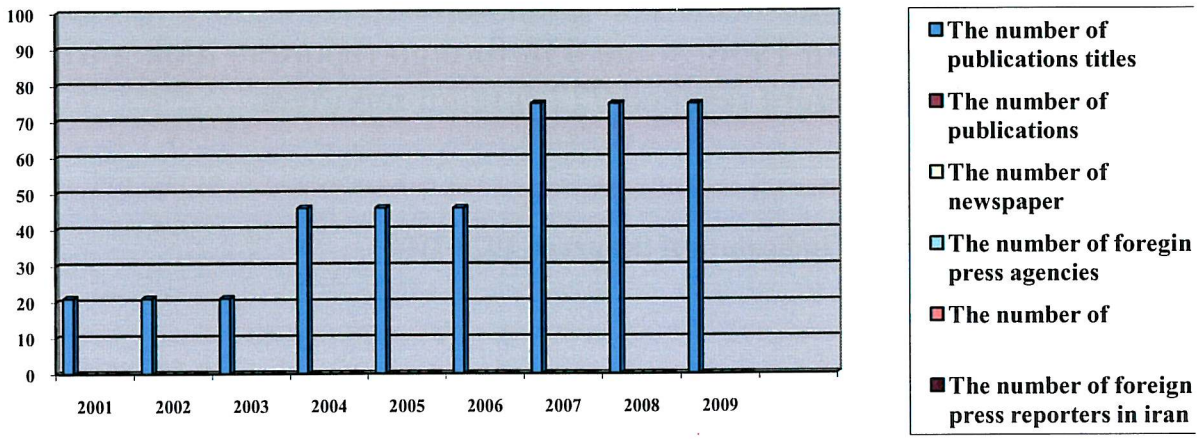


Diagram (3-2): **Indicators of the press (newspapers), 2001-2008**



6- Movies

- **Iranian cinema is the cinema of personality.**

In its century-long history, Iranian cinema has put behind many ups and downs. Theoretically, Iranian cinema can be divided into two distinct periods. The first period begins from introduction of motion pictures in Iran in 1900 until the victory of Islamic Revolution in

1979. The 70s is the decade of growth and flourishing of Iranian cinema. The second period begins from the victory of Islamic Revolution in 1979 and marks a distinctive growth except the early years (until early 80s).

From mid March 1970 until mid March 1979 a total of 504 films were screened in the movie theaters. In between the years 1971 and 1976 film production and screening reached unprecedented figure of over 80 films per year, but in the years 1977 and 1978 production and screening of Iranian films decreased. In those years 47 and 18 films were screened respectively. The crisis began since 1974 in Iranian cinema reached its pinnacle in 1976 and continued close to closure of motion pictures industry and bankruptcy of Iranian cinema. The crisis happened to a great deal because of the import of cheap foreign films of sex and violence. In 1974, there was a 10% decline in screening certified Iranian films in comparison with the year 1973. The downfall trend continued until the year 1976 so that in the same year from among 829 screened films only 7.8 percent or 65 films were Iranian.

The combination of foreign films screened in Iranian movie theaters in between the years 1971 and 1976 shows the hegemony of Hollywood films on Iranian motion pictures market.

Until 1979 moviegoers were from among all walks of life. In a general classification, moviegoers in that period belonged to two groups: "high class" moviegoers and "low class" moviegoers with subclasses in each class. The high class moviegoers fell into two subgroups of regular moviegoers and the intellectual moviegoers. Low class moviegoers comprised of people with deep interest in romantic films (Persian, Arabic, Indian and Turkish films) who used to watch the movies with their families or single men who watched the foreign action movies alone or in the company of friends.

Iranian cinema in the first period is concurrent with the Pahlavi I and II dynasties. It was a new phenomenon emerged in the traditional but developing society. Such a new phenomenon was so attractive to the people that they watched all movies irrespective of theme, script and influence on the addressee. In this period, cinematic industry has

completely focused on making cinematic films sidelining documentaries, short and experimental films. In 70s, filmmaking studios came to being and a new generation of producers and directors stepped on the scene with artistic tendencies. This helped the moviegoers find an aesthetic approach toward the movies. Publication of cinema books and periodicals played an important role in promoting public (the youth and students) awareness in motion pictures. At the threshold of the Islamic Revolution, Iranian cinema was rich in manpower. Cinema graduates and those specialized in motion pictures by experience, found a chance during Islamic Revolution to gain self-confidence and new experiences. The years 1979 until 1983 mark the period when old manifestations of Iranian cinema automatically become outdated as manifestations of corruption and prostitution. No film is shot, movie theaters are closed and cinema activists wait for a chance. The post-revolution Iranian cinema was born indeed in between the years 1983 and 1985. Revolutionary atmosphere in the society, rapid developments in political structure of the society, war, and dominance of religious approaches on art and culture are among the factors that exert deep influence on Iranian movies from the beginning. Post-revolution cinema in Iran can be duly called the cinema of ethics and personality.

The newly found cinema passes behind stages of development very fast so that today, 30 years after the revolution, we can say that it has gained a brand in world motion pictures industry for itself.

Iranian cinema may be ahead or back from world cinematic industry due to technology or production and screening, but it is special and specific in its concept, and the world recognizes Iranian cinema by its conceptuality. The major characteristics of national Iranian cinema can be outlined as the following:

- Iranian cinema is a highly prestigious cinema and at the same time personality-generating: Modern day Iranian cinema has its specific social excellence and status. It is not merely an evening recreation, rather, it possesses religious and national legitimacy. Cinema activists including producers, directors, actors and actresses

(specially the actresses who lacked social acceptability in the past and their art was sinful) are no more accused of moral decay.

- Iranian cinema is an ethical cinema with special status for human relations: Today, ethical criteria govern Iranian cinema. This cinema reflects the paradox and opposition between the corruptions in social life and social and religious values in such a way that corruption fades away in the light of values, rites and rituals, healthy manners and social ethical behaviors. Today, moviegoers do not go to the movie theaters to forget calamities of their life and dream a luxury life in the ecstasy and hallucination of darkness. Unlike Western cinema, Iranian cinema is not indifferent to ethics and it condemns unethical manners.
- Iranian cinema is the cinema of reality: Modern day Iranian cinema represents realities of the society and tries to solve the social problems in a practical and non-hallucinated way. In other words, Iranian cinema is a social cinema. The heroes and heroines in this cinema are ordinary people on the streets with ordinary strength and weakness. Their heroic conducts are the same as the behaviors expected from the ordinary people. In this cinema, the conflict between good and bad, noble and ignoble, egotism and self-denial is logical. In the mechanism to overcome poverty, bad guys, ignobility and egotism there is no need for the good, noble and self-denier to be antagonist first in order to overcome the bad, ignoble and egoist. It is the good, noble and self-denial nature indeed that finally defeats the bad characters.
- Iranian cinema is the cinema of love, self-sacrifice and hope: Iranian cinema is today full of outstanding characters and real heroes who manifest real love, self-sacrifice and hope to life. Such good characters finally defeat disloyalty, self-respect and wicked imaginations.
- The above, therefore, distinguish Iranian cinema from world cinema. This gives Iranian cinema a deserving status in the world motion pictures. The Iranian cinema, of course, owes such achievements to the decisions and policies of the officials and

activists. Hereunder, we will outline the major achievements of Iranian cinema within the past 31 years.

- **Some Achievements in Iranian Cinema:**

  - Cinema events and festivals
  - Participation of Iranian cinema in international festivals and events
  - Home video service
  - Computer games
  - Educating and training expert manpower
  - Cinematic and motion pictures heritage of the nation
  - Promoting social excellence of cinema activists
  - New cinema equipment and technology
  - Institutionalization of cinema and development of related infrastructures
  - Cinema from statistical point of view

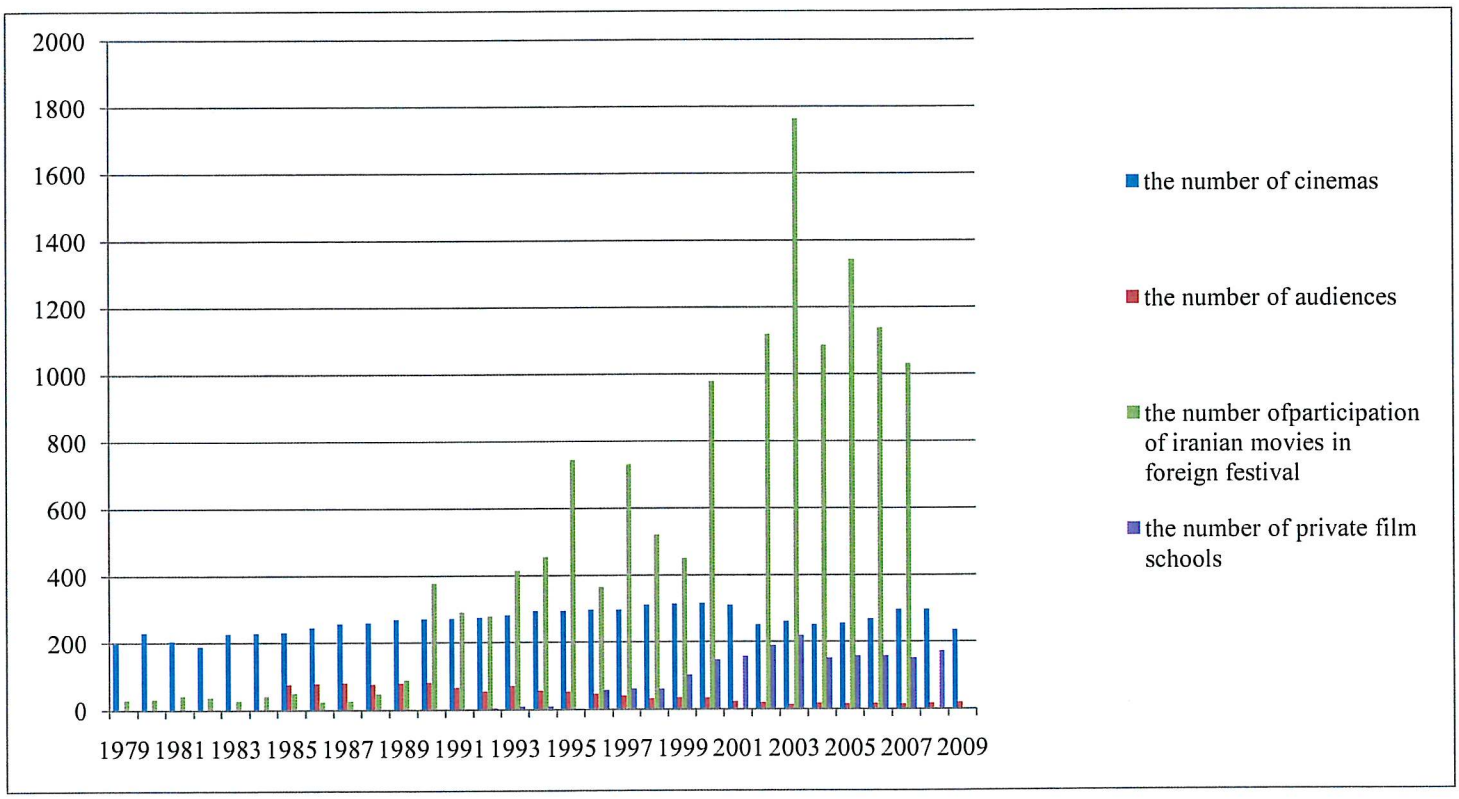
There were around 500 active movie theaters before the Islamic Revolution. The figure fell down sharply to 198 movie theaters in the year 1979. From 1979 until 2009 the number of movie theaters increased again to be 239 in 2009, showing 0.59 percent annual growth by average. During the years after the Islamic Revolution many movie theaters were built by the private sector at direct and indirect government supports. During the same period, many substandard and old movie theaters became closed and this pushed the figure of active movie theaters down. According to the statistics on 1979, there was only one movie theater for a population of 200,000 people. The figure was decreased to 312 movie theaters in the year 2009. This means that during the years after the victory of Islamic Revolution the per capita movie going rate in individuals remained almost unchanged despite duplicity of population.

The number of Iranian long and short films entries in international festivals was increased from 29 cases in 1979 to 1,031 cases in 2007, showing an average annual growth rate of 13.6 percent.

Until before 1991, the Islamic Filmmaking Training Center was the only cinema education center in the country. Since that time the ground was paved for the private sector to open educational and training centers so that three centers were activated in the same year. Enjoying an annual growth rate of 27 percent, the number of these centers reached 173 centers in the year 2008.

The number of moviegoers at the movie theaters is one of the important indicators in this sector. As it is seen in Table (4) from a population of 48 million people in 1985, almost 75 million people were moviegoers. The figure fell down to 18 million people in 2009. In 2009, indeed, from a population of four people only one person was moviegoer. Various economic problems (inflation, reduced leisure time, unemployment, low-income and the like) must be also taken into consideration in this respect. The non-economic factors were depreciation of the majority of movie theaters, losing their cultural nature, their locality in inappropriate areas after urban development programs, emergence of substitute cultural products such as home video, satellite and Internet, lack of movie theaters in over 450 towns across the country, etc.

Diagram (4): Cinema Sector indicators, 1979-2009



- Statistics are related to 240 movie theaters.
- Statistics are related to 228 movie theaters in 2007.
- Average annual growth has been calculated from 1979 until 2008.
- Average annual growth has been calculated from 1982 until 2008.
- Average annual growth has been calculated from 1993 until 2008.
- Average annual growth has been calculated from 1991 until 2008.
- Average annual growth has been calculated from 1980 until 2009.
- Average annual growth has been calculated from 1979 until 2009.
- Average annual growth has been calculated from 1985 until 2009.
- Average annual growth has been calculated from 1979 until 2007.

7- Art

Art is one major component and dimension of culture that is considered as a dynamic, live, changing, developing and self-refining element. Art plays a key role in cultural identity of a nation due to its aesthetic properties and influence. Music, visual arts, and dramatic arts can establish close relations with cultural elements due to their nature, and can reproduce the social and cultural values closely associated with rich past culture.

Iranian music has deep connections with mystical concepts and themes, calligraphy and illumination have deeply rooted in religious works, painting has deep connections with ethical, mystical, spiritual and epical literature, traditional Iranian drama is closely associated with passion play, life of the Infallible Household of the Prophet (S) and the spiritual life of the people. Other forms of art possess unique attractions for transmission of religious and humane values in the history of this land. They are capable of expressing the ideals, wishes, fears and concerns of people. Art is the best tool to transfer the ideals that the great reformers of history, most notably the Prophet of Islam (S), spent their lives to convey them to humanity.

Art is rich in historical personality elements, therefore, it is considered as an important element in production and reproduction of social identity for a society. Today, various forms of art can help the society publicize values among all walks of life, to establish a link between artistic elements and identity elements, and to promote public awareness on historical roots or culture and values.

Post-revolution art, possessing strong civilization and cultural backup, faced some mighty incidents as the Islamic Revolution and war. Each of these incidents could be an endless source to aspirate the artists to produce valuable works of art. Within the past 32 years, the Islamic Revolution has paved the ground for realization of eye-catching achievements in the field of art.

- **Islamic Revolution and Popularization of Art**

Today, due attention to art and culture is felt more than ever as a basis for all programs and policies of the Islamic system of government. The world in the past decade has experienced extraordinary developments in cultural activities, function of culture, cultural products and works, cultural demands, and the speed of transferring cultural products. The very fast and complicated growth in information technology has facilitated exchange of cultural products, and this has given variety to art and culture products.

Before the revolution, works of art and culture were considered as luxury and auxiliary goods and there was no need for the general public to use these works. Therefore, the majority of art addressees were from among the people in big cities and provincial centers. The art products distribution centers were chiefly focused in Tehran and a few major cities.

After the revolution, however, legitimacy of cultural activities upon a decree by Imam Khomeini gave a boost to cultural and artistic productions. Moreover, creation of new cultural and artistic institutions has increased the demands. Other factors giving a boost to cultural demand were population growth, increased official and unofficial trainings, reduced illiteracy rate, increased centers of higher education, science and culture, increased urbanization, and development of mass media and information technology. Intensification of the social segregation procedure has added to the variety of works of art and culture. The emergence of new social groups such as occupational and educational groups, creation of new jobs, and empowerment of women in various social activities have all intensified demands for art and culture works. This has necessitated ever-increasing development in production and distribution of art and culture products. One of the major policies of the Islamic Republic of Iran after the revolution, specially in closing years of 90s, is to increase art and culture products according to the principles, rules and regulations of the Islamic Republic. To that end, the government

has supported producers of desirable products and at the same time supervised all works of art and culture. On the other hand, the government has delegated the authority of art and culture production to the private sector to enable production of cultural products according to public taste and demands. This procedure necessitated serious attention to production and distribution of art and culture products. Therefore, the government offered various subsidies, loans and supports to the producers of art and culture products to help the growth in art and culture products. Granting low-interest loans to art productions, granting subsidies for theater and music productions, granting subsidies for establishment of art and culture institutions, and granting subsidies to the art and culture production companies are among the key policies that have brought about eye-catching growth in production of works of art and culture specially since 80s.

- **Supporting Art and Culture Activists**

Art sector, like other cultural sectors, is in need of material and spiritual support of the government. Although hardships and problems make the artists experienced and their productions more creative, the concerns of artists and art activists over financing their programs and meeting their livelihood are big obstacles to their artistic and cultural productions. On this basis, art and culture underwent umbrella coverage of government supports from the very beginning. In addition to financial supports, the government considered some legal facilities and advantages for the art and culture.

During the past 32 years, the governments have supported the cultural sector by various ways and means such as supporting art and culture festivals and exhibitions, supporting participation of artists and creators of works of art and culture in the international festivals and exhibitions, support music productions, dramatic and visual arts, and supporting establishment and operation of the non-governmental institutions of art, culture and music. In addition to regular supports, during the years after the revolution some exclusive supports were

also defined and offered to the activists and creators of art and culture, a few examples of which we have brought hereunder:

1- Realization of tax exemption for cultural and artistic activities by virtue of Clause L of Article 139 of the Direct Taxation Act
2- Establishing credit funds for supporting art and culture activists
3- Implementing Social Security Insurance plan for the creators of works of art and culture
4- Ratifying and implementing the directive for paying pensions to the disabled and aged artists
5- Implementing the plan to honor the veteran artists
6- Implementing the plan to evaluate artistic competence of artists
7- Purchasing works of art
8- Implementing the law to support the authors and composers

- **Art from Statistical Point of View**

Iranians are known for their history-long art and culture. Visual arts, dramatic arts and music rose to worldly fame in the course of ages by combining Iranian and Islamic characteristics to glitter bright in the sky of world art. Management, promotion and publicizing the collection of these arts inside and outside the country during the past 32 years have always been the prime concern of the policymakers and planners of the nation.

As it is seen in the Table, art indicators show eye-catching growth during the years after the revolution. It is a regret, however, to say that there is no statistics on art available before the year 1988. There is no record of artistic productions in between the years 1978 and 1988, i.e. first decade after the revolution. This is because of the eight years of Imposed War when the priority was defending the country against the enemy and there was no time for collecting information on the art and culture productions.

The number of plays produced with an average annual growth rate of 10.3 percent, grew from 226 plays in 1979 to 3,903 titles in 2008.
The number of play sequences also shows outstanding growth so that the 1,525 sequences belonging to the year 1988 jumped high to 49,044 sequences in the year 2008, showing an average annual growth rate of 19 percent.
A review of the per capita production of plays in between the years 1979 and 2008 shows that the per capita has moved up from 6.1 titles for each one million population in 1979 to over 54 titles in 2008. On the other hand the sequences in 1988 per a hundred thousand people stands at 2.85 sequences, rising to 67.6 sequences in 2008, showing 20-fold increase from 1988 until 2008.
The number of active art galleries rose from insignificant seven galleries in 1988 to 280 galleries in 2008, showing average annual growth rate of 20.3 percent. In other words, there were only two art galleries for an urban population of 10 million people in 1988, while the figure in 2008 jumped high to 38.6 galleries. This is a sign of increasing attention to creation of appropriate spaces for displaying works of art and culture.
The number of exhibitions held in visual arts rose from 420 exhibitions in 1988 to 1,430 exhibitions in 2008, showing an average annual growth rate of 6.3 percent. Reviewing pertinent per capita shows that in 1988 there were 14.4 exhibitions for an urban population of one million people, while the figure in 2008 has reached 19.7 exhibitions.
The number of private institutes of art in between the years 1988 and 2008 grew with an average annual growth rate of 22.5 percent from 48 institutes in 1988 to 2,778 institutes in 2008. The institute per capita, too, rose from 1.6 institutes in 1988 to 38.3 institutes in 2008 per an urban population of one million people.
This shows the increasing attention to art and training art as an influential factor for artistic development on one hand, privatization of this sector in a bid to help growing trend of the artists toward dynamic and extensive activities, transfer of the experience and knowledge from the veteran artists to the enthusiastic youth.
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Diagram (5): Art Trends Indicators, 1979-1990

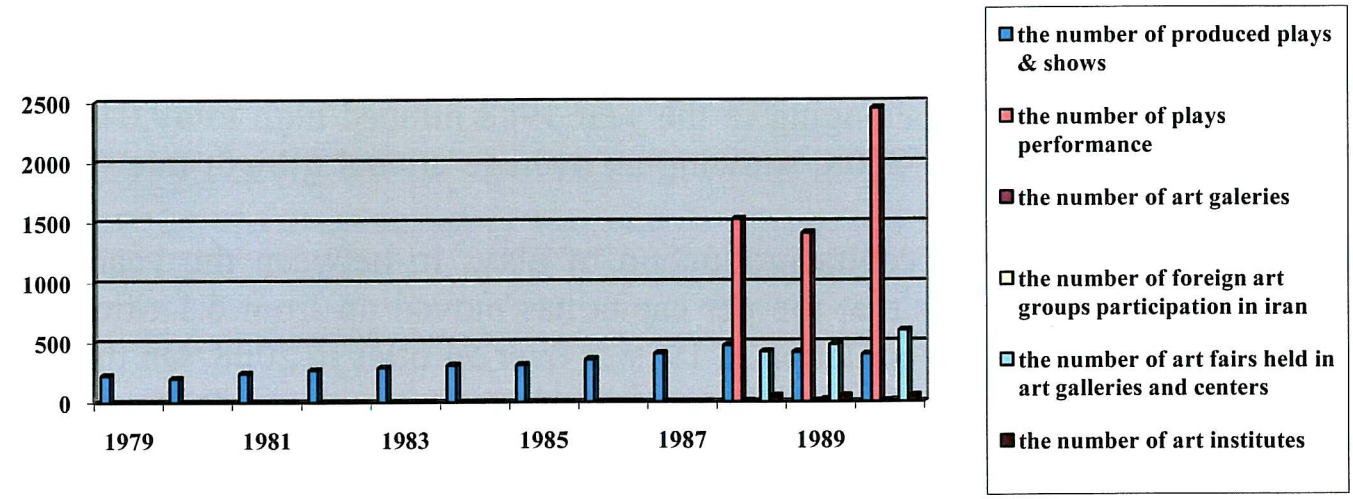


Diagram (5-1): Art Trends Indicators, 1991-2000

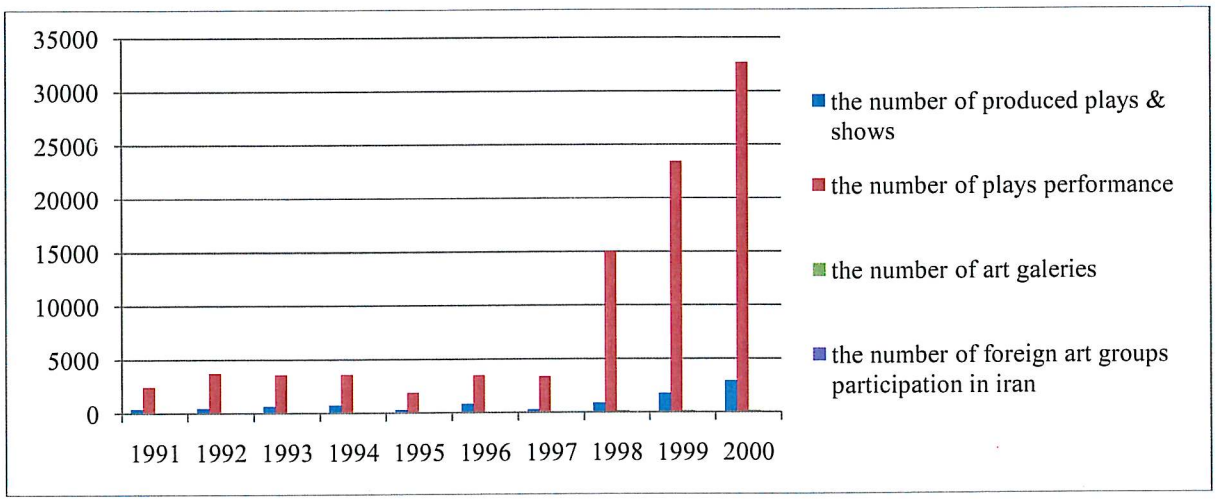
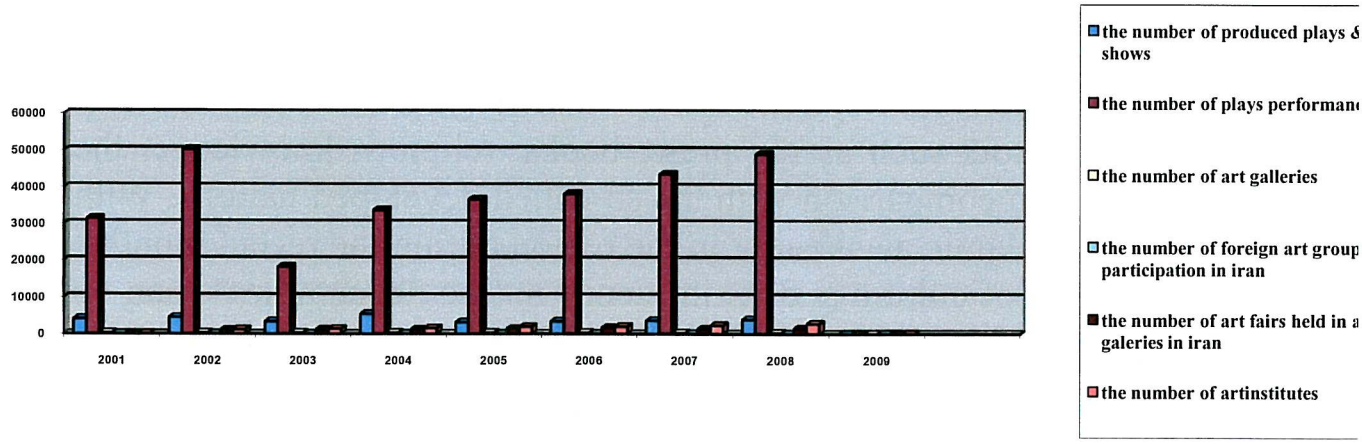


Diagram (5-2): Art Trends Indicators in between the Years 2001 and 2008



- The average annual growth rate has been calculated from 1988 to 2008.
- The average annual growth rate has been calculated from 1979 to 2008.
- The average annual growth rate has been calculated from 1998 to 2008.
- The average annual growth rate has been calculated from 1989 to 2008.
- The average annual growth rate has been calculated from 1991 to 2008.

Conclusion

Culture is the breathing room for a society. The major ideal of Iranian nation is to reach a brave, pious, happy, optimistic, justice-seeking, self-confident, indefatigable, pioneer and self-sacrificing society. Culture is the best tool for realizing all these higher objectives. (Part of the Supreme Leader's remarks in his visit to the members of the Supreme Council of Cultural Revolution, Dec. 8, 2007)

In order to realize these objectives, other economic, social and political systems move in tandem with cultural sector. The cultural development of the country will bring sovereignty for the nation in all other areas and sectors. With respect to the significance of culture, the Islamic Republic of Iran has worked for all-out development in cultural sector, in addition to leading development in other sectors, to promote the dissemination of the message of Islamic Republic of Iran in the region and in the world.
In some indicators such as the press, books, religious knowledge, the growth is fast in comparison with the so-called developed nations. With respect to the Islamic awakening in the region during the recent months, the importance of culture and its influence on the developments can be the strong point for the Muslim nations.

Source: Report of the Research for Supreme Council of the Cultural Revolution, May 22, 2011)

Chapter Four: Social, Sports, and Political achievements of I. R. of Iran within the Past Thirty Years

Introduction

The sacred Islamic Republic system was established under the leadership of Imam Khomeini and at the majority votes and supports of the wakeful people in Iran. The public awakening and uprising toppled down the tyrant regime of Shah and brought about the victory of Islamic Revolution.

At the emphasis of Imam Khomeini, people in a massive turnout attended ballot boxes. They voted "yes" with a majority 98 percent for the Islamic Republic system in the early months after the victory of the revolution. This made the country target of enemy plans and conspiracies.

Assassination of key government officials and religious leaders such as the president, prime minister, judiciary chief, and a large number of people and officials, the Imposed War against Iran, economic sanctions, … were among the problems and plots staged against the Iranian nation. The wakeful nation of Iran put behind all these crises vigilantly at the guidance of Imam Khomeini and safeguarded Islamic Revolution to the last ounce of their blood.

The Islamic Republic began Reconstruction Period after the war under the leadership of Ayatollah Khamenei. The Iranian nation proved obedience like before and marked a bright future for their country by supporting developments in all fields. Such developments can be vividly observed in all economic and reconstruction, political, sports, cultural, and social fields.

In this paper we will refer to some examples of massive participation of people in political, social and religious fields as well as their achievements in sports fields.

- **Sociopolitical Developments in the Islamic Republic of Iran**

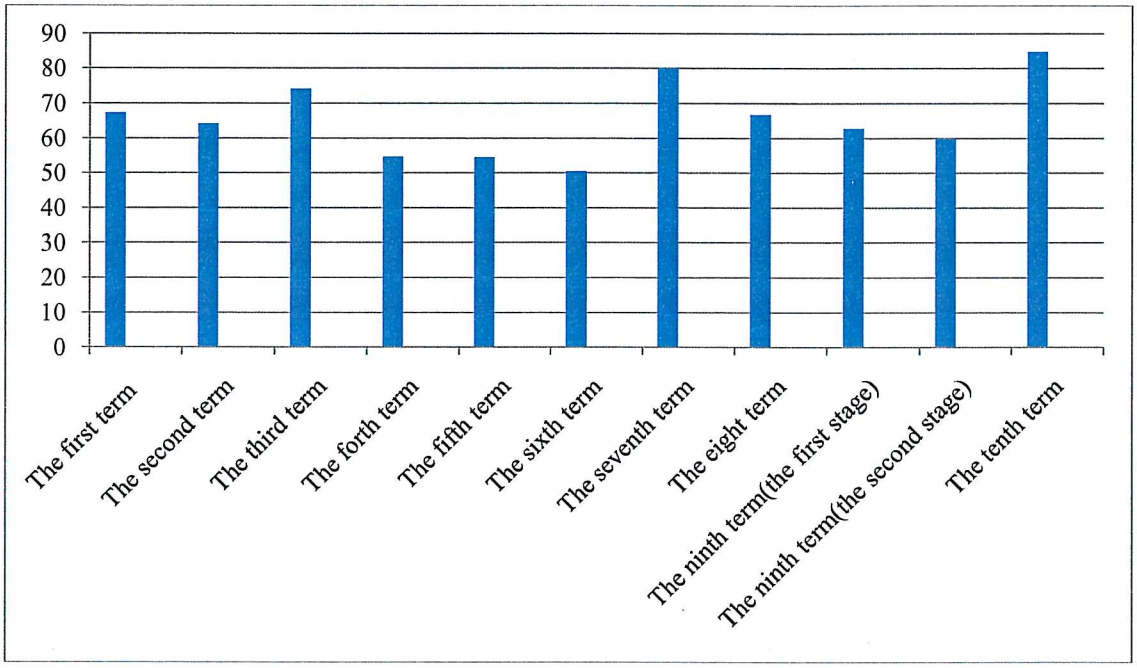
- **Political Participation and Islamic Revolution**

One major criterion for democracy in a political system governing a country is the political participation of the citizens in determining their destiny. Political participation in general sense means collective or individual contribution of the citizens to the decision-making process and administration of political and social affairs in their country. Ever since the establishment of the Islamic Republic of Iran political participation of people in presidential elections, Parliament elections, elections of the Experts Assembly, and Islamic city and village councils has experienced ups and downs under the influence of political events, developments and sociopolitical conditions in each period. In the latest elections on Khordad 2009 for the 10^{th} president of the Islamic Republic of Iran, participation rate touched 85 percent that is the highest political participation rate in the world. It is a sign of religious democracy and sovereignty of the Islamic system of government in Iran.
The first and most important post-revolution elections was the referendum to abolish the monarchy in Iran, held on April 1, 1979, that determined the type of government people preferred. The next two elections were in connection with the compilation of the Constitutional Law held in August and Nov. 1979. Holding five important elections in 1979 changed the year into an exceptional milestone in the history of the Islamic Revolution. In the Islamic Republic system all personalities and institutions from the leader to the Parliament and councils are selected by public votes.

- **Political Participation of People in Presidential Elections**

The first presidential elections were held in February 1979. Despite ups and downs in participation of general public in presidential elections, as the diagram shows, the participation rate has always been high. There is no serious fall in the rate since the past 32 years. Since the beginning, the least participation rate belongs to the sixth presidential elections in which the candidate won 50.65 percent of the votes to win the presidential office. Also the highest participation rate belongs to the 10th presidential elections, in which 85 percent of eligible voters took part to make an unprecedented record in the history of Islamic Revolution.

Participation Rates in 10 Presidential Elections



Participation Rates in 10 Presidential Elections

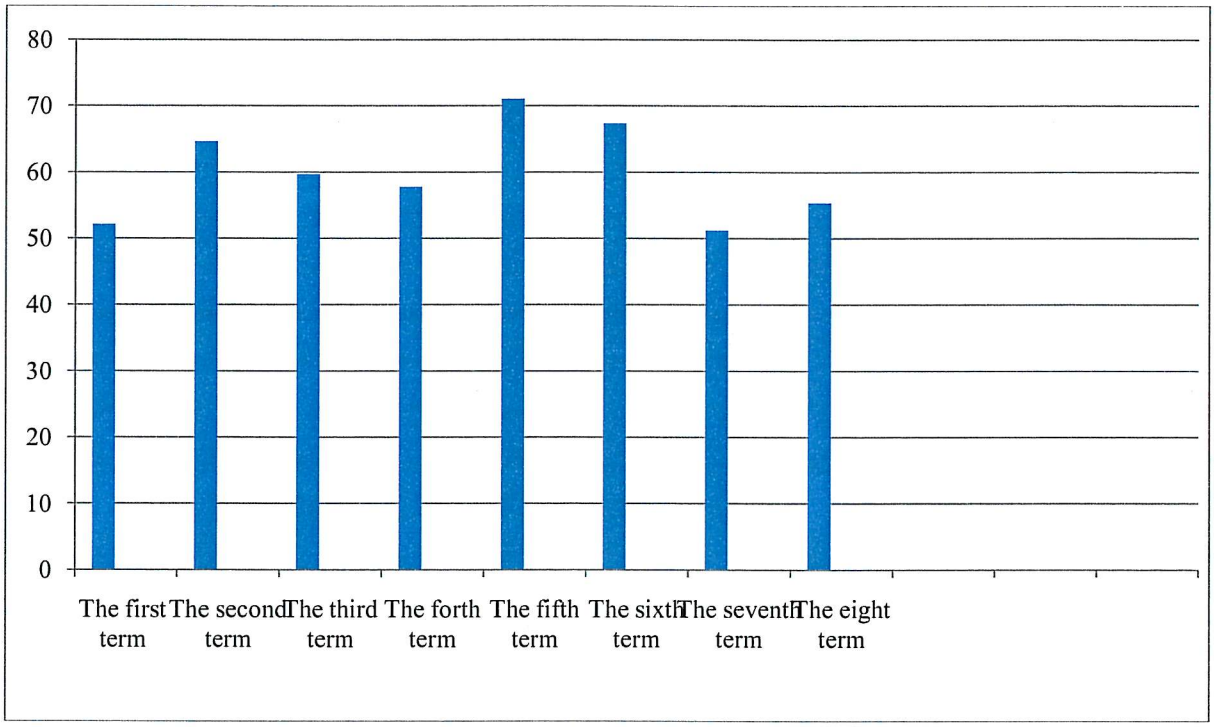
Number of participants	Number of eligible voters	Term
14.152.907	20.993.643	The first term
14.572.493	22.687.017	The second term
16.847.715	22.687.017	The third term
14.238.587	25.993.802	The forth term
16.452.562	30.139.598	The fifth term

16.796.755	33.156.055	The sixth term
29.145.745	36.466.487	The seventh term
28.155.969	42.170.230	The eight term
29.400.857	46.786.418	The ninth term
27.958.931	46.789.418	The ninth term (runner up)
39.371.214	46.199.997	The tenth term

- **People's Political Participation in Parliament Elections**

The first Parliament elections were held 49 days after the presidential elections in 1979. With respect to Imam Khomeini's famous remark that said "Parliament has the final say in all affairs", participation of people in the Parliament elections has been always high from the beginning.

Turn outs in Eight Parliament Elections



Turn outs in Eight Parliament Elections

Number of participants	Number of eligible voters	Term
10.875.969	20.857.391	The first term
15.907.306	143.498.24	The second term
16.714.281	27.986.736	The third term
18.767.042	32.465.558	The forth term
24.682.386	34.716.000	The fifth term
26.082.157	38.726.431	The sixth term
23.734.677	351.032.46	The seventh term
24.279.717	43.824.254	The eight term

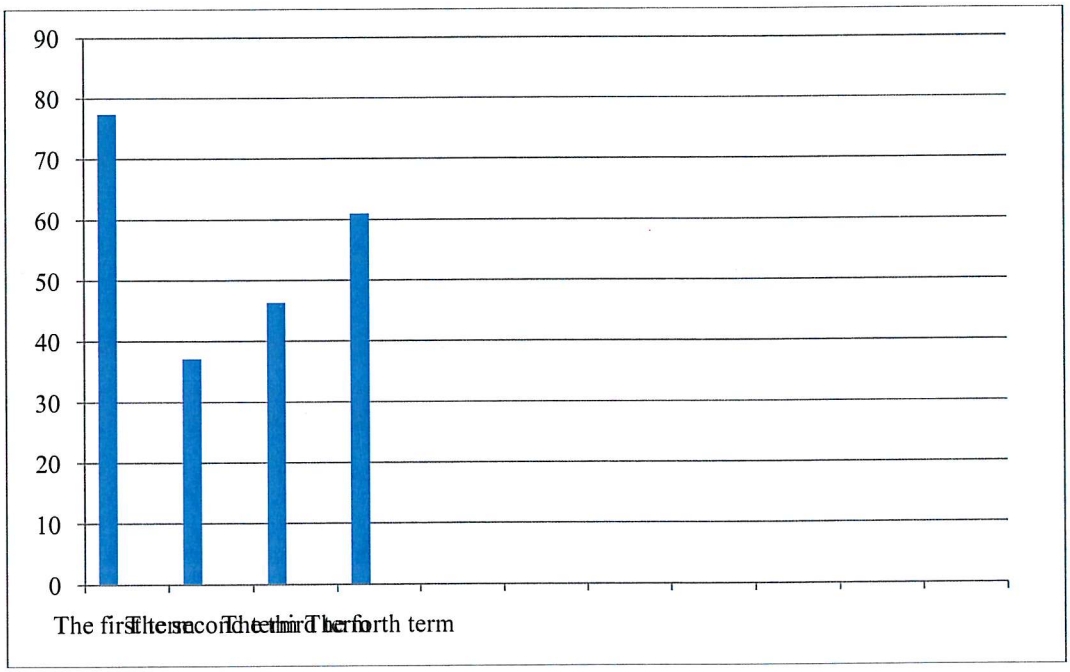
- **People's Political Participation in Experts Assembly Elections**

According to Imam Khomeini, participation in the elections is a religious duty. The Muslim nation of Iran, upon strong belief in absolute rule of the Islamic leadership and the Shura Chapter of Qoran (Va Amrahom Shura va Baynahom meaning and their affairs are done by

consultancy between them) consider participation in the elections as a religious duty.

The first Experts Assembly elections were held on Dec. 10, 1982 during the Imposed War. Since, according to the Constitutional Law, the Experts Assembly is a decisive body in political structure of the country and responsible for selecting leader of the Islamic community, people have always shown massive turnout in these elections. According to the diagrams, participation of people in the third Experts Assembly elections (1998) has been higher in comparison with the second elections (1990), and the fourth (2006) was higher in comparison with the third elections. This shows the gradual increase in public participation in Experts Assembly elections within the past 31 years.

Turnout in Four Elections of the Experts Assembly



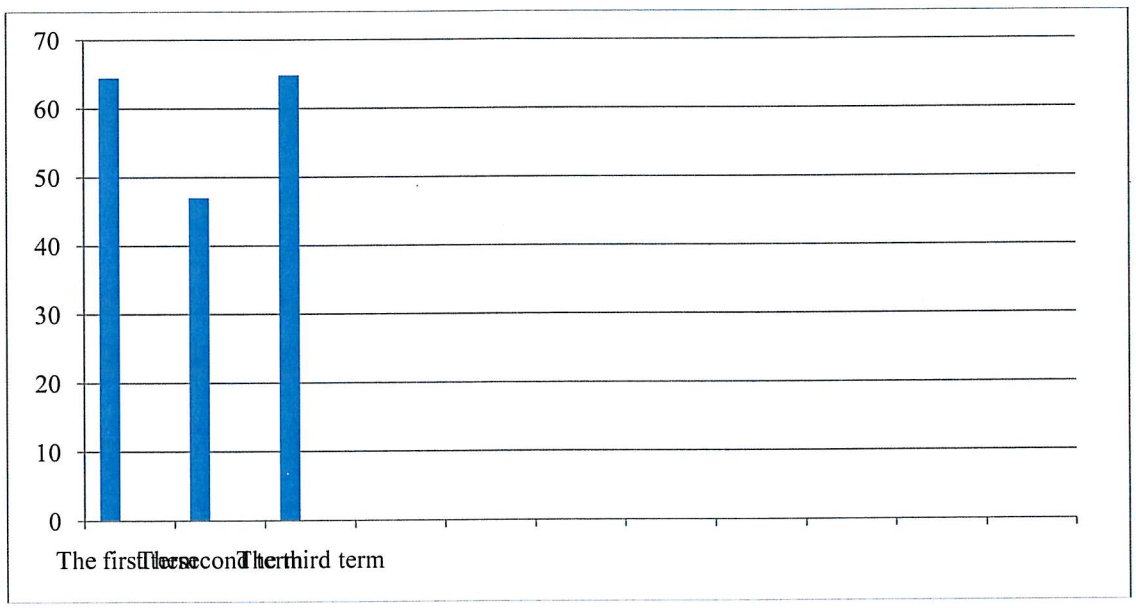
Number of participants	Number of eligible voters	Term
18.013.061	23.277.871	The first term
11.602.613	31.280.084	The second term
17.857.869	38.570.597	The third term
28.321.270	46.549.042	The forth term

- **People's Political Participation in Local Councils Elections**

The Islamic councils in the cities and villages had been anticipated in the Constitutional Law of the Islamic Republic of Iran from the beginning. The goal was to attract massive participation of people in various political, social and civil activities. Due to inappropriate conditions in the early years after the revolution and the outbreak of war, establishment of these councils postponed for some 20 years. Boosting public participation in administration of affairs is the major political task of the councils. The prerequisite for political participation is institutionalization. Councils are institutions present in the society and in the government, therefore they can play a key role in attracting sociopolitical participation of people. Recent researches have shown that the establishment of city and village councils has brought about more participation of people from all tribes, religious minorities, the youth and women in sociopolitical affairs. Over 64 percent of

participation in elections for the village and city councils in 2001 is a solid evidence for this claim. In the meantime, various walks of life have shown more interest and welcome of these elections. This, however, has not been similar in all regions across the country. The public welcome of these elections has been higher in rural areas, small cities, and less developed regions in comparison with urban areas, big cities and developed regions respectively.

People's Participation in Three Local Councils Elections



People's Participation in Three Local Councils Elections

Number of participants	Number of eligible voters	Term
23.668.739	36.739.982	The first term
20.235.898	40.501.783	The second term
28.199.903	500.000.43	The third term

According to the information available on the Website of the Interior Ministry, the number of unacceptable votes in each period has been reduced to almost zero level within the past 31 years. Studies show that there is a direct relationship with the increase in domestic and foreign threats against the Islamic Republic of Iran and participation of various political groups in the elections. Ever since the establishment of Islamic Republic in Iran (within the past 32 years) a total of 32 elections have been held. Every year one election has been carried out in the country that is an honor for the Islamic Republic of Iran in the region and in the world. It can therefore, serve as a model for the other Muslim nations in the region and the world.

*** The Week to Commemorate Status of Women and Mother's Day on the Occasion of the Birth Anniversary of Hazrat Fatemeh Zahra (SA)**

Undoubtedly the Islamic Republic of Iran boosted the excellence of women in the society, politics and economy by promoting the pure Mohammedan Islam. The Islamic Republic promotes the real status and personality of women and does not have an instrumental approach toward women. Unlike the past regimes, our approach toward women is according to the humane and pure Islamic precepts.
In this connection, concurrent with the Jamadi al-Thani 20, the birthday anniversary of Hazrat Fatemeh Zahra and Imam Khomeini, nationwide ceremonies are observed in the Week of Women and Mother's Day. All walks of life participate in this ceremony to honor women as the pillar of family and upbringing of children by granting them gifts.

- Public Demonstrations and Ceremonies

- Commemorating the International Day of Qods (Last Friday of the Holy Month of Ramadan)

Commemorating the World Qods Day is a heritage remaining from Imam Khomeini. It is observed to show Iranian nation supports the Islamic cause of the people of Palestine. It is also a sign of supporting the oppressed people of the world through an Islamic-humane approach that results in Islamic awakening of the Muslim nations.
Qods and Intifada Headquarters organize public demonstrations across the country against the Israeli atrocities in the last Friday of the holy month of Ramadan.

- Commemorating Ten-Day Dawn and Bahman 22nd Demonstrations

The nationwide Ten-Day Dawn ceremonies are held from Feb. 1, when Imam Khomeini returned home, and ends on Feb. 11 the victory day of the Islamic Revolution. All walks of life take part in

the ceremonies but the Bahman 22nd demonstration is the greatest public turnout in the cities and villages that receives wide reflections.

- Other Unexpected Ceremonies

These demonstrations and ceremonies are organized according to the social demands. Examples are the massive demonstration of people on July 14, 1999 and Dec. 30, 2009, marches to express solidarity with the 33-day resistance of the Lebanese Hezbollah against the savage atrocities of the Zionist regime, also solidarity with the 22-day resistance of the people of Gaza Strip against Israeli atrocities, and finally Khordad 14th (June 4) demonstration against the Israeli attack of humanitarian aid to the oppressed people of Gaza were held across the country.
The number of people participating in these demonstrations varies from case to case but the executive bodies responsible for organizing these demonstrations have their estimations of the marching population.
It should be noted that over four million took part in Dey 9th (Dec. 30) demonstration in Tehran while over 30 million joined then nationwide. Last year, over 4.5 million people poured out onto the streets in Tehran and almost 45 million people joined them across the country.

- Islamic Revolution and Religious and Cultural Programs in the Universities

Congregational prayers: By far, almost 2,350 congregational prayer leaders perform prayers in the universities and dormitories. At least 100 morning prayers are held in the universities every day. Nearly 50-1500 prayers took part in the congregational prayers in over 350 university mosques. Estimates say there are over 2,200 active prayer halls in the universities.

Student retirement for prayer: Student retirement for prayer is observed every year in Rajab and last decade of the holy month of Ramadan. It receives wide welcome of the students so that there is always insufficient space to lodge the prayers. Statistics say each university mosque hosts almost 30,000 people during these nights. The student retirement for prayer has caused ordinary people to go to the mosques for this ceremony.

Students minor pilgrimage to Mecca: By far over 25,000 students and professors have won the lot from among hundreds of thousands of hopeful applicants to take a trip to Mecca to perform minor pilgrimage to the House of God.

Pilgrimage tours: These trips are real manifestations of spiritual activities of the university students. Students enroll to visit the holy shrines and mausoleums in groups such as the Imam Reza (AS) Holy Shrine in Mashhad, Hazrat Masoumeh (SA) Holy Shrine in Qom, Jamkaran Mosque in Qom. Millions of students and their families have been sent thus far for such tours. Also almost 100,000 students take the tours in groups to these sacred places.
Students and professors also enroll for visiting the war operation zones in southern and western Iran in the form of caravans.

- **Sports in Post-Islamic Revolution Iran**

One of the greatest objectives of the Islamic Revolution was expanding public service and boosting public welfare in various fields. In this connection, the officials paid due attention to sports, that is the best practice for physical and psychological upbringing of man and for building a healthy society. The support programs covered al dimensions of sports and physical education and promoted cultural and ethical values in this field. As a result the quality of Iranian sports in cultural fields was improved, although such a change happened in outer layers of some fields of sports only. In

general, however, there is strong belief that Iranian sport is experiencing positive changes.

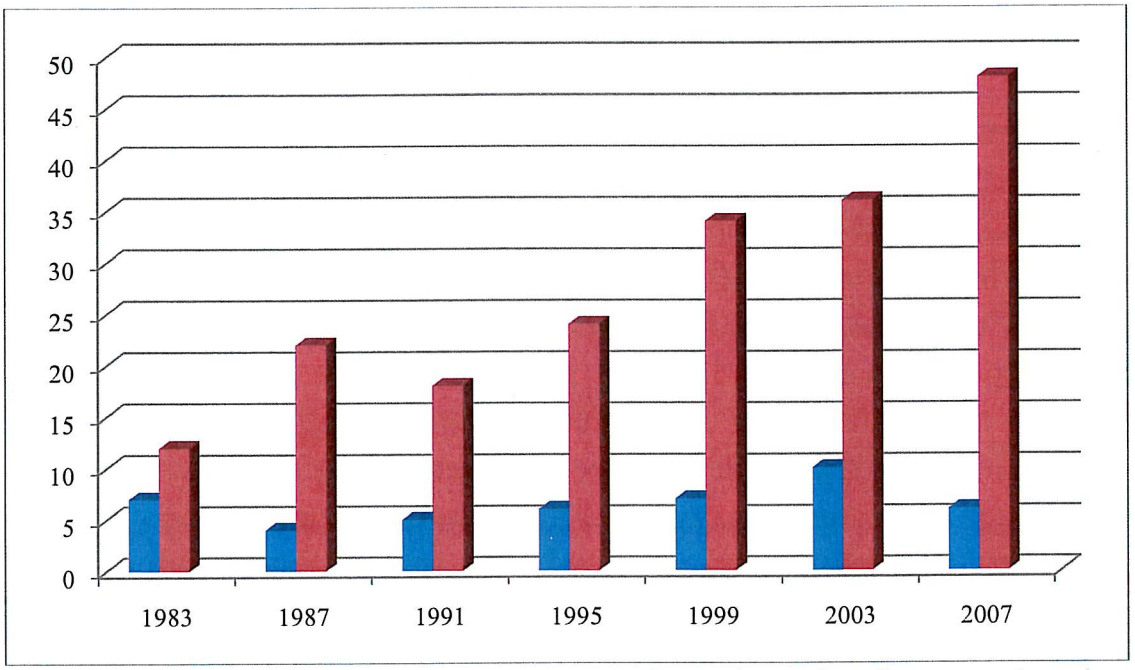
Establishment of women sports gyms gave this opportunity to the other half of the society to show their physical talents. Relations with foreign countries were improved and Iranian athletes could take part in international sports tournaments. Within a short time after the changes in sports, Iranian youth won valuable medals for their country. Developments continued, each improving a field of sport. In the early years of 90s Iran established sports TV channels and sports radio to show the government's full support of sports.

Alongside the ratio and TV sports programs, sports magazines and newspapers came to being. Internet gave the chance for mushroom growth of sports websites and news agencies. The world of sports is happy and energizing and it boosts happiness and energy in the society, therefore, the officials are interested in extending their supports to sports. After the victory of Islamic Revolution, the culture of spirituality and ethics was injected into sports, while before the revolution, sport was a publicity and advertising tool without cultural basis. According to the statistics at hand, after the victory of Islamic Revolution, sports received a new approach that sought championship in international and national levels. This is why the then officials publicized a motto that said: "Sport without the culture of championship and without due attention to championship is useless; Championship sport is like a peak that must be conquered and due attention must be paid to the outskirts or sports domain in development programs." Since then, we observe a giant stride toward championship in national sports.

Women sport was a limited physical practice for a limited number of athletes with an inappropriate culture. It was developed deservedly and women enjoyed exclusive sports gyms. Women sport and women status were honored by establishing the Deputy Office for Women Sports. This gave women a chance to work for the championship and international sports under coaches, trainers and referees. That time, the International Olympics Committee recommended the sports managers to use at least 30 percent of women athletes in their

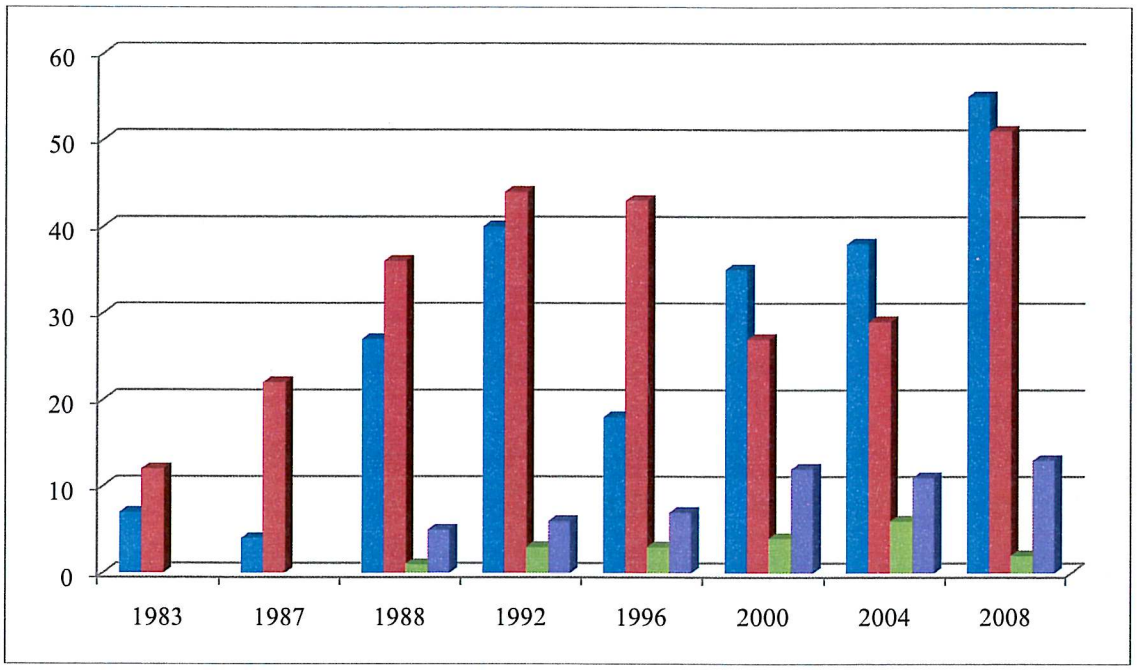
Olympic Games. Iran was among the first countries to act upon this recommendation and to receive commendation.

Figure 1-2: Performance in Asian Games



We observed great developments in the Olympic Games, that is an important indicator for the development of sports in Iran. Although after the Islamic Revolution we could not make great achievements in all sports fields, in such indicators as qualification for the games Iran made good records. It should be noted that the gold medals of these games remained unchanged between one to three medals. In the last Olympic Games Iran participated 55 athletes in 13 fields (Figure 2-2).

Figure 2-2: Performance in Olympic Games



Statistics of the sports fields and medals in various Olympic games:

- 1988 Seoul Olympic Games, freestyle wrestling (single medal)
- 1992 Barcelona Olympic Games, freestyle wrestling (three medals)
- 1996 Atlanta Olympic Games, freestyle wrestling (three medals)
- 2000 Sidney Olympic Games, weightlifting, freestyle wrestling, tae kwon do (four medals)
- 2004 Athens Olympic Games, weightlifting, freestyle wrestling, tae kwon do (six medals)
- 1999 Beijing Olympic Games, freestyle wrestling, tae kwon do (two medals)

The Islamic Republic of Iran qualified for various Olympic Games in the following fields:

- 1988 Seoul Olympic Games: cycling, freestyle wrestling, Greco-Roman wrestling, tae kwon do, track and field

- 1992 Barcelona Olympic Games: boxing, cycling, freestyle wrestling, Greco-Roman wrestling, tae kwon do, track and field, weightlifting, ping pong
- 1996 Atlanta Olympic Games: boxing, judo, freestyle wrestling, Greco-Roman wrestling, shooting, track and field, swimming
- 2000 Sidney Olympic Games: track and field, boxing, rowing, weightlifting, freestyle wrestling, Greco-Roman wrestling, tae kwon do, cycling, horseback riding, judo, swimming, ping pong and shooting
- 2004 Athens Olympic Games: track and field, boxing, weightlifting, freestyle wrestling, Greco-Roman wrestling, tae kwon do, cycling, judo, swimming, ping pong and shooting
- 1999 Beijing Olympic Games: ping pong, badminton, swimming, arrow shooting, rowing, boxing, tae kwon do, weightlifting, track and field, judo, freestyle wrestling, Greco-Roman wrestling, and basketball

Tables 1-2 and 2-2 depict the number of Iranian medals in international and Asian competitions.

Table 1-2: Iran's Medals in International Competitions

year	bronze	silver	gold	Total
1993-2000	224	189	275	688
2001	65	96	82	243
2002	58	69	74	201
2003	47	64	73	184
2004	40	30	37	107
2005	57	49	87	193
2006	59	45	60	164
2007	60	64	98	222

Table 2-2-: Iran's Medals in Asian Competitions

year	bronze	silver	gold	Total
1993-2000	224	189	275	688
2001	65	96	82	243
2002	58	69	74	201
2003	47	64	73	184
2004	40	30	37	107
2005	57	49	87	193
2006	59	45	60	164
2007	60	64	98	222

- **Stadiums and Sports Facilities**

The per capita sports facilities show a very good growth during the years after the victory of Islamic Revolution. The pre-revolution 17000 rials per capita has been increased to 70,000 rials per person for the time being.

On the other hand, the per capita sports facilities in 2008 stood at 0.5 meters, while plans are underway to boost the figure to international standards of two meters per person. A t present, 12 provinces enjoy sports per capita of almost one meter. This shows fair distribution of sports facilities across the country after the revolution.

Figure 2-3: Sports Per Capita Distribution in the Course of Years

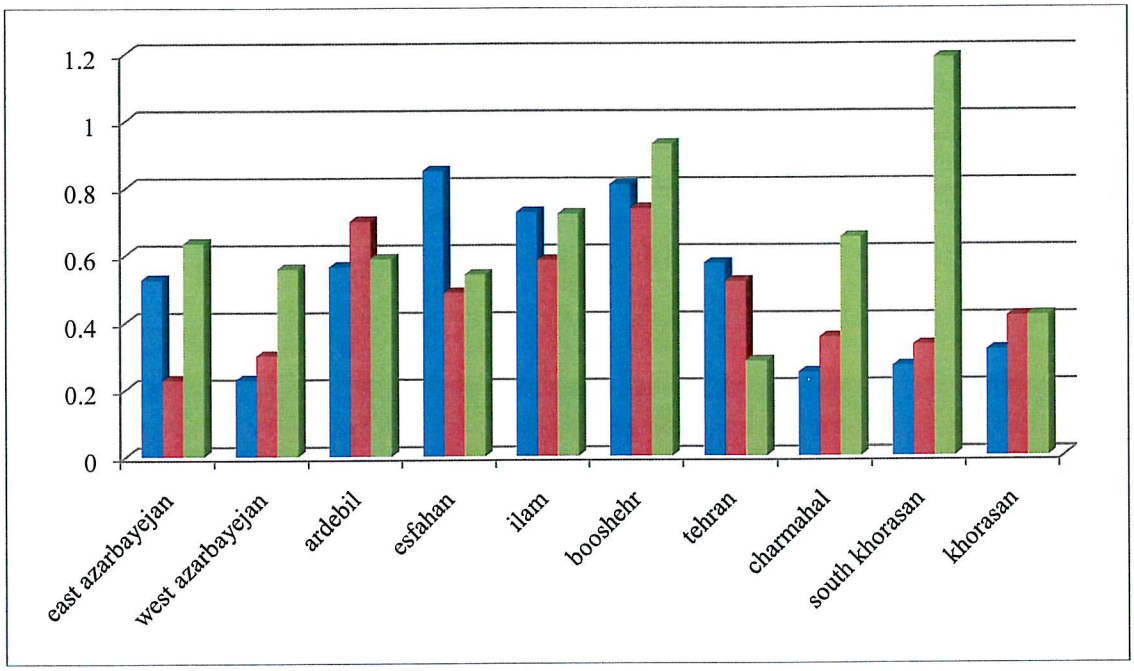


Figure 2-4: Trend of Sports Per Capita Distribution

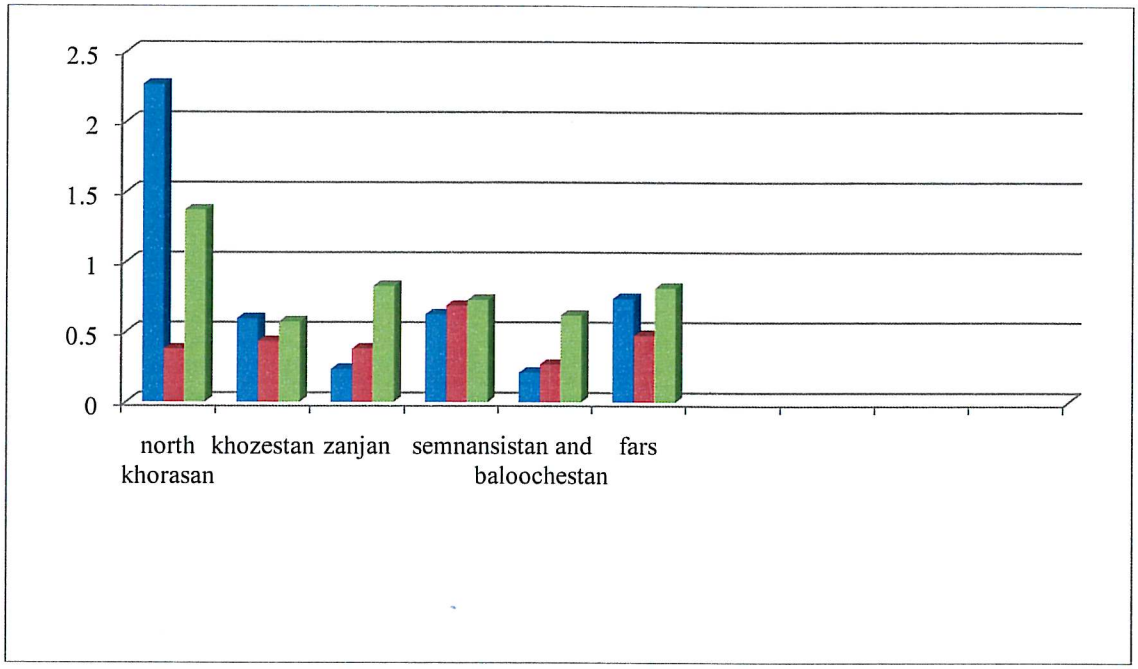
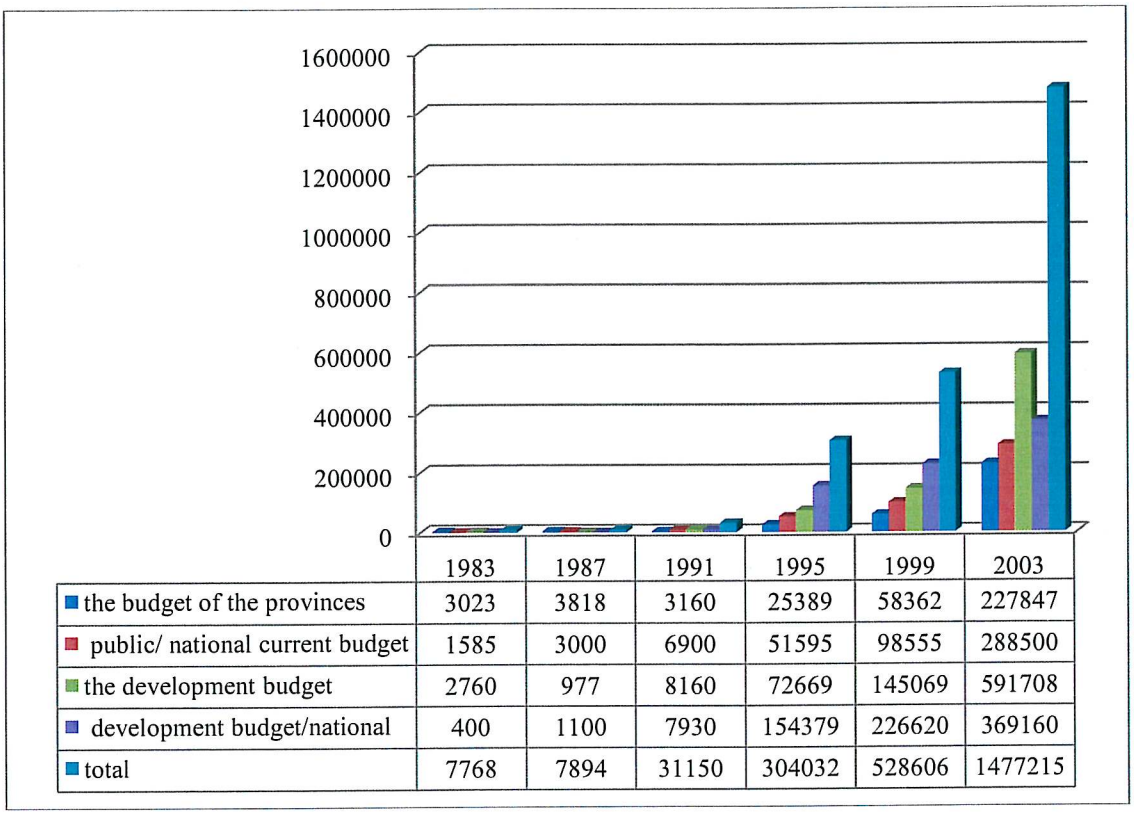
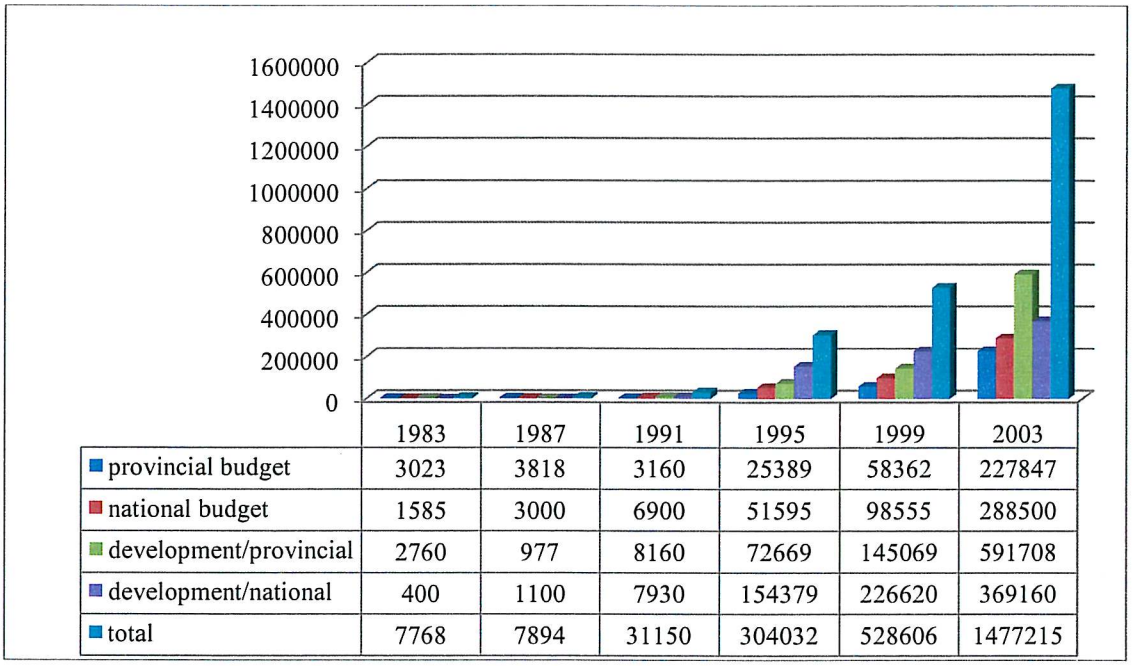


Figure 2-5: National Sports Budget



	1983	1987	1991	1995	1999	2003
the budget of the provinces	3023	3818	3160	25389	58362	227847
public/ national current budget	1585	3000	6900	51595	98555	288500
the development budget	2760	977	8160	72669	145069	591708
development budget/national	400	1100	7930	154379	226620	369160
total	7768	7894	31150	304032	528606	1477215

Figure 2-6: National Sports Budget



	1983	1987	1991	1995	1999	2003
provincial budget	3023	3818	3160	25389	58362	227847
national budget	1585	3000	6900	51595	98555	288500
development/provincial	2760	977	8160	72669	145069	591708
development/national	400	1100	7930	154379	226620	369160
total	7768	7894	31150	304032	528606	1477215

- **Professional and Amateur Athletes**

Post-revolution public sports in Iran stands at 15 percent. At present an average of 1.5-3 percent of the population in the provinces, including the amateur and professional athletes are under the insurance coverage. According to the Physical Education Organization the insurance coverage will touch 10 percent of the total population of the country in the near future.

- **Status of Women Sports**

According to Islam, sports should be an inseparable part of the life of a Muslim woman. However, doing sports must be according to the dignity and human excellence as well as physical and mental capacities of women. From Islamic point of view, women sport is permitted as far as they observe certain limits. In other words, women sports must be according to their social status and dignity. Sports must not lead to the corruption of social atmosphere and cause family problems. Women sport is very interesting and pleasurable in case women are trained to perform their duties better in the future.

Today, Iranian women are active in 44 fields, 32 fields of which are permitted to take part in international tournaments. Iranian sports caravan destined to Doha, Qatar, comprised of 243 athletes, 27 of who were women. This is an outstanding achievement given the fact that in the previous sports events the number of the women athletes was half of this figure. Also it shows an outstanding growth in comparison with the first overseas sports experience of women (shooting in 1990, China Asian Games).

In the early years after the victory of Islamic Revolution, there was no women athlete to qualify for the Olympics because there were no infrastructures for women sports. Years passed, infrastructures were created, and women could do sports and qualify for the Olympics. In the last Olympic Games Iranian women could qualify for three Olympic medals in various sports fields. It was a good achievement for women athletes (Figure 2-7).

Figure 2-7: Presence of Women in Olympic Games

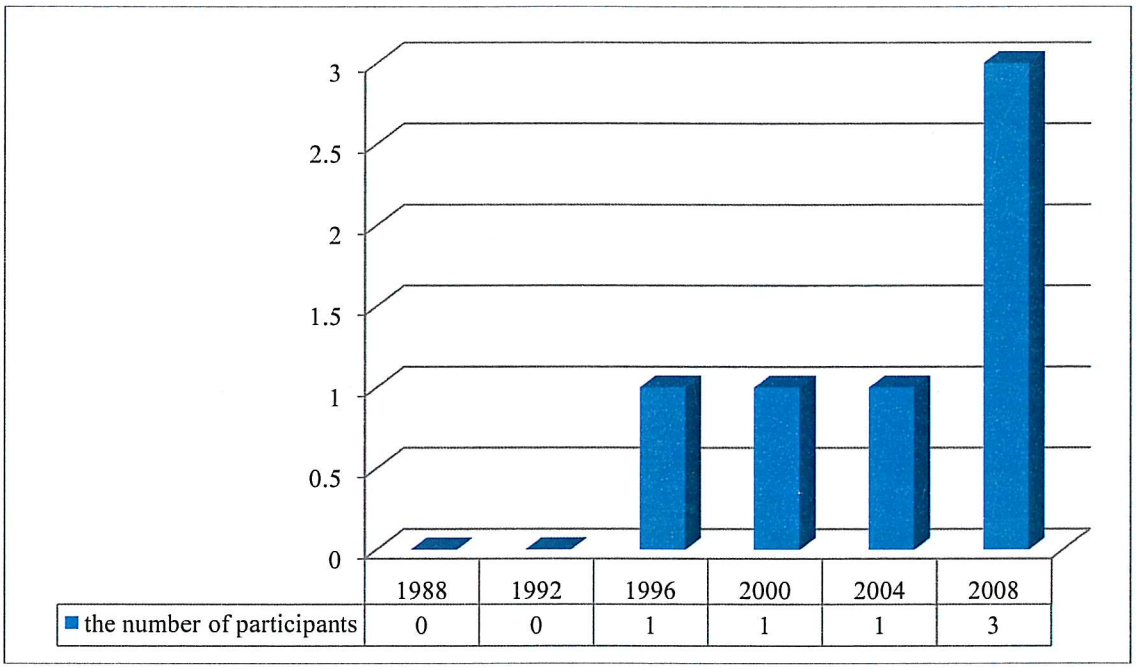


Figure 2-8: Women Sports Boards in Iran

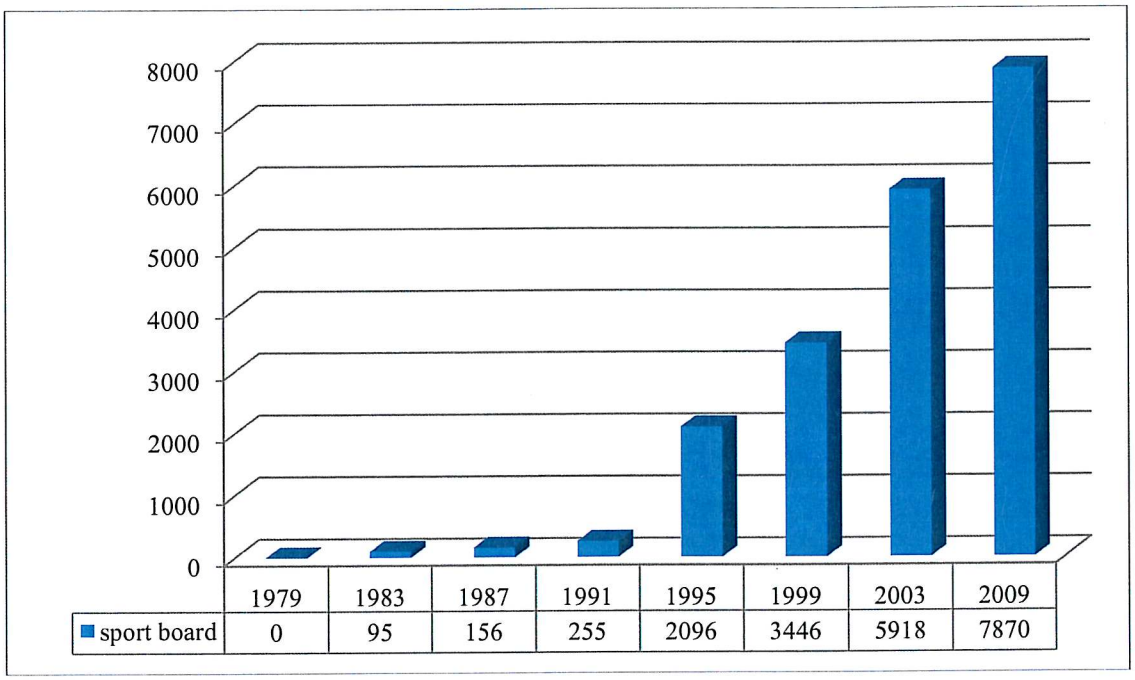


Figure 2-9: Number of Coaches and Trainers

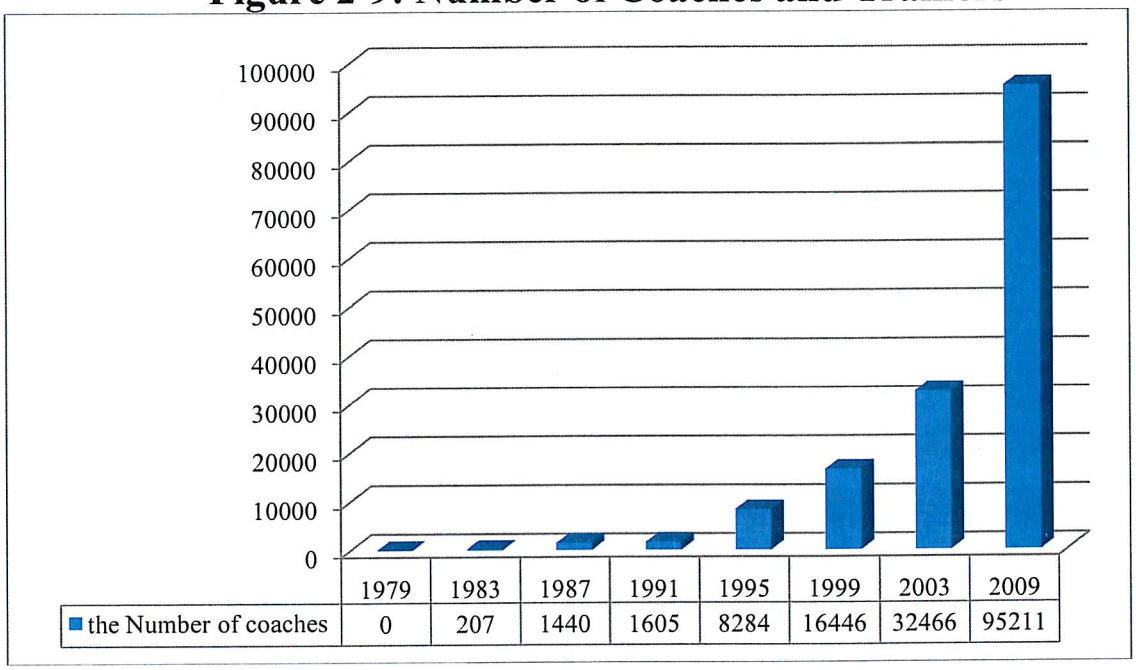
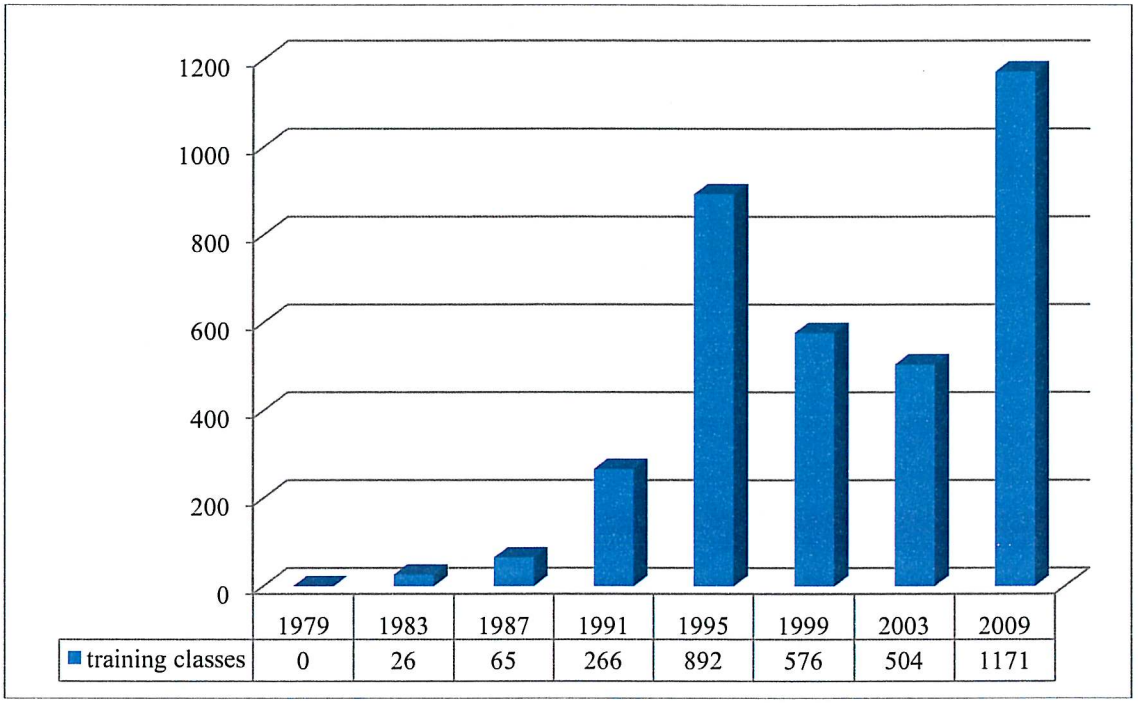
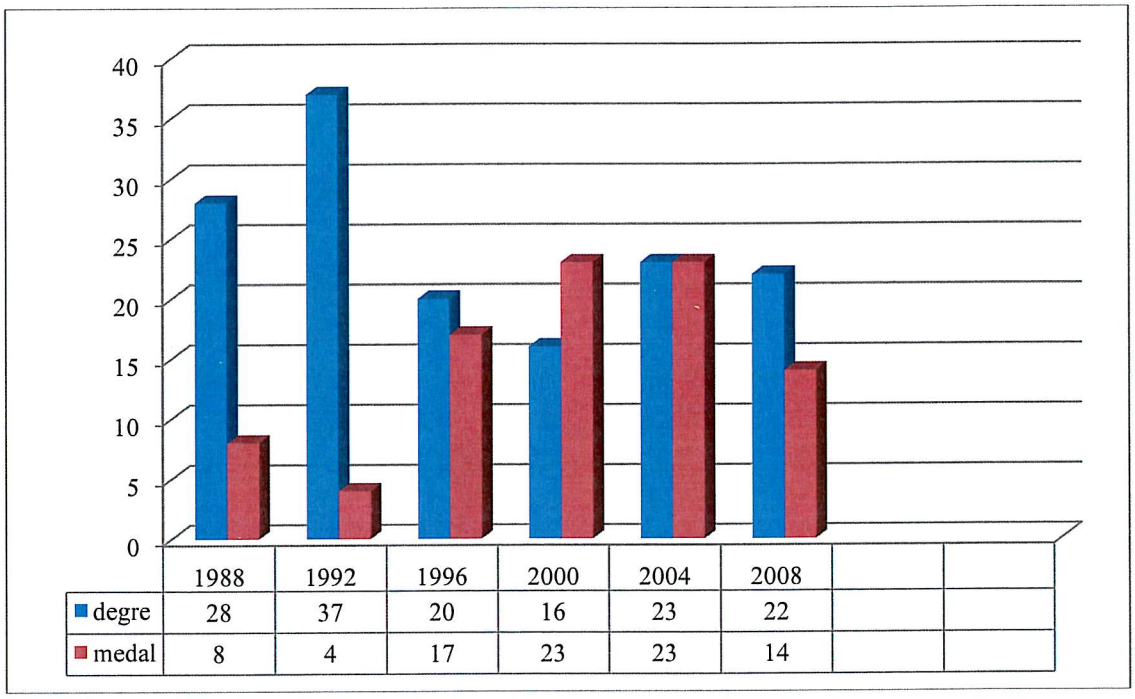


Figure 2-10: Number of Training Classes



Performance of Women Athletes in Paralympics

Figure 2-11: Iran's Status in Paralympics



	1988	1992	1996	2000	2004	2008		
degre	28	37	20	16	23	22		
medal	8	4	17	23	23	14		

- **Newly Established Fields of Sport**

After the Islamic Revolution new sports federations were established one after another, increasing from 23 pre-revolution federations to 52 federations. Such an achievement popularized sports across the country and sports boards (around 10,000 boards across the country) have grown in number substantially.
Among post-revolution sports initiatives we can refer to the Sports Olympiad of Iranians planned for various age groups and the International Ten-Day Dawn Sports Competitions.

Conclusion

During the years after the victory of Islamic Revolution in Iran, sports fields grew in quality and quantity outstandingly. Federations, athletes and qualifications for national, world and international competitions grew in number and Iranian athletes could win many colorful medals in these events. These achievements improved Iran's sports ranking among

other nations. The sports sector has also enjoyed some cultural achievements so that the role of women in sports - according to Islamic criteria - has been highlighted, and championship sports and generosity have been revived. The sports sector has also taken giant strides toward privatization and scientific activities, and all these achievements have been made in the light of the Islamic Revolution.

Sources:

- Official Report of the Interior Ministry
- Official Report of the Islamic Ideology Dissemination Organization (IIDO)
- Official Report of the Coordination Council of IIDO
- Official Report of Leader's Representative Office in the Universities
- Official Report of Physical Education Organization

Chapter Five:
Contribution of Women in Scientific, Research and Political Fields of I. R. of Iran within the Past Thirty Years

Introduction

Women have played a unique role in the establishment, reconstruction and development of the Islamic Republic of Iran. They have greatly contributed to the victory of Islamic Revolution by massive turnout in demonstrations and combats against the tyrant regime of Shah. During the Imposed War, they accompanied their husbands and children to fight the enemy while serving themselves as the physicians and nurses in the battlefield. As in Reconstruction Period, they have actively participated in social and scientific arenas to play their key roles in development of the country.

In the years of development women were always key players in scientific, research, technology as well as cultural, social, political and management posts namely minister, deputy president, and members of parliament. In the following part, we will review some achievements of women during the past thirty years.

- **Contribution of Women in Scientific and Research Areas**

The number of women academic board members grew from 1,894 in the year 1999 to over 13,000 in 2010. Female university students also grow in number from 54,248 students in 1999 to over two million students in 2010. Today, female students can study in any desired field such as technical and engineering (mining engineering for instance), aerospace engineering, etc. There is no restriction for their study in any academic course. During the recent years, female students have put behind male students in university admission. Iranian women are now very active in the universities, research centers, hospitals, higher education centers and the management posts. Women also hold key posts in the Islamic Republic of Iran as the advisor to the president, deputy president, minister, deputy minister, members of parliament, judge, and judiciary advisor.

In 2010, women constituted 62.27 percent of the applicants for university entrance examinations. In the same year, 392,935 female students enrolled for higher education. The figure shows 4.8-fold

increase as compared with the figures belonging to the past ten years (over 27 percent growth).

In 2010, some 63.56 percent of BA/BSc students were women. Also in the same year, some 45.68 percent of MA/MSc students were women, and similarly women constituted 47.88 percent of the PhD students.

In 2010, almost 15, 500 women worked in the higher education centers as the professors and academic board members. The figure shows 6.5-fold increase as compared with the past ten years. Also 173 women, from among the total number of women working in the state-run universities, hold full professor degree, 436 are associate professors and 3,086 are assistant professors. Also 12,450 women teach at the Islamic Azad University, manifesting 3.5-fold growth in comparison with the past ten years.

Elite women have also great contribution to the scientific Olympiads and festivals. During the past 22 rounds of Khwarizmi International Festival in various subfields of science and technology, over 20 elite women have won awards for their plans, inventions and innovations. Also 877 final qualifiers of the 14 rounds of student Olympiads in the country are women. Similarly 52 prizewinners at the Khwarizmi Festival for the Youth in university student category and 124 prizewinners in student level during the past 11 rounds are women. Statistics show that women have always been among the first prizewinners in major contests and festivals such as nine rounds of Dr. Hedayat Dentistry Festival, in which 114 women were lauded as the inventors and innovators of new plans. During the three rounds of Farabi Festival, held on various fields of human sciences, 11 women won top prizes. In two rounds of Robotics National Competitions, 11 women could qualify for the final. Women also have managed to reserve top awards for themselves in Razi Festival, special for medical achievements. In this festival, women scientists won three awards.

The Eternal Figures Festival has eight nominees from among the first-class women scientists and luminaries every year. The Internet website of Center for Statistics and Information on Women (www.iranwomen affiliated to the Cultural and Social Council of Women and Family, of the Supreme Council of Cultural Revolution) introduces 22,117

exemplary and active Iranian women, classified into 43 groups along with their outstanding works. The website also contains 6,196 introduction letters for academic board members, 120 inventor and innovator Iranian women, 693 top women researchers, 67 women authors, and 381 poetesses and women-of-letter.
Undoubtedly the strong will and determination of Iranian learned women along with their steadfast loyalty to Islamic values, and assuming responsibility of the family can turn them into an epitome of Muslim woman for the other Muslim nations.

Sources:

- Official Report of the Cultural and Social Council of Women and Family, of the Supreme Council of Cultural Revolution
- Official Report of Center for Statistics and Information on Women

- **Chapter Six: Trends in Economic Factors**

Trends in Economic Factors

Introduction: Manpower and capital are two traditional factors for production. In addition to these two, human capital and idea are two new factors for production. Human capital is created and accumulated by investment in education (higher education and healthcare). The accumulation of human capital through higher education was already discussed in the second chapter. The third chapter studied idea production through research and development. Therefore, in this chapter we will discuss two factors of manpower and physical capital. In the part related to manpower, we will study trends in specialized manpower as the human capital asset.

Trends in Manpower

Activities, or more precisely, economic activities are attributed to the kind of works that end in production of useful goods and services in the economic life of the society. According to the International Conference of Statisticians, "active population" comprises of men and women with ready power to produce goods and services. It is difficult to distinguish who is in the active age according to this definition. Therefore, in people and housing census, people with 10-15 years of age and above have been considered in the working population or those in the age of economic activity. The working population has the following two subdivisions:

- Economically active population, falling into employed and employment-seeking population.
- Economically non-active population including families, students, unemployed people with income, retired people and people with undeclared income.

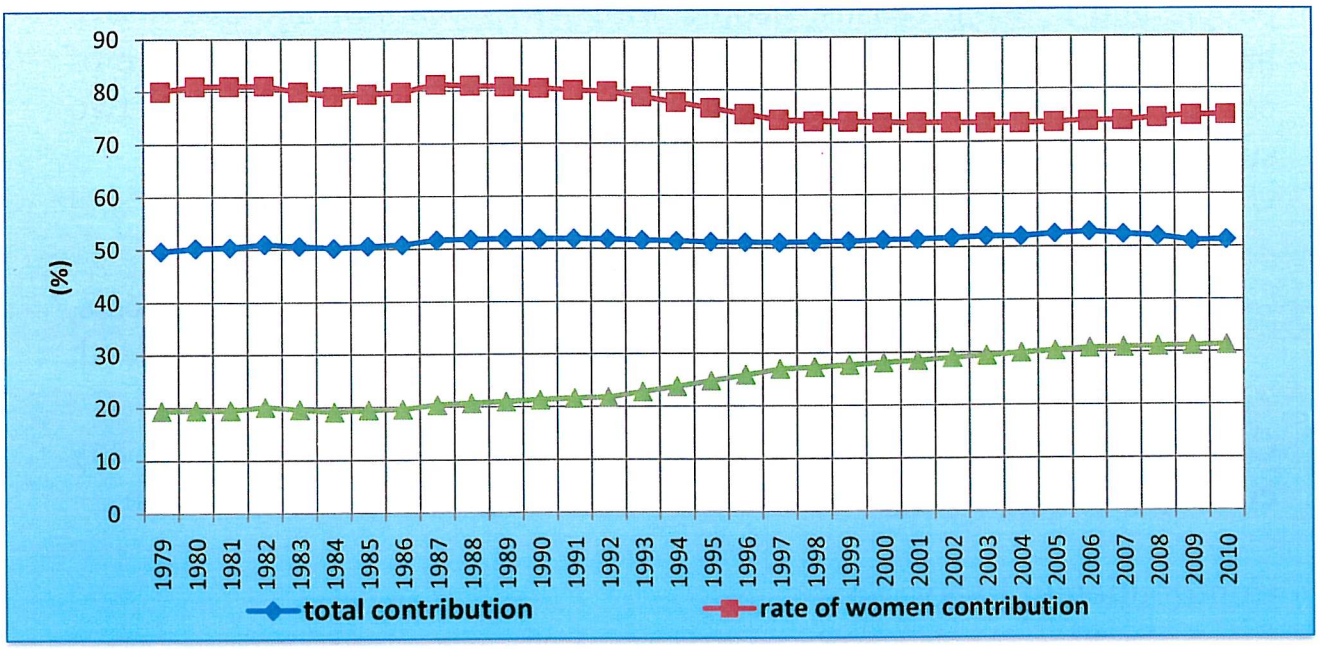
One of the major indicators in studying manpower specifications in any country is the percentage of economic contribution of that population.

Contribution in Labor Market

Economic participation index (activity index) is the most important indicator in labor market. This index is calculated by active population (employed and unemployed) divided by 10-15 or above working population, multiplied by 100. The participation rate in the early years after the establishment of Islamic Republic of Iran was around 42 percent. The index fell in the first decade and in the first half of the second decade, touching the minimum in 1996, when it began to grow and reached 38.9 percent in 2009. The reduction in participation rate in 2009 in comparison with the year 1978 was because of the old population and increased student population for ordinary schools and higher education.

In this process, the participation rate of both sexes were falling in the beginning and then rising in the end. In these periods, however, the rates belonging to women experienced speedy ups and downs. It should be noted that the participation rates between men and women in Iran is highly different. In 1966, active population in men was 6.6 times more than the active population of women, while in 2006 the figure has fallen to 5.5 times.

Diagram (3-1): Rate of Women Contribution to Labor Market



Source: Calculated and evaluated based on statistical reports of the Statistical Center of Iran

The changes in participation rate of women are always accompanied with fluctuations. The rate fell sharp in 1986 and then rose again. This shows women's increased tendency to enter the labor market upon increased job opportunities during the years after the victory of Islamic Revolution (1986 census).
A survey of developments in participation rate of various age groups in the labor market is also interesting. The participation rate of 10-14 age group falls in between the years 1966 and 1996 and rises again in between the years 1996 and 2006. The participation rate of 15-19 age group falls in between the years 1966-1996 and then rises again. The participation rate of men and women during the past 40 years has manifested noticeable change. In between the years 1965-2006 the participation rate for men and women were the same. The only difference was in 2006 figures in which the participation rate of men aging 25 to 45 was higher in comparison with 1965 and lower for age group of 45-60. This may be justified by the emergence of a young population. In between the years 1965 and 2006 the participation rate of women showed a different pattern. Such a difference is due to the changes in social, cultural and economic factors in the society in comparison with the past 40 years. Therefore, with the increase in educational involvement of women in various levels and universities, the labor market entry age in women has been increased from 10 to above.

Employment Rate

The employment rate is calculated by the total number of employed population divided by the active population. Its relation with unemployment is vice versa. It is one of the most important indicators in an economic system. The higher unemployment rate, the better will be

economic system and development. Diagram 2-3 depicts employment rate in Iran since the first national census. In the early years after the establishment of Islamic Republic in Iran the unemployment rate fell sharply to 80 percent due to the Imposed War. After the war, with the commencement of the Reconstruction Period, the employment rate rose to 91 percent, continued to date with minimal ups and downs.

The employment rate in men from 1965 to 2006 has not followed a steady trend. The rate in this period for women has been down and up from time to time. The reduction in employment rate after the revolution may be due to the fact that during the war there was an economic stagnation in the country. Women are always considered potential workforces in ordinary economic conditions and slow development procedure. Thus, it is natural to allocate the majority of employment to men in adverse economic situation, economic crisis and stagnation when job opportunities are scarce. In such abnormal conditions it is difficult to create equal job opportunities for men and women. Therefore, employment of women depends on social and economic conditions in a society.

The increase in employment rate of women during the recent decades is due to the cultural changes and the change in the attitudes of individuals toward the women, increased urbanization, higher education and increased eagerness of women to enter the labor market. As a result, the employment rate in 1996 was increased for both sexes.

Employment Rate in Each Economic Sector

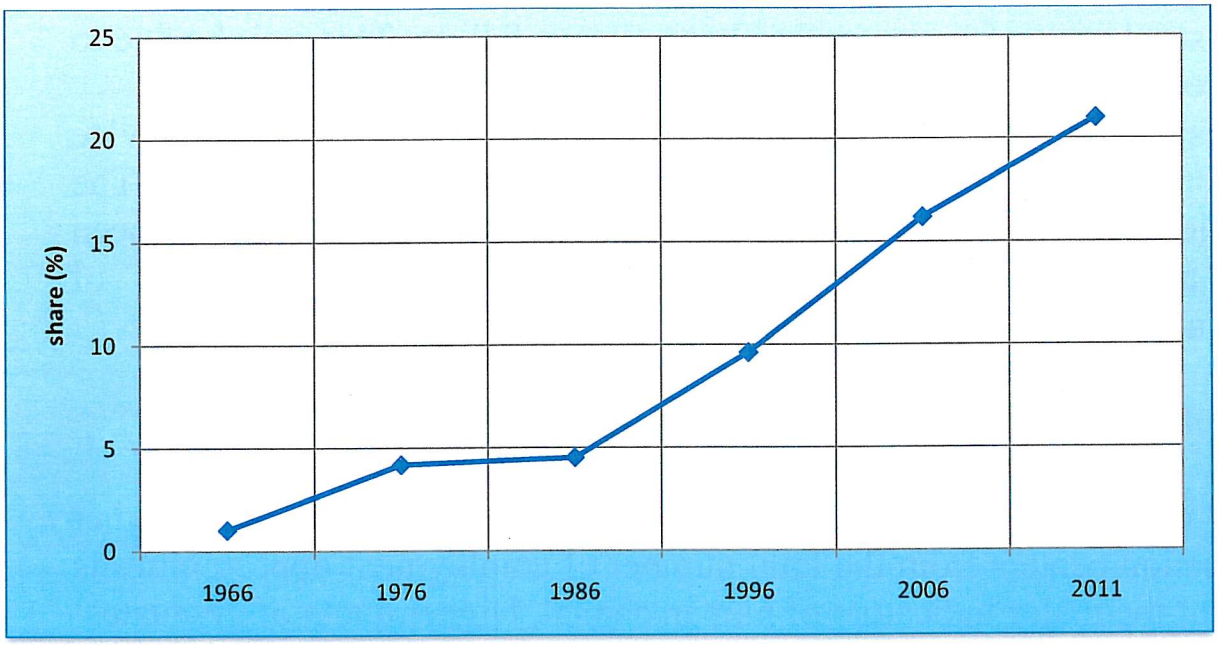
Surveying employment rate in each economic sector shows that the rate has fallen for both sexes in agricultural sector in the course of time. This may be due to mechanization of agricultural activities in some rural areas, development of some rural areas into urban areas, merging of some rural areas into the urban suburbs, migration of workforce from rural areas to the cities, and employment in non-agricultural activities. The employment rate in industrial sector shows a relatively different trend. The rate has been on the rise for men from 1966 until 1976. After a plummet in 1986, the rate rose again in 1996. The employment rate in

industrial sector for women has been always falling. This may be due to the reduction in the number of unpaid family members.
Statistical surveys show that employment rate for both sexes in service sector has been on the rise, with more growth for women than men. The employment rate for men in between the years 1966 and 2006 has been 1.9 against 2.9 for women. This may be due to expansion of urbanization and service activities.

Employment Quota of University Graduates

The employment quota of the graduates of universities and higher education centers from the total number of employment opportunities is one of the major indicators of human capital. Higher quota of graduates' employment suggests that economic and occupational activities are knowledge-based. Graduates of universities are chiefly employed in knowledge, management and information and data sectors. MA/MSc and PhD graduates are called knowledge workers.
The university graduates occupied only five percent of the total employment in the early years after the revolution. In 2009, they constituted 20 percent of the total employment, i.e. four times increase. The growth rate in the first decade was low because of the limited student capacities. With the creation of new capacities and increased student admissions in the second decade, the employment quota of graduates went up. Sue to increasing attention to the higher education in the country it is hoped that in future graduates would occupy the majority of employments in the country.

Diagram (3-2): Changes in Employment Rate of University Graduates out of Total Employments



Source: Until 2006, calculated and evaluated based on the statistical reports of the Statistical Center of Iran; 2004 figure has been anticipated based on the goals of the Fifth Development Plan

3-2- Energy Consumption

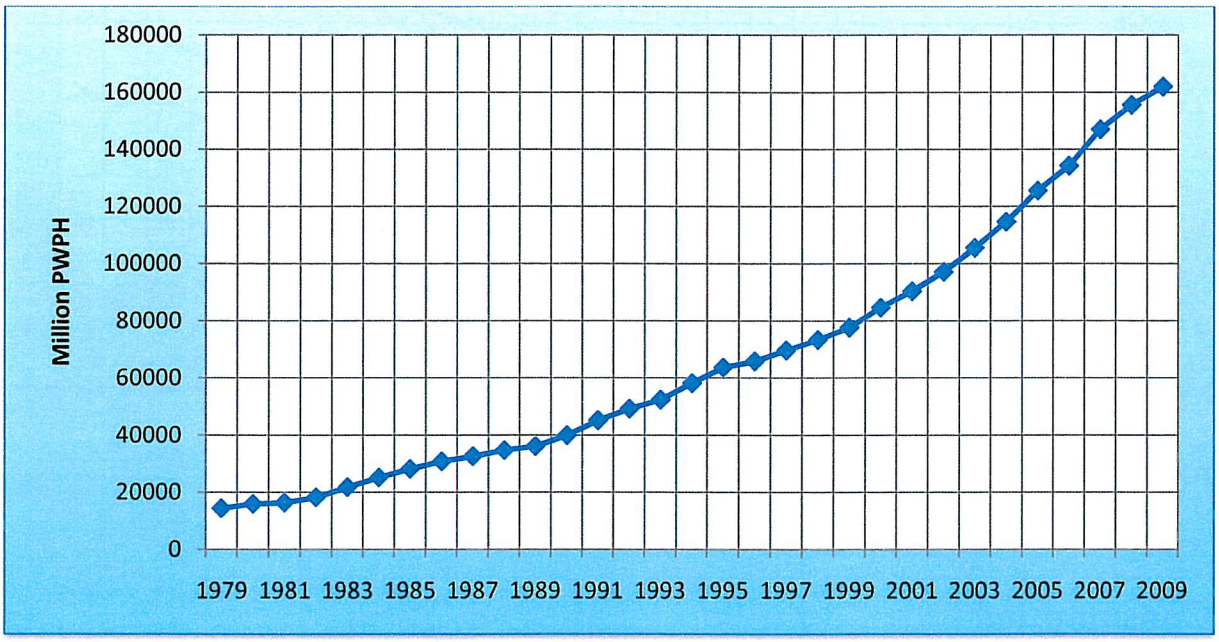
Non-muscular energy is the most important manufacturing source after workforce. The required energy for industrial and manufacturing sectors come from electricity, oil and derivatives, and gas.

3-2-1- Power Consumption

As it is seen in Diagram (3-3) power consumption during the past three decades has grown by an average 8.5 percent due to population growth and development of industrial and manufacturing units. From among various electricity consumers, household use has reserved the first rank for itself with increasing quotas according to population growth. Second to the household use, comes industrial sector. In the first decade due to the war the growth in power consumption for industrial sector was slow and steady. After the war, with the commencement of the Reconstruction Period, and due to progress of private manufacturing

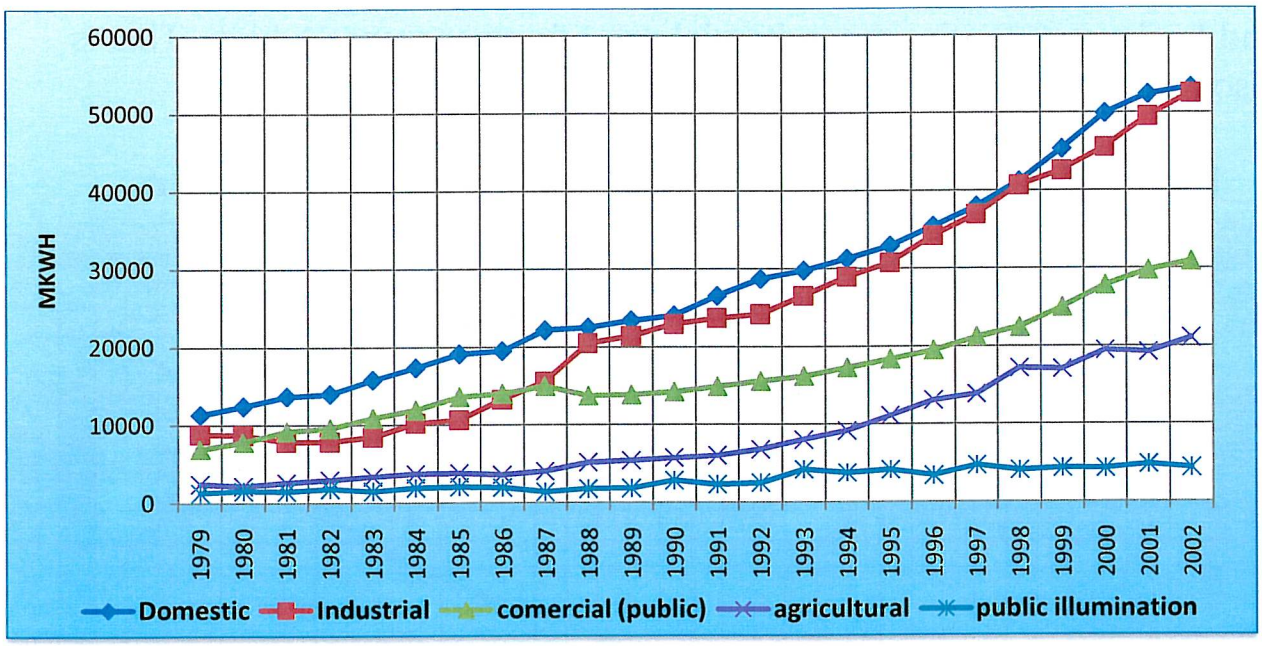
and business activities the industrial use of power went up high. This is also true in the case of agricultural use of power.

Diagram (3-3): Trends in Power Consumption in the Country



Source: Central Bank of Iran: Economic Time Series Database

Diagram (3-4): Trends in Power Consumption in Various Sectors

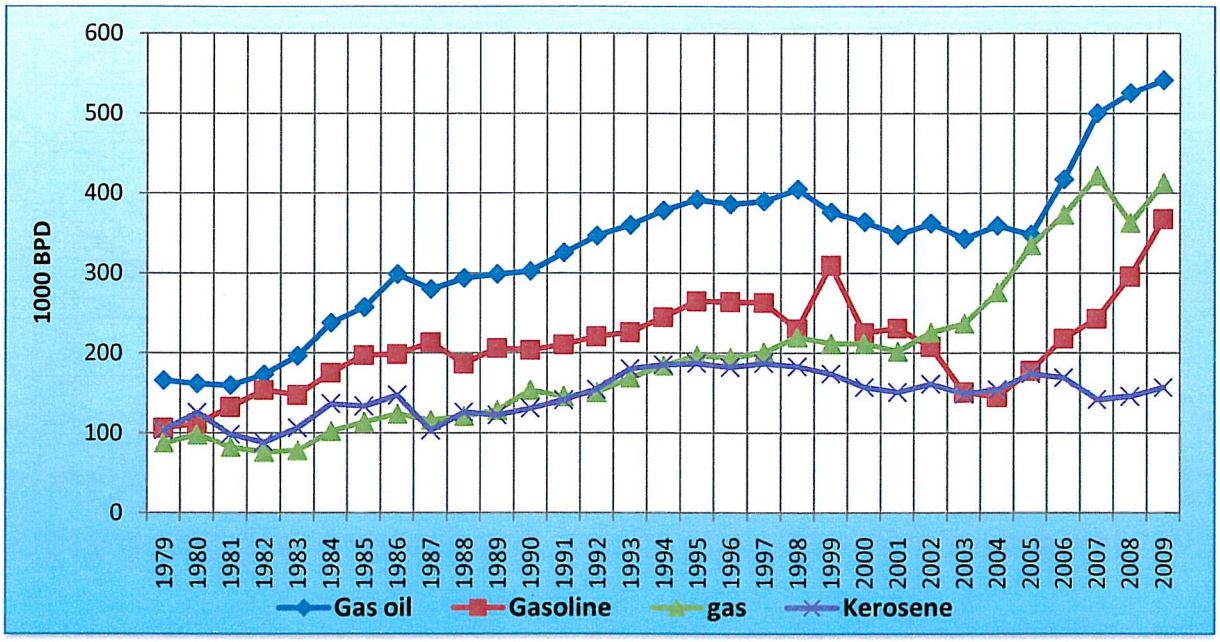


Source: Central Bank of Iran: Economic Time Series Database

Oil Consumption

Unlike power, oil consumption during the past thirty years has experienced ups and downs. Due to low power and gas generation in the country in the first decade after the revolution, the consumption of oil and its derivatives was high. In Reconstruction Period, due to the creation of new power generation and gas production facilities, the growth rate in oil consumption became slow, and even stopped in the closing years of the period. In this period, gas oil consumption was in the first rank of highly consumed oil derivatives. The consumption rate of other derivates varies from period to period. In the first and second decades the second highly consumed oil derivative was heavy oil for industrial use, but in the third decade the second rank was exclusive to petrol. Petrol consumption was on steady rise during the first and second decades, but in the third decade, due to increased import of automobiles petrol consumption went up fast.

Diagram (3-5): Changes in Consumption Rate of Oil Products



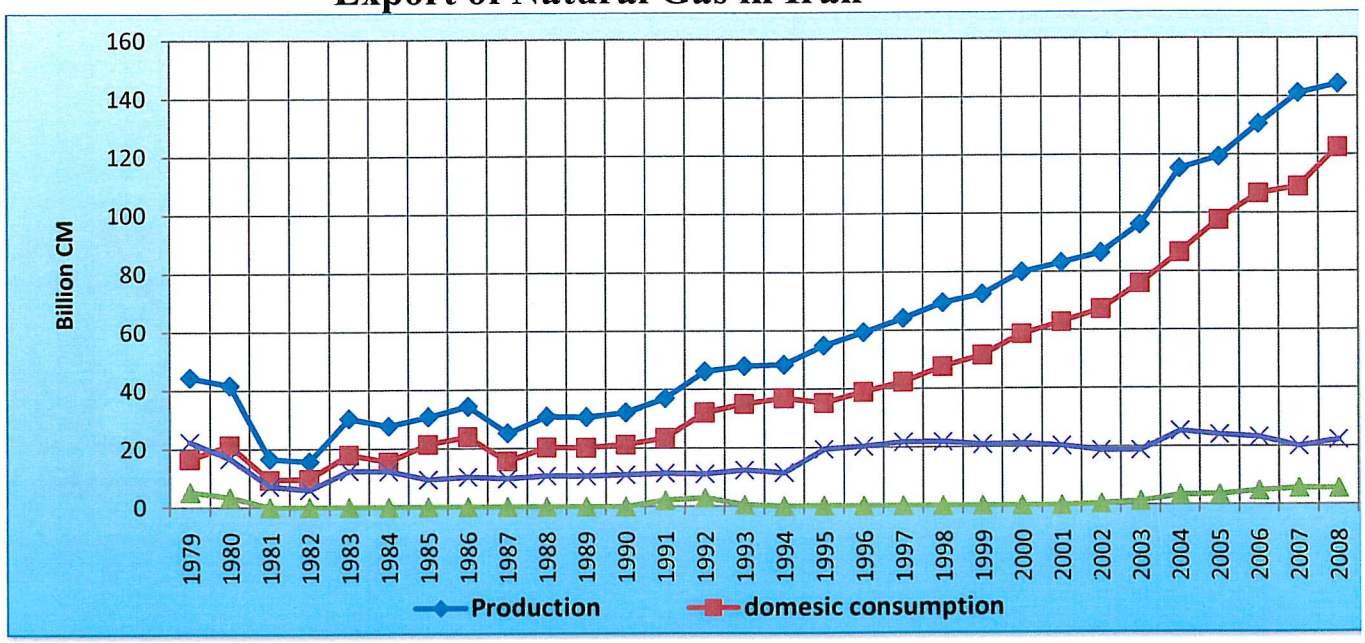
Source: Central Bank of Iran: Economic Time Series Database

Natural Gas Consumption

Natural gas production plummeted in the early years after the revolution because of the Imposed War. No significant growth was seen in this sector before the end of war. After the war, however, during Reconstruction Period, natural gas production began growth and was kept on its steady growth until now. From early third decade natural gas production was increased rapidly reaching 140 billion cubic meters in 2007. During the past three decades, natural gas consumption has been increased in tandem with the increase in gas production. Today, the majority of cities and villages have been supplied with natural gas reticulation. A minor part of gas production is exported and no significant growth has happened during the past three decades. Much of the gas export belongs to the recent years.

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Diagram (3-6): Trends in Production, Domestic Consumption and Export of Natural Gas in Iran



Source: Central Bank of Iran: Economic Time Series Database

Physical Capital Formation

According to the Central Bank of Iran (2001) formation of gross fixed capital includes purchasing expenditure (or paid on-account production value) of capital goods by the private sector, producers of governmental services and producers of private services minus net sale of second-hand capital goods in an audit period (usually one year).

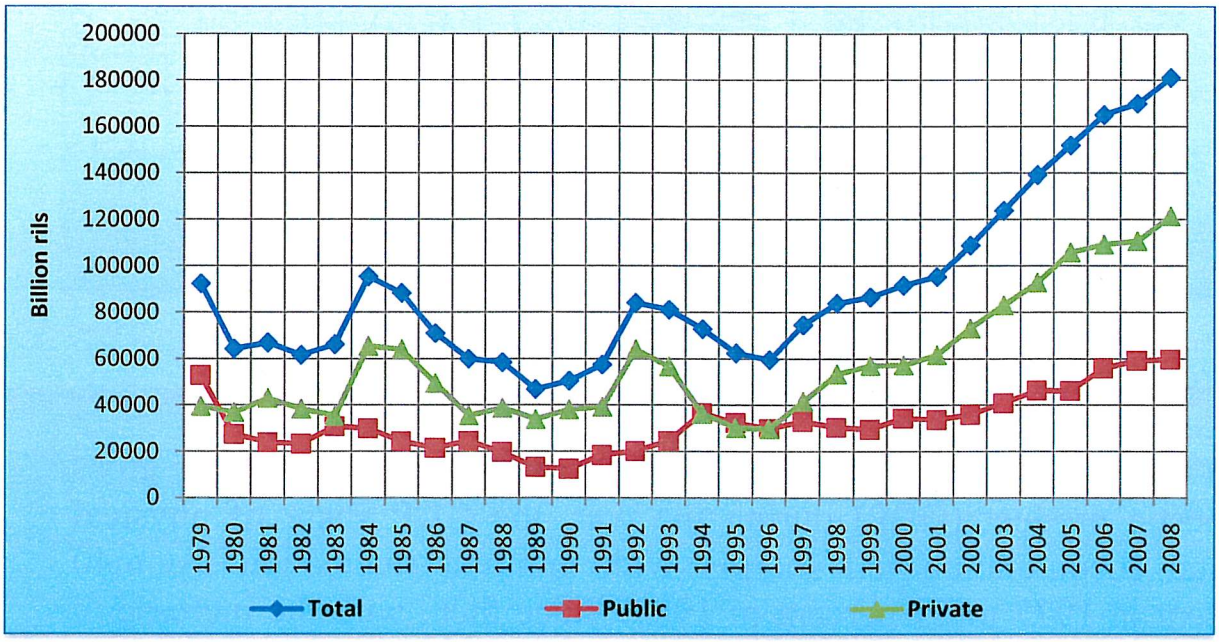
Capital goods are final goods with life expectancy of over one year used for production of new products and services.

Gross fixed capital formation is classified according to the investment made in the building, machinery and business equipment. Investment in machinery and business equipment includes that part of domestic production and import of capital goods that are not used in an audit period, not exported and added to the capital goods asset of the country.

As Diagram (3-8) shows, accumulation of physical capital was reductive in general, in the early years after the revolution because of the war. This variable touched its minimum in the first half of the

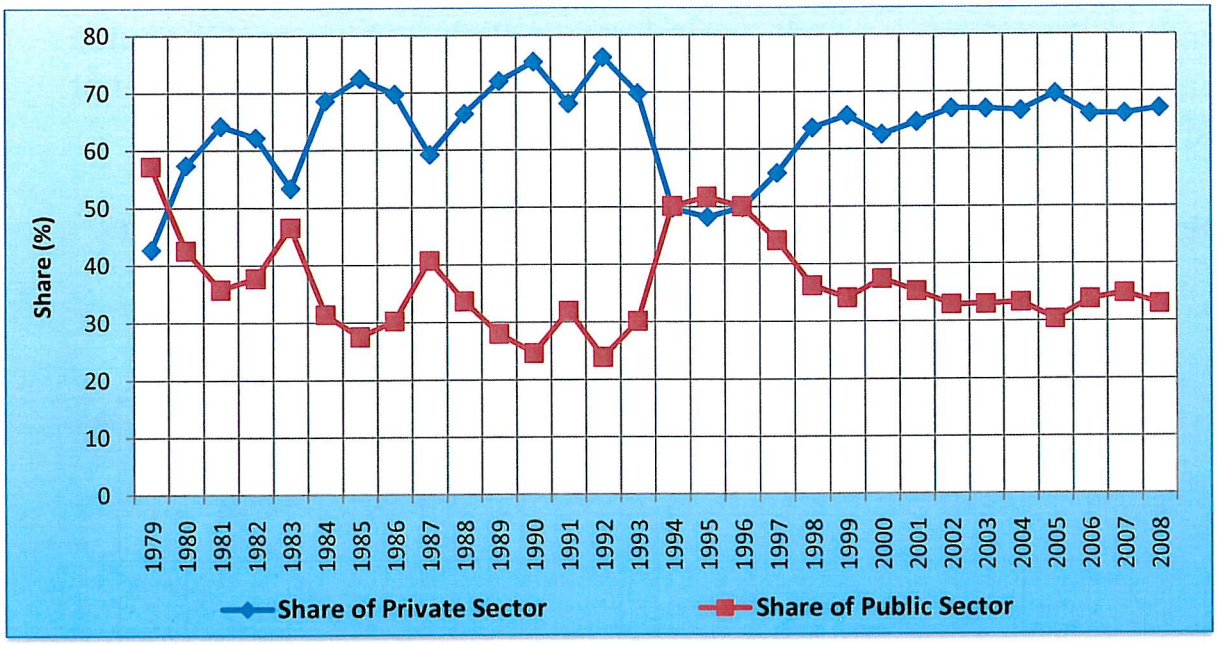
second decade, and grew again since 1996, that is on the steady rise until today. The highest quota of accumulated capital belongs to the private sector, and the general trends in physical accumulation of capital depend on the private sector's capital accumulation changes. Of course capital accumulation by the government is also notable but it was not decisive in the trends of physical capital accumulation in general.

Diagram (3-7): Trends in Percentage of Gross Physical Capital Accumulation by Private and Public Sectors



Source: Central Bank of Iran: Economic Time Series Database

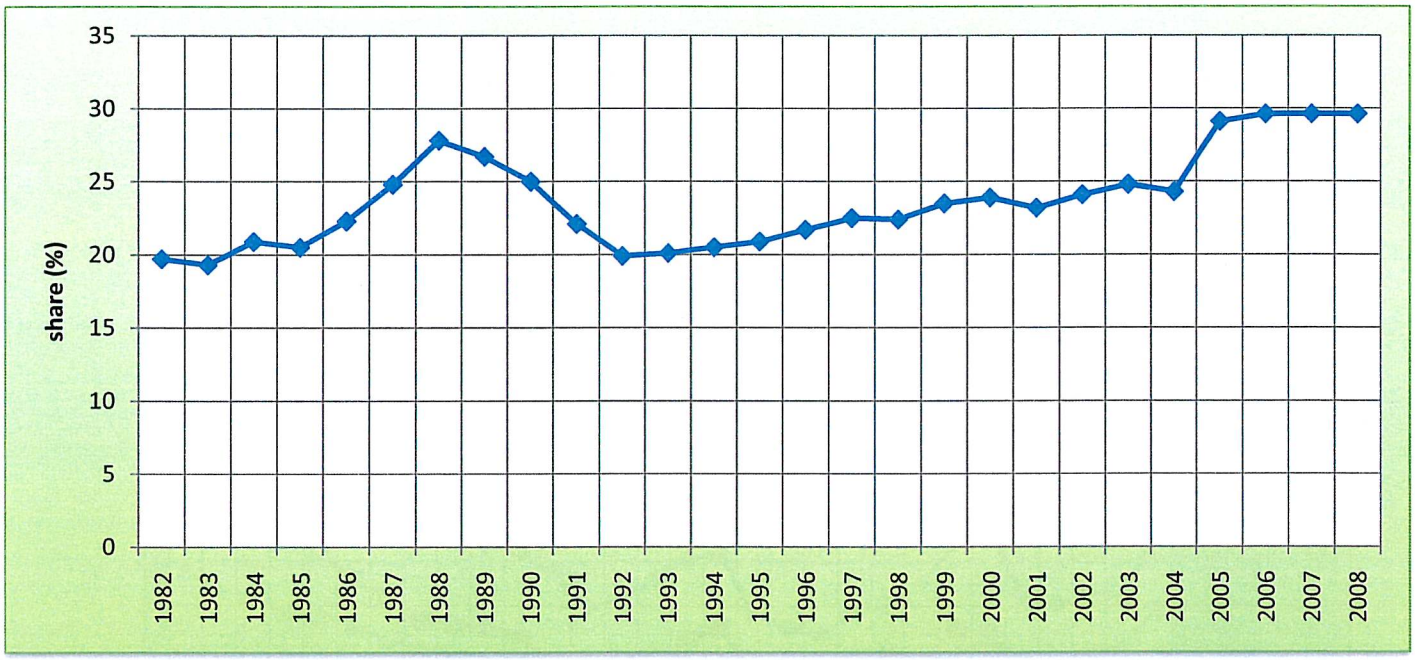
Diagram (3-8): Trends in Share of Gross Physical Capital Accumulation by Private and Public Sectors



Source: Central Bank of Iran: Economic Time Series Database

Due to inappropriate use of the existing capitals and the fall of gross domestic product (GDP) during the war, the GDP share of physical capital accumulation fell sharply with minimal fluctuation fro m40 percent in 1977 to 25 percent in 1989. Since then, with the increase in GDP and reduction of capital accumulation this indicator declined to 22 percent.

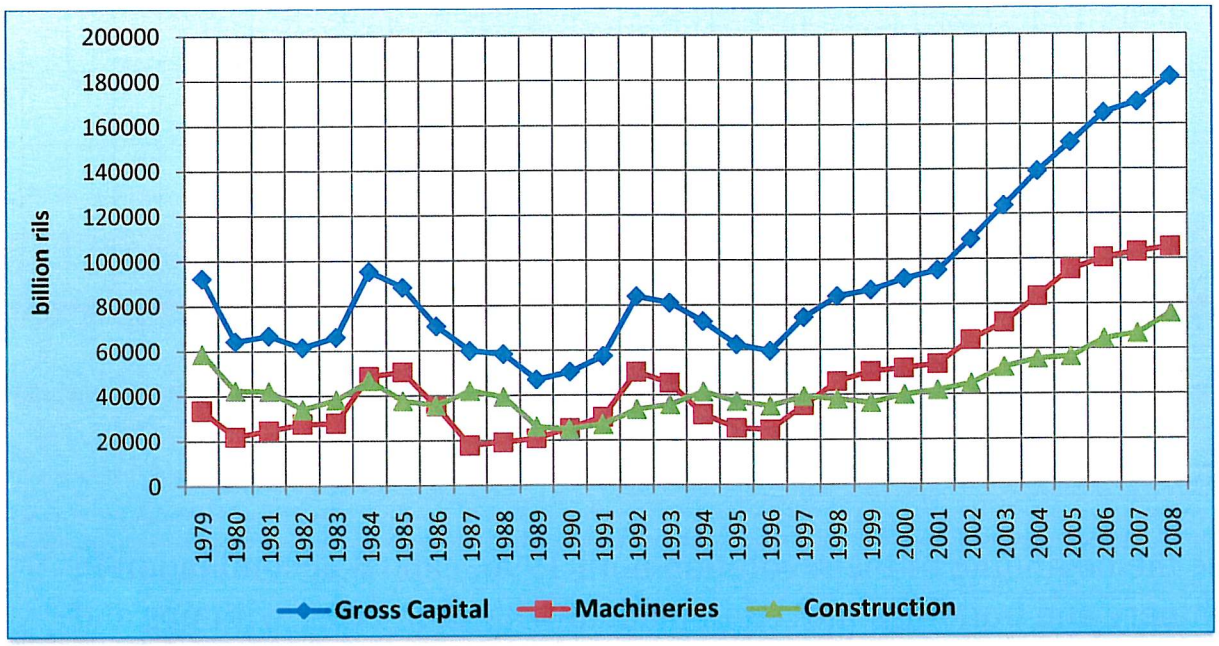
Diagram (3-9): Trends in Physical Capital Accumulation Share of GDP



Source: Central Bank of Iran: Economic Time Series Database

Since the beginning of the revolution until 1996, capital accumulation in machinery and buildings moved in tandem with each other with ups and downs, one outrunning the other now and then. However, since 1997, capital accumulation in machinery put behind capital accumulation in buildings. This may be due to the end of reconstruction of war-stricken cities.

Diagram (3-10): Trends in Gross Physical Capital Accumulation during the Past Three Decades



Source: Central Bank of Iran: Economic Time Series Database

Trends in Economic Activities

Introduction

According to international classifications, economic activities fall into three categories: agriculture, industry and service industry. Agriculture includes all activities related to farming, horticulture, animal husbandry, hunting, forestry and fishing. Industry comprises of such as activities as mining, industry, buildings, and supplying water, power and gas. Service industry includes wholesale and retail, repair of motor vehicles, motorcycles, private and household apparatuses, hotel and restaurant management, transportation, warehousing, communications and financial brokerage, real estate, rentals and business activities, healthcare and social relief training, overseas organizations and delegations, central bureaus and offices, ordinary families with servants, public service sector, and social security services. In Iranian economy oil sector has a very important role, therefore, in this sector we will study oil production and export independently.

1-1- Energy Production and Exports

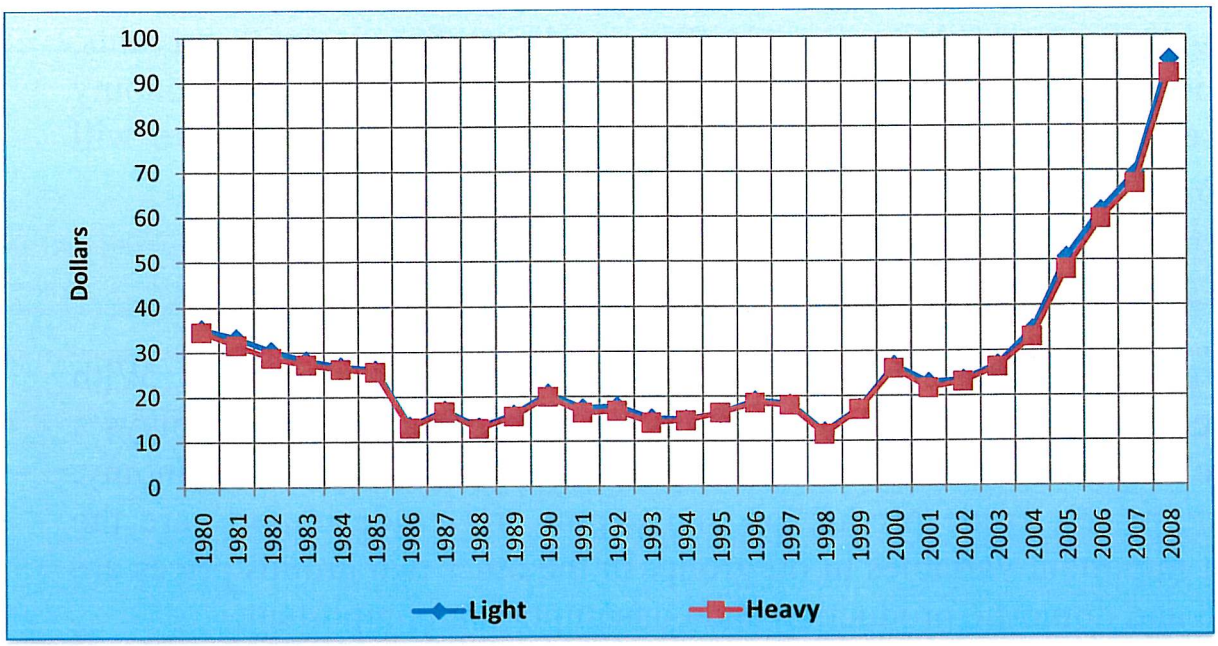
Energy sector comprises of three groups of oil, power and gas. With respect to the volume of oil production and exports, this group plays a more important role than the other two groups in Iranian economy. Crude prices, crude production and export and crude imports are the most important variables in oil group. In the other two groups prices are fixed and domestic production and consumption are important.

1-1-4- Oil Production, Exports and Value-Added

Public determination and request on economic progress, putting an end to backwardness, and no dependency on oil income were so deep in early years after the revolution that policymakers planned for reserving oil resources for the coming generations and cutting dependency on petrodollars. However, the absence of a practical program made all government efforts futile and highly influential and very serious role of oil in various economic sectors remained unchanged. Upon oil sanctions imposed by the Western states against Iran and substitution of Iranian

oil by Saudi Arabian and Iraqi, Alaskan, Mexican and British oil, Iranian crude in international markets was banned. No new marketing was made and sanctions left serious impacts on Iranian economy. Although the government tried to cut dependency on oil income and realize government incomes by taxes, oil income was too heavy (50 percent of national income) to be replaced by other resources.

Diagram (4-1): Trends in Iran's Light and Heavy Crude during the Past Three Decades

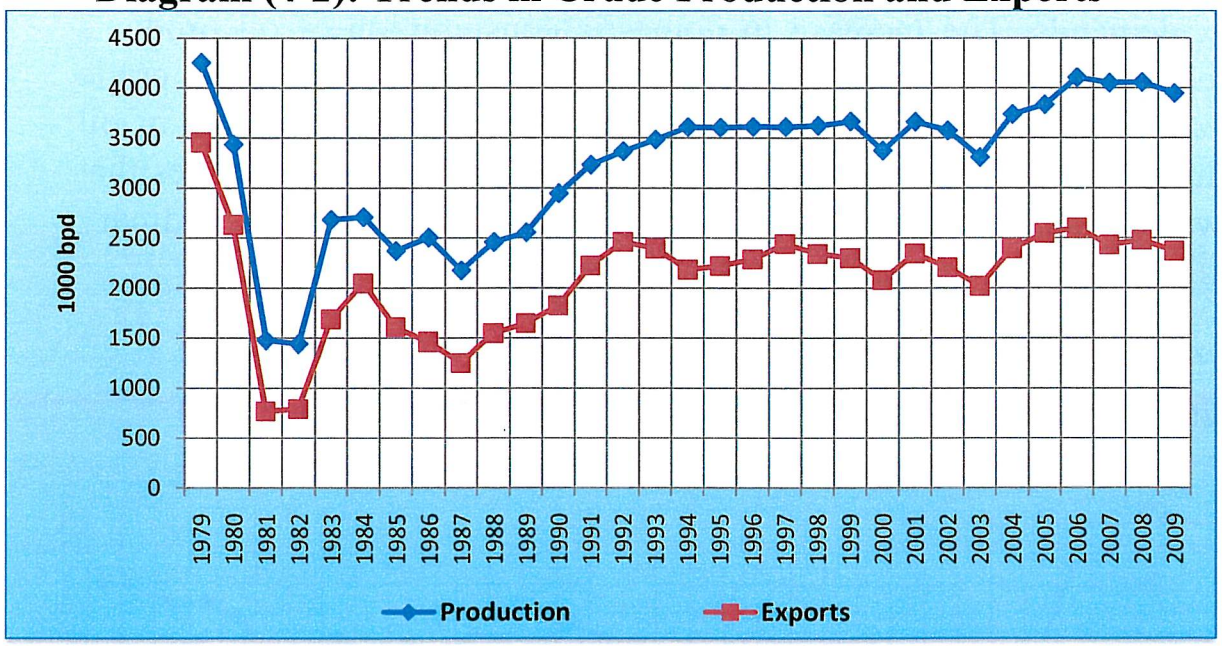


Source: Central Bank of Iran: Economic Time Series Database

After the Islamic Revolution, except the years 1980 and 1981 that oil export was reduced because of sanctions, the rise in oil prices compensated for the reduction in production and export of crude. Therefore, oil income went up in 1982, but declined again in the years 1986 and 1988 due to the fall in oil prices, to reach its minimum in the 20-year period of 1974-1994. There was no serious change in the coming years, but lifting of the sanctions revived petrodollars once

again. In the first four years of the Fourth Development Plan (2005-2008) the average oil production was 4,050,000 barrels per day. According to this report, the figure shows an average of 219,000 bpd increase in comparison with the same period in Third Development Plan (2000-2004).

Diagram (4-2): Trends in Crude Production and Exports



Source: Central Bank of Iran: Economic Time Series Database

Evaluation of long-term performance of crude production shows that collective production of crude during the years 1948-1980, i.e. 30 years before the victory of Islamic Revolution was 26.2 billion barrels, while collective crude production during 30 years after the revolution, despite the Imposed War and oil sanctions has reached 36.4 billion barrels. The average daily production of oil during the 30 years before the revolution stood at 2,394,000 bpd, while 30 years after the revolution Iran

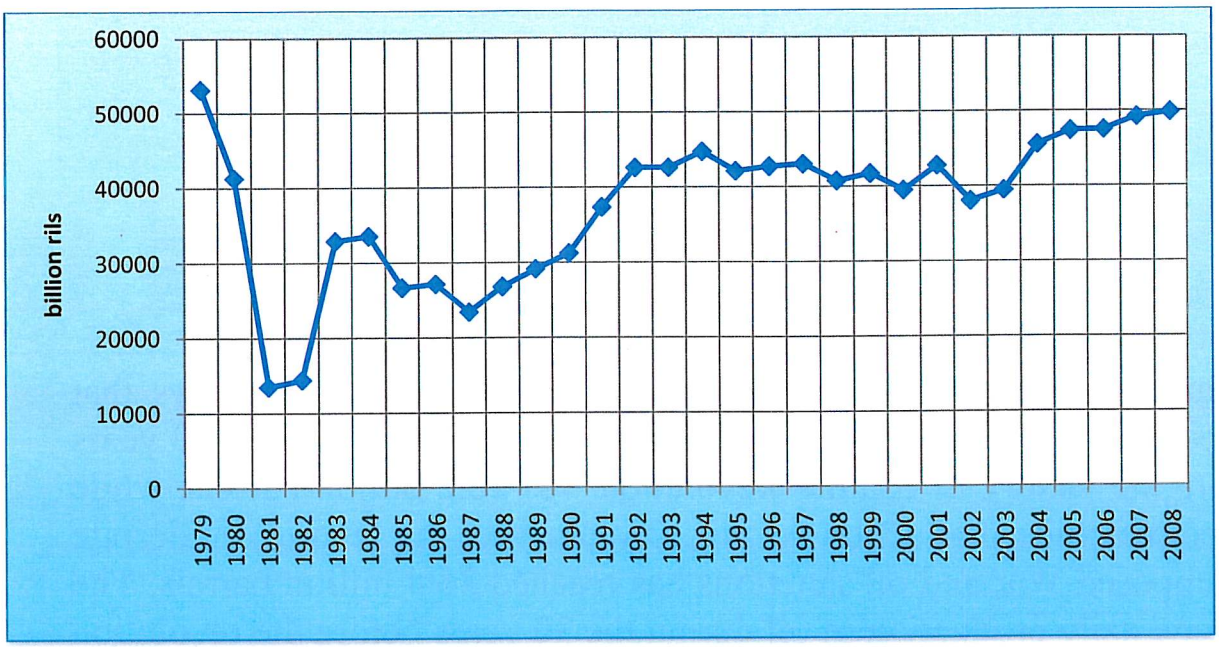
produced 3,318,000 bpd. (Donyay-e Eqtesad, June 3, 2010, quoted from NIOC website)

Generally, oil reserves are used for the following three purposes:

1- Earning foreign exchange income and meeting the current and construction expenditures
2- Supplying domestic fuel for industries, agriculture and transportation
3- Supplying raw material for refineries and petrochemical plants

The Islamic Republic of Iran produced oil for the first goal for tens of years. Even today, government heavily relies on petrodollars to meet its forex demands. The increase in domestic consumption of oil products forced the officials to set aside a considerable part of extracted crude (35% in 1994) for domestic consumption. Domestic consumption of oil products in a 37-year period from 1958 until 1995 grew 23.5 times that shows its consumption not for domestic production, but for ordinary livelihood such as increase fuel for private automobiles.

Diagram (4-3): Trends in Oil Value-Added (1997 Constant Prices)

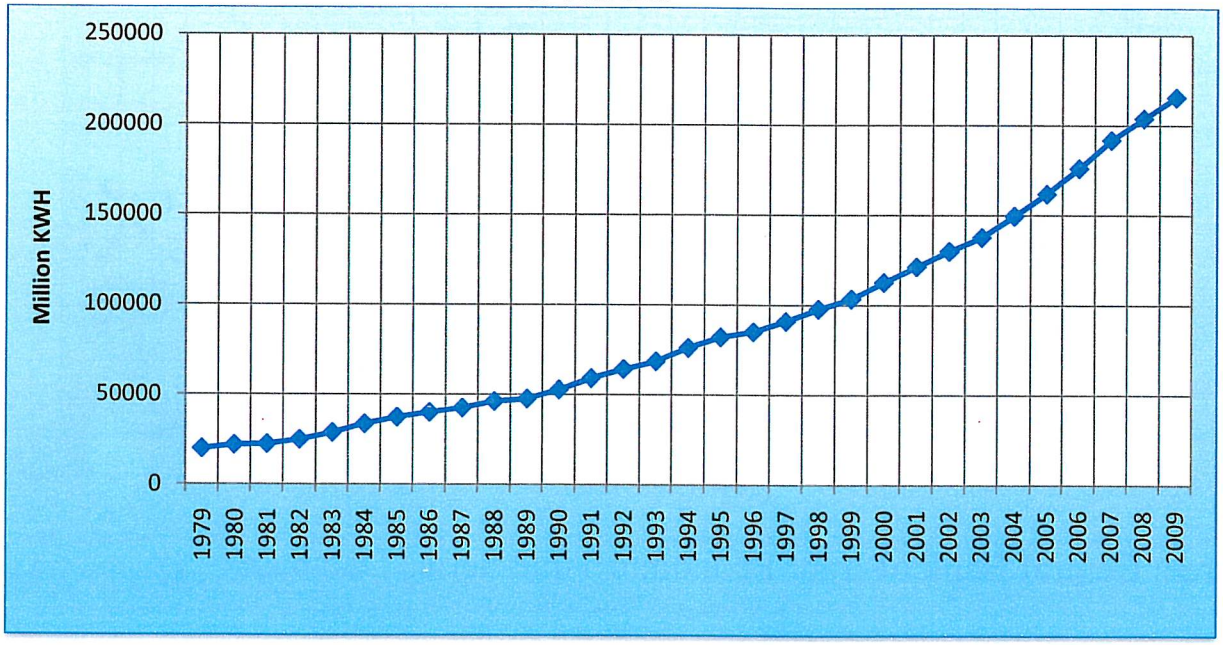


Source: Central Bank of Iran: Economic Time Series Database

4-1-2- Power Generation

Diagram (4-4) shows that power generation has been steadily increased during the decades of establishment of the Islamic Republic of Iran, Reconstruction Period and Development Period of the country. During these periods power generation was increased from 25,000 million kWh in 1978 to 250,000 million kWh in 2008, showing 10 times increase within the past thirty years.

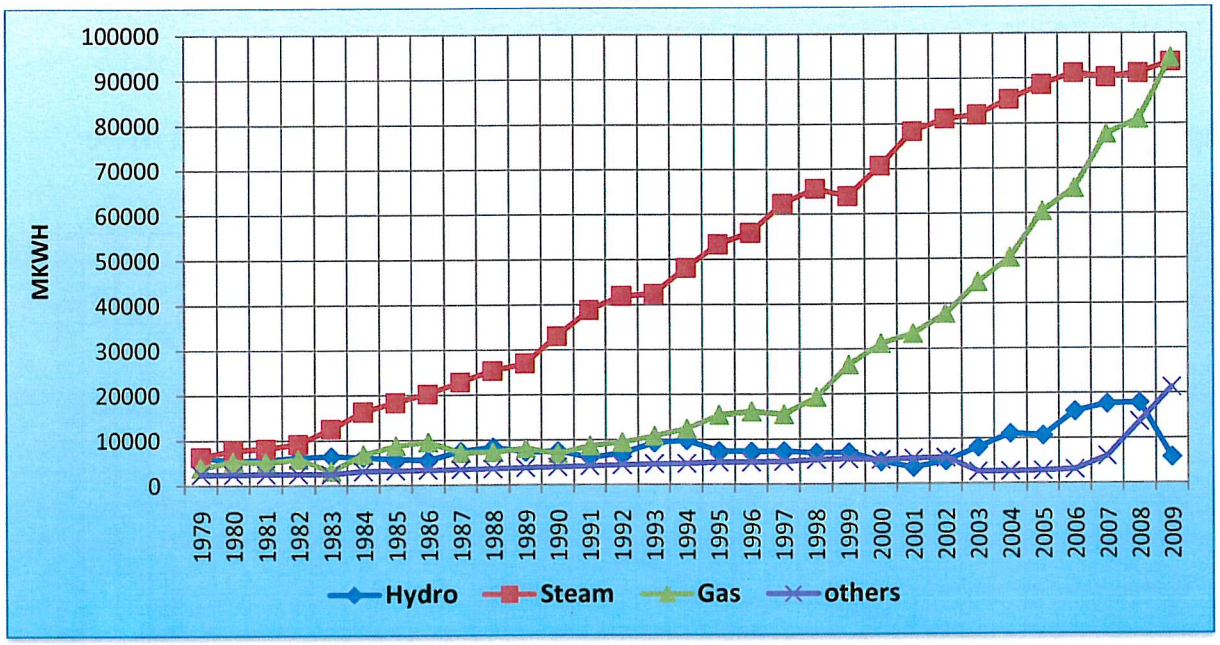
Diagram (4-4): Trends in Power Generation during the Past Three Decades



Source: Central Bank of Iran: Economic Time Series Database

In the early years after the establishment of Islamic Republic of Iran power used to be generated through power plants utilizing diversified technologies. Due to the advantages of steam-generated power plants, economic sanctions on new technologies, and expensiveness of water-generated power plants a large part of the existing power plants work on a steam system. After the end of the war, Iran shifted to gas power plants and combined-cycle power plants for electricity generation. Since 1997, the majority of power generation takes place in these two latest power plants.

Diagram (4-5) – Trends in Power Generation per Various Power Plants



Source: Central Bank of Iran: Economic Time Series Database

4-2- Industrial and Mineral Sector

The past regime had created a set of chiefly assembling and dependent industries through granting advantages and exemptions from customs duties. After the revolution, some of these industries were confiscated and some of them stagnated due to the migration of investors and managers. On the other hand, enormous debts to banking system, restrictions in procuring raw materials and other problems related to the war, made reconstruction and reorganization of industrial units inevitable. In order to revitalize industrial units the government nationalized part of the industries by creating required facilities and granting credits and loans, and establishing new organizations to run these units.

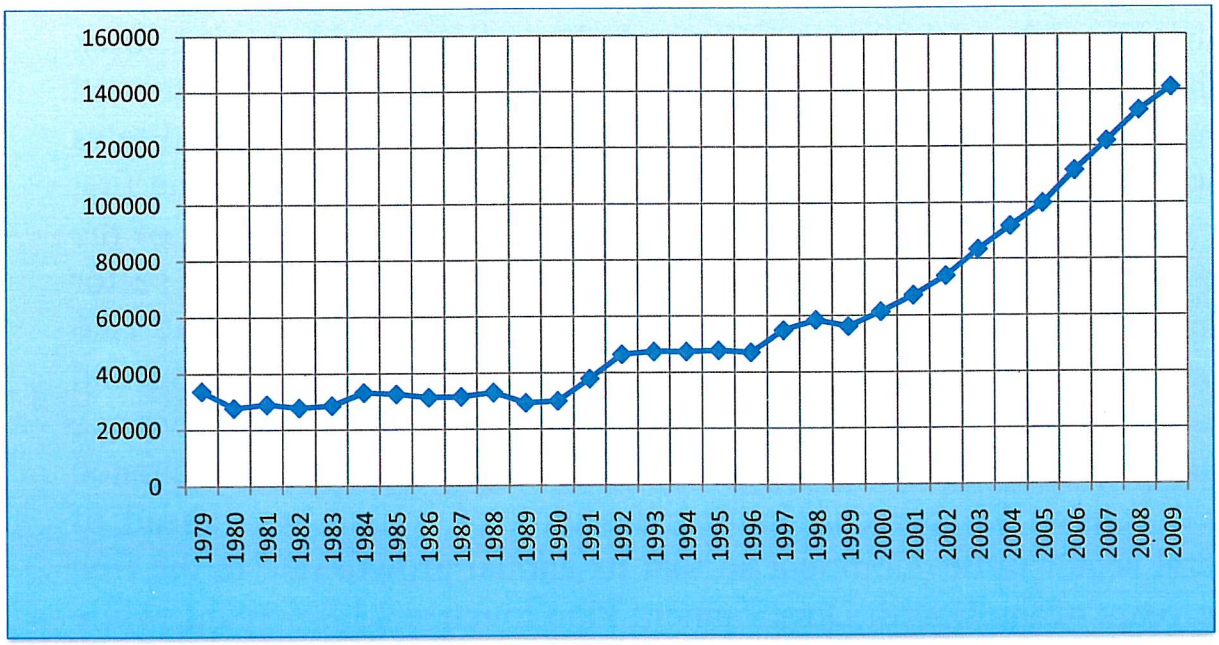
Today, the industrial and mineral sector can be considered as the drive force for the Iranian economy. Despite al hardships such as management crises, nationalization policies in the early years after the revolution, eight years of war, serious restrictions in supplying required foreign exchange, serious demand to raw materials and advanced machinery and equipment, this sector could reply on domestic capabilities to cater for the demands of the community and play a key role in gaining forex for the country through export of goods and services. The industrial and mineral sector has always reserved one of the highest value-added rates for itself. Despite the ever-growing trend of this sector, during the first four years of the First Development Plan, i.e. in the closing year of the plan (1993), its growth rate faced a decline. From 1994, this sector resumed growing trend so that its GDP share in 1999 stood at 13.6 percent. The growth of industrial and mineral sector during the Second Development Plan experienced ups and downs registering an average annual growth of 6.3 percent, that was still higher than the anticipated growth rate of 5.9 percent. Industrial sector, of course, was ahead of mineral sector in development so that its annual growth rate in the first three years of the Fourth Development Plan touched 13.8 percent, while the figure stood at 11.1 percent during the four years into the Third Development Plan.

The average annual growth rate in industrial and mineral employment during the Second Development Plan reached 18.3 percent, growing by 1.4 percent as compared to 1993. The non-oil exports in this sector grew

from 31.8 percent in 1993 to 50.1 percent in the closing year of the Second Development Plan (1998). The average annual growth rate stood at 43.9 for this period.

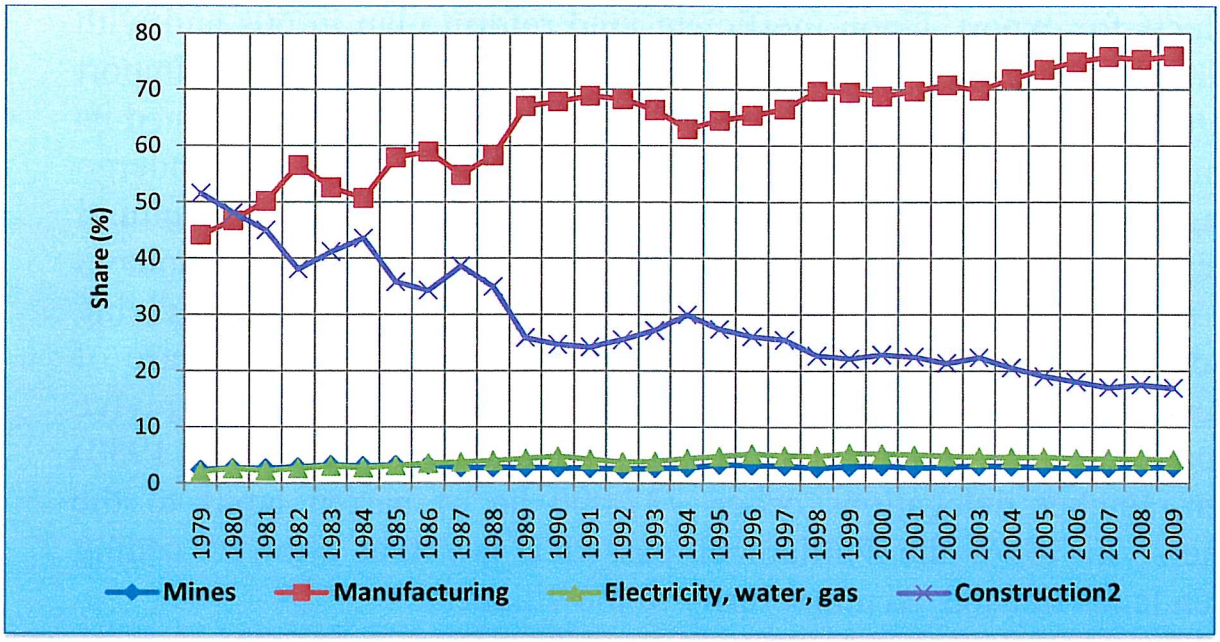
Manufacturing industry and construction industry have the lion's share of the value-added in industrial and mineral sector. In the early years after the establishment of Islamic Republic of Iran these two groups enjoyed an almost parallel share and other groups had little share in value-added. In the course of time with the increase in demands for industrial goods, policymakers paid double attention to manufacturing industry. As a result construction industry lost a part of its share in value-added in such a way that in 2008, almost 75 percent of the value-added in mineral and industrial sector belonged to manufacturing industry.

Diagram (4-6): Trends in Value-Added of Industrial Sector within the Past Thirty Years according to 1997 Constant Prices



Source: Central Bank of Iran: Economic Time Series Database

Diagram (4-7): Trends in Quotas of Each Industrial Sector Out of Total Industry



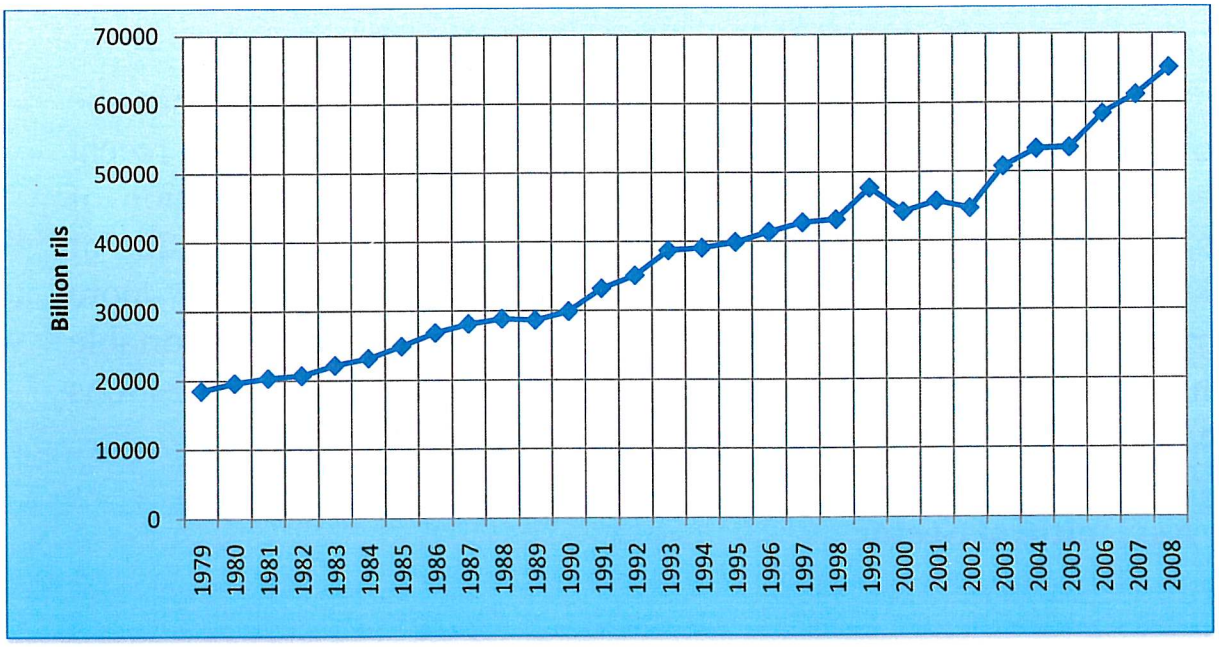
Source: Central Bank of Iran: Economic Time Series Database

The challenges in export of industrial and mineral sector can be removed by increased foreign investment. Fortunately during the recent years foreign investment in Iran has grown up high. Reformation of rules and regulations in the recent years, facilitation and acceleration of privatization, removing monopolies, paving the ground for more contribution of the private sector, giving variety to the exportable products, and playing more active role in international organizations have helped the government to meet the challenges.

4-3- Agricultural Sector

The agricultural sector in Iran has been rural and traditional in nature for ages. Agricultural activity was confined to small enterprises meeting the national demands and at the same time setting aside a minor part of products for export. Upon inefficient land reform plan in 60s and with the increase in oil incomes in 70s, the gates were opened for the import of agricultural products. During the war, agricultural sector continued its normal activities because its traditional structure did not undergo changes. In the first decade after the revolution, no special agricultural policy was made on the ownership of agricultural lands but emphasis was made on boosting cultivable lands, ceding the lands and reviving the derelict lands for agricultural use and the guaranteed purchase of agricultural products. In line with the policy to cede and revive agricultural lands (ratification by the Council of Revolution in 1980) seven-member delegations ceded 737,000 ha of barren lands to the farmers. In 1986, the Parliament passed a law that allowed ceding barren lands transferred temporarily to the villagers.

Diagram (4-8): Trends in Agricultural Value-Added according to 1997 Constant prices



Source: Central Bank of Iran: Economic Time Series Database

Agricultural sector observed an annual 6% growth in the First Development Plan, but in the Second Development Plan the growth rate diminished to 2.3%. In the beginning of Third Development Plan drought reduced value-added of this sector, but its increasing trend began since 2001.

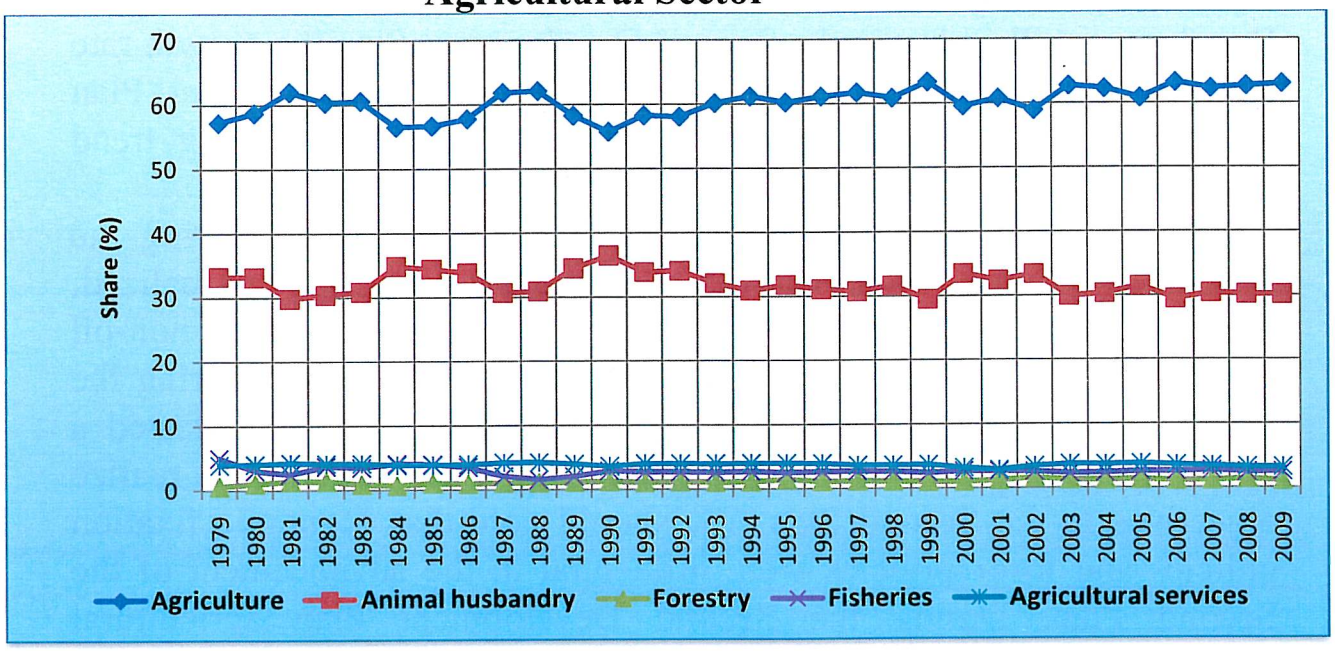
According to anticipations the export of non-oil products during the Second Development Plan had to be 8.4 percent but it was not realized, so that agricultural products constituted 30 percent of the total non-oil products during the First Development Plan and 14 percent during the Second Development Plan. Although agricultural sector manifested a relatively good performance during the First Plan, it failed to realize objectives in the Second Plan. We should note that economic fixation policies and forex policies were influential in the advancement of the Second Plan. During the Second Development Plan agricultural products could not meet the domestic demands, so that government had to import some products, except rice. The employment in this sector was not appropriate due to the migration of efficient workforce to the towns and seasonal unemployment. Therefore, this sector needs government support not only for development, but also for preserving employment rate.

Farming and animal husbandry are respectively the most important groups in agricultural sector. Other groups have little share in development of agricultural sector. During the past thirty years, the composition of these groups has remained almost unchanged. Farming and animal husbandry groups have maintained their 60 and 30 percent shares in total value-added respectively. Other groups have roughly 10 percent share in the total value-added of agricultural sector.

Small scale of farming lands and agricultural units makes them uneconomical and leaves no possibility for capital accumulation,

establishment of research and development units and prevents non-livelihood production.

Diagram (4-9): Trends in Quotas of Agricultural Groups in Agricultural Sector



Source: Central Bank of Iran: Economic Time Series Database

The Fourth Development Plan had anticipated annual growth of 6.5 percent in agricultural sector, food security based on domestic production, using state-of-the-art technology and technical now-how in manufacturing and applying agricultural apparatuses, efficiency of soil and water resources, as well as protection of environment and natural resources. Investment in implementation of infrastructural water and soil operations, development of irrigation valves and drainage on two million ha of agricultural lands were the ideal plans for development of the agricultural sector in this plan.

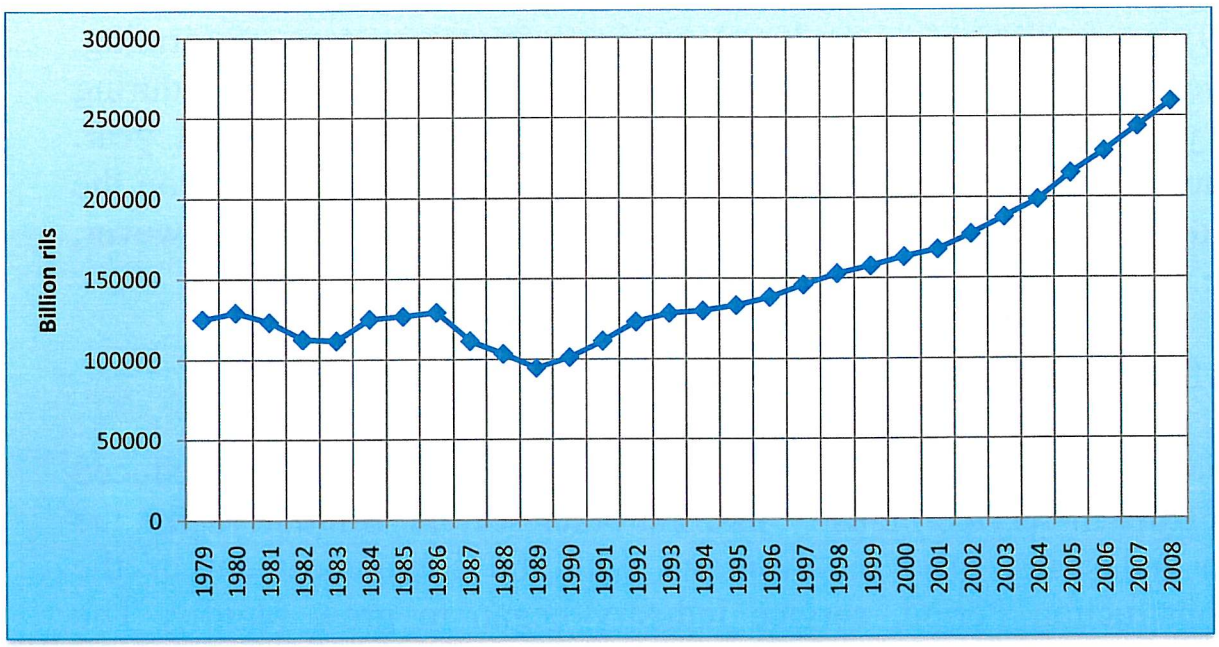
According to the Agricultural Jihad Ministry reports (Ministry of Agricultural Jihad, Achievements of Agricultural Sector in 2008 and

2009) production of agricultural products in sub-sectors of farming, horticulture, animal husbandry, poultry breeding and fisheries during last year increased by 3.5-20 percent in comparison with last year. Production of farming products during the recent years has been on the rise despite the reduction of cultivable lands. Recent droughts, however, have imposed a heavy blow on agricultural sector.

4-4- Service Industry

During the early years after the Islamic Revolution, war reduced indicators in service industry like the other sectors. Similarly, like the other industries, after the war and with the commencement of the Reconstruction Period, service industry began to grow rapidly. The service industry's value-added during the last three years of the Third Development Plan was 196,000 billion rials that was jumped high by 17.6 percent growth to 230.6 thousand billion rials in the first three years of the Fourth Development Plan. At the same time, the average annual growth rate of this industry during the last three years of the Third Development Plan was five percent and 5.6 percent during the first three years into the Fourth Development Plan.

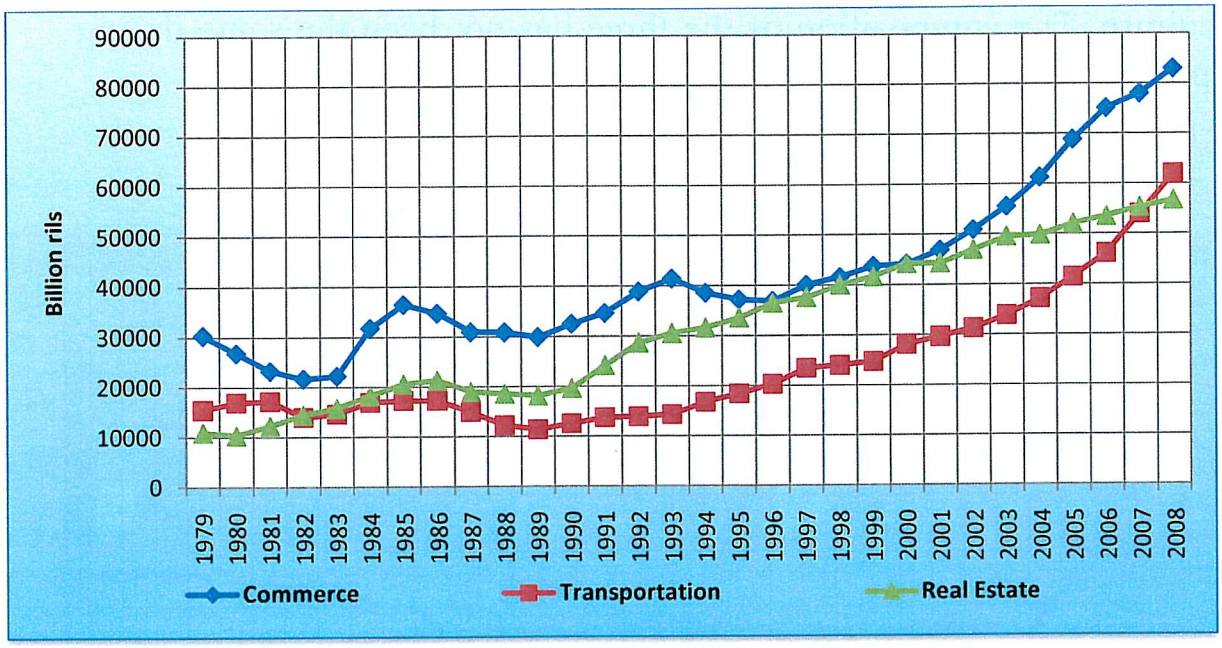
Diagram (4-10): Trends in Service Industry Value-Added (1997 Constant Prices)



Source: Central Bank of Iran: Economic Time Series Database

After the victory of Islamic Revolution the government tried to reduce the share of service industry in favor of other sectors, but such a change resulted in altering the nature of this sector. The Imposed War and unmethodical immigration to the cities as well as the policies for fair distribution of goods and services prevented any reduction in the share of this industry. Moreover, an increase in the domestic commercial activities (due to closing of the factories), economic sanctions and stagnation of manufacturing activities gave a boost to the share of this sector. In other words, during these years industrial capital was funneled into the service industry.

Diagram (4-11): Trends in Value-Added Quotas of Various Service Sector Groups



Source: Central Bank of Iran: Economic Time Series Database

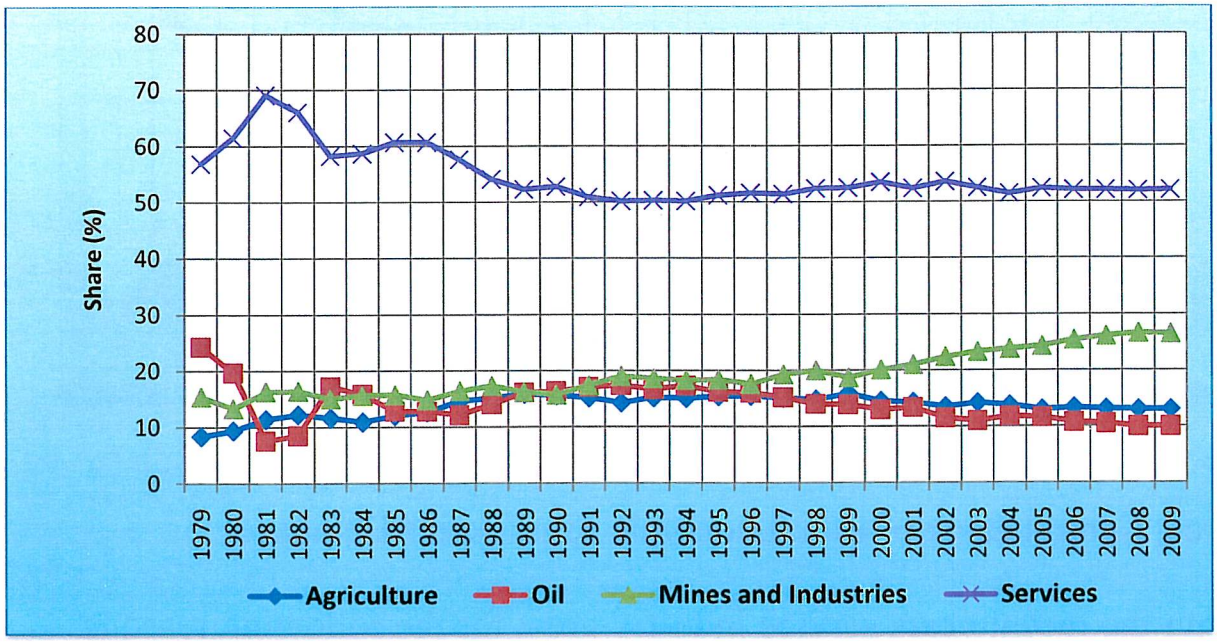
During the recent years service industry grew for the following reasons: expansion of public education, development of higher education, healthcare development, development of governmental commerce, and the growth of retail enterprises. During the past thirty years, service industry groups have undergone changes in their structure and composition. During the period under study, the GDP shares of public service and financial services have fallen, while transportation has boosted its share. Two groups of commerce and restaurant management have experienced seriously fluctuating growth in their shares. The value-added in these groups has always been on the rise.

4-5- Composition of Economic Sectors

A review of the composition of economic sectors in the national economy (Diagram 4-14) shows ever-increasing dominance of service sector during the past three decades. The service sector is followed with relative distance by the triple sectors of industry and mines, oil and

agriculture. The composition of the three has not been the same during this period, rather they have changed placed now and then.

Diagram (4-12): Trends in GDP Shares of Each Sector



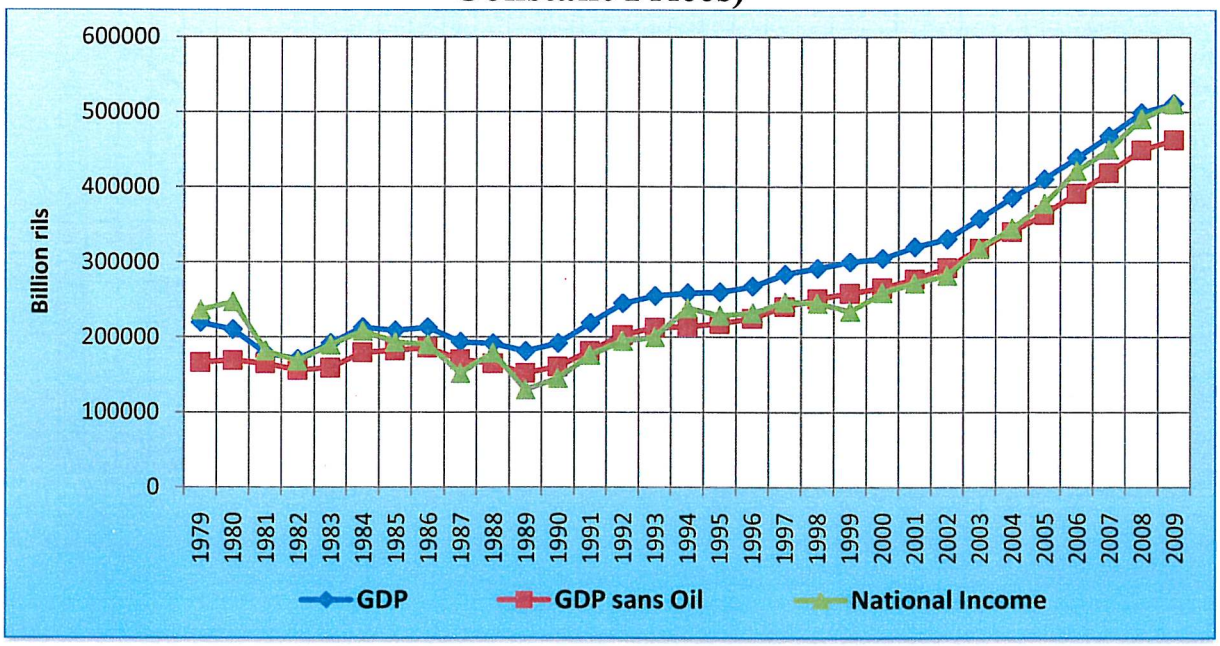
Source: Central Bank of Iran: Economic Time Series Database

Upon a reduction in oil production during the first years after war, oil group slipped down the other two groups in 1981. In the years later, despite reduced oil exports, the rise in oil prices compensated for the loss and oil group moved up, but plummeted again in 1986-1988 to touch its minimum rates in 1974-1994 period.
The collection of these incidents pushed the oil group down to below industrial and mineral sector during the years 1983-1988 to be almost at the same level with agriculture. Since 1995, oil group was below agriculture, which recorded its highest achievements in the years 1988 and 1998.

4-7- Gross Domestic Product and Income

A survey of gross domestic product (GDP) and national income in Iran during the past three decades suggests that from 1978 until 1988, the first decade after Islamic Revolution, GDP and national income have experienced ups and downs because of the Imposed War and economic sanctions. After the war and during the Reconstruction Period, economic development was accelerated because of resuming production, exporting oil and creation of new industries. However, in the closing years of this period, economic development slowed down because of the non-availability of vacant economic capacities and the mergence of downfall efficiency of manufacturing factors. Economic reforms in the third decade, coupled with the development of infrastructures created in the second decade, improvisation of economic, social and political relations with the world countries (specially with the Western nations), and rising oil prices accelerated economic growth and the age of development begins (Diagram 4-14).

Diagram (4-14): Trends in GDP and National Income (1997 Constant Prices)

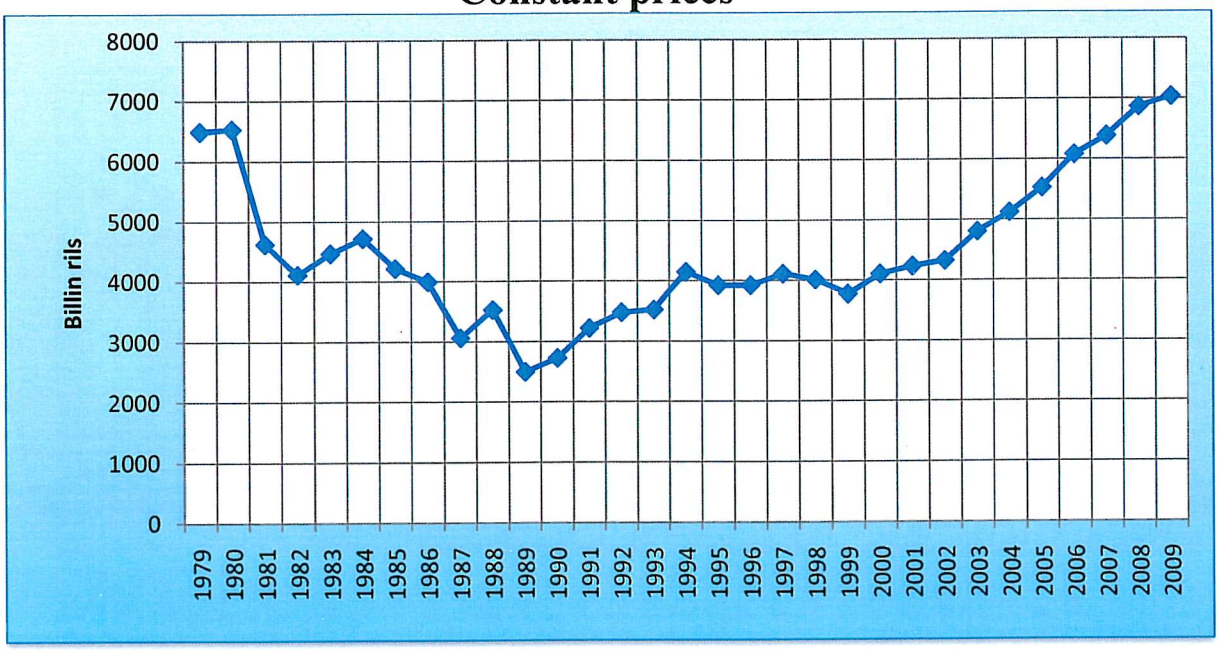


Source: Central Bank of Iran: Economic Time Series Database

4-8- Trends in Per Capita Income

Per capita income is a result of national income divided by the total population. Therefore, per capita income follows the procedure of these two variables. In the first decade after the Islamic Revolution income reduction and population growth were on the rise. Therefore, per capita income fell down sharp in this period, moving from six million rials in 1978 down to two million rials in 1988. In the beginning of the second decade, per capita income went up as a result of GNP growth and lower population growth, reaching four million rials in 1993. During 1993-2000, per capita income did not grow because of the fall in oil prices and consequently lower oil income. Since 2002 the oil market became brisk and oil income increased to give a boost to per capita income.

Diagram (4-15): Trends in Per Capita Income according to 1997 Constant prices



Source: Central Bank of Iran: Economic Time Series Database