

# BUDGETARY PRIORITIES IN A CRISIS STATE: SHIFTS IN IRANIAN GOVERNMENT ALLOCATIONS

ROBERT E. LOONEY

*Naval Postgraduate School, Monterey*

## ABSTRACT

The ability of the Iranian economy to provide viable jobs for the country's rapidly growing population will, in the long run, be largely dependent on the ability of the country to upgrade its stock of human capital. An analysis of Iranian Government budgets starting in 1970 indicates a steadfast commitment of the government to funding education. In fact, despite revolution, war, and political change the government has managed to maintain the budgetary share allocated to educational expenditures.

On the other hand, since the fall of the Shah there has been a dramatic shift in the composition of the educational budget towards primary education and away from secondary and university training. In this regard, it is hard to see major increases in growth occurring in the longer term unless the government is willing to alter its priorities towards increased funding of more advanced and technical training.

## Introduction

As it enters its second decade, the Iranian revolution would appear to be at an important and uncertain point — not because it seems to be in imminent danger of collapse or overthrow, but because many of the issues it confronts remain unresolved and the cost of failing to resolve them is rising. The war with Iraq only exacerbated these problems.<sup>1</sup>

However, as Clawson<sup>2</sup> has observed, the country has faced a set of circumstances remarkably unfavorable to its economic growth — the oil price decline (and later collapse), the Iraqi invasion, and the departure of many professionals and entrepreneurs in 1979- 80. At the same time, the government's basic political decisions, such as continuation of the war with Iraq, few concessions to those traditionally tied to the West and a policy of thorough-going Islamicization have created grave complications.

Most evident are the economic problems: high inflation (over 60 percent in early 1988) and unemployment; continued mass migration to the cities despite early attempts to reverse this trend; underproduction and inefficient utilization of industrial capacity. Much as the regime has been able to stave off its problems, it will be more and more difficult to ignore them, not least because of the demographic explosion in Iran: from a population of 10 million in 1900 to 28 million in 1966 to 47 million in 1986 and to an estimated 65-70 million in 2000.<sup>3</sup>

The ability of the country to deal with these problems will, in the long run, be largely dependent on its ability to upgrade its stock of human capital through the provision of education and training. The purpose of this paper is to present the results of some recent empirical findings on Iranian budgetary priorities. Has educational expenditure been a casualty of the war and revolution? And if so in what sense? Have the government's allocations to the educational system been biased in any particular way? And if so how do the current regime's budgetary priorities toward education differ from those of its predecessor?

## **Education**

The first serious attempts at eradicating illiteracy in Iran were undertaken in the 1930s under Reza Shah. However, a coordinated push to improve the fundamental skills of the population was not undertaken until the 1960s when a mass campaign was instituted under a Literacy Corps program as part of the then Shah's White Revolution. A great deal was achieved in a short time and by 1979 the literacy rate has improved substantially, to 55 percent for males and 30 percent for females, accounting for over 40 percent of the population. According to the 1986 census, 62 percent of those of school age or above were illiterate.<sup>4</sup>

Enrollment rates have show, fairly steady increases over time, especially in the primary grades. However, these rates appear to have leveled off at the secondary level with male enrollment rates in the mid-1980s actually lower than in the mid-1970s. As a basis of comparison, Iran lags considerably behind other countries with similar levels of income/development in terms of enrollment rates at the secondary level.

Following the revolution, the educational system was changed so that all teaching conformed to Islamic principles as ordained by the regime. Great emphasis was given to ensuring that the young would be brought up as totally committed Muslims. In some ways, the quality of education was improved. However, higher education presented the government with continuing problems since the universities, especially the main two institutions in Teheran, were, by traditional standards, politically liberal and secular. They were closed for a long period, reopening in 1983 with modified Islamic syllabi and a controlled intake of "acceptable" students.<sup>5</sup>

Iran has been in almost total intellectual and literary isolation since the revolution. At the present time, ideas, literature and new scientific advances from outside penetrate only slowly into the Iranian system as a result of attitudes, policies, and, recently, a shortage of financial resources. The fact that over 50 percent of the population is under 15 years of age means that the imprint of Islamic education is very powerful, since a part of the population has experienced no real schooling "other than of the Islamic Revolutionary type. This has occurred simultaneously with a contraction in higher education.<sup>6</sup>

In the wake of the revolution, there was a significant outflow of people and capital from Iran, the former even more damaging to the country's future prospects than the latter. Most of those Iranians who fled the country in the years 1978 to 1980 were professional people, industrial capitalists, landowners and experienced administrators or technocrats. These groups represented many years and even generations of expensive and time-consuming training and education. For all its faults, this stratum of society possessed the skills necessary for running what was becoming an economically sophisticated state. The mark of this loss is still instantly apparent in present-day Iran.

## **Employment**

The employment situation in Iran during the last decade or so has been one of extremes. During the boom period of the a serious shortage of labor existed in certain key sectors.<sup>7</sup> At that time, up to one million Afghan immigrants were attracted into agriculture and general labor in Iran, while many Iranian migrants to the Gulf states were induced by the prosperous conditions in Iran to return to their homes.

Collapse of the economy after 1976 brought on growing but generally modest levels of unemployment as the level of activity fell off, especially in construction and services. Young males who had often been employed in multiple shift work occupations found work less easy to come by, and new immigrants were not absorbed into the labor force on the previous scale. Much distress at this time arose from the fall in disposable income among the manual laboring groups as they faced rapidly increasing prices for their essential needs.

In the period before and after the revolution, what appeared at first to be a gradual decline on the employment front became a severe deterioration.<sup>8</sup> The causes of the problem were varied. Flight by factory owners, continuing migration of rural people to the towns, shutdown of major construction projects and displacement of people in the war zone all added to the government's difficulties. By 1986, it was admitted that some 3.8 million of the adult work force of 13.3 million were unemployed, up from three million in 1984. At the time of the 1986 census, only 20 percent or so of the population was gainfully employed.

The work-force was forecast to grow from 11.6 million in 1982 to 13.2 million by 1988, when the number of men seeking active employment would total 11.1 million, compared with 2.2 million females. Data on the distribution of the work force are weak. The Plan Organization suggested in 1982 that 34 percent of those in active employment were in agriculture,<sup>31</sup> percent in manufacturing, mining, construction, and utilities, and 35 percent in services.

Those figures mislead in the sense that large areas of disguised unemployment exist in all sectors. Most farming activity is confined to the warm months of the year. Industry retains many workers in employment for welfare purposes. Services is an all embracing term covering people in low productivity occupations such as cigarette selling and similar activities. Given continuing poor economic conditions and a high rate of entry into the labor market, unemployment can only get worse despite the dedication of the republic to full employment.

There was an attempt in the first National Assembly to introduce a new labor law that would have regulated employment closely and guaranteed very high levels of security to workers. By implication, it might also have made workers' councils responsible on a much wider scale for the management of their factories. The legislation was rejected by the council of Guardians of the Constitution and did not become law, although the opportunity arose in 1988 to resuscitate the law.

A number of workers' councils still control individual factories, running them for their own benefit, though in most cases with notable lack of commercial success. Only in the small factories sector, where there has been management input from the young revolutionary cadres, has there been major success using new management structures. Trade unions on the Western model do not exist, although consideration for workers under Islamic rules is fostered.

### **The Budget**

In response to falling oil revenues, after the revolution the government generally adopted a fairly orthodox policy. The government deficit as a percentage of GDP has been limited by continuing and drastic fiscal measures to between seven and eight percent of GDP or just about the same levels as the year before the revolution. Exceptions were when oil income fell steeply in 1981-82 and 1986-87, when the deficit reached 10-11 percent of GDP.

The method by which the Government curtailed its deficit constitutes the most stringent measure its domestic economic policy.<sup>9</sup> There has been an extraordinary shrinking of government expenditures in real terms. Specifically, actual expenditures — not just the budget — fell from 2.5 trillion rials the year before the revolution (1977-78) to 1.4 trillion rials five years later in 1982-83. In terms of its share of GDP, the reduction in government expenditures over this period from 1977-78 to 1981-83 was 18 percent (from 46 percent to 28 percent) Even worse, this was during a period when real GDP fell.

This reduction would seem to be among the most rapid and far reaching experienced by any government since such data began to be collected systematically after World War II. No industrialized nation has ever been able to reduce expenditures in any five year period by as much as five percent of its Gross Domestic Product (GDP) The much applauded efforts of Latin American governments to cut spending in responding to the

debt crisis were much more modest than Iran's response to its own crisis; indeed the International Monetary Fund (IMF) has been criticized for demand expenditure reductions that were as high as 10 percent of GDP.<sup>10</sup>

Over the past five years, the ratio of current and development (fixed investment) expenditure to the total indicates that between 80 to 90 percent of current government expenditure consists of salary payments to civil servants and procurement of consumer goods, and only the remaining 10 to 20 percent is used as a means of implementing various economic policies.

It is also apparent that the government's efforts to check current expenditures over the past few years have not been successful, with its ratio to the total expenditures going up to nearly 75 percent in 1987/88.

The war expenditure in turn fell into two categories: current and development. Development expenditure consisted of such things as the construction of air raid shelters and other non-active defenses. In recent years, total war expenditure to total government expenditure went up from 32 percent in 1986-87 to more than 34 percent in 1987-88.

Obviously, the rise in current expenditure in recent years has automatically reduced development expenditures and, as a result, investments for employment and the possibility of increasing the economic productivity potential.

With regard to specific categories, educational expenditures while declining in absolute terms, were able to stay around 20 percent of total government expenditures over the 1980-86 period. Economic expenditures fell from 24.0 percent of the budget in 1980 to 15.7 in 1986. It should be noted, however, that although falling in absolute terms, the 19.6 percent of the budget allocated to education was considerably higher than its share in the 1970s.

Clawson correctly notes, however, that Islamic Iran's expenditure reduction should be seen against the background of the oil boom. To a large extent, the Islamic Republic simply returned to the level of government that had prevailed until 1973. Reducing expenditure is always difficult, but it may be less so when the program cut is of relatively recent origin. Furthermore, much of the reduction was in development spending, which is estimated to have fallen in inflation adjusted terms by 80 percent from the pre-revolutionary past. Reducing expenditures on such development projects as roads, power plants or factories is relatively simple; as on-going projects are completed, work on new projects is postponed.

### **Costs of the War**

There is no doubt that the war has profoundly distorted Iran's economy, quite apart from the incalculable human cost which includes more than a million dead and injured and between one and two million displaced persons. The fact that Iran has not published detailed national statistics since 1977 means that any attempt to estimate the cost of the war is extremely difficult. The difficulty is compounded because each estimate selects different components of cost and thus is not comparable with the others. Furthermore, the estimates refer to different time periods.<sup>11</sup>

As Joffe and McLachlan<sup>12</sup> note, annual estimates of the costs of the war show similar variations. In financing the war, Iran is thought to have been constrained by lack of foreign exchange-especially since the 1986 oil price collapse. The result was to limit its expenditure on arms during the last several years of the Gulf War to \$2-3 billion annually.

While the costs of the war were staggering, when seen in historical context they do not appear to have altered budgetary priorities to a significant extent. Surprisingly, defense expenditures during the first eight years of the war were kept at levels approximating those under the Shah. The low expenditure during the war was due to three factors: (a) the government's inability to obtain sophisticated and expensive equipment, (b) greater reliance on voluntary forces, and (c) a reluctance to impose austerity on the public.

### **Budgetary Trade-offs Involving Education**

Before any assessment can be made of the country's ability (and willingness) to maintain or even improve its stock of human capital, some idea must be gained as to the factors affecting the government's expenditure decisions. To what extent did the Gulf War affect educational expenditures? Has education been a priority of the Revolutionary government? Are other budgetary categories cut only after reductions in the educational budget?

When public policy demands exceed the available public resources, budgetary trade-offs are bound to occur between and among different policy areas: one policy area may gain at the expense of other policy areas in the allocation of scarce resources. Budgetary trade-off patterns range on a continuum between two extremes. For example, in the case of defense expenditures and allocations to education, it may be that allocations to defense come at the expense of educational spending; that is, as defense spending increases, spending on education may actually decrease, producing a negative trade-off.

This pattern is sometimes referred to as a substitution effect.<sup>14</sup> A positive trade-off occurs if defense spending increases are matched by real increases in education spending. Of course, it is always possible that defense spending bears no relationship negative or positive to education spending, producing a pattern in the middle of the trade-off continuum — no trade-off.

What literature exists,<sup>15</sup> suggests that the defense/education trade-off is complex, and may be affected by a number of factors including: changes in regime (military/civilian authoritarian/democratic), wars/regional conflicts, austerity measures/budget deficits and foreign exchange shortages. Some or all of these factors must be included in the regression equation to obtain less biased estimates of any trade-offs between education and other categories of government expenditures.

Based on the discussion above— it is clear that several factors had a potential effect on the share of educational expenditures in the government budget:

1. **The Revolution.** The change in regime type from monarchy to Islamic republic is likely to have shifted priorities toward education, although this factor may be somewhat different depending on whether the level of education is primary, secondary or university.<sup>16</sup>
2. **The Iran-Iraq War.** This would seem to be a pure guns-vs-butter situation, with the government reducing its commitment to education to divert resources to the war effort.<sup>17</sup>
3. **Government Fiscal Deficit.** This factor could work in either direction, depending in part on the priorities of the government towards the educational sector. Larger deficits may have been run to maintain educational programs or larger deficits to finance other expenditures may have forced the government to reduce allocations to education as part of an austerity program.
4. **Sectoral Priorities.** This factor includes the guns-vs-butter analogy discussed above. However, educational expenditures could be affected (positively or negatively) by movements in any of the other major budgetary categories. In addition to education, the budgetary<sup>18</sup> data presented by the International Monetary Fund for Iran include: (a) general public services, (b) defense, (c) health, (d) social security and welfare, (e) housing, (f) community services and (g) economic services.

To summarize in other words we might expect the share of the government budget allocated to education to be greater: (a) the smaller the deficit, (b) during peace time, (c) after the revolution and (d) in the absence of other strong budgetary priorities. Because it appears that the current government treats allocations to primary education in a somewhat different manner from its funding of secondary schools, analysis was also undertaken on the funds allotted to each type of school.<sup>19</sup>

## Main Findings

In regard to the budget allocated to all expenditures on education:<sup>20</sup>

1. The fiscal deficit was by far the most important variable affecting the share of educational expenditures in total government expenditures. This variable accounted for over sixty percent of the fluctuations in the educational share of the budget. It appears that the government was willing to increase its deficit in order to maintain the level of instruction.
2. The major budgetary trade-off was a positive one, and involved the association between education and the catch-all category of "other services". A positive, albeit weak, correlation was also found with general public services.
3. As anticipated, the revolution introduced a new set of budgetary priorities, with education's share of the budget increasing in relative significance (but not necessarily in absolute terms) after the overthrow of the Shah.
4. As anticipated, the war took its toll by significantly decreasing the share of funds allocated to the country's educational efforts.

In general, therefore, education suffers from no really serious negative trade-offs with the to budget allocations, and therefore should *ceteris paribus* increase in relative importance in the post-war years. It should be noted, however, that a fairly weak but negative trade-off with economic expenditures was found. This variable will be examined more thoroughly below, since it may provide some insights as to possible shortfalls to education during the period of post-war reconstruction.

In regard to the factors affecting the share of the budget allocated to primary education:

1. As was the case with total education, the fiscal deficit was the most significant factor affecting the budgetary share allocated to primary education. This variable accounted for over one half the fluctuations in primary education's share of the budget over the 1970-86 period.
2. The revolution's emphasis on primary education is apparent in its contribution to the regression equation — increasing the explained variance by nearly 40 percent, a much greater incremental increase than in the case of total education.
3. The major budgetary trade-off was a negative one with the catch-all category "other services". Apparently the Islamic regime provides a certain type of services not available under the Shah. These services have expanded in part at the expense of primary education.
4. Interestingly enough, primary education has such a high priority with the present regime that the war does not appear to have seriously affected its relative position in the budget.
5. As noted with total education, a weak and negative trade-off exists with economic expenditures. Since economic expenditures consist of such a diverse group of activities, this budgetary category is examined in greater detail below.

For secondary education, a much different pattern emerged:

1. Apparently the government was unwilling to incur larger budgetary deficits simply to fund this type of activity — the fiscal deficit was insignificant when regressed on the share of secondary education in the budget.
2. Other social expenditures were the strongest determinant of secondary education's share of the budget, with the war reducing the share of funding for this type of activity.
3. It is also interesting to note that the change in budgetary priorities associated with the overthrow of the Shah may have actually resulted in a reduction in the relative importance of secondary education. This relationship is fairly weak however, and

probably does not reflect a major bias of the current regime against secondary education *per se*.

4. Finally, the percentage of variance on the share of secondary education explained by the model is considerably lower than was the case with either total or primary education. In part, this most likely reflects a weak commitment by the government to instruction at this level.

One of the more interesting (and surprising) findings from this analysis was the role of the budget deficit in funding primary and (since it is comprised mostly of primary education) total education. To determine the relative importance of education in this regard, additional regressions were run with the deficit as dependent variable. Other budgetary shares were included along with the Revolution term and the Iran-Iraq War dummy variables. The results of this exercise indicated that:

1. Education (either total or primary) was the only budgetary category associated with increases in the deficit. In fact, increases in the share of funds allocated to education accounted during the period under consideration for over seventy percent of the increase in the fiscal deficit.
2. The revolutionary regime appears slightly more disposed than its predecessor to run deficits, but this effect is not particularly strong.
3. Contrary to the situation in most countries, the war does not appear to have had much, if any, effect in increasing the size of the deficit.
4. Substituting the share of the budget allocated to defense for the war term also does not enable one to account for the increase in the deficit in recent years. In fact, the defense term has a positive sign, indicating that higher levels of defense expenditure are actually associated with lower deficits.

It appears, therefore, that both the Shah and the Islamic leaders gave a high enough priority to (primary) education so as to be willing to risk the inflationary impact usually associated with increased budgetary deficits. No other sector appears to have been elevated to this status by either regime.

It was noted earlier that a slight negative budgetary trade-off was found in the regressions of the share of economic activities in the budget upon education (both total and primary). Further analysis was undertaken to determine, through disaggregating to the various components of economic expenditures<sup>21</sup>, the extent of this relationship. Building from a three-variable model containing the deficit, the Iran/Iraq War and the revolution, the various economic categories were added on a one-by-one basis. The results indicate that:

1. Both total economic services and those involving mining, manufacturing and construction had a negative but weak effect on the shares of the budget allocated to either total education or primary education.
2. The greatest impact from the economic portion of the budget was the fairly strong negative impact of fuel and energy on primary education.

## Conclusions

Since seizing power, the Islamic regime has been able to maintain, if not significantly increase, the country's stock of human capital. Most likely, this has come at some cost in terms of inflation, and perhaps resources that could have been allocated more effectively in the higher levels of training. With the completion of the war, the country's focus will most likely turn to increasing its investment in its younger citizens. It is unlikely that, at least at the primary level, education will face major problems in maintaining its budgetary share, despite the increasing economic costs associated with reconstruction. Increases in the

absolute amounts of resources allocated to both activities should help revive the economy.

However, it is hard to see major increases in growth occurring in the longer term unless the government is willing to alter its priorities towards increased funding of secondary and university level education. There is no evidence to date that this will be the case.

## NOTES

1. Fred Halliday, "The Revolution's First Decade," *Middle East Report* (January-February 1989), p. 19.
2. Patrick Clawson, "Islamic Iran's Economic Politics and Prospects," *Middle East Journal* (Summer 1988), p. 371.
3. Halliday, *op. cit.*, p. 20.
4. Economist Intelligence Unit, *Iran: Country Profile: 1988-89* (London: The Economist Intelligence Unit, 1988), p. 13.
5. *Ibid.*
6. *Ibid.*
7. Robert Looney, *Economic Origins of the Iranian Revolution* (New York: Pergamon Press, 1982), chapter 7.
8. James Scoville, "The Labor Market in Pre-revolutionary Iran," *Economic Development and Cultural Change* (1985), pp. 143-155.
9. Clawson, *op. cit.*, pp. 377-78.
10. Clawson, *op. cit.*, p. 378.
11. George Joffe and Keith McLachlan, *Iran and Iraq: Building on the Stalemate — Special Report No. 1164* (London: the Economist Intelligence Unit, November 1988), p. 23.
12. *Ibid.*, pp. 23-24.
13. "Iranian Economy: Picking up the Pieces," *Middle East Economic Digest* (August 12, 1988), p. 8.
14. Joel Venner, "Budgetary Trade-offs between Education and Defense in Latin America: A Research Note," *Journal of Developing Areas* (October 1983), p. 78.
15. For a recent survey of the relevant literature, see Robert E. Looney and P.C. Frederiksen, "Consequences of Military and Civilian Rule in Argentina: An Analysis of Central Government Budgetary Trade-offs, 1961-1982," *Comparative Political Studies* (April, 1987), pp. 34-46.
16. This is a dummy variable with values of 0 for 1970-77 and one for 1978-86.
17. This is a dummy variable, depicted with zeros for the pre-war years and ones for the years of the war.
18. International Monetary Fund, *Government Finance Statistics Yearbook for the Years 1982 and 1989* (Washington: International Monetary Fund).
19. Similar tests were performed on the share of the budget allocated to university education. However, the proportion of the budget allocated to this activity was not only small relative to the other two types of schools, but also very irregular from year to year. As a result of the latter problem no strong patterns were identified.
20. Only those other budgetary allocations that were statistically significant are reported here. Analysis was undertaken with a multiple regression technique for the period 1970-86. A complete set of results can be found in Robert E. Looney, "Education vs. Defense Expenditures in a Conflict State: An Analysis of Budgetary Priorities in Contemporary Iran," Working Paper, Department of National Security Affairs, Naval Postgraduate School (May 3, 1989), copies of which are available from the author upon request.
21. Based on the level of detail provided by the International Monetary Fund data; these included: (a) total economic services, (b) general administration, research and regulation, (c) agriculture, (d) mining, manufacturing and construction, (e) electricity, gas and water, (f) roads, (g) other transportation and communication, (h) fuel and energy, and (i) other economic.