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The Iranian Economy in the 1970s: Examination of the Nugent Thesis

Robert E. Looney and P. C. Frederiksen

Despite many optimistic predictions, the post-war economic growth enjoyed by developed countries has not spilled over to developing countries. In fact, a widening gap between per capita incomes has taken place over the last thirty years.¹ Growth rates in developing countries have often been quite dismal and their rates of growth have varied significantly more than those of the more advanced countries. Iran was an exception to the norm for developing countries sustaining high and growing rates of real economic growth after its stabilization program of the early 1960s.

Iran's industrial sector lost its earlier dynamism by the late 1970s, and despite some growth in the agricultural sector, the economy began to experience severe stagnation. Two alternative explanations are possible to account for the slowdown. On the one hand, it can be attributed to short-run phenomena – largely political in nature.² On the other hand, the slowdown can be viewed as a direct result of the import substitution policies which had been adopted by the government to enable the manufacturing sector to 'catch up'.

This paper examines the major mechanisms which led to the demise of the Iranian economy. First, we identify some of the more important economic trends at work before and after the oil price increases of 1973. Despite the aggregate nature of the data, several patterns suggest the broad forces underlying Iran's growth and decline. Second, we examine the Nugent thesis as described below in the context of Iran to see why the momentum of growth which was established in the 1960s did not carry forward into the 1970s as Nugent's thesis would suggest.

SECTORAL GROWTH PATTERNS

Four distinct patterns of sectoral growth developed in Iran between 1960 and 1977:³ (i) a sharp decline in the growth of the agricultural sector from 33.3 per cent of non-oil GDP in 1959 to 13.7 per cent in 1977, (ii) erratic rates in the construction industry, (iii) a steady growth in the manufacturing sector, and (iv) the expansion of public services over private services. In a broader context, one can compare Iran's output by sector with the 'normal' output pattern (as defined by Chenery⁴) for countries with similar per capita incomes and population. While close to normal for most sectors of the economy, Table 1 indicates that by 1970 the manufacturing sector despite having grown quite rapidly, still fell far short of what might be considered the norm for countries in a like position.

The low proportion of manufacturing output is consistent with the findings of Chenery and Taylor.⁵ They interpret this pattern to be the result of many

resource-rich countries selling foreign exchange to Iran at artificially low prices. The relative ease of obtaining foreign exchange (either by resource exports or the underpricing of foreign exchange) shifts a country's comparative advantage away from manufacturers.⁶ This interpretation seems consistent in Iran where little encouragement had been given to industry before the 1960s. To try to bridge the gap between the industrial and agricultural sectors, an aggressive import substitution policy complete with sophisticated systems of tariffs and quotas was adopted in the early 1960s.⁷

TABLE 1
PERCENTAGE DISTRIBUTION OF NORMAL AND ACTUAL OUTPUT, 1970^a

Sector	Normal	Actual
Agriculture	19	18
Manufacturing	29	13
Construction	5	5
Transportation and Communication	7	5
Services (incl. Commerce)	40	59
Total	100	100

^aExcludes Oil and Mining

Source: Ahmad Kader, 'The Contribution of Oil Exports to Economic Development: A Study of the Major Oil Exporting Countries', *The American Economist* (Spring 1980), p. 50.

When combined with political stability and rising oil revenues, profit expectations were such that the industrial sector grew at approximately twice the rate of other countries. In addition, investment incentives initiated by the government led to average annual growth rates for gross domestic capital formation and fixed investment in machinery and equipment of 16 and 20 per cent respectively during the Third (1963–67) and Fourth (1968–72) Plans.⁸

While manufacturing prospered, the high tariffs on consumer goods, the over-valuation of the rial, and price controls on food undoubtedly were the critical factors leading to the slow growth of the agricultural sector. Real investment in agricultural machinery, for example, grew by only 6.7 per cent between 1963 and 1971 compared with a similar rate of 20 per cent for total investment.

A MODEL OF GROWTH AND MOMENTUM

At least for the period before the 1970s, Nugent found a general tendency among developing countries '... for the aggregate growth rates of individual countries to be rather similar from one decade to the next'.⁹ Drawing on data for the 1950s and the 1960s Nugent found the majority of countries were either consistently higher or lower than the group average during each decade. For example, 15 of 42 countries had GNP growth rates less than the group average in both decades, while 22 countries had growth rates above the group average in both decades. From this simple comparison, Nugent concluded that:

Once a certain degree of momentum for change and development has been attained, continued growth seems relatively easy to achieve. Without such momentum, however, the growth process seems relatively difficult to initiate and to sustain.¹⁰

In explaining the role of momentum in the growth process, Nugent drew on the theory of disequilibrium and suggested that many of the stabilizing and growth equalizing mechanisms assumed for the developed countries were often inappropriate in developing countries. Specifically, he suggested (a) the nature of technological selection and change, (b) the process of capital formation, and (c) the way in which human capital and income distribution tends to vary with growth, as the primary reasons why disequilibrium tends to be more prevalent in developing countries.¹¹

At first glance, it appears that the case of Iran with a successful economic performance in the 1960s but with declining growth in the 1970s is an exception to the Nugent thesis. However, by examining the growth rates for the 1960s and 1970s for 75 developing countries, we found no clear pattern between the growth rate in the 1970s of four major economic aggregates (industrial production, manufacturing output, GDP, and government consumption) with the corresponding growth rate in the 1960s – an apparent rejection of the Nugent thesis. These results suggest that relatively high 1960s growth rates in a country such as Iran do not *per se* assure a similar performance in the next decade.

A number of factors could have caused the disruption in the historical pattern observed by Nugent – sudden balance of payments problems faced by previously high growth non-oil exporters, changes in comparative advantage, shifts in foreign aid, and so on. It could also be that the sustained pattern still existed through the 1970s but was masked by a situation where some extreme shift in domestic savings and/or investment had taken place. While these cases might be relatively few in number, they might have been sufficient to eliminate any statistical correlation between performance in the two time periods.

To examine this thesis, we divided the set of developing countries into two homogeneous groups: (a) a relatively resource-unconstrained group where presumably once growth was established it would have a reasonable chance of continuing and (b) a relatively resource-constrained group with little chance of future growth. The grouping procedure was done twice. First of all countries were grouped on savings and investment measures. Presumably, unconstrained countries like Iran – with relatively fewer savings and investment constraints – would have a greater chance of sustained growth than the resource constrained countries. As a second step, countries were also grouped on the basis of foreign exchange resources. Once again, the relatively unconstrained group (which included Iran) – with little foreign exchange difficulties or balance of payments problems – would logically enjoy a greater chance of success in the following decade.

An examination of the mean values of the two sets (Table 2) indicates that most developing countries are fairly consistent in that the better performers tend to rate high in all four categories (savings, investment, export and import growth) while those doing poorly do so in all categories.

As a next step we correlated the 1960s and 1970s growth rates of the major economic aggregates (industrial productions, manufacturing output, GDP, and government consumption) for the unconstrained countries. For these countries, we found that relatively high growth rates in the 1960s were good predictors of growth in the 1970s.

TABLE 2
Mean Values of Variables in Country Groupings

<i>First Grouping</i>	Unconstrained N = 31	Constrained N = 47
Investment/GDP 1960	20.5	14.4
1978	26.6	20.5
Savings/GDP 1960	21.2	8.0
1978	25.2	11.0
<i>Second Grouping</i>	Unconstrained N = 52	Constrained N = 23
Import Growth 1970-78	9.1%	-2.8%
Export Growth 1970-78	4.9%	-2.9%

On the other hand, countries which were grouped in the relatively resource constrained set did not follow this pattern. No significant correlations were observed between growth in the 1960s and growth in the 1970s. These results suggest that for this set of countries, momentum built up in one period is not a sufficient condition to ensure success in a later period. Whatever growth did occur in the 1960s seems to have been limited in the next decade by the inability to overcome savings, investment and foreign exchange deficiencies.

CONCLUSIONS

Based on the results of the analysis above, it appears that the factors which Nugent suggested might have aided Iran's expansion in the 1960s may have become self-terminating or even detrimental to growth by the mid-1970s. Iran's position in the high savings-investment group and the high import-export group suggests a high probability that its growth should have continued into the 1970s. Since Iran faced stagnation by 1978, one can conclude that either (a) extenuating political factors may have predominated, or (b) political uncertainty and erratic government policy toward the economy may have undermined the normal savings/investment relationships, or (c) it may well be that the type of momentum experienced by most developing countries is not the same for major oil and mineral exporters.

Several recent studies¹² have shown that development patterns for mineral and oil exporters are fundamentally different than for those countries not possessing these natural resources. When combined with the results obtained above, it suggests that we may need a separate theory of development and growth for this set of countries. Our results indicate that many rich areas remain for further research to understand the mechanisms of growth for the major Middle East oil exporters.

NOTES

1. See W. Leontief *et al.*, *The Future of the World Economy* (New York, 1977), Ch. 1.
2. See G. Lenczowski, 'Iran: The Awful Truth', *The American Spectator*, December 1979.
3. For other descriptions of Iran's macroeconomic trends, see Firouz Vakil, *Determining Iran's Financial Surplus: 1352-1351* (Teheran, 1975); Ahmad Shahshahani and T. Malcom Dowling Jr., 'An Econometric Model Forecast of Iran 1975-1985', *The Journal of Energy and Development* (Autumn 1976), pp. 148-62; Robert Looney, *Iran at the End of the Century* (Lexington, MA, 1977); and Robert Looney, *A Development Strategy for Iran through the 1980s* (Washington, 1977).
4. H. Chenery, 'Patterns of Industrial Growth', *American Economic Review* (September 1960), pp. 624-54.
5. H. Chenery and L. Taylor, 'Development Patterns: Among Countries and Over Time', *The Review of Economics and Statistics* (November 1968), p. 396.
6. Gobind Nankani, 'Development Problems of Mineral Exporting Countries', *World Bank Staff Working Paper No. 354* (Washington, 1979).
7. Farhad Daftari, 'Development Planning in Iran: A Historical Survey', *Iranian Studies* (Autumn 1973).
8. Looney, *Iran at the End of the Century*, Ch. 6.
9. Jeffrey Nugent, 'Momentum for Development and Development Disequilibria', *Journal of Economic Development* (July 1977), pp. 31-52.
10. *Ibid.*, p. 35.
11. *Ibid.*, pp. 36-48.
12. See Robert E. Looney and Craig Knouse, 'Profiles of Third World Mineral Producers', *Resources Policy*, (March 1987), forthcoming, and Stephen R. Lewis, 'Development Problems in Mineral Rich Countries', in Moshe Syrquin (ed.), *Economic Structure and Performance: Essays in Honor of Hollis B. Chenery* (New York, 1984), pp. 162-75.