OIL AND THE RENTIER STATE:

IRAN'S CAPITAL FORMATION, 1960-1997 [1]

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1. INTRODUCTION

The focus of this study is on the "rentier" character of state and economy in relation to capital accumulation during the period of 1960-1997 in Iran. The rentier character and structure of the Iranian State reflects the domination of the economy by the oil sector (Mahdavy 1970, Bina 1992a). The rentier nature of the Iranian economy is also potentially recognized through a strand of literature in economic development, known as Dutch Disease (Katouzian 1978, Corden and Neary 1982, Corden 1984, Romer 1985, Evans 1986). Such domination has continually been the common denominator of both the Shah's, as well as the Islamic Republic's regimes in Iran. For the analysis of oil rents theory, see Bina 1985 (Ch. 5), 1989, 1990, 1992b. It is shown through a simple but decisive econometric model that oil revenues had a *positive* and *significant* relationship with the long-term trend of gross fixed domestic capital formation (GFDCF) during the latter part of Shah's regime in Iran. However, it is also shown that such a positive and significant relationship had suddenly become *negative* after the legendary oil price hike of 1973-1974, despite the fact that it brought an enormous windfall to the Shah's treasury by 1975 (Bina 1985, 1988, 1990, Karshenas 1990). The situation under the Islamic regime has been somewhat different. Iran's oil revenues have declined substantially, and were subject to much fluctuation during the period of 1980-1997 (Fesharaki 1985, Bina 1992a, EIU, various issues). It is shown that econometrically there is no significant relationship between the extent of oil revenues and the gross fixed domestic capital formation (GFDCF) during the period of 1980-1997 in Iran. Moreover, the Islamic regime in Iran does not appear to have paid much attention to *capital accumulation* and long-term investment. Instead, the government seems to have allocated the revenues from oil rents to politically motivated consumption expenditures and unproductive activities, presumably, to contain and ameliorate the potential internal political upheavals and external threats during the period under study (Mofid 1990, Yaghmaian 1992). The analogue of these activities is the fact that the Government of the Islamic Republic has consistently engaged in the allocation of various sorts of (formal and informal) subsidies to those areas and interest groups that provided sustained ideological and material support for the fortification of the regime in Iran (see Bina and Zangeneh 1992, Amuzegar 1993, Bina 1994a, 1999, Zangeneh 1997, 1999).

2. THE HYPOTHESES, MODEL, AND DATA

2.1. The Hypotheses

Given the weight of the literature concerning the dominant nature of oil revenues (rents) in the Iranian economy, the relationship between the level of oil revenues and that of the gross fixed capital formation is hypothesized as follows for different time periods:

Null Hypothesis I:

There is a significant relationship between the amount of oil revenues and the level of gross fixed capital formation (GFDCF) in the Iranian economy under the Shah's regime. There can be two outcomes, I_a and I_b

Null Hypothesis I_a: There is a positive (upward) shift in the above relationship (i.e., Null Hypothesis I) since the 1973-oil crisis during the Shah's regime.

Alternative Hypothesis I_b: There is a negative (downward) shift in the above relationship (i.e., null hypothesis I) since the 1973-oil crisis during the Shah's regime.

Alternative Hypothesis I

There is no relationship between the amount of oil revenues and the level of gross fixed domestic capital formation in the Iranian economy under the Shah's regime.

Null Hypothesis II: There is a positive relationship between the amount of oil revenues and the level of gross fixed domestic capital formation (GFDCF) under the Islamic Republic in Iran.

Alternate Hypothesis II: There is no relationship between the amount of oil revenues and the level of gross fixed capital formation under the Islamic Republic in Iran.

These relationships are measured through the test of significance of the corresponding linear models indicated above. This would capture the hypothesized influence of oil revenues on capital investment during the two sub-periods under study in Iran.

2.2. The Model

The entire period of the study extends from 1960 through 1997, spanning the Shah's regime as well as the IslamicRepublic regime in Iran. This period is divided into the two sub-periods of 1960-1979 and 1980-1997, corresponding with the above respective regimes. The period under study is limited to the availability of the time series data for the variables utilized in the model.

The model in its functional form is as follows:

$$I_t = f(R_t),$$

where, correspondingly, R_t and I_t stand for time series of oil revenue (oil rent) and gross fixed capital formation, assuming that I_t is a linear function of R_t. Given the structural

differences between the Shah's regime and the regime of Islamic Republic, the entire period of 1960-1997 has been divided into two sub-periods, each of which relates to the appropriate regime. The models utilized in the estimation of parameters for the two sub-periods are as follows:

(1) $I_t = \alpha + \beta R_t + D_t + \varepsilon$,

(2) $I'_t = \alpha' + \beta' R'_t + \varepsilon'$,

where I_t and I'_t are designated as dependent variables in time t, and R_t and R'_t as independent variables for oil revenues (oil rents) for the two sub-periods; α, α', β, and β' are vectors of parameters in the equations (α and α' constants, and β and β' coefficients of independent variable), and ε, and ε' are the residuals, and D is a binary variable (see Pindyck and Rubinfeld 1998a, Kennedy 1998).

2.3. The Data

The time series data on the gross fixed domestic capital formation (GFDCF) for the entire period of 1960-1997 are obtained from the Central Bank of Iran (Bank Markazi, *Annual Report*, various issues, EIU, various issues, IMF, *International Financial Statistics*). These data are nominal and kept in Iranian currency. As a result, one of the shortcomings of the data is the lack of adjustment for inflation. However, while it would have been desirable to utilize a real trend for a more accurate year-to-year comparison, due to the lack of information on the actual inflation rate in Iran, the authors had no choice except to utilize what was available. The time series data on Iranian oil revenues is in US dollars. Although problematic in terms of exchange rate, the revenue has been converted to Iranian rials for both sub-periods. These data are obtained from OPEC (*Annual Statistical Bulletin*, various issues). The conversion of the oil revenue data for the sub-period of 1960-1979 has been made at 760 rials per US dollar. This rate was consistently utilized by the Central Bank under the Shah (Pesaran 1992, Bina 1994b, EIU, various issues).

However, due to the unprecedented and unusual controls by the Islamic Republic—particularly the policy of holding multiple exchange rates—the oil revenue data for the period of 1979-1997 are kept in its original (US dollar) denomination. Despite these shortcomings, the time series are rather up-to-date and complete relative to what had been available previously on Iran's economy (Bank Markazi 1998).

FIGURE 1

Gross Fixed Domestic Capital Formation, 1960-1997
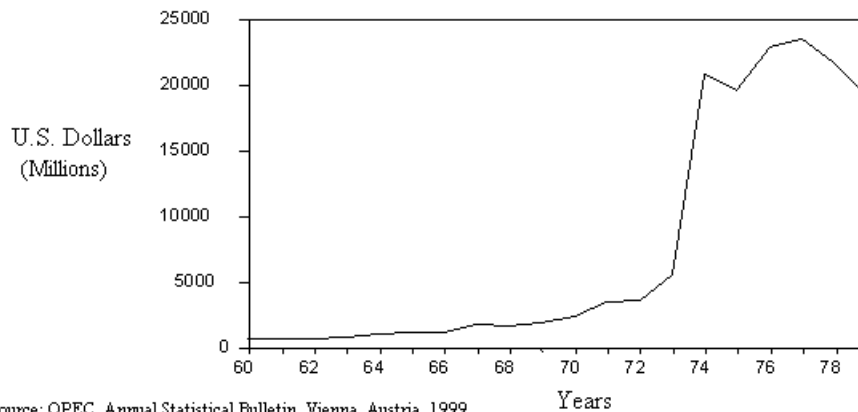(Iranian Rial)

Rials
(Millions)

Years
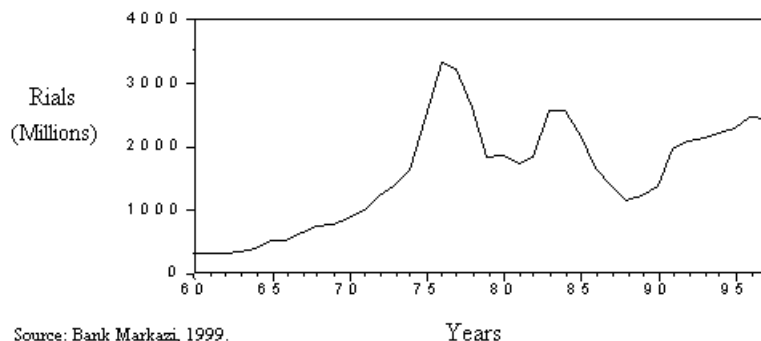
Source: Bank Markazi, 1999.

Figure 1 shows the trend of the gross fixed domestic capital formation (GFDCF) for the period of 1960-1997 in Iran. This trend reflects the growth of the Iranian economy in the long run, and overlaps the two regimes. While the shape of GFDCF somewhat resembles an inverted "V" during the 1960-1979 period, it is nearly "N"-shaped during the 1980-1997 period. GFDCF figures include gross capital investment in agriculture, oil and gas, mining and manufacturing, commercial and residential structures, and services. During the Shah's regime, in the period under study, GFDCF has increased steadily-except in the mid-1960s-through mid-1974, and then exhibited its sharpest increase ever in the Iranian economy during the 1974-1975 period. This period coincides, with a small lag, with the oil crisis of early 1970s, and the worldwide oil price hike of 1973-1974 (Bina 1985, 1990). However, GFDCF declines sharply from 1976 through 1979, when the Shah's regime was overthrown.

The trend of GDFCF during the regime of Islamic Republic is similarly moving with the trend of Iran's oil revenues. Even though the trend of GFDCF shows a brief decline, the new regime benefited from a sharp increase in the global oil prices in 1986, and reversed its direction. As can be seen from Figure 1, GDFCF shows a sharp increase from 1981-1983 when it levels off first and begins to taper off intensely from 1984 to 1987, a period of precipitous decline in the oil prices. The period of 1987-1995, however, can be divided into the two periods of sharp and (subsequent) moderate increase, which levels off thereafter during the period under study (see Figure 1).

As for the oil revenues in Iran, given the Iranian Revolution (1979), the period under study has been divided into the two sub-periods of 1960-1979 and 1980-1997. As can be seen from the comparison of the corresponding trends of oil revenues during the Shah's period, they are nearly mirror image of each other in both US dollars and Iranian rials (see Figures 2 and 3). This similarity stems from the fact that the Iranian currency has remained stable vis-à-vis the US dollar during this period. The oil revenues were steadily increasing from 1960 through 1972, before showing a tremendous increase during the oil crisis of 1973-1974, which has led to fourfold increase of 'posted prices' by OPEC (Alnasrawi 1985, Bina 1985, 1988, 1990). For the remainder of the period, however, oil revenues declined moderately in 1974-1975, before another increase during the 1976-1977 period, followed by a sharp decline the final years of the Shah's regime.

FIGURE 2
Iran's Oil Revenue, 1960 - 1979
(US Dollars)

U.S. Dollars
(Millions)

Years

Source: OPEC, Annual Statistical Bulletin, Vienna, Austria, 1999.

FIGURE 3
Iran's Oil Revenues, 1960-1979
(Iranian Rials)

Rials
(Millions)

Years
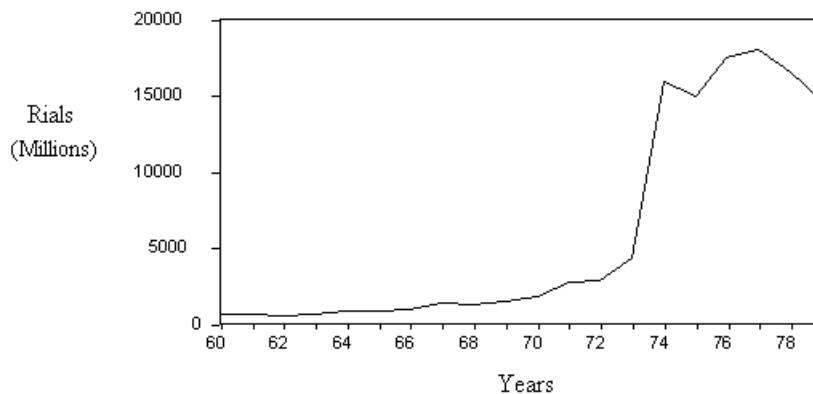
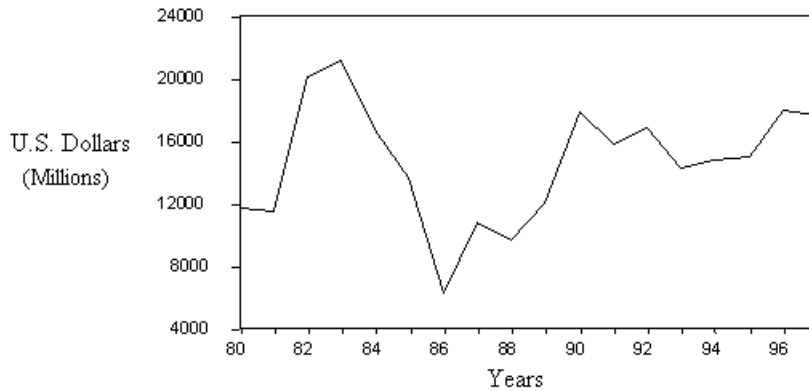Source: OPEC, Annual Statistical Bulletin, Vienna, Austria, 1999.

The trend of the oil revenues during the reign of the Islamic Republic is completely different from that of the Shah's. The oil revenues trend in terms of US dollars, as opposed to Iranian rials, shows a marked difference. This difference is due to the fact that data on the oil revenues are primarily collected by OPEC in dollar terms and any conversion to rials must be made based upon the declining value of the Iranian rial (vis-à-vis the US dollar) during the period of 1980-1997. However, given the inconsistent exchange-rate policies by the state since 1993, such a conversion remains problematic. The problem is compounded by the fact that the government of the Islamic Republic allowed the conversion according to both the "official" and market-determined rates (Pesaran 1992, Bina 1990, 1992a, 1994b). Finally, due to severe domestic inflation, any attempt at the conversion of oil revenues from US dollars to Iranian rials would lead to an enormously inflated trend, particularly since 1993. Nevertheless, as we shall see in the estimations, an attempt has been made to utilize both converted and dollar figures; the results are nearly the same.

As Figure 4 shows, there is an increase in the oil revenues from 1981 through 1983, following the revolution. However, there is a sharp decline in that trend (in US dollars) from 1983 to 1986, where the oil revenues reached their lowest level during this sub-

period. The decline of the converted oil revenue trend (in Iranian rials), although more moderate by comparison, attains its lowest level as well in 1986 (see Figure 5). In terms of US dollars, oil revenues bottom out from the 1986 through 1990, and level off thereafter toward the end of the period under study. Yet, the trend of oil revenues since 1993, in terms of the official devaluation of rial, shows a marked increase from 1986 through 1996, and thereafter levels off toward the end of the period. The difference between these two trends is due to the inevitable devaluation of rial, which in turn reflects the existence of domestic hyperinflation.
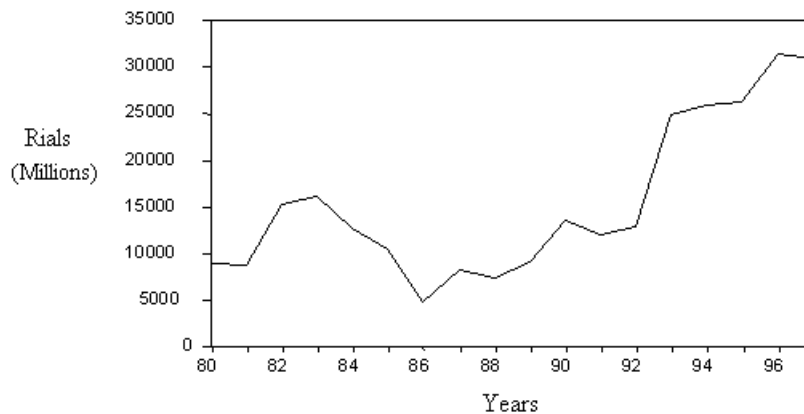
FIGURE 4

Iran's Oil Revenues, 1980-1997
(US Dollars)

Source: OPEC, *Annual Statistical Bulletin*, Vienna, Austria, 1999.

FIGURE 5

Iran's Oil Revenues, 1980-1997
**(Iranian Rials)**

Source: OPEC, *Annual Statistical Bulletin*, Vienna, Austria, 1999.

It is important to also look at the corresponding trends of GDP and GDP growth during the 1960-1997 period corresponding with the two regimes. Figure 6 shows GDP figures in rial for the entire period under study. During the 1960-1976 period Iranian GDP shows a steady growth rate, with a somewhat higher rate in the last two years, having, presumably, to do with latent effect of the oil price hike. However, from 1976 through the end of the Shah's regime in 1979, there is a sharp decline in GDP as well as GFPCF (see Figures 6, 7 and 8). In addition to the unmistakable effect of the revolutionary upheaval at this time, there is a decline in the oil revenues as well (see Figures 2 and 3). The economy, being at standstill due to the revolutionary disruption at the beginning of the second sub-period,

then recovers sharply from 1980 through 1982, followed by an equally sharp decline, hitting the bottom in 1986 (see Figures 6 and 7). The mirror image of this up-and-down, which is apparent from the trend of GDP growth, can also be seen in the up-and-down of the oil revenues—in terms of the stable US dollar rather than hyperinflationary Iranian rial —during the 1980-1986 period (see Figures 4 and 5). From 1986 to 1990 the GDP sharply increases—during the time when the oil revenues also increase—followed by a moderate increase thereafter (see Pesaran 1992, Bina 1992a, Amuzegar 1993).

FIGURE 6

Iran's Gross Domestic Product (GDP), 1960-1997

(Iranian Rials)
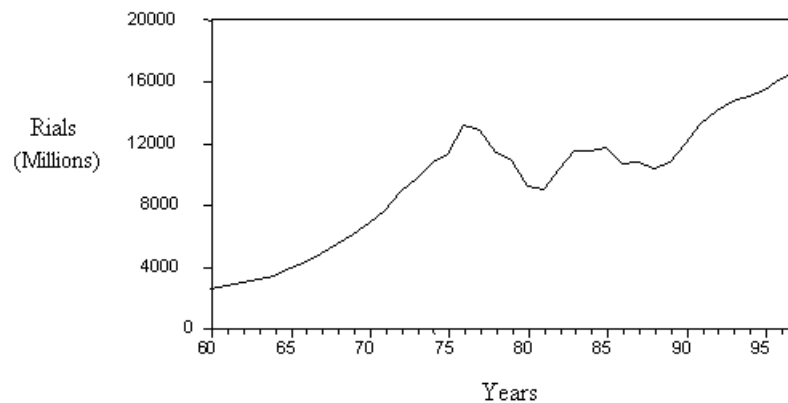
Source: Bank Markazi, 1999.

FIGURE 7

Iran's GDP Growth, 1960-1997
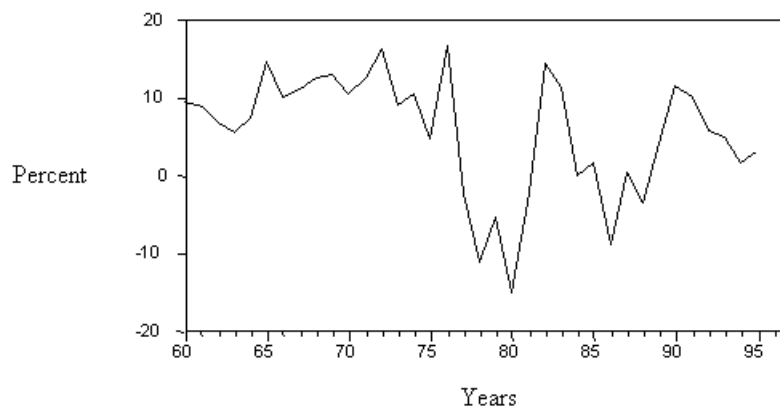
Source: Bank Markazi, 1999.

In the meantime, by looking at the trend of gross fixed public capital formation (GFPCF) for the entire period of 1960-1997, nearly the mirror image of the oil revenue trend comes to mind (see Figures 2, 4 and 8). This can be seen as a clear indication that Iran's economy possesses a rentier character, which, by and large, depends upon the exportation of oil alone (Bina 1992a, Zangeneh 1997). In the next section, we shall demonstrate this point more systematically.

Iran's Gross Fixed Public Capital Formation, 1960 - 1997
(Iranian Rials)

Source: Bank Markazi, 1999.
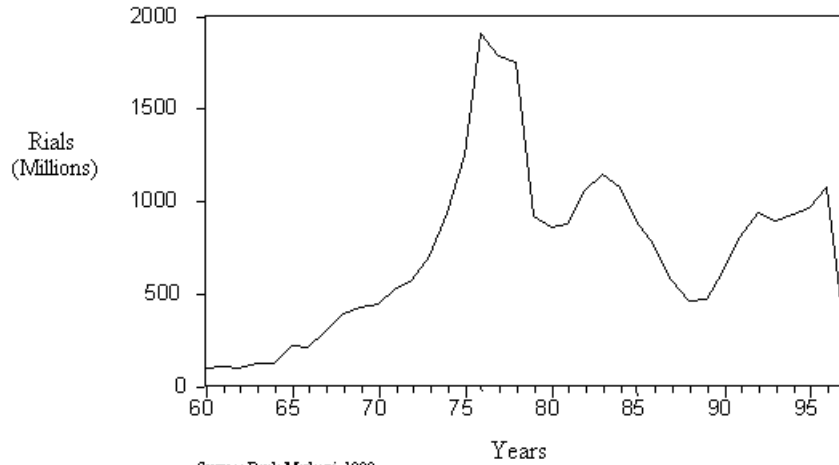
Finally, GFDCF trend as the percentage of GDP for the entire period under study is yet another indicator of the centrality of oil in the Iranian economy. Moreover, this trend nearly mimics the oil revenue trend for the sub-period of 1960-1980 (see Figures 2 and 9). The GFDCF trend as the percentage of GDP for the sub-period of 1980-1997, however, is not as similar as the oil revenue trend in comparison with their counterparts during the sub-period of 1960-1979. Yet, the two trends are somewhat moving in the same direction perhaps with a year or two lagged periods (see Figures 4 and 11).

FIGURE 9

Proportion of GFDCF in GDP, 1960-1997
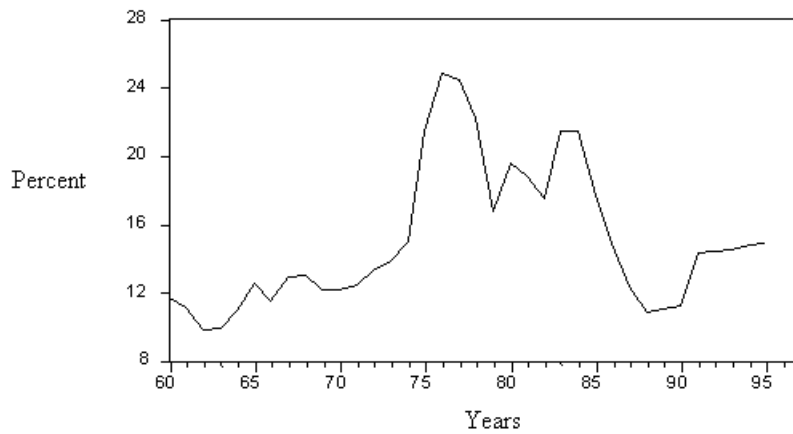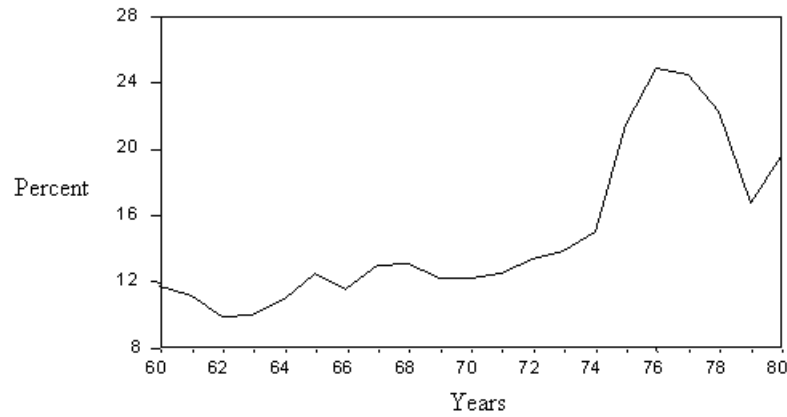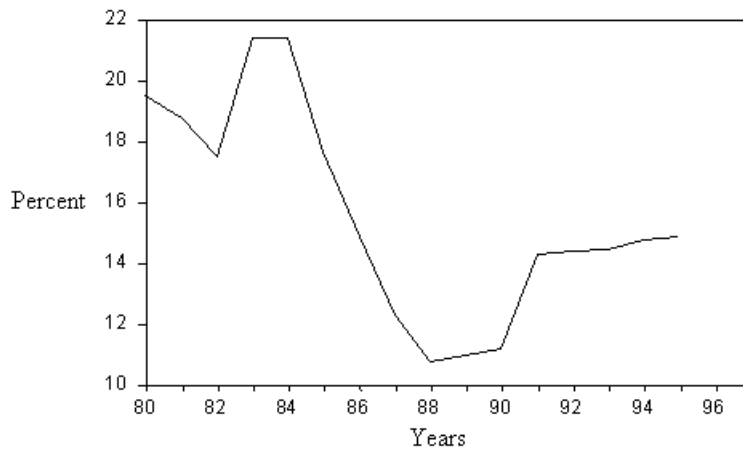

Source: Bank Markazi, 1999.

FIGURE 10

Proportion of GFDCF in GDP, 1960-1980

Source: Bank Markazi, 1999.

FIGURE 11

Proportion of GFDCF in GDP, 1980-1997

Source: Bank Markazi, 1999.

3. THE EMPIRICAL FINDINGS

Given the instability of the Iranian rial in terms of the US dollar during the Islamic Republic (1980-1997), and the desire to measure in similar framework the relationships in the models, the estimation has been done with oil revenues in both US dollars and Iranian rials (Pesaran 1992, Bina 1994b). As can be seen from the estimation of Equation I_a and Equation I_b (Tables 1 & 2), this distinction is not consequential for the Shah's regime. The OLS (Ordinary Least Squares) method has been employed via *Eviews* (version 4) in this study. The estimated coefficient of oil revenues for the sub-period of 1960-1979 is significant (and positive) at 1% level while the coefficient of constant in the equation shows no statistical significance.

At the same time, by employing the dummy variable technique in the latter period (See Table 1), we attempt to find out that whether there has been a significant shift in the function. In this manner, the period of 1960-1979 has been divided into the two sub-periods of 1960-1973 and 1974-1979, corresponding with 0 and 1, measuring the impact of

the oil crisis. The coefficient for D_t is at the 1% significance level. However, the sign is negative indicating that the quadrupled OPEC oil "posted prices" in 1974, and thus the effect of substantial increase in the oil revenues had indeed been *negative* for capital investment in Iran during the Shah's regime. In other words, peculiarly enough, increased oil revenues corresponded with a substantial reduction in the amount of capital formation in the latter part of the Shah's regime.

This result may seem somewhat anomalous upon initial inspection. However, this finding does not appear out of ordinary when it is subjected to a closer examination, particularly by focusing on the Shah's monumental military expenditures in the latter part of 1970s. The above result is also supported by the so-called Dutch Disease literature, associated with traditional development economics, in which the booming production of a single commodity (i.e., raw material) would ordinarily lead to deindustrialization of the economy as a whole (see Katouzian 1978, Corden and Neary 1982, Corden 1984, Romer 1985, Evans 1986). The goodness of fit of the estimation, measured by R-squared, is 0.93%, with no serial correlation (see the D.W. statistic in the appropriate table below) in the regression equation.

Given the suspicion that economic-series often exhibit non-stationary attributes, the augmented Dickey-Fuller (ADF) test was conducted on **I** (GFDCF) and **R** (OILD, OIL). OILD stands for oil revenues in U.S. dollars and OIL represents revenues in Iranian rials. The sample was divided into two sample study periods of 1960-1979 and 1980-1997. For the first sample period, the respective t-values of the ADF test for I and R were –1.13 and –2.13; indicating that both series were non-stationary. However, a co-integration test for the regression equation (i.e., the statistical relationship of **I**, **R**, and **D**) shows that the model is co-integrated. The t-value of the unit root test for the residual of the regression equation is –2.47, in conjunction with MacKinnon 5% critical value of –1.96.   The unit root test for the sample period of 1980-1997 showed again that both **I** and **R** were non-stationary series at the 99% significance level. However, our model was co-integrated at the 95% significance level. The t-value unit root for the regression equation is –2.23, with the MacKinnon 5% critical value 1.96. Therefore, our unit root test confirms the stationarity of the model, and validity of our estimated coefficients for both equations associated with both periods under study (see Greene 2000, Ch. 18).

TABLE 1

Result of Equation I_a: 1960-1979:

Shah's Era and First Oil Crisis, Oil Revenues in US Dollars

Dependent Variable: I				
Method: Least Squares				
Sample: 1960-1979				
Included observations: 20				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	155.9192	99.67088	1.564341	0.1362
OILD	0.265182	0.038575	6.874456	0.0000
D	-3295.808	758.6805	-4.344131	0.0004
R-squared	0.941972	Mean dependent var	1218.280	
Adjusted R-squared	0.935145	S.D. dependent var	985.1633	
S.E. of regression	250.8880	Akaike info criterion	14.02537	
Sum squared resid	1070062.	Schwarz criterion	14.17473	
Log likelihood	-137.2537	F-statistic	137.9806	
Durbin-Watson stat	1.808420	Prob(F-statistic)	0.000000	

Finally, the regression equation with converted oil revenues into rial would also show the same result (Table 2). This indicates a statistically significant coefficient (at the 1% level) for oil revenue, with positive sign as well as similar significance (at the 1% level) for D_t with a negative sign (see the results for Equation I_a and Equation I_b below). As a result, we accept *null hypothesis* I. Moreover, we confirm that there is a significant statistical relationship between the vector of oil revenues and capital investments during the sub-period of 1960-1979 in Iran. This relationship is positive, as the sign of the coefficient of oil revenues would indicate (see Pindyck and Rubinfeld 1998a, 1998b, Kennedy 1998).

Finally, we reject null hypothesis I_a and accept alternative hypothesis I_b. This confirms the fact that there is a significant downward shift in the coefficient of constant, having to do with the oil windfall of the 1974 in Iran. The result is consistent with *Dutch Disease* literature as well, having to do with the negative effect of reliance on a single commodity in the process of economic development.

TABLE 2

Result of Equation I_b: 1960-1979:

Shah's Era and First Oil Crisis, Oil Revenues in Iranian Rial

Dependent Variable: I				
Method: Least Squares				
Sample: 1960-1979				
Included observations: 20				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	156.5321	99.56148	1.572215	0.1343
OIL	0.348811	0.050715	6.877866	0.0000
D	-3294.588	758.1319	-4.345665	0.0004
R-squared	0.942014	Mean dependent var		1218.280
Adjusted R-squared	0.935192	S.D. dependent var		985.1633
S.E. of regression	250.7966	Akaike info criterion		14.02464
Sum squared resid	1069281.	Schwarz criterion		14.17400
Log likelihood	-137.2464	F-statistic		138.0875
Durbin-Watson stat	1.807775	Prob(F-statistic)		0.000000

FIGURE 12

Actual and Estimated Trends of GFDCF, 1960-1979
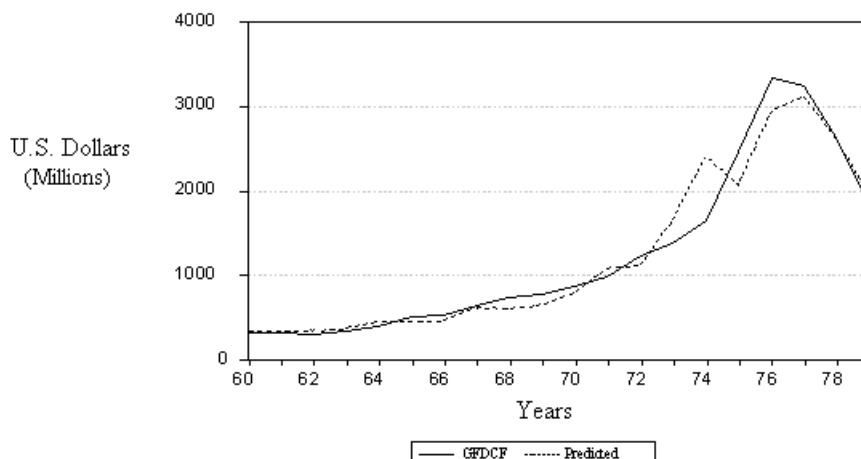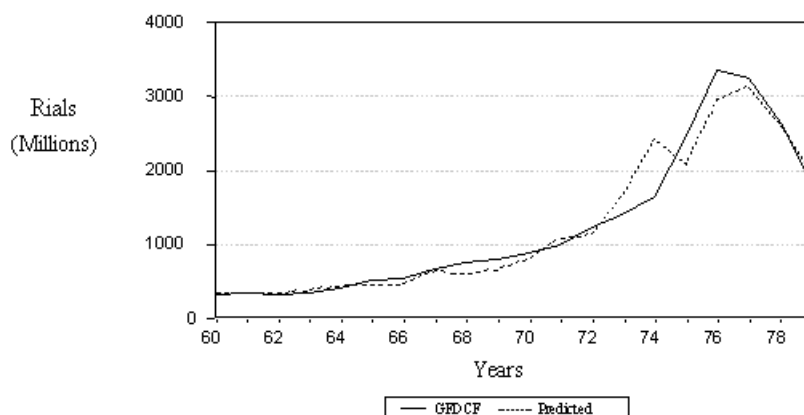**(Oil Revenues in US Dollars)**

FIGURE 13

Actual and Estimated Trends of GFDCF, 1960-1979
(Oil Revenues in Iranian Rials)

The regression equations for the sub-period of 1980-1997 are similarly testing the relationship of the oil revenue and capitalinvestment trends under the Islamic Republic in Iran (Table 3 & 4). In Equation II_a, oil revenues are in U.S. dollars while gross fixed domestic capital formation (GFDCF) is in Iranian rials. For easier interpretation of the coefficients in Equation II_b, oil revenues are converted to the same unit as the GFDCF, Iranian rials. Given the instability of foreign exchange, and the existence of parallel markets in foreign currency in Iran, however, such a conversion is by no means immune from controversy.

In the estimation of both Equation II_a and Equation II_b, we encountered the problem of serial correlation. After solving for significant second-order serial correlation associated with both of these regression equations, we have obtained no significant statistical

relationship between the vector of oil revenues and that of capital investments during the period of 1980-1997 in Iran. Moreover, the coefficient of oil revenues in both regression equations is not significantly different from zero. Consequently, we reject *null hypothesis II* and accept *alternative hypothesis II* associated with the sub-period of 1980-1997. In other words, we confirm that there is no (statistically) significant relationship between oil revenues and capital investments during the Islamic Republic in Iran. Given the dismal conditions of the Iranian economy, not only did oil revenues decline, but they also were not properly allocated to productive investments that were essential for the economic growth during the period of 1980-1997. Moreover, the Islamic Republic appears to have allocated the oil revenues toward consumption, thus neutralizing the external threat and, more importantly, subsidizing the domestic interest groups whose ideological support has been essential for the preservation of regime in Iran.

Figures 12 (U.S. dollars) and 13 (Iranian rials) plot the goodness of fit for the actual and predicted trends of GDFCF for the first sub-period 1960-1979. Figures 14 (U.S. dollars) and 15 (Iranian rials) give the same information for the second sub-period 1980-1997. Visual examination of the goodness of fit, notwithstanding the above tests, shows us that the estimated models are valid.

TABLE 3

Result of Equation II_a: 1980-1997:

(Oil Revenues in US Dollars)

Dependent Variable: I				
Method: Least Squares				
Sample: 1980-1997				
Included observations: 18				
Convergence achieved after 13 iterations				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2082.350	319.9946	6.507454	0.0000
OILD	-0.003835	0.017673	-0.217001	0.8313
AR(1)	1.143687	0.197952	5.777587	0.0000
AR(2)	-0.468628	0.194958	-2.403731	0.0306
R-squared	0.718400	Mean dependent var		1942.267
Adjusted R-squared	0.658058	S.D. dependent var		455.2998
S.E. of regression	266.2404	Akaike info criterion		14.19981
Sum squared resid	992375.1	Schwarz criterion		14.39767
Log likelihood	-123.7983	F-statistic		11.90533
Durbin-Watson stat	1.687197	Prob(F-statistic)		0.000383

TABLE 4

Result of Equation II$_b$: 1980-1997:

(Oil Revenues in Iranian Rials)

Dependent Variable: I				
Method: Least Squares				
Sample: 1980-1997				
Included observations: 18				
Convergence achieved after 11 iterations				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1859.563	290.9086	6.392259	0.0000
OIL	0.009356	0.014073	0.664837	0.5170
AR(1)	1.032612	0.217171	4.754841	0.0003
AR(2)	-0.398013	0.203277	-1.957982	0.0705
R-squared	0.722656	Mean dependent var		1942.267
Adjusted R-squared	0.663225	S.D. dependent var		455.2998
S.E. of regression	264.2210	Akaike info criterion		14.18458
Sum squared resid	977378.5	Schwarz criterion		14.38244
Log likelihood	-123.6612	F-statistic		12.15960
Durbin-Watson stat	1.674789	Prob(F-statistic)		0.000345

FIGURE 14

Actual and Estimated Trends of GFDCF, 1980-1997
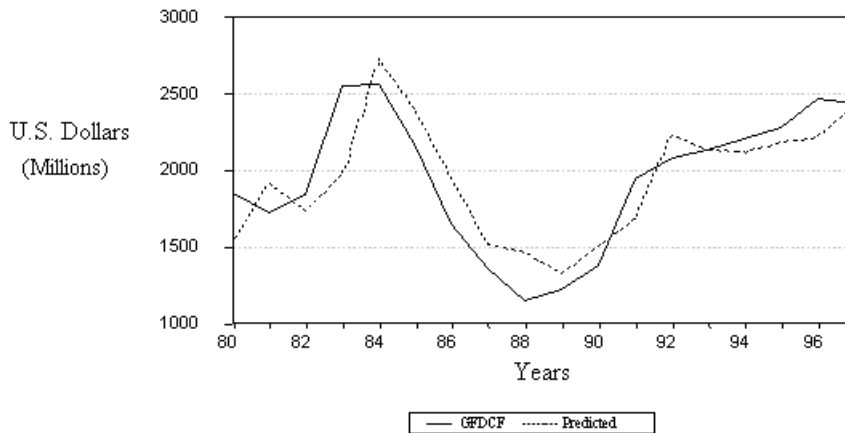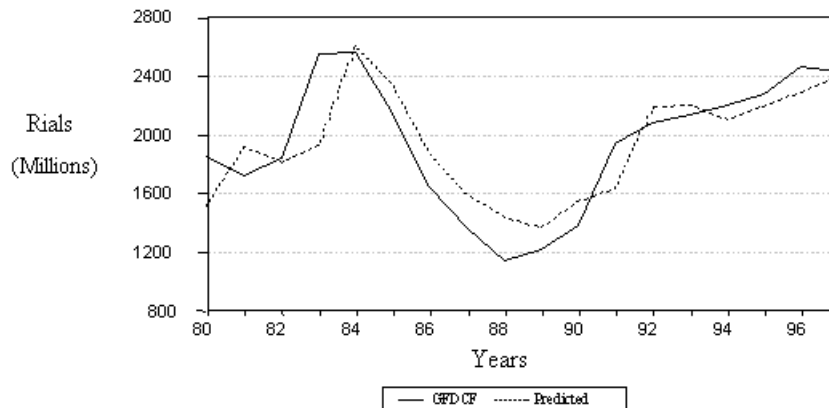**(Oil Revenues in US Dollars)**

FIGURE 15

Actual and Estimated Trends of GFDCF, 1980-1997
(Oil Revenues in Iranian Rials)

4. CONCLUSIONS

This study reveals the essential characteristics of an economy that is dependent on the collection of economic rent associated with the production of a single commodity, namely, oil. The *rentier* in Iran's case is the state itself (thus, rentier state), and oil is a single commodity whose price has been forcefully determined by the globalized oil market since the 1970s. The subject under study also has a counterpart in the economic development literature, known as Dutch Disease, which pertains to the effect of the booming raw material sector on deindustrialization of the economy as a whole. In this manner, both of these approaches lead to similar conclusions that the undo domination of one particular sector, if not countered by appropriate policy, would ultimately lead to "deindustrilization" of the economy as a whole. The rentier characteristic is particularly relevant to many oil-producing states in the Middle East.

We have demonstrated that the Iranian economy has long been dominated by the oil sector,

and by the global oil market. The oil exports have a lion share of Iran's international trade, and the oil revenues constitute the main source of country's foreign exchange earnings. The entire period of 1960-1997 is divided into the two sub-periods of 1960-1979 and 1980-1997, corresponding with the Shah's and the Islamic Republic regimes, respectively. During the Shah's regime, the trend of capital formation (a vital source of economic growth) shows a positive and significant relationship with the volume of Iranian oil revenues. However, following the oil-price hike of mid-1970s, which brought a monumental windfall to the Shah's treasury, the oil revenues have had a *negative* effect on the capital formation in Iran. From the standpoint of economic development, therefore, this is clearly evidence of outright waste (e.g., conspicuous consumption and monumental military expenditure), and neglectful economic conduct on the part of Iranian government under the Shah.

As for the oil policy and economic development under the Islamic government, the trend of oil revenues shows no significant relationship with that of Iran's national capital formation. It is true that Iran's oil export capacity has been reduced considerably under the Islamic government. It is also true that the global oil prices have been on a declining trend, thus resulting in declining oil revenues (and foreign exchange) for Iran during the last two decades or so.

Yet, the question of Iran-Iraq war aside, it is important to note that the Islamic government has completely neglected the task of capital formation, and instead pursued, perhaps deliberately, a myopic policy of attending to (short-term) consumption expenditures (see *The Third Five-Year Development Plan*, 1999-2004). Such an economic policy may have been motivated by the threat of potential (domestic) social and political upheavals, thus revealing the diehard tendency of extending state subsidies to certain social strata, interest groups and institutions that have provided protection and ideological support to the present regime in Iran.

END NOTES

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