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THE OIL SYNDROME: ADJUSTMENT TO WINDFALL GAINS IN OIL EXPORTING COUNTRIES

by

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August 1984

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The views presented here are those of the author, and they should not be interpreted as reflecting those of the World Bank.
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Abstract

This paper provides a compact overview of the adjustment of non-capital-surplus countries to oil windfalls after 1973. It quantifies windfalls, describes the fiscal response and outlines some consequences for the nonoil economies of a sample of countries.
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I. Introduction

Developing countries with only a limited range of exports --
typically primary products -- face greater oscillations in their terms of
trade than more diversified advanced economies. Mineral exports tend to be
among the most volatile and, since such highly specialized exporting countries
tend to have high ratios of exports and imports to GDP, mineral exporters are
prone to exceptionally large fluctuations in national income. Because a high
proportion of natural rent on rich mineral deposits usually accrues to
producer governments, the conduct of fiscal policy is often central in
determining the use of resources from favorable but temporary moments in terms
of trade and their ultimate benefit to producing economies. 1/

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1/ Government may also absorb fluctuations in nonmineral export revenues.
For a review of the reaction of coffee and tea producers to the commodity
booms of 1975–8, see Davis (1983).
The external shocks experienced by oil producers over the past decade have been exceptional, even by the standards of monoexporters. World oil prices quadrupled over 1973-74, then decreased slightly in nominal dollar terms over 1975-78. They then redoubled in 1979-1980, peaking at around $35 per barrel. As the world economy moved into recession and conservation measures in the major consuming countries began to affect the demand for (particularly petroleum-based) energy, prices fell by $6-$8 per barrel. New sources of supply, notably the North Sea, came on stream. Output increased rapidly in Mexico and energy sales from the Soviet Union to Europe rose. These developments placed additional stress on traditional exporters who saw their sales contract over 1980-83, in some cases, to little over half of their peak levels.

A small group of producers — the capital surplus exporters such as Saudi Arabia and Kuwait — have exceptionally large oil reserves with low recovery costs, small populations and underdeveloped nonoil economies. With very limited absorptive capacity, such countries face, in the first instance, a portfolio-choice problem: whether to store their major asset in the ground or to deplete reserves more rapidly and accumulate assets abroad. \(^1\) These exporters are not considered in this paper which focuses on a sample of countries — Algeria, Ecuador, Indonesia, Nigeria, Trinidad and Tobago, and Venezuela — with smaller reserves and projected oil incomes insufficient to shoulder the burden of development for more than perhaps two decades, a short

\(^1\) Although the Hotelling rule predicts that unit natural resource rents should rise at the rate of interest, the medium-run fluctuations about any such long-run relationship have major fiscal consequences. An extra 250,000 barrels/day sold through 1981 with the proceeds invested in U.S. government treasury bills would, by February 1984, have yielded approximately $4 billion, against an estimated value of $2.6 billion for the same volume of oil valued at February prices. The capital surplus countries are discussed in Hablutzel (1981).
period in historical perspective. The main questions addressed concern (a) the magnitude of the windfalls from oil over the past decade, (b) how they have been used and (c) the impact on nonoil producer economies. Has oil laid a basis for self-sustaining growth at a higher rate than would otherwise have been possible? Or, have the difficulties of economic management through fluctuating income severely reduced the benefits of oil windfalls, and resulted in increased oil dependence of producing countries?

II. Dimensions of the Oil Windfall

Gains from higher oil prices can be measured in a number of ways. Here the approach is to estimate the increase in domestic income resulting from an enlarged oil sector in current-value terms relative to the nonoil economy. For reasons of data comparability such computations are better performed with the economy partitioned into mining and nonmining, rather than oil and nonoil segments, which has only a minor effect on the results. Figure 1 indicates the (unweighted) average time profile over 1973–81 of the windfall for the above six countries expressed in each year relative to their nonmining economies. In 1974 the average windfall peaked at 33% of nonmining income but by 1978 this had contracted to 15%. The time and country average, over 1974–78, was 22%.

The second oil price increase raised the windfall to 27% of nonmining output in 1980 and maintained it at 23% of nonmining GDP over 1979–81. The main factor reducing the impact of the second oil price rise was the reduced size of oil sectors in constant prices, relative to the rest of producer

1/ The windfall is expressed as the difference between the ratio of mining sector value added to value added in the nonmining economy and the value of this ratio in the base period 1970–72. Consumption and investment effects are similarly expressed. For details see Gelb (1984) forthcoming.
Figure 1
The Oil Windfall and its Use: 1973-81
(Unweighted Average: Algeria, Ecuador, Indonesia, Nigeria, Trinidad and Tobago and Venezuela)
economies. Over the period 1979–81 constant price mining sectors were, on average 8.5% smaller relative to the nonmining economies, than they had been in 1970–72. The second oil price shock thus impacted on a relatively smaller oil sector than had the first. The combination of slumping prices and contracting sales over 1982–83 appear to have halved the windfall gain.

III. Use of the Windfall: The Fiscal Response

With little direct linkage between the oil sector and the rest of a developing economy and upward adjustment of tax and royalty rates to reduce the share of rent accruing to the oil multinationals the above fluctuations were mainly reflected in fiscal revenues, as shown in Table 1. For the six countries mentioned above, central government revenues jumped from 20% of non-mining GDP to 37% with the first oil price increase. This implies that on average, about four-fifths of the windfall as previously measured accrued to producer governments. Iran, for which data after 1977 are limited, experienced a particularly large windfall, 36.7% of nonoil GDP over 1974–77 which was reflected in fiscal revenues. Although there were significant differences in nonoil fiscal performance between countries, almost all the increase in the ratios of fiscal revenues to nonmining income is attributable to increased taxes and royalties on oil, except in Algeria where nonoil taxes were unusually high and buoyant.

Levels of development and income/head vary significantly between the above producers. So do the economic role of government and the weight of the public sector in the economy. All countries had extensive and growing public

1/ The decrease for Ecuador is explained by (a) the fact that some oil revenues accrue to special funds outside government as defined here and (b) the easing of certain nonoil taxes after 1974.
Table 1  
Central Government Revenues as a Percentage of Non-Mining GDP

<table>
<thead>
<tr>
<th></th>
<th>1970-72</th>
<th>1974-78</th>
<th>1979-81</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>32.6</td>
<td>59.9</td>
<td>57.4</td>
</tr>
<tr>
<td>Ecuador</td>
<td>14.2</td>
<td>12.9</td>
<td>14.2</td>
</tr>
<tr>
<td>Indonesia</td>
<td>15.6</td>
<td>23.1</td>
<td>30.9</td>
</tr>
<tr>
<td>Iran</td>
<td>31.7</td>
<td>71.1</td>
<td>--</td>
</tr>
<tr>
<td>Nigeria</td>
<td>12.3</td>
<td>27.7</td>
<td>--</td>
</tr>
<tr>
<td>Trinidad and Tobago</td>
<td>19.9</td>
<td>55.9</td>
<td>57.2</td>
</tr>
<tr>
<td>Venezuela</td>
<td>25.2</td>
<td>42.1</td>
<td>36.3</td>
</tr>
<tr>
<td>Mean: Six countries (excluding Iran)</td>
<td>19.9</td>
<td>36.9</td>
<td>--</td>
</tr>
<tr>
<td>Mean: Five countries (excluding Nigeria)</td>
<td>21.4</td>
<td>38.8</td>
<td>39.2</td>
</tr>
</tbody>
</table>

/a 1974-77.
/b Data judged unreliable or estimates not compatible with series for earlier years.


Involvement in the hydrocarbon industry over the 1970s, with virtually total nationalisation in Algeria and Venezuela. However, at the one extreme, central government and public enterprises are estimated to account for about 90% of domestic Algerian investment while at the other, the role of the Ecuadorian public sector outside the traditional functions of administration, defence and providing physical and human infrastructure has been quite
limited. These differences reflect both the varying ideological tendencies of successive governments and historical accident. For example, the extensive involvement in agriculture of Algeria's socialist government and (conservative) Indonesia's considerable public sector holdings in timber and plantation crops both stemmed from the departure at independence of colonial proprietors, French and Dutch, respectively. Nevertheless, all of the oil exporters saw an unparalleled growth in the size of the public sector after 1973 and most experienced a considerable extension of its role, towards direct participation in industrial production. Although most governments expanded their activities in virtually all directions there were considerable differences of emphasis between countries. Algeria and Trinidad and Tobago placed high priority on natural gas, the former for sale in primary form and the latter through gas-based industrialization. Venezuela emphasized the development of metals industries and Nigeria the expansion of road networks and school (and later university) enrollment. Ecuador's public programs were directed largely towards promoting private industry, while Indonesia pursued a strategy relatively balanced between physical infrastructure, education, agricultural promotion and capital-intensive industrial ventures.1/

Over 1970-72, current account deficits in the above six countries had averaged 5.1% of nonmining GDP. In these years, deficits were especially high in Trinidad and Tobago (14.5%) and Ecuador (16.9%) because of large investment expenditures to finance oil extraction and spending in anticipation of higher revenue flows. As indicated in Figure 1, during 1974-78 about one quarter of the windfall was saved abroad through reducing trade (and current) deficits and one quarter was consumed. Slightly over half of the increase in

1/ These choices and the reasons behind them will be discussed more extensively in Gelb (1984).
consumption relative to nonmining value-added was public, slightly under half private. The remainder was used for domestic investment. Although nonoil private investment boomed in certain countries, notably Venezuela over 1976-78, increased investment outlays were overwhelmingly those of the public sector. The pattern over 1979-81 was similar except that private consumption increased its share of the windfall at the expense of domestic investment which accounted for only one third of the second windfall.

Central government investment expenditures and net lending thus expanded particularly rapidly. On average they grew over twice as fast as the respective nonoil economies after the first oil price increase, but their growth slowed after 1978. Recurrent expenditures also increased but less rapidly. Wage and salary expenditures of central government grew, on average, at about 110% the rate of increase in nonoil incomes. An exception to the pattern of moderate growth in central government current expenditure was the category of subsidies and transfers which will be discussed further below.

IV. Some Consequences of Increased Domestic Expenditures

As would be predicted from a standard Salter-Swan model, the rapid increase in domestic absorption of goods and services was reflected in a tendency for real exchange rates to appreciate. The degree of real appreciation is shown in Table 2. Relative to their average levels over 1970-72, trade-weighted real exchange rates (here defined as the ratio of the domestic price level of the oil exporter to those of its trading partners) were 10% higher over 1974-78, 21% higher over 1979-81 and almost 40% higher.

Table 2
Real Exchange Rate Movements 1974-1983

<table>
<thead>
<tr>
<th>Country</th>
<th>Trade-Weighted Real Exchange Rate: Averages (Base=1970-72)</th>
<th>Non-mining Output Deflator Relative to Unit Value of Manufactures Imported by LDCs (MUV): Averages (Base=1970-72)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>90.8</td>
<td>103.3</td>
</tr>
<tr>
<td>Ecuador</td>
<td>106.4</td>
<td>112.7</td>
</tr>
<tr>
<td>Indonesia</td>
<td>133.8</td>
<td>129.5</td>
</tr>
<tr>
<td>Iran</td>
<td>100.4</td>
<td>119.2</td>
</tr>
<tr>
<td>Nigeria</td>
<td>131.0</td>
<td>170.0</td>
</tr>
<tr>
<td>Trinidad and Tobago</td>
<td>101.4</td>
<td>107.7</td>
</tr>
<tr>
<td>Venezuela</td>
<td>97.6</td>
<td>103.2</td>
</tr>
<tr>
<td>Mean (excl. Iran)</td>
<td>110.2</td>
<td>121.1</td>
</tr>
<tr>
<td>Memo: USA</td>
<td>92.3</td>
<td>93.4</td>
</tr>
</tbody>
</table>


/a Wholesale price index relative to MUV deflator.

over 1982-83. It should, however, be noted that over the 1970s the unit value of manufactures imported by developing countries (MUV index) rose markedly relative to the price levels of most countries, largely because of oil and other primary intermediate price shocks. This relative price shift

1/ The most notable exceptions to the pattern of real exchange appreciation, Algeria, is analyzed in Couway and Gelb (1984).
limited the tendency for consumption and investment prices to decrease relative to the cost of domestically produced nonoil goods as would be normal with real currency appreciation. Purchasers in producing countries were thus cushioned from increased import price shocks by their own real exchange appreciation.

As noted above, in addition to expanding their traditional functions, governments typically channelled windfall gains into industry, especially petrochemicals and heavy metals. They also invested heavily in physical infrastructure, notably to develop their transport and communications systems. Public projects tended to be large, complex and frequently were highly capital-intensive. In fact, among a sample of the top nineteen developing countries with investments in projects exceeding $100 million each, all but five were found to be oil exporters. The dimensions of that part of the investment programs of the above set of countries which consisted of such large projects may be seen from Table 3 which is mostly based on a sample of some 1,600 large projects in the developing countries over 1970-79. Iran, which ranked an overall second after Saudi Arabia, included in its investment program 108 projects averaging over one billion dollars each. The total capital cost was equivalent to over one and one half times its 1977 GNP or ten times its 1977 oil windfall as previously computed. Venezuela's investment program, which in contrast to Iran's was largely directed towards metals (notably steel and aluminum) represented five times its 1980 oil windfall or half its 1980 GNP. The large projects identified in Table 3 represent, on average, very roughly four and one half years average oil revenue over 1974-81. The poorest producers, Indonesia and Nigeria, were somewhat less inclined

1/ Murphy (1983).
Table 3

Macroprojects in Oil Exporting Countries
(projects with costs exceeding $100 million)

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Projects Included</th>
<th>Cost $ Billions</th>
<th>Average Cost $ Millions</th>
<th>Cost/1980 GNP</th>
<th>Cost/1980 Oil Windfall</th>
<th>Rank Among Developing Countries</th>
<th>Project Sector (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Hydro-carbons Metals Other Industry Infrastructure</td>
</tr>
<tr>
<td>Iran</td>
<td>108</td>
<td>119.6</td>
<td>1,107</td>
<td>1.57/(^b)</td>
<td>10.2/(^b)</td>
<td>2</td>
<td>30 7 9 54</td>
</tr>
<tr>
<td>Algeria</td>
<td>69</td>
<td>38.7</td>
<td>561</td>
<td>1.07</td>
<td>4.2</td>
<td>5</td>
<td>36 7 33 23</td>
</tr>
<tr>
<td>Venezuela</td>
<td>27</td>
<td>27.4</td>
<td>1,015</td>
<td>0.51</td>
<td>5.4</td>
<td>10</td>
<td>33 41 7 19</td>
</tr>
<tr>
<td>Mexico</td>
<td>59</td>
<td>26.0</td>
<td>441</td>
<td>0.18</td>
<td>5.1</td>
<td>2</td>
<td>46 17 12 25</td>
</tr>
<tr>
<td>Nigeria</td>
<td>19</td>
<td>14.4</td>
<td>758</td>
<td>0.17</td>
<td>0.9</td>
<td>15</td>
<td>26 11 16 47</td>
</tr>
<tr>
<td>Indonesia</td>
<td>44</td>
<td>14.4</td>
<td>327</td>
<td>0.23</td>
<td>1.1</td>
<td>16</td>
<td>41 18 16 25</td>
</tr>
<tr>
<td>Trinidad and</td>
<td>7</td>
<td>6.9</td>
<td>983</td>
<td>1.35</td>
<td>4.5</td>
<td>--</td>
<td>61 29 -- --</td>
</tr>
<tr>
<td>Tobago /(^a)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) Gas-based industrial projects only. Includes Tenneco-Midcon LNG project proposed for 1988.
\(^b\) 1977 GNP and oil windfall.

Source: Murphy (1983) Table 2.5; Auty (1984).
to mortgage oil for large projects but their investments of this type were still considerable.

In addition to such large investment commitments, most countries created or expanded programs of subsidies and transfer payments directed towards holding down the rate of inflation and supporting loss-making firms. Between 1970-72 and 1974-78 fiscal subsidies and transfers expanded, on average, twice as rapidly as nonmining GDP. Between 1974-78 and 1980-81 they rose about 1.6 times as rapidly. In addition, producer governments were reluctant to raise domestic oil prices, choosing to pass part of the windfall on to domestic consumers in the form of lower prices. In a number of cases, these were set at roughly the cost of production so that government derived no revenue from that part of oil output consumed at home. Several producers, notably Ecuador and Indonesia, raised domestic prices of oil derivatives in the early 1980s but they still typically remained below world levels, and as domestic consumption grew more rapidly than nonoil economies the implicit fiscal burden on the state increased. 1/ Energy subsidies in 1980 were estimated to be equivalent to almost ten percent of household income in Ecuador, while fiscal subsidies rose sharply in Trinidad and Tobago, to around 7% of GDP or 11% of non-mining GDP by 1981. These subsidies were directed primarily to keeping down prices of consumer goods but also were extended to support unprofitable industries.

Such estimates do not include the subsidies implicit in loans made to loss-making (and frequently public) firms, nominally for investment, and in guarantees permitting them access to commercial sources of finance. It is

1/ Petroleum subsidies conceded by producer governments are usually implicit rather than fiscal because revenues foregone through pricing oil for domestic use below world prices are not included in fiscal accounts.
difficult to estimate such subsidies (since many such firms would probably have been unable to borrow from commercial sources at any price without support) but they appear to have been considerable and to have been accorded to some extremely unprofitable firms. For example, by 1983 it was estimated that the production costs of Caroni Sugar in Trinidad were five times those of efficient worldscale producers, despite the fact that some of the latter, notably in Australia, had unit labor costs several times higher.

In addition to supporting firms some oil producing governments stimulated employment directly through public works programs. The INPRES programs in Indonesia and the Special Works (DEWD) programs in Trinidad and Tobago employed some 2.5% of the two countries' respective labor forces. The impact of such programs depends on their administration and on the extent to which labor is a major constraint to production, particularly in agriculture. While the impact of INPRES appears to have been beneficial in labor-surplus Java, the Trinidad programs (which offered pay at least twice that in agriculture) contributed to accelerate a rapid movement off the land which led to a drop in agricultural output. Per capita food production and that of agriculture as a whole were both reduced by about 20% over the period 1969/71 to 1982, during which time population expanded by only 16%. The main loser was sugar which saw its output fall by 62%.

The larger public projects had a greater tendency to overrun initial estimates both in terms of cost and time, as shown in Table 4. One third of the largest projects in the sample on which the table is based experienced cost overruns which averaged 109%. Overruns on the smaller projects were less frequent and more modest at 30%. Delays of between one and two years plagued half the troubled projects; a further 25% experienced delays of three to four years. These estimates greatly understate the true extent of cost and time
Table 4.
Cost and Time Overruns in Macroprojects

<table>
<thead>
<tr>
<th>Project Size ($ millions)</th>
<th>100-249</th>
<th>250-499</th>
<th>500-999</th>
<th>1000+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of total projects with cost escalations, completion delays or postponements/suspensions</td>
<td>21</td>
<td>28</td>
<td>38</td>
<td>47</td>
</tr>
<tr>
<td>Average cost escalation (%)</td>
<td>30</td>
<td>70</td>
<td>106</td>
<td>109</td>
</tr>
<tr>
<td>Percentage of total projects with:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost Escalation</td>
<td>10</td>
<td>18</td>
<td>28</td>
<td>34</td>
</tr>
<tr>
<td>Completion Delay</td>
<td>11</td>
<td>14</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Postponement/Suspension</td>
<td>7</td>
<td>10</td>
<td>13</td>
<td>20</td>
</tr>
</tbody>
</table>


overruns since many projects were not completed by 1980; many are still under construction, a number may never reach completion.

The tendency to overrun initial estimates and the poor operating performance of many plants once installed reflects a variety of factors, none specific to oil exporting countries but all accentuated by the scope and pace of their investment growth. ¹ First, projects were, in many cases, inadequately prepared and assessed. In no country does there appear to have been systematic assessment of relative costs and benefits across a spectrum of potential projects. Second, larger projects tended to be more complex, both

¹ As witness the $8 billion cost of the trans-Alaskau oil pipeline versus its $900 million original budget, cost overruns can be large in developed countries also. Their peculiar significance for the oil exporters is due to the weight of large projects relative to the size of their economies.
technologically and in terms of the organisation necessary to integrate the project with its necessary infrastructure. Some involved state-of-the-art technology which, in certain cases, was installed without the involvement of an experienced expatriate operating company. With little detailed knowledge of the industry or plant in question, public financing agencies were also sometimes slow to detect and correct emerging problems in construction, startup and operation. Third, about half of the purchasing power of oil relative to domestic construction costs was eroded by increases in the latter over 1973-78. Increased construction costs were a major factor in real appreciation of the exchange rate. As noted above, international inflation in traded manufactured goods was also high. Finally, certain industrial investments of the oil producers were severely affected by the global recession in the 1980s as described below.

The momentum of accelerated public investment (some of which implied large future recurrent obligations) and growing subsidies proved hard to curb when oil revenues fell, as they did in 1978 and after 1981. Central government deficits averaged 4.1% of nonmining GDP in 1978 and, excluding Trinidad and Tobago where expenditures accelerated more slowly, current account deficits averaged 11.8% of nonmining GDP. A number of exporters moved to slow domestic absorption of goods and services. Indonesia devalued by 50% in November 1978, seeking to restore the domestic purchasing power of oil revenues and to promote nonoil exports.

These contractionary moves were interrupted by the second oil price which resulted in a current balance surplus of $11.8 billion in 1980 for the above six countries (excluding Iran). As current-dollar commodity exports contracted by 21.6% over 1980-82 and imports rose by 22.3%, this shifted to a current deficit of $19.6 billion by 1982. Fifty eight percent of the current
account deterioration between 1980 and 1982 may be attributed to decreases in merchandise export revenues and 36.8% to increased imports of goods.

These swings in the exporters' current accounts often mirrored increased developments in their respective public sectors. Ecuador's public sector, for example, ran surpluses of around 2% of GDP in 1973-74, but these turned into deficits of 5% of GDP in 1977-78. With the second oil price increase the deficit declined but with contracting revenues and mushrooming subsidies and interest payments it rose to around 8% of GDP in 1982.

Economic management through the fluctuation in oil prices was rendered more difficult by the fact that access to international capital tended to vary with the level of oil prices, which affected future price and revenue expectations rather directly. Algeria was able to boost the expenditure impact of increased oil revenues by 50% over 1974-78 through borrowing abroad, largely to finance a transition from an oil to a natural gas-based hydrocarbon sector. Mexico augmented its comparatively small oil windfall (3.5% of nonmining GDP over 1979-81) by two thirds through financing a growing deficit on goods and nonfactor services. In addition, Venezuela and Mexico were able to cushion the impact of growing private capital outflows by large public borrowings until the outlook in world oil markets deteriorated.

The impact of expanded investment on growth has been, at first sight, disappointing as shown in Table 5. Excluding Iran where data are limited, only Ecuador proved able to significantly accelerate the growth rate of its nonmining economy over 1972-81 relative to performance over 1967-72. On average, nonoil economies\(^1\) were 4.1% smaller over 1979-81 than they would have been had they maintained their 1967-72 growth trajectories.

\[^1\] Excluding Iran.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Algeria</td>
<td>9.5</td>
<td>8.6</td>
<td>16.7 10.8</td>
<td>5.7 -1.0 11.6 10.8</td>
</tr>
<tr>
<td>Ecuador</td>
<td>4.7</td>
<td>7.6</td>
<td>3.2 10.2</td>
<td>15.9 6.0 6.0 9.7</td>
</tr>
<tr>
<td>Indonesia</td>
<td>8.5</td>
<td>8.2</td>
<td>24.3 13.0</td>
<td>15.7 4.3 16.7 19.1</td>
</tr>
<tr>
<td>Iran /a</td>
<td>10.1</td>
<td>13.3</td>
<td>10.2 21.1</td>
<td>12.9 -0.3 17.7 23.7</td>
</tr>
<tr>
<td>Nigeria</td>
<td>9.2</td>
<td>5.3</td>
<td>-/b 8.7</td>
<td>-/b -4.2 -/b 15.3</td>
</tr>
<tr>
<td>Trinidad &amp; Tobago</td>
<td>5.3</td>
<td>5.4</td>
<td>6.1 9.3</td>
<td>2.5 -6.5 6.6 8.4</td>
</tr>
<tr>
<td>Venezuela</td>
<td>6.5</td>
<td>5.1</td>
<td>11.9 3.5</td>
<td>-1.3 -8.7 7.7 12.8</td>
</tr>
<tr>
<td>Unweighted Mean (excluding Iran)</td>
<td></td>
<td></td>
<td>7.3 6.7</td>
<td>12.4 9.3</td>
</tr>
<tr>
<td>Memo: Middle Income Oil Importers</td>
<td>5.8/6</td>
<td>5.1/6</td>
<td>8.2 5.6</td>
<td>6.7 4.0 7.4 1.5</td>
</tr>
</tbody>
</table>


/a 1967-72 and 1972-77.
/b Deflated data unreliable before 1970.
/d GDP.
On closer examination, the growth record is less adverse than appears from historical trends. Algeria, Indonesia and Nigeria had all previously been in recovery phases, two from internal disturbances and one from a protracted war of independence, while Ecuador and Trinidad had been stimulated by oil development and the prospect of growing export revenues. The nonoil growth performance of the sample had therefore been exceptional over 1967–72, at 7.3% some 1.5% higher than the average growth of GDP in middle income developing countries. Although the higher growth initially stimulated by spending from the first oil price increase was not sustained, the nonoil economies still grew 0.9% more rapidly than had the nonoil economies through the favourable period of the 1960s. Much of this was, however, demand-led rather than supply-generated, in the sense that nonoil growth responded to increased absorption after 1974 but slowed after 1978 despite the expectation that the large investment undertaken over 1975–78 would begin to contribute to output growth.

Although growth was only moderate, it was often poorly balanced. Construction had been the leading growth sector over the 1970s followed by services and protected import–competing industry, with agriculture and nonoil export industry lagging in most cases. Only Ecuador, Indonesia and Venezuela managed to raise domestic food and agricultural supply per head over the 1970s, the latter from an extremely small base (over 1970–2 Venezuelan agriculture represented only 8% of nonmining GDP). Despite a policy objective common to all governments, that of reducing dependence on oil, the volume of nonoil exports contracted in all countries except in Ecuador (which saw a considerable shift towards processed products and manufactures) and in Indonesia which maintained a fairly strong nonoil export performance across a
wide range of traditional and nontraditional commodities. Overall export volumes contracted, on average, by 1.7% annually over the period 1972-81.

V. After 1981: the End of the Oil Boom?

The downturn in world oil markets after 1981 revealed the fragility of the development patterns of the oil exporters. Shifts in the allocation of resources towards the nontraded sectors which had cumulated over the 1970s could not be rapidly reversed and reluctance to devalue (plus competitive devaluations of trading partners) caused real exchange rates to remain at an appreciated level over 1982-83 as shown in Table 2. The massive infrastructural and educational investments which had been undertaken since 1974, whatever their implications for future productivity, did not represent an autonomous source of income to replace oil incomes. More seriously, the global outlook changed for a number of sectors—notably steel, aluminum and natural gas—which had featured prominently in the investment programs. For example, in 1980 the OECD was forecasting a doubling of global steel demand to 1400 million tons by the year 2000. More recent forecasts project a 20% rise to only 900 million tons. This has serious implications, particularly for those countries with domestic markets too small to absorb full-capacity output of large capital-intensive plants, and which had gone forward without foreign partners to assure marketing outlets. Such countries would need to be competitive with the globally most efficient (or most highly subsidised) exporters, to overcome trade and transport margins and a preference for domestic supply in major markets. In the case of steel, this required a producer such as ISGOTT in Trinidad and Tobago to undercut U.S. minimills by 15 percent although its production costs were some 50% higher than their estimated level of $270/tonne in 1982.
As the pressure of demand slackened, the transient boom of the mid 1970s was followed by deceleration in nonoil growth, surplus capacity and slackening labor markets. A further factor decelerating demand was the tendency for private capital to flow abroad, particularly in those oil exporters with open capital markets such as Venezuela and Indonesia. Over 1978–81 the total cumulative current balance deficits of the above six countries, at $5.6 billion, accounted for only 31% of the deterioration in their net foreign assets where the latter is defined as the change in external debt less that in currency reserves. Venezuela may have experienced an outflow equivalent to almost 10% of GDP in 1982, impelled by a stagnant economy, interest rate ceilings and reluctance to adjust the exchange rate in line with perceived trends in world oil prices. Over 1979–82 its nonoil economy virtually stagnated despite massive investments and considerable increases in the labor force which should have assured growth of some 4% per annum, even in the absence of any productivity improvements.

VI. Conclusion

Oil exporting countries entered the mid 1970s with high expectations that access to seemingly unlimited quantities of foreign exchange would accelerate development and lead to the creation of a modern, productive, self-sustaining nonoil economy. Towards this end, they allocated the bulk of their increased oil income to domestic investments, mainly large-scale and overwhelmingly carried out by the public sector. Multiplier effects of investment expenditures, cost overruns, subsidy growth and the recurrent spending needs of much past investment all resulted in a tendency to overshoot available revenues when the latter fell. The result has been a pronounced "stop-go" rhythm through which economic management has been difficult.
It is not yet possible to assess the impact on producer economies, since many domestic investments, notably in transportation and education, would be expected to have long gestation lags. Overall however, the yield on much domestic investment has probably fallen well short of that which could have been obtained abroad, and its supply-side growth impact has been moderate. With hindsight, the oil exporters would probably have seen a larger benefit from their windfalls had they saved a higher proportion abroad and limited domestic investments through applying market criteria more rigorously. This conclusion abstracts, of course, from the impact of such a strategy on the global recycling problem.
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