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THE REALIZATION OF THE OIL RENT

A PRELIMINARY STUDY

OF THE VENEZUELAN EXAMPLE 1946-1979

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** CNRS, Centre d’Etudes et de Recherches sur l’Entreprise Multinationale (CEREM Nanterre)
For numerous economists the current world crisis as well as its inflationary character find their cause in the successive oil shocks which have taken place since 1973. Whatever the position one may take with respect to this approach, it would seem that oil producing countries should be spared from the stagflationary phenomenon which affects the major economies of the world. The study of the Venezuelan experience shows that such is not the case even if one would have logically expected a different result: the crisis of some being accompanied by the expansion of others. To analyze this recent process, it would be necessary to investigate the real economic nature of oil rent and of the manner in which it structures the economy of a producing country. Absence of an understanding of these essential elements has caused most Venezuelan economists to remain at the stage of bewilderment [12], of simple description [1] or at the search for "guilty agents" responsible for the country's underdevelopment [5,14].

This paper is a contribution to the study of the economic impact of oil rent in producing nations. It attempts to create an applicable theoretical framework and to utilize it to analyze the major transformations of the Venezuelan economy in the post-war period. In Part I we will identify and study the links between the oil industry and the non-oil economy. In Part II, we will analyze the realization of the oil rent by the non-oil economy and of the forms of regulation corresponding to this process. Finally, we will attempt an interpretation in historical perspective of the changes identified and particularly of the current crisis.
I - FROM THE PETROLEUM INDUSTRY TO THE NON-OIL ECONOMY

1. THE PETROLEUM INDUSTRY AS AN ENCLAVE

On the one hand, to characterize Venezuela as an "oil country" appears totally appropriate: it is one of the first oil producing countries, and a major oil exporter. In addition, oil has been its main export product since 1925, representing since the 1930's over 90% of its exports.

But, on the other hand, to think of Venezuela as an "oil country" creates also the idea that the production process of the oil industry shapes in some essential way the organization of social life in a manner similar to the travel industry in a "tourist haven" or agriculture in a rural country. In this sense, a more appropriate characterization is to consider the petroleum industry as an enclave with limited contact to the non-oil economy. Thus, we have that its relation through input/output coefficients is very low and that the amount of employment generated is small and has been decreasing since the late 1940's representing 2.8%, 1.8% and 0.8% of the economically active population in 1951, 1961 and 1971 respectively. Also, even the wages and salaries paid in the sector represent only 6.5%, 5.4%, 2.5% and 1.2% of national revenue for the years 1951, 1961, 1971 and 1978 respectively ([1] [2] [3]). In addition, this type of employment and its associated revenue do not form the basis of an important urban development. The jobs are scattered throughout the country following the geological pattern of oil fields and the geographical location of transportation routes. Cities closely associated with the oil industry are stagnant (e.g. Cabimas, Punto Fijo) while the booming centers (e.g. Caracas, Maracay-Valencia, Barcelona-Puerto La Cruz, Ciudad Bolivar-Ciudad Guayana) owe their growth to the expansion of other economic sectors.

Thus, it is not through these economic mechanisms that the oil industry will generate its main impact on the Venezuelan economy, and it is in this sense that the term "oil country" leads to confusion.
Instead, the most conspicuous determinants which the oil industry imposes on the non-oil economy relate to foreign trade and public finance.

In effect, ever since the 1930’s oil represents, as we know, over 90% of all exports. Also, state taxation of the petroleum industry represents the main government income since 1943 constituting more than 70% of its revenues in the 1970’s. Consequently, the amount and type of government expenditure and the economy’s capacity to import will be shaped in an essential way by the presence of the oil industry. The point then, is to study as a first step, the concrete manner in which these two processes take place.

2. THE DYNAMICS BEHIND OIL EXPORTS: A PERIODIZATION

It can be said that the access of any country to the goods and services sold in the world market is limited by the goods and services it itself can sell in that market. In this sense, since oil is, for the most part, the only good which Venezuela can place in the world market, it is through it that the "external constraint" will operate. In this part of the paper we will study the mechanisms through which the export of oil will determine a capacity to import by the non-oil economy. In the second part, we will study the manner in which the economy effectively utilizes this capacity.

The value of oil exports is illustrated in Fig. 1 for the 1946-1978 period. The shape of the curve indicates, at first sight, three distinct periods: two periods of rapid growth 1946-1957 and 1971-1979 separated by a rather stagnant one (1958-1970). Further analysis suggests that this periodization coincides with important changes in other variables. These can be summed up as follows:

**Period 1 (1946-1957):** In this period, the two major determinants of the value of exports – volume produced and price – exhibit a favorable tendency. But it is production, which rising at an accelerated rate, explains about 70% of the rise in exports. In addition, gross fixed capital formation in the sector remains very high representing about 20% of the
FIGURE 1

THREE PERIODS IN THE EXPANSION OF PETROLEUM EXPORTS

![Graph showing three periods in the expansion of petroleum exports]

\[ XP = A \cdot PC + B \cdot PP + \text{Constant} \]

<table>
<thead>
<tr>
<th>Years</th>
<th>A</th>
<th>B</th>
<th>Constant</th>
<th>( R^2 )</th>
<th>DW</th>
</tr>
</thead>
<tbody>
<tr>
<td>RATE OF CHANGE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47 - 78</td>
<td>1.2</td>
<td>0.87</td>
<td>-0.06</td>
<td>0.87</td>
<td>2.66</td>
</tr>
<tr>
<td></td>
<td>(8.7)</td>
<td>(28.5)</td>
<td>(-0.05)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47 - 57</td>
<td>1.35</td>
<td>0.96</td>
<td>-1.8</td>
<td>0.83</td>
<td>2.80</td>
</tr>
<tr>
<td></td>
<td>(3.6)</td>
<td>(4.3)</td>
<td>(-0.45)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>56 - 70</td>
<td>-0.36</td>
<td>-1.09</td>
<td>0.27</td>
<td>0.39</td>
<td>1.29</td>
</tr>
<tr>
<td></td>
<td>(-1.7)</td>
<td>(-2.0)</td>
<td>(0.63)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>71 - 78</td>
<td>1.33</td>
<td>0.84</td>
<td>3.46</td>
<td>0.997</td>
<td>1.28</td>
</tr>
<tr>
<td></td>
<td>(7.8)</td>
<td>(39.6)</td>
<td>(2.0)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: [2] [3]

Note: The numbers in parenthesis are the student's t-values. DW is the Durbin-Watson coefficient. The same convention is used in other tables.
national aggregate. This manifests itself in the high number of wells drilled which averaged 1010 per year, and in a doubling of the reserves which go from 7214 to 15592 million barrels from 1946 to 1957, year of the shock caused by the Suez Canal closing.

**Period 2 (1958-1970)**: All major variables change in behavior during this period: the growth in production declines drastically and the price of oil falls at an equal but opposite rate causing the value of exports to stagnate. Investment is drastically curtailed, falling not only in relative terms (to 10% of the national aggregate) but even in absolute terms (from Bs. 1544 million in 1958 to Bs. 669 million in 1969, at constant 1957 prices [1]). Drilling fell to an average of 463 wells per year and reserves declined for the first time ever, going from 16781 million barrels in 1958 to 14039 in 1970.

**Period 3 (1971-)**: The most important change in this period is of course, the drastic reversal in the price tendency which more than compensates for the decline in production, reportedly due to a conservation policy but which may not be too distant from the actual production capacity of the country [14]. Furthermore, since nationalization, which took place in 1976, fixed capital formation has shown a positive tendency. Drilling averaged 483 wells per year but increased towards the end of the period amounting to 628 and 754 wells in 1978 and 1979. Reserves rose moderately from 13762 to 18715 million barrels between 1971 and 1979. Some averages for the three periods are shown in table 1.

**TABLE 1**

**PRODUCTION, PRICE AND VALUE OF EXPORTS OF PETROLEUM**

(annual rates of change)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PC PP XP</td>
<td>PC PP XP</td>
<td>PC PP XP</td>
</tr>
<tr>
<td>mean</td>
<td>2.6 10.3 12.1</td>
<td>9.4 7.4 17.6</td>
<td>2.3 -2.5 -0.5</td>
</tr>
<tr>
<td>median</td>
<td>2.7 0.5 4.0</td>
<td>13.0 1.9 15.4</td>
<td>2.6 -1.9 0.2</td>
</tr>
<tr>
<td>σ</td>
<td>6.3 31.4 29.1</td>
<td>6.7 12.7 16.5</td>
<td>4.0 3.5 4.8</td>
</tr>
<tr>
<td>μ</td>
<td>2.6 4.4 5.8</td>
<td>8.0 4.2 12.4</td>
<td>2.6 -2.1 0.1</td>
</tr>
<tr>
<td>θ</td>
<td>5.5 4.9 11.7</td>
<td>18.7 4.3 10.7</td>
<td>11.1 -7.6 2.3</td>
</tr>
<tr>
<td>R²</td>
<td>0.49 0.44 0.61</td>
<td>0.97 0.65 0.92</td>
<td>0.92 0.84 0.32</td>
</tr>
</tbody>
</table>

Source: [2] [3]

*Note*: The first three terms, mean, median and standard deviation (σ) relate to the series of yearly rates of change. On the other hand, μ is obtained through a best exponential fit (the simple regression of the logarithm of the index with respect to time). The student's t value and R² indicate the appropriateness of such a fit. The same convention is utilized in the other tables.
3. THE EFFECTIVE CAPACITY TO IMPORT OF THE NON-OIL ECONOMY

The value of oil exports, insofar as it defines a nominal sum realized in the world market and which can be used to appropriate goods and services sold at that scale, will determine the limits of the capacity to import of the non-oil economy, i.e. of the economy outside the enclave. But in order to see how the one determines the other beyond simply setting the upper limits, we must bring in additional factors.

In particular, it is important to take into account the fact that is not the "nation" which exports, but individual firms, and that the manner in which these operate within the enclave and with the surrounding national and world economy, will affect the links they develop with the non-oil economy. Let us consider, for example, the pre-nationalization arrangement: multinational companies, through concessions granted by the state and with a labour force provided for the most part by the local economy, extract oil, refine a fraction and transport most of it out of the country while they provide for the needs of the internal market. The export of oil, although an "international transaction" from the point of view of the "nation", is for the most part, an internal transfer from the viewpoint of the multinational firms. For this reason, the latter have a certain degree of freedom to make costs and revenues appear in different countries, simply through accounting methods(2).

Moreover, since they operate at the junction of the national and world economy, they have revenues and costs appearing in different currencies; more precisely, revenues in US $ and some expenditures in Bolivars (Bs.). This implies that in the process of rotation, they must exchange US $ into Bs., which in the Venezuelan institutional framework, takes place through the Central Bank. Also, the firms must purchase some replacement goods to reconstitute those consumed in the process of production. These can be bought either in the national economy (and hence in Bs.) or in the international economy (and hence in US $).
However, due to the weak articulation of the oil enclave to the local economy, most of these goods are imported. Similarly, in order to expand their production capacity, companies must purchase what we may label accumulation goods\(^3\). The same distinction can be extended to the services purchased by the companies needed for the process of production, as well as to the wages and salaries paid.

An attempt to make an analysis of the expenditure of oil revenue similar to the one used for cases of rent—namely, by studying the distinction between production cost and economic surplus, the latter being divided between profit and rent—would also have to include the nature of the monetary unit involved. The necessary accounts are shown in table 2.

\[
\text{TABLE 2}
\]

<table>
<thead>
<tr>
<th>Costs</th>
<th>Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>$</td>
<td></td>
</tr>
<tr>
<td>1- Imported replacement goods and services</td>
<td>1- Imported accumulation goods and services</td>
</tr>
<tr>
<td></td>
<td>2- Profit repatriation</td>
</tr>
<tr>
<td></td>
<td>3- Capital repatriation</td>
</tr>
<tr>
<td>Bs.</td>
<td></td>
</tr>
<tr>
<td>1- Replacement goods and services</td>
<td>1- Taxes</td>
</tr>
<tr>
<td>2- Wages and salaries of production workers</td>
<td>2- Wages and salaries of accumulation workers</td>
</tr>
</tbody>
</table>

Unfortunately, this type of information does not exist. However, we do have the series of goods imported, services imported, wages and salaries paid by the oil sector, and also the capital balance account. We lack information on the goods and services purchased locally but these are not numerically important. These series do not permit us to distinguish between production costs and surplus, but will allow us to extend our understanding of the problem at hand.
The import of goods by the oil industry appears in Table 2 as a component both of costs and surplus. The "import of services" as defined by the balance of payments account is composed essentially of profit repatriation [4]. The sectoral balance of capital account corresponds to the net movement of capital investment or repatriation. These three accounts measure the upper half of Table 2. Moreover, when subtracted from the value of oil exports it gives us an estimate of the lower half of the same table, i.e. of the payments made to the national economy. The evolution of these variables is studied in tables 3 and 4.

The import of goods account (MP) of the oil sector, as we said above, is a function of the replacement needs of the industry but most importantly of investment: the data suggests that the replacement floor oscillates around $50 million, while MP can attain a value equal to several times this amount. The high level of investment of period 1 and its decline in period 2 is manifested in the halving of the average level of MP.

In terms of rates of growth, the large difference between mean, median and exponential mean (µ) as well as the large standard deviation and low Students - t value indicate the widely fluctuating nature of this variable. In any case, the sequence high-low-high for the three periods is clearly illustrated. As a fraction of XP, we notice a drastic decline between period 1 and 2 due mostly to the fall in MP (since XP is stagnant in period 2) while the decline in period 3 is due to a more than proportional rise in XP. Hence, it can be said that MP looses its relative importance.
# TABLE 3

**PETROLEUM SECTOR: IMPORT OF GOODS AND BALANCE OF SERVICES**

(millions of US dollars)

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>MP 46-70</th>
<th>58-70</th>
<th>71-78</th>
<th>MSP 46-70</th>
<th>58-70</th>
<th>71-78</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean</td>
<td>164</td>
<td>86</td>
<td>173</td>
<td>578</td>
<td>585</td>
<td>445</td>
</tr>
<tr>
<td>median</td>
<td>141</td>
<td>66</td>
<td>121</td>
<td>466</td>
<td>585</td>
<td>459</td>
</tr>
<tr>
<td>σ</td>
<td>88</td>
<td>53</td>
<td>155</td>
<td>258</td>
<td>80</td>
<td>205</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RATE OF CHANGE</th>
<th>MP 46-70</th>
<th>58-70</th>
<th>71-78</th>
<th>MSP 46-70</th>
<th>58-70</th>
<th>71-78</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean</td>
<td>29.1</td>
<td>-3.2</td>
<td>56.7</td>
<td>22.9</td>
<td>-2.6</td>
<td>-8.3</td>
</tr>
<tr>
<td>median</td>
<td>36.4</td>
<td>-15.7</td>
<td>36.3</td>
<td>24.8</td>
<td>-4.9</td>
<td>-18.3</td>
</tr>
<tr>
<td>μ</td>
<td>51.6</td>
<td>40.5</td>
<td>98.3</td>
<td>29.4</td>
<td>15.1</td>
<td>40.3</td>
</tr>
<tr>
<td>ν</td>
<td>7.9</td>
<td>-7.2</td>
<td>29.9</td>
<td>13.2</td>
<td>-0.2</td>
<td>-15.4</td>
</tr>
<tr>
<td>t</td>
<td>2.3</td>
<td>-2.4</td>
<td>4.2</td>
<td>7.4</td>
<td>-0.2</td>
<td>-2.7</td>
</tr>
<tr>
<td>R²</td>
<td>0.34</td>
<td>0.34</td>
<td>0.74</td>
<td>0.84</td>
<td>0.0</td>
<td>0.55</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FRACTION of XP</th>
<th>MP 46-70</th>
<th>58-70</th>
<th>71-78</th>
<th>MSP 46-70</th>
<th>58-70</th>
<th>71-78</th>
</tr>
</thead>
<tbody>
<tr>
<td>mean</td>
<td>12.6</td>
<td>3.6</td>
<td>2.3</td>
<td>37.2</td>
<td>25.6</td>
<td>8.5</td>
</tr>
<tr>
<td>median</td>
<td>12.1</td>
<td>2.8</td>
<td>1.9</td>
<td>36.3</td>
<td>25.5</td>
<td>6.7</td>
</tr>
<tr>
<td>σ</td>
<td>4.8</td>
<td>2.4</td>
<td>1.6</td>
<td>3.8</td>
<td>3.3</td>
<td>6.7</td>
</tr>
</tbody>
</table>

Source: [2] [3]

# TABLE 4

**PETROLEUM SECTOR: CAPITAL BALANCE AND NET REPATRIATION (LONG AND SHORT TERM)**

(millions of US dollars)

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>DKLP (from annual data)</th>
<th>with short term capital</th>
<th>NET REPATRIATION (MSP - DKLP)</th>
<th>with short term capital</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>46-70</td>
<td>58-70</td>
<td>71-78</td>
<td>46-70</td>
</tr>
<tr>
<td>mean</td>
<td>183</td>
<td>-75</td>
<td>-235</td>
<td>-724</td>
</tr>
<tr>
<td>median</td>
<td>141</td>
<td>-92</td>
<td>-130</td>
<td>-478</td>
</tr>
<tr>
<td>σ</td>
<td>253</td>
<td>121</td>
<td>470</td>
<td>1141</td>
</tr>
</tbody>
</table>

Source: [2] [3]
The import of services MSP, behaves differently. Although it is high and rising in period 1 representing over a third of the value of exports (XP), it stagnates in period 2 falling to a quarter of XP. In period 3, the fact that the oil companies are nationalized implies that MSP no longer measures profit repatriation and hence it continues its fall at an accelerated rate. Together with the rise in XP this causes the fraction of MSP in the value of exports to fall below 10%.

The capital balance account (BKLP) clearly manifests the investment behavior already discussed. While it is positive in period 1, indicating high investment in the sector, it becomes negative in period 2, signaling the fall in capital formation. Period 3 sees the continuation of period 2 but nationalization will cause a sudden departure of capital in 1975-1976; after this date, the outflow of long-term capital stops.

Before nationalization, capital movements involve exclusively long-term placements. After nationalization however, the long-term capital balance becomes positive and almost zero while there is a strong negative balance of short-term capital. This indicates capital placements by the oil industry which earn an income (hence, the interest received appears as an export of services) and thus represents a radically different phenomenon.

Additionally, we call net repatriation, (i.e. BKLP - MSP) the net effect of profit repatriation and capital movement. This variable indicates several things. First, the repatriation of profits is always greater than the entrance of capital suggesting that oil companies utilize only a fraction of their earnings during the years in which they decide to invest. Secondly, it indicates that an identical economic phenomenon such as profit or capital repatriation can take two institutional forms appearing, hence, in two different accounts. Therefore, for BKLP negative, net repatriation is a more accurate description than MSP or BKLP separately.
In this sense, the reversal in the behavior of BKLP between period 1 and 2 causes a doubling of net repatriation.

These accounts allow us to estimate, as we said above, the lower part of table 2; namely, the expenditures made in the local economy. The statistic thus obtained measures the portion of the value of exports XP which effectively interacts with the local economy and corresponds to the following formula:

\[ X_N = X_P + BKLP - MP - MSP. \]

We show in fig. 2 the evolution of this variable and its relation to the value of exports XP.

In table 5 we show the evolution of the ratio \( X_N/X_P \) for the three periods. Between period 1 and 2 the ratio remains at a very similar level. This can be explained by the fact that \( X_P \) and MSP do not change much in period 2 while the decline in MP is canceled by the shift to a negative BKLP. However, since these two latter accounts exhibit strong fluctuations, their declining importance in period 2 accounts for the fall in the standard deviation. The rise in the ratio for period 3 is explained by the fall in the relative portion of profit and capital repatriation as well as in MP.

In table 6 we show the rate of growth of \( X_N \) during the three periods. While in period 1 it shows a similar rate as \( X_P \), in period 2 and 3 the rate is higher, indicating the increasing importance of payments to the non-oil economy as a fraction of \( X_P \). But the sequence high-low-high is verified indicating the fact that \( X_P \) imposes the limits of participation of the non-oil economy.
FIGURE 2

THE LARGE DIFFERENCE BETWEEN GROSS AND NET EXPORTS AND THEIR RELATIVE CONJUNCTURAL INDEPENDENCE.

\[ \log \text{index} = 3.5 \]
base 1946

\[ XP = \text{coeff} \times N + \text{Constant} \]

<table>
<thead>
<tr>
<th>Year</th>
<th>Coefficient</th>
<th>Constant</th>
<th>$R^2$</th>
<th>DW</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEVEL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>46 - 78</td>
<td>1.04</td>
<td>585.6</td>
<td>0.99</td>
<td>1.77</td>
</tr>
<tr>
<td>46 - 57</td>
<td>1.37</td>
<td>174</td>
<td>0.88</td>
<td>0.66</td>
</tr>
<tr>
<td>58 - 70</td>
<td>0.21</td>
<td>1861</td>
<td>0.12</td>
<td>1.33</td>
</tr>
<tr>
<td>71 - 78</td>
<td>1.02</td>
<td>1206</td>
<td>0.89</td>
<td>2.45</td>
</tr>
<tr>
<td>RATE OF CHANGE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>47 - 78</td>
<td>0.73</td>
<td>2.6</td>
<td>0.83</td>
<td>1.85</td>
</tr>
<tr>
<td>47 - 57</td>
<td>0.48</td>
<td>10.3</td>
<td>0.34</td>
<td>1.54</td>
</tr>
<tr>
<td>58 - 70</td>
<td>0.17</td>
<td>-0.5</td>
<td>0.19</td>
<td>1.58</td>
</tr>
<tr>
<td>71 - 78</td>
<td>0.78</td>
<td>0.9</td>
<td>0.87</td>
<td>2.87</td>
</tr>
</tbody>
</table>

Source [2] [3]
TABLE 5

PETROLEUM INDUSTRY: SOME RATIOS CONCERNING NET AND GROSS EXPORTS, FOREIGN EXCHANGE EARNINGS, COERCIVE PAYMENTS AND GOVERNMENT REVENUE.

<table>
<thead>
<tr>
<th></th>
<th>XN/XP</th>
<th>OP/XN</th>
<th>FCD/OP</th>
<th>PCD/XN</th>
<th>INTP/PCD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>46-57 56-70 71-78</td>
<td>46-57 56-70 71-78</td>
<td>46-57 56-70 71-78</td>
<td>46-57 56-70 71-78</td>
<td>46-57 56-70 71-78</td>
</tr>
<tr>
<td>mean</td>
<td>85.6 57.3 78.6</td>
<td>87.8 92.9 94.5</td>
<td>83.5 96.2 94.8</td>
<td>73.7 89.4 97.0</td>
<td>66.6 78.9 92.2</td>
</tr>
<tr>
<td>median</td>
<td>62.0 67.6 80.6</td>
<td>88.7 92.9 94.3</td>
<td>86.6 97.0 94.8</td>
<td>76.8 87.5 92.9</td>
<td>65.8 81.0 93.9</td>
</tr>
<tr>
<td>σ</td>
<td>13.7 5.3 11.4</td>
<td>6.3 4.5 6.3</td>
<td>9.1 6.1 3.4</td>
<td>12.7 7.0 15.6</td>
<td>5.7 5.0 3.8</td>
</tr>
</tbody>
</table>

Source: [2] [3]

* INTP represents government income from the oil industry.

TABLE 6

OIL INDUSTRY: SOME CHARACTERISTICS OF GROSS AND NET EXPORTS, COERCIVE PAYMENTS AND FOREIGN EXCHANGE EARNINGS (DP)

(annual rates of change)

<table>
<thead>
<tr>
<th></th>
<th>XP</th>
<th>XN</th>
<th>PCO</th>
<th>DP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>46-57 56-70 71-78</td>
<td>46-57 56-70 71-78</td>
<td>46-57 56-70 71-78</td>
<td>46-57 56-70 71-78</td>
</tr>
<tr>
<td>mean</td>
<td>17.6 -0.5 24.8</td>
<td>15.3 2.3 31.5</td>
<td>18.6 3.1 30.7</td>
<td>15.6 2.5 31.3</td>
</tr>
<tr>
<td>median</td>
<td>15.4 0.2 4.2</td>
<td>7.2 1.6 13.5</td>
<td>9.0 2.3 4.2</td>
<td>14.0 3.4 6.8</td>
</tr>
<tr>
<td>σ</td>
<td>18.5 4.8 52.0</td>
<td>22.6 10.3 68.8</td>
<td>30.1 8.6 72.9</td>
<td>26.0 7.8 7.4</td>
</tr>
<tr>
<td>μ</td>
<td>12.4 0.1 18.1</td>
<td>9.8 1.3 18.7</td>
<td>13.6 2.3 19.7</td>
<td>11.3 1.9 19.7</td>
</tr>
<tr>
<td>t</td>
<td>10.7 2.3 3.5</td>
<td>8.4 2.4 3.0</td>
<td>7.7 5.3 3.1</td>
<td>6.5 4.0 3.1</td>
</tr>
<tr>
<td>$r^2$</td>
<td>0.92 0.32 0.68</td>
<td>0.80 0.34 0.60</td>
<td>0.86 0.71 0.61</td>
<td>0.81 0.30 0.61</td>
</tr>
</tbody>
</table>

Source: [2] [3]
To verify that XN really measures the payments to the non-oil economy we will develop two other estimates of the same phenomenon. As we mentioned above, oil companies receive revenues in dollars, while payments to the Venezuelan economy must be made in Bolivars; hence, the need to exchange currency at the Central Bank. The receipt of US $ by the Central Bank coming from the oil industry is a known statistic which we will label DP. Fig. 3 shows the evolution of DP and XN.

We notice in table 5 that the rates of growth of XN and DP are very similar for all three periods. Even the standard deviation and the student-t value are similar. This suggests a high correlation between the two variables, not only in terms of long-run tendencies, but also as a conjunctural relation. The former can be checked by simple regression, the latter by the regression between the yearly rates of change (5). These results are illustrated in fig. 3.

Moreover, we remark that for most years, XN exceeds DP. This fact was expected since DP measures only the dollars which the oil companies were forced to exchange in order to pay their expenditures in Bolivars. But, some of these payments can be made with the receipts from sales to the local market. Moreover, some local payments can be made in US $ while a portion of the Bs. purchased can be obtained from sources other than the Central Bank. The evolution of the ratio between DP and XN is studied in Table 5. This information indicates that for the period as a whole, DP represents more than 90% of XN and that the ratio increases in each period.

The importance of DP is that it is through it that the non-oil economy acquires a capacity to import. In other words, to go from XP—which as we said, determined the initial upper limits of the capacity to import—to DP, we had to consider a series of other variables whose influence on the links to the local economy were not altogether evident.
FIGURE 3

THREE ESTIMATES OF THE PORTION OF THE VALUE OF EXPORTS WHICH CIRCULATES THROUGH THE NON-OIL ECONOMY: NET EXPORTS, COERCIVE PAYMENTS AND FOREIGN EXCHANGE EARNINGS

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>PCD</th>
<th>coeff.</th>
<th>Const.</th>
<th>R^2</th>
<th>DW</th>
</tr>
</thead>
<tbody>
<tr>
<td>46-78</td>
<td>1.10</td>
<td>66.6</td>
<td>0.99</td>
<td>0.71</td>
<td>1.05</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(53.8)</td>
<td>(1.4)</td>
<td></td>
<td>(57.5)</td>
</tr>
<tr>
<td>46-57</td>
<td>1.14</td>
<td>120.2</td>
<td>0.95</td>
<td>1.24</td>
<td>1.05</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(15.9)</td>
<td>(2.3)</td>
<td></td>
<td>(26.7)</td>
</tr>
<tr>
<td>XN</td>
<td>0.93</td>
<td>676.9</td>
<td>0.52</td>
<td>1.38</td>
<td>0.83</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(3.4)</td>
<td>(2.7)</td>
<td></td>
<td>(6.0)</td>
</tr>
<tr>
<td>71-78</td>
<td>1.10</td>
<td>131.5</td>
<td>0.97</td>
<td>0.83</td>
<td>1.03</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(13.8)</td>
<td>(0.3)</td>
<td></td>
<td>(14.0)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RATES OF CHANGE</th>
<th>PCD</th>
<th>coeff.</th>
<th>Const.</th>
<th>R^2</th>
<th>DW</th>
</tr>
</thead>
<tbody>
<tr>
<td>46-78</td>
<td>0.86</td>
<td>-0.5</td>
<td>0.91</td>
<td>1.69</td>
<td>0.88</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(17.9)</td>
<td>(-0.2)</td>
<td></td>
<td>(20.5)</td>
</tr>
<tr>
<td>46-57</td>
<td>0.63</td>
<td>1.1</td>
<td>0.64</td>
<td>1.64</td>
<td>0.76</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4.0)</td>
<td>(0.2)</td>
<td></td>
<td>(4.0)</td>
</tr>
<tr>
<td>XN</td>
<td>0.93</td>
<td>-0.8</td>
<td>0.66</td>
<td>2.14</td>
<td>0.98</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4.8)</td>
<td>(-0.4)</td>
<td></td>
<td>(5.2)</td>
</tr>
<tr>
<td>58-70</td>
<td>0.89</td>
<td>3.2</td>
<td>0.99</td>
<td>2.01</td>
<td>0.88</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(23.7)</td>
<td>(1.1)</td>
<td></td>
<td>(27.7)</td>
</tr>
<tr>
<td>71-78</td>
<td>0.90</td>
<td>3.2</td>
<td>0.99</td>
<td>2.01</td>
<td>0.88</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(23.7)</td>
<td>(1.1)</td>
<td></td>
<td>(27.7)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESULTS OF THE SIMPLE CORRELATIONS BETWEEN THE VARIABLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>coeff.</td>
</tr>
<tr>
<td>PCD</td>
</tr>
<tr>
<td>46-78</td>
</tr>
<tr>
<td>46-57</td>
</tr>
<tr>
<td>XN</td>
</tr>
<tr>
<td>71-78</td>
</tr>
</tbody>
</table>

| coeff. | Const. | R^2 | DW |
| OP     |       |     |     |
| 46-78  | 0.95  | -0.7| 1.53|
| 46-57  | 0.91  | 0.81| 0.81|
| XN     | 0.89  | 1.08| 0.88|
| 71-78  | 0.83  | 0.93| 2.40|

Source: [1] [2] [3]
But so far, DP appears determined as a residue between XP and the portion of it that circulates in $ (MP, MSP, BKLP). Yet, reality suggests just the opposite determination: profit and capital repatriation is a residue determined by the receipts (XP) on one side, and the payments that must be made to the local economy, on the other. These payments can be distinguished from capital or profit repatriation by the fact that they are not the product of the firm's policy choice: they are payments owed to others which must be made. We can therefore call them coercive payments. To estimate them we would have to sum up all expenditures made by the oil companies to Venezuelan institutions and agents. We do not have that much information. However, we do have series of wages and salaries as well as taxes paid by the industry. The dollar equivalent of the sum of these two we label PCD (Fig. 3). As expected for most years it is below DP. In addition, table 6 shows that the rates of growth for the different periods as well as the standard deviations and student's t value are very similar to those of DP. Moreover, Fig. 3 shows that it is highly correlated to XN and DP both in terms of level and of rate of change. Finally table 4 shows that as a ratio of DP, PCD represents over 90% for the whole period and around 95% for the last two periods. In addition, the portion of PCD constituted by taxes, rises strongly due to the fall in employment and wages in period 2 and to the rise in taxes in period 3, which represent today over 70% of XP (table 5).

4. THE LINKS BETWEEN THE PETROLEUM INDUSTRY AND THE NON-OIL ECONOMY

Our empirical study seems to validate the existence of an articulation between the oil industry and the non-oil economy, differing from the traditional view.
In particular, insofar as the oil industry can be said to constitute an enclave with little articulation to the productive structure of the rest of the national economy, it is not through variables such as the volume of production (PC) or the value of exports (XP) that the links to the non-oil economy will be established. Instead, it is variables such as XN, DP, and PCD that manifest the impact of oil in the economy. Moreover, insofar as the two sets of variables exhibit a certain independence—illustrated for example, by their changing proportions—it is necessary to pay attention to the determinants of the latter set which do not appear in the former.

The preceding analysis has shown that XN, defined as a residue, only slightly exceeds DP and more importantly, appears to be conjuncturally correlated. Also, PCD, constituted only by wages and taxes, accounts for over 90% of DP and also is conjuncturally correlated both to XN and DP. But, this being the case, it can be said then that the link to the non-oil economy is established and for the most part constituted by two social relations: wage-labour and state landed-property, each of which implies the formation of a particular revenue category.

A. The relation of wage-labour

At the arrival of the oil companies to Venezuela in the late 1910's, no historically constituted working class existed. The agricultural oligarchy which dominated rural life established either non-wage relations or wage relations unsuited for the utilization of labor force in the petroleum industry ([5][6]). Moreover, the absence of large urban concentrations of displaced peasants and the location characteristics of employment in the oil sector, implied that a new form of wage-labour had to be developed. Workers attracted by the possibility of a more stable employment and pushed by the chaotic stagnation of rural life, lived inside the campos petroleros where the company would provide directly all consumption goods, payments often taking the form of
Simultaneous to the expansion of the oil industry, and for not uncorrelated reasons (11), was the collapse of the agricultural sector and the formation of large urban populations. In this context, another form of wage-labour developed where employment lacked the stability of its former agricultural analog and wages were paid in money and utilized to purchase subsistence goods. With the development of wage-labour outside the enclave, the relation inside the campos petroleros was progressively aligned on the nationally dominant form, chips being substituted by the national currency.

Another major change in the wage-labour relation was due to a transformation of the process of production itself. On a world scale and in almost all industrial sectors, mechanization was extended following not only a logic of cost-reduction, but also one of control over the labour process, both through the intensification caused by the imposition by the machine of a faster rhythm of work and through the replacement of the worker's know-how through its integration to the automatic machine system, which permitted the substitution of highly qualified workers by a more widely available and less qualified and autonomous labour force.

By the mid 1940's, the alignment of the wage relation within the enclave on the nationally dominant form had essentially been accomplished: a national labour policy was in place and trade unions had been formed. But the transformations caused by the changes in the organization of production are patently apparent in the fast expansion of the industry with a simultaneous collapse of employment and with a reduction in the ratio of American supervisors to local workers (period 1).
In period 2 the fall in investment manifesting the end of the oil expansion allowed a further reduction in employment, while the slow growth in wage-rates expresses the evolution of the wage relation outside the enclave. Hence, the wage component of PCD exhibits a fast decline in relative terms and stagnation in the absolute level: the revenue produced by the wage-labour relation becomes increasingly irrelevant as a connection between the oil and the non-oil economy.

B. State-landed property

A distinctly opposite tendency is exhibited by the income received by the state. In effect, all indicators suggest that not only has the state increased its revenue in proportion to the rise of the economic surplus, but even as a growing fraction of the surplus itself.

The relation on which taxes are based can be analyzed by considering it as a form of landed property in which the state leases the land in exchange of a rent.

Traditionally, it is considered that the level of rent is limited by the economic surplus which may exist between the cost of production and the market-price. The portion of the surplus which is captured in the form of rent depends on the state of the relationship between the oil companies and the state. Here, the latter is limited in its ability to increase the rent by the possibility of oil companies to substitute production of a subsidiary in one country by that of another. In addition, the market price appears as a given, determining the size per unit of the surplus to be shared.

This view seems only partially valid and moreover, only for periods 1 and 2. We do not pretend here to provide an adequate analysis of the complex relations surrounding both the price of oil and the dynamics of its rent. But it is clear that in period 3 oil rent enters
not as a share of a surplus, but as a "cost" component which determines
the price and not vice versa ([9]). Given this, we can characterize the
relation of rent for each period.

In period 1, the expansion of production and the rise in price
produced an increase in the surplus. The splitting of this surplus appears
overall to have taken place at approximately constant proportions, a fact
illustrated by the very similar rate of growth of state oil income
and the value of exports. The long-term reproducibility of this pattern
is dependent on the sustained growth of the surplus either through price
or production increases.

But it is precisely this condition which in period 2 is not
satisfied. First, the massive discoveries of new oil reserves in the
Middle East which grew from 48 billion barrels to 133 billion barrels
between 1950 and 1955, while those of Venezuela went only from 9 to
12 billion, and the rapid growth in production, 16.9% of the world
total in 1950 and 25.0% in 1960 while Venezuela declined from 14.4%
to 13.6% in the same period ([6]), made oil companies reevaluate the
convenience of maintaining high levels of investment in Venezuela. Hence,
in period 2 the deteriorating comparative advantage of Venezuela caused
a collapse in investment which checked the growth in production. The
decreasing price made companies less interested yet in increasing investment
as the absolute size of the surplus started declining.

Faced with this circumstance the state could only increase
its revenue by raising its fraction of surplus appropriated as rent, a
fact which could only accelerate the decapitalization of the sector:
the declining level of reserves with a barely increasing level of
production illustrates this state of affairs.

The transformation of the relation in period 3 will be manifested
by the ability of the oil producing states to impose an increase in the
price of oil and to control the level of production so as to maintain
this increase. Under this new situation, the rise in the surplus allowed
the Venezuelan State to increase its income. In addition, nationalization
implied that the surplus no longer had to be shared with the companies
and that it would directly determine state revenue.
II - THE REALIZATION OF OIL RENTS

1. THE TWO-FOLD NATURE OF OIL WAGES AND RENTS

The preceding analysis has shown that, whatever the level or rate of change of PCD, i.e. of wages and rents, it is linked to the formation of a supply of dollars at the Central Bank (DP). In this sense, we can say that what distinguishes oil wages and rents in the Venezuelan economy from other forms of labor or state income, is that the former create not only a form of revenue for the direct agents involved, but will simultaneously produce an access to the appropriation of commodities in the world market.

This duality is all the more important since the processes of expenditure of the two forms of revenue follow initially autonomous determinations; that is autonomous, insofar as we can say that the political and social dynamics behind the elaboration of a government budget are independent of the motives of merchants and industrialists vis-à-vis importation.

To understand the causes of the duality we must analyze the real nature of the oil income, the desired form of its expenditure and the effects produced by the junction between the national and world markets. As we have said, oil sold on the world market is remunerated by a right of access to commodities sold at that scale and hence, its revenue appears in the form of world currency, e.g. dollars.

However, the State does not necessarily desire to realize directly the access to world commodities. Instead, it expects its oil revenue to provide it with a right of access to goods, services and labor-power sold on the national market, since it is through that market and the relations implicit in it, that the State exercises its role. It therefore requires a revenue in local currency forcing the oil companies to exchange dollars for bolivars at the Central Bank.

Now, as soon as the government receives the oil income (in local currency) it acquires the right of access to the national market and can start its expenditure. However, this process by itself does not constitute the realization of the rent since the basis of the latter is a right of
access to the world market. Instead, the realization process as a whole must include another exchange of currency and another expenditure process: that of importers.

In this second step, we find agents holding "rights of access" to the national economy who wish to exchange them for world currency. But, what appears as an autonomous exchange between an entrepreneur and the Central Bank is in fact an exchange between the former and the government. The basis of this trade is the fact that the state wishes to transformed the oil rent into a right of access to the local market and can initially do so by requiring payment in Bolivars. Yet in order to effectively realize the rent it must find an agent who wishes to forgo its access to the national market in exchange for one to the world market.

![Diagram 1: Monetary Flows in the Realization of Oil Rent](image)

However, it is not at all evident that these two processes are bound to coincide since the state can start its expenditure before importers do and vice versa. Moreover, in order for the state's expenditure to be really "paid" by the world market, its purchase of goods and services on the local market must be balanced out by the increased supply generated by imports. Yet, there are uses of foreign exchange which do not produce any additional supply as, for example, profit or capital repatriation. If such is the use of the petrodollars, government purchases on the local market represent a drain on existing resources and hence not a realization of rent. The necessary equivalence between the different flows is illustrated in Diagram 1.
Furthermore, the increase in local supply will be different and its conjunctural relation to changes in demand will vary, if imports are constituted essentially of consumer goods or of raw materials and equipments. In the first case we would expect a fast reaction of supply to changes in demand while in the latter, additional factors would come into play such as the state of the labour market, the lags involved in increasing productive capacity, etc.

In addition, the equivalence between the availability of rights of access to the world market and their effective utilization cannot be directly produced, for the case of Venezuela, by the foreign exchange market, due to the existence of fixed exchange rates and the absence of restrictions on the purchase of currency. If an adaptation between a changing supply and demand for dollars in the context of fixed exchange rates takes place, it must be produced by a set of links which go through the structure of the non-oil economy.

In the remaining sections of this paper we will study the dominant forms of state expenditure, the main patterns of importation and the correspondence of these two processes implied by the two-fold nature of oil rents. Since the two processes are initially independent, their link will appear as an aspect of the overall regulation of the scheme of accumulation in place.

2. OIL RENT AND STATE EXPENDITURE

The increasing importance of the oil revenue (IP) in the government's income constitutes a major constant of the development of the Venezuelan economy for the last 50 years. In effect, IP shows a tendency to rise both in absolute as well as in relative terms. Hence, from less than a fourth of the total ordinary revenue of the state in 1930, the fraction represented by IP reaches 30 % in 1935 and exceeds 50 % ten years later.
As we can appreciate in Table 7, after the 1974 oil shock, IP has remained at a level representing over 70% of total ordinary government income.

**TABLE 7**

**RATIO OF ORDINARY OIL INCOME TO TOTAL ORDINARY INCOME OF THE STATE.**

<table>
<thead>
<tr>
<th></th>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Ratio</td>
<td>22.9</td>
<td>32.0</td>
<td>27.0</td>
<td>54.2</td>
<td>45.9</td>
<td>54.5</td>
<td>58.2</td>
<td>65.0</td>
<td>60.1</td>
<td>77.4</td>
<td>69.6</td>
</tr>
</tbody>
</table>

The rapid expansion of oil exports (XP) in period 1 and the renegotiation of the government's part in the oil income in period 2 in spite of a stagnant level of XP (table 6) allowed the sustained growth of IP. This plays an important role in creating the situation of general equilibrium which the state's finances have exhibited over the long-run.

Modulated for the most part by the evolution of IP, the rhythm of public expenditure is essentially determined by the relation to the petroleum industry. For the three periods under study we observe a cyclical scheme of the type: expansion (period 1), slow down (period 2) and shock/slow down in period 3 (fig. 4).

We thus have that if we regroup government expenditure into three main categories – internal government, economic ministries and social activities (table 8) – we observe important changes in their relative proportions. Period 1 is characterized by a strong advance in the relative weight of the economic ministries, which is essentially explained by the accelerated expansion of building and public works, the constitution of a national communication network and the financing of private enterprises. It is the notion of a *promotyer State* – favoring the expansion of the economic activity while not participating directly – which best defines the logic of state expenditure in this period.

The adaptation of public expenditure, imposed by the slowdown in the growth of oil revenue in the initial years of period 2 was achieved through a rapid disengagement of the state from its role in Building and Public Works (BPW) whose fraction falls from 32.3% in 1955 to 15.2% in 1960. Overall, during period 2 the weight of the economic ministries is...
FIGURE 4
TOTAL EXPENDITURE AND OIL INCOME OF THE STATE

TABLE 8
ADMINISTRATIVE CLASSIFICATION OF PUBLIC EXPENDITURE

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>I - INTERNAL GOVERNMENT</td>
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<td></td>
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<tr>
<td>Interior</td>
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<td>24.6</td>
<td>24.5</td>
<td>31.8</td>
<td>29.4</td>
<td>31.9</td>
</tr>
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<td>18.1</td>
<td>17.4</td>
<td>13.0</td>
<td>13.2</td>
<td>19.2</td>
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<td>21.4</td>
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<td>Justice</td>
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<td>9.0</td>
<td>8.9</td>
<td>8.6</td>
<td>10.1</td>
<td>9.0</td>
<td>9.3</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II - ECONOMIC MINISTRIES</td>
<td>46.3</td>
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<td>59.2</td>
<td>63.2</td>
<td>48.6</td>
<td>45.1</td>
<td>43.0</td>
<td>53.7</td>
</tr>
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<td>13.1</td>
<td>6.2</td>
<td>12.0</td>
<td>11.7</td>
<td>8.8</td>
<td>7.0</td>
<td>29.6</td>
</tr>
<tr>
<td>Development</td>
<td>2.7</td>
<td>3.9</td>
<td>6.6</td>
<td>5.1</td>
<td>5.5</td>
<td>3.0</td>
<td>2.6</td>
<td>1.9</td>
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<tr>
<td>Public works</td>
<td>22.2</td>
<td>32.1</td>
<td>35.7</td>
<td>32.3</td>
<td>15.2</td>
<td>20.7</td>
<td>21.6</td>
<td>6.9</td>
</tr>
<tr>
<td>Communications</td>
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<td>5.0</td>
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<td>4.0</td>
<td>3.1</td>
<td>2.4</td>
<td>2.5</td>
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<td>Agriculture</td>
<td>12.8</td>
<td>6.9</td>
<td>5.7</td>
<td>5.0</td>
<td>7.6</td>
<td>7.9</td>
<td>7.4</td>
<td>8.9</td>
</tr>
<tr>
<td>Petroleum and Mining</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>III - SOCIAL MINISTRIES</td>
<td>11.4</td>
<td>14.6</td>
<td>13.5</td>
<td>12.1</td>
<td>16.5</td>
<td>21.2</td>
<td>26.1</td>
<td>15.9</td>
</tr>
<tr>
<td>Education</td>
<td>6.5</td>
<td>6.4</td>
<td>6.2</td>
<td>5.4</td>
<td>8.2</td>
<td>11.8</td>
<td>16.1</td>
<td>11.6</td>
</tr>
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<td>Health and Social Security</td>
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<td>4.6</td>
<td>8.5</td>
<td>5.8</td>
<td>7.4</td>
<td>8.8</td>
<td>8.5</td>
<td>4.3</td>
</tr>
<tr>
<td>Labor</td>
<td>3.6</td>
<td>0.6</td>
<td>0.8</td>
<td>0.9</td>
<td>0.8</td>
<td>1.5</td>
<td>1.0</td>
<td></td>
</tr>
</tbody>
</table>

Source: [2] and [3]
### Table 9
**Functional Classification of Public Expenditure**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Services</td>
<td>7.4</td>
<td>7.1</td>
<td>8.0</td>
<td>4.2</td>
<td>12.8</td>
</tr>
<tr>
<td>Defense</td>
<td>6.6</td>
<td>10.0</td>
<td>8.7</td>
<td>4.9</td>
<td>5.6</td>
</tr>
<tr>
<td>Social Services</td>
<td>26.1</td>
<td>32.7</td>
<td>32.2</td>
<td>18.3</td>
<td>36.1</td>
</tr>
<tr>
<td>Economic expenditures</td>
<td>40.1</td>
<td>31.1</td>
<td>33.5</td>
<td>63.1</td>
<td>20.5</td>
</tr>
<tr>
<td>Others</td>
<td>16.8</td>
<td>19.1</td>
<td>17.6</td>
<td>9.5</td>
<td>25.1</td>
</tr>
</tbody>
</table>

(1) Public Debt Services, Administrative Debt, purchases of financial assets, export financing fund, OPEC financing fund.

Source: [2]

### Table 10
**Structure of Public Expenditure According to Its Use**

<table>
<thead>
<tr>
<th></th>
<th>Current Bolivars</th>
<th>%</th>
<th>Investment Bolivars</th>
<th>%</th>
<th>Total Bolivars</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>1,978</td>
<td>65.2</td>
<td>1,054</td>
<td>34.8</td>
<td>3,032</td>
</tr>
<tr>
<td>1955</td>
<td>1,984</td>
<td>45.4</td>
<td>2,367</td>
<td>54.6</td>
<td>4,371</td>
</tr>
<tr>
<td>1960</td>
<td>3,937</td>
<td>67.6</td>
<td>1,883</td>
<td>32.4</td>
<td>5,820</td>
</tr>
<tr>
<td>1965</td>
<td>4,849</td>
<td>68.1</td>
<td>2,365</td>
<td>31.9</td>
<td>7,118</td>
</tr>
<tr>
<td>1970</td>
<td>7,159</td>
<td>70.6</td>
<td>2,959</td>
<td>29.2</td>
<td>10,118</td>
</tr>
<tr>
<td>1974</td>
<td>15,368</td>
<td>38.9</td>
<td>24,103</td>
<td>61.1</td>
<td>39,471</td>
</tr>
<tr>
<td>1979</td>
<td>31,985</td>
<td>74.2</td>
<td>11,125</td>
<td>25.8</td>
<td>43,090</td>
</tr>
</tbody>
</table>

(1) Excluding services to the public debt.

Source: [8], [2] and [3]

### Table 11
**Structure of Imports**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumption goods</td>
<td>40.5</td>
<td>34.2</td>
<td>35.8</td>
<td>24.2</td>
<td>21.3</td>
<td>16.4</td>
<td>17.2</td>
<td>17.8</td>
<td>19.7</td>
</tr>
<tr>
<td>Intermediate goods</td>
<td>19.1</td>
<td>18.3</td>
<td>25.0</td>
<td>32.3</td>
<td>33.0</td>
<td>38.7</td>
<td>32.0</td>
<td>26.0</td>
<td>22.6</td>
</tr>
<tr>
<td>Investment goods</td>
<td>40.4</td>
<td>47.5</td>
<td>39.2</td>
<td>43.5</td>
<td>45.7</td>
<td>44.9</td>
<td>50.8</td>
<td>56.2</td>
<td>57.7</td>
</tr>
</tbody>
</table>

Source: [8] and [7]

### Figure 5
**The Import Substitution Coefficient**

The coefficient $x$ is derived from the formula:

$$ x = \frac{C_{Ft} - C_{Ft-1}}{C_{FNt} - C_{FNt-1}} $$

Where $C_{Ft}$ is the total final household consumption of goods for year $t$, $C_{Ft-1}$ is the imported fraction of total final household consumption of goods for the previous year $t-1$, and $C_{FNt}$ is the final household consumption of nationally produced goods.
significantly lower than in period 1 returning to levels similar – or even inferior – to those of the 1940’s. Furthermore, the analysis of the expenditure data, grouped according to a functional classification (table 9) shows clearly the phenomenon of weakening of the state’s promoter role starting in the early 60’s; the fraction of expenditures of an economic nature fall by 40.1% between 1960 and 1970, to about a third of the total while the social activities see their weight expand. We can effectively talk of the strengthening of the reproductor state, whose role is to provide the essential services: health, education and social security. In this sense, a more significant measure of the change between period 1 and 2 is constituted by the change in the shares of current expenditures and investment studied in table 10.

Period 3, on the other hand, shows a much more erratic behavior of the expenditure indicators. While during the 1974 shock it is the economic expenditures which benefit the most of the sudden rise in the oil income, in the following years the State finds itself unable to maintain such a structure of public expenditure. In effect, the expenditure in economic activities falls systematically (with the exception of 1977) not only in relative but even in absolute terms, so that in 1979 it was 55% less than in 1974 while it represented only 1/5 of total government expenditure (table 9), which was itself 20% greater than in 1974. Hence, although at a much higher level, the State reproduces a modality of utilization of its resources which appears in many respects similar to that of period 2. It is in this context that the abandonment of the highly ambitious Fifth Plan (1976-1980) must be explained.

3. EVOLUTION AND STRUCTURE OF IMPORTS

Just as in the case of the State, where we find important variations from period to period, in the form it uses its right of access to the national market, we find also, very significant changes in the structure of imports which expresses the form of utilization of the right of access to the world market.
Contrary to the cases of the most advanced countries in the region—Argentina, Brazil, Mexico—in Venezuela the process of import substitution did not constitute the basis of growth after the Great Depression of 1929. In fact, the policy of the 1945-1948 government of Acción Democrática was to increase the importation of consumer goods [4]. Hence, we find that by 1950, imports, which represented over 30% of the GNP, provided over half of the goods constituting final household consumption.

Now, a rapid substitution took place during the 1950's which reached its fastest rate at the beginning of period 2, under the impact of the fall and then stagnation of the capacity to import. Thus, the portion of imported goods in total final consumption represented nearly 30% in 1955 and only 10% in 1965.

However, a very different process takes place after the 1974 shock especially in relation to the 1957 shock: the sudden rise in oil exports will not be simultaneously followed by imports as in the case of the crisis of Suez. Instead, imports will show a more continuous behaviour distributing the increase over several years. But most importantly, they rise— for the first time in the period of observation—well above the limits imposed by the nominal capacity expressed by OP. Also, while we find that the part of the GNP represented by imports goes from 16.8% in the shock year (1974) to 28.7% in 1976 and 36.7% in 1978 the part of imported goods in household final consumption rises only from 3.6% in 1974 to 11.2% in 1975 and 12.7% in 1979. In contrast, one can compare the size of the 1958 minimum in fig. 5 with that of 1975. Hence, slower answer to the shock, imports above the nominal capacity expressed by OP and reduced utilization of imported goods to satisfy the rise in final consumption, distinguish the recent shock from its earlier analog.

The phenomenon of import substitution can be studied over the long-run by evaluating the fraction of local final production which can be increased due to a reduction in the share of imported final goods. The difference between unity (or 100%) and this variable represents the increase in local production allowed by the growth of the internal market. Figure 5 shows the evolution of the variable for the 1950-1979 period.
We notice in period 1 an important import substitution effect. However, during the 1957 oil boom imported final goods were utilized to satisfy the rise in local demand explaining the deep trough. The 1960-1963 crisis implied major advances in the import substitution process; but from that time on, this dynamic, at least in so far as final goods are concerned, has lost its importance. Particularly remarkable is the comparison of the post-1974 boom / crisis with that of 1957: although the same behaviour can be said to be present, the relative importance for the current period is very significantly reduced.

The transformations in the structure of imports reflect also the general dynamic of import substitution. Grosso modo, as table 11 shows, two complementary tendencies can be highlighted: on the one hand, the decline of the fraction of imported final goods, especially those in the non-durable category which is particularly fast at the beginning of period 2; on the other, a proportional rise in the fraction represented by intermediate goods which doubles from 1955 to 1965. Nevertheless, the runaway rise in imports which occurred after the 1974 oil shock introduces a transformation in the structure of imports whose most significant aspect is the particularly rapid growth in the investment goods for the industrial sector.

4. ADJUSTMENTS FROM BELOW AND DISADJUSTMENTS FROM ABOVE: TWO FORMS OF CRISIS BEHAVIOUR

At the empirical level, the analysis of the process of realization of the oil rent and its double nature can be carried out by studying three essential variables: the foreign exchange earnings (DP), the imports by the non-oil economy (MZ) and the oil income of the state (IP). If the first one measures the right of access to the world market, then the second expresses the effective realization of this right, which has been previously exchanged to importers by the state, through the Central Bank, against the right of access to the domestic market held by these importers and which will subsequently find expression in IP (in Bolivars). The difference between DP and IP is constituted, grosso modo by the wages and salaries paid by the oil industry.
The analysis of the relation between these three variables for the 1946-1979 period (figures 6a and 6b) points towards three main findings:

a) First, we observe all through the pre-1974 period, a systematic and positive adaptation of imports (MZ) to the nominal capacity expressed by OP. In other words, OP operates both as an indicator and a ceiling for MZ, in spite of cyclical evolutions throughout the period. Hence, up to 1973 the national economy was able to function with no displacement of the external constraint becoming necessary and without a single deficit year in the balance of trade. This observation permits us to highlight a fact which constitutes a major original feature of the present period: the breakdown in the adaptation mechanism of imports (MZ) to the limits imposed by OP, a phenomenon which appears illustrated in all its extension in fig. 6b.

b) However, the observation throughout the period of the precise form of adjustment between OP, MZ and IP points towards significant changes not only in respect to the new situation, but also between period 1 and 2 of this work (cf. supra). In fact, period 1 is characterized by a high degree of synchronization of the variables under study: MZ adjusts within the same year to fluctuations both up or down in IP and OP. After the 1957 boom and the crisis that ensued, a change takes place in this mode of regulation. It appears that the mechanisms which produced the instantaneous adjustment of MZ throughout period 1, lost their efficacy so that imports become more rigid especially with respect to downward fluctuations in IP. The comparison of the adjustment results for the 1965-1973 period (1965 being the point of stabilization after the crisis) with those of the 1947-1959 period is illustrative in this sense. Within the context of a general decline of elasticities and correlation coefficients of MZ with respect to IP and OP, we observe a tendency towards a partial reconstitution of the previous adaptation between MZ and OP while the mediating role of IP weakens (the correlation between IP and MZ is not significant for α = 0.10).

c) Finally, the third finding which interests us in the context of this study relates to the radically different behaviour of the variables under study during the current crisis vis-à-vis the 1960-1963 crisis. In contrast to the earlier crisis which sees a fall in MZ well below the nominal capacity to import DP, allowing us to speak of an adjustment from below, the crisis which started in 1978 exhibits a disadjustment from above. MZ rising this time well above the limits imposed by OP. After a particularly long catch-up period (1974-1976) corresponding to the delay which became necessary for the economy to
adapt itself to the quadrupling of the oil rent, the jump in MZ since 1976 created a paradoxical situation: disposing of a rent four times larger than before but going against the tendency in DP, the economy finds itself these last three years with a large trade deficit.

This new feature — *disadjustment from above* — whatever its precise explanation, implies the appearance of major modifications in the economy's system of overall regulation. The following section will attempt to provide an interpretation of the observed transformations.

**FIGURE 6**

**CORRESPONDENCE AND CRISIS IN THE REALIZATION OF THE OIL RENT:**

**THE BREAK IN THE SYSTEM OF ADAPTATION**

<table>
<thead>
<tr>
<th>Simple Correlations Between the Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IP</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Coeff.</td>
</tr>
<tr>
<td>1947-59</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>MZ 1955-73</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>1974-79</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
III - ELEMENTS FOR A GENERAL INTERPRETATION.

The preceding analysis poses important questions in relation to the empirical evidence on the consistency of the double nature of oil rent: why do we observe a strong correspondence during the 1946-1959 period; why does this correspondence break up during the 1960-1963 crisis; what is the basis for the new correspondence observed during the 1964-1973 period; why does it break up after the 1974 oil shock. These questions are all the more interesting since the institutionalization of the foreign exchange constraint remains remarkably constant throughout the period under study: it is based upon fixed exchange rates and absence of exchange restrictions.

Given that this institutionalization is unable by itself to impose a rapid adaptation of imports to a varying DP since the exchange rate does not vary to make supply and demand of dollars coincide, the point then is to study the loop which is established between DP, MZ and IP which passes through the national economy and its regime of accumulation. For the 1946-1959 period, this regime can be characterized as follows:

* Production is centered around public works which constitute a massive expenditure of the state, and on the private building industry financed by a banking system whose development is also linked to the rapid growth of the oil rent. Manufacturing, which represents a small fraction of gross fixed capital formation, develops in two directions: building materials and consumption goods for the internal market (apparel and food industry). The oligopolistic power of local firms is limited by the important participation of imports in the final households consumption, which generates a competitive dynamic in the local market.

Under this regime of accumulation it is easy to see why the correspondence of state expenditure and imports takes place within the framework of the particular institutionalization of the foreign exchange constraints place.

* State expenditure generates two forms of demand: a direct one for building and public works and an indirect one for final household consumption. In the context of this arrangement, a rise in state expenditure generates an increase in demand for imported goods, both for final
consumption as well as building materials and equipment. These imports can be realized since states income is conjuncturally linked to the foreign exchange earnings OP. Moreover, these imports are decided on the one hand, by commercial firms whose purchases are linked to the satisfaction of current demand, and on the other by construction companies who operate on orders. Consequently, their reaction to conjunctural phenomena is fast explaining the observed correlation between variables without lags.

But the 1960-1963 crisis, which sees the end of the construction-led growth, coincides with large surpluses in the foreign trade balance produced by the substantial fall of imported goods and services in spite of a stable supply of dollars (DP) and a growing oil income of the state (IP) which indicates that the pre-existing economic link is broken. This situation implies then an incomplete realization of the oil rent, as a right of access to the world market. The characteristics of the crisis, which sees a falling price level and an adjustment of imports from below suggests the presence of a competitive mode of regulation.

The new regime of accumulation which emerges from this crisis can be characterized as follows.

* Industrialization which becomes the dynamic element, is directed towards the internal market with the state creating a strong protective system. State expenditure which is reassigned, as we know, towards tertiary activities, will generate the necessary exogenous demand needed by an industrial structure highly dependent on imports and hence unable to distribute sufficient revenue to realize the totality of its production, the difference being constituted by the imported value-added. The link between the exogenous demand in Bolivars, IP, and the funds necessary to purchase the imports OP manifests the internal consistency of this regime of accumulation.

The establishment of a new form of correspondence during the 1965-1973, period can be interpreted as follows:
Although the institutionalization of the foreign exchange constraint is not directly transformed, the strong and active protection of the internal market seriously limits the demand by commercial firms. The correspondence is then based on the relation between the exogenous demand generated by the expenditure of the oil rent (in Bolivars) which permits the realization of the imported value-added of production (in Bolivars) on the one hand, and the supply of dollars DP necessary to purchase those elements of production, on the other. However, the reestablishment of correspondence is weaker since importers are now essentially industrialists and hence a rise in imports depends on their decision to increase productive capacity, a policy which depends less on conjunctural changes in demand and more on medium-run considerations. This behavior is made possible by the protection of the internal market which, by eliminating the possibility of satisfying otherwise unexpected rises in demand, creates the conditions for the constitution of an oligopolic power among local producers, and hence permits supply to become independent in the short-run of changes in demand and consequently on variations of IP and government expenditure. It is this aspect of the new system of adaptation which will make it unable to reestablish the correspondence after the new shock in 1974, in contrast to other equivalent shocks (cf. supra).

Hence, the originality of the present situation relates not only to the important quantitative change in the oil rent, but also to the change in the structure of the non-oil economy and hence in the form taken by the realization of the rent: it is the regime of accumulation put in place in the early sixties and the overall system of regulation corresponding to it which explains the inability of the economy to reestablish the correspondence it had been able to reproduce in the previous period. In this sense, the autonomization of imports with respect to DP is explained by the oligopolic industrial structure which supplies the internal market while the ability of MZ to exceed the historic ceiling represented by DP reveals the incapacity of the present institutionalization of the foreign exchange market to impose the external constraint. Therefore,
it is not the decision of the government to accept a large external
debt which must be highlighted since it is a consequence of the mainte-
nance of the same institutionalization of the foreign exchange market
in spite of the change in the nature of the economy.

Yet, all this does not explain by itself the stagflationary
behaviour exhibited recently by the Venezuelan Economy where the GNP per
capita fell by 2.6% in 1979 while prices rose at a rate (over 25% for
1980) without any equivalent in historical series. It would appear that
the answer relates not only to the stagnation in the level of the oil rent
but more importantly to the incapacity of the current regime of accumulation,
qualitatively the same since the early sixties, to sustain growth.

In effect, the inability of the economic structure to export
commodities other than petroleum and iron ore (99% of exports), limits
the growth of production to the extension of the internal market. Moreover,
the necessary equivalence between the imported value-added and the exogenous
demand generated by the government, forces the utilization of the oil rent
(in Bolivars) as a source of final demand through its expenditure in tertiary
activities. Under these conditions, and given the highly advanced stage of
the import substitution process, no major sources of growth exist beyond the
continued expansion of the internal market through the double realization of
the oil rent. Moreover, even this form of expansion is seriously threatened
given that the elasticity of the GNP with respect to the oil income has
shown a strongly declining tendency since the early sixties amounting to
1.30, 0.80, 0.61 and 0.30 for the periods 60-64, 65-69, 69-73 and 74-79
respectively ([2][3]). In addition, the increase in the portion of the GNP
represented by imports and consequently the rise of the imported value-added
of production (given that 80% of imports constitute elements of production)
would imply —given a stable level of productivity and wages— a fall in the real
rate of profit, since the distribution of the revenue between capital and labour
is based on the nationally produced value-added which constitutes a falling
portion of total production. However, if prices include a relatively rigid
formation of nominal revenues and in particular, of a "usual" rate of profit,
the difference between the latter and the falling real rate of profit would
explain the development of an inflationary process within a recessive context.

Further research will be needed to deepen these views. In any
case, the double nature of oil rent and the mechanisms of adaptation
needed to achieve its realization must remain at the core of the analysis.
(1) Although statistics of this variable exists for earlier years, we have chosen to limit our analysis to the post-war period because of the unavailability of prior information on other related variables.

(2) This fact will force us to develop an analysis which relies on external parameters. The secret character of the internal accounting of these firms is well known and is based on the desire to withhold information on their real costs [4]. Hence, we cannot develop our analysis on the difference between production costs and economic surplus (which is then divided between profit and rent) due to the absence of reliable data. We will develop however a different scheme which attempts to explain the same phenomenon.

(3) In fact, under this distinction, an accumulation good can be physically identical to a replacement good, their distinction referring only to the effect they have on the production capacity.

(4) For recent years, the balance of services account is disaggregated into three accounts: "transport and insurance" which is small and positive (i.e. constitutes an export), "other services" which is small and negative, more or less cancelling out the previous account, and "return on investment" which is large and negative. For this reason we can take the service balance of the oil sector as a measure of the repatriation of profits.

(5) It is important to remark this difference. Some variables may be highly correlated in terms of their level, while their correlation in terms of yearly rates of change may not be significant. This indicates conjunctural independence but medium-run link. The correlation XP-DP exhibits this behavior especially for period 2, while XN-DP is conjuncturally correlated for all periods.
(6) In addition, the production/reserves ratio indicative of the long-run expansion possibilities was 1.4%, 0.9% and 1.0% for the Middle East in 1950, 1955 and 1960 respectively, while it averaged 6.3, 6.3 and 6.0 in Venezuela for the same years. The inverse of this variable is the time in years in which production can take place assuming no increase in reserves: for 1955 it is 15.9 years in Venezuela and 111 in the Middle East.

(7) By overall regulation we mean the set of institutional forms which permit the more or less precarious stability of a regime of accumulation. This concept has been utilized by some recent French works and is applied to the case of Chile by C. Ominami [13].
BIBLIOGRAPHY


