

## "God Is Brazilian": Turning Alcohol Into Fuel

### Pulling the Trigger: the Fuel Miracle is About to Occur

It was September 1, 1979, and Brazil was treading uncertain and dangerous waters. The alarming deficit in the country's balance of payments had been getting worse as a result of the second oil crisis, which had increased the country's oil import bill from US\$4.1 billion in 1978 to \$6.2 billion in 1979. The military government, which was heavily subsidizing oil, had to bear the costs associated with spiking oil prices in the international market.

Mário Garnero, chair of Brazil's National Association of Automotive Vehicle Manufacturers (*Associação Nacional dos Fabricantes de Veículos Automotores*, ANFAVEA), had just attended the opening ceremony of an expo held at the Anhembi Convention Center in São Paulo. Then the Brazilian minister of planning, the economist João Vitor Carvalho,<sup>1</sup> approached him and invited Garnero to accept a ride in the minister's car, saying he really needed to talk.

They had barely sat down when Carvalho started telling Garnero that, given the recent announcement by the Organization of the Petroleum Exporting Countries (OPEC) of a 37% increase in oil prices, the country's economic situation had become unbearable and the government needed to take drastic measures to contain the increasing deficit. Shortly after, Carvalho took out a handful of small papers from his briefcase and said: "Mário, do you know what these are? These are gas rationing tickets. They will grant a monthly gas quota to Brazilian motorists."

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<sup>1</sup> This case study, although inspired by true events and particularly by Mario Garner's book *Energia: o futuro é hoje* (São Paulo, Brazil: Edições Fórum das Américas, 1980), has been fictionalized. The names of politicians and some organizations have been changed.

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This case was prepared by Paola Giordano and Felix Sanchez, Research Assistants, under the supervision of Professor Ahmad Rahnema Alavi, as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation. We would like to thank Mário Garnero for his collaboration. November 2017.  
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Garnero blanched: the rationing system represented a catastrophe for the country. It would hurt the economy, and especially the automotive industry. Car sales would collapse, with the risk that hundreds of workers would be laid off.

"Do you have an alternative solution?" asked Carvalho.

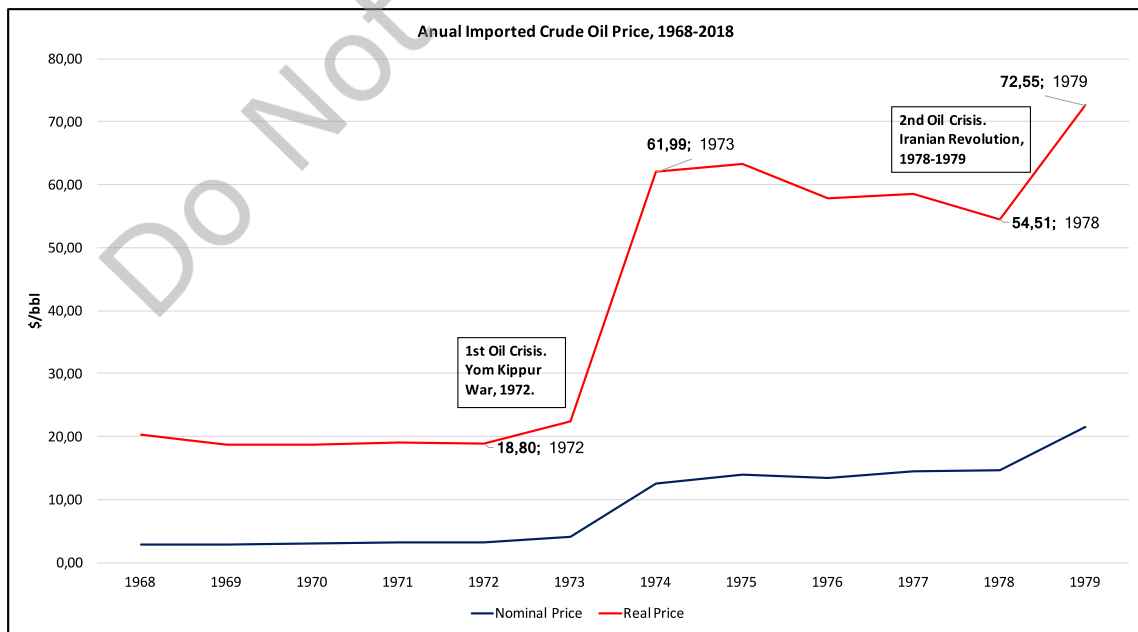
"I'll come up with one," Garnero answered. "Give me a couple of weeks." He quickly got out of the car, absorbed in his thoughts.

Garnero started to think about alternatives. He needed to forget for a while that he was the Chairman of ANFAVEA and try to analyze his country's situation from a macroeconomic perspective.

## The Brazilian Economy and its Fuel Industry at a Glance

Between 1970 and 1979, the Brazilian population grew from 96 million to 119.3 million people, 64.6% of whom lived in urban areas. At the beginning of the 1970s the Brazilian economy was booming. Annual GDP growth peaked at 14% in 1973, when the country faced a sharp increase in oil prices. Between 1972 and 1979, as a result of the Yom Kippur War and the Iranian Revolution, oil output from OPEC dropped and oil prices spiked worldwide. The real price of oil imports increased from \$18.80 per barrel (bbl) in 1972 to \$72.55 per barrel in 1979 (Figure 1).

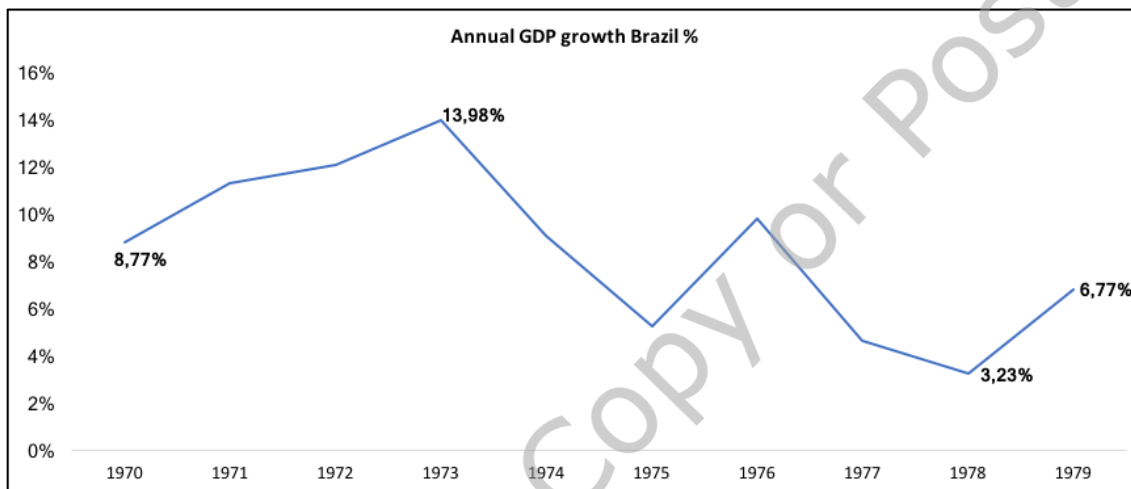
**Figure 1**  
**Nominal and real oil prices (\$/bbl), 1968-1979**



Source: Prepared by the authors, based on data from BP.

When the world entered into a recession as a result of the first oil crisis in 1973, Brazil had a comparative advantage. The country's growth was extraordinary, inflation was kept at 15%, and massive foreign exchange reserves built a retaining wall against the shock. Thus, despite a slowdown in GDP, the Brazilian economy managed to recover and, by the end of 1979, before the second oil crisis had translated in GDP's contraction, the country was showing a 6.8% growth rate in GDP (Figure 2).

**Figure 2**  
**Annual GDP growth in Brazil, 1970-1979**



Source: Prepared by the authors, based on data from the World Bank.

However, the days of what was dubbed the "economic miracle" were numbered. In fact, economic growth was hard to sustain amid the steep increase in oil prices for a country that depended heavily on oil imports for its energy needs and therefore was highly vulnerable to disruptions in oil supply (Figure 4).

Figure 3 shows oil's percentage of total primary energy consumption in Brazil in 1979. Moreover, it disaggregates total oil consumption into oil imports (representing 85.3%) and Brazil's oil production (14.7%).