

The Implications of the Recent Oil Price Drop on the Brazilian Economy

By Lavinia Rocha de Hollanda and Rafael da Costa Nogueira*

Introduction

Oil price movements have diverse impacts on different countries worldwide, which, amongst other factors, depend on the oil industry's contribution to the economy, and the flow of oil and oil products in the country's trade balance. In Brazil's case, there are also some particular characteristics of the oil sector that have to be considered when analyzing the economic impact of oil price volatility in Brazil.

The Brazilian national oil company, Petrobras, is a state-owned, publicly listed company that has a dominant presence in Brazil's oil sector. The company holds major positions in the entire value chain of the oil and gas sector, including major upstream areas both onshore and offshore, and also midstream and downstream assets. More than 90 percent of Brazilian oil production came from Petrobras in 2014, which also owns 13,686 billion bbl reserves and nearly all the national refining capacity. In addition to that, Petrobras is one of the biggest Brazilian companies, both in terms of assets and in market capitalization (US\$ 264.4 billion¹ and US\$ 64.2 billion², respectively). Therefore, when studying the economic effects of the drop in oil prices in Brazil's economy, it is mandatory to understand how they affect Petrobras.

From the macroeconomic scenario, Brazil has been a net exporter of oil since 2008 (Graph 1). Yet, the country still imports a significant volume of oil products, such as gasoline and diesel (Graph 2), and light oil ($\geq 31^\circ$ API), to blend with its local production of heavier oil.

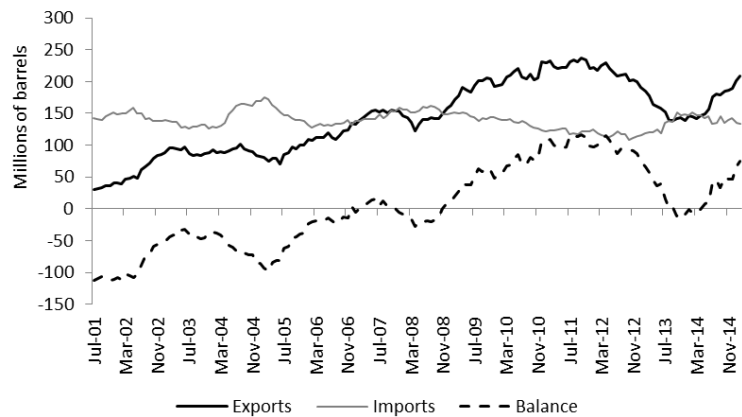
Also, as the majority shareholder in the company, the government has been able to impose price policies on Petrobras' domestic product market. At least since 2010, the prices of gasoline, diesel, LPG and fuel oil have been controlled at the refineries by the federal government, as an attempt to reduce its potential impact on consumer inflation indexes⁴. Thus, a drop in oil prices have mixed effects on the company's finances: on one hand, it should negatively affect its E&P business revenues. On the other hand, the company should benefit from the midstream segment, as domestic fuel prices at the refinery are currently higher than in the international market.

This article presents a brief discussion on the impacts of the recent oil price drop in Brazil, by pointing its consequences to the country, through both micro and macroeconomic perspectives.

The Microeconomic Effect: Can Petrobras Dodge Price Impacts?

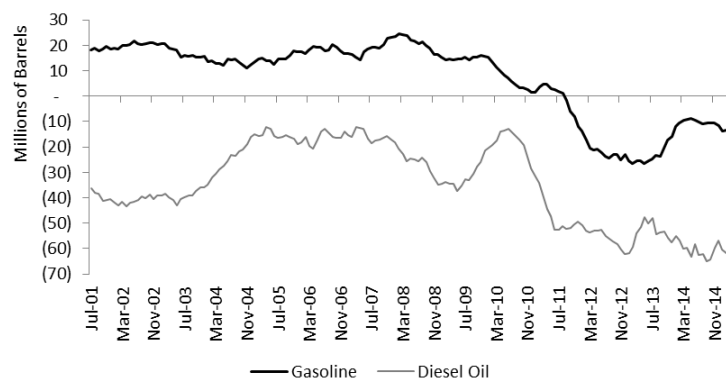
Despite Petrobras' idiosyncrasies, the recent oil price drop already had, and should continue to have, a strong negative impact on the E&P segment; the case being the same with other oil companies worldwide. The results of all major oil companies have been affected by revenue decreases and asset impairments adjustments, and there is no reason why it should be different for Petrobras' E&P segment. Petrobras released its 2014FY financial results last April, and reported an impairment of US\$ 3.3 billion due primarily to the drop in oil prices.

However, this negative effect should be compensated by the gains from the reduced costs of importing oil products, so both the refining, transportation and



Graph 1: Brazilian Oil Trade (trailing 12 months)

Source: Own elaboration from ANP³ data.

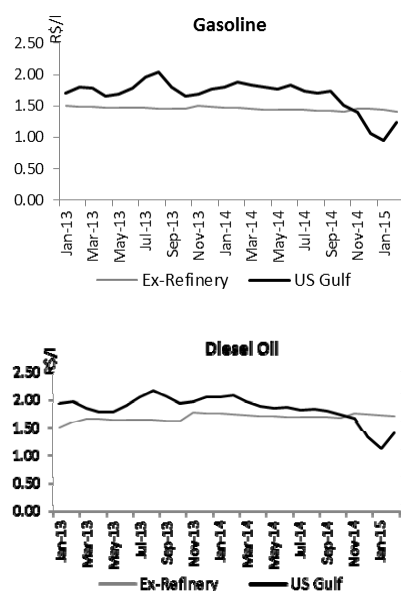


Graph 2: Brazilian Oil Products Trade Balance (trailing 12 months)

Source: Own elaboration from ANP data.

* Lavinia Rocha de Hollanda is Head of Research at Fundação Getúlio Vargas, Centro de Estudos FGV Energia (FGV Energia). Contact information: lavinia.hollanda@fgv.br Rafael da Costa Nogueira is a Researcher at the same institution.

See footnotes at end of text.



Graph 3: Ex-refinery vs. US Gulf (real prices*)

Source: Own elaboration from MME⁵ and EIA data. *Deflator: Brazilian CPI (IPCA).

marketing (RTM) and distribution segments should benefit from lower oil prices. As shown in Graph 2, Brazil is a net importer of gasoline and diesel oil, paying international prices, but selling them at a controlled price by the government (Graph 3) - Petrobras has had a historic role in cushioning oil price volatility. Speaking solely from this perspective, oil product prices considerably reduced by lower crude prices should be music to the company's ears.

The net effect is still unclear but, besides international oil price movements and their potential effects on the company's businesses, Petrobras has had a very turbulent year in 2014. The company has been on the news because of allegations of corruption and mismanagement. Also, net leverage has been increasing over the past few years, having reached US\$ 80.4 billion at the end of 2Q14 (3.9x EBITDA), to fulfill an ambitious investment plan of US\$ 220.6 billion in the period between 2014 -2018.

As a result of the above facts, the company has put its Investment Plan under review and has delayed the publication of its audited financial results from 3Q14. The figures for 2014, published on April 22, 2015, have shown a major asset write off, which amounted to nearly US\$ 17 billion. Apart from the US\$ 3 billion impact on oil asset prices, this number includes US\$ 2.0 billion due to corruption, US\$ 1 billion from petrochemical assets and US\$ 11 billion as impairment adjustments for the RTM segment. Naturally, it has damaged the company's annual result, which has disclosed an annual negative net result of US\$ 7.2 billion (-192% YoY).

Petrobras has also announced a US\$ 13.7 billion asset divestment plan, 30 % in E&P (both in Brazil and abroad), 30% in RTM and 40% in Gas & Power. Even though the divestment from non-core assets may allow the company to reduce its leverage and focus on its main areas, the current global scenario in the oil industry raises some

doubts on whether Petrobras will succeed in selling its assets at a favorable price.

It is clear that Petrobras' future is still very unclear. According to 2014's financial statements, the company's net leverage exceeded 4.7x adjusted EBITDA. That figure, added to the need for a high CAPEX in order to obtain increasing revenues from oil production and accomplish deleverage targets, creates a fuzzy scenario for the company's near future.

In this quite complex context, it is difficult to disentangle the impacts of the recent decline in oil prices on the company's numbers. Putting aside the extraordinary measures that had to be taken in order to reposition the company after all the events of 2014, the net effect will impact the prices on both E&P and RTM business. Revenues suffer from price decline, and the E&P segment becomes directly affected, as has been shown by recent oil company results worldwide. On the other hand, the cost of capital goods and services used in production is declining as well, which should have a positive effect on production costs for Petrobras. The effect of the recent increase in domestic oil product prices should be seen in the results for 1Q15 as well, which will be due on May 15, 2015. As mentioned previously, we expect a positive outcome from the RTM area to partially compensate for E&P segment losses.

Finally, Petrobras is working on a new investment plan for 2015 to 2019, which is expected to be released soon. This investment plan will signal to the market how the company will reposition itself in the new scenario. If the company is to maintain the level of production of 2,212 Mbpd registered in December 2014 throughout 2015, it will be able to deliver an 8.7% increase YoY in oil production. However, the E&P segment director has recently stated a target of 4.5% increase YoY in oil production for 2015, and 2.8% YoY for 2016, which could indicate a slowdown on future investments in E&P activities. It is a clear message that the company is suffering from mismanagement, aggravated by the oil price drop.

In short, Petrobras has been going through tough financial distress recently, and oil price declines act as a headwind for the company's plans. Brazilian ambition to become self-sufficient in "quality oil" and oil products has been put aside, since oil growth targets and refining facilities⁶ have been reviewed. Moreover, the regulatory framework and the macroeconomic scenario also hinder getting back on track with high production growth.

Regulatory Framework and the Macroeconomic Effects: How Big are Oil Price Impacts on Brazil?

Brazil's economy expanded only 0.1 % in 2014. Besides that, a planned primary surplus of 1.8 % of GDP for 2014 ended up being a 0.6 % deficit, and Brazilian CPI (IPCA) increased 6.41 % last year. 2015's negative perspectives have embodied Brazil. It is almost a consensus among analysts that the Brazilian economy will shrink in 2015. Inflation is skyrocketing and the market forecasts an 8.29%⁷ increase for 2015, way above its target's top limit of 6.5 %. The deteriorated macroeconomic scenario

has motivated a budget austerity plan in the new presidential term. Despite that measure, consumer and investor confidence is still disturbed, and political protests have risen. Consequently, the real (Brazilian currency) has registered a big loss recently, peaking at R\$ 3.29/US\$ on March 13, 2015.

Due to Petrobras' major role in the Brazilian oil sector, to measure the scale of the oil price decline in macroeconomic impact for Brazil, we should first understand how big Petrobras' economic contribution is. Table 1 shows Petrobras' economic contribution in Brazil, and its proportion to Central Government net revenues. The evolution of the company's contribution shows that, on average, almost 13% of the Brazilian Central Government net revenue comes from Petrobras. The company also has an important role in the country's development, helping to finance the Federal Government's funding and investments, and being a major demander in the local industry of services and goods.

In the beginning of 2015, PIS⁸/Cofins⁹ (both federal taxes) had their rates raised, and Cide¹⁰ returned to be effective last May 1, after a two-year waiver. Those actions result from the country's new austerity plan, i.e., a plan of budget cuts and tax increases. The federal government has returned to targeting primary surplus, so the need for revenue increase became even higher. For some economists, the exit of a capital and credit rating downgrade would follow without budget cuts. Subsequently, borrowing costs for the population and the currency crisis would emerge.

Brazil's dependency on Petrobras has been growing over the years (Table 1). So, cuts on the company's CAPEX and the decrease of oil production growth targets will hit the Brazilian public finance directly. Some of Petrobras' executives have publicly indicated that the company's investment will probably range from US\$ 129 billion to US\$ 141 billion from 2015-2019, according to the investment plan to be released. The previous investment plan presented a target of US\$ 221 billion of investments for the same time frame, meaning that a 41 % decrease in investment is expected for the period.

Cuts in CAPEX have other direct impacts to the economy, besides tax collection. Many projects will not develop as expected, triggering a wave of mass dismissals in the entire oil production chain, ranging from demand for capital goods and services for exploration activities, to resizing refinery capacity. In this scenario, foreign investment from major oil companies could be a way to compensate for the economic impact that the reduction of Petrobras' investments should have on Brazil.

However, the Brazilian regulatory framework for the oil and gas sector may pose several challenges for attracting international companies' interest in investing in Brazil, especially in a global scenario of reduced oil prices. The sole operator rule for the pre-salt areas requires Petrobras to participate as an operator, and with at least a 30 percent share, in any forthcoming auction of pre-salt E&P areas. Clearly, in a scenario of financial distress, the company may experience difficulties with accessing the credit market. The 30 percent mandatory participation, together with the obligation to operate pre-salt areas, restricts important possibilities of E&P risks mitigation, also constraining joint ventures with other oil producers. Finally, high local content requirements also represent a significant hurdle for attracting foreign investment to the sector; thus, leaving a significant investment to be made by Petrobras.

Conclusion

The recent oil price decline can differently affect a country, depending on its micro and macroeconomic structures. For producer countries that deeply rely on the oil industry, the price slump has a major impact on public finances. On the other hand, it may benefit countries that are major consumers by reducing fuel prices and helping to boost the country's GDP. However, in Brazil, the economic net effect of oil prices are unclear, due to Petrobras' major role in the country's oil production and its historic role in cushioning oil price volatility for domestic consumers.

The company has been going through a very turbulent period, due to financial issues derived from mismanagement and corruption activities. The fall in oil prices also adds a negative impact on its operations. So, considering Petrobras' development importance to the sector and to the country, the path for recovery will be a long and winding road, and a drop in prices may make it even longer.

Economic Contribution (R\$ Million)	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average
Economic Contribution in Brazil	48.6	48.6	56.7	52.1	62.0	69.4	62.2	63.8	58.5	
(% Central Government Net Revenue)	10.8%	10.8%	12.6%	11.6%	13.8%	15.4%	13.8%	14.2%	13.0%	12.9%
ICMS	17.7	18.1	23.1	24.7	28.7	37.1	39.4	43.4	48.0	
(% Central Government Net Revenue)	3.9%	4.0%	5.1%	5.5%	6.4%	8.2%	8.7%	9.6%	10.6%	6.9%
Cide	7.8	7.8	5.4	5.7	6.9	7.5	2.0	0.0	0.0	
(% Central Government Net Revenue)	1.7%	1.7%	1.2%	1.3%	1.5%	1.7%	0.4%	0.0%	0.0%	1.1%
PIS/Cofins	11.6	11.9	12.7	12.5	14.8	14.9	16.0	15.9	16.2	
(% Central Government Net Revenue)	2.6%	2.7%	2.8%	2.8%	3.3%	3.3%	3.5%	3.5%	3.6%	3.1%
Income Tax and Contributions Excluding Profit	11.4	10.7	15.5	9.1	11.7	9.9	4.9	4.6	-5.6	
(% Central Government Net Revenue)	2.5%	2.4%	3.4%	2.0%	2.6%	2.2%	1.1%	1.0%	-1.3%	1.8%
Economic Contribution Abroad	3.8	3.5	4.4	3.3	4.8	5.9	6.9	6.1	6.1	
(% Central Government Net Revenue)	0.8%	0.8%	1.0%	0.7%	1.1%	1.3%	1.5%	1.4%	1.4%	1.1%
Total	52.4	52.1	61.2	55.4	66.8	75.3	69.1	69.9	64.7	
(% Central Government Net Revenue)	11.6%	11.6%	13.6%	12.3%	14.8%	16.7%	15.3%	15.5%	14.3%	14.0%
Central Government Net Revenue	450.7	513.3	583.6	611.6	779.1	817.9	880.8	991.1	1013.9	

Table 1: Petrobras' Economic Contribution (Current Prices)

Source: Own Elaboration from Petrobras and Brazilian National Treasure data.

The good news is that the new macro scenario in Brazil might be an important catalyst for the revision of some aspects of the regulatory framework, as it has already been publicly stated by government officials¹¹. Local content requirements, as well as the sole operator clause, have started to be questioned and revisited. The critical macroeconomic situation, together with the threat of higher levels of unemployment, has given momentum to their simplification efforts by federal authorities.

Regulatory relaxation, along with recent Petrobras' actions towards compliance improvements, should contribute to easing the implications of the recent oil price decline in Brazil. However, the negative effects may last longer than desired.

Footnotes

¹ Exchange rate used in the article is R\$ 3.00/US\$.

² For May 13th, 2015.

³ Brazilian federal regulatory agency for the oil and gas sectors.

⁴ In November 2014, amidst news on corruption scandal surrounding Petrobras and cash flow pressures, the Board decided to allow an increase in gasoline and diesel domestic prices (3% and 5%, respectively), in order to improve the company's revenues.

⁵ The Brazilian Ministry of Mines and Energy (MME).

⁶ "Complexo Petroquímico do Rio de Janeiro (Comperj) and the second refining unit of Refinaria Abreu e Lima (RNEST) are both under construction and have been removed from the Downstream CGU in the quarter ended December 31, 2014 and assessed for impairment individually." (Petrobras 2104FY Results, page 30).

⁷ Central Bank Focus Report at May 11th, 2015.

⁸ PIS (Social Integration Program) is a social tax contribution paid by companies in order to finance the payment of unemployment insurance and abandonment to the employees who earn up to two minimum salaries.

⁹ COFINS (Contribution for Social Security Financing) is a federal contribution also paid by tax destined to social security that covers retirement and health care.

¹⁰ Cide (Contributions of Intervention in the Economic Domain) is a contribution that is for the improvement or activities linked to the sector in which its incident.

¹¹ Accordingly to Brazilian Newspaper "Valor Econômico" (<http://www.valor.com.br/brasil/4036526/nova-regra-de-conteudo-local-pode-valer-em-junho-diz-anp> - in Portuguese)

Careers, Energy Education and Scholarships Online Databases

IAEE is pleased to highlight our online careers database, with special focus on graduate positions. Please visit http://www.iaee.org/en/students/student_careers.asp for a listing of employment opportunities.

Employers are invited to use this database, at no cost, to advertise their graduate, senior graduate or seasoned professional positions to the IAEE membership and visitors to the IAEE website seeking employment assistance.

The IAEE is also pleased to highlight the Energy Economics Education database available at <http://www.iaee.org/en/students/eee.aspx>. Members from academia are kindly invited to list, at no cost, graduate, postgraduate and research programs as well as their university and research centers in this online database. For students and interested individuals looking to enhance their knowledge within the field of energy and economics, this is a valuable database to reference.

Further, IAEE has also launched a Scholarship Database, open at no cost to different grants and scholarship providers in Energy Economics and related fields. This is available at <http://www.iaee.org/en/students/List-Scholarships.aspx>

We look forward to your participation in these new initiatives.

