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Managing Resource Revenues in Oil-Rich Countries: The Case of Azerbaijan

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Abstract

For the past 20 years of independence the Republic of Azerbaijan has been through economic crisis, stability, and rapid development. All these steps taken toward development have been remembered ever since for both their uniqueness as well as their conformity to economic realities: firstly, the recession (1992-1995) recovery (1996-1997), boom (1998-2008) and final slump (starting 2009). Thus, when evaluating the past 20 years of the economy of the Republic of Azerbaijan, it is of great importance to pay close attention to its growth and prosperity and draw conclusions about the developmental process itself.

Possessing large oil revenues gives the Government of Azerbaijan a unique opportunity to effectively use this newfound wealth by investing in development programs that can provide a lasting benefit to its citizens’ social welfare, economic growth, security, and overall quality of life. On the other hand, the oil reserves and oil that has already been turned into liquid assets carries with itself risks of inefficiency due to the lack of institutional capacity created by traditions of bottom-up control and the legacy formed by years of participation in a centralized economy. Given that the flow of oil revenues has a finite life expectancy, the Government of Azerbaijan must implement a long-term macroeconomic strategy, fiscal rule and implementation mechanisms that ensure that the oil money is saved in the most efficient way and that the benefits of the investments address high priority needs are highly integrated and sustainable.

The volume of the Azerbaijani economy in 2011, in comparison with 1991 when it earned its independence, has increased 18.5 times. If nominal GDP in 1991 was AZN 2.7 billion, or approximately 3.4 billion U.S. dollars with the current exchange rate, in 2011 this figure was AZN 50.1 billion or approximately 63.4 billion U.S. dollars. During this period, the volume of nominal GDP per capita increased 39 times and reached 7003.4 U.S. dollars. For the first time since its independence, Azerbaijan achieved macro-economic stability and economic growth from 1996 to 2011. During this period the average economic growth rate was 11.8%.

On the other hand, dependence on oil revenues may create risks for the future sustainability of the state budget. According to independent experts’ calculations, the share of non-oil revenues in the budget totals 5.7 billion U.S. dollars, which constitutes 51% of current budget spending of $11 billion.

Considering that current expenses are important in terms of the state's economic functioning, barriers to this function as well as fiscal risks and social dissatisfaction may occur in the future.

However, in terms of the global economic crisis, the current state of Azerbaijan’s economy can be considered positive.
The historical record of managing resource revenues has been extensively researched and extensively reviewed (e.g., van der Ploeg, 2007). The consensus is that while resource revenues have a positive effect on economic growth in countries with good governance, their effect in countries with poor governance has on average been negative. Cross-country evidence suggests that countries can escape the resource curse (Sachs and Warner, 2007) and turn the windfall revenue into a boon if they have good institutions (Mehlum, Moene and Torvik, 2006), are open to international trade (Arezki and van der Ploeg, 2008), or have well-developed financial systems (van der Ploeg and Poelhekke, 2008). It is notoriously difficult to interpret the macroeconomic effects of commodity booms in cross-country studies, so it is useful to examine the dynamics more explicitly. Collier and Goderis (2007, 2008) use global data from 1960 onwards and find that, for the first few years following an increase in the price of commodity exports, non-resource output does indeed increase relative to what it would otherwise have been; people become more productive.

Both historic and modern literature has been examined to build a theoretical framework for our research. We will review literatures to test our hypothesis theoretically. Reviewing literatures we will also target to add value modern views done before our proposal.

Wakeman-Linn, Mathieu and van Selm (2002) note that oil funds improve coordination between monetary and fiscal policy. Funds function best when they are separate from the state budget and revenues cannot be easily disbursed by the state agencies. The authors exclude stabilization function of the fund arguing that “Shortfalls in state budget must be made up through changes/improvements in the state budget”

In his papers, Professor Paul Collier addresses the efficient management of natural resource revenues in capital-scarce developing economies. P. Collier has made enormous contributions on management of resource revenues in CAREC region. The authors only justify the use of stabilization functions in cases of instability in fiscal revenue – this complicates fiscal management, budgetary planning, and the efficient use of public resources. Sharp cuts in expenditure can be disruptive and costly; while increases in revenues can be a temptation to raise spending to unsustainable levels.

A useful theoretical framework that we will apply to the project, with desirable intergenerational considerations, is the permanent income hypothesis (PIH) formulated by Friedman (1957). Although PIH is a hypothesis, it is also applied as a model in the oil revenue management. According to the PIH, both individuals and benevolent governments should be considered forward-looking, trying to balance consumption over time with permanent income. Where there is zero population and productivity growth in an oil producing country, the PIH implies that constant government consumption over time is equal to the annuity present value of expected oil wealth. By definition expenditures out of oil proceeds would be stable, thus avoiding boom-bust cycles. The added predictability this rule offers should in principle help policymakers avoid bottlenecks in absorptive capacity.

Formally, using the PIH sustainable government consumption of oil wealth (GC) at any point in time t+1 would be determined as follows:

$$GC_{t+1} = (r-1) \times \left[ F_t + \sum_{i=0}^{T_{t+1}} T_i (1+r)^i \right]$$

where $F_t$ is the value of the accumulated revenue in the oil fund at the end of the previous year, in constant prices; $T_i$ is the oil revenue the government expects (net of production...
costs) in period \( i \), in constant prices; \( r \) is the expected average real rate of return on oil wealth; and \( I \) is the number of years until oil production ends.

Other variations of the PIH will be also been considered. By applying this model, we intend to consider constant government consumption of oil wealth, non-oil GDP and etc. We choose this model because there are ties between indicated theoretical model and hypotheses. Comparative application of both hypotheses will give more occasion to conduct research by considering different factors. Our hypothesis which addresses shifts in the life-cycle permanent income model can be tested PIH.

We accept that there are some have criticisms of the use of the PIH in managing oil revenues, especially by transition counties. When the initial capital of the economy, both physical and human, is low, the productivity gains of government social and capital spending of oil revenues could exceed the financial returns from oil savings. This can happen where there is production externality from government spending, particularly from the impact of public investment on productivity and the incentives it generates for private capital accumulation (Management of Oil Wealth Under the Permanent Income Hypothesis, Alonso Segura, 2006). But compare other models, such as Benchmark model, PIH will review more clear management of oil revenues, such as consumption of wealth and it will create base to apply hypotheses in Azerbaijani case.

Coming to a conclusion, researches show that the main problem of the Azerbaijan economy is a high degree of dependence on the oil industry. It is, however, true that in recent years the government has initiated efforts to develop the non-oil sectors of the economy. In this regard, some measurable results have already been achieved: the share of non-oil sector in GDP reached 56,0 % in 2013. This was the first time that the volume of investment in non-oil sectors was 3.6 times more than that of investments in the oil sector.

Inspire of the foregoing, Azerbaijan has been prodigal with its funds. In other words the necessities and priorities of public investments are not seriously analyzed and properly selected. This, in turn, reduces the effectiveness of investments. In fact, it is not the amount of money spent, but the result that is important. In some cases, investments are directed to the implementation of the same projects several times. As a result, the share of investments in the budget continues to grow instead of lessening each year. The oil industry’s influence on the economy of the country is so prominent that a lot of effort and power is required to reduce overdependence on it. However, if the government had taken certain steps, it would have been able to free the economy gradually from substantial dependence on oil.

The paper, finally, analyzes different scenarios of managing oil money in Azerbaijan and advocates for a strategy that involves the following:

- All of the oil rent money needs to be isolated from the economy and collected in the Oil Fund, meaning that it should not be transferred into the State Budget, and at the same time the Fund shouldn’t replicate any functions of the State Budget
- The Fund should select the savings strategy and employ the smooth distribution function at the expense of the stabilization function
- The Fund resources should initially be invested abroad only
- The diversification principle needs to be prepared to illustrate the ceilings - expressed in percentages of the Fund’s resources - that can be allocated in each country, each type of the business, and each company
• Ethical principles need to be prepared to outline the countries, the businesses and the companies where the Fund money can and cannot be allocated
• The correlation needs to be determined, where the more the Fund grows, the more the percentage share of it can be invested in equity shares rather than in T-bills
• The relationship between the risk, expected return, number of investments and overall Fund resources needs to be determined for the investors to serve the maximization principle, sticking to the Fund’s rules, but not on their own discretion that may have a goal not fully overlapping with the Fund’s goal
• Principles need to be developed for the future possibilities in investing in the domestic business sector, in the form of a separate bank that would expect the return for the Fund form the investing in the local business higher than from the investment abroad