

POLICY DIALOGUE ON NATURAL RESOURCE-BASED DEVELOPMENT

WORK STREAM 2:

REVENUE SPENDING AND NATURAL RESOURCE FUNDS

RESOURCE REVENUE EARMARKING: COMPARATIVE ANALYSIS AND LESSONS LEARNED

Participants in the Policy Dialogue on Natural Resource-based Development agreed to undertake further analysis to investigate how to use natural resource revenues to support the implementation of the 2030 Agenda for Sustainable Development.

This report was prepared by the OECD Development Centre and is submitted for discussion to support the thematic dialogue on earmarking practices under session 6 of the Eighth Plenary Meeting of the Policy Dialogue on Natural Resource-Based Development to be held on 16 June 2017 at the OECD in Paris.

This report sets out taxonomy of earmarking mechanisms, and their specific relevance for linking extractive revenues and expenditures. It also provides in-depth analysis of their advantages and disadvantages; how such advantages and disadvantages have played out in practice in selected resource-rich countries and why they have decided to earmark resource revenues. Finally, this report draws lessons on earmarking practices, based on the experiences of selected resource-rich countries.



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EXECUTIVE SUMMARY

This report reviews the motivations, advantages and drawbacks of earmarking natural resource revenues for the purposes of broad-based and inclusive development. Countries covered in this report include Azerbaijan, Bolivia, Botswana, Chad, Chile, Ecuador, Indonesia and Venezuela. ‘Earmarking’ is the practice of assigning revenue to a specific expenditure item(s) and is common practice in public finance in developed and developing countries, including the earmarking of natural resource revenues. Earmarking can be on-budget or off-budget, the latter namely through a natural resource fund.

One justification for earmarking is the so-called benefit principle, whereby a tax is levied on a specific activity to pay for that activity (e.g. fuel taxes to finance road construction and maintenance). In the case of natural resource revenues, this logic does not apply. However, there are various other reasons why resource-rich countries do earmark revenues, including: preventing inappropriate use of resource revenues, directly protecting the financial autonomy of certain institutions (e.g. universities), funding expenditures that may otherwise be neglected in the budget process (e.g. transport infrastructure, healthcare, and education) and addressing a dysfunctional budget allocation process. However, earmarking is associated with several risks, including diminished incentives to improve expenditure efficiency, reduced budget flexibility, reinforced procyclicality of expenditure absent a stabilisation mechanism and greater complexity of general fiscal management.

Country experiences with earmarking are mixed and in some cases negative. They suggest that earmarking may not be the most effective policy for prioritising broad-based and inclusive development. As the experiences of Botswana and Indonesia demonstrate, development expenditure can be prioritised without reverting to specific earmarks. The key lesson is that mobilising natural resource revenues for broad-based and inclusive development requires commitment and a strategic vision on the part of government, both of which can be achieved without earmarking. Underpinning this is the principle that resource-rich countries wishing to prioritise development-related expenditure must first ensure sound and consistent macroeconomic management of natural resource revenues and devise long-term policy frameworks and spending plans for their development policies that recognise the inherent volatility and finitude of natural resource revenues.

I. INTRODUCTION

1. Participants in the Sixth Plenary Meeting of the Policy Dialogue on Natural Resource-based Development held on 22-23 June 2016 agreed to share country experiences concerning the opportunities, trade-offs and effectiveness of using natural resource revenues in support of the 2030 Agenda for Sustainable Development. Four fiscal mechanisms relevant for resource revenues were identified for further analysis under Work Stream 2 of the Policy Dialogue on Natural Resource-based Development: sub-national spending, strategic investment funds, earmarking and direct distribution (cash transfer programmes). This report focuses on earmarking and is intended to complement previous work on stabilisation and savings funds (completed in 2015) and on sub-national revenue sharing and strategic investment funds (completed in 2016).

2. Citizens in many resource-rich countries expect an equitable sharing of the country's wealth, but perceive only a weak relationship between natural resource revenues and wider benefits received through services and investments that may compensate for the depletion of resources and the potential significant adverse impacts that large natural resource investments can bring. One possible approach to this problem is to strengthen revenue and expenditure linkages by requiring that revenue earned from one source be dedicated to specific expenditures that are of broad social benefit. In particular, participants in the Fifth Plenary Meeting of the Policy Dialogue asked the OECD Development Centre to investigate how natural resource revenues can contribute to the financing of the SDGs, for example to reduce funding gaps in social spending (health, education, and social protection).

3. The main objectives of Work Stream 2 in 2017 will be to: (1) improve understanding around practices on *earmarking* and direct distribution (*cash-transfer programmes*) as possible mechanisms to support the implementation of the 2030 Sustainable Development Agenda; (2) assess the effectiveness and constraints of earmarking practices; (3) identify the type of social expenditures that may be better suited for funding from resource revenues; (4) review institutional mechanisms for determining investment priorities.

4. The aim of this report is to understand the advantages and disadvantages of earmarking of natural resource revenues and assess the effectiveness of this practice. The report is structured as follows. Section II provides taxonomy of earmarking practices. Section III discusses the rationale for earmarking, followed by an analysis of the advantages, disadvantages and risks of earmarking. Section IV compares country experiences in the use of earmarking in resource-rich countries. This section is divided into four subsections. The first subsection discusses the case of Bolivia, which has an extensive system for earmarking oil and gas revenues. The second subsection presents the cases of Botswana and Indonesia, which have mobilised natural resource revenues on development-related investments (e.g. health, education) through the budget without reverting to specific earmarking. The third subsection assesses cases of earmarking reform in Chad, Chile, Ecuador, and Ghana. Finally, the fourth subsection considers off-budget earmarking in Venezuela and Azerbaijan. Section V outlines the lessons learned, emphasising how countries can prioritise development expenditure without earmarking. This section also offers guiding questions for peer-learning at the Eighth Plenary Meeting of the Policy Dialogue on Natural Resource-based Development.

II. TAXONOMY OF EARMARKING PRACTICES

5. Earmarking, as it is used generally in public finance, is the practice of designating specific revenues for targeted public services and/or investment (Buchanan, 1963). Earmarking can also refer to the use of 'segregated accounts', 'special funds', 'segregated budgets' and 'dedicated revenues'. In principle, earmarking is a way of compartmentalising fiscal decision-making. It is the use of a single income source

or a wider pool of government receipts, such as natural resource revenues, within a fiscal system that has multiple tax sources and provides multiple public services. Earmarking contrasts with general-fund budgeting, where fiscal decision-making allocates financing to specific public services and investments without regard to the source of financing out of a general budget. In the latter case, government revenues are pooled and reallocated to public services through the budget-setting process. Earmarking can be on-budget and off-budget.

6. **On-budget earmarking** of natural resource revenues comes in two forms: *real* and *notional* earmarking.¹ *Real earmarking* of natural resource revenues occurs where spending on a budget item or a transfer to another governmental or sub-national entity is agreed upon before receipt of those revenues. This includes transfers from the budget to extra-budgetary funds. Extra-budgetary funds refer to general government transactions that are not typically included in the annual budget law, and are organised as separate government entities with their own banking and institutional arrangements (Allen and Radev 2010). Types of extra budgetary funds include health funds, social security funds, road funds, education funds and other development funds. Also included are natural resource funds with a stabilisation and/or savings mandate, whose deposits first flow through the budget.

7. *Notional or symbolic earmarking* can be defined as a situation where natural resource revenues are intended for some goal or set of goals, such as investment in physical and/or human capital. Here, as exemplified in the case of Botswana and Indonesia discussed in section IV, natural resource revenues are intended to fund priority budget items such as health, education and infrastructure, whereas non-resource tax receipts fund other budget items such as recurrent spending on government salaries.² As such, symbolic earmarking is a flexible means of prioritising development-related expenditure and investment. Symbolic earmarking is also seen in the case of the National Fund of the Republic of Kazakhstan (NFRK), which accumulates natural resource revenues and through a so-called “guaranteed transfer” channels revenues to the national budget. These transfers are meant to finance the budget’s development programmes, with non-resource tax revenues meant to cover recurring expenditure. The case of the NFRK is discussed in the *Comparative Analysis on the Performance of Stabilisation Funds and Investment Options* endorsed at the Fifth Plenary of the Policy Dialogue on Natural Resource-Based Development. The NFRK is also able to make targeted transfers above the limits set by the regular withdrawal rules for socially important large-scale projects in the absence of alternative financing at the request of the President. However, these transfers still go through the budget to ensure transparency and to protect public financial management.

8. **Off-budget earmarking** is when natural resource revenues are funnelled to extra-budgetary funds, such as a natural resource fund, without passing first through the general government budget. These extra budgetary funds may or may not be subject to parliamentary oversight and conventional standards of public procurement. For example, as highlighted in section IV, the State Oil Fund of Azerbaijan has a stabilisation and savings mandate, but it is also used to make major domestic investments in support of socio-economic objectives. However, the prioritisation of projects is at the discretion of the country’s president, who controls the fund. As such, Azerbaijan is earmarking natural resource revenues for public expenditure outside of regular budget procedures and parliamentary scrutiny. There is a risk of fragmenting or duplicating public spending, which undermines public financial management. Likewise, bypassing parliamentary oversight could lead to natural resource revenues used for patronage.

9. It is important to distinguish off-budget earmarking of natural resource revenues for public spending and investment through a natural resource fund from domestic investment made by a state-sponsored strategic investment fund or sovereign development fund. The latter, which are typically funded from the budget, is concerned with making growth-enhancing investments that achieve a market-based financial return. The former does not necessarily seek a verifiable investment return subject to a market benchmark. It is spending and investment comparable to conventional public investment. For further clarification,

please see the report *Strategic Investment Funds: Comparative Analysis and Lessons Learned* presented at the Seventh Plenary Meeting of the Policy Dialogue on Natural Resource-Based Development.

III. UNDERSTANDING THE RATIONALE, ADVANTAGES AND DISADVANTAGES OF EARMARKING IN PUBLIC FINANCIAL MANAGEMENT

10. Earmarking practices are used widely in both developed and developing economies. Examples of earmarking include the use of payroll taxes for social security payments, fuel taxes for road building and maintenance, or property taxes to fund education. The rationale behind many forms of earmarking is that the user of the benefit pays for the expenditure (Teja 1988). There is a strong link between the source of the revenue and the policy that the revenue is expended on. There is also a degree of specificity of the expenditure. The earmarked spending might be focused on a single activity or several. Fuel taxes, for example, are paid for by those using the roads which the gasoline taxes pay for. This is known as the ‘benefit principle’. Yet, a strong linkage between natural resource revenue earmarking and expenditure does not typically hold for most cases.³

Rationale for earmarking natural resource revenues

11. While the benefit principle might not hold readily in natural resource revenue earmarking⁴, there are still other motivations. These motivations are generally as follows:

- To draw greater public attention to the use of natural resource revenues for longer-term benefits, such as improving health and education outcomes or the quality of infrastructure.
- To address expenditure items that may be typically neglected or vulnerable in the budget-setting process, such as health and education, at the expense of potentially favoured budget items (e.g. defence or government salaries).
- To discourage government from overspending on recurring expenditures that have limited long-term socio-economic benefits for most of the population.
- To address the volatility and finite nature of natural resource revenues by focusing expenditure on appropriate uses, and limit permanent increases in overall expenditure.
- To protect the financial autonomy of some institutions (e.g. universities) by securing a dedicated revenue stream from natural resource revenues.

Drawbacks and risks of earmarking

12. Even though earmarking is used widely across governments, a common criticism of the practice is that *earmarking limits budgetary flexibility* (McCleary 1991). On-budget earmarking forces governments to spend revenues on specific public services. The criticism is that such spending could be wasteful and inefficient, if not in the short term, eventually over the medium to long term. It is possible that too much public resources are spent on a specific service, particularly if the dedicated revenues increase, such as during a boom in commodity prices. Consequently, *earmarking may contribute to procyclicality in public spending*, especially if there is no ex-ante stabilisation mechanism to smooth the resource revenues channelled to the budget (Baunsgaard et al. 2012; Ossowski 2013)⁵ and *may disincentivise to levy taxes to pay for public services and investment*.

13. The inverse is also possible. *Earmarking may lead to underinvestment in a public service*. As the public service benefits from a dedicated financing source, there may be a disincentive for the government

to ensure that the public service is receiving adequate resources to fulfil its objectives. Or, there may be a disincentive to compensate the public service from other government receipts when the dedicated revenue stream declines during a collapse in commodity prices. In short, earmarking may transmit resource revenue volatility into the budget.

14. Another criticism is that *earmarking may encourage government inefficiency*. A protected revenue stream may limit incentives for public services to operate as efficiently as they would if they had to demonstrate their effectiveness to parliament in order to justify an allocation from the general budget. Consequently, public funds may continue to go to inefficient services when they should be reallocated to other areas of public spending.

15. A further criticism of on-budget earmarking, specifically notional earmarking, is that *the practice requires continued government commitment to the policy objectives* that underwrite the earmarking. In other words, earmarking does not guarantee that funds will be channelled to a specific public service or goods as intended. Governments may renege on their commitments and funnel the protected funds elsewhere. Earmarking alone is not a panacea for ensuring the resource revenues go to ‘worthy’ expenditures. If there is a political will to ensure adequate and sustainable spending on specific budget items, then there is little justification for earmarking. *Earmarking may simply complicate public financial management without achieving better results.*

16. Rather than reflecting a sound budget allocation process, earmarking may be a manifestation of a budget beset by complex political economy dynamics (Ossowski and Halland 2016). Where the budget allocation process is dysfunctional and subject to distrust, powerful interests may appropriate public resources through earmarking.⁶ Interest groups work on the principle, in this context, that they must appropriate public resources before another group can. In natural resource-rich countries this can be particularly acute, as large resource rents may weaken institutions that would otherwise restrain this behaviour. Groups would rather appropriate rents without the scrutiny of other groups, which consequently limits the efficient use of resource revenues across the economy (Eifert, Gelb, and Borje Tallroth 2003).

17. Off-budget earmarking to extra-budgetary funds may further complicate public financial management, if there is insufficient parliamentary oversight. For stabilisation and savings funds specifically, *earmarking natural resource revenues for domestic purposes may undermine their policy objectives* by reducing total assets under management. In short, extensive earmarking may reduce the resources they have to stabilise government revenues in periods of low commodity prices, or the resources available to future governments when the natural resources have been exhausted. A natural resource fund with a stabilisation and/or savings function furthermore requires a governance and management architecture that is suited to those needs. Extending the remit of the natural resource fund beyond these functions may complicate governance and management and thus reduce financial performance.⁷

18. At the same time, using this mechanism *may undermine public financial management by bypassing the project appraisal, public procurement, and project monitoring standards used in the normal budget expenditure process*. This may lead, consequently, to duplication and fragmentation of public investment, thus undermining the adequacy of public investment and spending on areas of greater social and infrastructural needs. In effect, earmarking resource revenues via a natural resource fund to domestic expenditure may undermine public accountability. Spending and investment via the government budget allows for parliamentary scrutiny and public accountability.

IV. ILLUSTRATIVE EXAMPLES OF EARMARKING PRACTICES

'Real' earmarking in Bolivia

19. Natural resource production has long been an important sector of the **Bolivian** economy, contributing more than 50% of government revenues. Between 1970 and 2015 the total natural resource rents as a percentage of GDP was 6.2%. In the period 2005 to 2015, the average total natural resource rents doubled to 12.6%.⁸ During this period of high commodity prices the country implemented a new regime governing the production of natural resources and the distribution of associated benefits, specifically in the oil and gas sectors. In 2009, the country's new constitution enshrined the principle that a key task of the state is to develop the country's natural resources with the ultimate objective of eliminating poverty and social and economic exclusion (Chavez, 2013). The new constitution also established that the allocation of benefits of natural resource production should follow a principle of social equity, assigning priority to regions where production is concentrated, indigenous communities and peasants.

20. The new constitution enshrined the principles that underpinned changes to the hydrocarbon production and distribution regime that were initiated following the election of President Evo Morales in 2005, which included a renationalisation of the hydrocarbon industry in 2006. Consequently, renationalisation has increased the share of rents going to the public sector, some of which has been focused on poverty reduction. From 2006, GDP growth has averaged roughly 5% per year and poverty has decreased by a third. By this metric, the distribution of natural resource revenues toward socioeconomic development has been successful. However, such progress also must be seen in the context of a decade of mostly strong hydrocarbon prices.

21. In Bolivia, the distribution of hydrocarbon rents is subject to various earmarking mechanisms, the legal basis of which was established in the 2005 hydrocarbon law. This law established the quantitative levels at which royalties and taxes are imposed and shared. Overall, the law establishes a 50% tax on oil and gas production. This consists of an 11% share of regional production to the region where production takes place, a 1% compensatory share of national production to the least developed regions of the country (Beni and Pando) and a 6% share of national production to the national treasury. In addition, the law establishes a direct tax on hydrocarbons (*IDH – impuesto directo a las hidrocarburos*) of 32%.

22. The IDH distributes 4% to producing regions according to their share of production and 2% to non-producing regions.⁹ The remaining allocation is decided by the executive branch in support of the national treasury, indigenous communities, peasant communities, municipalities, public universities, the armed forces, the national police, and others. The law furthermore stipulates that beneficiaries of the IDH will allocate resources for the education and health sector, roads, productive development, and anything which contributes to job creation.¹⁰ Chavez (2013, 27) calculates the allocation of the IDH as follows: 30.5% to municipal governments, 27.3% to the *Renta Dignidad* (a non-contributory old-age pension scheme), 10% to subnational governments, 5.8% to public universities, 1.8% to the *Fondo Nacional de Desarrollo Regional* and 1.4% to the *Fondo Indígena* (Indigenous Development Fund). The remaining 23.2% goes to the national treasury.

23. Evidence suggests that the earmarking of the IDH to national level social programmes, namely the *Renta Dignidad*, and the *Bono Juancito Pino*, a conditional cash-transfer for school-aged children, has supported poverty alleviation (local governments also contribute to these national programmes with local funds received from the IDH). However, at the subnational level there has been inconsistency in social spending and its impact across regions and municipalities (Wanderley and Mokrani 2011; Aresti 2016). Moreover, there is evidence that expenditure at the subnational level has not financed productive investments but rather recurrent spending. This is in part because of insufficient administrative capacity at regional and local levels to manage the increased revenues (CEDLA 2010). However, it is also a function

of the heavy reliance on the part of subnational government budgets on hydrocarbon revenues, which may prove problematic over the long term in a context of lower global oil and gas prices.

24. Ultimately, this means that the principle underpinning the IDH that natural resource revenues should go to physical and human capital investment is not being met entirely. As a result, the strict earmarking of hydrocarbon revenues is not necessarily achieving its stated goals. Moreover, the strict earmarks may be reducing the incentive to raise non-hydrocarbon taxes, which should be covering recurrent spending while improving budget sustainability over the medium-term as hydrocarbon prices remain lower than the average of the last decade.¹¹ However, the high average hydrocarbon price over the last decade may have equally reduced the incentive to increase non-hydrocarbon taxes.

‘Notional’ or ‘symbolic’ earmarking in Botswana and Indonesia

25. In comparison to many other resource-rich developing countries, **Botswana** is frequently considered an economic success story and a model for others to follow in the prudent management of natural resource revenues. Botswana has had continuous civilian rule since declaring independence from Britain in 1966 and is one of the longest-running multiparty democracies in Africa. When the country declared independence, there were only 12 kilometres of paved road and most of the population did not have secondary education (Acemoglu, Johnson, and Robinson 2002). Yet, from independence to the late 1990s, Botswana was one of the fastest growing economies in the world, comparable only to China, with average annual growth of 10%. As a result, Botswana has developed from one of the poorest countries to achieve upper middle-income status in a generation. Poverty has also reduced considerably. In 1985, 59% of the population lived in poverty. As of 2009, only 19.3% live in poverty. Yet, Botswana is still one of the world’s most unequal countries, with high levels of extreme poverty, behind only South Africa and Seychelles (World Bank 2015).

26. While non-violent political stability and sound institutions have underpinned Botswana’s growth and development, the country’s large diamond deposits have also been a crucial factor. Between 1985-1994, the mining sector declined from 42.2% of GDP to 22.2% of GDP as a result of economic diversification policies. However, the country is still reliant on the diamond trade, with the mining sector providing a significant source of income to the government. But this has also declined: between 1985-1994, 50.9% of government income came from the sector. Between 2004-2014 mining income has represented 39.9% of government revenues (African Natural Resources Center, 2016).

27. Botswana’s natural resource revenue management framework rests on two pillars: macroeconomic stability and the prioritisation of development expenditure. These two pillars are operationalised through the Pula Fund, a stabilisation and savings fund, and the Sustainable Budget Index.

- In 1993, Botswana established the Pula Fund with the objective of preserving part of the income from diamond exports for future generations, managing foreign exchange reserves that are more than the expected needs over the medium term, and mitigating Dutch-disease effects by holding the portfolio in foreign-denominated assets. This buffer came in useful for the government following the 2008/09 global financial crisis, which affected the diamond trade. The government drew on the fund to support expenditure to smooth the economic shock of the crisis on the economy. Managed as a distinct account at the central bank, the fund invests in public equity and fixed-income instruments in industrialized economies, with an aim of maximizing investment returns subject to acceptable levels of risk. The fund does not invest in commodity-exporting countries to hedge against decreases in commodity prices. Currently the Pula Fund has roughly 5.4 billion dollars in assets under management, or roughly a third of GDP. As such, accumulated assets are small considering how long the country has been saving mineral revenues. What it

shows, moreover, is that the country has focused on investing mineral revenues to improve the physical and human capital of the country.

- Public spending in Botswana is based on an annual budget process and informed by National Development Plans (NDP). The NDPs, which cover periods of six years, outline broad strategic development priorities that the government intends to achieve during the period, as well as specific development projects that will be supported. The expenditure framework follows the principle that *natural resource revenues should only be used to finance investment in assets that maintain the country's current asset base or improve the asset base for future income generation* as mining revenues decrease over time. This implies that natural resource revenues should finance investment (outlined in the NDPs) in physical assets, namely electricity, water, and roads, as well as investments in human capital, namely in education, training, and health. The corollary is that non-mineral revenues finance recurrent expenditure. This principle is operationalised through the Sustainable Budget Index (SBI), which is defined as the ratio of non-investment spending to non-mineral revenues. An SBI of 1 signifies that non-investment expenditure is being partly financed by mineral revenues. As SBI less than 1 implies that non-mineral revenue is financing recurrent expenditure whereas mineral revenue is financing investment and/or is being saved (in the Pula Fund). Since fiscal year 1983/84, the SBI has been below one, save for the period 2001-2005 when the SBI was over one. In calculating the SBI, it should be noted that education and health, which would normally be accounted for as recurrent expenditure because the majority of spending is allocated to the salaries of teachers and medical professionals, are classified as investment expenditure.

28. Botswana is, in effect, notionally earmarking revenues from mineral production for socioeconomic development by using the SBI. However, this is not a pure form of on-budget earmarking. Mineral revenues are not institutionally segregated from the budget but consolidated with other government receipts. However, there is no statutory basis for the SBI. It is not an ex-ante rule that policymakers must abide by in determining the budget allocation. The SBI is, rather, a principle which guides expenditure and savings decision-making in relation to the broader development aims outlined in the NDPs. Ultimately, this framework relies on the principled commitment of the parliament and the executive in the drafting and approval of the budget. Given that the SBI is not an ex-ante rule, there is flexibility in the budget-setting process. As such, Botswana avoids the budget constraints that conventional earmarking can bring. At the same time, the Pula Fund provides an important stabilisation function to ensure that this development expenditure does not succumb to absorptive capacity constraints and negative Dutch disease effects. The accumulated savings in the Pula Fund may, in turn, support continued development expenditure for future generations.

29. During the two oil booms of the 1970s, **Indonesia** mobilised the oil windfall to advance major investments in education provision across the country, while also channelling the windfall to economic diversification projects. Indonesia was the most populous and the poorest of the countries in the world to receive an oil windfall. In 1974, GDP per capita was USD 200. However, the country did not earmark oil revenues to specific expenditures; oil revenues accrued to the central government budget. But as oil revenues were most the government budget during the period, it can be interpreted as a case of symbolic earmarking. Oil revenues peaked at more than 70% of the budget in the early 1980s, falling to roughly 20% by the mid-1990s (Alisjahbana 2005). Development spending doubled because of the oil windfall. In 1973, development expenditure was 63% the amount spent on current expenditures. By 1975, development expenditure exceeded current expenditure by 25%. Development expenditure either matched or exceeded current expenditure through the remainder of the oil boom (Gelb and Associates 1988, 206).

30. Some of this increased development expenditure was channelled to the Sekolah Dasar (basic education) programme. Between 1973 and 1979, Indonesia constructed 61,807 schools. This was the

world's largest-ever school construction programme (1.5 percent of 1973 GDP). The number of schools built represented 1 for every 500 children aged 5-14 in 1971. Each school was designed for 120 students and three teachers. The central government also recruited and paid the teachers' salaries. Enrolment of children aged 7 to 12 increased from 69% to 83%. Before the programme in the early 1970s enrolment had been declining and there was no capital investment in schools. Duflo (2001) estimates that the programme led to an average increase of 0.12 to 0.19 years of education, with an increase in wages of 1.5% to 2.7%. This suggests that the large government intervention in the supply of education was effective. As such, Indonesia made efficient use of the oil windfall.

31. Indonesia also employed the oil windfall to advance agricultural development. Major investments were made in developing natural gas resources, for export to Japan and as an input for agricultural fertiliser production. Fertiliser was then distributed to farmers at subsidised prices, a practice which continues currently. With the benefit of new high-yield and disease-resistant rice varieties, Indonesia farmers greatly increased yields, pushing down prices for consumers. As a predominantly rural and agricultural-based economy, improved agricultural production and lower prices helped support economic diversification, underwriting the movement and growth of labour to low-wage export-orientated manufacturing in the early 1980s. Rural economies were furthermore supported by major investments in infrastructure (including construction of schools for the *Sekolah Dasar* programme), receiving a quarter of public infrastructure investment during the oil boom.

32. The lesson to draw from Indonesia is that this prioritisation of development expenditure did not require a specific earmarking of oil revenues. In fact, these priorities had been established before the oil boom, which came unexpectedly. The oil boom simply facilitated the large-scale expansion and rollout of these programmes (Gelb 2012). During the oil booms of the 1970s, the government operated with a formal balanced budget rule. Bureaucratic controls were also applied, though without much public transparency, to slow public expenditure. Consequently, the country achieved a fiscal surplus and doubled its international reserves. When oil prices fell in the early 1980s, the government, which was not constrained by specific earmarks, quickly adjusted fiscal policy, scaling back planned projects and restructuring public spending. The investments made in physical and human capital development during the boom provided a cushion to support economic growth in the non-extractives sectors, helped additionally by an exchange rate policy that limited real exchange rate appreciation and progressive trade and FDI liberalisation. By 2005, manufacturing represented 47% of merchandise exports, which is significant for a country with a large and diverse natural resource endowment.

Earmarking reform in Chad, Chile, Ecuador, and Ghana

33. Oil was first discovered in **Chad** in the 1970s, but civil war prevented exploitation. The country also lacked the basic infrastructure necessary to exploit its hydrocarbon reserves. Being a landlocked country further constrained its access markets. However, in 2000 construction began on the Chad-Cameroon pipeline to provide market access. Construction was completed in 2003 and oil production began in 2004, just as world oil prices began to increase significantly. During the construction phase of the pipeline the oil price was close to USD 30 per barrel, and the Chadian government had expected to receive resource revenues of roughly USD 45-50 million annually. But the rapid increase in oil prices provided the government with revenues that far exceeded expectations. Save for the collapse of oil prices in 2008 during the global financial crisis, oil prices averaged over USD100 per barrel until collapsing again in 2015. In 2011, government oil revenues peaked at USD 2 billion, which represented 76% of government revenues. From the beginning of production in 2004 through 2015, the Chadian government received a total of USD 13 billion in revenue for a population (in 2004) of only 10 million (IMF 2016b).

34. The World Bank was a major financier of the pipeline project, providing USD 100 million of debt-based financing, seeing the pipeline as a means of helping develop one of the world's poorest countries. As

part of the bargain, the World Bank provided technical assistance to inform the development an oil revenue management law for Chad to facilitate and ensure transparency and to encourage poverty reduction. Passed in 1999, the Petroleum Revenue Management Law established a Future Generations Fund that would receive 10% of annual revenues to provide a reserve for when oil production stopped. The law also stipulated 15% of royalties to go to the central government budget for general government expenditure and a further 5% share to go to the oil-producing region of Eastern Logone, to compensate for negative externalities associated with production. The law also included a 12.5% share of revenues to be deposited in an off-shore account in London and independently monitored to encourage transparency, and in part to ensure loan repayments to the World Bank and the other international creditors. All remaining royalties would be *earmarked* to what the World Bank determined were ‘priority sectors’. Priority sectors included health, education, public-works, rural development, and environmental projects. The law also established the *Collège de Contrôle et de Surveillance des Ressources Pétrolières*—a novel institution made up of key government ministers and representatives of civil society to advise the government on the programmes that would be financed by oil revenues.¹²

35. Yet, shortly after oil revenues began to flow, the Chadian government reneged on its commitments to earmark revenues to poverty alleviation. The government argued that it was facing threats from rebel groups and possible spill overs from the crisis in Darfur in neighbouring Sudan, and therefore needed to bolster its defence spending. In 2005, the Petroleum Revenue Management Law was amended. The central government’s share of royalties was increased to 30%, the Future Generations Fund was eliminated, and defence was added as a priority sector alongside poverty reduction. This latter change allowed the government to purchase more arms.

36. The World Bank responded initially to the new provisions by withholding a loan disbursement of USD 124 million and freezing USD 125 million of the country’s assets in the offshore account. But the World Bank eventually backed down, as the government threatened to stop oil production altogether. A new agreement was reached in 2006, with the government agreeing to allocate 70% of all budgetary resources to priority areas. This amounted to a larger amount of the previously agreed 85% of oil-based revenues. But according to the World Bank, the Chadian government failed to allocate adequate resources to poverty reduction. At the request of the World Bank the project came to an end in 2008 when Chad repaid all creditors in full. The World Bank’s evaluation of the project concluded that the macroeconomic, development, poverty reduction, and institutional development outcomes were unsatisfactory. The principal reason was that the government did not take adequate ownership of the basic structure and agreements of the project, with the suggestion that had the programme been more flexible to account for the fluid circumstances and political economy of Chad, the outcomes may have been different. However, it also concluded that the World Bank’s involvement nonetheless contributed to higher expenditure in priority areas than would have been the case otherwise (World Bank 2009).

37. One lesson from the Chad experience with earmarking is that dedicated spending is only as strong as the government’s commitment to those spending areas. However, the reforms initiated in 2006 were to address, in part, deficiencies in the earmarking system (Daban and Héris 2010). The government’s retreat from the initial system was not as simple as a case of broken promises. The establishment of multiple and complex earmarking arrangements created separate budget and cash management arrangements for oil and non-oil funded transactions. Increased spending pressure in the non-oil budget led to increased borrowing and accumulated arrears, which outpaced the returns of the Future Generations Fund. Furthermore, the parallel budgetary and treasury systems with the presence of the *Collège de Contrôle et de Surveillance des Ressources Pétrolières* delayed and added to the complexity of the budget process, which was already subject to limited administrative capacity. The addition of the *Collège* appeared to have delayed execution of the budget and discouraged civil service staff that were performing existing financial controls. There were also situations where the power of the *Collège* to grant or deny authorisation to commit or pay for a spending item was misused, leading to unnecessary intervention by the *Collège*. In effect, mandatory

earmarking and the oversight system did not result in more effective and targeted expenditure. Earmarked funds often remained unspent or idle. The 2006 reform introduced greater budgetary flexibility to address this problem (see also IMF 2007).

38. In **Chile**, revenues from mining activities (mainly copper) are for the most part combined with other fiscal revenues in the general budget.¹³ As such, natural resource revenues are not themselves earmarked for specific budget items. Nonetheless, there are two exceptions to this rule. Resources accumulated in the Pension Reserve Fund (*Fondo de Reserva de Pensiones*) are earmarked to support the funding of fiscal pension obligations and 10% of total export sales of Codelco (*Corporación Nacional del Cobre*), the state-owned copper producer, are allocated to the country's armed forces. The Fiscal Responsibility Law of 2006 stipulates that the Pension Reserve Fund must receive each year at least 0.2% of previous year GDP up to an amount equivalent to the previous year fiscal surplus, not exceeding 0.5% of GDP. These resources must be used to support the financing of fiscal liabilities deriving from the state pension guarantee for old-age and disability solidarity pension benefits, as well as old-age and disability solidarity pension contributions established by the Pension Reform of 2008. The fiscal pension expenditures are part of the annual budget, and they are included in the calculation of the budget for achieving the structural balance target. The size of the fund is approximately 9.2 billion dollars and the first withdrawals from the fund are expected in 2017. When first introduced in 1958, the *Ley Reservada del Cobre* (Restricted Law on Copper) stipulated that 15% of tax revenues from copper companies go to the armed forces, with a guaranteed floor if tax receipts did not reach a minimum threshold. The law was amended in 1973 (by which time copper production had been nationalised) during the regime of President Augusto Pinochet to stipulate that the 10% levy on the foreign receipts of nationalised copper companies be divided equally between the army, air force and navy.

39. The law was amended in 1976 after the formation of Codelco, establishing three secret accounts at the central bank. These accounts are separate from the Treasury's single account. In 1985, the law was again amended to include an annual inflation adjustment for the minimum allowance (USD 180 million at that time) that the armed forces are to receive regardless of the performance of Codelco. The armed forces are not required to disclose how the funds are spent. Unspent funds can be invested at the discretion of the armed forces.

40. As copper prices increased in the 2000s, revenues going to the military increased substantially. Between 2000 and 2015, the armed forces received an estimated USD 14.3 billion. However, this did not lead to increased expenditure, as defence spending was constrained to ensure compliance with the structural fiscal balance limit. Defence expenditure appears as an aggregate in the government budget. Yet, given that parliament has no control over the expenditure and that the funds do not first pass through the general budget, it cannot be classified purely as on-budget earmarking. Moreover, the military can roll over its surpluses for future expenditure (Fainboim 2009). In 2011, these surplus funds became the Strategic Contingency Fund (*Fondo de Contingencia Estratégico*), guided by the ministry of finance and managed by the central bank on behalf of the armed forces. The aim of this new fund was to take advantage of the government's experience in managing the Economic and Social Stabilisation Fund (*Fondo de Estabilización Económica y Social*) and the Pension Reserve Fund. Notwithstanding this innovation in the management of the accumulated funds, the *Ley Reservada de Cobre* has still courted controversy.

41. In 2015, an independent commission established by President Bachelet, the Presidential Advisory Council on Conflicts of Interest, the Traffic of Influence, and Corruption (*Consejo Asesor Presidencial contra los conflictos de interés, el tráfico de influencias y la corrupción*), also known as the Engel Commission, determined that the *Ley Reservada del Cobre* contradicted Chile's principles of transparency and public financial management, as the parliament (*Congreso Nacional*) does not have the legal authority to actively oversee the use of the earmarked funds. The comptroller general can exercise control only by following reserved procedures specifically adopted for this purpose. The only possible external oversight

comes from the executive. As the funds are not associated with a national security policy, this allows for potential inefficiency and opacity in their use, as this guaranteed transfer may not reflect the priorities of government or society. Consequently, the Engel Commission recommended the elimination of the law (Engel 2015).

42. **Ecuador** has a long history of oil production, beginning in 1921, with the country joining OPEC in 1976. Ecuador also has a history of extensively earmarking oil revenues that has led to significant budget inflexibility without also leading to better fiscal and policy outcomes. The budget process in Ecuador has been characterized by multiple competing interest groups, institutional instability, and limited incentives for long-term cooperation. Consequently, periods of higher oil revenues have led to rent-seeking behaviour in the form of increased discretionary spending or earmarking of allocations to different groups, such as subnational governments or specific budget items (Acosta Mejía, Albornoz, and Caridad Araujo 2009). As a 2006 study by Almeida, Gallardo, and Tomaselli (2006) determined, 92% of the central government's budget was inflexible, meaning that most income was already assigned to specific spending targets, guaranteed subsidies and debt repayments. This left the central government with little room for fiscal adjustment.

43. Paradoxically, the Ecuadorian government had moved toward fiscal consolidation and rationalisation in the late 1990s, in the context of low oil prices and poor macroeconomic and financial conditions that were attributed to deficiencies in public financial management. To minimise macroeconomic volatility, Ecuador completely dollarised the economy in 2000. This reform meant, however, that fiscal policy became the only source of economic adjustment. In common with other natural resource-rich countries at the time, Ecuador established five natural resource funds to support stabilisation and savings between 2000 and 2006. This effort did not lead to greater rationalisation or flexibility in public financial management of oil revenues (Cueva and Ortiz 2013). Although the funds provided some element of stabilisation and savings, they did not operate as conventional stabilisation and savings funds. Rather, they were mainly vehicles for earmarking oil revenues to different projects. Fiscal adjustment became consequently more constrained. Conventional stabilisation or savings fund are not utilised to channel revenue to specific projects but rather to preserve and increase accumulated natural resource revenues to be used eventually by government through the budget process.

44. In 2000, the government established the Oil Stabilisation Fund (*Fondo de Estabilización Petrolera*, FEP). The government set an annual budget price whereby any hydrocarbon receipts received above that price would go to the FEP. These funds in the FEP were earmarked for macroeconomic stabilisation (45%), construction and maintenance of roads in the Amazon region (35%), development projects in the border regions (10%), and capital spending for internal security (10%). In 2002, the government replaced the FEP with the Fund for Stabilisation, Social and Productive Investment and Debt Reduction (*Fondo de Estabilización, Inversión Social y Productiva y Reducción del Endeudamiento Público*, FEIREP), under the control of the central bank as a commercial trust. This fund received income from the state's participation in the sale of heavy crude, any end-of-year surpluses of the central government, and income previously assigned to the FEP. The funds of the FEIREP were earmarked to buyback debt in support of social security (70%), stabilisation of oil revenues and emergency expenditures (20%), and health and education (10%).

45. In 2005, the FEIREP was replaced with the Special Account for Social and Productive Revitalisation, Research and Development, and Fiscal Stabilisation (*Cuenta Especial de Reactivación Productiva y Social, del Desarrollo Científico-Tecnológico y de la Estabilización Fiscal*, CEREPS). The income of this special account came from similar sources to the FEIREP. Funds were earmarked for social security payments and government debt repurchase operations (35%), social investment projects, particularly in health and education (30%), scientific research (5%), road improvement and maintenance

(5%), environmental damage mitigation projects from petroleum and mineral exploitation (5%), and oil revenue stabilisation (20%).

46. At the same time, the government created the Savings and Contingencies Fund (*Fondo de Ahorros y Contingencias*, FAC) as a trust under the control of the central bank that would manage the stabilisation and emergency funds, and any additional earmarked funds of the CEREPS that were not spent by the end of the year. In 2006, the government established the Energy and Hydrocarbon Investment Fund (*Fondo Ecuatoriano de Inversión en los Sectores Energéticos e Hidrocarburiíferos*, FEISEH) to manage the oil income of the Occidental Petroleum Corporation (Oxy) operations, whose assets and concessions the government had seized in that year. The income of this fund was earmarked to repay Petroecuador for operating the assets, to compensate CEREPS and the general budget for loss of this income from the suspension of the Oxy operations, and to invest in the hydrocarbon and electricity sectors.

47. From 1999 to 2006 the oil funds received approximately USD 6.2 billion. Of this amount 79% was spent, leaving a buffer of 21%. Of the remaining USD 1.4 billion at the end of 2007, much of the funds were used to compensate the difference between the budgeted oil price and the effective price. Nearly a quarter of the funds were used to repay government debt, and 16% was invested in the energy sector (Cueva 2008). As Cueva and Ortiz (2013, 10) argue, all of the funds had stabilisation as one of their objectives. However, the multitude of other objectives and the complicated, confusing, and opaque on-budget and off-budget earmarking schemes rendered the stabilisation mechanism ineffective. Moreover, the complexity of the earmarking, and when and how savings could be made, constrained government's ability to prioritise spending efficiently, and to have a sufficiently open debate about what those priorities should be. And, as Villafuerte, Lopez-Murphy, and Ossowski (2010) find, earmarking exacerbated spending pressures during the 2003-2008 oil boom.

48. In 2008, a major reform to the manner in which oil revenues were managed and spent in Ecuador was undertaken. The *Asamblea Constituyente*, a legislative assembly called to redraft the country's constitution, eliminated all the oil funds and all oil revenue earmarking schemes. One reason given for dismantling the system was that it favoured debt repayment rather than social spending. The reforms recentralised and rationalised the allocation and management of oil revenues. This effort was furthered by the introduction of a single point for collecting oil revenues, the *Cuenta Unica del Tesoro* (Single Treasury Account), which is part of the budget (Arrellano-Yanguas and Mejía Acosta 2014). Since the reforms, social indicators have improved. As the IMF (2015) has noted, the poverty rate fell from 38% in 2006 to 22.5% in 2014.

49. In 1993, the government of **Ghana** established the Mineral Development Fund (MDF), an extra-budgetary fund, by executive fiat to provide funds from mining activities to the communities that hosted these mining activities, with the aim of supporting development and environmental mitigation projects. The MDF receives 20% of royalties from mining companies through the Consolidated Fund. Half of the MDF is transferred to the government mining agencies to support their operating budgets and half to the Office of the Administrator of Stool Lands (stools are customary lands held in trust for ethnic groups, clans or families). The latter can retain 10% of the share it receives, but channels the remaining 90% to local authorities. The distribution to local authorities is as follows: 25% to the stools of the mining areas; 20% to traditional authorities of the areas; and 55% to District Assemblies in the area of authority of which the stool lands are situated.

50. Although the operations of the MDF were administratively clear, the outcomes were not as expected. Partly reflecting the complexity of the distribution procedure via the Office of the Administrator of Stool Lands, payments to local authorities were frequently delayed. A more significant problem was that the local authorities tended to utilise the payments for cover current expenditures, rather than channelling the funds as intended to development and environmental mitigation projects. There was also a lack of

transparency, with improper accounting and reporting of the use of monies received (IMF 2004, 30). Given the poor performance of the MDF, the government introduced a new Mineral Development Fund bill in 2014 to establish legislation to revert the MDF to its intended purposes. The new bill establishes a stricter legal basis for the disbursement of funds and the guidance for how funds should be used. As the bill passed parliament in 2016, it is too soon to judge the effectiveness of the reform effort. What this case shows is that strict earmarking does not necessarily produce the outcomes intended.

Off-budget earmarking in Venezuela and Azerbaijan

51. Natural resource revenue management in **Venezuela** has been subject to considerable political volatility and change in the last two decades. Oil production and revenues represent a substantial portion of GDP and government income. For instance, between 1958 and 2010, oil income accounted for 60% of government income, 86% of exports, and 28% of GDP. However, the benefits of the country's oil wealth have been mixed. After 1978, as global oil prices entered a period of sustained decline, the country saw rising poverty and inequality, leading to the eventual election of Hugo Chávez to the presidency on a socialist economic platform (Rodríguez, Morales, and Monaldi Marturet 2012). The sustained boom in oil prices in the 2000s provided the Chávez government with considerable resources to implement this platform. From 2004 to 2008, poverty decreased substantially in the country from just over 50% to 27%.¹⁴

52. Although the executive historically had an important say in the distribution and expenditure of oil revenues, under the Chávez administration an unprecedented amount of direct control was placed in the executive in determining the use of oil revenues outside of the normal budget allocation process in parliament. This control was operationalised through two policy changes. First, in 2005 the government established the *Fondo Nacional para el Desarrollo Nacional* (FONDEN) under the direct control of the president, with the express purpose of investing in the economic and social development of the country. Between 2005 and 2012, FONDEN took in close to USD 100 billion in oil revenues.¹⁵ The creation of FONDEN was, in part, a fulfilment of a change to the Venezuelan constitution in 1999 that said that the exploitation of natural resource wealth should be used to finance the productivity of the real economy, health, and education. Second, the government began using the state-owned oil company *Petróleos de Venezuela, S.A.* (PDVSA) as an extra-budgetary fund to manage most of the government's new social programmes, known as Bolivarian missions. The CEO of PDVSA is directly appointed by the president and is also the Minister of Energy and Petroleum. As such, the executive branch maintains absolute control over PDVSA (Penfold-Becerra 2010). Before this change, PDVSA transferred all its revenues to the central bank, except those which it required to cover its foreign obligations. Removing the central bank from the flow of oil revenues resulted in the reduction of another layer of oversight.

53. These two policy changes significantly curtailed the amount of oil revenues passing through the budget and therefore parliamentary scrutiny (Puente et al. 2009). Budget scrutiny of oil revenues was further constricted by the *Situación Constitucional*, which stipulates that 20% of general government income be distributed to the subnational state governments and the capital district (30% in equal shares and 70% according to population). In addition, there is the Law of Special Economic Allocations, which stipulates that 25% of fiscal income from oil and mineral resources must be distributed to the states and municipalities. The distribution is determined by the *Secretaría del Consejo Federal de Gobierno*, which includes the participation of the state governors, mayors and representatives of communal councils, and the executive branch. In practice, the executive branch wields control over the council. Moreover, there are additional earmarks in the budget that further dilute the share of government income subject to parliamentary deliberation. For 2009, Rodríguez et al. (2012) calculated that roughly only a third of oil revenue was subject to parliamentary scrutiny.

54. Although the Chávez reforms initially improved the quality of life of many poor Venezuelans, the progress has been short lived and is reversing. Since bottoming out at 26.8% in 2009, poverty has

increased recently, reaching 33.1% in 2015.¹⁶ Macroeconomic conditions have deteriorated drastically (Vera 2015). Inflation was 180.9% in 2015, rising to 720% in 2016. GDP contracted by 6.2% and 10% in 2015 and 2016 respectively.¹⁷ Given the macroeconomic context and with oil prices well below the peaks reached in the last decade and this decade, the sustainability of the earmarked spending on social programmes in Venezuela is doubtful.

55. At the same time, as the Bolivarian missions are under the authority of the president and not under an appropriate government ministry, they are not institutionally integrated in the broader Venezuelan state apparatus. Just as their funding bypasses the budget, they operate in parallel to the state (Daguerre 2011). The other issue regarding this extra budgetary earmarking of oil revenues at the discretion of the executive is that, as some contend, the social programmes have been subject to rent-seeking and populist pressures. Political considerations, rather than effective distribution of oil revenues to the poor, have figured strongly in their design (see Penfold-Becerra 2007). Ultimately, the outcomes and the long-term implications of this experiment in off-budget earmarking for oil revenue management and public financial management in Venezuela appear highly negative.

56. Like Venezuela, **Azerbaijan** has concentrated a significant amount of the discretion over oil revenue expenditure in the executive and, in part, via a natural resource fund. Since gaining independence from the Soviet Union in 1991, Azerbaijan has made exponential progress in its development due to a growing oil and gas sector. In 1995, 68.1% of the population was living under the poverty line (Bezemer 2007). As of 2012, only 6% live in poverty and¹⁸ extreme poverty is non-existent. As oil and gas production started to expand in the late 1990s, Azerbaijan took steps to ensure that natural resource revenues were not quickly consumed and that Dutch disease did not take hold. At the end of 1999 a presidential decree established the State Oil Fund of the Republic of Azerbaijan (SOFAZ). Starting with USD 271 million, SOFAZ now has roughly USD 34 billion in assets under management. SOFAZ is ultimately controlled by the country's president. Azerbaijan was also the first country to fulfil all requirements of the Extractives Industries Transparency Initiative. As a result, the transparency on the income side of Azerbaijan's natural resource production is generally of a high standard. However, the withdrawal and expenditure of natural resource revenues is opaquer and less strict.

57. SOFAZ has three operational objectives. As is conventional for many natural resource funds, SOFAZ has a long-term savings function and a stabilisation function. Oil and gas revenues flow through SOFAZ, which then makes a distribution to the government budget. The distribution to the budget is determined annually by presidential decree. As such, there is no guaranteed distribution or specific withdrawal rule, but in practice distributions are regularly forthcoming. SOFAZ's third function contravenes conventional practice. Whereas many savings and stabilisation funds are invested exclusively in foreign assets¹⁹, SOFAZ's third objective is to finance major national scale projects to support socio-economic progress. But, there is a prohibition in the bylaws of SOFAZ on domestic investment. Most of the major projects that SOFAZ has helped finance are oil and gas infrastructure, such as the Heydar Aliyev Baku-Tbilisi-Ceyhan Main Export Pipeline that links Caspian Sea oil production with the Mediterranean Sea via Georgia and Turkey. In addition, SOFAZ has helped finance the reconstruction of the Samur-Abershon irrigation system, the Baku-Tbilisi-Kars New Railway, housing for refugees and internally displaced persons because of the Armenia-Azerbaijan Nagorno Karabakh conflict, and the State Programme on the Education of Azerbaijani Youth Abroad. As such, SOFAZ, as an extrabudgetary fund that receives natural resource revenues, has used those revenues for specific domestic expenditure and investment projects.

58. While the apparent justification of these domestic expenditures is that they support economic growth and socio-economic development, these are projects that could have been funded through normal budgetary channels subject to parliamentary scrutiny. Indeed, they are different from financial investments or strategic investments that expect a financial return. SOFAZ is therefore not a strategic investment fund

that invests subject to market-based risk and return metrics.²⁰ This domestic expenditure through SOFAZ in effect bypasses parliamentary oversight, and normal public procurement procedures (Bauer 2017). Moreover, without a clear withdrawal role, the extra budgetary spending is largely discretionary and not subject to independent oversight. The risk is that higher commodity prices and thus higher natural resource revenues incentivise greater, but ultimately unsustainable, expenditure (Aslanli 2015). Ultimately, this practice may be undermining the public financial management system in Azerbaijan.

V. LESSONS LEARNED AND GUIDING QUESTIONS FOR PEER-LEARNING

59. Earmarking is common practice in public finance in developed and developing countries, including the earmarking of natural resource revenues. One justification for earmarking is the so-called benefit principle, whereby a tax is levied on a specific activity to pay for that activity (e.g. fuel taxes to finance road construction and maintenance). By this logic, there is a strong link between the beneficiary and the liability. The earmarking of natural resource revenues does not, in most cases, have a strong link. Notwithstanding, earmarking of natural resource revenues for various purposes is practiced among some natural resource-rich countries. Motivations for earmarking non-renewable resource revenues include drawing public attention to their use, protecting spending on socio-economic development priorities, and discouraging expenditure on recurrent budget items, and ensuring an equitable distribution across subnational regions.

60. While the motivations for earmarking of non-renewable resource revenues may seem sound, the evidence of their effectiveness is mixed, and in some cases (e.g. Venezuela) highly negative. There are several disadvantages to earmarking. It can constrain budgetary flexibility. It may lead to government inefficiency, and overinvestment or underinvestment in certain public services. And, it may contribute to procyclicality of public expenditure. Furthermore, earmarking, in some cases, has been fashioned such that it is not subject to parliamentary oversight. This may undermine public financial management and public investment. These are reasons why countries such as Chad and Ecuador abandoned earmarking.

61. As the cases of Botswana and Indonesia show, earmarking is not necessarily a better means of ensuring that non-renewable resource revenues are invested in physical and human capital in support of sustainable socio-economic development. Botswana notionally earmarks resource revenues for this goal, without relying on strict statutory expenditure requirements. It is simply a commitment that the government of Botswana and its parliament have stood by. This commitment can be seen in the progress Botswana has made in terms of development since independence. In Indonesia, the oil windfall of the 1970s helped to scale and expand a development agenda that had preceded the unexpected revenue windfall. The economic diversification that followed and the government's efforts to minimise the macroeconomic impact and fiscal policy dependence on hydrocarbon revenues buffered the economy once oil prices declined in the 1980s. What is clear is that the Indonesia, like Botswana, ensured sound macroeconomic management coupled with a clear long-term development plan.

62. The key lesson is that mobilising natural resource revenues for broad-based and inclusive development requires commitment on the part of governments and a strategic vision, which can be done without strict earmarking. Rather, strict earmarking may complicate public financial management. From this lesson, we can derive two policy recommendations:

- Mobilising natural resource revenues for broad-based and inclusive development requires a clear long-term development plan that informs spending and investment decisions.
- Any prioritisation of development-related expenditure which underwrites broad-based and inclusive development must be preceded by a commitment to sound and consistent macroeconomic management of natural resource revenues.²¹

Guiding Questions for peer-learning:

- How can countries foster a commitment to invest non-renewable resource revenues in physical and human capital without reverting to strict earmarking mechanisms?
- Where earmarking is used, what additional oversight mechanisms should be considered to ensure efficiency and effectiveness of the expenditure?
- What is the best way to reform and/or eliminate earmarking practices where they have become ineffective or a constraint to fiscal adjustment?

NOTES

- ¹ *Real vs. notional* earmarking is used in aid modalities literature (e.g. Bandstein 2007). Conceptually, this terminology allows a distinction to be made between ex ante and ex post control over earmarking. Real refers to a predetermined (usually in quantitative form) line item (or sector) on which funds will be spent. Notional, or virtual, refers to a desired expenditure item, but the control is post facto. As such, the expenditure is not necessarily guaranteed or necessarily traceable once pooled with other government revenues.
- ² Given the fungibility of revenues and expenditures, earmarked funds can be offset by shifting funding to other areas. In this sense, and given the difficulty in monitoring and verifying compliance, notional earmarking may be largely presentational rather than real, wherein the pattern of expenditure does not necessarily change significantly. Consider, for example, a government that wants to spend 1 billion dollars in a fiscal year on infrastructure. In that year, the government receives 10 billion dollars in non-resource taxes. The policy of the government is to spend natural resource revenues on infrastructure development. In that year, the government receives 1 billion additional revenues from natural resource production. This covers the 1 billion of infrastructure spending, but this does not mean that an additional 1 billion is spent on infrastructure. It may simply shift spending of non-resource taxes to another item in the budget.
- ³ A link could be made that producing regions should receive additional resource revenues to compensate for negative externalities of natural resource production (e.g. environmental degradation; community displacement). However, the negative externalities could be covered with a local production tax that is then used specifically for mitigating such negative externalities. In other words, there is a strong link between the earmarked tax and what the tax is used on. This follows the benefit principle. In the case where a producing region receives higher earmarked revenues that can then be used on a broader set of expenditure and investment priorities, the link is less strong.
- ⁴ It is recognised that there are various mechanisms for extracting revenues for natural resource production (e.g. taxes vs. royalties). For the purposes of this report, we consider natural resource revenues as an umbrella concept, rather than the specific policy instruments for collecting revenues.
- ⁵ See also *Comparative Analysis on the Performance of Stabilisation Funds and Investment Options* endorsed at the Fifth Plenary Meeting of the Policy Dialogue on Natural Resource-Based Development.
- ⁶ A sound budget process does not necessarily imply the process is not also competitive. The difference between a sound budget process and a dysfunctional budget process is the relative ability of different interest groups to appropriate resources and deflect competing interests such that compromise over time is constrained and fiscal resources are not allocated efficiently to support growth and development.
- ⁷ Please see the fifth lesson from the *Comparative Analysis on the Performance of Stabilisation Funds and Investment Options* endorsed at the Fifth Plenary Meeting of the Policy Dialogue on Natural Resource-Based Development.
- ⁸ Source: World Bank Open Data
- ⁹ If producing region receives less than a non-producing region, because of lower relative output in any given year, the national treasury will compensate the producing region to the level of a non-producing region. As such, all regions are guaranteed a minimum compensation.

- ¹⁰ See Title IV, Ch. 2, sec. 2 art. 57 of *Ley de 17 de mayo 2005, “Ley de Hidrocarburos”*. Available at http://medios.economiayfinanzas.gob.bo/VPT/documentos/Ley_3058.pdf
- ¹¹ In the 2016 Article IV Consultation with Bolivia, the IMF (2016a, 12) also recommended that “over the medium term, transfers to subnational governments should rely more on criteria such as population size, development needs, and means-testing, rather than primarily on hydrocarbons revenues.” By implication, the recommendation is critical of the earmarking to regions based on production. While there are national-level efforts to reduce poverty and aid development, earmarking to producing regions may be entrenching inequality. Bolivia passed a new law in 2016, the *Ley del Sistema de Planificación Integral del Estado*, which introduces a system for integrated fiscal planning and monitoring across different levels of government. This new law is intended to improve the quality of fiscal planning and expenditure.
- ¹² The *College* consists of a member of the Court of Auditors, a representative of parliament, a member of the Council on Economy, Society and Culture, the national director of the Bank of Central African States, the director general of the national treasury, and the secretary general of in charge of the ministry of hydrocarbons, and four representatives from civil society (one representative of national NGOs, one from trade unions, one from human rights organisations, and one from religious organisations).
- ¹³ For a more extensive discussion of Chile’s copper revenue management system, please see the *Comparative Analysis on the Performance of Stabilisation Funds and Investment Options* endorsed at the Fifth Plenary Meeting of the Policy Dialogue on Natural Resource-Based Development.
- ¹⁴ World Bank Development Indicators. Poverty headcount ratio at national poverty lines (% of population).
- ¹⁵ Although FONDEN is focused on domestic spending, it has also invested internationally. FONDEN made investments in Ecuadorian and Honduran bonds, which appeared to be politically motivated investments rather than a concerted effort to diversify FONDEN’s holdings, particularly as Ecuador partially defaulted on the bonds in 2008. FONDEN also held high-yield derivative securities from Lehman Brothers, which turned sour when the investment bank collapsed in 2008. Unfortunately, there is limited data on FONDEN’s financial investments and how it is spent domestically (Ellsworth and Chinaea 2012).
- ¹⁶ World Bank Development Indicators. Poverty headcount ratio at national poverty lines (% of population).
- ¹⁷ International Monetary Fund World Economic Indicators Database 2017.
- ¹⁸ World Bank Development Indicators. Poverty headcount ratio at national poverty lines (% of population).
- ¹⁹ The management of the accumulated assets in SOFAZ has become increasingly sophisticated over time, moving from low risk foreign government bonds to now including global equities and other foreign assets such as real estate. In effect, SOFAZ has evolved to take advantage of its long-time horizon by diversifying into higher risk, higher return assets.
- ²⁰ For further clarification on this point please see the report *Strategic Investment Funds: Comparative Analysis and Lessons Learned* submitted for discussion to the Seventh Plenary Meeting of the Policy Dialogue on Natural Resource-Based Development.
- ²¹ In short, the prioritisation of sustainable development expenditure requires a stable policy platform that recognises the inherent volatility and finitude of natural resource revenues. This can be addressed through the creation of stabilisation and savings funds, as outlined in the *Comparative Analysis on the Performance of Stabilisation Funds* endorsed at the Fifth Plenary Meeting of the Policy Dialogue on Natural Resource-Based Development, where countries should account for the duration of natural resource revenues and the development (human and physical capital) needs of the economy in determining the trade-offs between investment in development and saving.

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