Helpdesk Report

Lessons from resource-rich developing countries about using their resource revenues for improved public service delivery

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Question

What are the lessons learned from transforming revenues from natural resources into improved basic service delivery in resource-rich developing countries? If possible, identify key enabling factors from such transformation.

Contents

1. Summary

This rapid review synthesises the literature from academic, policy, and knowledge institution sources on how resource-rich developing countries use their resource revenues for improved public service delivery. Such lessons are particularly important for low-income countries that are in a transition phase of increased resource revenues in total revenues. The question is how they can build their institutions to ensure that resource revenues are used in an effective way to improve public service delivery and public investments. **The literature is clear that governments in resource-rich developing countries, particularly with capital constraints, need to be careful not to fall into the trap to over-consume and over-invest during boom periods as this inevitably results in a collapse in public spending when resource prices are low.** To assure stable budgets over a longer period, which is important for investor confidence in the country and to stabilise social spending, fiscal policies must challenge short-term and middle-term pro-cyclical fiscal policies, boom-bust macroeconomic growth cycles, and sharp exchange rate appreciation that make non-resource exports vulnerable.

The literature often explains why it is difficult for resource-rich developing countries to spend resource revenues wisely (e.g. Venables, 2016). **Research shows that in general most resource-rich developing countries do not comply with fiscal rules, and many do not even have them** (e.g. Mihalyi & Fernández, 2018). The literature (e.g. OECD, 2018; Ossowski & Halland, 2016) also mentions four policy areas that need extra attention: 1) fiscal rules within a clear fiscal policy framework, 2) sovereign wealth funds that are embedded within the fiscal policy framework and a macroeconomic strategy, 3) transparent and simple to manage expenditure arrangements, and 4) accountable oversight bodies.

The literature on fiscal rules further shows that having a fiscal rule on itself is not enough to avoid the kind of macroeconomic challenges as mentioned above; it is merely the specific set of fiscal rules that are more relevant as based on country-specific needs, institutional capacity and exposure to external shocks (Sharma & Strauss, 2013). Therefore, fiscal rules should be accompanied by clear fiscal procedures that ensure decisions are accountable at all levels. It is often assumed that embedding fiscal rules in law ensures long-term political commitment, although Botswana is mentioned as a country with good compliance but without permanent fiscal laws (African Natural Resources Center, 2016a). The advantage of embedding fiscal rules in law is that they become more difficult to alter when there is a change of governments. Legislation, particularly constitutional laws, is difficult and costly to amend. **Overall, the literature shows that fiscal rules should not be too rigid, but flexible within clear margins** (Mihalyi and Fernández, 2018). Capital scarce resource-rich developing countries should also be able to spend more money upfront, but within the confines of clear fiscal rules (e.g. Sharma & Strauss, 2013). However, issues related to the absorptive capacity of natural resource revenue-related investments in capital scarce countries must be carefully considered (OECD, 2018).

Sovereign wealth funds are becoming increasingly popular tools for managing natural resource wealth in developing countries. Five different funds are mentioned in the literature: stabilisation funds, saving funds, finance funds, development funds, and strategic investment funds. **Such resource funds can support the implementation of sound fiscal policies.** Therefore, the establishment of a resource fund should be combined with a broader fiscal management framework that needs to be coherent, consistent, and disciplined (OECD, 2018). Implementing countries establish specific operational rules for managing their resource funds, covering accumulation, withdrawal, and investment decisions. Evidence shows that sovereign wealth funds' success in resource-rich developing countries depends on commitment to fiscal discipline and sound macroeconomic management (e.g. diversification strategy, national development plan) (e.g. OECD, 2018; Ossowski & Halland, 2016). **For capital scarce developing countries, stabilisation funds must not be seen as supporting capital needs, because their investment policy must highlight safe foreign assets to ensure sufficient liquidity to counter price volatility, which can result in public criticism.** In this respect, transparency is an important tool, not just to report on performance, but to build trust among the population that resource revenues are well spent (OECD, 2018).

Saving funds have a longer time horizon inherent to the policy objective and in principle they afford a lower liquidity preference and a greater risk tolerance. **Evidence shows that saving funds' investment decision-making shielded from short-term political cycles drives better performance, that long-term value creation is contingent on the management of risk and uncertainty, and that policymakers should be aware that high-return projects in resource-rich developing countries are not immediately available** (Ossowski & Halland, 2016)**.** Examples of countries that have established resource funds and successfully implemented the operational arrangements, at times through a process of adaptation, include Norway, Botswana and Chile. Countries that have been less successful in implementing resource funds include Chad, Nigeria, Venezuela, Ecuador and Algeria.

Key learning points for improved management of resource funds, as mentioned in the literature, are an increased transparency, fiscal discipline, and capacity to manage funds. **Evidence shows that resource-rich developing countries need to integrate the management of the funds within broader Public Financial Management (PFM) and Public Investment Management (PIM) systems and integrate the funds within the national budget to ensure clarity** (Venables, 2016; Ossowski & Halland, 2016)**.** Countries with weak institutional capacity and PFM and PIM systems should focus on one resource fund, possibly with two separate portfolios to meet stabilisation and savings objectives, rather than two separate funds (Sharma & Strauss, 2013). Extra-budgetary strategic investment funds (commercial investment) are also an option, even though they are seldom used in low-income, resource rich countries. **Strategic investment funds are a complementary tool that government can utilise to deploy capital within the economy and are most effective as part of a broader policy and institutional development and reform pathway** (e.g. OECD, 2018). However, there are concerns over potential conflicts of interest between spending priorities and financial returns if these funds are not autonomous entities with investment decision-making made independently of direct government influence (Ossowski & Halland, 2016).

Although fiscal rules and sovereign wealth funds are tools to improve fiscal stability and control over increasing spending (e.g. public services and public investment), an important question governments need to answer is how they can ensure that the spending of natural resource revenues improves development outcomes and is not used to cover recurrent costs (e.g. wages for civil servants). This is where political economy has to be considered as governments are under immense pressure from different stakeholders to consume more of the revenues (Fritz et al., 2017).

Governments often earmark natural resource revenues for special investments (e.g. education or health care) to safeguard investment in these sectors. However, evidence from research shows that earmarking generally reduces fiscal flexibility and is open to capture from special interests, which can constrain budgetary flexibility (Arrellano-Yanguas &

Mejía Acosta, 2014; Ossowski & Halland, 2016). Moreover, earmarking may lead to government inefficiency and overinvestment or underinvestment in certain public services. Earmarking can even contribute to procyclicality of public expenditure, which fiscal rules try to challenge (OECD, 2018).

There is also evidence that an earmarking 'light' approach, which does not rely on strict and complex statutory expenditure requirements and where earmarking has been linked to a clear long-term governmental development policy agenda approved by parliament, can be successfully used (e.g. Botswana) (e.g. OECD, 2018; African Natural Resources Center, 2016a). Well-functioning stabilisation funds are important as they provide stability over a long period thus ensuring continued spending in downturn periods. **Another option that governments could chose is to spend the natural resource revenues through direct distribution, via cash transfers. As with other socioeconomic public investments (or earmarking), funding cash transfer from natural resource revenues should be complemented by a fiscal framework that aims for stability** (OECD, 2018)**.**

Overall, the literature shows that linking the fiscal system with PFM and PIM systems is crucial to help avoid the risk that resource revenues are not spent irresponsibly and without consultation with relevant stakeholders (Sharma & Strauss, 2013). **Establishing a monitoring and accountability system that is independent and transparent, focusing on both complying with fiscal rules, advising on any changes in such rules, and evaluating the impact and quality of public investments, is also crucial.** In cases where there is limited technical capacity but already one established institution working on public finance, it may be beneficial to build on it and expand its remit, rather than setting up a new oversight institution (Sharma & Strauss, 2013). Countries also increasingly make use of public consultation and building consensus (e.g. Timor-Leste, Ghana) for setting expectations around how the natural resource wealth will be managed, particularly regarding how much revenue will be available for current consumption and investment, and how much will be saved for future generations.

Finally, the literature is clear that 'best practice' in one country is not *per se* the answer for another country, even in the same region (Mihalyi and Fernández, 2018). Four areas of attention have been particularly emphasised in the literature, regarding enabling factors: country-specific needs, country-specific absorptive capacity for domestic socioeconomic investments, institutional capacity (consultation, decision-making, implementation, monitoring), extent of exposure to external shocks. All these factors create different environments to put fiscal frameworks (e.g. different set of fiscal rules and funds) in place that ultimately impact on the quality of public services delivery. For countries with low institutional capacity, high needs for investment, but low absorption capacity, the literature in general comes to some specific considerations based on evidence.

- 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**.
- Fiscal rules can only be effective if accompanied with procedural rules. However, this requires robust PFM and PIM systems to be in place, which is not the case in many low-income countries. **Such countries could follow a policy guideline (instead of fully implementing a fiscal policy framework) to enhance fiscal discipline without formally committing to a specific fiscal framework** until it has gone through a learning process and has established better PFM and PIM systems (Sharma & Strauss, 2013).

- Design and implement a fiscal framework and **learn about what works through an iterative process**. However, there is a risk that if a rule or commitment is broken the government could lose credibility.
- **Seek external expertise** by contracting external long-term expertise or forcing a learning partnership with another country (e.g. Timor-Leste with Norway, or Mongolia with Chile).
- Establish a **step-by-step approach** through learning to adapt existing rules and guidelines and introduce new next-step actions to extend the fiscal policy framework.
- Choose a **simple framework that is easily understood and straightforward to monitor**. This approach is generally preferable to a complicated structure that is less transparent (Mihalyi and Fernández, 2018).

2. Fiscal rules

Fiscal frameworks and rules

Governments in resource-rich developing countries have a challenge in deciding how much revenue is being spent and how much is saved. Fiscal frameworks are often put in place to guide countries' decisions based on strict rules. Often, variants of the *Permanent Income Hypothesis* (PIH)[1] have been used, but they are criticised as not workable for capital scarce, low-income countries. These countries need immediate (upfront) investments (in infrastructure and human capital) to push for further development (OECD, 2018). As a response two alternatives to the traditional PIH approach have been developed (Sharma & Strauss, 2013).

- The **Modified PIH** allows for an initial scaling up of spending to meet immediate demands in poor countries, including both for consumption and public investment. However, fiscal policy remains anchored to an estimate of the long-term sustainable use of resource revenue, although spending can be front-loaded and financed through a drawdown from resource revenues, thereby reducing spending in future years.
- The **Fiscal Sustainability Framework** aims to stabilise net resource wealth over a longer term than the PIH. Similar to the modified PIH, this framework takes into account the inter-temporal budget constraint, although it allows for an actual drawdown of government wealth accumulated from the natural resources. The rationale for this drawdown is that public spending can be stabilised at a higher level because growth-enhancing domestic public investment will have 'fiscal returns' in the form of larger non-resource revenues.

Successful implementation of these two alternative PIH approaches depends on the quality of public investment and its decision-making to give a push to productivity and human capital growth (Ghura & Pattillo et al., 2012). Furthermore, **issues related to absorptive capacity of**

[1] The Permanent Income Hypothesis is used to guide countries' fiscal policy frameworks and establish fiscal benchmarks. The PIH implies that "following a discovery of an exhaustible natural resource, consumption should increase by the expected annuity value of the discovery, with revenues in excess of this being invested to build a stock of assets sufficient to finance the consumption increment in perpetuity" (Venables, 2016). Norway for example has the approach that all additional expenditure should be financed by the resource revenues, which is set to be equal to the accumulating financial assets (i.e., the interest earned on the financial assets generated from the resources that have been extracted) (Sharma & Strauss, 2013).

these investments in capital scarce countries must be carefully considered (OECD, 2018). For clarity on what and how decisions are made, countries often establish fiscal rules. Mihalyi and Fernández (2018, p.3) describe fiscal rules as:

> *"[A] permanent quantitative constraint on government finances. It provides a numerical ceiling or target for some key budget aggregate, such as the budget balance, debt, or spending for many years ahead. Governments use them to contain spending pressures, to signal a commitment to fiscal responsibility and tie the hands of politicians who may be tempted to overspend, including to win elections".*

Fiscal rules have been promoted to mitigate macroeconomic risks, decrease deficits, and as such are believed to improve investor confidence in a country. For resource-rich (developing) countries fiscal rules are particularly important to help overcome three macroeconomic challenges associated with managing natural resource revenues (Mihalyi & Fernández, 2018):

- **Short- to medium-term pro-cyclical fiscal policy**: Seeking short-term political wins can surge public spending of resource revenue, particularly in boom times and associated with high natural resource prices. However, spending needs to decrease drastically when revenues decline.
- **Long-run boom-bust cycles**: As a result of pro-cyclical fiscal policy many resource-rich countries do not save or invest revenues for the benefits of future generations during boom periods. Government spending sprees often result in a rise in domestic wages and prices without substantive development outcomes. Consequently, without reserves to invest in downtime periods, countries can turn into long or deep spells of recession or depression as spending stops abruptly.
- **Exchange rate appreciation**: The inflow of money can also lead to exchange rate appreciation, making it more difficult for domestic non-resource businesses to export or strive. As a result, the economy becomes even more dependent on the resource sector (also known as "Dutch disease").

The International Monetary Fund (Schaechter et al, 2012) classifies fiscal rules in four categories, however, in practice, governments often use some combination of these rules:[2]

- **Debt rules** set an explicit limit or target for public debt in percent of GDP. However, debts are mostly affected by changes in interest or exchange rate and less by budgetary measures. These rules limit countries from borrowing in downtime periods but do not often prevent resource-rich countries' governments from high debts in boom periods (Mihalyi & Fernández, 2018, p.10).
- **Budget balance rules** constrain the variable that primarily influences the debt ratio and are largely under the control of policy makers. However, budget balance rules are procyclical because they allow expenditures to increase with rising revenue, and if binding, they force expenditure cuts when revenues are declining. As such, these rules transmit the volatility of resource revenue into fiscal policy in resource-rich countries and do not provide flexibility in adjusting to larger commodity price drops (Mihalyi & Fernández, 2018, p.9). Some countries have non-resource current balance rules to avoid

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[2] See for a far more detailed list of fiscal rules Ossowski & Halland (2016) p.60-62.

procyclical budgeting, however, these countries might create parallel budgets for current and capital spending (Sharma & Strauss, 2013).

- **Expenditure rules** set limits on total, primary, or current spending. However, governments can circumvent rules by engaging in off budget spending and not providing flexibility to respond counter-cyclically to commodity price shocks. Furthermore, governments may try to comply with an expenditure rule by cutting productive spending too much compared with non-productive spending. Countries with new resource discoveries but limited spending capacity may consider using expenditure rules to surmount pressures to spend based on expectations of future wealth (Mihalyi & Fernández, 2018, p.11).
- **Revenue rules** set ceilings or floors on revenues and are aimed at boosting revenue collection and/or preventing an excessive tax burden. Many resource-rich countries have set up regulations to limit how much resource revenue should enter the budget and how much they should deposit into a sovereign wealth fund (see section 3). However, these rules only constrain government finances if complemented by other rules that limit borrowing or debt. Otherwise, governments can save a portion of revenues, while borrowing at the same time and fail to achieve their objectives (Mihalyi & Fernández, 2018, p.11).

The literature on fiscal rules is clear that having a fiscal rule on itself is not enough to avoid the kind of macroeconomic challenges as mentioned above (Venables, 2016); **it is merely the specific set of fiscal rules that is more relevant as based on country-specific needs, institutional capacity and exposure to external shocks** (Sharma & Strauss, 2013). Also, to avoid too much 'creative accounting' researchers refer not only to *'numerical fiscal rules'* but insist to combine them with *'procedural fiscal rules'* that "stipulate the principles and associated practices of transparency and accountability that should guide the design and implementation of fiscal policy" (Sharma & Strauss, 2013, p.9-10). Typical procedural rules include: a 'hierarchical' budget formulation process, for example, where more power is given to the Ministry of Finance than to the line ministries; transparency requirements in the budget document; and distinct amendment rules for budget formulation and approval (Sharma & Strauss, 2013).

Although several countries in sub-Saharan Africa have no (numerical) fiscal rules in place, in comparison with the Middle East, Northern Africa and large parts of Asia, more countries in the region have incorporated some of these rules, mostly following supranational mandates from regional institutions. However, some countries, such as Liberia, Tanzania, Botswana, Namibia and Uganda, also have national fiscal rules (Llédo et al., 2017).[3]

Studies from Cordes et al. (2015) show that only around 60% of governments worldwide comply with fiscal rules and that expenditure rules have the highest level of compliance. Caselli et al. (2018) recognise that compliance rates are low (in high-, middle-, and low-income countries) but conclude that countries are more likely to follow budget balance rules when these rules are combined with debt or expenditure rules. Mihalyi and Fernández (2018), who analysed data from 34 resource-rich countries (high-, middle-, and low-income countries) during the oil crash years of 2015-16, show that **out of the 34 reviewed resource-rich countries most did not comply**

[3] See also this map on the IMF website: https://www.imf.org/external/datamapper/FiscalRules/map/map.htm

with their fiscal rules. No country complied with supranational fiscal rules. The following results come from their research (Mihalyi & Fernández, 2018):

- **Compliance:** Only six countries followed their fiscal rules fully in both 2015 and 2016: Botswana, Colombia, Indonesia, Liberia, Malaysia and Norway. Botswana, Colombia and Norway used a structural or a non-resource balance rule that allowed them to continue with some controlled (extra) spending in downturn rather than pure budget balance or debt targets (which often result in austerity measures). However, as the authors conclude, the institutional capacity, fiscal reporting and statistical quality preconditions for adopting structural rules are very demanding.
- **Non-compliance:** 25 countries suspended, modified or disregarded the rules. Argentina, Azerbaijan, Russia and Venezuela suspended their rules, while most just failed to comply. Some anticipated by modifying the rules significantly, such as Ecuador and Mongolia.
- **Escape clause:** Only Peru invoked a well-defined escape clause, rather than modify or break its fiscal rule. Although many countries have an escape clause for their fiscal rules, only Peru has specific operational guidance on how to activate the escape clause in event of a natural disaster or international crisis.
- **Implementation phase:** Tanzania and Uganda adopted their rules in 2015, as such they are only beginning to implement their fiscal rules.

Studies that look at the impact of fiscal rules on macroeconomic stability have mixed results, in particular for countries with similar characteristics (Heinemann et al., 2016). Resource-rich countries that on paper have adopted the same kind of fiscal rules, have very different outcomes (see for example Table 1 in Sharma & Strauss, 2013, p.11-12). **In general, resource-rich countries with fiscal rules show low levels of discipline to implement these rules effectively and comply with fiscal rules** (Arezki & Ismail, 2013; Bova et al., 2016). The overall conclusion from research is that fiscal rules themselves do not create impact, but that the strength of institutions, political will to follow the rules, and some flexibility in the rules, do create some impact (Eyraud et al., 2018). To cite Mihalyi and Fernández (2018, p. 4):

> *"Fiscal rules need robust design features that balance simplicity, flexibility and enforceability that supported by strong political institutions, consensus and commitment".*

The literature also shows the importance of embedding fiscal rules in what sometimes is called a *Fiscal Responsibility Law*. Such a law is a limited-scope law that elaborates on the rules and procedures relating to three budget principles: accountability, transparency, and stability in the design and implementation of fiscal policy (Sharma & Strauss, 2013). **The advantage of embedding fiscal rules in law is that it becomes less political during change of governments; legislation is difficult and costly to revert, particularly constitutional laws**. However, this is a time-consuming political process (Sharma & Strauss, 2013) and caution needs to be in place on how the introduction of new laws will complement existing institutional traditions, particularly where 'best practice' procedures from other countries are being considered (World Bank, 2013; Eyraud et al., 2018).

Case studies

Botswana (source: African Natural Resources Center, 2016a)

The framework for public spending in Botswana is based around National Development Plans (NDPs) that run for five to six years, and the annual budgeting process. The public finance policy framework specifies that revenues derived from minerals should be used to finance investment in other assets. The intention is twofold: 1) to preserve the country's overall asset base; and 2) to provide the basis for the generation of income that can replace mineral income when it eventually declines. The corollary to the asset replacement principle is that recurrent (non-investment) spending must be financed from recurrent (non-mineral) sources.

Targeting this balance is more under the control of the government than the overall balance, allows the government to follow the same budget path irrespective of commodity revenue fluctuations, if the fiscal position is sustainable and financeable. The rules emphasise further that resource revenues and borrowing are targeted at developmental and capital spending. As such, it can help insulate and decouple fiscal policy from resource revenue fluctuations, at least in the short run, and thus contribute to macroeconomic stabilisation. Furthermore, Botswana complements revenue for its sovereign wealth fund Pula Fund with expenditure and debt ceiling rules.

The budget balance rule has been monitored through the *Sustainable Budget Index* (SBI), defined as the ratio of non-investment spending to non-mineral revenues. In calculating the SBI, the normal budget classification of expenditure is adjusted so that recurrent spending on education and health is classified as investment in human capital. Since 1983/84 the SBI has been 'sustainable' with the exception of the period between 2001-2005 when part of recurrent spending was being financed by mineral revenues. Since 2006, the SBI is sustainable again as the share of spending on development and health and education in the budget rose sharply.

However, the budget rules (e.g. SBI) are not embedded in jurisdiction. In other terms, the rules are a general statement of intent, not an ex-ante rule against which policymakers are held accountable. Parliament can pass any budget, whether or not it meets the SBI principle. Compliance with the SBI is entirely dependent upon a responsible executive (to draw up sustainable budgets) and a responsible legislature (to approve sustainable budgets). However, the country has a legislated debt rule.

Chile (source: African Natural Resources Center, 2016b)

Since 2001, Chile's budget policy has been based on strong fiscal rules (e.g. structural budget balance rules). The structural budget balance rule seeks to link public spending to long-term expected government revenue by imposing a target on the structural deficit/surplus level. Hence, the government achieves a budget balance that is corrected for the business cycle and for fluctuations in copper and molybdenum prices. Between 2001 and 2007, a structural surplus target of 1% of GDP was established for fiscal policy, but during the financial crisis in 2008-2009 this was reduced to 0.5% in 2008 and later reduced to a 1% deficit to stimulate the Chilean economy out of the recession, showing the flexibility within the rules.

Although the Fiscal Responsibility Law (No 20,128) of 2006 did not establish a specific target for the structural balance, it did mandate each president to establish the bases of the fiscal policy during their administration and to inform Congress how its fiscal policy would affect the structural balance. The law outlined the savings rules for the fiscal surplus, which should be saved in a pension fund (minimum of 0.2% of GDP, maximum of 0.5% of GDP), in the capitalisation of the Central Bank (up to 0.5% of GDP during five years) and in the stabilisation fund (any surplus above 1% of GDP). Hence, the law provided a reference target for the desired amount of savings to be accumulated as liquid assets.

While the rules provide some flexibility to respond to shocks, it also requires strong statistical systems as it involves complex calculations. Although the fiscal framework has worked well, several changes were recommended by the *Independent Committee on the Fiscal Rule* in 2011 to improve it further. For instance, the methodology used to calculate the cyclically adjusted balance rule no longer takes into account transitory changes in tax rates. In 2015, the government again changed the calculation of the cyclically adjusted balance (CAB) for a more complex formula than it had used during the previous decade, making it more difficult to monitor and interpret.

Box 1. The ways resource-rich developing countries make use of fiscal rules

Nigeria: "Nigeria has a flat three percent deficit ceiling, which it comfortably achieved in the oil boom years. However, the government allowed procyclical increases in spending during the resource boom, which in turn resulted in overall balances that did not generate significant savings. Ultimately, the government missed the ceiling after the oil price crash." (Source: Mihalyi & Fernández, 2018, p.9).

Indonesia: "Indonesia complied with its budget balance rule and debt rule in both years reviewed. This follows a strong track record of compliance since the rules were legislated and incorporated into a coalition agreement in 2003. Indonesia's budget is less dependent on oil revenues than budgets in other oil producers reviewed. The government also spent large amounts on fuel price subsidies, which became easier to phase out as oil prices dropped. The lessened impact of oil price drop on budget revenues and its beneficial impact on spending made it considerably easier for the government to comply with its overall balance fiscal rule in the period reviewed." (Source: Mihalyi & Fernández, 2018, p.15).

Colombia: "Colombia adopted a fiscal rule in 2011 and was able to follow it in the economic downturn despite difficult economic times. This is because under its structural budget balance rule, Colombia had to adjust much less harshly than if it had an overall balance rule: both the structural oil price adjustment and the adjustment for the cyclical position of the economy provided additional fiscal room." (Source: Mihalyi & Fernández, 2018, p.14).

Malaysia: "Malaysia has a current balance rule, also called a "golden rule," which targets the balance of revenues and recurrent expenditures. This in practice means that the government only borrows for developmental or capital spending. According to the Malaysian Central Bank, the government complied with its public debt ceiling of 55 percent of GDP in both 2015-2016. However, the newly elected Malaysian government recently claimed that the debt was much higher than previously disclosed, citing that the previous administration excluded contingent liabilities and other debts from the official figures. If these figures were included public debt would have reached 80% of GDP at the end of 2017. Though we assess that the numerical rule was complied with in 2015 and 2016, the large off-budget liabilities and irregularities relating the country's development bank, Malaysia Development Berhad (1MDB), put into question whether the spirit of the fiscal rule was followed." (Source: Mihalyi & Fernández, 2018, p.16).

Peru: Since 2013, Peru is one of the very few countries that uses a strict escape clause for its fiscal rules only for extreme situation as natural disasters or abrupt fall in international commodity prices. Most other countries that have such a clause have less refined guidelines to safeguard the good use of the clause. The clause allows the government to relax the deficit ceiling up to 2.5% of GDP. The rule includes a step-by-step description of how to return to the fiscal targets set prior to the escape clause and fiscal adjustments for the regional and local governments. (Source: Mihalyi & Fernández, 2018, pp.19-20).

Tanzania: Tanzania provides a good example of non-resource budget balance: the non-gas deficit limit is set at 3% of GDP, meaning that any gas revenue above and beyond that level needs to be saved for times of poor economic performance or until after gas revenues are exhausted. (Source: Mihalyi & Fernández, 2018, p.10).

Liberia: "The fact that Liberia complied with its fiscal rule is unsurprising given how the rule is written. Liberia adopted a debt ceiling in 2009, the year before obtaining almost complete debt relief. With the debt ceiling set at 60% of GDP, while the country's debt shrunk to 30%, the debt rule was clearly too loose to provide any meaningful restrictions on government action.

However, recent forecasts suggest that the debt limit now is coming increasingly close, which will soon put the rule to a more challenging test." (Source: Mihalyi & Fernández, 2018, p.15).

Timor-Leste: In the case of Timor-Leste, the modified PIH has been put in place with a process of adaptation. "To facilitate such a process, the authorities developed a peer-learning relationship with the Norwegian government. This did not mean that the Timor-Leste authorities adopted the institutions developed in Norway. Rather, the country was exposed to how Norway managed natural resource wealth, and has now adapted its own procedures in response to the local context. Whereas Norway adopts the PIH, the Timor-Leste authorities have followed a modified version of this fiscal framework, and thus designed the fiscal rule accordingly so that investment can be front-loaded to address the current development gaps. This process of changing and revising the fiscal rule has been accomplished through a consultative and transparent process that involved key agents." (Source: Sharma & Strauss, 2013, p.7).

3. Sovereign wealth funds

Stabilisation, Saving, and Investment funds

Sovereign wealth funds are becoming increasingly popular tools for managing natural resource wealth.[4] These assets do not represent an increase in a country's net wealth, but simply a shift in the composition of wealth from natural resource reserves to foreign exchange assets. Public sector balance sheets should reflect the current market value of these assets, including potential liabilities. A fund's annual contribution to changes in the government sector's net financial worth should also be recorded (Shields, 2013).

There are five types of sovereign wealth funds (e.g. Ossowski & Halland, 2016; OECD, 2018; Mihalyi & Fernández, 2018):

- **Stabilisation funds** are created to reduce the volatility of government revenues and counter the boom-bust cycles' unfavourable effect on government spending and the national economy.[5]
- **Saving funds** are intended to build up savings for future generations, for example in special pension funds.
- **Finance funds** are mainly intended to finance the budget as the fund accumulates budget surpluses and finances budget deficits.[6]
- **Development funds** are created to specifically allocate resources to priority socioeconomic projects in the national budget.

[4] See for a good list of these funds worldwide Bauer et al., 2016.

[5] According to the IMF, countries that would benefit from the establishment of stabilisation funds are those that are resource dependent as they derive at least 20% of their revenue from natural resources and need to counter the cyclical component linked to the commodity cycle (OECD, 2018).

[6] Very few countries have finance funds (e.g. Norway, Chile and Timor-Leste). For some more information see Ossowski & Halland, 2016, p.71-73.

- **Strategic Investment funds** are revolving funds that commercially invest money in larger and long-term productive projects with the aim to earn money back from future profits.[7]

Several countries combine the use of stabilisation, savings, and investment objectives in the design of their funds. As mentioned above (in section 2), sovereign wealth funds are not a fiscal rule, but such resource funds can support the implementation of sound fiscal policies (Baunsgaard et al., 2012). Therefore, the establishment of a resource fund is often combined with fiscal rules (numerical and procedural) that work within a broader fiscal management framework that needs to be coherent, consistent, and disciplined (OECD, 2018). **Implementing countries establish specific operational rules for managing their resource funds, covering accumulation, withdrawal, and investment decisions**. For example, Algeria, Iran, Libya, Mexico, Russia, Trinidad and Tobago and Venezuela have established stabilisation funds with price- or revenue-contingent deposit and/or withdrawal rules; Equatorial Guinea, Gabon and Kuwait have set up savings funds based on revenue-sharing, where a pre-determined share of oil or total revenues is deposited in the fund; and Norway and Timor-Leste have established savings funds with operational rules that are explicitly linked to the budget's non-oil deficit (examples mentioned in: Sharma & Strauss, 2013).

Having a resource fund in place does not mean budget and investment decisions are effective and transparent (Venables, 2016). **Evidence shows that sovereign wealth funds' success in resource-rich developing countries depends on commitment to fiscal discipline and sound macroeconomic management (e.g. diversification strategy).**[8] Stabilisation funds aimed at stabilising budget revenue within a single year have proven more resilient than those that cover a longer time horizon (Ossowski, 2013). Furthermore, stabilisation funds should by design not aim to maximise returns on investments, but rather hedge fiscal revenues against fluctuation of commodity prices. The OECD (2018) mention that for stabilisation funds investing in safe foreign assets is necessary to ensure sufficient liquidity to counter price volatility. **For capital scarce developing countries, stabilisation funds therefore must not be seen as supporting capital needs, which can result in public criticism**. In this respect, transparency is an important tool, not just to report on performance, but more importantly to build trust among citizens and educate the public and stakeholders on what and why conservative investment policies have been put in place in the first instance (OECD, 2018).

[7] These strategic investment funds are rare in low-income countries, with experiences to draw on from mainly form middle- and high-income countries like Singapore and Malaysia. Some sub-Saharan African countries, like Senegal and Nigeria, have established these funds more recently (OEDC, 2018).

[8] Malaysia and Chile offer examples of success to link fiscal discipline with macroeconomic strategic decisions. In Malaysia a strong central government implemented a series of development plans in which resource revenues (in particular oil revenues) were used to diversify the economy, in particular reforming agriculture. Investment programmes raised productivity and implemented a transition from rubber to palm oil production. In manufacturing, specific investments in infrastructure for special economic zones resulted in a range of labour-intensive activities including the electronics sector. Venables (2016, p.178): "Elements of Malaysia's success are due to its location in a booming region and its commodity mix (rubber and tin as well as oil). But most importantly, the government recognized that inclusive economic growth was necessary for future stability, and government capacity was sufficient to implement this policy effectively".

Two types of contingent mechanisms for the accumulation and withdrawal of assets are most frequently used (Ossowski & Halland, 2016):

- **Rules contingent on resource prices or revenues** that are prespecified in advance (either fixed or set through a formula). Examples of current or earlier resource funds with these rules include Chile (copper stabilisation fund until 2006), the Russian Federation, Sudan, and República Bolivariana de Venezuela.
- **Rules contingent on the difference between the price (revenue) set in the budget for the current year**—which can be specified on an ad hoc basis or by formula—and the actual price (revenue). Examples include Alberta (since 2004), Algeria, Bahrain, Ghana, the Islamic Republic of Iran (until 2010), Libya, Mexico, Mongolia, Oman (since 1998), Qatar, and Trinidad and Tobago.

Saving funds have a longer time horizon inherent to the policy objective in principle affords a lower liquidity preference and a greater risk tolerance. This means that the fund would not be under pressure to sell assets during periods of poor market performance and it would be able to invest without concern for short-term liquidity. Evidence, as mentioned in OECD (2018), shows that **investment decision-making shielded from short-term political cycles drives better performance, that long-term value creation is contingent on the management of risk and uncertainty, and that policymakers should be aware that high-return projects in resource-rich developing countries are not immediately available.** An efficient path of investment needs to take into account domestic opportunities and the absorptive capacity of the economy (Venables, 2016). To cite Venables (2016, p.171): "There are numerous white elephant projects, and [low-income] resource-rich countries perform poorly on the IMF's index of public investment management efficiency".

Examples of countries that have established resource funds and successfully implemented the operational arrangements, at times through a process of adaptation, include Norway, Botswana and Chile. In Botswana, annual capital spending has to be equal to the amount of diamond revenue used to finance the budget (e.g. African Natural Resources Center, 2016a). In Chile, the copper stabilisation fund operates on a structural balanced budget rule (e.g. African Natural Resources Center, 2016b). Other countries that have been mentioned as successful in managing the resource funds by using a fiscal framework are Timor-Leste, São Tomé and Príncipe, Gabon, and Trinidad and Tobago (OECD, 2018).

Countries that have been less successful in implementing resource funds include Chad, Nigeria, Venezuela, Ecuador and Algeria. In Chad, the establishment of very complex earmarking arrangements led to separate budgets and cash management systems for oil and non-oil funded expenditures (e.g. Ossowski & Halland, 2016). This resulted in costly borrowing to finance the non-oil budget at the same time as savings were being generated in a low-yielding petroleum fund. In Nigeria and Venezuela, the attempt to use the long-term price of oil to guide savings has not been very successful due to difficulties in accurately projecting the price of oil (OECD, 2018). In Ecuador, an excessive earmarking scheme for the use of resource revenues caused liquidity problems and weakened the quality of expenditures (see also section 4). In Algeria, specific oil accounts were linked to multi-year investment projects through complex cash management systems, which undermined transparency and accountability. Gabon sometimes made deposits into its savings fund with low returns, while at the same time paying significantly higher interest rates on its high public external debt and incurring debt service arrears (Ossowski & Haland, 2016).

Key learning point from these examples, as mentioned in the literature, is the lack of transparency, fiscal discipline, and capacity to manage funds (Venables, 2016). In such cases, there is a risk that these funds can be set up as a type of parallel budget that can be managed under the discretion of the Executive, and are not subject to any of the basic controls or procedures in a sound public finance management (PFM) system (Sharma & Strauss, 2013). Therefore, **evidence shows that resource-rich developing countries need to integrate the management of the funds within broader PFM and Public Investment Management (PIM) systems**. As was the case for Chad and Ecuador in the early 2000s (mentioned in: OED, 2018) their resource funds were over-complicated to strengthen internal controls and expenditure tracking within a domestic PFM system that was far too weak, resulting in resource revenues allocated to the funds through predetermined ratios and used to fund off-budget expenditures (Dabán & Hélis, 2009).

The literature, therefore, mentions the following considerations for stabilisation, saving, and within budget development/investment funds (e.g. Sharma & Strauss, 2013; Ossowski & Halland, 2016; Venables, 2016; OECD, 2018):

- **Integrate the funds within the national budget to ensure clarity.** Funds with their own mandate to invest, and with a separate legal identity, should be avoided, as this can lead to an excessive concentration of power, fragmentation of the budget process, and divert attention from ongoing PFM reform efforts.
- **The importance of transparency in the management of the resource fund** has been demonstrated in the case of both Chile and Timor-Leste, which has enabled the electorate and specialised bodies to monitor if procedures are being adhered to.
- **Use controlled flexibility within the fiscal and withdrawal rules instead of rigid rules to control the funds**. The fiscal rules and the fund's operational rules may be mutually inconsistent in certain circumstances, leading to the need for difficult choices between compliance and avoiding inefficiency and fiscal costs. Chile's stabilisation fund is an example of a fund where flexible rules have contributed to its successful implementation, while Venezuela had poor experiences with resource funds because of changes to the fund's rules and deviations from the intended purpose.
- **Countries with weak institutional capacity and PFM and PIM systems should focus on one resource fund, possibly with two separate portfolios** to meet stabilisation and savings objectives, rather than two separate funds with different objectives and asset management frameworks. In some cases, the limited expertise of resource funds with public service delivery, and limited accountability, have raised serious concerns about the effectiveness, prioritisation, and probity of such spending (Shields 2013).
- **Volatile resource revenue flows should not be earmarked for priority spending categories**, as these expenditure priorities are likely to benefit from stability and predictability in the funding source.

Increasingly resource-rich developing countries establish strategic investment funds as emerging tools for extra-budgetary investments, such as Senegal and Nigeria. Countries in the Middle East (e.g. Kuwait, Abu Dhabi), Russia, and countries in South East Asia (e.g. Malaysia, Singapore) have long experiences with such funds. They are geared toward fostering economic diversification by catalysing new sectors in the economy and making investments in infrastructure and R&D capabilities to support long-term growth and economic competitiveness (OECD, 2018). **As strategic investment funds operate with a double bottom-line objective**

(the aim is to generate financial returns as well as positive returns for socio-economic development), this can help resource-rich countries better scrutinise the financial and economic feasibility of development-oriented projects and avoid wasting resources on so-called white elephant projects. As such strategic investment funds are managed like a private sector investment fund, based on financial returns on investment, while the public side of the funds should guarantee positive long-term socioeconomic outcomes.

Strategic investment funds are a complementary tool that government can utilise to deploy capital within the economy. Yet, as a tool for government and given their combined financial and development remit, **strategic investment funds are most effective as part of a broader policy and institutional development and reform pathway**. A key challenge for strategic investment funds is the need at some level to coordinate across government to avoid duplication of public investment, while still remaining independent from political influence (OECD, 2018). Funds with knowledge of local markets and long-term investment horizons could be used for commercial or near-commercial domestic investment, including strategic investment in sectors that are seen as economically important and that at the same time yield commercially competitive risk-adjusted returns on financial investment (Clark & Monk 2015). On the other hand, there are concerns over the potential quality of the investments and the returns on investment when the fund's owner (government) can generate conflicts of interest between spending priorities and financial returns (Gelb et al. 2014).

A key difference between a strategic investment fund and a national development bank is that a development bank may be more likely to fund projects that produce below market returns (Gelb et al. 2014). Strategic investment funds are typically established with start-up capital financed by the state budget (or some other form of government revenue or savings). The decision to establish and finance such funds is thus subject both to state financing and parliamentary (or executive) scrutiny at the outset. However, **strategic investment funds are typically established as autonomous entities with investment decision-making made independently of direct government influence** (Ossowski & Halland, 2016). They are rarely accounted for in the state budget and can thus be classified as extra-budgetary entities. This is important because the fund's vulnerability increases with political interference. In particular, funds could be used to bypass constraints on budget spending, and an increasing share of their portfolio could become inappropriate for a resource fund (Gelb et al., 2014). However, their performance and adherence to their intended objective(s) is still subject to periodic government review.

Evidence shows that many strategic investment funds invest in different parts of the capital structure of firms (i.e. debt and equity) and large infrastructure projects. Investments are made in large but also small and medium-sized enterprises. Strategic investment funds take minority equity stakes and in some case majority equity stakes. Many strategic investment funds, such as the Russian Direct Investment Fund, seek to co-invest with external investors at home and abroad, to leverage capital investments but also to access a qualified and credible cadre of skills and expertise (OECD, 2018). There is not enough evidence from low-income countries with strategic investment funds to understand how impactful they are and how they are managed to achieve socioeconomic goals (see in Box 2 some information about Senegal and Nigeria).

Case studies

Botswana (source: African Natural Resources Center, 2016a)

Although the government accumulated financial assets during part of the mineral development period, this was not pursued as an active policy. Botswana has never had any rules requiring a specified proportion of mineral revenues to be paid into a dedicated fund; they are simply combined with other general revenues in the consolidated fund. Importantly, there are no rules regarding the payment of mineral revenues into the *Government Investment Account* (GIA). The Pula Fund, which is the national equivalent of the government savings held in the GIA. Botswana's Pula Fund and GIA have been successful in managing both long-run investments and stabilisation.

Similarly, there are no restrictions on withdrawals from the Pula Fund and GIA: The government can withdraw any amount up to its balance in the Pula Fund and GIA to fund budget deficits. Other than the normal public finance procedures, there are no restrictions on how much of the GIA can be drawn down by the government.

This mechanism provides flexibility; for instance, during the global financial crisis of 2008/09, the government was able to run large deficits by drawing down in accumulated savings in the GIA, including the Pula Fund, and hence minimise the impact of the crisis on the economy. It has resulted, however, in relatively small financial asset accumulation.

In theory, financial savings accumulated over many years of budget surpluses can be used to finance any level of spending and any size of budget deficit – until the savings are depleted, of course. There is no legal requirement for financial savings to be preserved for future generations. Because additions to or drawdowns from government financial savings are residual driven (i.e. by budget surpluses or deficits), the emphasis for sustainability is on responsible public finance processes and decision-making.

Spending by Botswana's government has been de-linked from current resource revenues, and revenues that do not meet government spending and investment criteria are invested abroad through the fund. The government has a claim on part of the Pula Fund, up to the value of the GIA. While there are procedures to be followed in the event of drawdowns from the Pula Fund, there are no legal limits on how much can be drawn down in a given time period.

Chile (source: African Natural Resources Center, 2016b)

From 1987-2006 Chile had the Copper Compensation Fund (FCC) to counteract the effect of volatile copper prices on public spending. In particular, the purpose of FCC was to save resources when the price of copper in a given year exceeded a long-term price and to use these savings when the price falls below the reference price. The FCC helped manage good and bad times during copper price fluctuations. In the boom years the resources accumulated in the fund were used to reduce debt. The operation of the FCC allowed Chile to use fiscal policy as a counter-cyclical tool to reduce the impact of swings in the business cycle. In 2006 it was replaced by the Economic and Social Stabilisation Fund (FEES). At the same time Chile established the Pension Reserve Fund (FRP) to help finance pension and social welfare spending. The funds are governed by a strong set of deposit and withdrawal rules underpinned by a structural fiscal rule (see in this review more in section 2) that smooths spending over time.

FEES allows the government to finance budget deficits and make repayments of the public debt, thus largely safeguarding fiscal spending against fluctuations both in the global economy as well as in revenues from taxes, copper and other sources. For example, in the case of a downturn affecting tax revenues, the national budget could be financed in part by FEES without needing to borrow, as was done during the 2008/9 crisis. Every year FEES receives the positive balance resulting from subtracting the cash contributions to the FRP and to the Central Bank of Chile from the fiscal surplus. This is in accordance with the Fiscal Responsibility Law, subtracting, when applicable, debt repayments and anticipated contributions made during the previous year. Funds can be withdrawn at any time to fill budget gaps in public expenditure and to pay down public debt. However, withdrawals are subject to the structural balance rule. Funds can also be withdrawn at the discretion of the Minister of Finance to finance annual contributions to the PRF.

FEES funds are saved in highly liquid, low-risk assets to ensure resources are available to cover fiscal deficits and avoid significant losses in the fund's value. Sovereign investments are made exclusively in foreign government bonds from the United States, Germany and Japan because of their low risk. Funds are allocated according to the following strategic asset allocation: 30% in money market instruments, 66.5% in sovereign bonds and 3.5 % in inflation-indexed sovereign bonds.

FRP and FEES are managed by the Central Bank, which outsources the management of about 35% of the PRF to external fund managers. The Central Bank releases its own annual reports separate from those of the Ministry of Finance. An external auditor's report is included in the report of the General Treasury. The Controller General performs an audit and reports to Congress and government. The Ministry of Finance also provides monthly, quarterly, and annual reports on the performance of the funds to Congress.

The funds are judged to achieve high levels of transparency. Information on fund managers, returns on specific investments and on how deposits and withdrawals are calculated is all publicly available. As a result of the application of this fiscal rule during years of very high copper prices, Chile accumulated significant resources in its two funds. This allowed fiscal policy to make a contribution to reactivating the economy during the 2008/9 crisis.

Box 2. The ways resource-rich developing countries make use of sovereign wealth funds

Nigeria: Nigeria's Excess Crude Account has played some role in stabilising the economy, but its effectiveness has been undermined by failure of many state governments to ratify the federal *Fiscal Responsibility Act* that set up the fund; by absence of sound legal foundation; and by "ad hoc disbursements". In 2011, Nigeria established the *Nigeria Sovereign Investment Authority* (NSIA) as an independent agency to manage the country's new sovereign wealth fund. Next to a saving and stabilisation fund an investment fund started, named the *Nigeria Infrastructure Fund*. While the savings and stabilisation portfolios are invested abroad, the Nigeria Infrastructure Fund takes the form of a strategic investment fund that can invest domestically on a commercial basis and with the aim of generating a financial return, and preferably via co-investments with external investors. The Fund each year develops a Five-Year Infrastructure Investment rolling plan. The current focus is on healthcare infrastructure, real estate, particularly mass affordable housing, motorways, and power generation. These areas were chosen in consultation with relevant government ministries and regulatory agencies, as well as sector experts. And, in some cases, a strategic partnership is formed. Importantly, including an external partner multiplies the investment and provides greater scrutiny and due diligence of any deal. (Source: OECD, 2018, p.33).

Senegal: Senegal is an example of a country attempting to catalyse new economic opportunities via a strategic investment fund since 2012 by establishing the *Fonds Souverains d'Investissements Stratégiques* (FONSIS). FONSIS is modelling itself after Singapore's Temasek. The goal is to consolidate and reinforce the government's existing holdings, while making new investments alongside partners in the private sector to increase the productivity and dynamism of the economy. FONSIS is focusing initially on investments in Senegal (e.g. solar power plants), but its founding legislation allows for investments to be made abroad. (Source: OECD, 2018, p.31)

Gabon: In 2012 the existing *Fonds pour les Générations Futures* was renamed the *Fonds Souverain de la République Gabonaise* (FSRG), and an agency was created to identify long-term investments for the FSRG, which would be a savings fund with investments in Gabon. Until the fund's capital reaches a preestablished minimum level, the fund will receive 10% of annual budgeted oil revenues, 50% of the difference (if any) between actual total budget revenues and the revenue projection in the budget, and dividends from public investments and state participation. Once the minimum capital level is reached, the FSRG will receive 25% of the income on its investments, and the difference between actual and budgeted oil revenues. The IMF, however, has projected low fiscal deficits or a broad fiscal balance over the next few years. (Source: Ossowski & Halland, 2016, p.78).

Cameroon: Cameroon was initially praised for setting up an offshore (and extra-budgetary) account to manage oil revenues, but from which about half of Cameroon's total oil revenue subsequently disappeared. The overall record on stabilization funds has been poor, with multiple episodes of boom and bust (Source: Venables, 2017, p.171).

Ghana: Ghana established funds in its Petroleum Revenue Management Act of 2011 and deposited some revenues in saving and stabilisation funds. All oil and gas revenues go directly to the Petroleum Holding Fund. Part of the revenues is then reinvested in the Ghana National Petroleum Corporation (GNPC). Another share is allocated to the Ghana Petroleum Funds which serve the dual objective of saving for future generations (Heritage Fund) and smoothing the effects of commodity price volatility and sustaining public expenditure in periods of revenue shortfalls (Stabilisation Fund). The remaining share is channelled to the national budget through the Annual Budget Funding Amount and shall serve for spending and investment in priority sectors such as agriculture, education, health and infrastructure. But strong fiscal rules governing the small resource sector coexisted with lax budget rules elsewhere, allowing government current spending to increase dramatically, creating fiscal and external deficits that necessitated an IMF rescue programme early in 2015. (Source: Ossowski & Halland, 2016, p.76)

Trinidad and Tobago: Trinidad and Tobago is one of the very few Caribbean countries with a natural-resource-revenue fund. The Heritage and Stabilization Fund (HSF) has well-defined objectives, a sound governance structure, and a relatively conservative investment portfolio. Nonetheless, inflow and outflows rules are not directly linked to fiscal indicator(s) or the sovereign balance sheet. Such rules need to be reassessed and more closely linked to a medium-term fiscal framework, improving its potential as a countercyclical tool. The fund should be considered within a sovereign asset-liability management framework. (Source: IMF, 2018, p.10).

4. Managing expenditures

Decisions on how much resource revenue should be consumed or invested and how much be saved or put away in a stabilisation fund, is often the outcome of political discussions and consultation. The literature (as mentioned earlier) agrees that capital scarce countries need to spend more money (but wisely) instead of focussing on savings. This does not mean that such countries are not in need to establish fiscal rules and sovereign wealth funds but find a balance that allows them to spend more upfront while still putting money aside from the budget for future investments (e.g. Timor-Leste). To cite OECD (2018, p.15):

> *"If a country would like to spend more now, the government should be aware that the economy may not be able to absorb quickly and productively the increased spending and investment. Hence, there may be sound reasons for a developing country to save more of current revenues until they can be utilised more productively and sustainably".*

Although fiscal rules and sovereign wealth funds are tools to improve fiscal stability and control over increasing spending, an important question governments need to answer is how they can ensure that the spending of natural resource revenues improves development outcomes. The expenditure side of the government budget in most resource-rich developing countries is divided into two main components, recurrent spending and development spending.

- The **development budget** in principle covers one-off capital items, such as roads, schools, other building projects, purchases of capital equipment, equity injections to government-owned companies, etc. The implementation of many development projects (and the associated expenditure) is spread over a number of years.
- The **recurrent budget** mainly covers public sector salaries and wages, maintenance costs, consumables, debt interest etc., and relates specifically to annual expenditures.

The annual budget includes both the annual recurrent budget provision and the annual component of expenditure required for on-going development projects. Resource revenues could find its way into the budget in very different ways. For example, domestic investment and other spending undertaken by resource funds only for public policy purposes are non-commercial activities that could be replicated through the government budget's tax and expenditure policies. **The public investment carried out by a fund could, under an alternative setup, be on budget. Social transfers from the fund also could be executed by the budget.** The various reasons put forth for establishing this type of a fund include (Ossowski & Halland, 2016, p.80):

- To get around weak public financial management (PFM) systems and an ineffective, inefficient, or corrupt budget system; and to deliver through a fund with separate procedures and control systems expenditure of better quality and at a lower cost (the "islands of excellence" argument).
- To prevent potential overspending or rent capture by keeping resources off-budget and managed by a separate entity.
- To support development by undertaking public investment projects in infrastructure or social infrastructure, delivering public services, or financing the private sector based on public policy objectives.

Sometimes these fund activities may be motivated, at least in part, by political economy considerations— that is, by showing that the resource revenue is being put to good use. There are various ways a resource fund can spend or encumber resources for public policy purposes (Ossowski & Halland, 2016, p.80):

- Spend directly off-budget.
- Provide off-budget subsidies or domestic loans to public enterprises or the private sector, undertake equity investment in private domestic companies, or participate in special purpose vehicles (SPVs) co-financed by the private sector (for example, for infrastructure projects) for non-commercial public policy purposes.
- Provide guarantees to SPVs, public enterprises, or private companies, generating contingent liabilities.

However, to phrase Bauer et al. (2016, p.4-5), "most governments permit domestic spending directly through their funds' choices of asset holdings rather than through the budget process. This has undermined parliamentary accountability, democratic institutions and public financial management systems in some countries".[9] In recognition of this danger some funds have prohibited or limited direct domestic investments (Bauer et al., 2016).

Some countries have utilised strict earmarking practices to channel natural resource revenues to particular budget items often linked with national development plans (NDPs).[10] However, **the earmarking of natural resource revenues does not, in most cases, have a strong benefit principle (tax levied on specific activity to pay for related issues).** Resource-rich developing countries often earmark natural resource revenues for various purposes, with the aim to protect spending on socio-economic development priorities and discouraging expenditure on recurrent budget items, while at the same time drawing public attention to these spending. However, **evidence from research shows that "earmarking generally reduces fiscal flexibility and is open to capture from special interests, leading to underinvestment or overinvestment"** (OECD, 2018, p.19). The OECD (2018) report mentions several disadvantages to earmarking:

- It can constrain budgetary flexibility.
- It may lead to government inefficiency, and overinvestment or underinvestment in certain public services.
- It may contribute to procyclicality of public expenditure.
- It can be fashioned such that it is not subject to parliamentary oversight. This may undermine public financial management and public investment.

Ecuador in the start of the 2000s is mentioned as example how earmarking can go wrong (e.g. OECD, 2018; Ossowski & Halland, 2016). Although the government had in place fiscal rules and a stabilisation fund, on the other hand the budget process in Ecuador had been characterised by multiple competing interest groups, institutional instability, and limited incentives for long-term cooperation (Cueva & Ortiz, 2013). Most revenues were already assigned to specific spending targets, guaranteed subsidies and debt repayments resulting in little room for fiscal adjustment. The practise the stabilisation and saving funds were vehicles for earmarking oil revenues to different projects (Cueva & Ortiz, 2013). The complexity of the earmarking, and when and how deposits were made, constrained government's ability to prioritise spending efficiently. As such earmarking exacerbated spending pressures during the 2003-2008 oil boom (Lopez-Murphy et al., 2010). In 2008 the whole fiscal system was dismantled as it became clear that the schemes favoured debt repayment rather than social spending (Arrellano-Yanguas & Mejía Acosta, 2014).

On the other hand, Botswana and Indonesia are mentioned as countries that to some extent earmarked resource revenues, but without relying on strict and complex statutory expenditure requirements. Both countries 'earmarking' has been linked to a clear governmental development policy agenda approved by parliament. Both countries successfully combined

[9] In Azerbaijan, for instance, government authorities have used the State Oil Fund (SOFAZ) to directly finance strategic government projects such as the railway between Azerbaijan, Georgia and Turkey. These expenditure items are not subject to the same reporting or public procurement requirements as those financed through the normal budget process, nor are they subject to as much parliamentary oversight. The Angola Sovereign Fund, the National Development Fund of Iran, and Russia's National Wealth Fund also bypass normal budgetary procedures and are used as vehicles for political patronage. (Source: Bauer et al., 2016, p.4).

[10] See for example Botwana.

sound macroeconomic management with clear long-term development policies, which was the basis for increased productive investments in human capital and infrastructure. Development spending was stable over a long period as the stabilisation fund ensured continued spending in downturn periods (OECD, 2018).

Another option that governments could chose is to spend the natural resource revenues is direct distribution through cash transfers. Like with other socioeconomic public investments, to ensure sustainability of cash transfer expenditures from natural resource revenues they should be complemented by a fiscal framework that aims for stability. To cite OECD (2018, p.24):

> *"While allocating resource revenues directly to citizens may reduce poverty and improve natural resource revenue accountability, there is an opportunity cost. Supporting a cash transfer mechanism may take away from other productivity-improving public expenditure and investment, such as in infrastructure, healthcare and education".*

How much and for what purpose the government - with approval of Parliaments – spends resource revenues, positive outcomes depend on the government's administrative capacity and abilities (on all levels). **Linking the fiscal system with the public finance management (PFM) and public investment management (PIM) systems is crucial to help avoid the risk that resource revenues are not spent irresponsibly and without consultation with relevant stakeholders.** Given the intricate link between fiscal frameworks, rules and funds, and the budget, as well as the need to have a robust PFM (e.g. Medium-term Expenditure frameworks)[11] and PIM system in place for the fiscal system to be effective, there is useful guidance in the literature on how PFM and PIM systems should be strengthened for resource-rich development countries.

A centralised system of financial control and authority can help with fiscal discipline. In principle, a central finance ministry can balance the competing demands of spending ministries, regional authorities, or other lobby groups. However, to play this role effectively the finance ministry must have control of incoming revenues, along with sufficient political will and power to resist competing demands (Venables, 2016). Often the main constraint is not finance, but rather implementation capacity and control. Capacity can be brought in via donors (e.g. IMF). In many other countries control is diffuse, often with national resource companies engaging in off-budget quasi-fiscal activities, such as running fuel subsidy or social welfare programs.[12] The hand of the finance ministry can be strengthened by fiscal rules.

Key principles for considering how natural resource wealth should be integrated within the budget process and the wider PFM and PIM systems (consultation, decision-making, implementation, administrating, monitoring) that Sharma and Strauss (2013) mention, are:

- The budget should have a transparent presentation of resource revenue;
- If a natural resource fund is established, it should be fully integrated in the national budget process;

[11] See more on this in Ossowski & Halland, 2016, Chapter 6.

[12] An extreme example mentioned by Venables (2016) is Venezuela.

- Whether a natural resource fund is established or not, resource revenue should not be earmarked for specific expenditure items. Instead, resource revenue should be handled as part of a unified budget preparation and execution process.
- To enhance oversight and transparency, a special unit should be established at the Ministry of Finance to reconcile and disseminate resource revenue information.

As highlighted earlier (in section 3) **extra-budgetary investments can also be used to increase strategic investments, in particular within businesses, specific economic sectors and infrastructure**. Although most of these investments need a financial return, if well linked with NDPs and other macroeconomic strategies for diversification these funds (if well managed and equipped) are able to supplement existing public spending to boost socioeconomic outcomes.

5. Transparency and independent monitoring

One of the main points mentioned in the literature to achieve a fiscal stability and predictable inflows of resource revenues to public investments within the context of resource-rich developing countries, is to **establish a monitoring and accountability system that is independent and transparent focusing on both complying to fiscal rules, advising on any changes in such rules, and evaluating impact and quality of public investments**.

In the study of Mihalyi and Fernández (2018) only one third of the 34 reviewed resource-rich countries have established an external oversight body tasked with monitoring compliance with their fiscal rules. These are either supreme audit institution, fiscal advisory councils or parliamentary budget offices. The aims, mandates and limitations of these institutions vary depending on the legal, political and institutional environment of each country.

- **Supreme audit institutions** increasingly play a role in overseeing the fiscal framework, but only when fiscal rules are widely adopted (e.g. Brazil, India, Indonesia). They can play an important role in resource governance as they oversee compliance with rules across the whole extractive decision chain. They are well placed to monitor whether the law was followed and if budgetary and fiscal targets have been met. However, audits are protracted in time, often completed more than a year after budget execution, which hinders their ability to warn about impending risks (Mihalyi & Fernández, 2018).[13]
- Many **fiscal councils** were established after the global economic crisis in 2008. Unlike audit institutions, fiscal councils generally conduct ex-ante evaluations of compliance with the rule through forecasts and provide inputs into the planning and policy formulation process (e.g., by estimating costs of measures), often making explicit recommendations on fiscal sustainability. Unfortunately, the technical expertise needed for a well-

[13] The Brazilian Federal Court of Accounts, the Tribunal de Contas da União (TCU), conducts inspections and audits on its own initiatives or by request of the National Congress. The house of representatives elects the audit board of the Republic of Indonesia, the Badan Pemeriksa Keuangan (BPK). The BPK provides periodic reports on state finance accountability, including periodic reports on fiscal compliance. It is established in the constitution and is independent from both the legislative and executive branches of government. In India, however, the president elects the comptroller and auditor-general members. The Indian audit institution’s mandate is vague in respect of fiscal rules oversight, but it does report on compliance regularly (Mihalyi & Fernández, 2018).

functioning fiscal council remains a challenge across low-income countries (Mihalyi & Fernández, 2018).

- A **parliamentary budget office**'s role is to provide technical support to parliamentarians in their legislative and oversight functions. They often do this by supporting the work of the main budget committees, or evaluating or costing various new bills. Some also review compliance with fiscal rules.[14]

In the cases where there is limited technical capacity but already one established institution working on public finance, it may be beneficial to build on it and expand its remit, rather than setting up a new institution (Mihalyi & Fernández, 2018). Most common in developing countries is to establish a fiscal advisory council. For example, in Timor-Leste, Nigeria, Colombia, Peru, Brazil, Indonesia and Ghana independent fiscal advisory councils have been created to advise (non-binding recommendations) governments and legislators in the management of their resource wealth and related fiscal policy formulation and implementation.[15] To cite Sharma and Strauss (2013, p.15): "Opening up fiscal policy to scrutiny by an independent body is a good practice of fiscal transparency, which puts pressure on the government to be honest. Enshrining independence in legislation is considered an effective means of demonstrating political support for a fiscal council".

Typically, fiscal councils are government or legislative agencies mandated to provide independent advice on and/or verify fiscal policies, plans and performance (Hemming, 2013; Hemming & Joyce, 2013). Many fiscal councils must, as part of their mandates, check compliance with fiscal rules, although they cannot prevent governments from actually breaking these rules. However, the literature also mentions that too much pressure from fiscal councils on governments could undermine the credibility of the government and draining scarce resources from the government (Sharma & Strauss, 2013). While the mandate of fiscal councils differs among countries, no council has been granted the power to set fiscal targets or change taxes, as this would raise serious issues of democratic accountability (Ossowski & Halland, 2016). Empirical evidence on the usefulness of fiscal councils in developing countries is still sparse (Hemming, 2013). However, Mihalyi and Fernández (2018) research shows **overall countries**

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[14] The Centro de Estudios de las Finanzas Publicas (CEFP) in Mexico is an examples of parliamentary budget offices. It is not legally mandated to monitor compliance with the fiscal rules. Nevertheless, CEFP started publishing quarterly public finance reports in 2016, which can be used to monitor the rules.

[15] For example, **Timor-Leste** has established a Petroleum Fund Advisory Council that advises Parliament, an Investment Advisory Board that advises the Minister of Finance, and appoints an external auditor by law. The external auditor is appointed by the Government and the auditor's report is included in the annual report of the Petroleum Fund, which is available to Parliament and the public (Petroleum Fund Law, Art. 34). The Law requires the external auditor to be an internationally recognised firm appointed on a term contract (Sharma & Strauss, 2013). In **Ghana** the citizen-based PIAC monitors and evaluates the Government's management of the Ghana Petroleum Fund, facilitates public debate, and provides an independent assessment about the use and management of the petroleum revenues, in particular to ensure that petroleum revenues are used for the benefit of both current and future generations. Ghana also has an Investment Advisory Committee, comprising seven members, advising the Minister of Finance and Economic Planning on the investment policy and monitor the performance of the fund. The Minister shall not make any decisions in relation to the investment strategy or management of the Funds without first seeking advice from the Investment Advisory Committee and the Governor of the Bank of Ghana. Independent audits are part of the framework, but there is no jurisdiction (Sharma & Strauss, 2013). - See more examples in Ossowski & Halland, 2016, p.66.

with national independent oversight bodies are more likely to follow fiscal rules than countries with no formal oversight. Colombia, Indonesia and Peru are all examples of countries with strong oversight bodies publishing yearly reports on fiscal rule compliance.[16] But fiscal councils require capacity and strong governance structures, which may be difficult to establish, especially in low-income resource exporters (Ossowski & Halland, 2016).

Still, most resource-rich developing countries have no oversight bodies at all in place (e.g. Liberia) or they are purely internal government oversight bodies in place to monitor progress and compliance (e.g. Malaysia, Argentina).[17] However, in other cases, the degree of independence is more difficult to evaluate. As Mihalyi and Fernández (2018) mention, in Chile, the fiscal advisory council is comprised of five renowned fiscal experts all appointed by the government, but it has no staff or budget. Furthermore, the Fiscal Council in Chile is not formally accountable to Congress. Greater autonomy would allow the council to provide a more objective and credible assessment of fiscal policy and government compliance with the fiscal rule (African Natural Resources Center, 2016b). Also, Botswana, praised for its fiscal framework and discipline combined with macroeconomic development goals, is not a good example on transparency and independent monitoring. Although 'reasonably detailed data' are published on government revenues and spending, no information is published on the disbursement of funds to service delivery units (African Natural Resources Center, 2016a).

Commitments of governments to increase transparency is important. A number of resources and initiatives are available to enhance transparency efforts, such as the Global Initiative for Fiscal Transparency; the Open Budget Initiative; and the IMF's Guide on Resource Revenue Transparency, Code of Good Practice on Fiscal Transparency, and Reports on the Observance of Standards and Codes. Resource-rich developing countries are encouraged to join the Extractive Industries Transparency Initiative (EITI), which aims to strengthen governance by improving transparency and accountability in the extractives sector, and thereby limit the rentier state culture.[18] This initiative, which is a coalition of governments, companies, civil society groups, investors and international organisations, was established in 2002.

Countries increasingly make use of public consultation and building consensus (e.g. Timor-Leste, Ghana) for setting expectations around how the natural resource wealth will be managed, particularly regarding how much revenue will be available for current consumption and investment, and how much will be saved for future generations. This is particularly important for countries that are in a transition to increase natural resource revenues significantly. This would entail ensuring participation and consultation in the optimal fiscal policy framework, and then identifying the mechanisms required to achieve this. Fiscal frameworks can

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[16] Norway does not have an oversight body for its rule, but the government did task a public expert commission to review compliance with the rule. Malaysia has no independent oversight, though it has an internal government body. Botswana and Liberia on the other hand have followed their fiscal rules despite not having formal oversight bodies (Mihalyi & Fernández, 2018).

[17] Supranational bodies generally oversee supranational rules. There is a regional commission tasked with monitoring the rules with legal independence from member states. Given the low compliance with supranational rules, Mihalyi and Fernández (2018) state that it may be beneficial to delegate some oversight tasks to national entities.

[18] Botswana has not subscribed to the Extractive Industries Transparency Initiative (EITI), and does not meet the EITI Standard (EITI, 2015).

be implemented as part of the process. The implication is that transparency is important, so that revenue flows and spending are visible to parliament and civil society.

6. Enabling factors

The literature is very clear that 'best practice' in one country is not *per se* the answer for another country, even in the same region. Differences in political economy, for example, is one important issue that influences decision-making and outcomes (Fritz et al., 2017). Being clear about different institutional arrangements and roles is essential for assessing bottlenecks and likely difficulties, as well as for identifying priorities for engagement on institutional changes. Four areas of attention have been particularly emphasised in the literature, regarding enabling factors:

- Country-specific needs,
- Country-specific absorption capacity for domestic socioeconomic investments,
- Institutional capacity (consultation, decision-making, implementation, monitoring),
- Extent of exposure to external shocks.

All these factors create different enabling environments for fiscal frameworks (e.g. different set of fiscal rules and funds) that impact on the quality of public services delivery (e.g. Sharma & Strauss, 2013). For countries with low institutional capacity, high needs for investment, but low absorption capacity, the literature in general comes to some specific considerations based on evidence. For example, 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 (OECD, 2018). Linking the fiscal framework with macroeconomic framework therefore is required to ensure better-quality and productive public spending.

Another consideration from the literature is that **numerical fiscal rules can only be effective if accompanied with procedural rules. However, this requires robust PFM and PIM systems to be in place, which is not the case in many low-income countries**. Such countries could follow a policy guideline (instead of fully implementing a fiscal policy framework) to enhance fiscal discipline without formally committing to a specific fiscal framework until it has gone through a learning process and have established better PFM and PIM systems (Corbacho & Ter-Minassian, 2013). In this case, the country will still need to choose the overall fiscal policy framework, and what the appropriate policy guideline or rule is for achieving this (Sharma & Strauss, 2013).

To cite Sharma and Strauss (2013, p.17):

> *"A potential risk to this approach is that if the authorities do not commit to a formal [fiscal arrangement], such as a resource fund or a procedural rule, the basis for monitoring compliance to fiscal discipline is not as strong and it may become difficult for citizens to demand accountability. Therefore, the importance of public participation and consultation in designing the fiscal guidelines will still be an important factor".*

Another option mentioned by Sharma and Strauss (2013) is to design and implement a fiscal framework and learn about what works through an iterative process. However, as the authors mention, there is a risk that if a rule or commitment is broken the government could lose credibility. This could be particularly pertinent in post-conflict countries where governments need to establish trust with citizens.

There are several ways the literature mentioned how resource-rich developing countries can access capacity. For example, contracting external long-term expertise or forcing a learning partnership with another country (e.g. Timor-Leste with Norway, or Mongolia with Chile). Most important is that countries establish a step-by-step approach through learning to adapt existing rules and guidelines and introduce new next-step actions to extend the fiscal policy framework. For example, countries do not need to start directly with a sovereign wealth fund to be effective, but if they want, they need to have fiscal rules in place and comply with them, including independent monitoring. Therefore, **choosing a simple framework that is easily understood and straightforward to monitor is generally preferable to a complicated structure that is thereby less transparent** (Dabán & Hélis, 2010).

Only after a fiscal policy framework is in place, linked with PFM and PIM systems, and macroeconomic frameworks, governments can consider strategic investment funds that can further help natural resource rich countries manage long-term financing challenges and shrinking fiscal space, while balancing policy and commercial objectives. **Such funds are most effective as part of a clear government investment policy that establishes the priorities, criteria and targets for investment, coupled with some level of coordination across government levels and different agencies to avoid duplication of public investment** (OECD, 2018).

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