

IMF STAFF DISCUSSION NOTE

Direct Distribution of Resource Revenues: Worth Considering?

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EXECUTIVE SUMMARY

Some scholars have argued that direct distribution of natural resource revenues to the population would help resource-rich countries escape the “resource curse.” This Staff Discussion Note analyzes whether this proposal is a viable policy alternative for resource-rich countries.

The first priority for policymakers in resource-rich countries is to establish fiscal policy objectives to support macroeconomic stability and economic development. In this regard, the establishment of an adequate fiscal framework that informs decisions on how much to save and invest, how to smooth out revenue volatility, and how to deal with resource exhaustibility issues should precede any discussion of direct distribution of resource wealth to the population.

The extreme option of directly distributing all resource revenues to the population is problematic: the state would be left without adequate resources to carry out its core activities, such as providing basic public goods, and there is no guarantee that the redistribution mechanism would not be affected by rent-seeking. This option would severely diminish the ability of fiscal policy to manage volatility and address society’s intergenerational concerns. Furthermore, there is the issue of the adverse consequences on labor markets of relatively large income transfers to individuals.

However, there could be merit in more modest schemes that either seek to replicate the Alaskan model or seek to develop (or expand) the system of cash transfers to the population. The Alaskan model is innovative, but it is limited in scale and does not bypass state institutions. Starting small is necessary given uncertainties about the administrative capacity of a typical resource-rich country. The limited size of the program would help avoid unanticipated implementation problems.

Similarly, using resource revenues to establish or expand social safety nets and systems of direct cash transfers to the population seems a reasonable approach. Conventional wisdom suggests that revenue earmarking is generally undesirable because it reduces budget flexibility. Nevertheless, there may be a case to earmark a portion of resource revenues to particular cash transfer programs. This would ensure that these programs are sustained over time, elicit the support of the population, and increase government accountability for the use of resource wealth.

INTRODUCTION

Resource wealth is often associated with weak institutions and poor governance. One reason is the difficulty of finding more than a handful of countries that have managed their resource wealth well. The argument is that resource wealth distorts incentives, generates rent-seeking behavior, and undermines democratic accountability. As a result, some scholars have argued that governments in resource-rich countries cannot be trusted to spend their resource revenues wisely and equitably using existing institutions and systems, even if the private sector is extracting natural resources efficiently and paying all the taxes that are due. This has prompted calls for the direct distribution of natural resource income to the population instead of channeling it through the budget. The purpose of this Staff Discussion Note is to assess this proposal in light of limited historical experience with direct distribution and best practices in fiscal policy in natural-resource-rich countries.

THE CASE FOR DIRECT REDISTRIBUTION

Though resource wealth provides an enormous opportunity to boost development, the historical record of resource-rich countries is relatively weak. It is difficult to find more than a handful of examples of resource-rich countries that have leveraged their resource wealth in ways that boosted their economic development and made a difference to the well-being of their populations. These countries include Australia, Botswana, Canada, Chile, and Norway. But scholars have often focused on examples of failure.²

The “resource curse” is the most widely cited cause for the poor economic performance of resource-rich countries. The main empirical regularity is the surprising inverse relationship between heavy natural resource dependence and economic performance compared with resource-poor countries. The underlying hypothesis is that natural resources generate unexpected dynamics that inhibit the growth process. These dynamics have both a political and an economic dimension.

² Frankel (2010) provides a survey of the “resource curse.” The few case studies of success stories include Larsen (2003) on Norway and Sarraf and Jiwaji (2001) on Botswana.

The political dimension is viewed as the dominant force behind poor growth performance.

Because natural resources are associated with rent-seeking behavior, they prevent the emergence of inclusive political regimes and efficient institutions. The abundance of natural resources allows authoritarian leaders to stay in power, obviates the need for domestic taxation, and hampers the emergence of systems of checks and balances that promote accountability, transparency, and efficient resource use.³ The few countries that have escaped the resource curse have been those with relatively strong institutions.⁴

The economic dimension is often linked to the phenomenon of “Dutch disease.” With booming resource exports, there is an increase in capital inflows that drives up the value of the currency. Labor and capital shift from the traded to the nontraded sector, and domestically produced goods become less competitive. Over time, the manufacturing and agriculture sectors contract and growth begins to fade.⁵ Most proponents of Direct Distribution Mechanisms (DDMs) consider that the private sector will perform no worse than the public sector in terms of savings during resource booms—which implies that DDMs would not exacerbate Dutch disease.

In this context, it has been suggested that the resource curse could be avoided if resource wealth were distributed directly to the population. The justification for DDMs is based primarily on political and behavioral considerations, with the objective of breaking the link between the abundance of natural resources and rent-seeking behavior.⁶ If DDMs were applied to the entire revenue take from natural resources, the plausible size of resources directly distributed would be large, with significant implications for the budget and the economy (Box 1).

³ The most dramatic characterization of this view was provided by Pérez Alfonso, Venezuela’s oil minister and co-founder of the Organization of Petroleum Exporting Countries (OPEC). In 1975, he described petroleum as “the devil’s excrement,” bringing waste, corruption, excessive consumption, and debt. Studies on the political dimension include Collier and Venables (2009), Leite and Weidmann (1999), and Isham et al. (2005).

⁴ Mehlum, Moene, and Torvik (2006) argue that the main reason for the diverging experiences of resource-rich countries lies in the quality of institutions.

⁵ For the analytical underpinning of the argument see Corden and Neary (1982). Empirical studies include Gelb and Associates (1988), Spatafora and Warner (1995), and Arezki and Ismail (2010). Cherif (2013) argues that less-advanced countries are more vulnerable to Dutch disease.

⁶ DDMs seek to reduce discretion in the use of natural resource revenues as a way to mitigate corruption and rent-seeking. Proponents include Sala-i-Martin and Subramanian (2003), Gillies (2010), and Rodriguez, Morales, and Monaldi (2012).

Box 1. How Large Could Direct Distribution Mechanisms Be?

The potential size of distribution under a Direct Distribution Mechanism (DDM) can be large. Resource revenues averaged 15 percent of GDP in a sample of 34 resource-rich countries during 1992-2009 (Crivelli and Gupta, 2014), with a median of around 10 percent of GDP. Moreover, using different sources and methodologies, the World Bank's World Development Indicators estimates natural resource revenues at 21 percent of GDP on average in resource-rich countries.

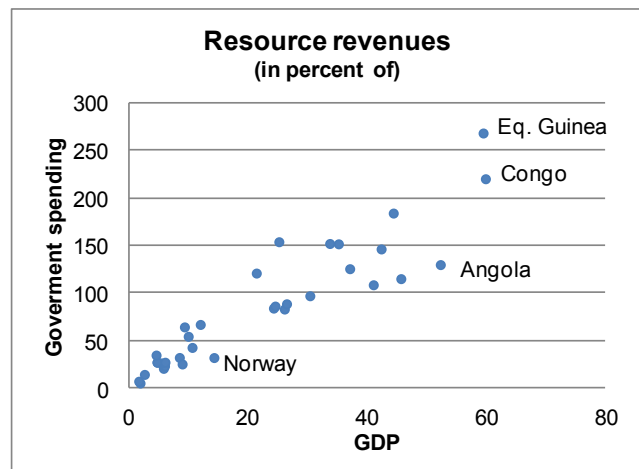
The distributional impact of DDMs can be significant. Even in cases where resource revenues in relation to GDP are relatively low—such as in Ghana, where they amount to about 5 percent of GDP—the potential to raise the incomes of the poorest is considerable. The income share of the lowest decile in Ghana is 2 percent, so a universal DDM would raise the income of this group by about 25 percent. However, this transfer should be weighed against the costs arising from lower public service provision, which could have important consequences for income distribution.

The potential impact of DDMs on government

funding could be large. With natural resource revenues averaging about 84 percent of government spending in resource-rich countries, there is a sizable risk that the basic operations of the government

would be underfunded if the government is not able to claw back a significant share of the distributed amount through taxes. Even if only 10 percent of the distributed amount is lost, the revenue effort needed to compensate for such a loss would be significant—about a third of the countries would need to raise their nonresource tax revenues by more than 25 percent.

Even modest revenue losses could have a significant impact on the provision of basic services. A loss of 10 percent of natural resource revenues would be equivalent to public health spending in more than 40 percent of the countries in our sample. It would also be equivalent to half of the public spending on education. These figures highlight that even a modest loss could have potentially large budgetary implications.



The proponents of direct distribution offer two broad arguments. First, they contend that with direct distribution the state will no longer receive large windfalls and will not seek to do too much too soon. This would prevent these governments from being administratively overextended and vulnerable to rent seekers (Karl, 1997; Ross, 2001). Second, a DDM would generate incentives to increase accountability. Citizens will be more vigilant of the state's natural resource management given that their "dividend" is at stake (Box 2). Moreover, deprived of large resource revenues, the

state will have to rely on taxation of citizens to cover the cost of public services. And if resource revenues were transferred to the population and then taxed, it would make citizens more aware of their rights as taxpayers, leading them to demand greater accountability of public spending programs (Devarajan et al., 2011; Sala-i-Martin and Subramanian, 2003; Birdsall and Subramanian, 2004). In this way, direct distribution would help promote development of political and economic institutions. This argument is bolstered by the evidence that a large share of tax revenues in total revenues (especially direct taxes) is associated with more democratic institutions (Ross 2004; Mahon 2005).

Box 2. The Behavioral Economics of Taxes and Direct Distribution Mechanisms

DDMs seek to improve accountability by forcing the government to fund itself through taxes.

The theoretical underpinning behind this argument is that transferring resources to the public and then clawing them back through taxes can lead to a change in the public's behavior. This "endowment effect" is drawn from behavioral studies, which highlight the following three considerations:

- **Reference dependence.** Behavioral economists have found that, when assessing outcomes, there is what is called reference dependence—people's choices depend not only on the material outcome of that choice, but are also related to a reference point to which the outcome can be compared. In the context of compensating human beings, Kahneman and Thaler (1991) argue that people adapt quickly to their income stream and perceive it as neutral (neither good nor bad), while bonus pay—for the same compensation value—leads to a higher level of satisfaction. The reason is that people pay attention to the changes in their income, not only to its level.
- **Loss aversion.** Tversky and Kahneman (1991) argue that a recipient's assessment of income changes is asymmetric, with losses being more upsetting than gains. This would suggest that citizens are more vigilant of a dividend that is clawed back than they are about resource rents that are not perceived as part of their income stream to begin with.
- **Framing.** Individual behavior can be changed by the way options are framed. Madrian and Shea (2001) report that automatic enrollment in 401(k) plans leads to 100 percent participation, but it drops to about half if an action is required—which is not necessarily explained by transaction costs. DDMs could shift the reference point to frame a perceived gain as a perceived loss, leading to stronger monitoring of the use of resources.

There is considerable variation in the literature on what constitutes direct distribution. Hjort (2006) argues that DDMs are mechanisms that transfer a portion of a country's income from natural resources directly to citizens, reducing the discretion of the state. However, Alaska's case discussed in Box 3—which distributes only the realized investment earnings rather than the principal—is often

cited as the prime example. In our view, DDMs are mechanisms that transfer a portion of resource income to the citizens to reduce the discretion of the state over such resources and to foster accountability.⁷ There are also mechanisms that distribute cash to the population—or at least a segment of the population, but do not seek to reduce the discretion of the state. Venezuela’s *Misiones*—social programs funded from oil revenues that operate outside the budget—keep the discretion in the hands of the executive.⁸ Conditional cash transfer programs—like those provided in Mexico (*Oportunidades*) and Brazil (*Bolsa Familia*)—are not DDMs because they are not funded with earmarked resource revenues, and they are part of the regular budget process—a policy decision—rather than through transfer of resources to the private sector without discretion by the political leadership.

Similarly, the literature presents several variants on how much resource revenues DDMs should distribute. In this regard, there are three relevant questions (Rodriguez, Morales, and Monaldi, 2012).

How much? The most extreme variant argues that country authorities should give away the entire flow of their natural resource revenues to the population. This has been proposed for Nigeria (Sala-i-Martin and Subramanian, 2003), and considered under the Oil-for-Cash Initiative (Moss, 2011). Alternative variants seek to return a portion of revenue from natural resources to the population, or a portion of the investment income from a natural resource fund, as in Alaska. Some of these variants refer to technical, political, or economic consequences of DDMs—such as undermining work incentives, or their impact on overall savings and macroeconomic stabilization.⁹ For example, Birdsall and Subramanian (2004) argue for distributing 50 percent of the oil revenue in Iraq because of the need to deploy the remaining resources for development and providing social services in light of the weak capacity of the government to collect non resource revenues. Rodriguez, Morales, and Monaldi (2012) call for complementing DDMs with a stabilization mechanism through an oil fund,

⁷ We realize that judging the objective of a policy entails a subjective assessment.

⁸ Isakova, Plekhanov, and Zettelmeyer (2012) describe Mongolia’s Human Development Fund, which uses resource revenues to fund cash handouts to all citizens, as well as pensions, healthcare, education, and housing. The revenues and expenditures are approved annually as part of the budget process, so it does not seek to reduce political discretion.

⁹ Sala-i-Martin and Subramanian (2003) argue that the private sector does not respond better or worse in terms of savings behavior, while Sandbu (2006) argues that saving and stabilization issues could be addressed through an oil fund, or through appropriate dividend taxation.

and Hjort (2006) considers that the scope of DDMs in resource-rich developing countries should be limited at most to investment income, given concerns about Dutch disease, revenue volatility, and limited provision of public goods.

Box 3. The Dividend Distribution in Alaska

The Alaska Permanent Fund was established in 1976 after Alaskan residents endorsed a constitutional amendment. The amendment states that “at least 25 percent of all mineral lease rentals, royalties, royalty sales proceeds, federal mineral revenue-sharing payments and bonuses received by the state be placed in a permanent fund, the principal of which may only be used for income-producing investments.” The Fund is invested in a diversified portfolio of assets, domestically and internationally. It does not invest in economic or social development projects.

The legislature may spend realized Fund investment earnings, but not the principal. Realized earnings consist of stock dividends, bond interest, real estate rent, and the income made or lost by the sale of any of these investment assets. The Alaskan legislature bears ultimate responsibility for the program.

The Alaska Permanent Fund Corporation (APFC), created by the legislature in 1980, manages the assets of the Alaska Permanent Fund. The APFC is overseen by a six-member board appointed by the Governor of Alaska. One seat is statutorily assigned to the Commissioner of Revenue, given the prominent role that the Department of Revenue plays in the program, as described below; one seat to a cabinet member; and four seats are reserved for public members who serve staggered, four-year terms. The board appoints an executive director, who manages a staff of about 35. The APFC is in many ways a model of transparency, with strong checks and balances, internal governance rules, independently audited accounts, and detailed disclosure of financial information.

Under the current system, annual spending is limited to about 5 percent of the Fund’s total market value. Given that the Fund has earned an average annual return of over 10 percent, this spending rule is relatively conservative. In terms of spending decisions, it is more conservative than the approach followed by Norway.

The dividend distribution is calculated each year by using a formula that seeks to smooth out payments. The formula is computed by using the average of the Fund’s income over the previous five years. From 1982 through 2009, dividend checks have ranged from US\$336 to \$2,069 per adult resident (about 3-6 percent of per capita income). The program is managed by the Alaskan Department of Revenue. Qualified residents need to submit an annual application to the Department of Revenue, and the list of all applicants is published on the department’s website. Annual reports are published by both the APFC and the Department of Revenue.

Source: Alaska Permanent Fund Corporation and Department of Revenue of Alaska.

To Whom? A broad coverage reduces the political discretion over who receives the resource revenues, thereby increasing incentives for accountability. Therefore, a popular approach calls for providing the dividend to all citizens.¹⁰ Other approaches consider addressing the possible unintended consequences of these dividends on individuals' behavior, such as by providing dividends only to adults in order to ameliorate incentives to increase fertility, and are willing to discriminate among the population for social or development goals, either by targeting certain segments of the population or by imposing behavioral conditions.¹¹ Of course, such initiatives have to be pursued within certain limitations in order to reduce the scope for government or political intervention.¹² Moreover, there is clearly some tension on the latter, as addressing social and development goals entails political decisions that are outside of the scope of a DDM.

How? The issues considered here cover aspects such as whether distribution is inside or outside the budget and whether the population should be provided a gross or net (after tax) dividend. Sandbu (2006) proposes setting up a system of individual accounts to be managed by an independent agency—outside the budget—that seeks to reduce the discretion on the use of those resources. In contrast, in Alaska the dividends from the fund are managed by the Department of Revenue. The proponents of gross dividends stress that—by being larger and requiring explicit taxation to claw back—this alternative strengthens ownership and accountability. They point out that a large withholding might hinder the positive perception by the public of the program. The proponents of net dividends, on the other hand, stress the logistical costs and risks of clawing back resources through taxes, as the quality of tax administration in resource-rich countries is relatively poor.¹³ Finally, the technical challenges entailed by a universal cash transfer should not be underestimated. While these challenges make DDMs susceptible to corruption, the experience of cash transfer programs with identification technology and mobile banking could help reduce such risks.¹⁴ The latter highlights the institutional and IT capabilities needed to make some of the proposed approaches feasible.

¹⁰ Examples include West (2011) for Iraq, and Gelb and Majerowicz (2011) for Uganda.

¹¹ Sanbdu (2006) considers the issue of fertility as well as making transfers conditional, building on the success of conditional cash transfers such as Mexico's *Oportunidades* and Brazil's *Bolsa Familia*.

¹² Rodríguez, Morales, and Monaldi (2012) stress the benefit of not deviating too far from a universal transfer.

¹³ Crivelli and Gupta (2014) discuss the low efficiency of domestic revenue mobilization in resource-rich countries.

¹⁴ An overview of the issue is provided in Gelb and Decker (2011).

INTERNATIONAL EXPERIENCE WITH DIRECT DISTRIBUTION MECHANISMS

There are limited examples of direct redistribution of resource wealth, and they mostly come from advanced economies. The case of Alaska is well studied, while the case of Alberta is less relevant for the DDM literature. There are no DDMs in the strict sense in developing countries, albeit the experience with targeted cash transfers in several countries, and the case of the *Misiones* in Venezuela provide important lessons for DDMs.

The case of Alaska is the best-known example of a DDM. As noted earlier, the Alaska Permanent Fund pays dividends to individuals financed from income arising from saved resource revenues. Its key characteristics are described below.

- ***The Fund provides a relatively small dividend.*** The dividend payments are modest compared to what the literature has suggested. First, one-fourth of the resource revenues are set aside in a fund. Second, only interest income from the Fund can be spent, thus ensuring that it remains well-capitalized and its resources are not depleted over time. Third, annual spending is limited to 5 percent of the Fund's market value and the actual distribution of dividends is about 50 percent of the annual returns generated on the accumulated financial assets. In practice, dividend payments have ranged between 3-6 percent of Alaska's per capita income. Finally, the Alaska Department of Revenue plays a prominent role in the administration of the dividend program, including determining eligibility criteria and distributing the dividends.
- ***The dividend eligibility is relatively broad.*** Adults are eligible provided they comply with certain residency requirements and are not convicted or incarcerated in the relevant year. The payment is not automatic, as residents have to apply each year to receive the dividend.
- ***Dividends are paid in the context of a strong institutional framework.*** The Fund is subject to strong oversight, and the dividend payments are made through checks by Alaska's Department of Revenue.

Despite being cited as an example in favor of DDMs, the case of Alaska does not provide the basis for large-scale DDMs in resource-rich developing countries. The amounts transferred in the Alaskan case are rather small and the system is underpinned by a strong institutional framework.

Hence, it is difficult to argue that such an arrangement provides lessons for large resource dividend payments in countries that have a weak institutional setting. In addition, the argument that clawing back some of the dividend through taxes is a way to enhance citizens' incentives to demand accountability cannot be tested in Alaska, which does not have an income tax.

The case of Alberta is less relevant as an example of a DDM. The Alberta Heritage Savings Fund—established in 1976—receives 30 percent of Alberta's nonrenewable resource revenues subject to annual authorization by the legislature. Thus, the government could choose not to transfer any resource revenue to the Fund in any given year.¹⁵ Moreover, there are no cash dividend payments to individuals. The Alberta government, however, paid once an oil dividend of \$25 to every adult Albertan in the mid-1950s, and it paid a \$400 dividend payment to residents of Alberta (called the prosperity bonus) in January 2006 from its 2005 provincial surplus.

As mentioned above, Venezuela initiated a program using its resource revenues to pursue social policy outside the budget. Since 2003, the government has established a series of social programs, with diverse objectives, funded directly by the state oil company (PDVSA)—which means that part of the oil revenues have circumvented the budget process. The programs have sought to improve social welfare. For example, *Misión Robinson* uses volunteers for basic adult education, *Misión Ribas* provides remedial high school classes for dropouts, *Misión Mercal* seeks to improve access to food for low-income families at discount prices, and *Misión Barrio Adentro* seeks to provide health care services to the poor. These programs did not diminish the government's discretion and did not transfer resources to the private sector to improve accountability. Thus, they cannot be viewed as examples of DDMs. However, they are indeed instances of using resource revenues outside the budget—which is one of the central features of DDMs. In this context, Penfold (2006) used data from *Misiones* programs at the sub-national level to argue that political considerations were behind these programs, and distributing oil revenue to the poor was not the prime consideration. Rodriguez, Morales, and Monaldi (2012) contend that the programs have suffered as much from rent-seeking and populist pressures as resource revenues channeled through

¹⁵ For example, from 1976 to 1982, the government transferred about 30 percent of the resource revenues to the Fund, and the latter was also allowed to retain the return on investments. However, in 1983 the investment yields were transferred to the government, and from 1984 to 1987 the government transfer was reduced to 15 percent of the resource revenues. Moreover, during 2010-11 no revenues were transferred to the Fund.

the budget—which highlights that shifting spending off-budget is not a substitute for improving institutions.

The experiences with income support and conditional cash transfer programs provide important insights. While the objectives of these programs—that is, to improve income distribution or reduce poverty—are not the same as DDMs, they do provide insights into their possible impact on labor supply and income distribution, and on how a system of cash payments can be put into operation, as described below:

- ***Income support programs and the labor supply.*** There is ample experience with these programs, including the shift from Negative Income Tax (NIT) programs to Earned Income Credit (EIC) programs. NIT programs provide basic income support to all households, which is then taxed away but at a marginal rate lower than 100 percent. The perception that they discourage recipients to work,¹⁶ led to a shift towards EIC programs. The latter provide low-income workers with a subsidy for their earnings, but do not provide support to those unemployed.
- ***Conditional cash transfer (CCT) programs and the labor supply.*** These programs have expanded significantly around the developing world, and have had substantial impact on poverty and inequality, as well as education and health outcomes. Fizbein and Schady (2009) found that CCT programs in general had little impact on the adult labor supply, but they indicate that this might reflect the fact that most of these programs target very poor households that might have lower leisure elasticities. In addition, they suggested that the education component leads to reductions in child labor, which offsets some of the income impact of the transfer, and that the households may have viewed these programs as temporary.¹⁷ They also noted that there were significant effects on adult labor in Nicaragua, which had one of the largest cash transfer programs. These inferences are in line with the results for Brazil from Perez Ribas and Veras Soares (2011), who found that the *Bolsa Familia*

¹⁶ Saez (2000) stresses that while the empirical literature is somewhat controversial on the impact along the intensive margin (the number of hours worked), there is ample evidence that the impact along the extensive margin (participation in the work force) is significant, particularly for low-income and secondary-income earners.

¹⁷ Fizbein and Schady (2009) argue that the data available to estimate the impact of CCTs on labor reflect a relatively short period not long after the introduction of the program. Thus, they may not fully capture the adjustment in household behavior in response to CCTs.

program—the largest CCT in the world—had a positive impact on labor supply in rural areas, but a negative impact in urban areas.

- **CCTs and income distribution.** Despite their relatively small size (usually under 1 percent of GDP), CCTs have proved effective in reducing income inequality. Targeting the poorest households, CCTs in Brazil and Mexico contributed to the reduction of the Gini for disposable income by about 2.7 percentage points. However, their effectiveness is linked to their small size, so a large DDM may not be able to achieve the same degree of success.¹⁸
- **Implementation lessons from CCT programs.** A remarkable operational aspect of CCT programs has been the improvements they have made in delivering cash to beneficiaries—a development that might have influenced the idea of DDMs.¹⁹ However, CCT programs are administratively intensive in terms of designing and implementing effective targeting mechanisms. The movement towards electronic payment systems—particularly smartcards and electronic banking—has improved the transparency of cash delivery—mainly by providing an auditable trail.²⁰

The large energy subsidies provided by oil-rich countries are somewhat similar to DDMs. Pre-tax subsidies—which emerge when firms and households pay a price below supply and distribution costs—were estimated at 8.5 percent of GDP in the Middle East and North Africa region in 2011 (IMF, 2013). In many oil-rich countries, populations expect to reap benefits from resource abundance in the form of low energy prices, even when they are inefficient, growth retarding, and inequitable. While they can be viewed as a vehicle to share oil revenues with the public at large—and to reduce somewhat the government’s discretion over the use of these resources to the extent that energy subsidies are generalized—they do not foster accountability.

The experience with energy subsidy reform provides further insights into cash transfer mechanisms. In many instances, countries have sought to replace energy subsidies with cash

¹⁸ Bastagli, Coady, and Gupta (2012) provide a comprehensive review of the impact of fiscal policy on income inequality, including the effect of CCT programs.

¹⁹ Collier and Gunning (1996) assessed three options for transferring resource revenues to the private sector—including through the exchange rate, taxation, and expanding credit to the private sector—but they did not consider direct cash payments.

²⁰ Gelb and Decker (2011) assess the potential use of biometric technology to improve the transparency of delivery mechanisms.

transfers. For example, Iran pursued a reform in 2010 that replaced the subsidy with a close-to-universal cash transfer that sought to cover the cost of higher energy consumption. It opened bank accounts for most citizens—prior to the reform—and transferred cash into those accounts prior to the increase in price. The scheme proved effective in gaining support for the reform. While it is debatable if such a scheme constitutes a DDM—as it transferred funds in relation to the higher cost of energy consumption rather than in relation to resource revenues—it nonetheless illustrates the power of cash transfers to gain public support. Similarly, the reduction in subsidies in Nigeria in 2012 was linked to a strengthening of targeted cash transfers.²¹

Remittances could also provide some lessons for DDMs. Large inflows from abroad can cause an appreciation of the exchange rate and reduce the competitiveness of the tradable sector. Compared to resource revenues, remittances tend to be relatively stable and persistent over time, so they are less of a concern in terms of Dutch disease effects. The evidence suggest that they are used mainly for current consumption, and their impact on growth is inconclusive,²² which suggests that transferring resource revenues to the private sector may not lead to higher savings and growth.

AN ASSESSMENT

The limited experience with DDMs hinders a full assessment of their potential. Nevertheless, based on the above discussion, several observations are in order.

First, the decision to adopt a DDM must be cast in the context of the overall design of fiscal policy in a resource-rich country. Spending and revenue decisions by a government—whether financed by natural resource revenues or otherwise—should be based on the overall macroeconomic position. The fiscal framework adopted by a natural-resource-rich country requires (1) deciding on the appropriate level of public revenues and spending to ensure both domestic macroeconomic stability and sustainable external balances, with a view to avoiding fiscal cyclicity and the rapid exhaustion of resources; (2) adopting policies that reflect long-term average revenues

²¹ IMF (2013) provides a comprehensive view of energy subsidy reforms, while Salehi-Isfahani, Stucki, and Deutshmann (2013) provide further details of Iran's subsidy reform.

²² IMF (2005) found no robust effect of remittances on growth, education, or investment, while Caceres and Saca (2006) argue that remittances are largely used for consumption in El Salvador, and Gupta, Pattillo, and Wagh (2009) highlight their positive impact on poverty reduction in sub-Saharan Africa.

in order to mitigate excessive year-to-year fluctuations in resource revenues arising from volatility in resource prices; (3) targeting government spending on the basis of a fiscal balance that excludes all or some resource revenues in countries with a high degree of production uncertainty and a relatively short resource horizon with due consideration to the economy's capacity to absorb additional spending; and (4) saving resource revenues for future generations.²³ Simple DDMs, as discussed in the literature, do not obviate the need to address these issues.

Second, there is little evidence that shifting the burden of managing volatility, resource exhaustibility, and the balancing of intergenerational considerations to the private sector would improve economic outcomes. A DDM will likely shift management of resources to the private sector, which can have important macroeconomic consequences. For example:

- ***It can be questioned whether the private sector will do no worse in managing volatility.*** Sala-i-Martin and Subramanian (2003) argue that intertemporal consumption-smoothing relies on saving a large portion of the windfalls, and using such savings efficiently. They cite Collier and Gunning (1996) to suggest that the private sector is no worse (or better) placed to perform these functions, and argue that the private sector will likely be able to get a better return on investment. In our view, the evidence in Collier and Gunning (1996) on savings behavior is somewhat limited, and a higher return—while important—is not the only relevant macroeconomic factor to consider.²⁴ Moreover, IMF (2012) found that resource-rich countries have improved their fiscal performance, shifting from largely procyclical stances during 1970-99 to broadly neutral ones during the last decade. In addition, the evidence from remittance-receiving countries suggests that the bulk of the money received was used for consumption. For Latin America, Fajnzylber and Lopez (2008) found that remittance recipients had lower saving rates.
- ***It can also be questioned if the private sector can adequately address issues of intergenerational equity.*** There is no evidence to suggest that a simple DDM could weigh the needs of future generations, given the high premium placed on immediate consumption in many countries. The experience with the use of remittances for consumption is a case in point.

²³ These issues are reviewed in Daniel et al. (2013), and IMF (2012).

²⁴ For example, individuals might face larger transaction costs associated with portfolio diversification at the personal level, particularly in countries with less-developed financial sectors.

This is particularly relevant if natural resources are expected to be depleted in a relatively short span of time.

Third, DDMs could lead to the suboptimal provision of public services. By shifting resources to the private sector, DDMs have the potential to change the level of public spending. While this might be useful to curtail wasteful spending in some resource-rich countries, it also has the potential to lower public spending below the desirable level given the economy's need for infrastructure and public goods. Over the medium term, the private sector may emerge as the major provider of public services, but until then the availability of such services could be sharply curtailed. Ultimately, DDMs will fundamentally alter the ability of governments to provide services in the long term—even when their institutional capacity has improved. In our sample of resource-rich countries, government spending averaged about 28½ percent of GDP. Whether this level of spending is high or low would need to be assessed on a case-by-case basis, and should take into account institutional capacity. Countries with strong institutions—like Norway—have more options and can implement a higher level of government spending in an efficient manner than those with weaker administrative capacity (Box 4). Moreover, even countries with similar capacity may have different political preferences for the amount of public goods they desire.

Fourth, DDMs could have a negative impact on the labor supply and create a culture of dependency on the state. The move from NIT programs to EIC programs in advanced countries highlights this concern. The experience with CCTs also suggests that this could be an issue if such programs are expanded to better-off segments of the population, and if the cash transfer amounts are increased.

Finally, DDMs could fall prey to corruption and political pressures, just as public programs do.

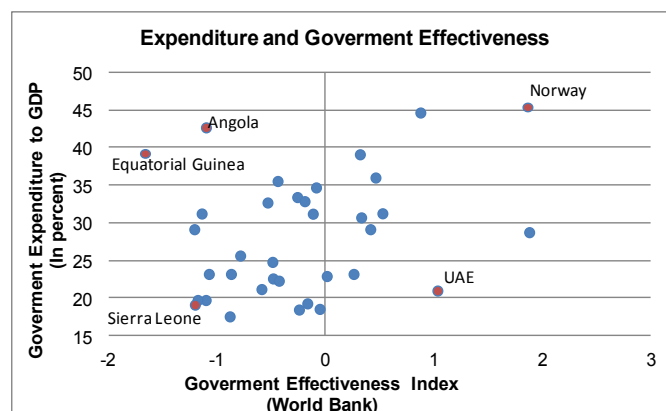
The management of DDMs requires strong institutions to avoid leakages:

- ***While the experience with targeted cash transfers has shown that more sophisticated electronic transfers could help reduce risks at the delivery stage, it has also demonstrated the need for significant administrative efforts to achieve the DDM's objectives.***

Box 4. Are Resource-Rich Governments Bloated or Starved?

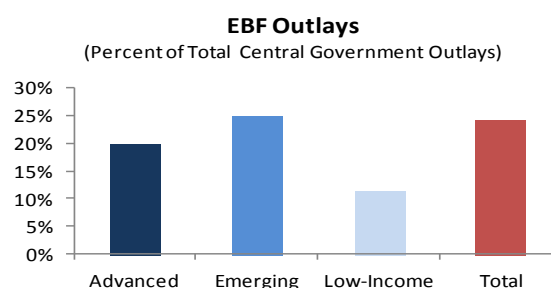
The size of governments in resource-rich countries does not seem to be out of line with other countries. Our sample of 35 countries shows that total expenditures to GDP averaged 28 percent during 2000-13, which is broadly similar to that of emerging market countries. In our sample, there are countries with government-spending-to GDP ratios of around 40 percent—such as Angola, Brunei, and Norway—while others are below 20 percent—such as Cameroon, Indonesia, and Sierra Leone. The median spending is about 27 percent of GDP, but there is a large dispersion across countries.

Is there an optimal size? The optimal size of government is open to debate, albeit one could argue that the larger the size of the government the stronger the need for institutions underpinning it to ensure spending is efficient. The country with the largest government spending in our sample is Norway, which is also the one with the strongest institutions, while Sierra Leone has one of the smallest governments and has relatively weak institutions.



Bloated or starved? Some countries have relatively large governments despite having weak indices of government effectiveness (such as Angola and Equatorial Guinea), while others have relatively small governments despite relatively stronger governance (such as Indonesia, Peru, and the United Arab Emirates). These data suggest that some resource-rich countries have indeed overstretched their spending capacity. In others, a reduction in government size—as a result of moving resources to the private sector—may be detrimental to the optimal provision of public goods.

- Establishing DDMs outside the budget entails significant risks.** While extrabudgetary funds (EBFs) in OECD countries manage a large share of resources—about 20 percent of government outlays—it is not a recommended practice for countries lacking sufficiently strong governance and financial management systems. EBFs in OECD countries are well integrated into the budget process, while the picture is different in developing countries, including resource-rich countries that use an array of arrangements, sometimes without a clear economic or legal identity (Allen and Radev, 2010).



Can DDMs be designed or complemented to address these concerns? Some proponents deviate from the simple design in order to address the above-noted concerns. In general, it implies being modest with respect to the size of the dividend payment, as outlined below:

- ***Designing a DDM within a fiscal framework.*** Some proponents of DDMs have argued that the issues of volatility, balancing the interests of different generations, and exhaustibility could be addressed by saving some revenues in a resource fund before transferring the remaining revenue, or part of it, to the private sector through a DDM. In this context, one could consider a range of arrangements consistent with an appropriate fiscal framework where all or part of the resources is channeled through the budget.
- ***Addressing labor supply concerns.*** One way to minimize labor market distortions is to keep the dividend amount relatively small. Limiting the coverage to those employed would also reduce the impact—albeit they would likely cut back on their hours worked. Both of these choices, however, imply moving away from a simple DDM, and highlight the trade-off between efficiency and a larger “endowment effect” to foster accountability.
- ***The government’s size and provision of public services.*** The choice of the government size depends—among other factors—on the efficiency losses associated with collecting taxes. In this context, DDMs impose a constraint as resources are transferred to the private sector and then clawed back in a process that will inevitably involve efficiency losses.²⁵ The risks of insufficient provision of public services would be ameliorated by considering a relatively small dividend payment.

CONCLUSIONS

Policy innovations that attempt to identify ways to overcome the “resource curse” are welcome. However, large-scale direct distribution of resource wealth has not been tested anywhere in the world. Hence, there is general skepticism about the benefits of wide-ranging DDMs that seek to bypass the state. The payments in Alaska—the only example of a well-known DDM—are small and supported by strong institutions. Therefore, while there are arguments that support the view

²⁵ Despite this, we are sympathetic to the argument that DDMs might be a tool to “starve the beast” for cases where the government has become too large.

that DDMs might lead to stronger institutions and accountability (Box 2), it is not clear if they will suffice to improve the management of resource revenues.

Decisions on the appropriate fiscal framework for resource-wealth management should precede any discussion of direct redistribution. Policymakers first need to ensure that there is an appropriate institutional setting so that fiscal policy supports macroeconomic stability and development objectives. In this regard, decisions on how much to save and invest or how to smooth out revenue volatility and deal with exhaustibility issues should precede any discussion of direct distribution of resource revenues to the population.

In our view, the extreme case of directly distributing *all* resource revenues to the population is not appropriate. As noted earlier, there is no guarantee that the mechanism of redistribution would be unaffected by large-scale rent-seeking. In addition, there is the issue that the state would be left with insufficient resources to carry out its core activities, such as providing basic public goods. DDMs would hardly be feasible at the political level as incumbent leadership, especially in countries that already have the symptoms of weak governance that DDMs are supposed to fix, would have no incentive to implement them. Finally, the labor market consequences of large transfers cannot be overlooked.

However, we see merit in more modest DDM schemes that either try to replicate the Alaskan model or seek to develop (or expand) the system of cash transfers to the population. The Alaskan model is innovative and has generated strong support from the population. Starting small is necessary given uncertainties about the administrative capacity of a typical resource-rich country and logistical concerns about how the system would work in practice. The limited size of the program would help avoid unanticipated implementation problems.

Using resource revenues to establish or expand social safety nets and systems of direct cash transfers to the population also seems a reasonable approach. While conventional wisdom suggests that revenue earmarking is generally undesirable because it reduces budget flexibility, the case to earmark a portion of resource revenue to specific cash transfer programs seems reasonable to gain popular support—albeit proper management is needed to avoid pro-cyclicality. Resource revenues should be either invested (so that natural wealth is transformed into physical assets and human capital) or “consumed” in a way that reduces poverty and increases the overall welfare of the poor. At the same time, it should be recognized that current generations are likely to be poorer than

future ones (IMF, 2012). There is also the issue of the criteria for eligibility. Making the transfer conditional on certain interventions that increase the incentives for the poor to invest in themselves (i.e., keep an up-to-date vaccination record or ensure school attendance) seems superior to unconditional transfers.

The above proposal emphasizes that there is a role for both the public and private sector to contribute to economic transformation of resource-rich countries. The government could design a strong fiscal framework, including an efficient fiscal regime without loopholes to maximize resource revenues without creating disincentives for production. The private sector could—as is the case in many countries—help in extracting resource wealth in an efficient and sustainable manner, and pay to the government royalty and corporate taxes that are due. Part of the resource revenues could finance public goods, as well as direct transfers to the households in the form of a modest DDM or a social safety net. These could enhance the households' incentives to demand more accountability from government, as well as from the private or public firms in the natural resource sector.

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