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8.8 Revenue Allocation and Sub-National Issues

A major challenge for government policy in the EI sector is how to design a method of resource revenue allocation that takes into account a key fact of life. *Natural resources are very often unevenly spread geographically within, as well as across, countries,* with the potential to lead to wide disparities in income in decentralized systems, and to claims that allocation should benefit producing areas disproportionately. Where different layers of government co-exist, such as central, regional and local, the resulting horizontal fiscal disparity will require a particular response, sometimes called fiscal federalism[1].

For devolved systems of government that are not strictly federal, as well as federal ones, revenue allocation issues between central and sub-national governments have become increasingly common, particularly where countries have heterogeneous populations and centrifugal tendencies. *First and foremost, the form of revenue allocation that results is one that follows from a political decision.* In most countries resources will be owned by the state, but in some ownership will reside in provincial state bodies, and in the US to a significant degree among private landowners. Coastal municipalities also receive rents, even from offshore hydrocarbons, as in Brazil. Sometimes the overall legal structure may be federal but issues of revenue sharing can readily arise among countries with looser, devolved structures.

Any form of EI revenue allocation requires a number of choices to be made. These include the scope of distribution, and particularly geographical distribution across producing and non-producing regions, but also the objectives or outcomes sought by the distribution of revenues (compensation for social and environmental impacts, reduction of income inequality or political economy imperatives, such as conflict mitigation and historical legacies, for example); and the method (should it be formula-based and, if so, what objective indicators should the formula include; or should cash transfers be used). Even more challenging is the need to find a path between objectives that compete with each other: a government may have to reconcile the

[1] The literature on this subject is very extensive but the following provide a good start: E Ahmad and G Brosio (eds), *Handbook of Fiscal Federalism* (2006). Edward Elgar; Northampton MA; T Ter-Minassian (ed), *Fiscal Federalism in Theory and Practice* (1997), International Monetary Fund, Washington DC; R Boadway and A Shah, *Fiscal Federalism: Principles and Practice of Multi-Order Governance* (2009), Cambridge University Press, New York. It can be relevant for the study of fiscal arrangements in devolved systems of government that are not strictly federal. Another good analysis is by Kenneth J McKenzie, 'Fiscal Federalism and the Taxation of Nonrenewable Resources, in *Perspectives on Fiscal Federalism* (2006), World Bank Institute Learning Resources Series (eds RM Bird and F Vaillancourt), The World Bank, Washington DC, p. 247 et seq.

aims of national cohesion and conflict avoidance on the one hand with local service delivery and effective macro-management on the other.

Research on revenue allocation suggests a useful distinction can be made between *revenue sharing* and *revenue assignment*[2]. The question that arises with respect to *assignment* is: to which level of government should resource revenue accrue in a multi-layer system of government? Or, who should tax extractives, and how? In many cases it will be the central, national level, but in some countries such as the US and Canada it will be sub-national. The question that arises about *revenue sharing* is different: if the national government obtains the revenue, how does it share it with the sub-national governments? An option is to share the revenue *bases*, meaning that part of the revenue (arising from the application of a *single* fiscal regime to the sector) directly accrues to the national level and part to the sub-national level (the extractive producing regions). These questions raise vertical and horizontal balance issues.

Revenue Assignment For countries with federal and even unitary systems of government the approach to revenue *assignment* will be influenced by the following considerations:

1. the generally superior institutional capacity of the national government;
2. the ability of the national government to offset instability in resource revenues based on their larger budgets, more sources of non-resource income, greater access to credit markets, and the power to engage in monetary policy;
3. the local costs of providing public services and infrastructure and the local social and environmental costs imposed by exploitation of the petroleum or mineral resource;
4. the national government's ability to make state-wide decisions on revenue use based on assessments of economic efficiency and vertical and horizontal equity, offset in part by local government insistence on acquiring a major share of their 'patrimony;'
5. the prospect of enhanced accountability, expenditure program design and implementation through sub-national assignment of revenues; and
6. issues of trust between local and national governments related to both distribution and expenditure of revenues.

Balancing these several considerations in practice is likely to prove very difficult and certainly complicates the task of integrated and comprehensive resource revenue management. Moreover, in the fiscal federalism literature there is a broad consensus that resource revenues

[2] Charles E McLure Jr., 'The Assignment of Oil Tax Revenue', in *Fiscal Policy Formulation and Implementation in Oil-Producing Countries* (2003)(eds J Davis, R Ossowski, and A Fedelino), International Monetary Fund: Washington DC, pp.204-215; see also E Ahmad and E Mottu, 'Oil Revenue Assignments: Country Experiences and Issues', in the same volume at pp.216-242,

should be centralized (they should accrue to the central government)[3]. In this respect, the US and Canada are outliers, since in most resource-rich countries revenues are centralized and an inter-governmental transfer system is in place to share them. If there is a dilemma about balancing, it turns on the one hand on the value of institutional capacity building and technical assistance in public fiscal and expenditure management, at all levels of government, and on the other, the importance of fostering effective dialogue and coordination. In fiscal decentralization, regional and sub-national authorities may lack the capacity to manage revenues. This means that there is a role for the central ministries of economy and finance (and civil society bodies) to provide assistance, supervision and scrutiny at that level and ensure that an optimal utilization of the revenue occurs.

Revenue Sharing This is an inter-governmental financial relationship between the central government and sub-national governments. Revenues from EI production could be collected in a single account and then distributed according to an agreed formula between the central and sub-national governments[4]. A derivation principle is often used, whereby each sub-national government's share is related to the oil revenue that originates in its own territory. The formula may be needs-based or resource-based. The criteria on which a formula is based may include: population ratios; land mass; the need to ensure an equal standard of public services between regions or provinces; distinctions between current and future producing resources; central/national and local/provincial needs for expenditure; payments to producing areas and compensation to provinces, districts and indigenous peoples for resource development and any related environmental or social damage. In fairness, such criteria could also be used for many inter-governmental transfer systems.

In some cases, it may be appropriate to fix in legislation a percentage from the total amount for local communities. An alternative, but pro-cyclical approach would be to fix the percentage annually at the moment of approval of the national budget. As **Box 7.4** shows, in Nigeria the formula used by law requires the Parliament to take several of these criteria into account before approving a formula every five years[5]. Iraq, Sudan and Venezuela have adopted formulae but, as **Box 7.4** illustrates, these are different in character.

[3] For example, various authors in Davis, Ossowski and Fedelino (2003): "the theory hardly recommends revenues from oil and gas as an ideal source of finance for sub-national governments – with the exception of funds to compensate social and environmental damages and to finance additional needs for infrastructure in the producing areas….": G. Brosio, 'Oil Revenue and Fiscal Federalism', p.243.

[4] For a review of the options which is still useful today, see: Ahmad, E and Mottu, E, (2003) Oil Revenue Assignments: Country Experiences and Issues, in Davis, Ossowski and Fedelino (2003), IMF, Washington DC, pp. 216-242.

[5] For a review of many related issues in the Nigerian context see: Ojo, E., "The Politics of Revenue Allocation and Resource Control in Nigeria: Implications for Federal Stability" (2010), Federal Governance, vol. 7 no. 1, pp. 15-38.

Box 7.4: Revenue Sharing Formulae: Examples

Country	Revenue Sharing
Indonesia	Scheme established in Law 33/2004; Requires 15% of oil revenues and 30% of gas revenues to be transferred to the originating provinces and districts within them; Within this, there is a distinction between producing and non-producing districts; Special asymmetric arrangements exist (e.g. for Aceh) that allow receipt of 70% of the oil and gas revenues produced in their jurisdictions instead of the general arrangement. The allocation of revenue sharing is based on the actual, realized, oil and gas revenue. This means that revenue sharing received by regions fluctuates with variations in the oil and gas price. The net oil revenues are distributed 84.5 percent to the central government and 15.5 percent to the relevant sub-national government. Net gas revenues are divided 69.5 percent to the central government, and 30.5 to the sub-national government. Of the revenues received by sub-national government, 20 percent is allocated to the provinces, 40 percent to the producing district, and the remaining 40 percent is equally distributed among other districts within the relevant province. Revenue from mining, particularly from land rent and royalty, is shared between central and sub-national governments. Of the land rent, 20 percent is allocated for the central government, while the remaining 80 percent is shared among the provinces (16 percent) and the producing districts (64 percent). The arrangement for the shared revenue from royalty is similar, with 32 percent for producing districts and 32 percent equally divided among the non-producing districts within the province. *(Article 14 Law 33/2004)*

Iraq	Federal Government as well as producing provinces and regions is given the authority to manage oil and gas extracted from present oil and gas fields; this is conditional on the distribution of revenues in proportion to the population distribution and specification of a share for previously disadvantaged areas (Constitution, Art 112.1] Articles 17 to 20 of Iraq's 2009 Budget Law outline the country's current revenue sharing arrangements. 'Sovereign expenditures' for the Council of Representatives, the administration of the national Cabinet, the Ministry of Foreign Affairs, the Ministry of Defence, oil export production, and other national government functions are prioritized. Of the remaining hydrocarbon revenues, 17 per cent is allocated to the Kurdistan Regional Government (KRG), and the remainder is allocated to national ministries in other governorates (both hydrocarbon producing and non-hydrocarbon producing) in proportion to the population distribution and specific needs. The 2010 budget also includes a provision that will deliver $1 to producing governorates for each barrel of oil and refined fuel they produce. *(Iraq: Oil and Gas Sector, Revenue Sharing, and U.S. Policy Christopher M. Blanchard Analyst in Middle Eastern Affairs March 3, 2010)*
Nigeria	Parliament decides on a formula for distribution of oil revenues every five years; the Constitution sets our criteria to be taken into account in the formula: population; equality of States; internal revenue generation; land mass, with a minimum of 13% reserved for oil producing States [Art 162.2] Oil-producing states receive 13 percent of revenues from the oil produced in their state, in addition to standard revenue allocations. The current vertical allocation formula which is based on Presidential Executive order is as follows: Federal Government – 52.68% State Government – 26.72% Local Government – 20.60%

Sudan	Net oil revenues split equally between the Government of Sudan and the Government of South Sudan with 2% of oil revenue reserved for the producing states in accordance with their proportion of production [Comprehensive Peace Agreement, Wealth Sharing Protocol Arts 5.5-5.6] After independence, South Sudan appears to be continuing this practice. The National Legislative Assembly passed a Petroleum Law in April 2012 and now is considering a Petroleum Revenue Management bill. The Petroleum Revenue Management Bill states that counties in oil-producing states are to receive 3 percent of net petroleum revenues. *(NRGI)*
Venezuela	The Constitution requires 15-20% of the national budget to be transferred to the states [Art 167.4], and special shares are envisaged for states with hydrocarbons and mining activities [Art 156.16] Of the total, 80 percent is assigned to states, while municipalities receive 20 percent. Until 2009, three main mechanisms served to decentralize public spending: i. Constitutional Revenue Sharing: This arrangement consisted of the distribution of 20 percent of the Ordinary Fiscal Income to sub-national levels of government, of which 80 percent went to states and 20 percent to municipalities. ii. Special Allocations Law: This arrangement consisted of the distribution of a minimum 25 percent of the Collected Fiscal Income to sub-national levels of government. Of this, 42 percent went to state governments, 28 percent to municipalities and 30 percent to communal councils. iii. Intergovernmental Decentralization Fund: This consisted of the distribution of no less than 15 percent of the Income collected from the Value Added Tax to sub-national levels of government; 42 percent of this amount went to state governments, 28 percent to municipalities and 30 percent to communal councils. In 2010, the Intergovernmental Decentralization Fund was eliminated, and an Inter-Territorial Compensation Fund (FCI) was created. This fund does not have a rule for allocations. Instead, its income sources are decided by the Executive Power, the sub-national levels of government and other sources defined by law. The Federal Government Council decided to distribute the FCI funds in the

	following manner: 35 percent for communal councils (consejos comunales), 37 percent for states and 28 percent for municipalities. The 65 percent for states and municipalities is distributed considering population and a relative development index. *(IDB WORKING PAPER SERIES No. IDB-WP-300, Sub-national Revenue Mobilization in Latin America and Caribbean Countries: The Case of Venezuela, Germán Ríos, Federico Ortega, J. Sebastián Scrofina , August 2012)*

Sources: *As indicated above; Haysom/Kane: Centre for Humanitarian Dialogue (2009) Adapted.*

The approach taken in Indonesia merits some comment. It was expressly designed to counter centrifugal tendencies and 'hold the country together' by meeting demands from regions and local communities for a large measure of control over resource revenues. Under the scheme set up by Law 33/2004, the central government makes transfers quarterly, based on estimated profits for the current quarter and with an adjustment for the differences between projected and actual profits in the previous quarter transfers. Some delays have been reported in the transfers[6], a familiar concern among sub-national authorities. There is also a transfer of oil and gas revenue indirectly to sub-national governments through a general allocation transfer which forms the largest transfer to sub-national entities. This is based on forward estimates. However, "there is an incentive for the central government to underestimate the revenue by assuming a low oil price"[7]. An effect of the above regime is to create a significant disparity across provinces and districts. For mining revenues, the amounts are much smaller, and comprise land rents and royalties, which are shared between central and sub-national governments, such as Papua. The locations are often remote and so mining makes a significant impact upon local development and generates employment for a large number of local persons. However, recent research has found the effect of the resource-sharing scheme again to be one of creating significant disparity among provinces in terms of revenue sharing per capita.

Example: Nigeria One consequence of a growing dependence upon EI revenue at the expense of alternatives over time is evident from Nigeria. The local authorities have become increasingly dependent on the Federal authorities not only for a share of revenue (they have become increasingly unable to generate revenue internally from alternatives such as agricultural produce). The Federal Government has assumed more responsibilities from the states and local governments on matters such as environment, defence and security as well as transportation. This leads to the Federal Government arguing for a greater share of the

[6] Agustina, CD, Ahmad, E, Nugroho, D, and Siagian, H (2012) Political Economy of Natural Resource Revenue Sharing in Indonesia, Asia Research Center Working Paper 55, 14.
[7] Ibid.

revenues to discharge these responsibilities. State authorities have also annexed allocations that are intended for local government councils (the next layer of government down the chain)[8].

Example: Peru Dissatisfaction about the distribution of mining revenues in Peru led to the establishment of a mechanism for direct distribution of mining revenue from central government to sub-national government entities. The Canon Minero Law (2004) allows 50 percent of corporate income tax collected from mining companies to be earmarked in this way. The distributed amounts are to be spent on projects contributing to sustainable development by districts, provinces and departments (defined as the sub-national governments). Its impact has been primarily on infrastructure projects but for provincial governments these revenues have been “transformational”[9] for their revenue base. Its effectiveness is nonetheless dependent upon sound governance and public fiscal management. It also requires an appropriate administrative capacity at the sub-national level to ensure that projects supported are ones that deliver tangible benefits to the local population.

An alternative approach in Peru is the Voluntary Contributions Programme which adds a social welfare component to the Canon Minero. Established in 2006 with a five-year duration, the idea was to promote social development through public-private partnerships between mining companies and their surrounding communities. Companies would agree to contribute a percentage of their profits towards projects compatible with a list of social development priorities. It was not an industry-wide agreement but rather agreed with individual mining companies, as a way of responding to higher metals prices but avoiding a windfall profits tax. Not all mining companies joined the scheme, but the larger ones did. The four participating mining companies contributed three percent of profits after taxes, amounting to around US$140 million for projects relating to social development among sub-national governments[10]. The scheme underlined how the mining industry could be a catalyst for sustainable development, and appeared to bring benefits to working relationships between the communities and the mining companies.

Delays in Payment and a Lack of Transparency These are among the most frequent concerns about revenue sharing. Sharing ought to be automatic on the basis of the agreed principles and formula, but in practice the fear of sub-national governments that the payments will not be made in a timely fashion from the central account is often well founded. Their lack of trust in the central government may extend to fears of political interference and a lack of

[8] See the overview by Wumi Idelare and Rotimi Suberu, Nigeria’, in G Anderson (2012) at pp.227-256.
[9] World Gold Council, The Economic Contribution of Large-scale gold mining in Peru (second edition, 2012).
[10] World Gold Council (2013), The Socio-Economic Contribution of Gold Mining in Peru, p. 10.

transparency about their share of the revenues (although the source may also be attributable to institutional weaknesses). This has been a factor in negotiations about revenue sharing in Sudan, Iraq and Indonesia. One solution that may be open is to outsource the collection and sharing of revenues to a third party rather than leave them to the ministry of finance and/or Treasury. An alternative approach to revenue sharing is to assign certain taxation powers to different levels of government. In Brazil, Argentina, Sudan and Canada, for example, the state or provincial governments have the right to directly collect certain types of revenues (for example, royalties, fees and excise or production taxes), leaving others to be collected by the central authority (for example, corporate income taxes and export charges). Revenues can be distributed by the particular level of government as it deems appropriate or according to its own set of rules. This has the advantage of circumventing the distrust that often exists between the central government and regions, but it has the disadvantage of increased complexity, potential duplication of taxation and monitoring and reduced competitiveness of national resources. Without an element of redistribution, such systems risk an unequal provision of public services between provinces or uneven levels of development. Each of the foregoing is evident in, respectively, Canada and the United Arab Emirates.[11]

The assumption behind revenue sharing according to a formula is that local representatives in sub-national jurisdictions are better able to meet the diverse preferences and investment needs of the producing regions. The resources are physically located in the region even if legal ownership is vested in 'the people' as a whole, and costs of EI development are all too often evident at the local level. However, tensions may well develop among the various producing and non-producing regions and districts, and indeed within a particular region in spite of this decentralization. Moreover, the common assumption in the fiscal federalism literature that sub-national governments respond to the wishes of their constituents may be a brave one to make in the context of the EI sector of some countries[12].

Revenue Volatility A source of potential concern about sub-national management is the considerable fluctuation in revenues that results from the overall budgetary process and commodity prices. An IMF study, which concluded that revenues should be fully centralized, included in its reasoning a concern about precisely this factor: revenue sharing between central and sub-national levels transmits volatility in commodity prices to the sub-national level[13]. Some mechanism needs to be put in place to minimize the potential for unpredictability in fiscal transfers to sub-national governments, which are likely to be less well placed to manage the

[11] Haysome, N and Kane, S (2009). Negotiating Natural Resources for Peace: Ownership, control and wealth-sharing, Centre for Humanitarian Dialogue, 23-24.
[12] McLure (2003) at p.205.
[13] Ahmad, E and Mottu, E, (2002) Oil Revenue Assignments: Country Experiences and Issues, IMF, Washington DC.

macro-fiscal risks because of their less diversified revenue base. A formula also needs to be found that shares the spending and saving decisions across all levels of government in a way that gives sub-national governments confidence that savings made in their name will not be expropriated.

Delays in investing in projects and reduced levels of government service may be a consequence. In their review of the results of revenue sharing, the authors of a study on the Indonesian approach note that "the biggest danger remains that of heightened expectations concerning public services and improving living standards being unfulfilled. This could create a political backlash".[14]

There are other reasons for concern, however. In many countries, sub-national administrations lack the technical expertise and administrative capacity – or even the authority – to utilize revenues so as to complement the private investments with the kind of strategic public investments in related areas, such as infrastructure (ports, roads, power plants, and so on) and education to provide the necessary local skills. As a result, even if resources are allocated to the local level, management of their implementation might remain under the authority of the national government.

Revenue Management Laws Sometimes the sharing among regions is enshrined in constitutional arrangements or in a dedicated piece of legislation such as a Revenue Sharing Law[15]. Any such rules should be clear and specific if they are to work. This formal approach to the design and adoption of a scheme should not be underestimated: its emergence from a formal, legal process can be a response to the lack of trust that is common in post-conflict environments, and present in many other countries. It can be key to establishing a consensus on the sharing of power over the resources, and to balancing provincial demands for a direct share of locally generated resource revenues with equally strong claims that the resource wealth belongs to all citizens in the country. Revenue distribution can be as sensitive an issue as ownership of the resources themselves, and in some contexts even more so.

Timing of the design of legal arrangements can have a crucial impact. Prior to the discovery of any resources, it will be much easier to reach an amicable result. As Charles McLure notes, "decisions on revenue assignment can be made behind the 'veil of ignorance', not knowing how much revenue will be at stake or which will be the oil-rich jurisdictions. Regional vested

[14] Agustina, CD, Ahmad, E, Nugroho, D, and Siagian, H (2012) Political Economy of Natural Resource Revenue Sharing in Indonesia, Asia Research Center Working Paper 55, 30.

[15] For a good discussion of this, see N Haysom and S Kane (2009) Negotiating natural resources for peace: ownership, control and wealth-sharing. Center for Humanitarian Dialogue. October 2009: http://comparativeconstitutionsproject.org/files/resources_peace.pdf (visited 12 April 2016)

interests will not yet have arisen and a nationally oriented view of costs of compliance and administration, of distributional equity and of allocative efficiency is possible”[16]. Once oil, gas or other minerals are discovered, the context changes forever, and a different view of distribution issues is likely to dominate: how revenues are to be distributed between the central and sub-national governments and among sub-national governments. Brazil is an interesting case in this respect since certain states and municipalities obtained a distinct fiscal advantage in 1988 by having a favourable allocation of hydrocarbons revenues written into a new constitution when those resources were relatively small. As a result, although the resource is federally owned and managed, most of the revenues flow to the states and unusually to the municipalities. Often these revenues are generated from offshore production at a great distance from the states' coasts[17].

In Sao Tome e Principe, the revenue management law expressly sets out regional allocations but avoids any detailed requirements for priority sectors such as a poverty reduction strategy or a national development plan. Instead, there is only a general requirement that the revenues be used in “education, health, infrastructure, and rural development”, since the drafters considered more detailed limitations on future governments to be inconsistent with their democratic preferences; future governments “should be free to determine the details of their own expenditure choices within the ceilings”[18].

Any such law faces the risk that a future government may simply direct EI funds to its own short-term needs. Trying to mitigate this risk is a real challenge since fettering a future government is, as Sao Tome e Principle concluded, not desirable either. In Alaska, a change in the legal regime for resource management was made more difficult by adoption of a provision in the state constitution. Article IX, Section 15, states that “(a)t least 25 percent of all mineral lease rentals, royalties, royalty sale proceeds, federal mineral revenue sharing payments and bonuses received by the State shall be placed in a permanent fund, the principles of which shall be used only for those income-producing investments specifically designated by law as eligible for permanent fund investments. All income from the permanent fund shall be deposited in the general fund unless otherwise provided by law”.

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[16] McLure (2003)

[17] G Anderson, Reflections on Oil and Gas in Federal Systems, in *Oil & Gas in Federal Systems* (ed G Anderson)(2012) Oxford University Press, New York, pp.390-391; see also SW Gobetti, HQ Pinto Jr., and J de Carvalho Sardinha, ‘Brazil’, in the same volume at pp.61-87.

[18] Joseph C Bell and Teresa Maurea Faria, ‘Critical Issues for a Revenue Management Law, in Escaping the Resource Curse (eds M Humphreys, JD Sachs and J Stiglitz), (2007)(Columbia University Press: New York), 286-321, at p.294; see also Appendices 1 and 2 for overviews of the revenue management laws of Sao Tome e Principe and Timor Leste.

Contrasts among EI Sectors Allocation of revenues may well have different effects according to whether the revenues derive from oil and gas on the one hand or mining on the other. A revenue assignment scheme may alleviate tensions between governmental levels with respect to oil development in many cases (but not all: Iraq and Nigeria are examples where difficulties have arisen). However, the impact of such arrangements on mining may be less dramatic. Essentially, the environmental and social costs of mining are borne at the local level while the benefits often accrue mostly at the central level. Arguably, the same could be said about oil and gas as well. *This is a key dilemma in EI revenue allocation, even if it may be more vividly illustrated in the mining sector.* This local impact is a critical dimension in countries that have significant sub-national and provincial rivalries or which have recently emerged from serious conflicts.