Peru: Building a More Efficient and Equitable Fiscal Decentralization System

Macroeconomics and Fiscal Management Global Practice
Latin America and the Caribbean Region

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Contents

Abbreviations and Acronyms

CND	Decentralization National Council
CTAR	Transitory Council of Regional Administration
DGAES	General Directorate of Economic and Social Affairs
ENAHO	National Household Survey *(Encuesta Nacional de Hogares)*
FOCAM	Socioeconomic Development Fund of the Camisea Project *(Fondo de Desarrollo Socioeconómico de Camisea)*
FONCOMUN	Municipal Compensation Fund *(Fondo de Compensación Municipal)*
FONCOR	Regional Compensation Fund *(Fondo de Compensación Regional)*
FONIPREL	Fund for the Promotion of Regional and Local Public Investment *(Fondo de Promoción a la Inversión Pública Regional y Local)*
FUNDEB	Brazilian Basic Education Fund *(Fundo de Manutenção e Desenvolvimento do Ensino Basico e Valorização do Magistério)*
GDP	Gross Domestic Product
GFS	Government Finance Statistics (IMF)
IGM	Municipal Management
IMF	International Monetary Fund
INADE	National Institute of Development
INEI	**National Statistical System** *(Instituto Nacional de Estadística e Informática)*
IPIM	Municipal Promotion Tax
MEF	Ministry of Economy and Finance *(Ministerio de Economía y Finanzas)*
MINSA	Ministry of Health (Ministerio de Salud)
MML	Provincial Municipality of Lima
OECD	Organisation for Economic Co-operation and Development
PCM	Secretary of Decentralization
PEN	Peruvian Nuevos Soles
PIMGMM.	Municipal Improvement Incentive Program *(Programa de Incentivos a la Mejora de la Gestión y Modernización Municipal)*
PpR	Result-based-Budgeting *(Presupuesto por Resultados)*
SIS	Main health-insurance program *(Seguro Integral de Salud)*
SNGs	Subnational Governments
SNIP	National System of Public Investment (Sistema Nacional de Inversion)
SUNAT	National Tax Administration *(Superintendencia Nacional de Administración Tributaria)*
VAT	Value-added Tax
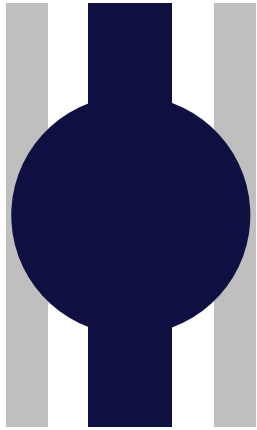
Executive Summary

Over the past two decades, Peru has achieved remarkable economic success. Average annual Gross Domestic Product (GDP) growth has exceeded 5 percent since 2001. Poverty has been consistently reduced, and sustained improvements have been observed in social and human development. The poverty incidence rate fell from 58 to 23 percent between 2004 and 2014, and households' incomes at the bottom 40 percent grew 50 percent faster than the national average. The structural transformation of Peru's economy striking fast and widely shared growth transformed Peru into an upper-middle-income and diversified economy.

Peru is now embarking on a new stage in its development, and as an emerging upper-middle-income country with aspirations to become a high income country, it will face new challenges at the same time that it will need to address long standing development challenges. To continue growth in a context of unpredictable external markets, Peru's development model must transition from one based on factor accumulation to one based on productivity and human capital enhancements. At the same time, to attenuate the large regional disparities that have branded the country's socioeconomic development, a more equitable, efficient, and tailored provision of public goods and services across the country will need to be supported by enhancing the current fiscal decentralization arrangements.

Peru began a process of political and fiscal decentralization in the early 2000s. The 2002 Constitutional Reform transferred political power to subnational jurisdictions, and elections for newly established regional governments were held in November of the same year. The 2004 Fiscal Decentralization Law established the policy actions and fiscal resources necessary to complete the decentralization process and defined the implementation schedule for transferring expenditure responsibilities to municipal and regional governments.

The main objectives of this process were to increase the overall efficiency of the public sector and strengthen the democratic decision making by enhancing regional and local governments. The rationale for fiscal decentralization was that proximity between citizens and government will enable public services to be better tailored to the specific needs of local communities. Also, enhanced accountability should improve efficiency and quality of public spending. Finally, an important motivation in Peru was to achieve a more regionally balanced economic growth favoring increased economic dynamism and improving socioeconomic conditions in the less developed regions of the country.

However, the implementation of Peru's fiscal decentralization stalled in 2005, when the creation of macro-regions was defeated in a referendum. Under the original decentralization plan, the 26 regional governments were to be consolidated into 12 macro-regions, which would serve as an intermediate level of government, but without clear spending responsibilities and lacking own revenue sources and tax assignments. Moreover the establishment of a new revenue-sharing mechanism for the income tax and value-added tax (VAT) could not be implemented, as it was conditional on the formation of the macro-regions, which made regional governments fully

dependent on discretionary transfers from the national government.

A second important variable affecting the country's decentralization process was the unexpected (and significant) revenue windfall that extractive industries generated for the central government and a few municipalities over the past decade. As a result of the revenue-sharing mechanism between the central, regional, and local governments for the corporate income tax generated by extractive industries and the boom in commodity prices, an unintended decentralization of fiscal revenues was spurred in the second part of the 2000s. Moreover, the adoption of the derivation principle (origin of the resources revenues) as a distribution criteria resulted in few municipal governments receiving vast amounts of resources, especially in gas and in mining areas, even though the economies of scale of the public infrastructure they provide and their size, institutional capacity, and spending needs were not commensurate to the resources availability.

This report analyzes recent trends of the fiscal decentralization process in Peru and presents a set of reform options designed to harvest the envisaged efficiency and equity gains in service delivery that the fiscal decentralization was expected to bring. The analysis and policy options are presented in a conceptually logical order: (i) departing from institutional arrangements in the vertical structure of subnational governments passing to (ii) the need of a clearer definition of spending responsibilities among levels of government that needs to be followed by (iii) a commensurate redefinition of revenue assignments and (iv) enhancing equalization role of the transfer system.

The report does not cover other important topics of the fiscal decentralization agenda such as subnational accountability and transparency and subnational borrowing restrictions. The report looks at expenditure responsibilities, however it does not provide detailed analysis at the sector specific level. While accountability and transparency can be fostered by expanding the ability of subnational governments to collect their own revenues and by improving the design of intergovernmental transfers, it is important to recognize that enhancing internal and external controls is a necessary condition for improving accountability, transparency, and efficiency in decentralized service delivery. In the same direction, recent evidence has shown that a heavy reliance on transfers may also be associated with excessive subnational indebtedness. Effective fiscal rules supported by sound accounting systems and meaningful enforcement are critical to keep subnational finances on track.[1] Finally, it is worth mentioning that this report is not intended as a substitute to the preparation of a detailed blueprint for enhancing the current fiscal decentralization framework, but it aims at providing policy options on specific areas and tools to simulate impacts of proposed reforms.

Institutional Arrangements

Peru's fiscal decentralization framework remains uneven and incomplete. Regional governments have assumed some of the functions originally assigned to the macro-regions and are the *de facto* intermediate level of government. In theory, they are responsible for providing or coordinating the delivery of public goods and services with spatial spillovers across local jurisdictions, and for coordinating policy priorities and service delivery between the local and national authorities. They also prepare the formal development program for their region. However, unlike what was envisaged for the macro-regions, the regional governments lack own-revenue sources or a transparent and stable revenue-sharing mechanism. Moreover, regional governments have limited autonomy to allocate the transfers they receive from the central government, adjust public services to suit the local context, or coordinate the provision of public goods and services between municipalities in their jurisdictions. This is particularly important for capital spending, where regional governments could bring scale to individual investments by municipalities, but can also apply to social programs.

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1 At the time of completion of this report (December 2016), the government enacted a new regulation establishing a fiscal rule for subnational governments.

The failure to establish macro-regions prompted the central government to shift focus from decentralization to administrative de-concentration. Today, two types of situations prevail. First, central government line ministries might retain direct control over the provision of public goods and services and over budget allocation decisions, but their regional directorates or other administrative arrangements have been gradually incorporated into regional governments. However, the regional governments have very limited control over the directorates, which typically remain under the effective authority of the line ministries and are financed through annually determined allocations of Ordinary Resources (*Recursos Ordinarios*) from the central government budget based on historical norms—although a small proportion is allocated via incentives for certain actions undertaken by regional governments. Second, a central government line ministry holds all budget resources, but transfer them, generally under opaque rules, throughout the fiscal year to subnational governments for them to implement specific projects.

Meanwhile, a high and increasing degree of fragmentation and lack of scale at the local level is undermining the efficiency of decentralized service delivery and productive infrastructure. Many municipalities are too small to have the scale for service delivery, and their institutional and technical capacities are inadequate. Also, their scope for local revenue collection is limited, leaving them heavily dependent on intergovernmental fiscal transfers. Most importantly, the otherwise well-designed revenue-sharing transfer to local governments, the Municipal Compensation Fund (*Fondo de Compensación Municipal*, FONCOMUN), has two main shortcomings. First, it provides incentives to subdivide municipal jurisdictions rather than incentives for consolidation. As a result, the number of local government units (and the associated fixed costs of public administration) have been steadily increasing over the past several years. Second, it does not account for own-revenues and, thus, even rich municipalities or municipalities that are beneficiaries of large resource transfers in gas and mining areas still receive FONCOMUN transfers.

The fragmentation and the current transfer system provide little or no incentives to create service delivery platforms or infrastructure projects with economies of scale that serve several jurisdictions at the same time to improve efficiency. A case in point is investment spending. The number of investment projects at the local level increased from 2,100 in 2004 to more than 15,000 in 2014, and the average costs per project shrank; currently the average cost per project is less than 1 million Peruvian Nuevos Soles (PEN). The large number of small projects suggests that investment decisions are uncoordinated, limiting positive spatial spillover effects. Unfortunately, incentives for consolidating projects within the public investment system (SNIP), e.g., the extra points given in project evaluation to regionally-bundled projects, do not compensate for the strong incentives provided by the fiscal decentralization framework.

Perhaps most important is the unclear distribution of responsibilities across different levels of government, which has further weakened the effectiveness of decentralization. A large number of functions are either shared or delegated between different government levels rather than assigned to a specific level. While some degree of shared responsibilities is normal, formal mechanisms for intergovernmental coordination must be established, such as binding master plans, cofinancing arrangements, conflict-resolution forums, and joint implementation mechanisms. Yet despite the extensive legal framework, the decentralization framework does not yet include formal institutions and procedures to support intergovernmental coordination. In principle, the regional directorates of the line ministries should facilitate coordination between the national and regional governments, but in practice this is not the case, and coordination with local governments is even less well structured.

Expenditure and revenue decentralization: Vertical and horizontal gaps

Peru's intergovernmental fiscal framework reveals a high degree of asymmetry between revenue and expenditure decentralization. The "fiscal decentralization diamond" presented below provides a simple conceptual model for

understanding trends in fiscal decentralization. While certain expenditure responsibilities have been either deconcentrated or decentralized (particularly with regard to recurrent spending programs), the central government continues to collect the overwhelming majority of public revenue. As a result, regional and local governments are heavily reliant on intergovernmental transfers. This is especially true among subnational governments in less developed regions of the country, and in some cases transfers finance more than 95 percent of subnational spending. Due to their limited access to credit markets and tight restrictions, regional and local government borrowing is limited, albeit has been increasing.

In particular, asymmetries between revenue decentralization and expenditure decentralization generate two types of gaps that are today present in Peru to various degrees:

- The **vertical fiscal gap** defined as the asymmetry between subnational revenue generation and spending responsibilities. If in deficit, this gap increases subnational governments' reliance on intergovernmental transfers (possibly motivating excessive transaction costs and "lobbying" in the system). This gap can be bridged by tax revenue sharing and other intergovernmental transfers or by borrowing. At the same time, the availability of transfers

also affects revenue incentives and influences the quality of subnational spending and tax-collection effort.

- The **horizontal fiscal gap** defined as the imbalances between expenditure needs and a regional or local government ability to raise revenues. The imbalances are reflected in disparities in per capita spending across jurisdictions, implying that service delivery can vary significantly across the territory depending on where citizens actually reside. Equalizing transfers are typically used to reduce horizontal fiscal gaps, but again, unless they are carefully designed, they can affect the efficiency of the recipient governments' spending and own revenue collection.

Vertical fiscal gaps are common in fiscal decentralization arrangements; the problem is that the vertical fiscal gap in Peru has become excessively large and places a number of serious challenges. Peru has one of the largest vertical fiscal gaps among comparable countries. At less than 1 percent of GDP, subnational own-source revenues—which include taxes, user fees, and other minor revenue streams—represent 5 percent of total public revenue, yet subnational governments were responsible for a full 40 percent of total public spending in 2014. As noted above, large vertical fiscal gaps tend to reduce expenditure quality,

The fiscal decentralization diamond
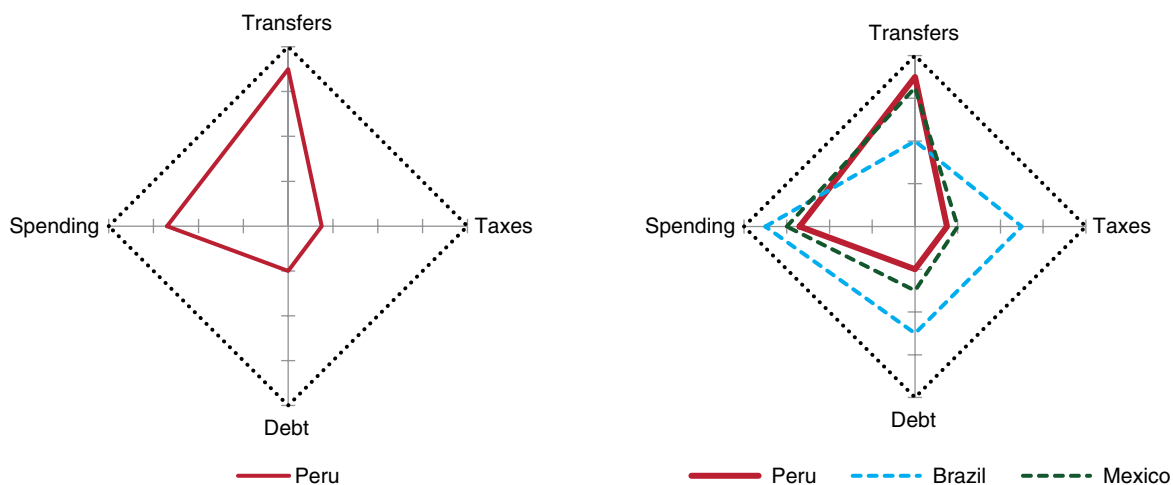
Source: World Bank staff.

discourage revenue mobilization by recipient governments, and undermine fiscal discipline.

The similarly large horizontal fiscal gap is reflected in the uneven coverage and quality of basic public goods and services across regions. The concentration of economic activity in Lima, Callao, and a few resource-rich provinces results in a highly uneven distribution of local revenue bases. Fiscal transfers do little to reduce regional imbalances in revenue capacity or equalize the supply of public goods and services. More than 15 percent of the population living in the Andean and Amazonian regions, which together cover almost 70 percent of Peru's territory, lack access

to at least at two of four basic services—education, health care, sanitation, and housing—compared to fewer than 2 percent of the population in Lima, Ancash, and Moquegua.

Resource-revenue sharing transfers (*canon, sobre canon,* and royalties) exacerbate horizontal fiscal imbalances. These revenues are distributed according to their point of origin, and as municipalities receive the bulk of these transfers, fiscal inequality is especially pronounced at the municipal level. For example, over 25 percent of *canon* mining-revenue transfers go to just 1 percent of municipalities. Moreover, district municipalities receive more than 50 percent of resource-revenue

Regional disparities in per capita GDP and access to basic services
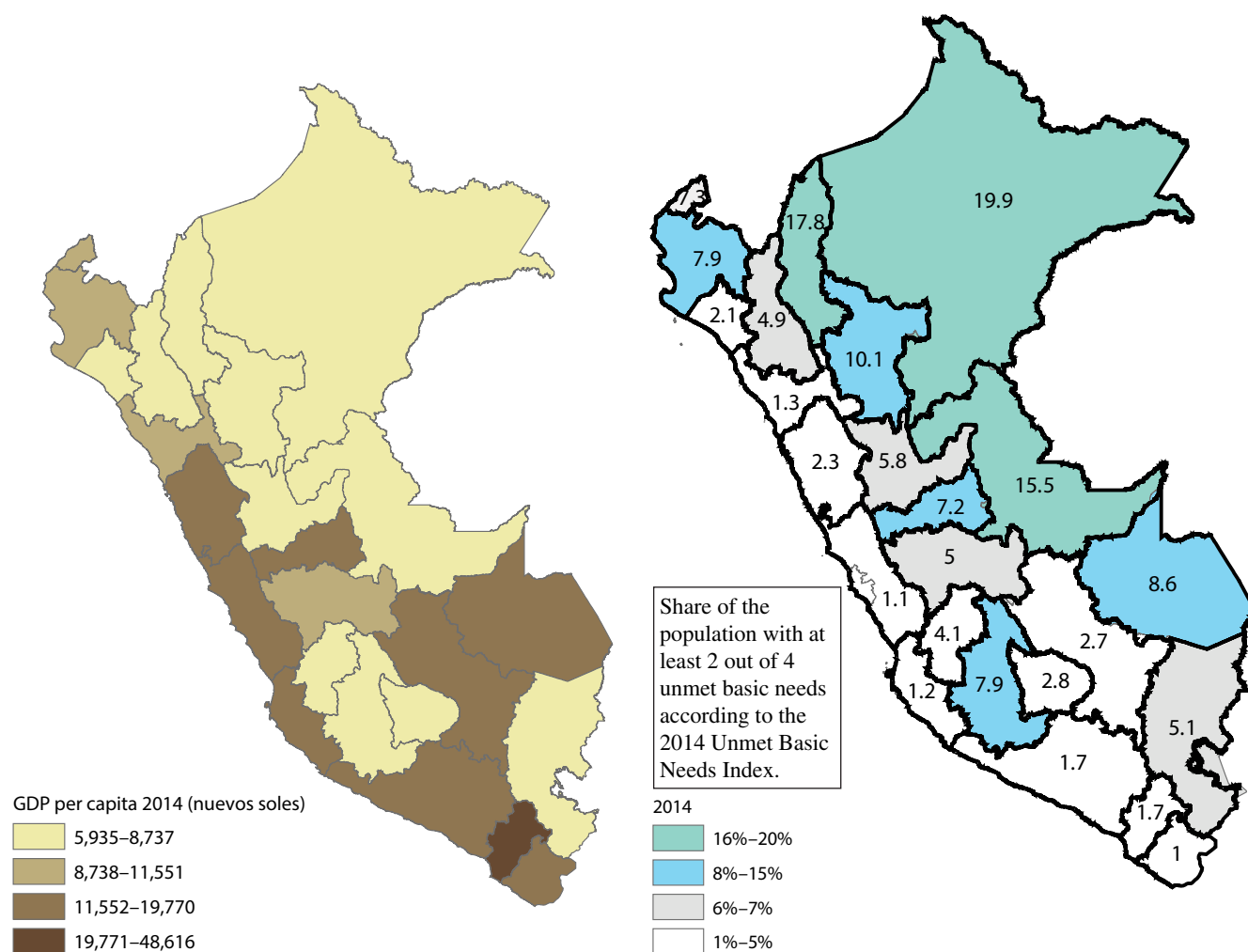
GDP per capita 2014 (nuevos soles)
- 5,935–8,737
- 8,738–11,551
- 11,552–19,770
- 19,771–48,616

Share of the population with at least 2 out of 4 unmet basic needs according to the 2014 Unmet Basic Needs Index.

2014
- 16%–20%
- 8%–15%
- 6%–7%
- 1%–5%

Sources: INEI and MEF.
Note: The Unmet Basic Needs Index estimates the share of the population with access to adequate housing, sanitation, basic education, and a subsistence-level income.

transfers in each region where an extractive industry is located. As a result, the wealthiest provincial municipality spends 80 times more, per capita, than the poorest provincial municipality, while the wealthiest district municipality spends 250 times more than its poorest counterpart.

Expenditure responsibilities

The administrative and expenditure responsibilities of subnational governments are still not clearly defined. The 2002 Constitutional Reform, the organic laws for regional and local governments, and sector-level regulations all assign administrative functions across government levels. However, an excessive number of shared functions and a lack of precise assignments create overlapping responsibilities rather than complementary roles or concurrent competencies. This ambiguity undermines public accountability by making it difficult to determine which government level is ultimately responsible for the delivery of specific services.

The situation is worsened by the atypical feature of Peru's decentralization system of having two categories of local government (provincial municipalities and district municipalities) with often overlapping responsibilities. A conspicuous case of the need for greater coordination is the case of "Metropolitan Lima," which refers to the geographic area that includes the 43 districts of Lima Province and the six districts of the Constitutional Province of Callao. This all involves a complex governance system. The provincial municipality of Lima (MML) itself has a special regime that combines district, provincial, and regional competences.[2] The Lima district (*Cercado de Lima*) is run directly by the MML. The Lima Metropolitan Council exercises powers and functions equivalent to the Regional Council, and the mayor of the MML exercises the powers and functions equivalent to the Regional President. As

part of its provincial competences, the MML has responsibilities over the 43 districts that are part of the province of Lima. Beyond the issue of greater coordination, which could involve a "metropolitan area authority," Lima also raises the question of the need for a special fiscal regime—regarding functional responsibilities and also revenue sources—a need that can be extended to other large urban centers in the country.

Limited institutional and technical support and capacity prevents regional governments from expanding their expenditure capacity. Under the original decentralization strategy, institutional capacity-building plans were designed to boost the ability of regional governments to spend resources efficiently. Once a subnational government was deemed capable of assuming its expanded role, annual plans would be drafted detailing the specific functions, sub-functions, programs, and actions to be undertaken, as well as the fiscal resources, human resources, and capital assets to be transferred, along with a timetable for completing the process. However, this framework has largely been abandoned, and subnational governments have been receiving resources and assuming responsibilities regardless of their ability to manage them effectively.

Tax assignments

The decentralization system has not significantly enhanced the own-source revenue capacity of subnational governments. The 2002 and 2004 fiscal decentralization laws, and all subsequent legislation, did not alter the original allocation of tax ownership between different levels of government. As a result, the municipal tax bases have not changed since 1993 and remain limited to the urban property tax (*predial*), the real estate transaction tax (*alcabala*), and other minor taxes on lotteries, entertainment, and gambling. In particular, district municipalities collect property taxes and taxes on the transfer of real estate. Provincial municipalities collect taxes on motor vehicles and on public entertainment, lotteries, and other forms of gambling. Regional governments have no tax authority at all, as they were established to be transitory entities that would be subsumed into macro-regions. Regional governments collect all of

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2 In the region (department) of Lima, the regional government does not have authority over the province of Lima. The election of regional authorities in the region of Lima does not include the province of Lima, but rather only the other nine remaining provinces of the Lima region. The regional seat or capital city of the Lima region is Huacho.

Property-tax-to-GDP ratio, Peru and selected comparators

Legend: 2008 | 2010 | 2013
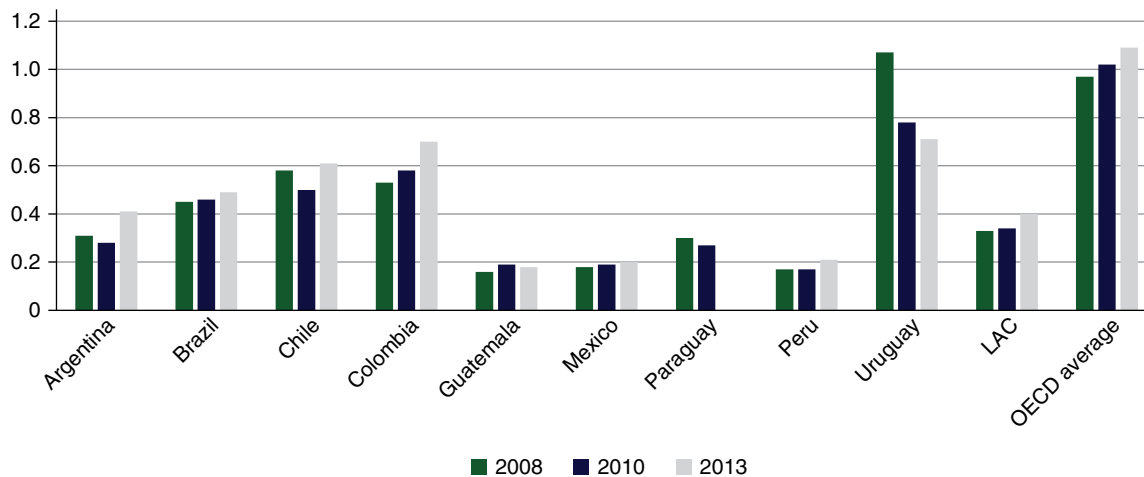
their own-source revenue from user fees and other small revenue sources.

In Peru, subnational taxes represent around 0.45 percent of GDP, a lower share than in comparable countries in Latin America. This results from a combination of limited subnational tax powers and low collection efficiency. The largest tax bases—income and consumption—are leveraged by the central government, and subnational governments are restricted to exploiting more marginal revenue sources, such as property taxes, various administrative charges, and user fees for public services. Moreover, insufficient administrative capacity prevents the subnational government from fully exploiting their limited revenue base, and a heavy reliance on intergovernmental transfers weakens incentives to strengthen tax collection. Even though local governments have larger tax powers than regional governments, local tax revenues are very low. Most local governments do not have cadasters of properties or if they have they are not updated. Problems with the registration of vehicles have also constrained the ability to collect revenues from this tax source. The share of local property-tax revenues in Chile and Colombia are both far higher than in Peru at about 0.8 and 0.7 percent of GDP, respectively. Peru's property-tax-to-GDP ratio is comparable to those of Paraguay, Mexico, and Guatemala.

Nevertheless, local tax collection in Peru has improved in recent years. Property-tax revenue has risen from 0.17 percent of GDP in 2002 to 0.24 percent in 2015. This likely reflects a variety of factors. In the first place there is the role of the recent real estate property boom, which has also been reflected in the tax revenue collections from the property transfer tax (*alcabala*). The technical and institutional support from the national government have also played a role. However, improvements in revenue collection have been offset by reductions in other revenue streams, and total subnational own-source revenues have remained broadly constant over time.

Intergovernmental transfers

While the intergovernmental transfer system closes the vertical fiscal gap, it does little to generate adequate incentives to improve fiscal (revenue) effort and more expenditure efficiency at the subnational level. The use of ordinary resource transfers as the main revenue source for regional governments presents several important drawbacks. First, since these transfers are based on historical or inertial criteria, such as existing expenditure needs, regional governments have no incentives to generate efficiency gains in their use (i.e., less inputs, less money). Second, the lack of a clear distribution criteria for ordinary resource transfers and also the lack of a rule to

determine the amount of funds to be distributed, creates unpredictability of regional governments' budgets, fosters excessive negotiations between subnational governments and MEF, and increases administrative procedures and management costs. Third, and most importantly, a substantial share of ordinary resource transfers is determined throughout negotiations during a given fiscal year, generating month-to-month uncertainty, negatively affecting annual budget execution, and further undermining medium-term budget planning and spending for results. They also introduce an element of unfairness, as the relative bargaining power of different regional governments likely affects their transfer allocations. Finally, the lack of a clear rule for determining the total pool of funds to be transferred annually creates additional uncertainty.

The central government provides two equalizing transfers to regional and local governments, yet their relatively small size and the specifics of their distribution formulas reduce their equalizing impact. The Regional Compensation Fund (*Fondo de Compensación Regional*, FONCOR) is a capital-budget transfer to regional governments that promotes equalization by basing allocations on regional investment needs and revenue capacity. It is well defined and its distribution criteria is clearly equalizing, but its small size (currently at 690 million of PEN) renders it useless—creating scope for discretionary "ordinary" transfers, rather than rule-based allocations. FONCOMUN is the largest transfer for municipalities to cover recurrent costs. It is also a well-designed equalizing transfer, except that its distribution formula does not include revenue generation capacity, which enables wealthy municipalities to receive FONCOMUN resources.

Certain aspects of FONCOMUN distribution criteria create additional distortions that weaken its equalizing effects. FONCOMUN has a complex three-stage distribution procedure. In the first stage, resources are allocated at the provincial level according to equalizing criteria (socio-economic conditions reflected by population and unmet needs for public services). The second stage distributes the resources allocated in the first phase at the provincial level to the district municipalities

within each province according to their rurality, territory, and municipal management capacity. Due to this two-stage distribution, it is possible that two identical municipalities (same population, unmet needs, rurality, territory, and capacity) may receive different transfer amounts just because they are located in two different provinces (with different socioeconomic conditions). In the third stage two adjustments to the amounts defined in the two stages are undertaken: a minimum transfer level (eight tax units) and the application of the harmless clause that ensures that municipalities should receive at least the same amount (in real terms) that they had received in 2009. After these two adjustments the FONCOMUN equalizing formula distribution may be further dissipated. Moreover, the minimum transfer received by all municipalities also encourages local administrative fragmentation. Due to the minimum FONCOMUN transfer level, two municipalities can significantly increase the transfers they receive by splitting, as compared to when they were one.

The increasing size of resource-revenue transfers has shifted public investment responsibilities to subnational governments, yet municipalities often have limited capacity to execute investment projects and face weak incentives to build interjurisdictional infrastructure. *Canon* proceeds increased from 0.4 percent of GDP in 2004 to 2 percent of GDP in 2012, though the recent decline in global commodity prices reduced them to 1.4 percent in 2015. By law, resource-revenue transfers are earmarked for infrastructure investment. As the amount of these transfers increased over the last decade, subnational governments eclipsed the national government as the primary source of public investment. Local governments now account for 47 percent of total public investment, while regional governments account for 23 percent. However, the limited administrative capacity of subnational governments diminishes the quality of capital spending. While execution rates for investment projects have improved, regional and local governments still execute an average of less than 80 percent of their investment budgets. Low execution rates and poor implementation quality negatively affect the efficiency of investment spending. Moreover, individual municipalities have limited incentives to invest these resources

Distribution of resource-revenue transfers among the top 1, 5 and 10 percent of recipient municipalities, 2011 (in PEN ten thousands)

Source: Erman, 2015.

Subnational per capita spending in constant 2014 PEN (left) and regional poverty rates in 2010 (right)

Sources: MEF and INEI.
*The poverty rate of metropolitan Lima, Lima provinces and Callao is not disaggregated; INEI reports a rate of 13.5 percent for Lima and Callao regions.

in interjurisdictional infrastructure, which Peru urgently needs. The existing legal framework for pooling resources is weak, and most investment projects are small and generate limited economic returns. The failure of the establishment of macro-regional governments and the absence of a coordination entity at the national level coordinating subnational governments' investments have prevented the seizing of economies of scale and spillovers associated to larger infrastructure projects.

Resource-revenue transfers have exacerbated budgetary volatility and increased horizontal inequalities. While FONCOMUN and other intergovernmental transfer mechanisms are based on equalization criteria, the enormous size and vastly uneven distribution of resource revenues effectively eliminates the transfer system's capacity to attenuate interregional disparities.

In addition, the allocation criteria for ordinary resource transfers to regional governments do not account for regional expenditure needs or revenue capacity. While FONCOR does account for resource-revenue transfers, its small size limits its equalization effect. In addition, the inherent volatility of resource revenues has greatly increased the unpredictability of subnational government budgets, further undermining the efficiency of both capital and current expenditures.

A Summary of Reform Options

Peru has several policy options to improve its fiscal decentralization system. Below we present these options as follows: (i) the institutional arrangements determining the relationship

between different levels of government; (ii) the importance of clarifying expenditure responsibilities at all government levels; (iii) the commensurate redefinition of the tax authority to boost subnational own-source revenue capacity and enhance collection efficiency; and (iv) proposals to increase the transparency, stability, and equalizing impact of the intergovernmental transfer system.

The institutional framework

Reforms should acknowledge that the macro-regions are unlikely to be established, and focus on strengthening the existing regional governments. While important progress has been made, the decentralization process has been slow and uneven. In this context, future efforts should focus on the consolidation of regional governments as the intermediate unit of government that articulates policies and interventions for a region and serves as the interphase between the central and local governments. A second stream of reforms under this area is to stop the further creation of new municipalities and develop mechanisms to foster consolidation.

1. **Consolidating regional governments at the permanent intermediate government level**

   a. Review the legislative framework for regional governments to formalize their role as a full-fledged intermediate-level government;

   b. In parallel establish and enhance institutions for national-regional coordination in decision-making processes (e.g., establishment of an entity at the national government responsible for the coordination with regional and local governments, supporting the recently created Association of Regional Governments);

   c. Prioritize the resumption of institutional capacity-building efforts at the regional level, identifying a suitable mechanism at the central level to deliver such programs (the entity at the national government responsible for the coordination with other levels of government may be responsible for capacity building and accreditation of subnational governments);

   d. Fully incorporate the regional directorates of line ministries into the institutional structure of regional governments; and

   e. Eliminate the current system of ordinary resource transfers and replace it by (i) assigning tax bases to regional governments and (ii) establishing an unconditional revenue-sharing transfer (see options on taxation and intergovernmental transfers presented below).

2. **Reducing municipal fragmentation**

   a. Declare a moratorium on the creation of new municipalities;

   b. Complete the legal demarcation of municipal boundaries to end territorial disputes, which are the most important loophole allowing for the creation of new municipalities;

   c. Tighten regulatory requirements to further discourage the establishment of new municipalities;

   d. Significantly reduce the minimum FONCOMUN transfer level, diminishing the incentive to create new municipalities; and

   e. Design stronger incentives for municipal consolidation and cooperation in service delivery.

Expenditure assignments

A clear definition of expenditure responsibilities will be necessary to increase the autonomy and accountability of subnational governments and improve the efficiency of service delivery. In particular, further clarification is needed of the shared or concurrent functions, by disentangling sub-functions to define what level of government is ultimately responsible for the sub-function without ambiguities. A clear differentiation between deconcentrated and delegated functions and the definition of financing sources (own-revenue, block grants, or conditional grants) in each case would also be needed. As this work tends to be inherently dependent on the nature of the sector (e.g., health, roads, etc.), a commission comprised of sectoral

and fiscal experts will probably need to be mobilized for each sector.

3. Clarifying expenditure responsibilities

a. Review the organic laws for regional and local governments to identify sectors with duplicative or overlapping responsibilities;

b. Unbundle shared responsibilities into sub-functions (regulation, financing, and service delivery) and allocate responsibility for each sub-function to the appropriate government level following the subsidiarity principle;

c. Eliminate overlapping responsibilities between regional and local governments, assigning them to the appropriate level, and balancing economies of scale and the subsidiarity principle;

d. Streamline the framework for delegated responsibilities; and

e. Establish permanent formal inter-governmental coordination mechanisms to harmonize activities, resolve conflicts, and reach agreements on specific issues. Again, a national government entity and representative associations of regional/local governments may play a facilitating role.

Taxation

Narrowing the vertical fiscal gap will require increasing the tax revenue generated by regional and municipal governments. This can be achieved through the combination of broadening tax bases assigned to them, enabling them the ability to define rates for their own taxes, and improvements in tax-collection efficiency. Regional governments completely lack tax bases while local governments have small bases but without autonomy to define rates. Proposed are the following policy options to increase subnational taxation. It is, however, important to mention that tax and revenue sharing reform options for subnational governments need to be discussed based on a proper reassessment of the overall tax system and their compound effects on labor, investment, and consumption decisions that affect growth and income inequality. This

consideration is also important because Peru has a relatively small tax revenue base as a whole and, thus, only sharing or devolving existing taxes might be at the expense of central government's ability to address national-level priorities if the overall tax base is not expanded.

4. Assigning tax bases to regional governments

a. Establish a regional surcharge on the personal income tax collected by the national government to be levied at a flat rate to minimize interregional labor factor movements;

b. Enable regional governments to define a local rate for the surcharge of 1–3 percent; and

c. Explore other tax-policy options, including a presumptive income business tax, or surcharges on existing national excise taxes or on potentially new ones.[3]

5. Improving the efficiency of revenue collection at the local level

a. Give municipalities discretion to set property-tax rates within a limited range determined at the national level;

b. Establish a national framework for cooperation between regional and municipal revenue agencies, or for developing administrative cooperation agreements for shifting tax administration responsibilities (e.g., collection) between government levels, or between district and provincial tax agencies;

c. Streamline user charges and fees collected by local governments and simplify licensing and payment procedures; and

d. Create an Office of the National Cadaster to enhance property-tax collection by managing the registration and valuation of properties at the national level.

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3 To expand their tax bases, an increasing number of countries and most recently Mexico (2014) and Chile (2015) have adopted excise taxes on tobacco, alcoholic, and sugar-containing non-alcoholic beverages and junk food with corrective effects on consumption and beneficial impacts on health.

Intergovernmental transfers

The proposed reforms in this area would transform the ordinary resource transfers into a more transparent and predictable financing system based on revenue sharing and equalization criteria. The size of the revenue-sharing mechanism and an enhanced FONCOR equalization pool could be adjusted to enhance the equalizing properties of the entire system. The new formula for FONCOR used in the second scenario could also be adjusted by changing its weights to increase the equalization effect of the transfer. A fiscal simulation of the impact of these reforms on the finances of regional governments are presented in detail in Chapter 6.

A number of reforms to FONCOMUN will enhance its equalizing properties and remove the incentives to create new municipalities. These reforms would also require the earmarking of resource-revenue transfers to capital investment projects, enabling a broadened use. These reforms include the inclusion of fiscal capacity estimates in the distribution criteria and the streamline of the three-stage distribution. A simulation of the impact of these reforms on the finance of each municipality is presented in detail in Chapter 6.

Establishing a Stabilization Fund for Resource-Revenue Transfers and defining clear rules of accumulation and withdrawal will strengthen the current revenue stabilizing mechanism based only on withdrawals and transfers. Compensating regional and local governments for the fall in resource-revenue transfers by increasing other transfers has functioned as a type of revenue-stabilizing mechanism. In particular, as local governments were the most affected by the fall in resource-revenue transfers, the central government enabled them to withdraw the unused balances of resource-revenue transfer proceeds accumulated in previous years. However, more permanent mechanisms to stabilize subnational revenues with transparent rules of accumulation and use are needed. Chapter 6 simulates a scenario in which canon resources accumulate in periods of higher than historical average commodity prices,

and resources are withdrawn in events of lower than average commodity prices.

6. **Establishing a more stable, predictable, and equalizing system of transfers for regional governments**

   a. Reform ordinary resource transfers by:

      i. Defining a share of personal and corporate income-tax (excluding the corporate income tax on extractive industries that is already transferred via the *canon*) and VAT revenue equivalent to the current level of ordinary resource transfers;

      ii. Dividing that pool of funds into a formula-driven revenue-sharing component (two-thirds) and an equalization-transfer component (one-third);

      iii. Basing the revenue-sharing distribution formula on two equally weighted criteria—regional GDP and population—in order to incorporate both the point-of-origin principle for resource transfers and the equalization principle; and

      iv. Developing a strategy for phasing in the new system that minimizes the shock to regional government budgets. Note the reform can be designed so as to be neutral with respect to the central government level of revenues.

   b. Enhance the equalization impact of transfers to regional government by incorporating part of ordinary resource transfers to the pool of FONCOR funds;

   c. Either preserve the current FONCOR formula, or alter it to better account for regional differences in expenditure needs and revenue capacity, thereby enhancing its equalization impact; and

   d. No longer earmark FONCOR transfers for infrastructure investment, but instead make them unconditional transfers

designed to finance the decentralization of functions currently funded by ordinary resource transfers.

7. **Enhancing the equalizing impact of FONCOMUN**

   a. Alter the distribution formula to include revenue-capacity criteria—including the size of resource-revenue transfers and other transfers (except transfers from FONCOMUN itself)—in order to enhance its equalization effect;

   b. Ease the earmarking rules for resource-revenue transfers, and enable provincial and district governments to use them to finance recurrent expenditures, helping to offset the decrease in FONCOMUN transfers that may result from the proposed reforms;

   c. Eliminate minimum transfers, at least for newly created jurisdictions, as they incentivize the proliferation of municipalities;

   d. Reform FONCOMUN's three-stage distribution rule by creating separate criteria for transfers to provincial and district municipalities;

   e. Pursue a gradual and properly sequenced reform process, which may include temporary compensation mechanisms to minimize budgetary shocks; and

   f. Explore options to increase the pool of resources transferred under the reformed FONCOMUN mechanism by, for example, increasing the national VAT surcharge or funding it with excise taxes.

8. **Reducing the volatility of resource-revenue transfers**

   a. Establish a stabilization fund for resource-revenue transfers based on well-defined rules for accumulation and withdrawal;

   b. Integrate the stabilization fund into the macro-fiscal framework and the fiscal rules for subnational governments;

   c. Create separate accounts for each recipient government;

   d. Ensure that the management of the fund is fully transparent and backed by appropriate oversight and accountability mechanisms; and

   e. Strengthen the system for pooling resources among municipalities to finance interjurisdictional infrastructure projects.

1 Introduction

Following a period of strong centralization in the 1990s, Peru launched an ambitious fiscal decentralization process in 2001–02. As opposed to the centralism imposed in President Fujimori's tenure (1990–2000), the new democratic government elected in 2001 initiated a rapid process of political and fiscal decentralization. Shortly after the election, the authorities formalized the decentralization process as a permanent state policy. The March 2002 constitutional reform[4] established autonomous regional governments based on the existing administrative jurisdictions (*departamentos*), and elections for the newly established governments were held in November of the same year. The decentralization program envisaged the consolidation of the 26 regional governments into 12 macro-regions, which were to serve as an intermediate level of government between the national and local governments.

The decentralization process had three main objectives: to improve the overall efficiency of public spending, to reduce Peru's large regional disparities in the provision of public goods and services, and to strengthen local democratic decision processes and institutions. As in other countries, the rationale for fiscal decentralization relied on the idea that their relative proximity to their constituents enables local governments to more accurately tailor public services to suit the specific needs of citizens in their jurisdictions, while also strengthening the accountability of government officials. Attenuating the country's vast socioeconomic disparities and meeting the rising demand for public services in its most underserved regions was also a major objective of the decentralization agenda. The drive to strengthen democratic institutions to enable decisions to be taken at the local level also meant an accelerated wave of political decentralization.

While its initial actions were swiftly implemented, Peru's decentralization plan was expected to be phased in over a number of years. The 2002 Decentralization Law[5] and the 2004 Fiscal Decentralization Law[6] defined the policy actions and fiscal resources necessary to complete the decentralization agenda and specified the implementation schedule for transferring administrative and expenditure responsibilities to local and regional governments. First, a system was established to identify functions that could be transferred to subnational governments without overwhelming their institutional capacity. Second, complementary legislation was developed to execute an orderly transfer of functions from the national government to regional and local governments. Third, institutional capacity-building plans for regional governments were formulated to ensure that regional authorities would be adequately prepared to assume their new responsibilities. Finally, a plan to gradually transfer

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4 Law 27680 (March 2002) defined the basis for the decentralization process, including the election of new regional government officials. The fiscal decentralization process had already begun with the adoption of new legislation in July 2001 mandating that local governments and departments receive 80 and 20 percent, respectively, of public revenues generated by extractive industries.

5 Law 27783 (June 2002).

6 Legislative Decree 955 (February 2004).

fiscal resources to regional governments and then to the macro-regions was established. In the first stage of the fiscal transfer, Ordinary Resources (*Recursos Ordinarios*) from the national government would be reallocated to finance the staff and facilities being transferred from the line ministries to the regional authorities. In the second stage, more permanent revenue-sharing mechanisms would be created to finance the operations of the macro-regional governments.

However, the failure to establish macro-regional governments derailed the decentralization process. A 2005 referendum rejected the proposed merger of 16 regional governments into five macro-regions. A second referendum on the consolidation of other macro-regions had been scheduled for December 2009, but was postponed indefinitely. The capacity-building plans for regional governments were designed, but have not yet been implemented. As the decentralization of service delivery responsibilities was delayed, emphasis shifted to administrative deconcentration, with line ministries assuming a greater role in sectoral policy making.

As a result, an intermediate level of government, which was expected to balance economies of scale with local autonomy, has not yet been created, and regional governments have attempted to fill the gap. Regional governments have assumed the functions originally assigned to the macro-regions, becoming the *de facto* intermediate level between the local and national authorities. However, regional governments have weak technical and institutional capacity and lack either own-source revenues or transparent and stable revenue-sharing mechanisms. Moreover, regional governments have limited autonomy to allocate the ordinary resource transfers they receive, to tailor public services to local needs, or to coordinate the provision of public goods and services by municipalities.

Meanwhile, a high and increasing degree of fragmentation at the local level is undermining the efficiency of decentralized service delivery. Many small municipalities have inadequate institutional and technical capacities, and their limited scope for local revenue collection leaves them heavily dependent on intergovernmental fiscal transfers. Moreover, the distribution criteria for intergovernmental transfers creates incentives to further subdivide municipal jurisdictions, increasing both the number of local government units and the fixed costs of public administration.

Increasing distortions in the intergovernmental fiscal relations underscores the pressing need to refocus attention on the core objectives of the fiscal decentralization effort. While expenditure responsibilities increasingly devolve upon subnational governments, revenue collection remains highly centralized, and the reliance of regional and local governments on intergovernmental transfers creates perverse incentives that negatively impact the quality of the public spending and the efficiency of service delivery. The dependence of regional and local governments' budgets on intergovernmental fiscal transfers diminishes incentives for expenditure efficiency at the subnational level while further discouraging own-source revenue collection.[7]

Rising revenue from the extractive industries has driven the fiscal decentralization process, but the increasing importance of resource revenues has also inadvertently shifted responsibilities for public investment to subnational governments and exacerbated their budgetary volatility. By law, resource revenues (called *canon, sobrecanon and royalties*[8] in Peru) are shared and transferred to regional and especially to local governments, and they are earmarked for infrastructure spending. The share of fiscal revenues generated by the extractive industries and transferred to regional and local governments increased from 0.4 percent of GDP in

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7 Recent research on fiscal decentralization also suggests that a heavy reliance on transfers is associated with excessive subnational indebtedness, as financial implications of spending decisions are not necessarily fully internalized.

8 The canon is a resource-revenue transfer financed by 50 percent of the corporate income tax paid by extractive industries to the central government. In the case of oil resources there is the canon and sobrecanon that correspond to 10 percent ad valorem of the oil production (for the canon) and 2.5 percent (for the sobrecanon). Mining royalties are an ad-valorem levy applied to the gross value of the extracted minerals.

2004 to 2 percent of GDP in 2012, before falling to 1.4 percent of GDP following the recent decline in commodity prices. As a result, local governments have eclipsed the national government as the primary source of infrastructure investment, but their limited administrative capacity has negatively affected the quality and efficiency of investment spending. In addition, the inherent volatility of revenues from the *canon, sobrecanon and royalties* (referred to hereafter as canon) has made the budgets of regional and local governments highly unpredictable, further undermining the efficiency of both capital investment and current expenditures at the local level.

The growing importance of canon revenues has also jeopardized recent progress in improving the interregional equity of public service delivery. Historically, economic activity has been heavily concentrated in the capital, Lima, and the coastal region of Callao.[9] Together, Lima and Callao are home to a third of Peru's population and produce more than 50 percent of its GDP. The concentration of economic activity in Lima, Callao, and a few resource-rich provinces results in highly uneven local revenue bases. Fiscal transfers were designed to address these imbalances, but canon resource revenues have exacerbated disparities in fiscal capacity across subnational governments. A large share of resource revenues goes to regional and local governments in areas where extractive industries are located, more than offsetting the equalizing effect of intergovernmental fiscal transfers, which have increased at a much slower rate. Consequently, fiscal decentralization is both excessive at the local level, as fiscal transfers exceed local administrative capacity, and inadequate to compensate for the regional imbalances caused

by the heavy concentration of resource revenues in certain provinces.

Large fiscal disparities between regions continue to be reflected in the uneven distribution of basic public goods and services. While inter-governmental transfers are designed to shift fiscal resources from wealthier regions to poorer ones, regional inequalities in education, health care, and basic services such as water and sanitation are highly correlated with the regional distribution of income (Figure 1).

The following report analyzes the status of fiscal decentralization in Peru and presents a set of reform options designed to promote greater efficiency and equity in the fiscal decentralization framework. Chapter 2 provides a brief overview of recent progress on the decentralization agenda and the main challenges faced by policy makers. Chapter 3 assesses the institutional arrangements that define the vertical and horizontal structure of subnational governments. Chapter 4 describes the allocation of spending responsibilities between different levels of government and explores options for promoting greater accountability and efficiency in subnational spending. Chapter 5 assesses the distribution of revenue authority and tax-collection rates at various government levels and simulates the effectiveness of different policy options designed to bolster the own-source revenue capacity of regional and local governments. Chapter 6 analyzes the system of intergovernmental fiscal transfers and evaluates prospective reforms to the distribution criteria intended to enhance their equalization effect. Chapter 7 summarizes the report's conclusions and policy recommendations.[10]

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9 Lima and Callao are specially designated as a Metropolitan Municipality and a Constitutional Province, respectively. Despite their relatively small geographic size, the special status of Lima and Callao puts them on equal footing with regional authorities rather than other municipalities.

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10 Given Peru's very low level of subnational indebtedness, this report does not include a chapter on borrowing.

Figure 1: Regional disparities in per capita GDP and access to basic services
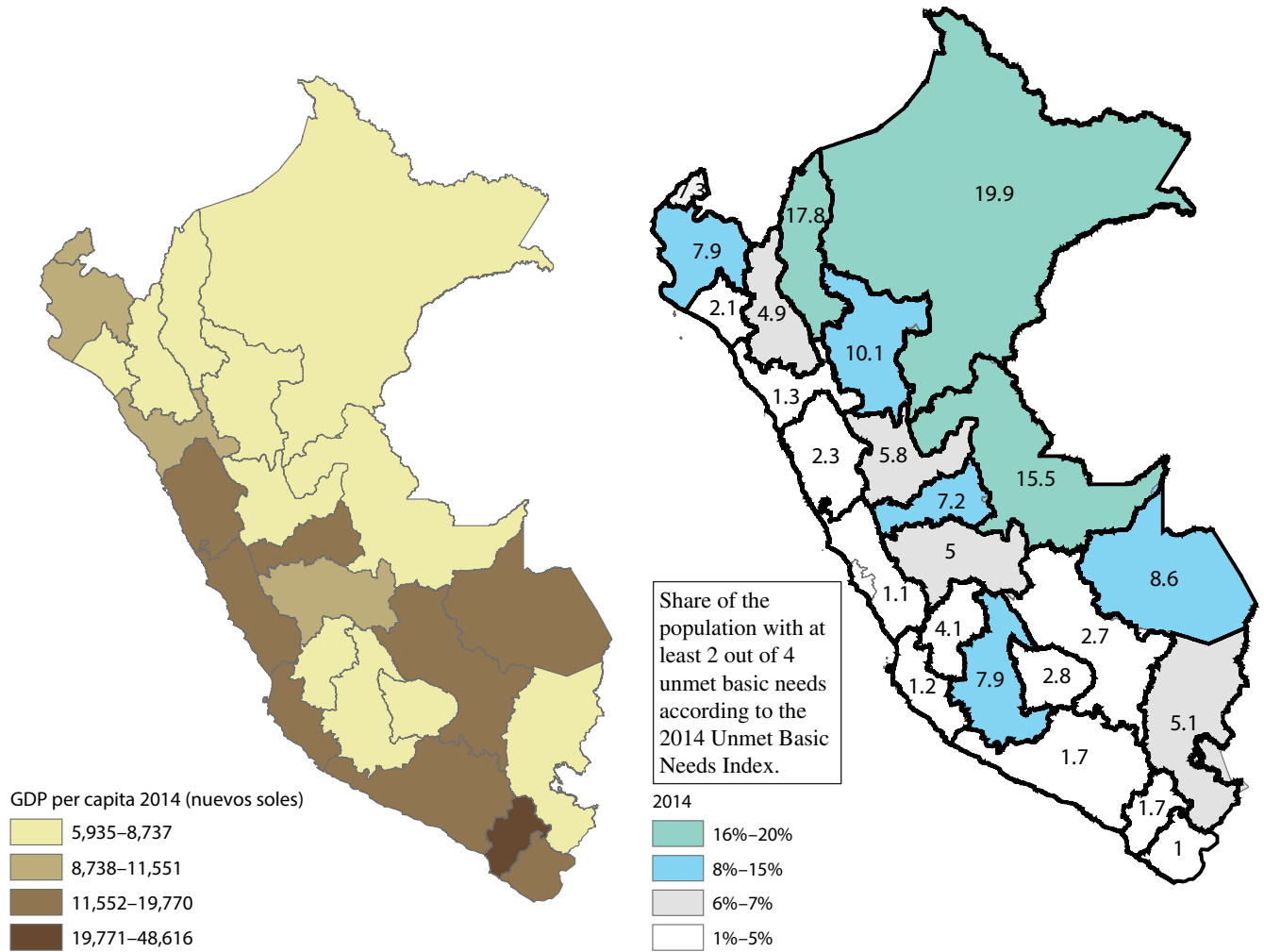
GDP per capita 2014 (nuevos soles)

- 5,935–8,737
- 8,738–11,551
- 11,552–19,770
- 19,771–48,616

Share of the population with at least 2 out of 4 unmet basic needs according to the 2014 Unmet Basic Needs Index.

2014

- 16%–20%
- 8%–15%
- 6%–7%
- 1%–5%

Sources: INEI and MEF.
Note: The Unmet Basic Needs Index estimates the share of the population with access to adequate housing, sanitation, basic education, and a subsistence-level income.

2 An Overview of Fiscal Decentralization in Peru

Peru's public sector consists of the national government, 26 regional governments,[11] and 1,845 municipalities, of which 195 are provincial municipalities and the rest are district municipalities. The fiscal decentralization framework consists of the laws, rules, and institutions that allocate revenue and expenditure responsibilities among the three levels of government. It also includes the intergovernmental transfer system and the fiscal arrangements regulating the fiscal performance of regional and local governments and borrowing by subnational authorities.

Peru's fiscal decentralization trends highlight the profound asymmetry between revenue and expenditure decentralization. The "fiscal decentralization diamond" presented in Figure 2 provides a simple analytical framework for understanding the present asymmetries in the fiscal decentralization framework. The diamond reflects the four dimensions of public financial management: taxation, spending, intergovernmental transfers and debt. In Peru, spending is far more decentralized than taxation. As a result, intergovernmental transfers are the dominant financing source for regional and local governments. Due to their reduced access to credit markets and the tight borrowing restrictions imposed on them, regional and local governments have limited recourse to borrowing to finance their expenditure responsibilities, leaving them heavily dependent on intergovernmental transfers.[12]

Figure 2: The fiscal decentralization diamond
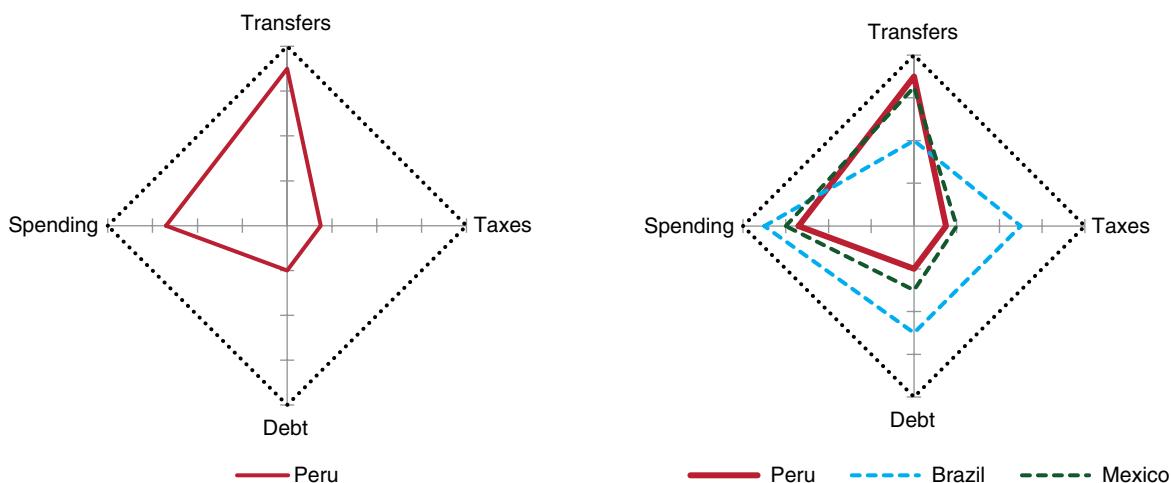
Source: World Bank staff.

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11 This includes the Constitutional Province of Callao and the Metropolitan Municipality of Lima.

12 In 2014, debt to GDP ratio of regional governments was 0.45 percent.

Figure 3: Subnational spending as a share of total government spending, 2012
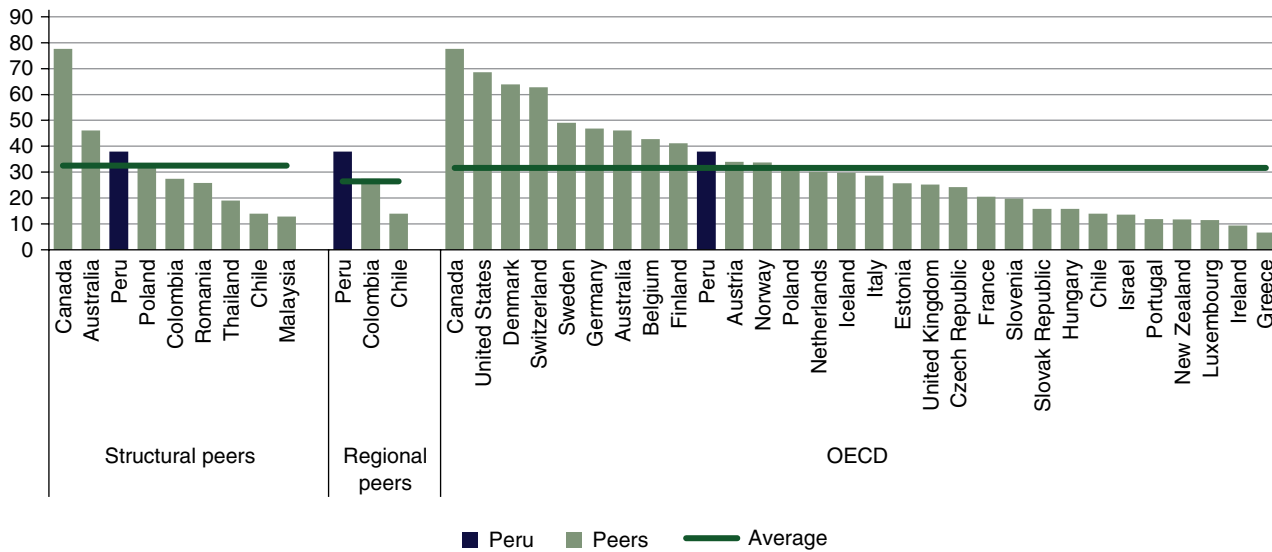
Sources: IMF GFS database and OECD.

Figure 4: Public investment by local governments as a share of GDP, Peru and selected comparators, 2012
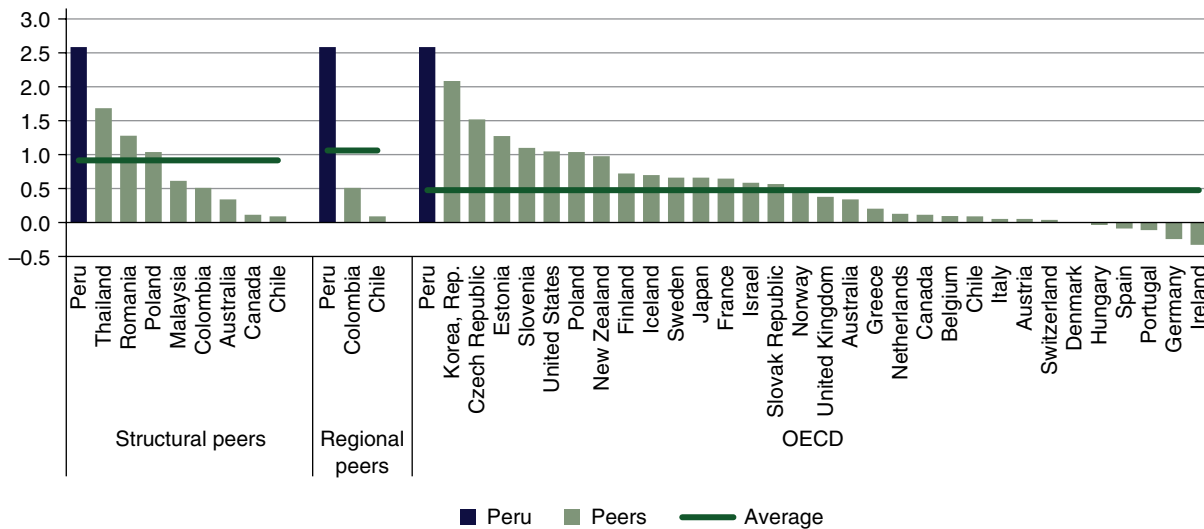
Source: IMF GFS database, 2014.

Expenditure decentralization progressed rapidly in recent years. Over the past decade responsibility for the provision of key services, such as education and health, has been transferred to regional governments, while municipalities now implement the bulk of public infrastructure investment. Regional and local governments account for close to 40 percent of all primary spending (Figure 3) and about 70 percent of all investment spending, with 47 and 23 percent of investment spending carried out by local and regional governments, respectively. Indeed, local governments in Peru invest significantly more than their peers (Figure 4). Consequently, the efficiency of subnational governments is especially critical to the quality of public service delivery, and especially to the provision of public infrastructure.

By contrast, taxation remains highly centralized. The national government collects more than 90 percent of total tax revenue, and the low

tax-collection rate of subnational governments has been a persistent feature of Peru's fiscal decentralization process. Tax and other own-source revenues represent less than 1 percent of GDP and finance less than 10 percent of subnational expenditures. Regional governments rely on user fees and other nontax revenue streams to supplement their low tax revenues. Local governments are empowered to collect certain property taxes, but these revenues are modest and collection efficiency is very low.

This asymmetry between concentrated revenues and decentralized expenditure—known as the vertical fiscal gap—is common in other fiscal decentralization arrangements worldwide and not necessarily very problematic. In principle it may be nothing more than a benign effect of efforts to reduce economic distortions associated with taxation or economies of scale in tax administration, as a central revenue authority may be better positioned to collect personal and corporate income taxes, as well as certain indirect taxes. Meanwhile, public spending tends to be more effective when it reflects local conditions and priorities. As a result, it may be most efficient to collect the bulk of tax revenues at the national

level, then transfer resources to subnational governments to finance spending at the local level. However, increasing own-source revenue collection by subnational governments can also promote expenditure efficiency by strengthening local control and taxpayer accountability. In light of this tradeoff, the balance between subnational taxation and intergovernmental transfers will vary from country to country depending on the relative efficiency of centralized tax collection and the effectiveness of decentralized service delivery.

In Peru, however, the vertical fiscal gap has become excessively large and poses a number of serious challenges. Subnational governments (SNGs) in Peru execute about 40 percent of total spending and collect about 10 percent of tax revenues—the largest vertical fiscal gap among OECD countries (Figure 5). Large vertical fiscal gaps can reduce expenditure quality and undermine fiscal discipline. Although the optimal vertical fiscal gap for any given country is difficult to determine precisely, recent research indicates that very large fiscal gaps, or very low own-source revenue collection by subnational governments, diminishes incentives for expenditure efficiency. Given Peru's very large vertical fiscal gap, increasing the share

Figure 5: The vertical fiscal gap, Peru and OECD countries, 2012
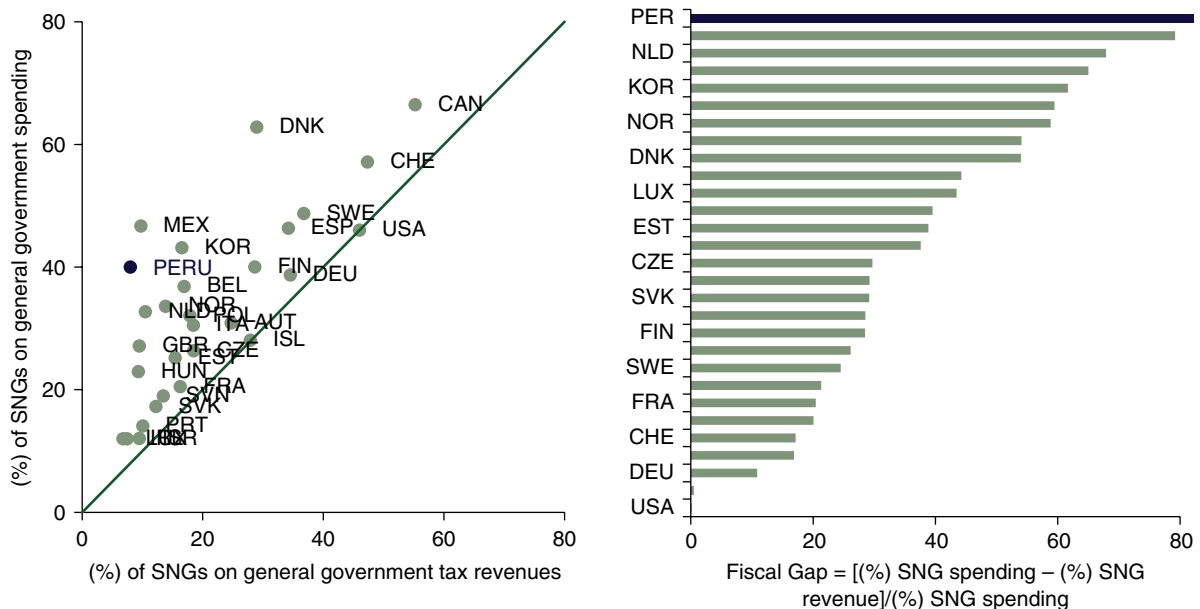
Sources: OECD and World Bank.

of tax revenues raised by subnational governments could boost the overall efficiency of public spending.

Peru's very wide vertical fiscal gap is compounded by a similarly large *horizontal* fiscal gap, as both revenue and expenditure levels vary enormously between regions. These large vertical and horizontal fiscal gaps have resulted in a complex set of intergovernmental transfers. This system includes non-earmarked transfers financed through revenue-sharing mechanisms, earmarked transfers financed through the national budget, and special fiscal arrangements for using resource revenues to fund infrastructure investment.

The size and composition of intergovernmental transfers have both changed substantially in recent years. As a result of the increase in fiscal revenues from extractive industries and the implementation of the decentralization agenda in the second part of the 2000s, per capita transfers in 2014 were around three times larger than they were in 2004. Moreover, the importance of earmarked transfers—both budgetary transfers to finance spending in specific sectors and resource revenues transferred to fund infrastructure investment—has increased relative to non-earmarked transfers, reducing the autonomy of subnational governments to allocate their resources according to regional and local preferences.

Transfers to regional governments are entirely earmarked, restraining their autonomy. These include ordinary resources, which were previously transferred from the central government budget to the regional directorates of its line ministries, but which are now transferred directly to regional government budgets and earmarked for specific decentralized functions. They also include the Regional Compensation Fund (*Fondo de Compensación Regional*, FONCOR), a capital-budget transfer distributed according to investment needs and fiscal capacity criteria, and resource-revenue transfers (*canon* and *sobrecanon*), which represent 20 percent of the income tax on extractive industries. Resource-revenue transfers are distributed according to the derivation principle and earmarked for infrastructure investment projects (see Table 1).

Transfers to local governments have increased substantially in recent years. Local governments receive fiscal resources from three main sources. The first is the Municipal Compensation Fund (*Fondo de Compensación Municipal*, FONCOMUN), a non-earmarked revenue-sharing transfer financed by a 2 percent surtax rate on the central government's value-added tax (VAT). FONCOMUN resources are distributed to all municipalities according to equalization criteria that reflect their fiscal needs and ensure that they have adequate revenue to execute their core functions. The second source is resource-revenue transfers. Municipalities receive 80 percent of all income-tax revenue from the extractive industries, and as with transfers to regional governments these resources are distributed according to the derivation principle and earmarked for infrastructure investment. The third source is a conditional transfer for the modernization of municipalities. While local governments also receive transfers of ordinary resources, the amounts are much smaller than those transferred to regional governments.[13]

Regional and local governments are overwhelmingly dependent on intergovernmental transfers, and this dependence has increased over time as the spending needs of local governments have intensified while their own-source revenue capacity has remained limited. The recent evolution of regional government revenues (Figure 6). reveals a continuous increase in the share of ordinary resources transferred from the central government, which rose from 65 percent of regional government revenues in 2007 to 80 percent in 2014 (Figure 7). Meanwhile, falling global commodity prices caused resource-revenue transfers to decline from 15.4 percent of

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13 Other intergovernmental transfers to regional and local governments include the Fund for the Promotion of Regional and Local Public Investment (Fondo de Promoción a la Inversión Pública Regional y Local, FONIPREL), which provides matching grants for investments in infrastructure and social service delivery, and the Socioeconomic Development Fund of the Camisea Project (Fondo de Desarrollo Socioeconómico de Camisea, FOCAM), which is also distributed on a derivation basis and finances environmental and basic social infrastructure investments in regions and municipalities affected by the country's major hydrocarbon sector project.

Table 1: Intergovernmental transfers in Peru

Fund	Size (% of GDP)	Distribution criteria	Use	Formula for distribution
Transfers to regional governments				
Ordinary resources (*recursos ordinarios*)	3.19	Finance decentralized functions	Earmarked for service delivery	No
FONCOR	0.12	Equalizing based on fiscal needs/fiscal capacity	Earmarked to investment	Yes
Resource revenues (*canon and sobrecanon*)	0.35	Derivation principle	Earmarked to investment	Yes
Transfers to local governments				
FONCOMUN	0.85	Equalizing based on fiscal needs	General	Yes
Resource revenues (*canon and sobrecanon*)	1.07	Derivation principle	Earmarked to investment	Yes
Municipal improvement incentive program	0.00	Result-based transfer for (tax collection)	Enhance public administration	No
Ordinary resources	0.07	Negotiations	Earmarked to specific uses	No
Transfers to regional and local governments				
FONIPREL	0.007	Competitive selection of investment projects	Earmarked to investment	No
FOCAM	0.08	Derivation principle	Earmarked investment	Yes

Sources: MEF and World Bank Staff.

regional government revenues in 2007 to 9 percent in 2014, and stagnant funding for FONCOR capital transfers progressively diminished their share in regional government revenues. Nevertheless, canon resource-revenue transfers are an important budgetary component in resource-producing regions such as Ancash, Cuzco, Loreto, and Piura, while in non–resource-producing regions transfers of ordinary resources represent more than 85 percent of regional government revenues.

While the revenue structure of local governments is more balanced, they are also highly dependent on transfers from the central government, and this dependence intensified during the 2000s as resource-revenue transfers increased. The share of natural resource-revenue transfers in total local government revenue rose from 14 percent in 2007 to 35 percent in 2009, though the recent decline in commodity prices caused this share to fall to 31 percent in 2014 (Figure 8). The inherent volatility of resource revenues and their increasing fiscal importance has increased the unpredictability of local government budgets. FONCOMUN transfers have represented about a quarter of local government revenue since 2004 (Figure 9), but own-source revenues fell from 34 percent of total revenues in 2007 to 26 percent in 2014. However, these figures mask significant regional disparities. Municipalities in resource-producing regions are heavily dependent on resource-revenue transfers, while municipalities in non–resource-producing regions are similarly dependent on FONCOMUN transfers. However, across all regions local

Figure 6: The evolution of regional government revenues (in constant 2007 PEN billions)
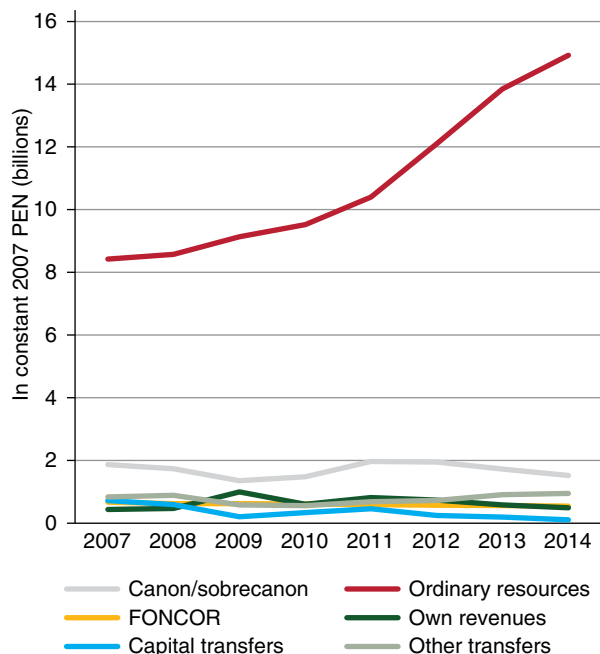
Sources: Ministry of Economy and Finance, MEF; World Bank staff calculations.

Figure 7: Revenue structure of regional governments, 2007–14
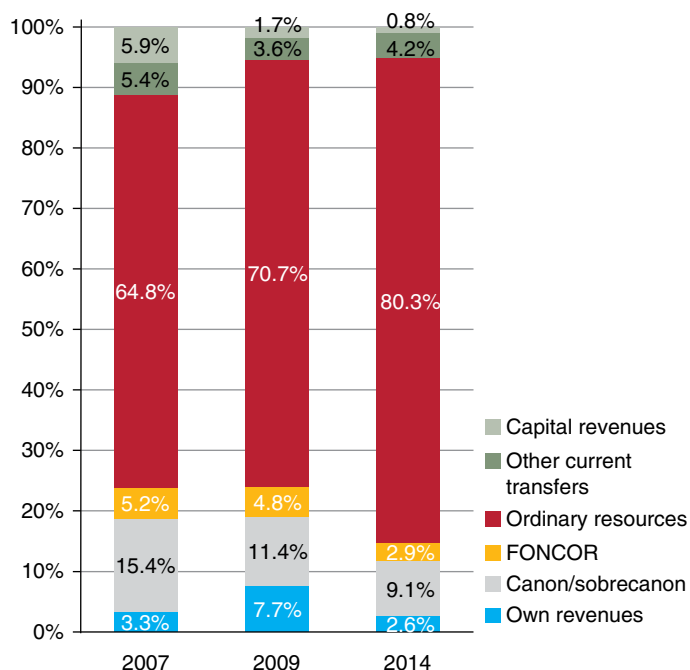
Sources: Ministry of Economy and Finance, MEF; World Bank staff calculations.

own-source tax revenues typically represent less than 5 percent of total revenues. Only municipalities in the greater Lima metropolitan area generate substantially larger shares of own-source revenues.

The evolution of canon resource revenue has become the key determinant of both the vertical and horizontal distribution of fiscal resources, as well as the revenue and spending patterns of subnational governments. The rapid increase in resource-revenue transfers spurred an unintended and likely temporary decentralization of fiscal revenues. This process did not result from the reassignment of tax bases to lower levels of government, nor did it reflect increased own-source revenue capacity among subnational governments, and it was not part of a strategic plan to finance decentralized service provision. Moreover, the increasing reliance of subnational governments on resource-revenue transfers left their budgets highly vulnerable to external shocks, and greater budgetary volatility may be undermining the quality of subnational spending.

Intergovernmental transfers have been partially successful in reducing horizontal fiscal imbalances. Equalization transfers are used to reduce differences in own-source revenue capacity between different regional and local governments. Tax revenue finances both ordinary resource transfers and FONCOMUN transfers. These revenues are largely collected in the most economically developed regions of the country and then distributed to less-developed regions according to their demographic and socioeconomic characteristics.

Nonetheless, the increasing importance of resource-revenue transfers has weakened the equalization effect of the overall intergovernmental transfer system. Resource-revenue transfers disproportionately benefit a small number of regional and local governments in resource-rich areas (Figure 10). Moreover, the allocation criteria for ordinary resource transfers and FONCOMUN transfers do not account for other revenue streams, and these transfers are allocated to resource-rich

Figure 8: The evolution of local government revenues (in constant 2007 PEN billions)

Sources: Ministry of Economy and Finance; World Bank staff calculations.

Figure 9: The revenue structure of local governments, 2007–14
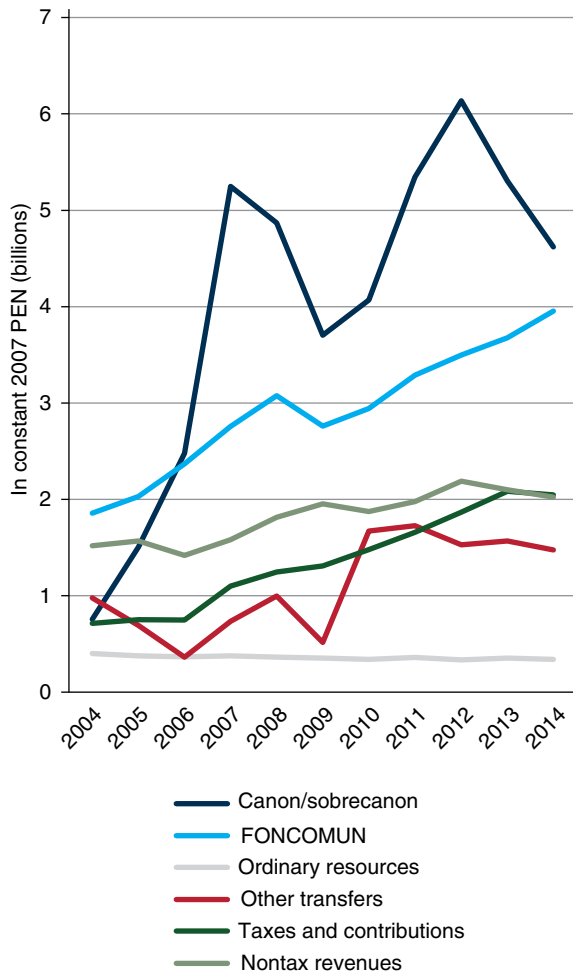
Sources: Ministry of Economy and Finance; World Bank staff calculations.

areas without regard to their total income. FONCOR is the only transfer that does account for resource revenues, but its relatively modest value reduces its equalization effect. Five of the country's 26 administrative regions receive almost 50 percent of resource-revenue transfers, with a full 25 percent going to the Cuzco region alone.

As municipalities receive the bulk of resource-revenue transfers, fiscal inequality is even more pronounced at the municipal level. For example, over 25 percent of canon mining–revenue transfers in 2011 went to the top 1 percent of municipalities.[14]

14 Erman, 2015.

The distribution rules also disproportionately benefit district municipalities, which receive more than 50 percent of resource-revenue transfers in each region where an extractive industry is located. As a result, the wealthiest provincial municipality spends 80 times more, per capita, than the poorest one, while the wealthiest district municipality spends 250 times more than the poorest district municipality (Table 2).

Though subnational indebtedness has increased significantly in recent years, the subnational debt stock remains modest and does not yet represent a source of macroeconomic risk. Faced with increasing spending obligations, lower resource-revenue transfers due to the drop in international commodity prices, and a

Figure 10: Per capita resource-revenue transfers to regional and local governments, 2004–14 (annual averages in constant 2007 PEN)

Average 2004–2014 (nuevos soles of 2007)
- 0–21
- 22–175
- 176–293
- 294–1,936
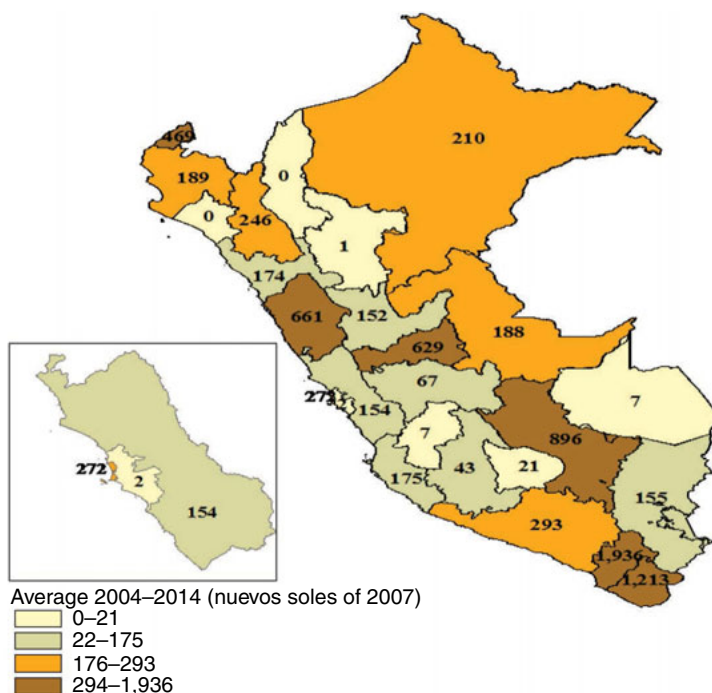
Sources: MEF and Bank staff calculations.

Table 2: Per capita spending among provincial and district municipalities (in constant 2007 PEN)

	2005	2008	2011	2014
Maximum	1,793	2,530	3,449	4,625
Province municipality	Purus (Ucayali)	Jorge Basadre–Locumba (Tacna)	Jorge Basadre–Locumba (Tacna)	Jorge Basadre–Locumba (Tacna)
Minimum	20	34	40	62
Province municipality	Ascope (La Libertad)	Ascope (La Libertad)	Ascope (La Libertad)	Ascope (La Libertad)
Variation coefficient	1.27	1.35	1.2	1.09
Number of provincial municipalities	188	195	195	195
Maximum	5,447	17,378	29,657	26,342
District municipality	El Algarrobal (Moquegua)	Ilabaya (Tacna)	Ilabaya (Tacna)	Ilabaya (Tacna)
Minimum	43	87	87	102
District municipality	San Pedro (Puno)	Sauce (San Martin)	San Juan de Miraflores (Lima)	Comas (Lima Met.)
Coefficient	1.05	1.31	1.31	1.18
Number of district municipalities	1,548	1,632	1,634	1,639

Source: Ministry of Economy and Finance.

limited capacity to raise own-source revenues, many subnational governments have turned to borrowing. As a result, the total subnational debt stock rose from 0.17 percent of GDP in 2007 to 0.42 percent in 2016.

However, there are certain local governments' practices of incurring debt—through arrears to providers and to central government agencies that need to be addressed. Most regional government financial debt is held by Peru's Ministry of Economy and Finance (*Ministerio de Economía y Finanzas*, MEF). Other debts are arrears to private providers, to the national pension system, and to the National Tax Administration (*Superintendencia Nacional de Administración Tributaria*, SUNAT according to a "public works for taxes" financing scheme[15]). When those debts are added to the financial debt, the total subnational debt stock may amount to 4 percent of GDP, according to preliminary estimates from the MEF. While subnational indebtedness does not yet appear to be a source of systemic risk overall, certain regional and municipal governments have become highly indebted. In some cases, debt levels exceed 100 percent of the annual revenues of regional and municipal governments, and these governments may need to adopt fiscal adjustment programs to ensure long-term debt sustainability.

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15 This new borrowing modality is increasingly common among local governments. Under a "public works for taxes" arrangement, private providers construct local public infrastructure as a way of reducing their tax liability to the central government. That tax liability is then transferred to the local government, with SUNAT as the creditor.

3 Strengthening the Institutional Arrangements for Decentralization

Peru's institutional framework for fiscal decentralization remains unfinished. Following the establishment of regional governments and the gradual devolution of administrative functions supported by increased intergovernmental transfers, the process of consolidating regional governments into macro-regions stalled. While the fiscal decentralization law included a generous revenue-sharing mechanism, earmarking 50 percent of national income-tax and VAT revenues for macro-regional governments, the newly elected regional authorities feared that the establishment of macro-regional governments would entail a significant sacrifice in regional political authority. Meanwhile, the central government was resistant to the idea of transferring half of its two most important revenue streams (income tax and VAT) to the macro-regional governments. Finally, local authorities may not have viewed the creation of a new intermediate level of government to be beneficial, as it could reduce local control over service delivery and would require municipalities to share a portion of the resources transferred to them by the national government.

The failure to establish macro-regional governments halted the fiscal decentralization process on several fronts. First, it left the regional authorities as the sole intermediate level of government, a role that they were not designed to assume alone. Second, it delayed the decentralization of fiscal revenues, as the income tax and VAT revenue-sharing mechanism was conditional on the formation of macro-regions. Third, it delayed the process of administrative decentralization, as regional governments were initially viewed as transitory entities that lacked the capacity to fully assume certain expenditure responsibilities, and central government agencies were slow and sometimes reluctant to transfer their functions to regional governments.

As a result, an administrative de-concentration model was adopted in place of the planned decentralization model. Rather than directly increasing the authority of subnational governments, sector ministries were given direct control over all budgetary decisions. In recent years the regional directorates of line ministries have been incorporated into regional governments, and their operations have been financed by ordinary resource transfers from the central government budget.[16] The result is a hybrid deconcentration/decentralization model, in which sector ministries and other central government agencies retain authority over key policy areas that were in principle decentralized, including education, public health, and water management.[17] In addition, a majority of technically decentralized fiscal resources go to finance the public payroll, which regional governments have a limited ability to influence. Consequently, subnational governments rely on intergovernmental transfers, yet they have

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16 Law 28926 of 2006 integrated the sectoral regional directorates into the regional governments as regular line bodies.

17 The World Bank report "The Decentralization Process and its Links with Public Expenditure Efficiency" (2010) describes the ambiguous role of the regional directorates on the education sector. The World Bank report "*Hacia un sistema integrado de ciudades*" documents the coordination problems between levels of governments in sanitation and water management.

Figure 11: Average municipal population size, Peru and selected comparators
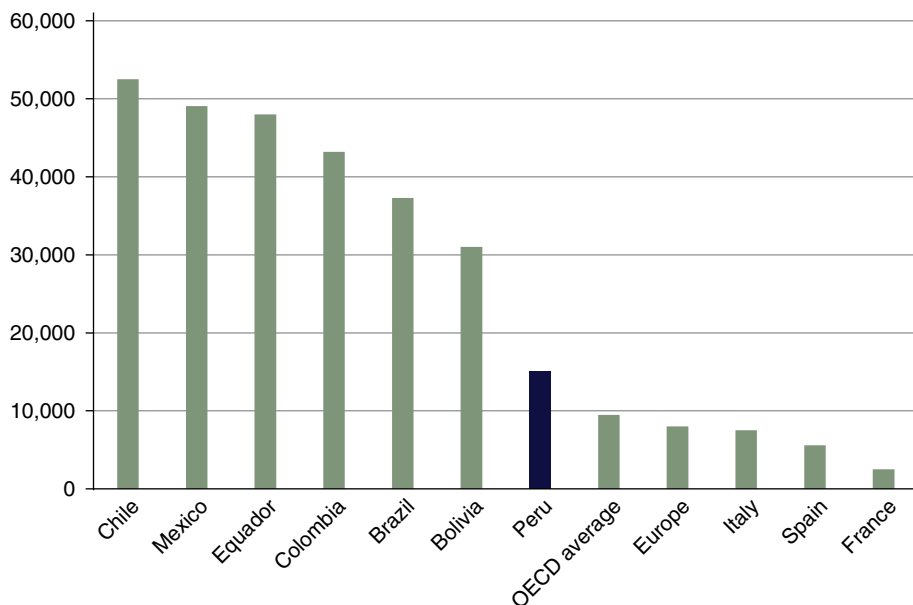
Sources: World Bank, OECD.

Table 3: Municipalities by population, 2012

	District		Provinces	
	Number	**Cumulative (%)**	**Number**	**Cumulative (%)**
0–1,000	195	11.9	0	0.0
1,000–5,000	739	56.8	33	16.9
5,000–10,000	337	77.4	23	28.7
10,000–50,000	298	95.5	92	75.9
>50,000	74	100.0	47	100.0
Total	**1,643**			

Source: Cheasty and Pichihua (2015) based on INEI.

limited autonomy over expenditure decisions, which undermines accountability and expenditure efficiency at the regional level.

The fragmentation of municipal governments further weakens the efficiency gains of decentralized service delivery. The average municipalities in Brazil, Bolivia, Colombia, Ecuador, Mexico, and Chile have populations between two and three times the size of Peru's average municipality (Figure 11). This is due to the large number of very small municipalities in Peru. Fifty-seven percent of Peru's district municipalities have fewer than 5,000 inhabitants, and around 80 percent have

fewer than 10,000,[18] while 4 percent have more than 50,000 (Table 3). Peru's average municipal population is comparable to that of certain high-income and highly fragmented countries in Europe, such as France, Italy, and Spain.[19] However, while municipalities in wealthier countries often have relatively strong local revenue bases and efficient local governments, the degree of municipal fragmentation in Peru reflects inadequate

18 A minimum population of 10,000 is generally regarded as the threshold for leveraging economies of scale in local public administration.
19 Martinez-Vazquez, 2013.

local fiscal resources, high fixed administrative costs, and an inability to leverage economies of scale in local service delivery. Moreover, small municipalities often have difficulty executing their budgets efficiently.[20] In addition, the lack of formal demarcation of boundaries among many municipalities remains a potential source of conflict, especially among local governments located in areas with natural resource deposits.[21]

Efforts to consolidate municipalities have not succeeded in reducing the fragmentation of local governments. The 2007 Local Government Association Law enables municipalities to form voluntary associations in order to jointly provide certain services and execute certain infrastructure investments, and it regulates service-delivery agreements between municipal and regional governments. The law established financial incentives for municipal associations by enabling them to access additional FONCOMUN resources. However, the law has not led to widespread municipal consolidation. To date, 198 municipal associations have been formed, but they comprise just 0.05 percent of local spending. For political reasons many municipal governments prefer to provide services and implement infrastructure projects individually rather than share credit with other municipalities. The central government could attempt to overcome this barrier to consolidation by focusing on the revenue side, and indeed the MEF appears to have successfully incentivized joint property tax (*impuesto predial*) collection at the local level.

Due to Peru's weak intergovernmental coordination mechanisms, regional governments have been unable to foster greater cooperation among municipalities. Regional governments lack the capacity to proactively support collaborative efforts between municipalities, promote complementarity investments, or encourage projects with positive spillover effects. As a result, inadequate leadership at the regional level has further diminished the returns to municipal spending.

The situation is exacerbated by the atypical feature of Peru's decentralization system of having two categories of local government (provincial municipalities and district municipalities) with often overlapping responsibilities. A conspicuous case of the need for greater coordination is the case of "Metropolitan Lima," which refers to the geographic area that includes the 43 districts of Lima Province and the six districts of the Constitutional Province of Callao.[22] This all involves a complex governance system. The provincial municipality of Lima (MML) itself has a special regime that combines district, provincial, and regional competences.[23] The Lima district (Cercado de Lima) is run directly by the MML. The Lima Metropolitan Council exercises powers and functions equivalent to the Regional Council, and the mayor of the MML exercises the powers and functions equivalent to the Regional President. As part of its provincial competences, the MML has responsibilities over the 43 districts that are part of the province of Lima. Beyond the issue of greater coordination, which could involve a "metropolitan area authority," Lima also raises the question of the need for a special fiscal regime—regarding functional responsibilities and also revenue sources—a need that can be extended to other large urban centers in the country.

More than a decade after the launch of the fiscal decentralization process, the establishment of macro-regions appears unlikely. Meanwhile, in spite of an unclear division of responsibilities,

20 Loayza et al. (2011) found a strong correlation between the size of the population and the rate of budget execution, both for current and capital spending.

21 The National Directorate of Territorial Demarcation indicated that about 80 percent of district municipalities and 92 percent of provincial municipalities lack permanently defined boundaries (World Bank, 2010). It appears that to date no progress has been made in this dimension.

22 Metropolitan Lima has a significant presence in the population and the economy of Peru. With about 0.2 percent of the land area of the country, it represents over 40 percent of Peru's GDP and about one-third of its total population.

23 In the region (department) of Lima, the regional government does not have authority over the province of Lima. The election of regional authorities in the region of Lima does not include the province of Lima, but rather only the other nine remaining provinces of the Lima region. The regional seat or capital city of the Lima region is Huacho.

an incomplete devolution of tax authority and increasingly convoluted revenue-sharing mechanisms, the regional decentralization process has significantly advanced. In this context, future decentralization efforts should focus on clarifying the expenditure responsibilities of regional governments,[24] ensuring that they have adequate resources[25] and promoting coordinated action between them. While exceptions exist, most countries with a geographic and population size similar to that of Peru have three levels of government: local, regional, and national. This arrangement is typically the most efficient because it allows each public sector function to be executed at its optimal level of centralization.[26]

The authorities should prioritize the resumption of institutional capacity-building efforts at the regional level. This should be accompanied by a thorough review of the legislative framework for regional governments with a view to clarifying their expenditure responsibilities and identifying appropriate permanent revenue sources. Regional tax authority should be properly defined, and rules for revenue sharing should be specified. The first step should be to reevaluate the institutional arrangements that were planned for the macro-regions and reformulate them to reflect the status of the regional authorities as the sole intermediate level of government.

In order to address municipal fragmentation, the authorities should declare a moratorium on the creation of new municipalities, which, **despite the adoption of some restrictions, has continued in recent years.** While recent legislation has sought to prohibit the establishment of new municipalities, regulatory loopholes have allowed the process to continue. Completing the legal demarcation of boundaries between municipalities would end territorial disputes, thereby eliminating the most important loophole that allows for the creation of new municipalities. Tightening regulatory requirements would also help discourage the establishment of new municipalities. Finally, reducing the minimum FONCOMUN transfer level would eliminate an important incentive for the creation of small municipalities.

Efforts to encourage voluntary consolidation at the municipal level have been largely unsuccessful, both in Peru and elsewhere, as local officials tend to strongly resist measures that might render their positions redundant. As a result, an increasing number of countries in Europe have embraced mandatory consolidation strategies, though these efforts also tend to face bureaucratic resistance. One promising alternative is to foster greater coordination and cost-sharing between municipalities without reducing the number of municipal governments. While the Local Government Association Law provides an appropriate foundation for local-level coordination, greater fiscal incentives for cooperation will need to be provided in order to enhance its effectiveness. In addition, the government should promote more effective local service provision through competitive contracting at the municipal level.

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24 New expenditure responsibilities at the regional level should be assigned according to the guidelines of the national government. Accomplishing this will require capacity-building efforts and the use of incentives; for example, the government could increase certain fiscal transfers on the condition that regional governments recruit well-trained public managers, as it currently does under the SERVIR program.

25 Recent proposals by the General Directorate of Public Revenues and SUNAT require further evaluation.

26 For a more detailed discussion of the role of intermediate levels of governments see Lago-Peñas and Martinez-Vazquez (2013).

4 Clarifying Expenditure Responsibilities and Reducing the Investment Bias of Local Spending

Despite extensive legislation on the issue, expenditure responsibilities are not clearly defined, and intergovernmental coordination mechanisms for public service provision are largely ineffective. The 2002 Constitutional Reform, the organic laws of regional and local governments, and sector-level regulations assign administrative functions across government levels. This framework distinguishes between three types of functions: (i) those undertaken exclusively by the central government; (ii) those shared by multiple levels of government; and (iii) those that can be delegated by the national government to lower government levels. The excessive number of shared functions included in the organic laws—and the lack of a clear and precise description of the functions and sub-functions (regulation, financing, and implementation) exclusively assigned to each government level or shared between levels—creates overlapping responsibilities rather than clearly shared or concurrent competencies. In addition, the lack of clarity regarding which functions can be delegated, and how they should be financed, has undermined accountability by making it difficult to determine which government level is ultimately responsible for the delivery of specific services.[27]

The absence of clearly defined expenditure responsibilities has also delayed the decentralization process and has negatively impacted the overall efficiency of public spending. According to the decentralization law, the transfer of sectoral functions must be based on an evaluation system designed to ensure that the institutional capacities of subnational governments are adequate to execute the transferred functions. Institutional capacity-building plans were prepared to support subnational governments in expanding their administrative capabilities. Once a subnational government was deemed capable of assuming their expanded role, annual plans would be drafted detailing the specific functions, sub-functions, programs, and actions to be undertaken, as well as the fiscal resources, human resources, and capital assets to be transferred, and a timetable for completing the process.

However, the institutional capacity-building plans were not satisfactorily implemented, and the process for certifying the capabilities of subnational governments required more time than initially planned, which derailed the decentralization process. In 2006 the government attempted to accelerate the transfer of functions by eliminating the requirements to implement capacity-building plans, verify the capabilities of subnational governments, or prepare detailed annual plans for the transfer of resources. The accelerated decentralization process further obscured the distribution of expenditure responsibilities. Some functions were transferred to subnational governments that lacked the institutional capacity to execute them, and confusion regarding the transfer of staff and budgetary resources required the continuous involvement of the central government. The disarray of the expenditure decentralization

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27 World Bank (2010) provides an extensive description of the ill-defined and frequently overlapping expenditure responsibilities in the education sector, while the Peru Ministry of Health presented a similar analysis for the health sector.

process weakened governmental accountability and undermined the efficiency of public spending.

The lack of formal mechanisms for coordination between levels of government has also weakened the effectiveness of decentralization.[28] The lack of coordination starts with some line ministries which do not internalize in their decisions the assignment of functional responsibilities to subnational governments. This issue is even more pronounced for the new ministries created after the launch of the decentralization process (e.g., Ministry for Development and Social Inclusion or Ministry of Tourism and Foreign Trade) (OECD, 2016). Due to the large number of functions that are either shared or that can be delegated, different government levels must coordinate closely. Yet despite its expansive legal framework, the decentralization process does not yet encompass formal intergovernmental coordination or conflict-resolution mechanisms. In principle, the regional directorates of the line ministries should facilitate coordination between the national and regional governments, but in practice this mechanism has proven ineffective.

Precisely establishing the role of deconcentrated and decentralized units at the regional level has also proven challenging. As described above, a number of sectoral functions were deconcentrated through the establishment of regional directorates, which were incorporated into regional governments yet remained under the control of the sector ministries. The complexity of this arrangement is reflected in the classification of spending by these decentralized units. As the regional directorates are formally part of the regional governments, they are financed through "ordinary resources" transferred from the central government to the budgets of the regional governments. As a result, the regional

directorates are financially decentralized yet administratively deconcentrated.

Expenditure arrangements at the regional level are still in transition. Expenditures financed through the national government budget within the framework of shared functions could be considered decentralized spending, since these funds effectively are transferred to subnational government budgets and earmarked for specific purposes. However, as decentralized service delivery financed via the shared-functions framework becomes permanent, earmarked transfers to regional governments could become regular revenue flows and could be included in the budget of regional governments in the same way that "ordinary resources" are. For example, payments from the central government to the regional government to finance the country's main health-insurance program (*Seguro Integral de Salud—SIS*) could be completely decentralized, meaning that resources would only be budgeted and executed at the regional level, and would appear as transfers—not executed expenditures—at the central level. However, these funds are still registered in the national government budget, and they continue to be recorded as deconcentrated spending rather than decentralized spending.[29] This underscores the need to identify items currently included in the national budget that should be formally decentralized. This process could represent a second phase of fiscal decentralization (Box 1).

Well-defined expenditure responsibilities are necessary to increase the autonomy and accountability of subnational governments and improve the efficiency of public service delivery. This will require further clarification of shared or concurrent functions. Shared assignments can be unbundled into their respective sub-functions (regulation, financing, and service delivery) and responsibilities for each sub-function can be allocated to the appropriate government level. This

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28 Note that as the (OECD, 2016) reports the government approved a law in 2007 to establish intergovernmental commissions (ICC), which were to include national and subnational government representatives. Recently, the Decentralization Bureau has considered only three commissions to be active (health, labor, and education). A main difficulty has been the selection of subnational government representatives to participate in the commissions.

29 Mexico's health insurance program (Seguro Popular) has a similar structure: the federal government reimburses state governments for the use of health care facilities and staff, but these expenditures are registered in the state governments' budgets with the revenue source classified as an earmarked transfer from the federal government.

Box 1: Partial decentralization in the health sector

Decentralization of health services took place between 2005 and 2009 with regional governments officially becoming owners of the public health facilities located in their territory. However, financing flows and budgetary arrangements have not enabled regional governments' autonomy in planning, allocating, and executing budgets toward their health goals. Indeed, regional governments have not been able to manage and coordinate the budgets used to finance the various components of their health services provision. In general, goods are acquired and assigned by the Ministry of Health (Ministerio de Salud–MINSA), bought by Budget Units directly from funds assigned by the central government treasury, or they are assigned by *Seguro Integral de Salud* (SIS). Human resources and services are contracted at the regional level with resources assigned by the Treasury or by SIS. Investments are carried out either by MINSA or by regional governments.*

As a result, the different inputs used for the delivery of a particular health service are the responsibility of different entities and levels of government, and there is no guarantee that all inputs are available to provide those services in a timely and adequate quality manner. For example, for vaccination services,

salaries are normally paid by regional governments, inputs are provided by MINSA and incidentally may be financed by SIS—however, the lack of coordination among these entities may result in incomplete inputs that prevent the regular full delivery of vaccination services.

This organizational disarray undermines efforts to improve planning, budget allocation, and execution. In fact, while budget allocation in the health sector has been trying to move away from inertial allocations based in historical budgets toward mechanisms that provide incentives for more effective allocation of funds, such as the Result-based-Budgeting (*Presupuesto por Resultados*—PpR) and the Comprehensive Health Insurance Scheme, or the SIS, these attempts have had only a limited impact on budget management efficiency. About half of the health budget is still assigned using historical budgets, and the different financing mechanisms (historical budgets, PpR, SIS) "compete" with each other and provide contradictory incentives preventing the efficient assignment and execution of funds.

Source: World Bank Staff.
*According to Carlos Ricse, former Vice Ministry of Benefits and Insurance of the Ministry of Health (Minsa).

process may require several rounds of unbundling, as some functions are more complex than others. A clear definition of responsibilities will also require the establishment of permanent formal coordination mechanisms to harmonize activities, avoid conflicts, and reach agreements on specific issues.

Successful decentralization will also require eliminating the overlapping responsibilities between regional and local governments and streamlining the framework for delegated responsibilities. Reviewing the organic laws for regional and local governments would enable policy makers to identify sectors with duplicative or overlapping responsibilities. The delegated-functions framework remains incomplete and underutilized. The central government could delegate more functions to regional governments

and even to certain local governments with sufficient administrative capacity. In addition, the possibility of reverse delegation from lower to higher government levels has not been fully explored. Given the weak administrative capacity of many local governments, some district municipalities may wish to delegate more sophisticated functions with clear economies of scale—such as the administration of the property tax (*predial*)—upward to provincial municipalities and regional government.

Fully incorporating the regional directorates into the institutional structure of regional governments and providing them with adequate authority and resources to perform their functions will be crucial to the decentralization process. This will require severing the administrative links between the regional directorates and

the line ministries. The central government could continue to pursue sectoral policy objectives by creating incentives for regional directorates, such as conditional matching grants and national regulations, but it would no longer involve itself in the day-to-day operations of the regional directorates.

Resuming the use of institutional capacity-building plans for subnational governments would complement the clarification of expenditure responsibilities. Most capacity-building plans were suspended several years ago, and a lack of institutional capacity has left a large number of municipalities unable to execute their decentralized functions. Precisely defining the responsibilities of these governments would enable them to develop new, more accurate capacity-building plans. Capacity building is a critical area that conditions

the effectiveness of all other reforms in the fiscal decentralization system. Lessons can be learned from many other countries that have successfully confronted similar difficulties by, for example, introducing national programs to train and certify key local government functionaries in charge of budget planning and implementation (Box 2).

Increased coordination and collaboration among different levels of government should become priorities. The lack of coordination among the different levels of government remains a key obstacle to the effectiveness and efficiency of the entire public sector. Several attempts have been made in the past to increase vertical and horizontal coordination, but so far they have largely failed (OECD, 2016). Institutional reforms leading to adequate coordination and dialogue among the different levels of government should be a reform

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Box 2: The Brazilian basic education fund (FUNDEB)

The financing arrangements, budget allocation process, and service delivery responsibilities of the three levels of government in the provision of education services in Brazil represents a good example of a sound assignment of responsibilities, predictable financing, and accountability among central and subnational governments. The system has consistently yielded adequate service delivery. Brazil's Fund for Primary School Maintenance and Development and Teacher Training (*Fundo de Manutenção e Desenvolvimento do Ensino Basico e Valorização do Magistério,* FUNDEB) is a multi-governmental matching transfer that finances basic education services provided by state and municipal governments. Municipalities administer primary education (levels 1–8), while states are responsible for secondary education (levels 9–12). Both states and municipalities are responsible for the management of human resources, including teachers' payroll and school construction and operation, while the federal government provides regulatory oversight for basic education.

All three levels of government contribute to FUNDEB. The federal government defines regional minimum levels of expenditures per student, which can vary according to region, grade, and location (urban/rural). State governments and municipalities

contribute 15 percent of their current revenues to a common pool in each state, which is then distributed according to the number of students in the state and municipalities. If the resources in a state's pool are not sufficient to cover the minimum expenditure needs per student, the federal government makes up the difference. In this sense, the transfer from the federal government can be considered a regional equalization transfer. The distribution formula for FUNDEB also incentivizes good performance through the Index of Development of Basic Education, which is included as an indicator of the quality of education, combining information on students' performance from national assessments.

FUNDEB has promoted regional equalization in per capita expenditures and has been successful in improving the coverage and quality of education services. However, because the minimum level of expenditures per student determined by the federal government is low, regional disparities in expenditures per capita persist, with the more developed south and southeastern regions (which have greater tax revenue) seeing higher education expenditures per student.

Source: World Bank staff.

priority. At the central-regional level, there is a need to clearly delineate the roles of deconcentrated units of the central government and to make them a separate permanent establishment from the "regional directorates." Beyond that, there is a need to create permanent coordinating committees by sectoral area between the central line ministries and agencies and the regional governments, which should meet on a periodic basis to discuss issues of coordination and potential conflict between the two levels of government. Bilateral negotiations between the central authorities and regional governments should be avoided unless they are issue specific, because they tend to lack transparency and can give rise to perceptions of favoritism. They are also more expensive for the central authorities to hold. Similar permanent coordinating committees should be established at the regional level for the dialogue and coordination between regional and local authorities in the main areas where there are concurrent responsibilities.

There is a need for introducing mechanisms addressing the resolution of conflicts in expenditure assignments among different levels of government. Even when mechanisms for coordination and collaboration are in place, conflict is likely to arise because of different interpretations of the legal system regarding expenditure assignments. Conflicts among government levels should be first addressed by mixed administrative sectoral committees with representation of the different levels of government. At a second stage, unsolved issues could be addressed formally (as is now done informally) in the meetings of the national president and regional governors. If the conflict is among municipalities in the same region, this second stage could consist of the mediation of the regional authorities (for example, the regional president). If the conflict is between regional and municipal governments, the mediation could be entrusted to the prime minister. At a third stage, this issue could be considered by administrative courts or even by the Administrative Bench (*Sala de lo Contencioso-Administrativo*) of the Supreme Court. The Constitutional Court should work as the last instance for conflict resolution after other avenues have been exhausted.

While the process of administrative decentralization has been slow and uneven, the system has made considerable advances in the decentralization of expenditures. Over the past decade Peru has achieved an intermediate-to-high level of spending decentralization by international standards (Figure 3). The share of total primary spending executed by subnational governments rose from 30 percent in 2004 to around 40 percent in 2014.[30] Municipal governments drove this trend, as the share of municipal government spending rose from 12 percent in 2004 to 22 percent in 2014. Meanwhile, the share of regional government spending remained broadly unchanged at around 20 percent, reflecting the modest progress in devolving additional responsibilities to the intermediate level of government.

Rising natural resource revenues drove the rapid increase in local government spending, and strict rules for using resource revenues have created a powerful bias in favor of capital investment. The bulk of resource revenues is transferred to local governments, and these resources are earmarked for infrastructure investments. As a result, the share of investment spending executed by subnational governments rose from 44 percent in 2004 to 68 percent in 2014, surpassing the OECD average of 64 percent, and investment now accounts for about 60 percent of local government budgets. On average, resource-revenue transfers financed about two-thirds of local investment spending between 2004 and 2014.

The recent decline in resource-revenue transfers has not reversed the fiscal decentralization process or significantly reduced investment spending by local and regional governments. Between 2012 and 2015 the central government compensated for the decrease in natural resource-revenue and FOCAM transfers by boosting ordinary resource transfers to regional governments and enabling local government to use their accumulated resource-revenue balances. This enabled local government investment to rise by 15 percent between 2010–2011 and 2012–2014.

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30 Cheasty and Pichihua, 2015.

The rationale for allocating natural resource revenues to capital investment is widely accepted in the international literature. Investing resource revenues creates a sustainable long-term income stream that compensates future generations for the loss of nonrenewable resources. As such, resource revenues can be used to finance physical assets, human capital formation, or environmental protection, or they can be accumulated as cash reserves for future use. In Peru, the law mandates that resource revenues be used exclusively for infrastructure investment and the maintenance of capital assets.

The distribution of resource revenues based on point of origin, their exclusive use for infrastructure investment, and weaknesses in public investment management at the local level all limit the contribution of resource revenues to economic growth and welfare objectives. Under the current legal framework, a small group of local governments in resource-producing regions receive large amounts of resources regardless of their spending needs. The influx of resource revenues has overwhelmed the capacity of local governments to properly design and execute investment projects, and as a result many local investment projects have relatively low rates of return. These resources would likely be spent more effectively at the regional level or by local governments in other areas. Rather than identifying spending needs and allocating resource revenues accordingly, revenues are allocated first and then spending needs are determined.

The fragmentation of investment decisions limits opportunities for coordination and complementarity. The number of investment projects at the local level increased from 2,100 in 2004 to more than 15,000 in 2014, while the average cost per project is less than 1 million Peruvian Nuevos Soles (PEN).[31] The large number of small projects suggests that investment decisions are uncoordinated and that few projects produce spillover effects. The distribution rules for resource-revenue transfers do not allow for the implementation of large strategic investment projects that would benefit more than one municipality.

The poor quality of many local investment projects and the limited public investment management capacity of local governments undermine the effectiveness of resource-revenue transfers. Inadequate strategic planning prevents the efficient prioritization of public investment projects, while low technical capacity for project appraisal results in the implementation of projects with low rates of return. Capacity limitations at the local level can delay implementation and increase costs, and weak budget management may fail to ensure that assets will be maintained over time and that resources will be set aside to finance future recurrent costs. Indeed, projections for future operation and maintenance spending are normally not included in local government budgets, resulting in dilapidated, idle, or underutilized capital. Finally, exclusively earmarking resource revenues for infrastructure investment, rather than for recurrent spending on education and public health, has slowed human-capital formation and created a barrier to sustainable economic growth.

Shifting the composition of subnational spending, especially local government spending, in favor of human-capital formation could enhance its effectiveness in advancing key social and economic development objectives. This will require relaxing the earmarking rules for resource-revenue transfers, along with other changes in how subnational governments are financed. For example, the establishment of a dedicated stabilization fund for regional and local governments could help smooth expenditures over time, allowing them to increase their recurrent expenditures. Meanwhile, enabling regional and municipal governments to allocate a share of resource-revenue transfers to the education and health sectors would greatly increase their budgetary flexibility. These measures would be complementary, as education and health services typically entail a larger share of recurrent expenditures than capital investment projects. However, strict oversight will be necessary to ensure that budgeted expenditures are appropriately registered and accounted for, as relaxing spending rules could create incentives to misuse resource revenues.

The government could also recentralize some investment decisions in order to ensure that

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31 Erman, 2015.

public investment projects are aligned with regional and national objectives and that they fully leverage complementarities and maximize positive spillover effects. This partial recentralization could reduce the fragmentation of municipal investment decisions and increase the overall efficiency of investment spending, as regional and national governments are better suited to designing and implementing certain types of investment projects. Policy makers should also assess the possibility of using accumulated subnational resources to finance projects in other parts of the country through grants from the national government.

Capacity constraints are also present at the regional level. Capacity limitations can be as acute for regional governments as for local governments. Given the limited technical capabilities of many regional governments, capacity building in strategic planning and project appraisal could ensure sound project screening and the efficient implementation of regional projects of greater scope and complexity.

Reforming Peru's National System of Public Investment (Sistema Nacional de Inversión Pública, SNIP) and adapting its procedures for use by regional and local governments could further enhance investment efficiency. SNIP's strict procedural rules include the preparation of pre-feasibility studies for investment projects financed by resource revenues. Though it was originally highly centralized, SNIP's authority has gradually devolved upon investment units in local governments. Yet even as its regulations were eased, SNIP came to be viewed as a bottleneck to public investment at the local level. Meanwhile, with less stringent standards in place the quality of local public investment deteriorated. Rather than further relax its selection criteria and implementation guidelines, SNIP could develop different procedures and methodologies for project design and implementation at the regional and local levels. Moreover, using canon resource revenues to improve project appraisal, implementation, and maintenance capacity could enhance the impact of local public investment on economic growth and welfare.

5 Improving Subnational Taxation

The decentralization process launched in the early 2000s has not significantly enhanced the own-source revenue capacity of subnational governments. Fiscal decentralization laws did not alter the allocation of tax authority between different levels of government. The tax authority of municipalities has not changed since 1993, and regional governments have no tax authority, as they were established to be transitory entities that would be subsumed into the macro-regions. Regional governments collect all of their revenue from user fees and other small revenue sources. The tax structure remains highly centralized, and around 95 percent of total tax revenue is collected at the national level.

Municipal governments' limited tax authority is compounded by low collection efficiency. Income and consumption are taxed by the national government through the income tax, the VAT, and excise taxes. District municipalities collect property taxes and taxes on the transfer of real estate.[32] Provincial municipalities collect taxes on motor vehicles and on public entertainment, lotteries, and other forms of gambling. All tax rates and tax authorities are defined by the national government. Generous exemptions, weak tax administration in rural areas, the lack of a property registry (or "cadaster") in many municipalities, and outdated real estate values in municipalities that

have a cadaster all contribute to low tax-collection efficiency.

Tax-collection rates vary significantly by region. In Lima per capita local tax revenue is 100 times the national average, while Lima's income per capita is only around 40 percent above average. About 95 percent of property-tax revenue is collected by about 10 percent of all large municipalities, though together these municipalities represent about two-thirds of Peru's total population. Overall, property-tax revenue in 2014 represented just 0.215 percent of Peru's GDP, well below the Latin American average of 0.42 percent, the global developing-country average of 0.6 percent and the OECD average of 2.1 percent. However, total property-tax revenue in Peru has increased in recent years, likely due to the MEF's Municipal Improvement Incentive Program (*Programa de Incentivos a la Mejora de la Gestión y Modernización Municipal*, PIMGMM).

Subnational taxes represent around 0.45 percent of Peru's GDP, a lower share than in comparable countries in Latin America. Local property-tax revenue represents about 0.8 percent of GDP in Chile and about 0.7 percent in Colombia (Figure 12). The ratio of total local revenues to GDP in Peru is also much lower than in Argentina (5 percent of GDP) and Brazil (11 percent), though comparable to Mexico and Guatemala.

Nevertheless, local tax collection in Peru has improved in recent years. MEF data for 2014–15 indicate that property-tax revenue rose to 0.24 percent of GDP. This likely reflects a variety of factors. In the first place there is the role of

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32 Provincial municipalities also receive property taxes, but only for properties located within the capital district of the province. The capital district of the province does not have its own district government, and the provincial government governs both the province and the capital district.

Figure 12: Property-tax-to-GDP ratio, Peru and selected comparators
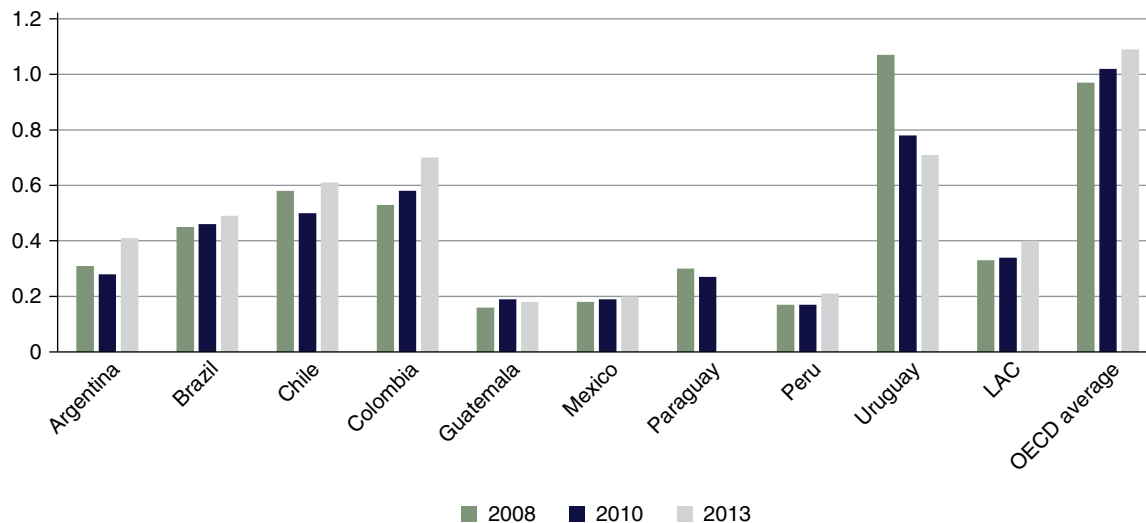
Source: OECD.

Table 4: Subnational government revenues as a share of GDP, 2004–14

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Local government taxes	0.28	0.27	0.25	0.34	0.36	0.37	0.39	0.41	0.43	0.46	0.44
Local government user fees and other revenues	0.59	0.57	0.48	0.50	0.52	0.55	0.49	0.49	0.51	0.46	0.43
Total local government revenues	0.87	0.84	0.73	0.84	0.88	0.92	0.88	0.90	0.94	0.92	0.87
Regional government user fees and other revenues	0.11	0.10	0.12	0.14	0.14	0.28	0.16	0.20	0.17	0.13	0.11
Total subnational own-source revenues	0.98	0.94	0.85	0.98	1.02	1.20	1.04	1.10	1.11	1.05	0.98

Source: MEF.

the recent real estate property boom, which has also been reflected in the tax revenue collections from the property transfer tax *(alcabala)*. The technical and institutional support from the national government—the MEF's PIMGMM—may also have played a role.[33] However, improvements in tax collection were offset by reductions in other revenue streams, and total subnational own-source revenues remained broadly constant (Table 4).

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33 Note that the increase in property-tax collections has been mostly in urban areas while rural governments continue to raise almost nothing from the tax. But, it could also be the case that the MEF's PIMGMM has been less effective in rural areas.

Boosting subnational own-source revenue capacity will require both expanding subnational tax authority and improving tax-collection efficiency. As it now appears that the macro-regional governments will not be formed, tax bases should be assigned to the existing regional governments. However, the decentralization of tax authority does not imply the decentralization of tax administration or enforcement. Indeed, it may be both desirable and feasible to give regional governments some autonomy to set regional rates while keeping tax collection under the purview of SUNAT.

Allocating tax authority to the intermediate level of government in a decentralized context

requires a careful assessment of the trade-offs and potential distortions inherent in multi-level taxation. Regional governments require an adequately large tax base to finance a substantial share of their expenditures. A thorough analysis will be required to determine the optimal tax authority to assign to regional governments, but the most promising option could be to establish a surcharge on the national personal income tax.

Ideally, a regional surcharge on the personal income tax would be levied at a flat rate and collected concurrently with the national tax. This surcharge could be between 1 and 3 percent and levied on the same basis as the national income tax. The rate for each region could be decided by the regional government, but collection would be administered by SUNAT. Even at 3 percent, the additional revenues generated by this surcharge would be relatively modest (Table 5).

To illustrate this proposed reform's modest effect on regional government revenues, Table 6 presents the estimates from Table 5 as percentages of the ordinary resource transfers received by regional governments in 2015. This is the appropriate perspective from which to consider the relative importance of the revenues that could be generated by a flat-rate surcharge on the personal income tax. While the amounts involved are small, they are significantly biased downward by the estimation methodology. After applying a correction factor, which could be as high as fivefold or more, these amounts would remain small, but they would not be insignificant. Despite its effective status as a regional government, important spending responsibilities were not transferred to the Metropolitan Municipality of Lima, and as a result it receives a marginal amount of ordinary resources. Given the heavy concentration of income-tax collection in Lima, a surcharge on the income tax would substantially boost its own-source revenue capacity.

Other policy options include assigning regional governments the authority to levy a payroll tax,[34]

a presumptive-income business tax,[35] separate subnational corporate income taxes,[36] or indirect taxes. New indirect taxes could include surcharges on existing national excise taxes, such as taxes on telephone or electricity services. Subnational taxes on merchandise could include a regional tax on final sales or a centrally coordinated VAT; however, subnational VATs entail serious design, efficiency, and tax administration issues and are generally a less-preferred option. Whatever the mechanism, merchandise tax rates should be uniform in order to avoid creating incentives for interregional smuggling, and the establishment of any new taxes always entails a risk of distortive effects. Box 3, summarizes the international experience with indirect taxation at the intermediate level of government.

There are several policy options for enhancing local tax-revenue capacity. One possibility would be to give municipalities some discretion over local property-tax rates within a limited range established at the national level.[37] While inconsistent tax rates create economic distortions and encourage the migration of tax bases, some modest latitude over the definition of tax rates (such as the definition of a rate interval) would not only enhance the revenue capacity of local governments, but would also tighten the link between local taxes and local public services, thereby strengthening the accountability of municipal governments. Another potential source of municipal tax revenue is the "municipal license" (*patente municipal*) for business and commercial activities, which is currently used in Chile.

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34 For example, Mexico levies a state payroll tax on employers. Rates range from 1 to 3 percent and exemptions vary by state.

35 For example, Colombia's industry and commerce tax, which yields significant revenues, is designed to tax presumptive net income. Gross income can be transformed into net income either by applying differentiated tax rates to gross income, which already incorporate the presumptive rate of profitability for each type of business, or by using standard lump-sum deductions for the cost of doing business for each type of business category and then applying a uniform tax rate.

36 For example, Germany and the United States, among other countries, use subnational corporate income taxes. Determining the right apportionment of net income across jurisdictions is the most serious difficulty with this type of tax.

37 As mentioned above, some rate discretion existed prior to the reforms implemented by the Fujimori administration in the early 1990s. Having a minimum rate also means that the use of the tax is compulsory for all municipalities.

Table 5: Potential regional government revenue derived from a 1–3 percent flat rate income-tax surcharge, 2015 (in PEN thousands)

Department	National personal income tax collection	Alternate rates		
		1%	2%	3%
Amazonas	25,598	256	512	768
Ancash	127,726	1,277	2,555	3,832
Apurimac	41,530	415	831	1,246
Arequipa	932,956	9,330	18,659	27,989
Ayacucho	53,685	537	1,074	1,611
Cajamarca	136,609	1,366	2,732	4,098
Callao	1,225,783	12,258	24,516	36,774
Cusco	404,670	4,047	8,093	12,140
Huancavelica	15,611	156	312	468
Huánuco	65,404	654	1,308	1,962
Ica	339,588	3,396	6,792	10,188
Junín	229,329	2,293	4,587	6,880
La Libertad	775,178	7,752	15,504	23,255
Lambayeque	217,457	2,175	4,349	6,524
Lima provinces	114,608	1,146	2,292	3,438
Loreto	195,346	1,953	3,907	5,860
Madre de Dios	35,619	356	712	1,069
Moquegua	38,339	383	767	1,150
Pasco	28,772	288	575	863
Piura	413,414	4,134	8,268	12,402
Puno	167,412	1,674	3,348	5,022
San Martín	115,583	1,156	2,312	3,467
Tacna	91,388	914	1,828	2,742
Tumbes	42,618	426	852	1,279
Ucayali	164,413	1,644	3,288	4,932
Total	**5,998,636**	**59,986**	**119,973**	**179,959**
Metropolitan Lima	28,746,804	287,468	574,936	862,404

Source: Authors' calculations based on SUNAT data for 2015.
Note: These data are for actual collections, not taxable income.[38]

38 This imparts a significant downward bias to the estimates, which is larger the smaller the effective average rate on taxable income for the national tax in the region. A corrective factor should be applied reflective the inverse of the effective rate on taxable income in the region. It should also be noted that these data are based on the place of withholding and payment of the tax, which may not necessarily coincide with place of residence of the taxpayer. For example, if the effective average tax rate at the national level is 25 percent, collections for Amazonas a flat rate of 3 percent should be PEN 3,072, but if the average national effective rate is 15 percent, then collections for Amazonas would be PEN 5,120.

Beyond traditional capacity-building programs, the government has several options for enhancing subnational tax-collection efficiency. These include establishing a national framework for cooperation between regional and municipal revenue agencies, or developing administrative cooperation agreements for outsourcing tax administration from lower to higher government levels, or between district and provincial tax agencies. Administrative cooperation agreements

Table 6: Share of ordinary resources represented by the potential tax revenue from the income-tax surcharge, 2015 (in PEN thousands)

Regional government	Ordinary resources (in PEN thousands)	Personal income tax potentially collected as a share of ordinary resources		
		1%	2%	3%
RG Amazonas	575,323	0.04%	0.09%	0.13%
RG Ancash	923,039	0.14%	0.28%	0.42%
RG Apurimac	696,738	0.06%	0.12%	0.18%
RG Arequipa	1,124,108	0.83%	1.66%	2.49%
RG Ayacucho	1,056,010	0.05%	0.10%	0.15%
RG Cajamarca	1,188,583	0.11%	0.23%	0.34%
RG Callao	610,352	2.01%	4.02%	6.02%
RG Cusco	1,083,458	0.37%	0.75%	1.12%
RG Huancavelica	701,745	0.02%	0.04%	0.07%
RG Huánuco	820,606	0.08%	0.16%	0.24%
RG Ica	689,200	0.49%	0.99%	1.48%
RG Junín	1,155,639	0.20%	0.40%	0.60%
RG La Libertad	1,159,319	0.67%	1.34%	2.01%
RG Lambayeque	972,208	0.22%	0.45%	0.67%
RG Lima	907,607	0.13%	0.25%	0.38%
RG Loreto	1,031,540	0.19%	0.38%	0.57%
RG Madre De Dios	271,837	0.13%	0.26%	0.39%
RG Moquegua	301,949	0.13%	0.25%	0.38%
RG Pasco	442,395	0.07%	0.13%	0.20%
RG Piura	1,205,200	0.34%	0.69%	1.03%
RG Puno	1,211,842	0.14%	0.28%	0.41%
RG San Martin	1,080,027	0.11%	0.21%	0.32%
RG Tacna	309,374	0.30%	0.59%	0.89%
RG Tumbes	285,822	0.15%	0.30%	0.45%
RG Ucayali	519,666	0.32%	0.63%	0.95%
Total	**20,323,587**	**0.30%**	**0.59%**	**0.89%**
Municipality of Metropolitan Lima	38,555	745.60%	1,491.21%	2,236.81%

Source: Authors' calculations based on SUNAT data.

are currently being used in Mexico with very positive results.

One especially promising option for enhancing administrative cooperation would be the creation of an Office of the National Cadaster. This agency would enhance property-tax collection by managing the registration and valuation of properties at the national level. Similar agencies have been successfully established in Colombia, Uruguay, and Spain. While the national agency would maintain the cadaster, property taxes would still be collected locally. As some large urban municipalities in Peru can maintain accurate and comprehensive cadasters and collect property taxes efficiently, qualifying municipalities could be allowed to maintain their own cadaster, while the cadasters of other municipalities would be managed by the national office.

Box 3: International experience in multilevel indirect taxation

There are a wide variety of arrangements for multilevel taxation, though taxes at the intermediate level are much more common in federal countries than in unitary states such as Peru (Table 7). Although some countries, notably the United States, impose state-level retail sales taxes, several studies suggest that the VAT is the least distortive consumption tax.

However, the VAT suffers from a number of theoretical and practical limitations. These include:

(a) **Intergovernmental coordination.** The design and operation of a multilevel tax system poses serious challenges in terms of federal-state coordination. Due to a desire to assert jurisdiction, federal entities may be unwilling to coordinate policy, which can lead to negative outcomes.

(b) **Tax base and tax rate differentials.** A lack of coordination can lead to large differentials between the tax base and the tax rate. While such differentials are an inevitable result of state autonomy, uncoordinated policies can have a perverse impact, as states may compete to offer tax incentives that serve their individual interests but undermine their collective interests. In Brazil, competition between states to offer ever more generous tax incentives

regardless of their budgetary impact is sometimes referred to as "the fiscal war between the states." In addition to reducing state revenue, tax base and rate differentials encourage inefficient resource allocation, as firms attempt to relocate based on more favorable tax treatment rather than economic efficiency. Firms can contribute to widening base and rate differentials by pressuring state authorities for more favorable treatment. Ultimately, all firms may suffer as tax-related uncertainty deters investment and inadequate revenue mobilization causes state-level fiscal crises. Coordination between states can end this type of fiscal competition.

(c) **Administrative capacity and costs.** Complex tax systems can strain the ability of public agencies to administer the tax system and enforce compliance with tax laws. The challenge of administering a multilevel tax system can divert attention away from audit and oversight functions, as well as transparency and accountability mechanisms such as taxpayer education and data publication.

(d) **Compliance capacity and costs.** Complex tax systems also increase the cost of compliance. Compelling taxpayers to parse tax laws and regulations for different jurisdictions involving

Table 7: Subnational indirect taxes

Country	Federal VAT	Subnational sales tax	Type of subnational tax	Cross-border treatment
Argentina	Yes	Yes	Gross-receipts taxes	Origin
Australia	Yes	No	All VAT revenue goes to states	Destination
Austria	Yes	No	States receive a share of VAT revenue	Destination
Belgium	Yes	No	None	Destination
Brazil	Yes (limited)	Yes	VAT	Origin
Canada	Yes	Yes	Some provinces use VATs, some use retail sales taxes, and some do not use a provincial consumption tax	Destination
Germany	Yes	No	States receive a share of VAT revenue	Destination
India	Yes (limited)	Yes	States are currently moving from producer taxes to VAT	Origin
Switzerland	Yes	No	None	Destination
United States	No	Yes	Most have retail state taxes	Destination

different bases, rates, filing requirements, and other features can greatly increase the administrative cost of paying taxes. An excessively complicated tax code can cause especially acute problems in a developing country environment, marked by low levels of general education, high transportation, and communications costs, and limited taxpayer education programs. When tax compliance represents a substantial burden, it creates an incentive for informality and tax evasion, leading to both revenue losses and economic inefficiencies. Ease of compliance is especially important for VATs, as registered traders essentially act as tax collectors on behalf of the tax administration. If they are not able to fulfil this role, the tax administration will not be able to fulfil its own.

(e) **Tax evasion in interjurisdictional trade.** Many of the VAT's advantages depend on it being an efficient and effective indirect tax on consumption under the destination principle. This requires that all imports be subject to the rate of the importing jurisdiction, and that exports to other domestic jurisdictions or abroad be zero-rated. Thus, interstate trade should be subject to the VAT rate of the importing jurisdiction. As few countries regulate interjurisdictional trade, unregistered importers have no incentive to self-impose the VAT, and registered exporters have an incentive to inflate VAT credits to take advantage of the zero-rating of domestic exports.

(f) **Tax evasion in cross-border trade:** The most common forms of fraud on cross-border trade are "carousel fraud," false credit and refund claims, and import non-compliance with the VAT. The most serious of these, particularly in the EU, is carousel fraud, also known as "missing trader intra-community fraud." Carousel fraud works by exploiting the zero-rating of exports under the deferred payment mechanism used to collect VAT on EU imports.

6 Toward More Efficient, Equitable, and Stable Intergovernmental Transfers

Due to Peru's vertical and horizontal fiscal imbalances, decentralized spending is overwhelmingly financed through intergovernmental transfers. The vertical fiscal gap results from the fact that the largest and most dynamic tax bases—income and consumption—are assigned to the national government, while regional governments have no tax authority, and municipalities are restricted to collecting property taxes and a few other minor taxes. Horizontal fiscal imbalances are the effect of large interregional socioeconomic disparities and the spatial concentration of certain economic activities, especially natural resource extraction. The concentration of economic activity in Lima and a few resource-rich areas greatly increases their own-source revenue capacity, and as a result, the ability of subnational governments to self-finance public services varies widely. While the growth of the extractive industries created new economic centers outside of Lima, it has also intensified regional differences in per capita income and subnational fiscal revenue, particularly as many resource-rich areas are sparsely populated.

The intergovernmental transfer system helps to close the vertical fiscal gap, but it does very little to attenuate the horizontal gap. Most of the existing transfers to regional and local governments are based on equalization criteria. However, the absence of fiscal-capacity criteria in the formulas for practically all other intergovernmental transfers,[39] and the increasing importance of resource-revenue transfers, undermine the effectiveness of the transfer system in reducing interregional disparities.

The distribution of resource-revenue transfers, and their increasing fiscal importance, is a serious obstacle to achieving the objectives of fiscal decentralization. The main rationale for distributing resource revenues to areas where extractive industries are located is to compensate local communities for the negative externalities generated by the exploitation of natural resources.[40] However, the distribution criteria would appear to be excessively generous to affected communities, as their impact eliminates the equalization effect of FONCOR and FONCOMUN transfers. Resource-revenue transfers are extremely uneven at the municipal level (Figure 13), and the distribution rules disproportionately benefit district municipalities, which receive more than 50 percent of resource-revenue transfers in each region where an extractive industry is located. Because the location of extractive industries determines resource-revenue transfers, there is no correlation between regional governments' per capita spending and local poverty rates (Figure 14). Indeed, the less-populated regions where most extractive industries are located tend to have relatively modest poverty rates, yet their per capita expenditures are among the highest in the country.

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39 The exception is FONCOR, which explicitly accounts for fiscal capacity. However, FONCOR's resource pool is small and remains constant over time.

40 The externality argument is not officially recognized in the current legislation of Peru. The Constitution, Articles 193 and 196, state that natural resource royalties (canon) are regional rights, while Article 66 establishes that natural resources, renewable and nonrenewable, are patrimony of the nation, and the state is sovereign in their utilization.

Figure 13: Distribution of resource-revenue transfers among the top 1, 5, and 10 percent of recipient municipalities, 2011 (in PEN thousands)

Source: Erman, 2015.

Figure 14: Subnational per capita spending in constant 2014 PEN (left) and regional poverty rates in 2010 (right)
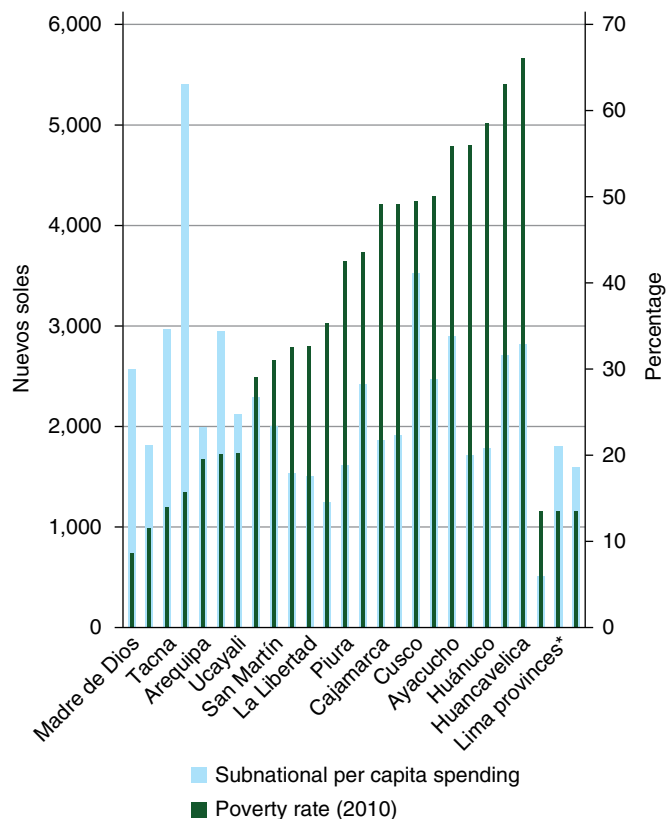
Sources: MEF and INEI.
*The poverty rate for metropolitan Lima, the Lima provinces and Callao is not disaggregated; the INEI reports a rate of 13.5 percent for the Lima and Callao region.

In decentralized fiscal systems, equalization transfers are used to bridge the gap between expenditure needs and tax-collection capacity at different levels of government. In most cases the majority of tax revenue is collected by the central government in the most developed regions of the country, and a portion of this revenue is then redistributed according to a formula that reflects fiscal capacity and expenditure needs. In principle, this should result in the systematic redistribution of fiscal resources from richer areas to poorer ones. Expenditure needs are defined as the amount a subnational government would need to spend to provide a standard level of public services based on the size of the population, local socioeconomic conditions, and the costs of providing those public services. Revenue capacity is the ability of a government to raise own-source revenues based on an average level of administrative effort,

and given the size of the government's assigned tax bases. The optimal equalization transfer to a subnational government increases in line with its expenditure needs and decreases in line with its revenue capacity.

Several aspects undermine the fiscal equalization role of Peru's intergovernmental transfer system. While transfers are distributed according to fiscal needs criteria, most do not consider revenue capacity. As a result, governments that are able to raise substantial own-source revenues or other revenue streams continue to receive large equalization transfers. For example, while ordinary resource transfers and FONCOMUN transfers use needs-based distribution criteria, they do not include revenue capacity. As a result, municipalities

with substantial own-source revenues and those that receive resource-revenue transfers also receive ordinary resource transfers and FONCOMUN transfers proportionate to their expenditure needs.[41] As noted above, recent changes to the FONCOR allocation criteria may enhance its equalization impact, as capital expenditure needs are now adjusted to reflect revenue capacity, including resource-revenue transfers. However, in practice the equalization capacity of FONCOR remains limited due to its very small size.[42]

The distribution criteria for ordinary resource transfers to regional governments primarily reflect supply-side considerations rather than demand for public services or local expenditure needs. This mechanism was established in order to finance the transfer of institutional and human resources necessary for the decentralized provision of public services. However, the distribution criteria do not explicitly account for either expenditure needs or fiscal capacity criteria at the regional level. Although regional governments currently have no tax authority, some regional governments receive resource-revenue transfers, which greatly increase their revenue capacity.

Equalization transfers are relative small, especially compared with resource-revenue transfers. With the strong increase in revenue from the extractive industries, resource-revenue transfers became the country's most important fiscal transfer system. For example, in 2012 the largest per capita resource-revenue transfer

received by a regional government was more than 20 times higher than the largest FONCOMUN transfer and more than five times higher than the largest FONCOR transfer. As noted above, resource revenues are transferred based on their point of origin and are not correlated with recipients' expenditure needs or revenue capacity.

Finally, specific aspects of the FONCOMUN distribution formula may require reform. In particular, the minimum transfer level encourages fragmentation, and the allocation of resources in two stages is opaque and may produce undesirable results. For example, two identical districts may receive different transfer amounts just because they are in regions with different overall fiscal needs.

As a result of their weak equalizing criteria, intergovernmental transfers do not reduce fiscal disparities. Indeed, per capita spending at the regional and municipal levels reinforces existing regional disparities in socioeconomic development (Figure 15 and Figure 16).

Another disruptive aspect of canon resource-revenue transfers is the volatility that it adds to subnational and especially local public finances. Resource-revenue transfers to regional and local governments increased from 0.4 percent of GDP in 2002 to almost 2 percent in 2012, then fell to 1.5 percent in 2014. While this substantially improved subnational government finances, it also increased fiscal risks. Resource-revenue transfers represent almost 10 percent of total regional revenues and more than 30 percent of local government revenues. The increasing dependence of subnational governments on an inherently volatile revenue source, their limited capacity to mitigate revenue shocks, and the absence of national-level stabilization mechanisms leaves subnational governments highly exposed to commodity-price volatility.

There are a number of policy options for enhancing the efficiency, predictability, and equalization impact of intergovernmental transfers. The most direct way, albeit the most politically difficult and perhaps least viable one, would be to modify the

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41 There is also some question as to whether ordinary resource transfers are based on an accurate assessment of expenditure needs that fully reflects local demand for public services.

42 FONCOR's limitations stem from three sources. First, its equalization effectiveness is limited because the pool of funds distributed is relatively small and fixed at PEN 690.33 million. In 2015 FONCOR represented less than 3 percent of the total revenue of regional governments. Second, its distribution formula has a strong fixed component (23.6 percent) and a variable component that partially reflects equalization criteria (76.4 percent). However, 50 percent of the variable component is inertial and fixed, leaving only 38.2 percent of the PEN 690.33 million truly variable. Third, funds are earmarked exclusively for public investment projects, which limits the ability of regional governments to improve the provision of decentralized services and equalize access to them.

Figure 15: Per capita spending by regional governments, 2014 (in constant 2007 PEN)

In constant 2007 PEN

Source: Ministry of Economy and Finance.

Figure 16: Per capita spending by municipalities, 2014 (in constant 2007 PEN)

62–400
401–810
811–4,625
Regions

Source: Ministry of Economy and Finance.

origin basis of transfers by allocating a share of resource revenues according to equalization principles. While the majority of resource-revenue transfers would be distributed according to their point of origin as compensation for the negative externalities generated by the extractive industries, the use of equalization criteria would mitigate the disproportionality of their impact.

This chapter simulates several prospective reforms to the intergovernmental transfer system aimed at improving its efficiency, as well as its equalization and stabilization effects. The first would be to reform ordinary resource transfers into a revenue-sharing mechanism for regional governments based on two equally weighted distribution criteria—regional GDP and regional population. Under this scenario, the size of FONCOR transfers would also be increased, and steps would be taken to enhance its equalization role. The second prospective reform would be

to alter the FONCOMUN distribution formula to include revenue- and expenditure-capacity criteria. The third would be to establish a stabilization fund using natural resource revenues.

Ordinary Resources and FONCOR

Since the process of establishing macro-regions stalled, regional governments have played an increasingly important role in the decentralization process. While regional governments were supposed to be temporary entities, they have become the established intermediate level of government. Their main financing source continues to be ordinary resource transfers from the central government budget.

The use of ordinary resources for inter-governmental transfers is atypical, and presents several important drawbacks. As ordinary

Figure 17: Relation between per capita ordinary resources and per capita GDP

$$y = 0.00000178 \cdot (gdppc^2) - 0.0727216 \cdot (gdppc) + 1541.883$$
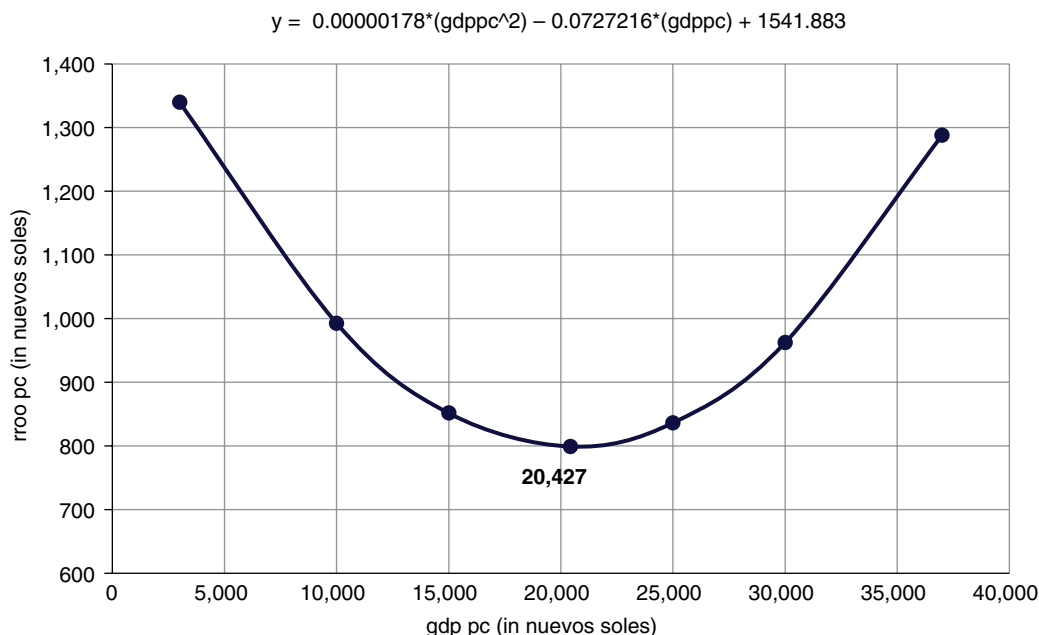
Sources: MEF and World Bank calculations.

resource allocations are based on historical or inertial criteria, such as existing expenditure needs, regional governments face weak incentives to use these resources efficiently. As a result, ordinary resource transfers tend to undermine the quality of public financial management and the efficiency of public spending at the regional level. This system also introduces perverse incentives to expand public staff and facilities, as rising expenditure needs are likely to entail increased revenue transfers. While the increase in ordinary resource transfers designed to compensate for the recent decline in resource-revenue transfers has proven effective in stabilizing regional budgets, it is unclear how this policy response has impacted the quality and efficiency of subnational public spending.

The lack of clarity in the distribution criteria for ordinary resource transfers and the rules for determining the pool of funds to be distributed increases the unpredictability of regional government budgets. A substantial share of ordinary resource transfers is determined through in-year negotiations between the regional and central governments. This process generates uncertainty that negatively affects annual budget

execution and medium-term budget planning. In addition, it introduces an element of unfairness, as regional government bargaining power likely affects transfer allocations. Indeed, the distribution of ordinary resources favors very poor and very rich regions and has an ambiguous effect on equalization (Figure 17). The lack of a clear rule for determining the total pool of funds to be transferred also generates uncertainty and weakens budget execution and medium-term planning.

Ordinary resource transfers could be reformed by dividing them into two components: a formula-driven revenue-sharing component and an equalization-transfer component. The revenue-sharing component could be funded through a revenue-sharing rule similar to the one planned for financing the macro-regions, which would have set aside 50 percent of income-tax and VAT revenue. That share would likely need to be recalibrated to reflect the new administrative context. In the simulations presented below, funding is equivalent to two-thirds of the ordinary resource transfers for 2016, which would represent approximately 10 percent of current income tax and VAT revenue. The revenue-sharing distribution formula is based

on two equally weighted criteria—population and regional GDP. These criteria are commonly used in subnational revenue-sharing systems, as the inclusion of regional GDP reflects the point-of-origin principle in resource transfers, while population size reflects the equalization principle.[43]

The equalization impact of regional transfers could be further enhanced by reforming FONCOR. Under the first reform scenario, the pool of FONCOR funds would be substantially increased by adding the remaining one-third of the pool of ordinary resources for 2016, which is equal to approximately 5 percent of income-tax and VAT revenue. The equalization criteria of the current FONCOR formula would be preserved in the first scenario, and it would account for expenditure needs and revenue capacity, including resource-revenue transfers. In the second scenario, the FONCOR formula would be modified to enhance its equalizing role. Finally, under both scenarios transfers would no longer be earmarked for capital investment and would instead represent an unconditional transfer designed to finance the decentralization of functions currently financed by ordinary resource transfers.

These reforms would result in a more transparent and predictable financing system for ordinary resource transfers based on revenue-sharing and equalization criteria. The size of the revenue-sharing mechanism and the enhanced FONCOR equalization pool could be altered to make the entire system more equalizing. The more funds that are allocated to the equalization component and the larger the weight of the population criterion in the revenue-sharing formula, the greater the equalization effect. The new formula for FONCOR used in the second scenario could also be altered by changing its weights to increase the equalization effect of the transfer. The extent of the equalization effect is ultimately a political economy decision, and different countries will reach different balances between allocating resources to the areas

where they are generated and redistributing them to other regions.

The first scenario, which simulates the impact of the reformed ordinary resource transfer system, uses two-thirds of the ordinary resources transferred in 2016. The allocation is based on two equally weighted criteria, the regional population as a share of the total population and regional GDP as a share of total GDP in 2014. The computation of the formula is presented in Appendix 1. In this scenario the enhanced FONCOR transfer system uses a pool of funds that is equal to one-third of ordinary resource transfers in 2016.

Two alternative formulas are used to allocate these resources. In the first scenario, the new pool of resources is distributed using the existing FONCOR formula (see Appendix 2). The "fixed" and the "base" amounts of the FONCOR remain the same as they were in 2016, while the additional resources (one-third of ordinary resource transfers in 2016) are distributed using the existing FONCOR index. In the second scenario, the new pool of resources is also distributed based on the "fixed" and the "base" amounts of the "old FONCOR" formula, but the additional FONCOR funds are distributed using a "new FONCOR" formula. This new formula keeps the existing criterion of "relative poverty," but the second criterion, the "relative transfer" index, is adjusted to reflect fiscal capacity. The fiscal-capacity criterion includes both resource-revenue transfers and the new revenue-sharing funds. This methodology is described in Appendix 3. The proposed change in the FONCOR formula also includes a more straightforward and transparent distribution approach that eliminates the logit regressions used in the current distribution formula.

The results of the simulations are summarized in Table 8. Column 1 shows the current distribution of ordinary resource transfers, as well as funds transferred under the current FONCOR formula. Figure 18 illustrates the geographical distribution of these resources. Column 2 in Table 8 shows the regional distribution of funds based on the proposed revenue-sharing mechanism plus FONCOR transfers using the current formula but the revised resource pool. Figure 19 presents the

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43 It is important to note that this distribution would differ significantly from the previously envisioned revenue-sharing mechanism for the macro-regions, which was intended to reflect only the point-of-origin principle.

Table 8: Simulations transforming the system for ordinary resource transfers into a revenue-sharing-plus-FONCOR equalization grant, 2016 (in PEN millions)

Regional government	(1) Old ordinary resources 2016	(2) New revenue sharing 2016 plus FONCOR (1st scenario)	(3) New revenue sharing 2016 plus reformed FONCOR (2nd scenario)	(4) = (2) – (1) Winners and losers (1st scenario)	(5) = (3) – (1) Winners and losers (2nd scenario)
Amazonas	264	461	260	197.4	–3.6
Ancash	451	370	416	–80.9	–34.5
Apurimac	299	481	269	182.4	–29.2
Arequipa	497	489	514	–7.9	16.7
Ayacucho	449	423	320	–25.8	–128.4
Cajamarca	593	426	563	–166.7	–29.6
Callao	276	373	397	97.9	121.2
Cusco	480	450	504	–30.0	24.2
Huancavelica	309	458	238	148.7	–71.0
Huánuco	343	573	432	230.5	88.7
Ica	327	303	330	–24.3	2.4
Junín	492	502	557	9.9	65.0
La Libertad	553	524	643	–28.6	89.5
Lambayeque	505	453	538	–52.1	32.8
Loreto	521	256	398	–265.1	–122.9
Madre De Dios	113	145	112	32.6	–0.5
Moquegua	133	137	159	4.1	25.7
Pasco	154	354	192	199.9	37.9
Piura	558	517	641	–41.5	82.4
Puno	542	605	595	62.9	52.2
San Martin	415	387	403	–27.5	–11.8
Tacna	150	133	156	–16.8	6.1
Tumbes	156	73	98	–82.4	–58.0
Ucayali	255	127	215	–128.3	–39.5
Lima region	421	233	305	–188.4	–116.0

Sources: MEF and World Bank Calculations.

corresponding geographical distribution of funds. Column 3 in Table 8 shows the regional distribution of funds using the new revenue-sharing mechanism plus the new FONCOR formula. Figure 20 presents the corresponding geographical distribution.

The proposed reforms generate regional gains and losses. These are computed as the difference between the sum of the new revenue-sharing mechanism plus the original FONCOR formula presented in the first scenario and the current distribution of ordinary resource transfers shown in column 4 of Table 8. The corresponding geographical distribution of gains and losses is depicted in Figure 21. Finally, the gains and losses for the second scenario are shown in column 5 of Table 8, and illustrated in Figure 22.

Avoiding drastic changes in the resources available to regional governments will require

Figure 18: The current distribution of ordinary revenue transfers, 2016 (in PEN millions)
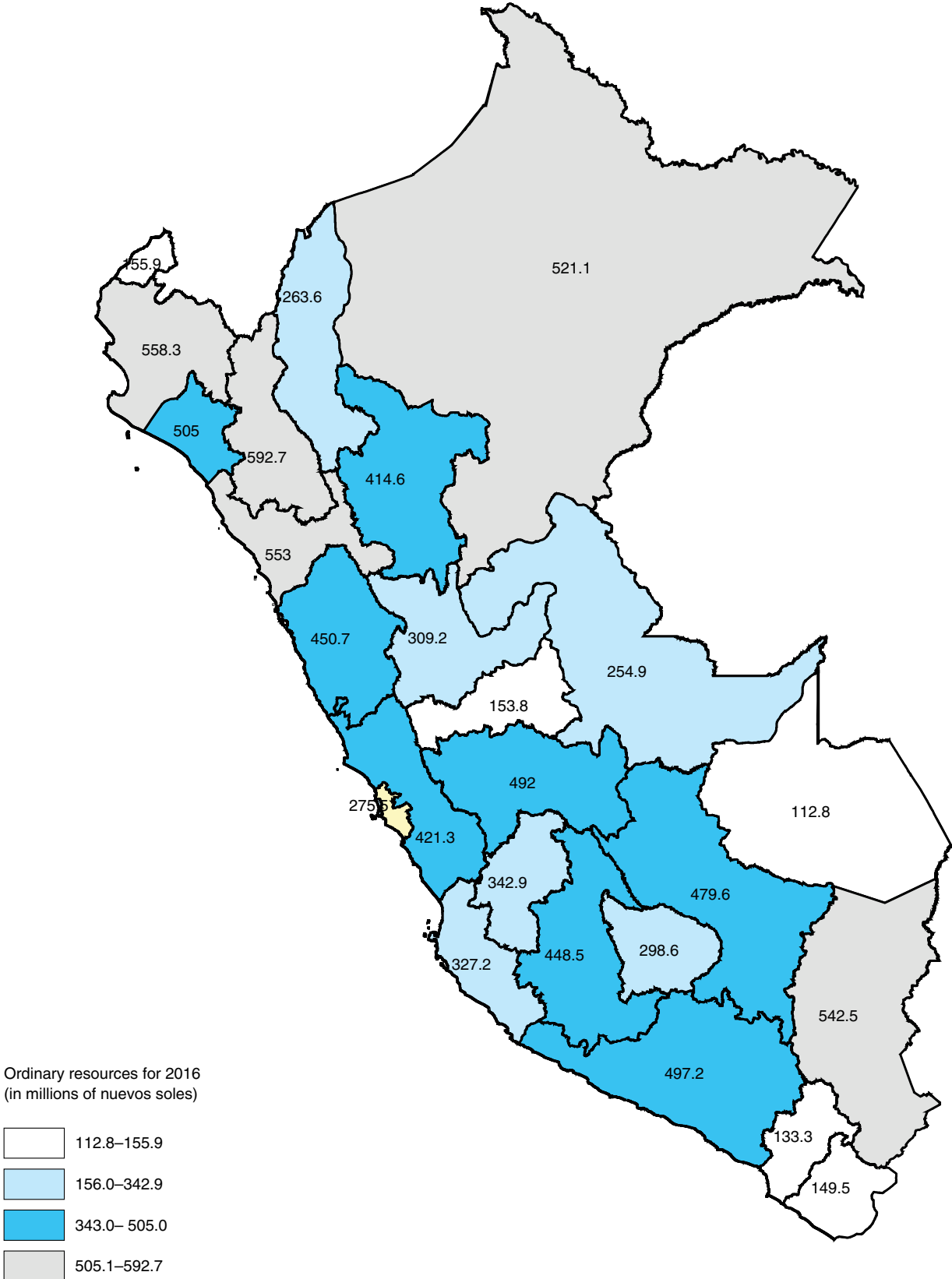
Ordinary resources for 2016
(in millions of nuevos soles)

- 112.8–155.9
- 156.0–342.9
- 343.0– 505.0
- 505.1–592.7

Sources: Ministry of Finance and Ministry of Agriculture; World Bank calculations.
Note: This figure corresponds to column 1 in Table 8. Metropolitan Lima (in yellow) is not part of the simulation.

Figure 19: The distribution of ordinary resources under the new revenue-sharing mechanism and the original FONCOR distribution formula (in PEN millions)

Reformed ordinary resources—1st scenario
(in millions of nuevos soles)

- 73.5–145.4
- 145.5–387.1
- 387.2–501.8
- 501.9–605.4
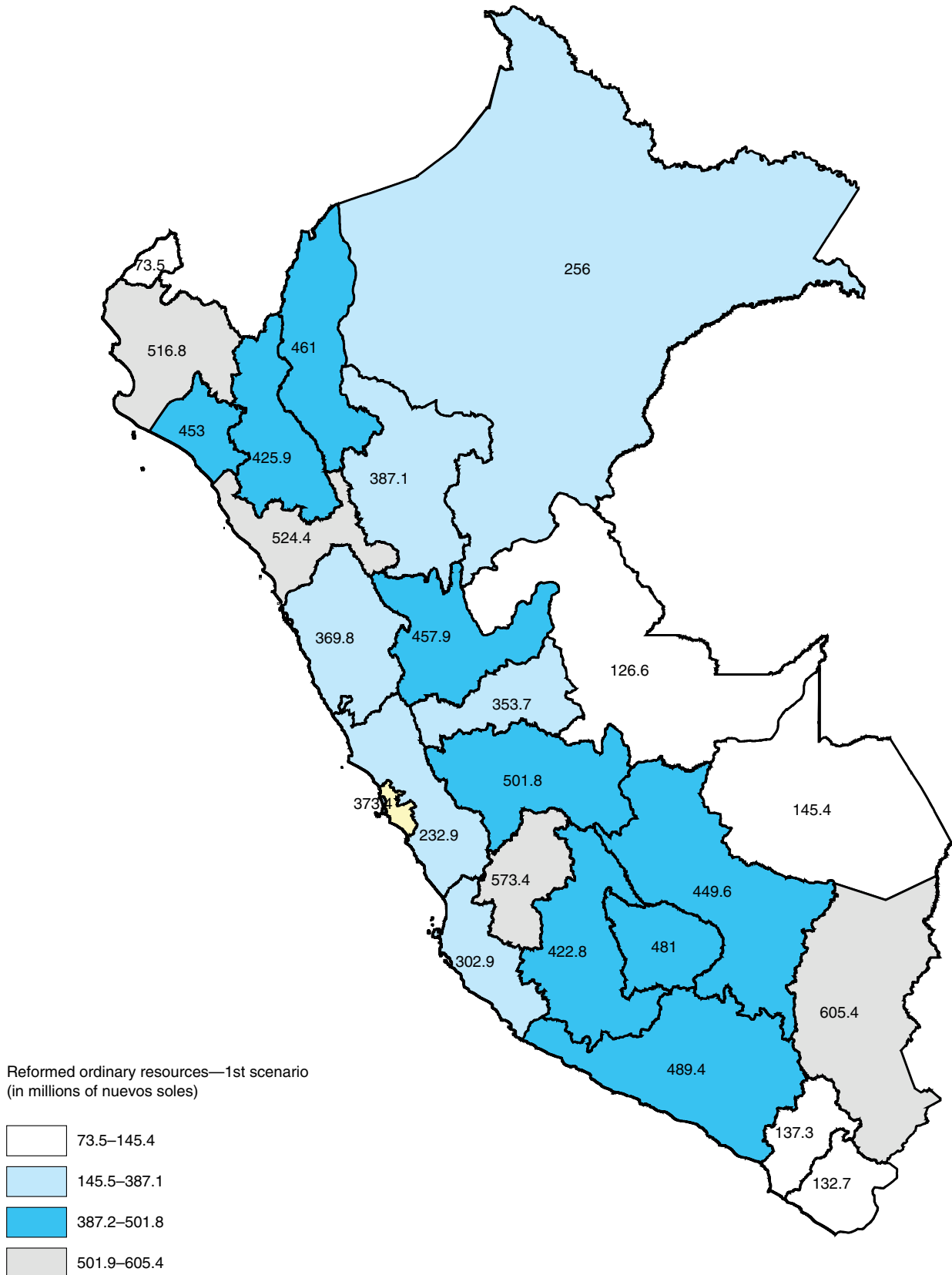
Sources: Ministry of Finance and Ministry of Agriculture; World Bank calculations.
Note: This figure corresponds to column 2 in Table 8. Metropolitan Lima (in yellow) is not part of the simulation.

Figure 20: The distribution of ordinary resources under the new revenue-sharing mechanism and the new FONCOR distribution formula (in PEN millions)

Reformed ordinary resources—2nd scenario
(in millions of nuevos soles)

- 98–215
- 216–330
- 331–432
- 433–643

Sources: Ministry of Finance and Ministry of Agriculture; World Bank calculations.
Note: This figure corresponds to column 3 in Table 8. Metropolitan Lima (in yellow) is not part of the simulation.

Figure 21: Relative gains and losses from the introduction of the proposed revenue-sharing mechanism and the original FONCOR distribution formula (in PEN millions)

Winners & losers—1st scenario
(in millions of nuevos soles)

- −265.1– −128.3
- −128.2–9.9
- 10.0–97.9
- 98.0–230.5

Sources: Ministry of Finance and Ministry of Agriculture; World Bank calculations.
Note: This figure corresponds to column 4 in Table 8. Metropolitan Lima (in yellow) is not part of the simulation.

Figure 22: Relative gains and losses from the introduction of the proposed revenue-sharing mechanism and the new FONCOR distribution formula (in PEN millions)

Winners & losers—2nd scenario
(in millions of nuevos soles)

	−128.4– −116.0
	−115.9– −29.2
	−29.1–37.9
	38.0–121.2

Sources: Ministry of Finance and Ministry of Agriculture; World Bank calculations.
Note: This figure corresponds to column 5 in Table 8. Metropolitan Lima (in yellow) is not part of the simulation.

Table 9: Simple regressions of current ordinary resource transfers and transfers under scenarios one and two on GDP per capita

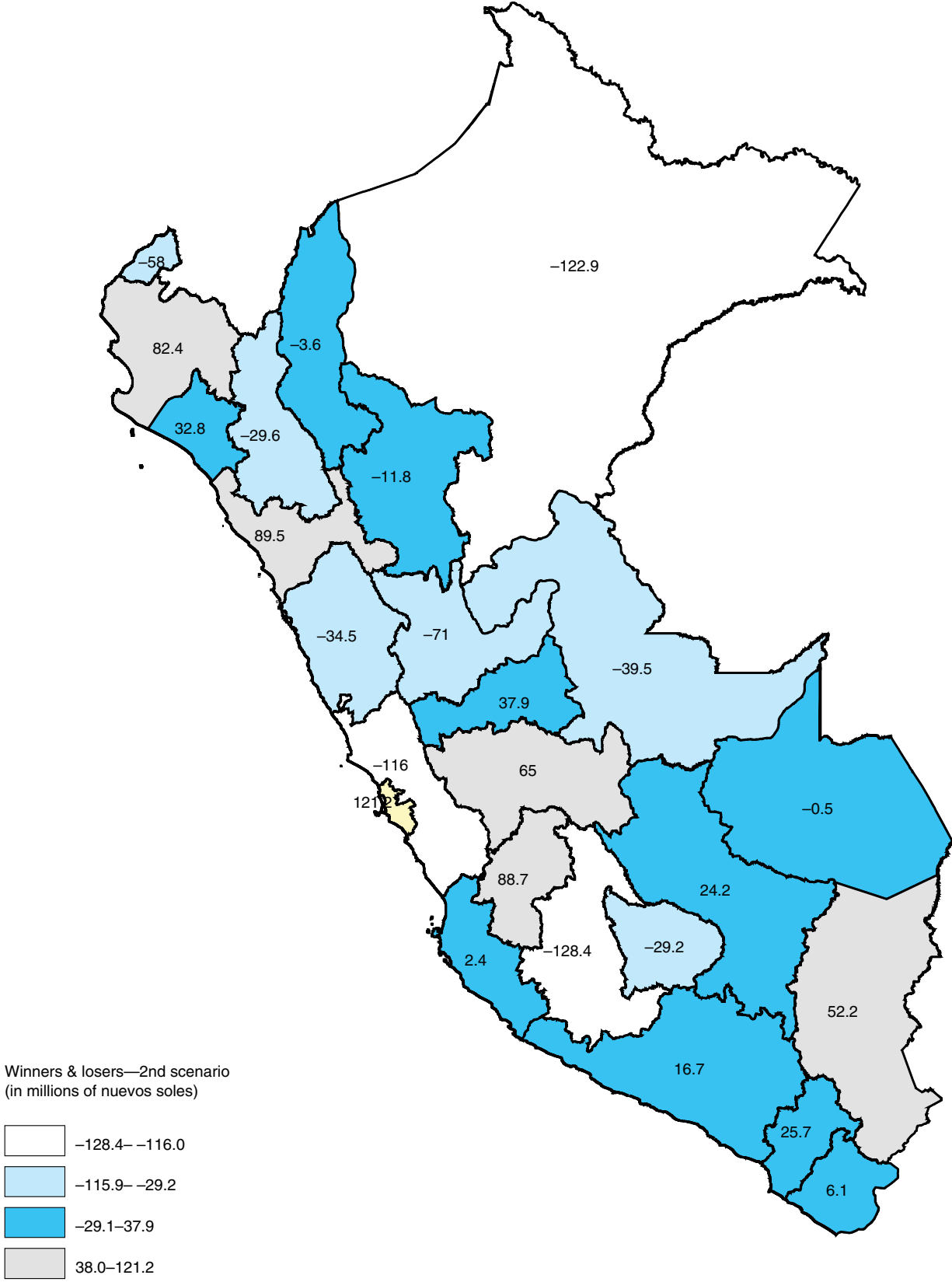| Variables	(1) Current ordinary resources	(2) Reformed new revenue sharing	(3) Reformed FONCOR— 1st scenario	(4) Reformed FONCOR— 2nd scenario
	Model 1	Model 2	Model 3	Model 4
GDP per capita	0.00324	0.0122	–0.00899	–0.00378
	(0.00345)	(0)	(0.00726)	(0.00289)
Constant	444.3***	139.8	345.6***	226.7***
	(53.41)	(0)	(112.3)	(44.74)
Observations	25	25	25	25
R-squared	0.037	1.000	0.063	0.069

Standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

a transition strategy for phasing in the new system. The most gradual approach would entail the use of a "hold harmless" strategy, in which all regions would receive the same amount they received the year prior to the reform and only the annual increase in funds would be applied in each subsequent year. The transition period can be open-ended or limited to a specific timeframe.

The equalization impact of the proposed reforms on ordinary resource transfers and FONCOR is shown by regressing the regional distribution of per capita ordinary resource transfers before and after reforms with regional per capita GDP. Table 9 shows the results from regressing the current distribution of ordinary resource transfers and the distribution under scenarios one and two with regional per capita GDP. Column 1 shows that the current distribution of ordinary resource transfers is largely neutral with respect to the regional distribution of per capita GDP. This is also the case for scenario one, as the revised allocation is based on regional populations and regional per capita GDP, and thus it is closely linked with GDP per capita. FONCOR transfers under scenario one (column 3) and scenario two (column 4) appear to be mildly redistributive and progressive, as indicated by the negative regression coefficient, though in neither case is that coefficient statistically significant. The apparently more progressive

FONCOR formula used in the second scenario may enhance the equalizing impact of the proposed reforms.

FONCOMUN

The set of proposed FONCOMUN reforms explored here would both increase its size and alter its distribution formula. With respect to the latter, the new formula would include a revenue-capacity criterion, reflecting both the capacity to raise own-source revenues and other revenue resources received from transfers (excluding those for equalization purposes). FONCOMUN is a traditional equalization fund financed through the municipal promotion tax, which is a surtax of up to 2 percent applied to the VAT collected by the national government. One option to increase the size of FONCOMUN would be to increase the surtax rate and reduce the national VAT rate to keep the tax burden from VAT constant. FONCOMUN's pool of funds could also be increased by allocating for that purpose a share of the overall pool being used for all other transfers.

Adjustments in FONCOMUN's distribution formula are also needed. In line with FONCOR's recent reforms, the most obvious adjustment would be to add revenue capacity as a distribution criterion. Currently, the distribution formula only

takes into account differences in expenditure needs. As revenue capacity would include income from resource-revenue transfers (other than equalization), its inclusion would help correct the inequalities generated by the unevenly distributed revenues from extractive industries. This would also require adjustments in the current legal use of the resource-revenue transfers. Because resource-revenue transfers are currently earmarked almost exclusively for capital investment purposes, for many governments that receive resource-revenue transfers, the funds from FONCOMUN are actually the only revenue source they have with which to finance recurrent expenditures. Relaxing the rules for using these resources would help offset the potential decrease in FONCOMUN funds that subnational governments would likely experience as a consequence of including revenue capacity as an additional criterion in the distribution formula.

A second adjustment would be the simplification of the FONCOMUN's three-stage distribution rule. FONCOMUN's distribution rule consists of three stages. In the first, the FONCOMUN national pool is distributed among provinces (which include provincial municipalities and district municipalities) according to the population of the province and an equalizing criterion represented by the index of unmet needs for public services. FONCOMUN transfers to each province are divided between the provincial municipality (20 percent) and the district municipalities (80 percent). In a second stage, the 80 percent of FONCUMUN transfers to the province that correspond to the district municipalities are allocated among them according to three factors: rural status, territory size, and municipal management. Rurality and territory are intended to reflect expenditure needs while the third factor, municipal management, is intended to stimulate improvements in public financial management. The three factors are applied with the following weights: 85 percent for rurality, 5 percent for territory, and 10 percent for municipal management. In the third stage two types of adjustments are adopted: the first is to ensure that district municipalities receive a minimum level of FONCOMUN transfer corresponding to eight tax units, and the second that corresponds to the hold harmless clause (established when FONCOMUN was last reformed)

which ensures that the FONCOMUN transfer to each district is at least equal to the amount they received in 2009 (in real terms).

The complexity of the three-stage distribution rule undermines the intended equalizing effect of FONCOMUN. The application of the first and second stages may result in cases in which two districts with identical populations; unmet needs for public services; and rurality, territory and municipal management receive different FONCOMUN transfers just because they are located in provinces that at the aggregated level have different socioeconomic conditions (population and unmet needs). Moreover, the application of the minimum level and hold harmless adjustments in the third stage may distort the supposed equalizing effect of the first and second stages. In fact, after performing the third stage allocation adjustment, it is hard to guarantee that the allocations corresponding to the first and second phase actually are maintained.

The following scenario simulates the effect of reforming the FONCOMUN formula to additionally reflect the fiscal capacity of local governments, especially by accounting for resource-revenue transfer funds. The proposed reform would only alter the first stage of the distribution methodology by including the fiscal capacity aggregated at the provincial level as an additional criterion in the initial allocation of the pool of resources. It must be recalled as outlined above that FONCOMUN's distribution methodology is based on three stages: (i) a geographical index combining population and unmet needs for public services is used to allocate the pool of funds across all the provinces; (ii) several other criteria are used to allocate the funds for each province across districts within each province; and (iii) the minimum amounts that each district should receive are established. The new proposed methodology is explained in detail in Appendix 5.

The new criterion is based on an index of fiscal capacity measured at the provincial level. Fiscal capacity is measured by examining the sum of all the transfers received by the municipalities in the province, including resource-revenue transfers—but excluding the FONCOMUN itself—and potential

own-source revenues. Potential own-source revenues are calculated through a regression analysis of per capita local governments' own-source revenues, such as taxes and user fees on per capita household spending (as a proxy for per capita income).

The inclusion of local government fiscal capacity as a distribution criterion significantly alters the allocation of FONCOMUN funds. Figure 23 shows the geographical distribution of actual FONCOMUN transfers at the district-municipality and provincial-municipality levels for 2014. Figure 24 depicts the results of the simulation using the new distribution of FONCOMUN funds in 2014. The geographical distribution of gains and losses is shown in Figure 25.

The gains and losses resulting from the FONCOMUN reform are approximately bounded within +/– PEN 250 per capita, which represents about 16.6 percent of average local expenditures per capita. Gains and losses were defined based on a comparison of the per capita allocation of FONCOMUN funds for 2014 under the new formula and the existing formula. Out of the 1,845 local governments included in the simulation, 669 were classified as losers under the new formula, with losses varying from PEN 284 (the district municipality of Santa Maria del Mar located in metropolitan Lima) to PEN 0.005 (the district municipality of Sachaca in the Arequipa region). Among the losers there were 118 provincial municipalities, with losses ranging from PEN 280 (the provincial municipality of Jumbilla in Amazonas region) to PEN 0.6 (the provincial municipality of Trujillo in La Libertad region). On the other hand, 1,176 local governments would gain under the new formula, with amounts ranging from PEN 0.06 (the district municipality of Surquillo in metropolitan Lima) to PEN 314 (the district municipality of Rosa Panduro in Loreto region). Among the provincial municipalities that would benefit from the new formula, the gains range from PEN 0.9 (the provincial municipality of Contamana in Loreto region) to PEN 242 (the provincial municipality of Lima). Among the 43 municipalities located in

metropolitan Lima, 35 would see losses under the new formula. This includes the district municipality of Santa Maria del Mar and the district municipality of Comas (PEN –3). Among the eight municipalities in metropolitan Lima that would gain under the reform, seven municipalities would see gains of less than PEN 3.09, although the provincial municipality of Lima would see a gain of PEN 242.

It is important to note, that the equalization impact of the proposed reform on FONCOMUN is weaker than the one of the current FONCOMUN. This is shown by regressing the regional distribution of per capita FONCOMUN transfers before and after the proposed reform of FONCOMUN with the variable municipal household expenditure per capita. Table 10 shows that the implied re-distribution of current FONCOMUN transfers is slightly higher than the one that would result from the proposed FONCOMUN reform.

The lack of a redistributional impact from the introduction of a fiscal capacity indicator in the FONCOMUN formula signals the need to complement this reform by streamlining the current three-stage distribution rule. In fact, the equalizing effect of FONCOMUN is undermined not only by the lack of fiscal capacity criteria but mainly by the complexity of the three-stage rule which treats districts with the same characteristics differently, defines minimum FONCOMUN transfers, and eventually works to preserve the distribution criteria and results of previous arrangements. In particular, without relaxing over time the minimum transfer clauses in the third stage of the formula, little could be changed in terms of redistributing resources.

But redistribution should be gradual without imposing drastic changes in municipal budgets. A comprehensive reform of FONCOMUN should avoid drastic changes in the resources available to provincial and district municipalities. This can be accomplished by adopting a transition strategy for phasing in the new system over a period of three to five years. However, a hold harmless clause is neither required nor desirable.

Figure 23: Geographical distribution of existing FONCOMUN transfers (in PEN per capita)
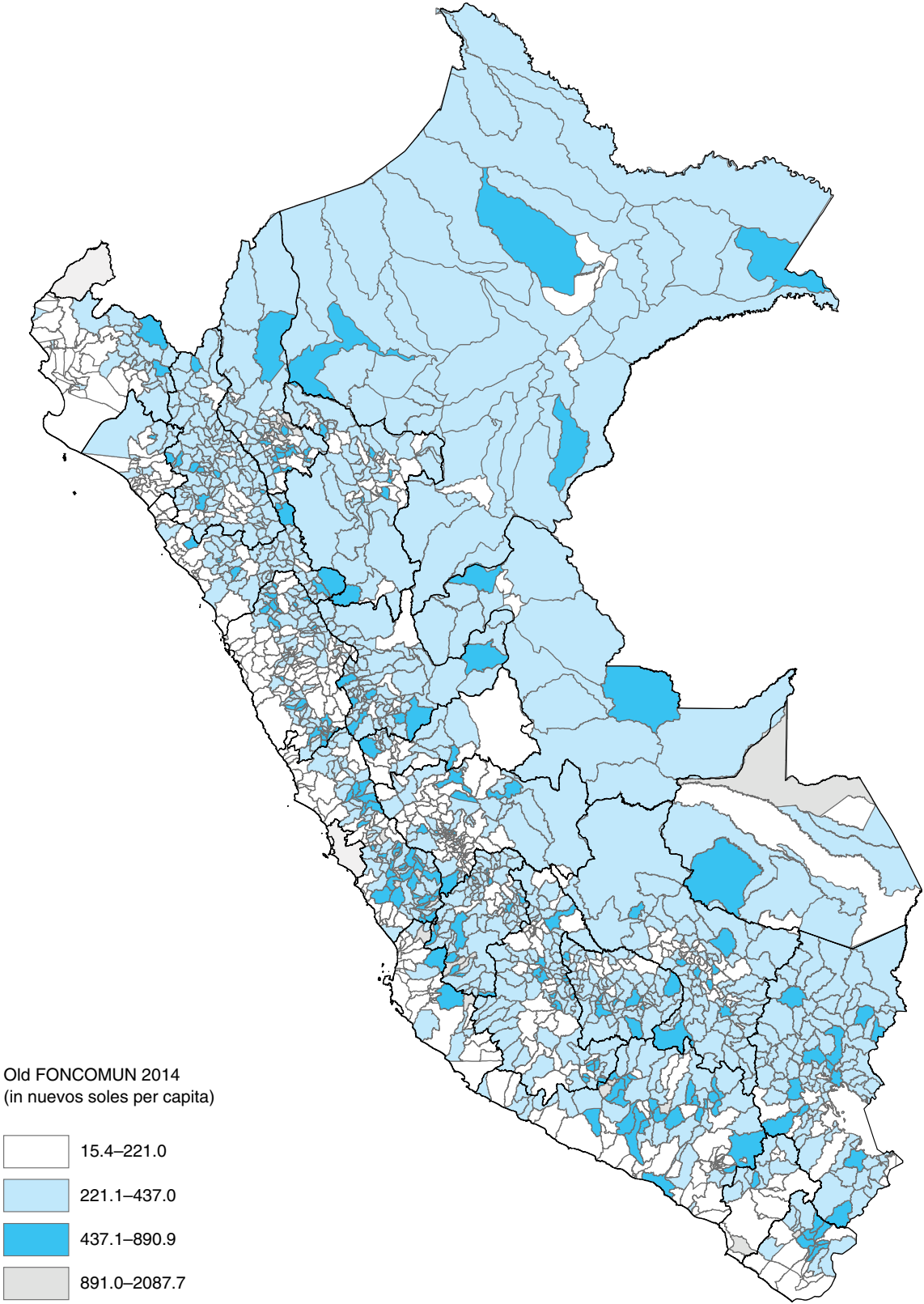
Old FONCOMUN 2014
(in nuevos soles per capita)

- 15.4–221.0
- 221.1–437.0
- 437.1–890.9
- 891.0–2087.7

Sources: Ministry of Finance and Ministry of Agriculture; World Bank calculations.

Figure 24: Geographical distribution of the proposed changes in FONCOMUN transfers
(in PEN per capita)
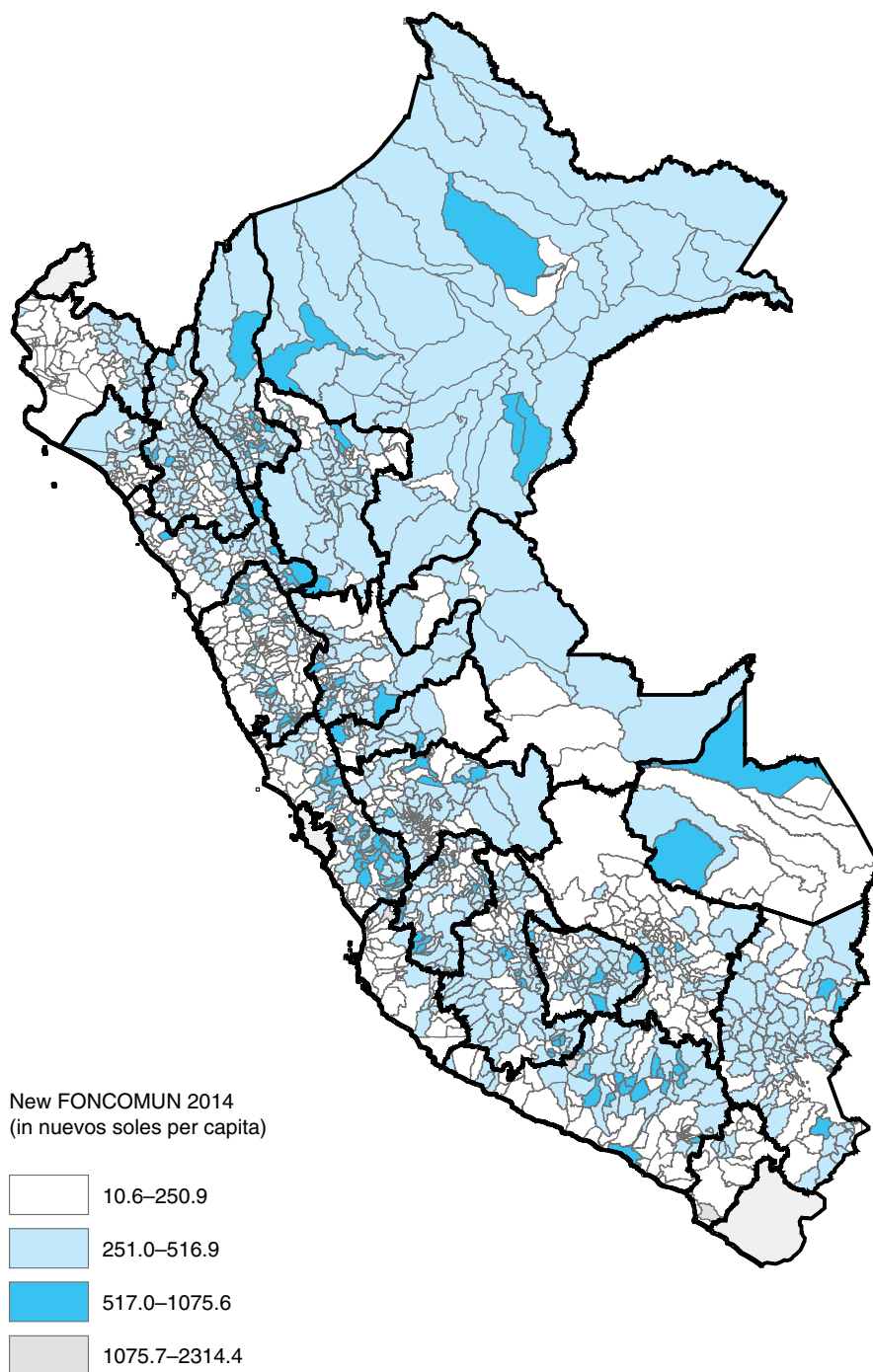
New FONCOMUN 2014
(in nuevos soles per capita)

	10.6–250.9
	251.0–516.9
	517.0–1075.6
	1075.7–2314.4

Sources: Ministry of Finance and Ministry of Agriculture; World Bank calculations.

Figure 25: Relative gains and losses from the proposed changes in FONCOMUN transfers
(in PEN per capita)

Winners & losers
(in nuevos soles per capita)

	−284.3– −63.8
	−63.7–8.4
	8.5–68.1
	68.2–247.6
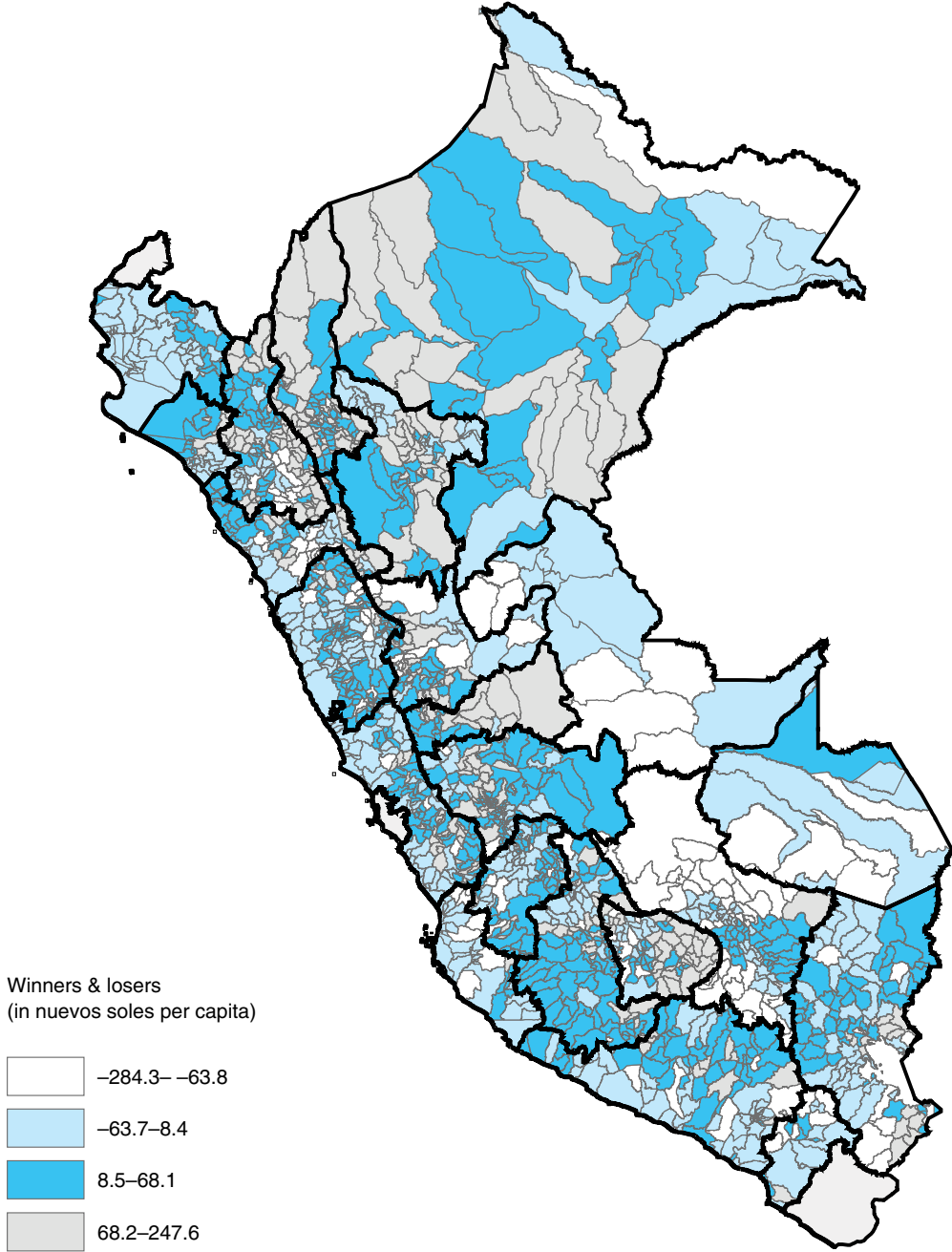
Sources: Ministry of Finance and Ministry of Agriculture; World Bank calculations.

Table 10: Simple regressions of FONCOMUN transfers on household expenditure per capita

Variables	Current FONCOMUN	Reformed FONCOMUN (using adjusted formula)
Household expenditure pc_2013	–0.282***	–0.261***
	(0.0277)	(0.0279)
Constant	421.1***	398.6***
	(12.27)	(12.35)
Observations	1,845	1,845
R-squared	0.053	0.045

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Source: World Bank staff calculations.

A Stabilization Fund for Resource-Revenue Transfers

The increasing share of resource-revenue transfers in the budgets of regional and local governments, coupled with fluctuations in commodity prices, have made subnational revenues less predictable, possibly affecting the continuity of service delivery at the local level. Faced with increasing expenditure obligations and a very limited capacity to boost own-source revenues, the finances of regional and local governments have been affected by the fall in resource-revenue transfer proceeds, triggering a compensatory increase in transfers from the central government. The current decline in commodity prices is highlighting the strong exposure of subnational governments and may open a window of opportunity to reconsider the role of resource-revenue transfers in subnational public finances. The fiscal impact of the fall in commodity prices on subnational government budgets may, moreover, reduce anticipated resistance to reforms in the distribution of resource-revenue transfer proceeds.

From a risk-management perspective, the authorities should rebalance risks among the various levels of government by increasing the share of volatile revenues going to the central government and ensuring a more stable stream of fiscal revenues to subnational governments. The central government is better prepared to address the effects of revenue volatility given the larger number of policy tools at its disposal to increase fiscal revenues. Moreover, the central government's access to credit markets would enable it to attenuate exogenous shocks. Subnational governments, which have substantially less revenue sources and limited access to credit markets, would benefit from more stable revenue sources. A reduction in the share of resource-revenue transfers to subnational governments, compensated by expanded tax revenue-sharing mechanisms, would help rebalance risks between the central government and subnational entities, with the former receiving a greater share of higher risk revenues.

To attenuate the recent fall in resource-revenue transfers, the national authorities have been taking actions to stabilize subnational governments' fiscal revenues. The national authorities' policy response of compensating regional and local governments for the fall in resource-revenue transfers by increasing other transfers has functioned as a type of revenue-stabilizing mechanism. In 2012–14, the central government significantly increased ordinary resource transfers to regional governments, as well as other current transfers to local governments.[44] Furthermore, as local governments were the

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44 Ordinary resources to regional governments increased by 23 percent in real terms from 2012 to 2014.

most affected by the fall in resource-revenue transfers, the central government enabled them to withdraw the unused balances of resource-revenue transfer proceeds accumulated in previous years.[45] Therefore, the accumulated balances of resource-revenue transfers have been serving as a *de facto* revenue-stabilization fund, as proceeds accumulated during the period of rising commodity prices are being used to offset the strong decline in extractive industry revenue.

Given the measures already adopted to stabilize subnational revenues, establishing a Stabilization Fund for Resource-Revenue Transfers could face less political resistance than the centralization of resource-revenue transfers. As mentioned above, the authorities have been using accumulated resource-revenue transfer proceeds as a sort of revenue-stabilization fund. However, the functioning of this stabilization mechanism needs to be regulated in at least five ways. First, the rules for accumulation and withdrawal need to be clearly defined and simplified. Second, the subnational stabilization fund would need to be integrated into the macro-fiscal framework and reflected in the fiscal rule for subnational governments. Third, the stabilization role of the proposed fund could be strengthened if the constraint on the use of resource-revenue transfer funds to exclusively finance investment expenditures and infrastructure maintenance was relaxed. This would enable disbursed resources from the fund to be assigned to a broader set of expenditures. Fourth, as the distribution rule for resource-revenue transfers among regional and local governments is based on separate ownership of resources, the stabilization fund's proceeds should involve individual separate accounts. Fifth, a transparent and professional investment policy for the resource-revenue transfer balances would be needed.

The Stabilization Fund for Resource-Revenue Transfers could be based on the following accumulation and withdrawal rules. Thirty percent of the resource-revenue transfer proceeds are accumulated in the funds[46] whenever the actual price of the corresponding commodity exceeds its average level observed in 2004–14, and 10 percent of the accumulated balance of the fund is withdrawn whenever the actual price of the corresponding fund is lower than its average level observed in 2004–14.

Comparing the actual flow of resource-revenue transfer funds for the period from 2004–14 with a simulation based on the above-mentioned rules of accumulation and withdrawal show the stabilizing effects of the proposed instrument. Figure 26 and Table 11 show how the stabilization fund, based on differences between actual and average prices, attenuates the volatility of the resource-revenue transfers received by regional and local governments. Volatility is reduced for the four most important sources of resource revenue (gas, oil, mining, and mining royalties). For the total resource-revenue proceeds, volatility is reduced by approximately 20 percent.

Automatic rules for accumulating and with-drawing resources would ensure a stable flow of resources, which would in turn support the continuity of service delivery by regional and local governments. While rules governing the inflow of resources could reduce their availability when prices are high, rules for withdrawing resources could help avoid expenditure cuts that would be necessary to balance the budget in the absence of stabilization funds.

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45 Classified as the sale of assets (unused balances of resource-revenue transfer proceeds), grew by 750 million nuevos soles, equivalent to an increase of more than 100 percent in real terms between 2012 and 2014, partially compensating the fall of 1,500 million nuevos soles in canon proceeds (or 25 percent decrease in real terms) in the same period.

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46 There would be seven stabilization funds, one for each type of resource revenue: mining, gas, oil, hydropower, fisheries, forestry, and mining royalties.

Figure 26: Annual resource-revenue transfers, actual and stabilization-fund scenario, 2004–2014 (in constant 2007 PEN millions)
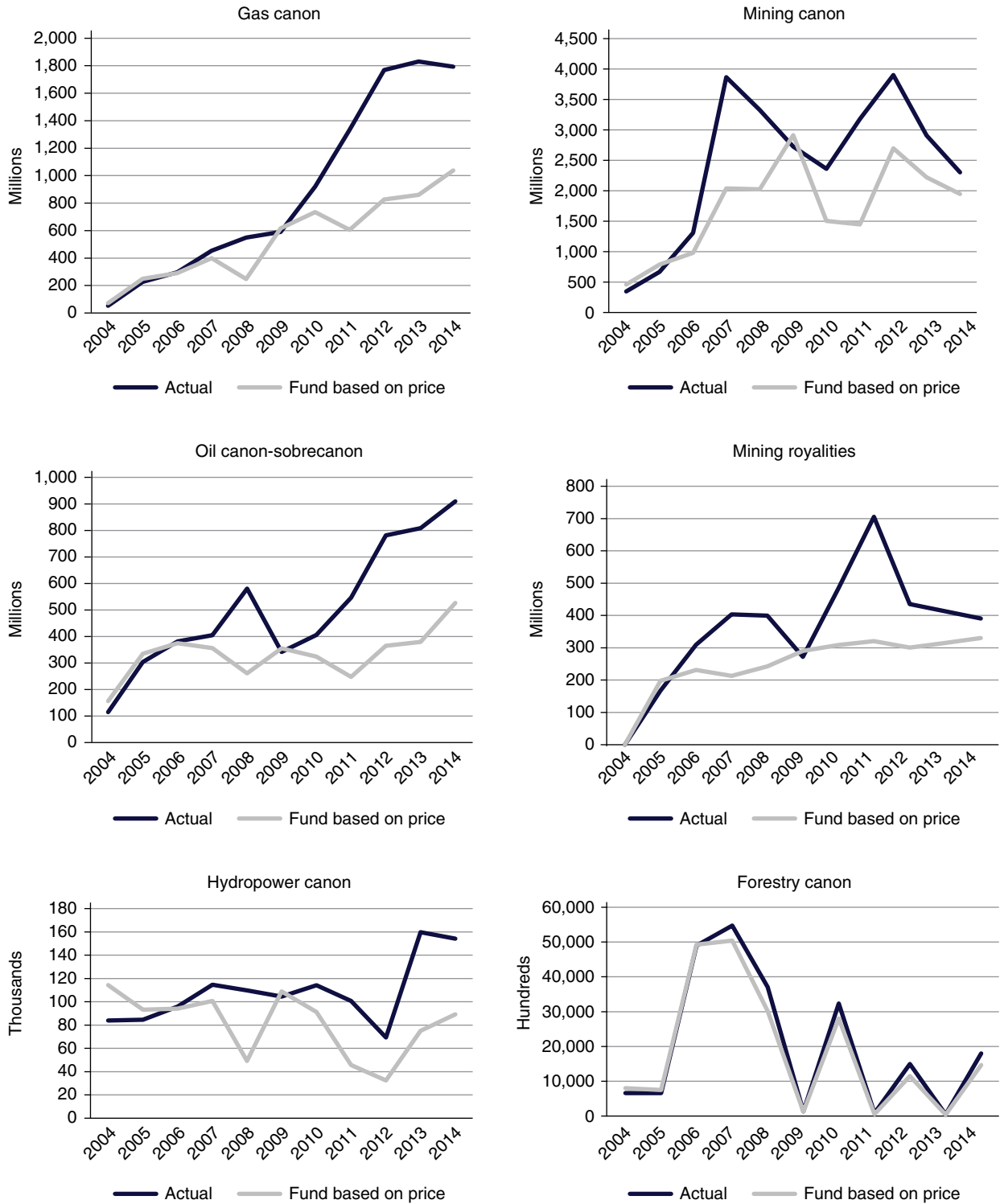
Sources: MEF; World Bank calculations.

Table 11: Annual resource-revenue transfers, actual and stabilization-fund scenario, 2004–14 (in constant 2007 PEN millions)

	Actual flows			Simulated flows		
	Average	Standard deviation	Coefficient of variation	Average	Standard deviation	Coefficient of variation
Gas	802	675	0.84	490	308	0.63
Mining canon	2,460	1,210	0.50	1,707	775	0.45
Oil	467	244	0.52	316	94	0.30
Mining royalties	359	180	0.50	242	95	0.40
Hydropower	104	28	0.27	80	27	0.39
Forestry	2.1	1.9	0.98	1.8	1.7	0.98
Total	**4,242**	**2,056**	**0.48**	**2,879**	**1,135**	**0.39**

Sources: MEF and World Bank calculations.

7 Conclusions and Policy Recommendations

This report presents policy options designed to improve specific aspects of Peru's fiscal decentralization system. These options are presented in logical order, beginning with (i) the vertical institutional arrangements that determine the relationship between different government levels, then moving on to (ii) the importance of clarifying expenditure responsibilities at all government levels, and then (iii) the commensurate redefinition of tax authority to boost subnational own-source revenue capacity and enhance collection efficiency, and concluding with for tax collection, before concluding with (iv) proposals to increase the transparency, stability, and equalizing impact of the intergovernmental transfer system.

The Institutional Framework

More than a decade after the launch of the fiscal decentralization process, it appears highly unlikely that macro-regions will be established, and reform options must focus on strengthening the existing regional governments. While important progress has been made, the decentralization process has been slow and uneven. In this context, future efforts should focus on the consolidation of regional governments as the intermediate unit of government. Meanwhile, at the municipal level, policy makers should take steps to prevent the creation of new municipalities, which has significantly increased the fragmentation of local government in recent years.

Consolidating regional governments at the permanent intermediate government level

a. Review the legislative framework for regional governments to formalize their role as a full-fledged intermediate-level government;

b. In parallel establish and enhance institutions for national-regional coordination in decision-making processes (e.g., establishment of an entity at the national government responsible for the coordination with regional and local governments, supporting the recently created Association of Regional Governments);

c. Prioritize the resumption of institutional capacity-building efforts at the regional level, identifying a suitable mechanism at the central level to deliver such programs (the entity at the national government responsible for the coordination with other levels of government may be responsible for capacity building and accreditation of subnational governments);

d. Fully incorporate the regional directorates of line ministries into the institutional structure of regional governments; and

e. Eliminate the current system of ordinary resource transfers and replace it by (i) assigning tax bases to regional governments and (ii) establishing an unconditional revenue-sharing transfer (see options on taxation and intergovernmental transfers presented below).

Reducing municipal fragmentation

a. Declare a moratorium on the creation of new municipalities;

b. Complete the legal demarcation of municipal boundaries to end territorial disputes, which are the most important loophole allowing for the creation of new municipalities;

c. Tighten regulatory requirements to further discourage the establishment of new municipalities;

d. Significantly reduce the minimum FONCOMUN transfer level, diminishing the incentive to create new municipalities; and

e. Design stronger incentives for municipal consolidation and cooperation in service delivery.

Expenditure Assignments

A clear definition of expenditure responsibilities will be necessary to increase the autonomy and accountability of subnational governments and improve the efficiency of service delivery. In particular, further clarification is needed of the shared or concurrent functions, by disentangling sub-functions to define what level of government is ultimately responsible for the sub-function without ambiguities. A clear differentiation between deconcentrated and delegated functions and the definition of financing sources (own-revenue, block grants, or conditional grants) in each case would also be needed. As this work tends to be inherently dependent on the nature of the sector (e.g., health, roads, etc.), a commission comprised of sectoral and fiscal experts will probably need to be mobilized for each sector.

Clarifying expenditure responsibilities

a. Review the organic laws for regional and local governments to identify sectors with duplicative or overlapping responsibilities;

b. Unbundle shared responsibilities into sub-functions (regulation, financing, and service delivery) and allocate responsibility for each sub-function to the appropriate government level following the subsidiarity principle;

c. Eliminate overlapping responsibilities between regional and local governments, assigning them to the appropriate level, and balancing economies of scale and the subsidiarity principle;

d. Streamline the framework for delegated responsibilities; and

e. Establish permanent formal intergovernmental coordination mechanisms to harmonize activities, resolve conflicts, and reach agreements on specific issues. Again, a national government entity and representative associations of regional/local governments may play a facilitating role.

Taxation

Narrowing the vertical fiscal gap will require increasing the tax revenue generated by regional and municipal governments. This can be achieved through the combination of broadening tax bases assigned to them, enabling them the ability to define rates for their own taxes, and improvements in tax-collection efficiency. Regional governments completely lack tax bases while local governments have small bases but without autonomy to define rates. Proposed are the following policy options to increase subnational taxation. It is, however, important to mention that tax and revenue sharing reform options for subnational governments need to be discussed based on a proper reassessment of the overall tax system and their compound effects on labor, investment, and consumption decisions that affect growth and income inequality. This consideration is also important because Peru has a relatively small tax revenue base as a whole and, thus, only sharing or devolving existing taxes might be at the expense of central government's ability to address national-level priorities if the overall tax base is not expanded.

Assigning tax bases to regional governments

a. Establish a regional surcharge on the personal income tax collected by the national government to be levied at a flat

rate to minimize interregional labor factor movements;

b. Enable regional governments to define a local rate for the surcharge of 1-3 percent; and

c. Explore other tax-policy options, including the establishment of a regional payroll tax, a presumptive income business tax, or surcharges on existing national excise taxes or on potentially new ones.[47]

Improving the efficiency of revenue collection at the local level

a. Give municipalities discretion to set property-tax rates within a limited range determined at the national level;

b. Establish a national framework for cooperation between regional and municipal revenue agencies, or for developing administrative cooperation agreements for shifting tax administration responsibilities (e.g., collection) between government levels, or between district and provincial tax agencies;

c. Streamline user charges and fees collected by local governments and simplify licensing and payment procedures; and

d. Create an Office of the National Cadaster to enhance property-tax collection by managing the registration and valuation of properties at the national level.

Intergovernmental Transfers

The proposed reforms in this area would transform the ordinary resource transfers

into a more transparent and predictable financing system based on revenue sharing and equalization criteria.** The size of the revenue-sharing mechanism and an enhanced FONCOR equalization pool could be adjusted to enhance the equalizing properties of the entire system. The new formula for FONCOR used in the second scenario could also be adjusted by changing its weights to increase the equalization effect of the transfer. A fiscal simulation of the impact of these reforms on the finances of regional governments was presented in detail in Chapter 6.

A number of reforms to FONCOMUN will enhance its equalizing properties and remove the incentives to create new municipalities. These reforms would also require the earmarking of resource-revenue transfers to capital investment projects, enabling a broadened use. These reforms include the inclusion of fiscal capacity estimates in the distribution criteria and the streamline of the three-stage distribution. A simulation of the impact of these reforms on the finance of each municipality was presented in detail in Chapter 6.

To offset the recent decline in resource-revenue transfers, the central government has increased the size of other transfers. This has stabilized subnational budgets, especially at the municipal level, where the drop in resource-revenue transfers was most acute. In addition to increasing other transfers, the central government enabled municipalities to withdraw and spend the unused balances from resource-revenue transfers in previous years.

Establishing a Stabilization Fund for Resource-Revenue Transfers backed by clear rules for accumulation and withdrawal could further reinforce the stability of subnational budgets. Such a mechanism would enable resource revenues accumulated during periods of higher-than-average commodity prices to be withdrawn when commodity prices fell, reducing the volatility of the intergovernmental transfer system.

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47 To expand their tax bases, an increasing number of countries and most recently Mexico (2014) and Chile (2015) have adopted excise taxes on tobacco, alcoholic, and sugar-containing non-alcoholic beverages and junk food with corrective effects on consumption and beneficial impacts on health.

Establishing a more stable, less discretionary, and more equalizing system of transfers to regional governments

a. Reform ordinary resource transfers by:

   i. Defining a share of personal and corporate income-tax (excluding the corporate income tax on extractive industries that is already transferred via the *canon*) and VAT revenue equivalent to the current level of ordinary resource transfers;

   ii. Dividing that pool of funds into a formula-driven revenue-sharing component (two-thirds) and an equalization-transfer component (one-third);

   iii. Basing the revenue-sharing distribution formula on two equally weighted criteria—regional GDP and population—in order to incorporate both the point-of-origin principle for resource transfers and the equalization principle; and

   iv. Developing a strategy for phasing in the new system that minimizes the shock to regional government budgets.

b. Enhance the equalization impact of regional transfers by adding a share (one-third) of ordinary resource transfers to the pool of FONCOR funds;

c. Either preserve the current FONCOR formula, or alter it to better account for regional differences in expenditure needs and revenue capacity, thereby enhancing its equalization impact; and

d. No longer earmark FONCOR transfers for infrastructure investment, but instead make them unconditional transfers designed to finance the decentralization of functions currently funded by ordinary resource transfers.

Enhancing the equalizing impact of FONCOMUN

a. Alter the distribution formula to include revenue-capacity criteria—including the size of resource-revenue transfers and other transfers (except transfers from FONCOMUN itself)—in order to enhance its equalization effect;

b. Ease the earmarking rules for resource-revenue transfers, and enable provincial and district governments to use them to finance recurrent expenditures, helping to offset the decrease in FONCOMUN transfers that may result from the proposed reforms;

c. Eliminate minimum transfers, at least for newly created jurisdictions, as they incentivize the proliferation of municipalities;

d. Reform FONCOMUN's three-stage distribution rule by creating separate criteria for transfers to provincial and district municipalities;

e. Pursue a gradual and properly sequenced reform process, which may include temporary compensation mechanisms to minimize budgetary shocks; and

f. Explore options to increase the pool of resources transferred under the reformed FONCOMUN mechanism by, for example, increasing the national VAT surcharge or diverting ordinary resource transfers to FONCOMUN.

Reducing the volatility of resource-revenue transfers

a. Establish a stabilization fund for resource-revenue transfers based on well-defined rules for accumulation and withdrawal;

b. Integrate the stabilization fund into the macro-fiscal framework and the fiscal rules for subnational governments;

c. Create separate accounts for each recipient government;

d. Ensure that the management of the fund is fully transparent and backed by appropriate oversight and accountability mechanisms; and

e. Strengthen the system for pooling resources among municipalities to finance interjurisdictional infrastructure projects.

These proposed policy options reflect four set conclusions regarding the relationship between Peru's institutional framework and three of the dimensions of fiscal decentralization. The first is the importance of consolidating vertical institutional arrangements to reflect the presumptive permanence of the regional governments. The second is the need for a clearer, more precise definition of expenditure responsibilities between government levels and a corresponding distribution of revenue authority. The third is the crucial role that regional and local own-source revenue capacity plays in the long-term sustainability of fiscal decentralization. And the fourth is the significance of the framework for intergovernmental transfers in fostering equity of service delivery nationwide while minimizing their potential negative effects on public expenditure efficiency and tax collection efforts.

Methodology for New Ordinary Resources and Simulation

The pool of resources to be distributed in this new revenue-sharing mechanism will be equivalent to two-thirds of the current value of Ordinary Resources (budgeted in 2016). The distribution formula is based on an index that considers the regional population and regional GDP both with equal weights of 50 percent (see Table 12).

Table 12: New ordinary resources distribution index

Regional government	Population 2014		Regional GDP 2014 (thousands of nuevos soles)		Distribution index
	Total	%	Total	%	
Amazonas	421,122	0.019	3,235,930	0.013	0.016
Ancash	1,142,409	0.052	16,558,359	0.065	0.059
Apurimac	456,652	0.021	2,710,392	0.011	0.016
Arequipa	1,273,180	0.058	23,985,309	0.095	0.076
Ayacucho	681,149	0.031	5,461,714	0.022	0.026
Cajamarca	1,525,064	0.069	11,817,954	0.047	0.058
Callao	996,455	0.045	19,249,771	0.076	0.061
Cusco	1,308,806	0.059	21,390,383	0.084	0.072
Huancavelica	491,278	0.022	3,535,902	0.014	0.018
Huánuco	854,234	0.039	5,128,940	0.020	0.029
Ica	779,372	0.035	15,373,558	0.061	0.048
Junín	1,341,064	0.061	13,108,553	0.052	0.056
La Libertad	1,836,960	0.083	20,498,411	0.081	0.082
Lambayeque	1,250,349	0.057	10,924,336	0.043	0.050
Loreto	1,028,968	0.047	8,858,322	0.035	0.041
Madre de Dios	134,105	0.006	1,940,575	0.008	0.007
Moquegua	178,612	0.008	8,683,376	0.034	0.021
Pasco	301,988	0.014	5,291,774	0.021	0.017
Piura	1,829,496	0.083	18,875,817	0.074	0.079
Puno	1,402,496	0.064	10,016,943	0.039	0.052
San Martin	829,520	0.038	5,720,598	0.023	0.030
Tacna	337,583	0.015	6,327,816	0.025	0.020
Tumbes	234,638	0.011	2,710,404	0.011	0.011
Ucayali	489,664	0.022	4,092,239	0.016	0.019
Lima provinces	933,749	0.042	8,249,610	0.033	0.037
Total	**22,058,913**	**1.000**	**253,746,986**	**1.000**	**1.000**

Sources: Ministry of Finance and National Institute of Informatics and Statistics.
Note: Metropolitan Lima is not included in the simulations.

Current Methodology of the FONCOR[48]

The Regional Compensation Fund (FONCOR) was established in article 37 of the Law No. 27783, the Framework Decentralization Law. It is an equalization transfer seeking to distribute additional resources for regional governments, under the criteria of equity and compensation. These resources should be fully used in projects of regional investment that complied with the standards set by the National System of Public Investment (SNIP).

The FONCOR is currently made of the resources coming from the base programs and public investment projects of the former Transitory Council of Regional Administration (CTAR) (regional investment), and a variable part constituted 30 percent of the resources generated by privatizations and concessions, as well as an additional amount of regular resources from the Treasury, established by the general direction of the public budget.

According to article 39 paragraph 2 of the Law No. 27783—Decentralization Base Law— FONCOR is distributed proportionally among all regional governments with criteria of equity and compensation, considering factors of poverty, unmet needs, border location, population, tax contribution to the Treasury, and performance indicators in the execution of public investment.

Article 39 of the Law No. 27783 and article 15 of the Law No. 28411, General Law of the National Budget System, established that the Regional Compensation Fund (FONCOR) index is approved by the Ministry of Finance (MEF) through a Ministerial Decree, supported by the Decentralization National Council (CND) report (now Secretary of Decentralization (PCM) on the basis of the proposal issued by the General Directorate of Economic and Social Affairs (DGAES) of the Ministry of Finance.

Fixed Amount

When FONCOR was created in 2004, according to the law on decentralization, this would be financed with the financial resources of the programs and regional projects of the then National Institute of Development (INADE) and resources product of the privatization of regional companies.

Currently the government still transfers to the regional governments that amount as stipulated in the Framework Decentralization Law.[49] The use of such expenses is mainly operating expenses as the payment of the project workers, insurance works, etc.[50]

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48 The information in this chapter has been extracted from the website of the Ministry of Finance (MEF). https://www.mef.gob.pe/index.php?option=com_content&view=article&id=284&Itemid=100847&lang=en

49 Article 39—Regional compensation fund 39.1. The Fund of Regional compensation (FONCOR) was initially constituted with:
(a) financial resources corresponding to all investment projects of regional scope in charge of respective Regional Administration transitory Council, and to all the public investment projects of regional scope in the field of agriculture, fishery, industry, agro-industry, trade, tourism, energy, mining, roads, communications, education, health, and environment, present in his constituency, in accordance with the principle of neutrality and fiscal responsibility with equity and compensation criteria considering factors of poverty.
(b) the proceeds from the process of privatization and concessions, as established in the third complementary provision of this law.
50 Two known cases are the Sihuas Majes project in Arequipa and the Chavimochic project in the North.

Nineteen regional governments receive this fixed amount; regions that do not get this fixed amount never had such projects. The total fixed amount is S/.162,841,356.

Variable Amount

FONCOR also features a variable amount that sums S/.527,488,644, which comes from the Ordinary Resources of the public Treasury.

The allocation of this amount comes in two parts: a base amount (50 percent) and an amount to be distributed (50 percent). The aim of this structure is that the implementation of the methodology does not generate distortions in the allocation of resources or leave investment projects unfinished. The variable amount is structured into two parts to establish a gradual and permanent allocation rule so that regional governments receive annually not less than 50 percent of what they received the previous year.

Base amount

The base amount corresponds to 50 percent of what regional governments received the previous year as a variable amount. In that sense, the distribution of the variable amount of FONCOR for 2017 will assign as base amount, 50 percent of what was assigned as a variable amount in 2016.

The aim of this annual fixed rate is to not affect the planning of regional governments in relation to this source of funding.

The total base amount is S/. 263,744,322.[51]

Amount to be distributed

The remaining 50 percent of the variable amount is assigned according to a methodology based on relative probabilities estimated through a logit model. The methodology incorporates two dimensions: one of deficiencies or relative poverty and the other on transfers received.

Variables or criteria used for the construction of the index to allocate the amount to be distributed

Following the criteria established in the Law No. 27783, the index is composed of the following indicators and sources of information:

Allocation methodology

The methodology to be used for the construction of the FONCOR index is based on the prioritization of regions through a probabilistic approach.

To define and identify as priority regions, the methodology is based on Box 4, where "type A" regions have higher priority since they have fewer resources for investment projects and have higher rates of poverty or unmet needs. On the contrary, "type D" regions are lower priority since they have more resources and lower poverty rates.

In that sense, the probabilistic approach defines what is the probability that a region is type A given its poverty and transfers indicators. In this sense, it will be assigned greater amounts of FONCOR to those regions that are more likely to be type A. Two relative indicators will be used (poverty and transfers), which will be explained.

a. Equity criteria

The equity criterion is based on the construction of a relative poverty index, in which the variables type population, unmet needs, and extreme poverty are considered. The construction is as follows:

(a.1) Poverty index (p):

$$p = POB2^{0.1} \times (0.5\ Car + 0.5\ Pobex)$$

Where:
- *POB2*[52]: regional population + regional population in frontier districts.
- *Car:* unmet needs index in the region.
- *Pobex:* extreme poverty rate in the region.

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51 The total amount is frozen since 2009.

52 The 0.1 exponent is justified to reduce the urban bias that may have the population variable (like Metropolitan Lima and other major cities). On the other hand, it assumes a heterogeneous production scale where the unit costs of the investment project are higher in more dispersed areas, which are associated with poorer localities.
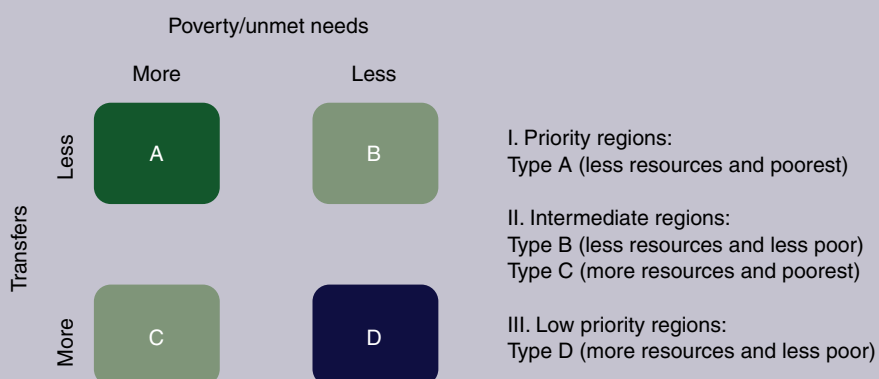
Table 13: FONCOR distribution index

	Variables	Description	Source	Relation to the FONCOR index	Criteria (Law 27783, Art. 39)
1	**Population**	Regional population	INEI-census (latest data available)	Positive	Population
2	**Population in frontier areas**	Population in frontier districts	INEI-census (latest data available)	Positive	Border location
3	**Extreme poverty rate**	Percentage of the population in extreme poverty	INEI-ENAHO (latest data available)	Positive	Poverty
4	**Unmet needs index**	Average of the rates of population with a deficit in access to water and sewage (to public network) and electricity	Census 2007	Positive	Unmet needs
5	**Transfers**	Transfers to regional governments by concept of canon, sobrecanon, mining royalties, income from customs, and FOCAM	MEF-SIAF	Negative	Transfers
6	**Balance transfers**	Balance of "certain resources" (*recursos determinados*) (does not including FONCOR) to December 31 of the year prior to the calculation	MEF-DNTP	Negative	Execution of investments

Sources: Ministry of Economy and Finance; World Bank.

Box 4: Prioritization criteria of regions

Poverty/unmet needs

More — Less

Transfers: Less / More

A
B
C
D

I. Priority regions:
Type A (less resources and poorest)

II. Intermediate regions:
Type B (less resources and less poor)
Type C (more resources and poorest)

III. Low priority regions:
Type D (more resources and less poor)

(a.2) Relative poverty index (P):

$$P = \frac{p_i}{\sum_{i=1}^{26} p_i}$$

b. Compensation criteria

The compensation criterion is based on the construction of a relative transfer index, in which the variables of regional governments' available income of certain resources for public investment projects are considered:

(b.1) Transfer index (t):

$$t = \frac{(Disposable\ Income)}{POB^{0.1}}$$

• Disposable income: transfers to regional governments by concept of canon, sobrecanon, mining royalties, income from customs, and FOCAM in the year of the calculation plus

the balance of "certain resources" (*recursos determinados*) (does not include FONCOR) to December 31 of the year prior to the calculation. It is the regional government disposable income for investment projects in a given year.

• *POB*: regional population

(b.2) Relative transfer index (T):

$$T = \frac{t}{\sum_{i=1}^{26} t_i}$$

c. Calculation of the FONCOR index

For the calculation of the FONCOR index, it was estimated as a probabilistic logit model based on a pool of data on indicators of poverty and transfers.

The results in Table 14 show a degree of considerable significance (all under a 0.01) in the constant and independent variables of the model.

Table 14: Probabilistic—Logit regression

```
. logit prioridad ipobreza itransferencias

Iteration 0:    log likelihood = -127.56404
Iteration 1:    log likelihood = -81.996729
Iteration 2:    log likelihood = -65.872284
Iteration 3:    log likelihood = -61.320306
Iteration 4:    log likelihood = -61.15241
Iteration 5:    log likelihood = -61.152096
Iteration 6:    log likelihood = -61.152096


Logistic regression                         Number of obs  =      208
                                            LR chi2(2)     =   132.82
                                            Prob > chi2    =   0.0000
Log likelihood = -61.152096                 Pseudo R2      =   0.5206
```

prioridad	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
ipobreza	138.995	25.05356	5.55	0.000	89.89087	188.099
itransfere~s	-111.6345	22.51362	-4.96	0.000	-155.7603	-67.50858
_cons	-4.74878	1.016194	-4.67	0.000	-6.740484	-2.757076

```
Note: 10 failures and 0 successes completely determined.
```

Finally, for the calculation of the odds chances "prediction" is taken into account associated with the logit model:

$$PROBABILITY\ (TYPE\ A = 1) = \frac{e^y}{1 + e^y}$$

$$y = -4.74878 - (111.6345 \times T) + (138.995 \times P)$$

Where:
- *T* is the relative transfer index
- *P* is relative poverty index

Finally, the index is defined as the probability for each regional government expressed as a proportion of the total sum of the estimated probabilities.

The simplicity of the methodology is that its annual update will only correspond to the update of the indicators "T" and "P" not of the coefficients, which are updated every four years. Table 15 shows the index for the year 2017.

The total amount to be distributed is S/. 263,744,322.

Table 15: Calculation of the FONCOR index for 2017

Regional government	Poverty indicator (P)	Transfers indicator (T)	Y	Score	FONCOR index 2017
Amazonas	0.056189236	0.005554794	2.441136144	0.919910833	0.1353871152
Ancash	0.034302468	0.112737246	−12.5662745	0.000003488	0.0000005133
Apurimac	0.051228587	0.004162577	1.907050173	0.870687387	0.1281426953
Arequipa	0.018422326	0.038607924	−6.49814515	0.001503965	0.0002213448
Ayacucho	0.051884298	0.022685711	−0.06963001	0.482599528	0.0710261860
Cajamarca	0.067522485	0.055464513	−1.55524539	0.174329961	0.0256568677
Callao	0.017204102	0.099564800	−13.4723626	0.000001409	0.0000002074
Cusco	0.040015598	0.175447100	−18.7727612	0.000000007	0.0000000010
Huancavelica	0.058499017	0.033530093	−0.36082433	0.410760034	0.0604532679
Huánuco	0.056048505	0.002795861	2.729567473	0.938748972	0.1381596027
Ica	0.019853106	0.022566488	−4.50849622	0.010895003	0.0016034631
Junín	0.035968465	0.008561616	−0.70511493	0.330679158	0.0486674313
La Libertad	0.037740897	0.069659087	−7.2793414	0.000689164	0.0001014272
Lambayeque	0.030996653	0.003696581	−0.85306615	0.298790059	0.0439741795
Loreto	0.052909655	0.039189025	−1.76944974	0.145610773	0.0214301449
Madre de Dios	0.029504551	0.004794557	−1.1830329	0.234507311	0.0345134194
Moquegua	0.017877687	0.034954281	−6.16597463	0.002095272	0.0003083699
Pasco	0.048988337	0.012923625	0.617631494	0.649679677	0.0956160686
Piura	0.043588613	0.077559486	−7.34849515	0.000643146	0.0000946545
Puno	0.056225213	0.020345404	0.794994475	0.688902734	0.1013886895
San Martin	0.046603108	0.021256936	−0.64418849	0.344300339	0.0506721174
Tacna	0.018703863	0.029998654	−5.49792138	0.004078572	0.0006002605
Tumbes	0.023285593	0.030294889	−4.89415379	0.007434558	0.0010941749
Ucayali	0.038718141	0.016920108	−1.25601978	0.221659827	0.0326226014
Lima	0.029304927	0.050761228	−6.34224604	0.001757251	0.0002586219
Metropolitan Lima (special case)	0.018414571	0.005967413	−2.85541592	0.054402035	0.0080065745
Total	**1.000000000**	**1.000000000**	**−96.10778000**	**6.794670465**	**1.000000000**

Sources: Ministry of Economy and Finance and World Bank staff calculations.

Appendix 3

Methodology of the New FONCOR Index

The new FONCOR index keeps the relative poverty criterion in the old FONCOR index but changes the relative transfer criterion by adjusting its computation and its content, and thus this criterion is renamed the "Fiscal Capacity" criterion

The "Fiscal Capacity" criterion is now defined as:

$$fc_i = \frac{(Disposable\ Income)}{POB}$$

Where:
- fc_i: per capita fiscal capacity of regional government i
- Disposable income: "revenue sharing" (or reformed ordinary resources) plus transfers to regional governments by concept of canon, sobrecanon, mining royalties, income from customs, and FOCAM in the year of the calculation plus the balance of "certain resources" (*recursos determinados*) (does not include FONCOR) to December 31 of the year prior to the calculation. Note that since regional governments do not have tax sources assigned to them, none are included here. However, if new taxes were assigned to regional governments, the potential revenue from those taxes should also be included in this definition of disposable income.
- POB: regional population

- Then, it is calculated the national average of the Fiscal Capacity per capita and the Fiscal Capacity gap per capita relative to this national average as follows:

  - If the per capita fiscal capacity of the regional government is higher than the national average, the fiscal capacity gap is zero and the regional government is not eligible for this component of the FONCOR index.
  - If the per capita fiscal capacity of the regional government is less than the national average, the fiscal capacity gap is:

$$fcg_i = (fc - cf_i) \times POB \quad \text{if} \quad fc > fc_i$$

Where:
- fc: per capita fiscal capacity – national average
- fc_i: per capita fiscal capacity of regional government i
- POB: regional population

Note: A variation to this rule is to use the maximum tax capacity instead of using the average as the base; this criterion would only keep ineligible the richest region in per capita terms.

Subsequently, the fiscal capacity of each regional government as gap index is defined:

$$FCG = \frac{fcg_i}{\sum_{i=1}^{26} fcg_i}$$

The final new FONCOR index is:

$$IDF_i = (0.5 \times P) + (0.5 \times FCG)$$

Where:
P: relative poverty index
FCG: relative fiscal capacity gap index

The Municipal Compensation Fund (FONCOMUN) and the Proposed Reform

Definition

The Municipal Compensation Fund (FONCOMUN) is established in the Peruvian Constitution with the objective of promoting investment in the municipalities of the country, with a redistributive criterion in favor of the most remote and deprived areas, giving priority in the allocation to rural and marginal urban areas of the country.

Legal Background

- Paragraph 5 of article 196 of the Peruvian Constitution states that the resources allocated by the Municipal Compensation Fund (FONCOMUN) concept are revenues of municipalities.

- Article 87 of the law of Municipal taxation, approved by Supreme Decree 156-2004-EF, stipulates that the FONCOMUN is distributed under the criteria of equity and compensation, and that it aims to ensure the functioning of all municipalities.

- Article 88 of the law of Municipal taxation establishes that the monthly resources municipalities perceive by the concept of the FONCOMUN may not be lower than the amount equivalent to eight tax units (UIT) in force at the date of approval of the budget law of the Public Sector of each year.

- Article 146 of the Law No. 27972, the Organic Municipalities Law, establishes a priority and compensatory allocation within the FONCOMUN to the municipalities located in rural areas.

- Article 4 of the Law No. 29332, that creates the Plan of incentives to improve municipal management, sets that the distribution criteria of FONCOMUN are applied progressively from the budget for Fiscal year 2010.

- The Supreme Decree No. 060-2010-EF approved the criteria, procedures and methodology for the distribution of the FONCOMUN, setting the allocation for each provincial and district municipality according to the criteria described in the Supreme Decree No. 156-2004-EF.

Funding Sources

Article 86 of the Legislative Decree No. 776 (the Law of Municipal Taxation) (amended by the article 31 of the Legislative Decree No. 952), determines the source of the funds that make the FONCOMUN (see Table 16).

Table 16: Financing sources of FONCOMUN

	Percentage
a. Municipal promotion tax (IPM)	95.6%
b. Tax on vehicles that use gasoline (*impuesto al rodaje*)	4.3%
c. Tax on recreational crafts	0.1%

Distribution Procedure

The procedure for the distribution of the Fund comprises three (3) phases:[53]

First phase: Geographical allocation to the provinces. The total national FONCOMUN "pool of funds" is divided into 196 parts, which are the 196 geographical provinces that make up the country.

Second phase: Inter-district allocation. The amount assigned to each geographical province in the first phase, is distributed among all the districts that make up each of the 196 provinces across the country.

Third phase: The setting of eight UIT and 2009 district allowance as a "minimum amount." The amounts obtained in the second phase are adjusted so that no district is transferred monthly less than eight tax units (UIT) by concept of FONCOMUN. It is also guaranteed that no transfer will be less than the amount transferred by the concept of FONCOMUN in 2009.

Existing and Proposed Distribution Criteria

Essentially, the existing distribution criteria are kept the same except that we propose to change the methodology in the first phase in order to include the fiscal capacity of the provinces as an additional criterion in this phase.

Figure 27: New methodology to distribute FONCOMUN

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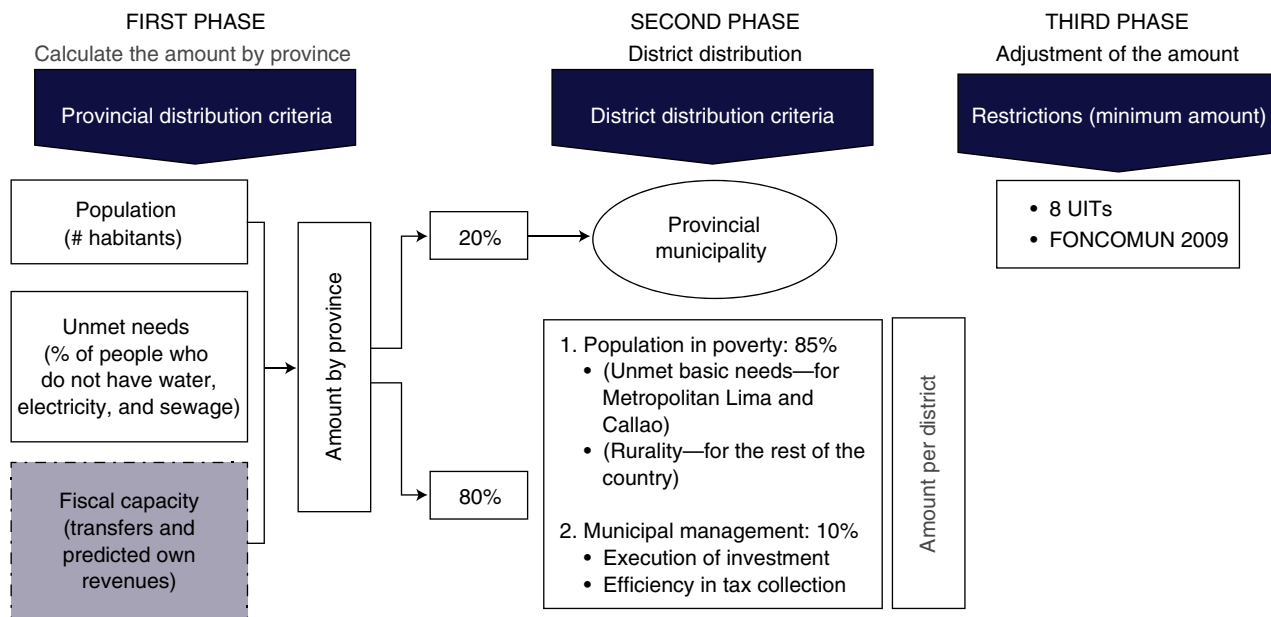
53 These three phases are described in the law of Municipal taxation (approved by Supreme Decree No. 156-2004-EF). Article 87 states: "... The procedure of distribution of the Fund comprises, first, a geographic allocation by province and, on this basis, a distribution among all district municipalities of the province...." Article 88 mentions: "... Resources received in the municipalities by concept of Municipal compensation fund may not be less than the amount equivalent to eight (8) tax units ..."

First phase: Allocation by province

The allocation by province currently uses an index combining population and the index of unmet needs for public services.

Thus the original index is calculated as:

(a) Geographic index for provinces *(IGPj)*

$$IGPj = \frac{POPULATIONj * ICj}{\sum_{i}^{196}(POPULATIONj * ICj)}$$

Where:
IGPj: geographic index for province j
POPULATIONj: population in province j
ICj: unmet needs index of province j

The unmet needs index is defined as:

$$ICj = \left(\frac{NOWATERj + NOSEWAGEj + NOELECTRICITYj}{3}\right)$$

Where:
ICj: unmet needs index for province j
NOWATERj: percentage of people that have no access to water in province j
NOSEWAGEj: percentage of people that have no access to sewage in province j
NOELECTRICITYj: percentage of people that have no electricity in province j

Proposed scenario

We propose to add an index of fiscal capacity to the criteria used in the first phase.

(b) Fiscal capacity index (ICFj)

Fiscal capacity is measured by all the transfer funds received by the province, including canon, but excluding the FONCOMUN itself plus potential own revenues—which are calculated using regression analysis. These components of fiscal capacity are further explained in what follows.

(b.1) Transfers received during the year analysis

We add all components of the item "transfers" (except for FONCOMUN) received by the province.

$$TRj = \sum_{i=1}^{n} TR_i$$

Where:

$$TR_i = CANON\_SOBRECANON + ROYALTIES + CD + OTHERS$$

Where:
TRj: total transfers received by province j
CANON_SOBRECANON: Canon Forestal, Canon Gasífero, Canon Hidroenergético, Canon Minero, Canon Pesquero, Canon and Sobrecanon Petrolero of district i
ROYALTIES: mining royalties of district i
CD: custom duties of district i
OTHERS: Fideicomiso Regional, FOCAM, FONIE, participants and balance of transfers of district i
n: number of districts that are part of province j

(b.2) Estimating potential own-revenues

We first calculate actual own-revenues[54] of each district, then we estimate the per capita own-revenues as follows:

$$IPpc_i = \frac{OWN\_REV_i}{POPULATION_i}$$

Where:
IPpc_i = own-revenues per capita of district i
OWN_REV_i = own-revenues of district i
POPULATION_i = population of district i

Then in order to estimate potential own-revenues per capita, we run a regression for all districts having as a dependent variable the own-revenues per capita calculated and as an independent variable

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54 For the calculation of own-revenues it was considered the revenues coming from the "Municipal Tax" and "resources directly collected." From both sources of financing, we do not take into account the generic entries "Indebtedness," "Balance," nor "non-Financial Assets Sale." Other sources not considered: "tax on casinos" "taxes on slot machines," transfers by canon, sobrecanon, concession rights, FOCAM royalties, custom duties, and FONCOMUN.

the average household private expenses in each district expressed in per capita terms. We run this regression using the information for 2013, the year for which we have the most updated information.

Subsequently, we used the regression parameter to predict the values of the district own-revenues per capita for the year of the analysis. In the case that the predicted value is negative, the district is assigned a value of zero.

$$\widehat{IPpc}_i = 0.5625352 \times Gtoavgpc_i - 129.5626$$
$$\widehat{IPpc}_i = 0 \text{ if } \widehat{IPpc}_i < 0$$

Where:
$\widehat{IPpc}_i$ = predicted value of own-revenues per capita of district i
$Gtoavgpc_i$ = average household private expenses in per capita terms of district i

We multiply the predicted value of own-revenues per capita calculated by the district population for the year of analysis

$$\widehat{IP}_i = \widehat{IPpc}_i \times POPULATION_i$$

Where:
$\widehat{IP}_i$ = predicted value of own-revenues of district i
$POPULATION_i$ = population of district i for the years of analysis

In order to arrive at the potential own-revenues at the province level, we sum the predicted value of own-revenues for all districts including the provincial municipality,

$$\widehat{IP}_j = \sum_{i=1}^{n} \widehat{IP}_i$$

Where:
$\widehat{IP}_i$: predicted value of own-revenues of district i
$\widehat{IP}_j$: predicted value of own-revenues of province j
n: number of districts that are part of province j (it includes the provincial municipality in each province)

The fiscal capacity of the province is thus defined as the revenues coming from all transfers (except FONCOMUN) plus potential own-revenues (calculated as predicted values based on regression analysis):

$$FC_j = TR_j + \widehat{IP}_j$$

Where:
TR_j: total transfers received by province j
$\widehat{IP}_j$: potential own-revenues for province j
FC_j: fiscal capacity of province j

$$FCpc_j = \frac{FC_j}{POPULATION_j}$$

Where:
$FCpc_j$: fiscal capacity per capita of province j
$POPULATION_j$: population of province j

(b.3) Calculating the fiscal capacity gap

In this step we first calculate the national average fiscal capacity per capita and then we calculate the fiscal capacity gap per capita for each province relative to this national average as follows:

● If the per capita fiscal capacity of the province is higher than the national average, the fiscal capacity gap is zero and the province is not eligible for this component of the index.

● If the per capita fiscal capacity of the province is less than the national average, the fiscal capacity gap is:

$$fcg_j = (FCpc - FCpc_j) \times POPULATION_j$$
$$(\text{if } FCpc > FCpc_j)$$

Where:
fcg_j: fiscal capacity gap of province j
$FCpc$: fiscal capacity per capita – national average
$FCpc_j$: fiscal capacity per capita of province j
$POPULATION_j$: population of province j

The fiscal capacity index of each province is defined as its share in the total fiscal capacity gap of all qualifying provinces:

$$FCG_j = \frac{fcg_j}{\sum_{1}^{196}(fcg_j)}$$

Where:

FCG_j: fiscal capcity index of province j

(c) The information on the fiscal capacity index is combined with the original provincial allocation index (IGPj) to estimate the proposed provincial allocation index.

We give the original index a weight of 70 percent and the added fiscal capacity index a weight of 30 percent. Both criteria are pro-poor and other combinations of weights could be simulated to arrive to more (or less) redistributive outcomes:

$$API_j = 0.7 \times IGP_j + 0.3 \times FCG_j$$

Where:

API_j: adjusted allocation index for province j
IGP_j: geographic index for province j
FCG_j: fiscal capacity index for province j

Second phase: The allocation across districts within each province

After determining the allocation by province, the next step is the distribution between the district and provincial municipalities in each of the 196 provinces, taking into consideration the following:

20 percent of the first step allocation is assigned to the provincial municipality (of each province).

80 percent of the geographical allocation by province is distributed among all the district municipalities of the province, taking into account three criteria: (i) the rurality (prioritization in districts with higher rural population); (ii) the territorial extension; and (iii) municipal management (the generation of income and the prioritization of spending in investment).

The relative weights for the three criteria are shown in Table 17:

Table 17: FONCOMUN: Distribution criteria (weights)

Indicator	Weights
Rurality	0.85
Territorial extension	0.05
Municipal management	0.10
Total	**1.00**

Source: Ministry of Economy and Finance.

(a) Rurality index (IRj)

Article 146 of the Organic Law of Municipalities, approved by Law No. 27972, states that rural areas have priority for receiving compensatory allocation of FONCOMUN resources. The index is calculated as a weighted summation of the rural and urban population of the district where a double weight is provided to the rural population. The index is applied as follows:

$$IRi = \left(\frac{1 * URBANi + 2 * RURALi}{\sum_{i=1}^{n}[1 * URBANi + 2 * RURALi]} \right)$$

Where:

IRi: rurality index of district i
URBANi: urban population in district i
RURALi: rural population in district i
n = number of districts that are part of the province where district i is located

In the case of the districts located in Metropolitan Lima and Callao province, the unmet needs

indicator (NBI) is used in substitution of the rurality index. The NBI's indicators taken into account are:

- Population
- Households with inadequate housing (NBI1)
- Households without access to water service. (NBI2)
- Households with no access to sewage service. (NBI3)
- Households with children between 6 to 12 years old who do not attend school. (NBI4)
- Households with very low economic capacity (NBI5)

Therefore the index applicable to the districts of the provinces of Lima and Callao is:

$$IPOi = \left(\frac{POPULATIONi * NBIi}{\sum_{i=1}^{n}[POPULATIONi * NBIi]} \right)$$

$$NBI_i = NBI1_i + NBI2_i + NBI3_i + NBI4_i + NBI5_i$$

Where:
IPOi: poverty index for district i
POPULATIONi: population of district i
NBIi: unmet needs index for district i
n: number of districts that are part of the province where district i is located

(b) Territorial extension index (TERRITORY)

Since 2010, the FONCOMUN index incorporates the territorial extension variable.[55] This variable aims to compensate districts that due to their territorial extension have difficulties providing basic services to their more remote populations. The index is calculated as:

$$TERRITORYi = \left(\frac{KM^2i}{\sum_{i=1}^{n}[KM^2i]} \right)$$

Where:
TERRITORYi: territory index of district i
KM²: territorial extension of district i (in square kilometer—KM²).
n: number of districts that are part of the province where district i is located

(c) Municipal Management (IGM)

The municipal management indicators incorporated into the interdistrict allocation are based on the Article 32 of Legislative Decree No. 952 that modifies the Legislative Decree No. 776—Municipal Taxation Law.

The municipal management index is calculated on the basis of two criteria: (i) the generation of own-revenues; and (ii) the prioritization of spending in investment.[56]

- The own-revenues index[57] (IPI) is defined as:

$$IPi = \left[1 + \left(\frac{\dfrac{ING\_PROP_{t-1}}{POPULATION_{t-1}}}{1 + \dfrac{ING\,PROP_{t-2}}{POPULATION_{t-2}}} \right) \right]^{0.1}$$

Where:
IPi: own-revenues index of district i
ING_PROPi: own-revenues of district i
POPULATIONi: population of district i
t: year for which the index is calculated

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56 In the case of the municipalities whose value of the indicator is zero (0) for the years of assessment, they are assigned 50 percent of the minimum value of the indicator of municipal management district registered nationwide.

57 For the calculation of own-revenues it was considered the revenues coming from the "Municipal Tax" and "resources directly collected." From both sources of financing, we do not take into account the generic entries "Indebtedness," "Balance," nor "non-Financial Assets Sale." Other sources not considered: "tax on casinos" "taxes on slot machines," transfers by canon, sobrecanon, concession rights, FOCAM royalties, custom duties, and FONCOMUN.

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55 The Legislative Decree No. 952 (February 2004) modifies the Legislative Decree No. 776—Municipal Taxation Law. Its Article 32 sets that within the new distribution criteria for FONCOMUN, the territorial extension should be included.

The expenditures prioritization index (IPGIi) considers the acquisition of nonfinancial assets[58] (ADQ_ACT_NO_FINAN) and total spending[59] (GASTO_TOTAL). The index is defined as:

$$IPGIi = \left(1 + \frac{ADQ\_ACT\_NO\_FINAN_{FONCOMUNi}}{GASTO\_TOTAL_{FONCOMUNi}} \right)$$

Where:
IPGIi: expenditures prioritization index of district i
$ADQ\_ACT\_NO\_FINAN_{FONCOMUNi}$: *acquisition of nonfinancial assets financed with FONCOMUN of district i*
$GASTO\_TOTAL_{FONCOMUNi}$: *total expenditure financed with FONCOMUN of district i*
FONCOMUN: expenditures financed with "FONCOMUN"

Therefore, the municipal management index for district i is set by the following formula:[60]

$$IGMi = \frac{\left[\dfrac{IPi}{\sum\limits_{i=1}^{n} IPi} \right] + \left[\dfrac{IPGIi}{\sum\limits_{i=1}^{n} IPGIi} \right]}{2}$$

Where:
IGMi: municipal management index for district i
IPi: own-revenues index for district i
IPGI: prioritization of expenditures index for district i
n: number of districts that are part of the province where district i is located

Based on the previously developed indexes, the allocation index for district i is set by the following formula:

$$IND\_DISTRi = [IRi] * 0.85 + [TERRITORYi] * 0.05 + [IGMi] * 0.10$$

Where:
IND_DISTRi: allocation index for district i
IRi: rurality index of district i
TERRITORYi: territorial extension index for district i
IGMi: municipal management index for district i

In the case of Metropolitan Lima and Callao, the allocation is:

$$IND\_DISTRi = [IPOi] * 0.85 + [TERRITORYi] * 0.05 + [IGMi] * 0.10$$

Where:
IND_DISTRi: allocation index for district i
IPOi: poverty index based on unmet needs of district i
TERRITORYi: territorial extension index for district i
IGMi: municipal management index for district i

Third phase: District allocation adjustment for 8 UIT and 2009 FONCOMUN allocation as "floor value"

The district allocation obtained in the second phase should be corrected so that no district receives less than 8 tax units (UIT) per month. To do this, the municipalities that have a preliminary monthly allowance higher than 8 UIT, would yield their allocation marginally (prorated) to ensure this minimum level FONCOMUN. This legal "minimum" is established by the Article 33 of Legislative Decree No. 952 which modifies the Legislative Decree No. 776—Municipal Taxation Law.

The formula used for the adjustment is:

$$RA_{8UIT} = \frac{\sum\limits_{i=1}^{n} Surplus_i + \sum\limits_{i=1}^{m} Deficit_i}{\sum\limits_{i=1}^{n} Surplus_i}$$

Where:
RA: adjustment ratio for 8 tax units.
$Surplus_i$: *positive difference between the preliminary monthly allocation of FONCOMUN and 8 tax units in district i*
$Deficit_i$: *negative difference between the preliminary monthly allocation of FONCOMUN and 8 tax units in district i*
n: number of districts in surplus
m: number of districts in deficit

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58 It is considered the expenditures under the generic "Acquisition of non-financial assets" financed with FONCOMUN and are intended for investment projects.
59 It consists of total spending financed with FONCOMUN.
60 In the case of the own revenues index (IP), before the data is converted into an index, a previous numeric transformation is done through which these numbers are converted to a scale between 1 and 2.

With the adjustment ratio, we calculate the adjusted monthly allocation of FONCOMUN to be no less than 8 UIT as follows:

*(a) if the district is in surplus: FONCOMUN$_i$ = 8UIT + RA$_{8UIT}$ * Surplus$_i$*

(b) if the district is in deficit: FONCOMUN$_i$ = 8UIT

Where:
FONCOMUNi: adjusted monthly allocation of FONCOMUN in district i
*UIT: Tax units*

In addition of making the adjustment of 8 tax units, the methodology also sets a "floor amount," meaning that it guarantees that no transfer is less than the amount of FONCOMUN transferred in 2009. The methodology for the calculation is similar to the one established for the adjustment to 8 tax units, the difference is that in order to obtain the adjustment ratio (RA), the surplus and deficit will be given by the difference between the adjusted monthly allocation of FONCOMUN to 8 tax units and the monthly amount of FONCOMUN transferred in 2009.

Fluctuations in the "pool of funds" used in the allocation

The resources distributed by FONCOMUN are mainly determined by the collection of the Municipal Promotion Tax (IPM), which is closely linked to the performance of the general sales tax (VAT). Article 76 of the Legislative Decree No 776 sets that the IPM is levied at a rate of 2 percent over the operations affected by the VAT.

Therefore, the monthly allocation of FONCOMUN is directly related to the performance of the tax revenue of the previous month: when the revenue increases, the allocation of the following month increases and when the levy is reduced, the municipalities receive a lower allocation.
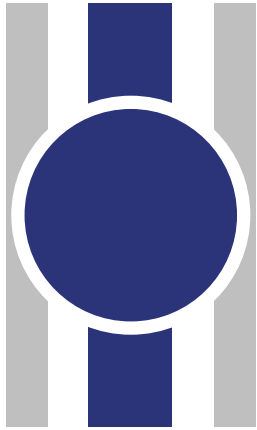
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