Moldova

Public Expenditure Review

Reforming Local Public Finance for More Efficient, Equitable and Fiscally Sustainable Subnational Spending

June 2014

Poverty Reduction and Economic Management Unit
Europe and Central Asia Region

THE WORLD BANK
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CURRENCY AND EQUIVALENT UNITS
(as of June 2, 2014)

Currency Unit = Moldovan Lei
US$ = 13.88

ABBREVIATIONS AND ACRONYMS

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<tr>
<td>ATU</td>
<td>Autonomous Territorial Unit</td>
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<tr>
<td>BEM</td>
<td>Banca de Economii</td>
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<td>CIS</td>
<td>Commonwealth of Independent States</td>
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<td>CIT</td>
<td>Corporate Income Tax</td>
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<td>Consumer Price Index</td>
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<td>Gross Domestic Product</td>
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<td>IMF</td>
<td>International Monetary Fund</td>
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<td>MDG</td>
<td>Millennium Development Goal</td>
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<td>MDL</td>
<td>Moldovan Lei</td>
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<td>MOF</td>
<td>Ministry of Finance</td>
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<td>NBM</td>
<td>National Bank of Moldova</td>
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<td>PER</td>
<td>Public Expenditure Review</td>
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<td>PIT</td>
<td>Personal Income Tax</td>
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<td>PPG</td>
<td>Public and Publicly-Guaranteed</td>
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<td>SIDA</td>
<td>Swedish International Development Corporation Agency</td>
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<td>SRA</td>
<td>State Roads Administration</td>
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EXECUTIVE SUMMARY

1. This report reviews intergovernmental fiscal relations in Moldova and recommends ways to improve the efficiency and equity of local public finance, while maintaining fiscal sustainability. It is part of programmatic fiscal work aimed at assisting the Government of Moldova by providing a review of its public expenditures and budget, as well as recommendations to improve the efficiency and equity of fiscal policy. It complements and extends the 2013 PER, which examined public investment processes, institutions and sector policies, and recommended reforms to achieve better outcomes for public capital expenditures in Moldova.

2. Local public authorities are responsible for meeting key public service delivery needs. They play a major role in education and bear primary responsibility for urban and rural functions such as water supply and local road construction and maintenance. The quality of these services is important for the poor, most of whom live in underserved rural areas. To continue to reduce poverty and promote shared prosperity in a fiscally sustainable way, intergovernmental fiscal relations thus have a significant role to play, notably by helping reduce inequalities in the quality of public services, enhance human capital and facilitate access to markets.

3. Local authorities are unable to fulfill their role due to their sub-optimal size, inadequate financial capacity, and low administrative capacity. The extreme fragmentation of Moldova’s administrative-territorial organization results in poor efficiency of expenditures at the subnational level. The intergovernmental transfer system (prior to the application of recent amendments) is insufficiently transparent and discourages local governments from raising their own-source revenues. Problems with public investment management are heightened at the local level.

4. The Government of Moldova is reforming intergovernmental fiscal relations, as part of broader commitments under the National Decentralization Strategy (2012). A package of amendments was adopted by Parliament in November 2013. These amendments aim to reduce political influence over grant allocations and eliminate disincentives for local governments to raise their own revenues and rationalize their expenditures. They set new rates for sharing national taxes with the two tiers of local government, introduce formulas for transfers to local governments and remove subordination in financial relations between top and bottom-tiers of local government. Implementation of these reforms is expected to start against the backdrop of an electoral context, with anticipated parliamentary elections in 2014 and local elections in 2015.

5. This report reviews recent reforms in local public finance and makes suggestions to further improve subnational expenditures, fiscal policy and budgetary processes. Suggestions are made in five key areas: (i) address the inefficiencies of expenditures related to the high fragmentation of Moldova’s administrative-territorial organization; (ii) improve the efficiency and equity of intergovernmental transfer formulas; (iii) help develop the revenue capacity of local governments; (iv) improve public investment management at the
local level; (v) ensure sustainability of subnational debt. A summary of proposed reforms is presented in Table 1 at the end of this executive summary.

**Macroeconomic and Fiscal Context**

6. **Moldova’s growth performance has been strong but volatile.** Following a drought-induced contraction in 2012, growth rebounded to 8.9 percent in 2013, driven by a record harvest in agriculture (Figure 1). Strong economic growth and the associated growth in labor earnings, as well as an increase in remittances have reduced poverty and promoted shared prosperity.

![Figure 1: GDP Growth, 2001-2013](image1.png)

**Figure 1: GDP Growth, 2001-2013**

![Figure 2: Expenditure Structure, 2009-2013](image2.png)

**Figure 2: Expenditure Structure, 2009-2013**

Source: National statistics

7. **In this context, sound macroeconomic management is key to Moldova’s ability to deal with shocks.** Moldova’s policies of maintaining low fiscal deficits, flexible exchange rates and inflation targeting have reduced key macroeconomic risks arising from its vulnerability to climatic and global economic conditions. Nevertheless, significant risks exist in the banking sector due to governance, credit quality, liquidity and capital adequacy concerns at select banks and due to concerns over effective enforcement powers of the regulator.

8. **The adjustment program started in 2010 reduced fiscal deficits.** With an already high tax burden and weaknesses in revenue collection, adjustment has mostly been achieved by containing expenditures (Figure 2). As a result, the fiscal deficit of the general government has declined by over 4 percentage points of GDP in the four years since 2009, to 1.8 percent in 2013.

9. **GDP growth is projected to decelerate to 2 percent in 2014, and the fiscal deficit to widen.** Modest agricultural sector growth following the exceptional performance in 2013, as well as lower growth among Moldova’s main trading partners is expected to reduce export demand and could reduce remittance inflows. The adopted Budget Law for 2014 targets a 2.6 percent deficit. After parliamentary elections, the budget deficit is expected to remain below 3 percent of GDP by 2016.

10. **In the medium term, maintaining fiscal sustainability will be challenged by the institutional and social context.** Social and demographic challenges will intensify, including pressures related to existing commitments on social insurance and pensions. Ageing will
increase the pensions bill and fuel the demand for healthcare services, while public sector spending on health remains inefficient. Fragmented local governments create inefficiencies in spending at the local level. Further expenditure adjustments are needed to make space for pressing public investment needs in the medium term. At the same time, constraints on the revenue side limit flexibility, making it important to preserve fiscal sustainability in the medium term.

Current trends in local public finance and key issues

11. **Fiscal consolidation at the national level after 2009 was mirrored at the subnational level.** Central government expenditures (excluding social funds) contracted from 16.8 percent of GDP in 2009 to 14.5 percent in 2013. Over the same period, subnational expenditures declined from 10.8 percent of GDP to 8.8 percent. This was achieved by reducing the subnational wage bill (from a high of 5.9 percent in 2009 to 4.4 percent in 2013) and subnational capital expenditures (from an average 2.1 percent of GDP in 2003-2008 to an average 1.3 percent in 2009-2013).

12. **The extreme fragmentation of Moldova's administrative-territorial organization creates large inefficiencies in public expenditures at the local level.** Moldova's current structure of Government, resulting from the reversal of a previous reform of administrative-territorial organization, is characterized by sub-optimally small local governments. With a population of 3.6 million people in 2013, there are 35 top tier jurisdictions (including 2 cities, 32 raions and ATU Gagauzia) and 896 bottom tier jurisdictions. Half of rural, bottom-tier municipalities have fewer than two thousand residents and more than a quarter have fewer than 1,500 residents (Figure 3).

![Figure 3: Population of rural municipalities (bottom-tier)](image)

**Source:** National statistics

![Figure 4: Own-functions expenditures per capita, bottom-level municipalities, 2013](image)

**Note:** Own functions include all functions other than education and social protection.

**Source:** MOF, National statistics

13. **Rationalizing the territorial administrative structure could yield savings that could be used for much-needed improvements in public services at the local level.** The sub-optimal size of municipalities suggests large diseconomies of scale for their own functions. A positive development in the education sector has been the recent transfer of responsibility for general education from the bottom to the top tier of local government. Nevertheless, for expenditures on their own functions, the per capita expenditures of bottom-tier local governments are higher where the population is smaller (Figure 4). Rural
municipalities spend more on public administration, leaving little space for spending on communal amenities such as transport or utilities.

14. **Own-source revenues of local governments (non-tax, property taxes and other local taxes) have been declining as a share of GDP over the past decade.** Revenue from taxes on immovable property plummeted from 0.7% of GDP in 2003 to 0.3% of GDP in 2013 (Figure 5). As a result, local governments are increasingly relying on grants and other transfers from the central government for financing.

![Figure 5: Trends in subnational revenue](image)

**Source:** Ministry of Finance  
**Note:** Property Taxes include taxes on immovable property and land. Non-Tax includes road tax, local taxes and other taxes. Grants include the revenues of special funds, revenues of special means, transfers from the state budget and transfers from the republican fund of social support.

15. **Overall, local revenue sources (taxes, fees and levies set by local governments, such as property taxes and other local taxes) are under-utilized and could be significantly increased (Figure 6).** This may be explained by tax administration and enforcement issues, political considerations that (under the system in place prior to recent amendments, and in the absence of a hard budget constraint) do not encourage local governments to raise their own revenues, and disincentives for raising own revenues in the law of local public finance until the adoption of the recent amendments (notably, rules requiring that actual local revenues significantly in excess of assessed expenditure needs be transferred to the higher level budget, and for the purpose of grant allocations, the projection of locally-derived revenues on the basis of past collections, so that higher revenue collections meant smaller transfers in the future).
16. **The weaknesses in Moldova’s public investment management cycle are particularly pronounced for projects at the local level.** The domestically-funded part of capital investment is not subject to adequate appraisal. Local capital spending is mostly funded through transfers from the central government. However, the allocation of capital grants to local authorities shows that the current process of direct selection of small local capital repairs and investments by the central government and parliament results in insufficient prioritization, and is criticized for lacking transparency. As a result, resources are spread thinly and the lack of continuity of funding for ongoing projects lowers the efficiency and effectiveness of public expenditure by lengthening implementation periods and delaying service improvements. Resource allocations by raion governments to bottom-tier municipalities are also not prioritized and lacking transparency. Weaknesses in project implementation are particularly evident in infrastructure sectors, and monitoring systems are especially weak for local government projects.

17. **Current subnational debt ratios are low, albeit increasing.** Total outstanding local government debt was 0.7 percent of GDP in 2013.

**Reforming Local Public Finance**

18. **Under the National Decentralization Strategy, the specific objective for fiscal decentralization is to improve the current system of local finances “to ensure the financial autonomy of local public authorities, maximizing the efficiency and equity in allocation of resources while maintaining fiscal discipline.”** Accordingly, the strategy plans to: (i) strengthen the local revenue base and the related decision making autonomy; (ii) reform the system of transfers and shared taxes, establishing it on a basis of objectivity and predictability, separating the budgets of the first and second levels of local public authorities, to ensure a minimum level of services, provided that the system does not discourage the own fiscal effort and the rational use of resources; (iii) strengthen the autonomy and financial management of LPAs, ensuring financial discipline, increasing transparency and public participation.
19. The amendments to the law on Local Public Finance and the Tax Code approved by Parliament in November 2013 aim to reduce political influence over grant allocations, and eliminate disincentives for local governments to raise their own revenues and rationalize their expenditures. The amendments:

   a. Set new rates for derivation-based sharing of PIT revenue for all tiers of local government;
   
   b. Introduce special-purpose transfers for delegated and shared (central-local) functions (education and social benefits), accounting for two thirds of local expenditures;
   
   c. Introduce a general-purpose transfer for the remaining (own) local functions, calculated by applying transparent formulas (based on revenue capacity [PIT] and two proxies for needs [population and land area];
   
   d. Remove the previous subordination in financial relations between the top and bottom tiers;
   
   e. Modify the framework for subnational debt by allowing issuance of municipal bonds and guarantees (to municipal enterprises and fully or majority municipal-owned enterprises ) by bottom-tier municipalities;
   
   f. Introduce a fund to compensate local governments that would stand to lose from the reform in the first two years of application. The compensation fund can amount to up to 1 percent of state budget revenue.

20. The new Law is to be fully applied beginning in 2015. In 2014, the new legal amendments apply in only three “pilot” raions (Basarabeasca, Ocnița and Rîșcani) and the Municipality of Chisinau. For the rest of the raions, Balti municipality and ATU Gagauzia, recent amendments will apply from January 1, 2015 whereas in 2014 the old mechanism of transfers is applied.

21. The new system for general purpose grants introduces a number of improvements in the system of intergovernmental transfers, but it also could be improved. It makes intergovernmental fiscal relations more predictable and transparent and reduces existing disincentives for local governments to raise their own revenue. However, there is room for increasing the accuracy of the formulas in bridging objective differences in revenue capacity and expenditure needs among localities. A number of technical issues could also be addressed. The formula falls short of accurately capturing disparities between municipalities, especially for bottom-tier municipalities. It underweights population, and overweights fixed costs. It also favors sub-optimally small municipalities.

22. Application of the new transfer system may increase subnational expenditures, particularly in the smallest municipalities. Simulations indicate higher aggregate expenditures at the bottom level, and particularly for municipalities with fewer than 1,500 residents. An aggregate increase in expenditures on own-functions is estimated, equivalent to 0.3 percent of GDP. In 2014, in the pilot raions and the
Municipality of Chisinau, Parliament approved compensating transfers to the local governments that would have lost revenue as a result of the application of the law, equivalent to 0.2 percent of projected GDP and 0.7 percent of planned state revenue.

23. The report makes policy recommendations to further improve the system of intergovernmental transfers and the local public finance framework to allow for the provision of local services “effectively, efficiently, equitably, and following fiscal discipline”, as stated in the National Decentralization strategy. The recent amendments to the law on local public finance introduce a number of improvements, but the system of intergovernmental fiscal relations could still be further improved. The recommendations are organized around the main policy areas for action regarding: (i) addressing the inefficiencies arising from Moldova’s fragmented administrative-territorial organization to improve public services at the local level; (ii) improving intergovernmental transfer formulas; (iii) raising own-source revenues of local governments; (iv) improving public investment management at the local level; and (v) ensuring the sustainability of subnational debt.

Addressing the inefficiencies arising from Moldova’s fragmented administrative-territorial organization to improve public services at the local level

24. There is a need to consolidate local governments to address the inefficiencies in public expenditure and public service delivery arising from their high fragmentation and limited capacity. Beyond intergovernmental transfer formulas, achieving administrative-territorial organization reform would require stewardship and further legal changes. The exact modalities of administrative-territorial reform should be examined more specifically in order to formulate the best options for Moldova. In addition, enabling regulations and institutional support will be required to allow small municipalities flexible modes of service provision such as inter-municipal cooperation and/or outsourcing of services to the top-tier municipalities and private providers.

25. The grant formula should be adjusted not to further entrench the existing fragmentation (see below). The recent reform of intergovernmental transfers introduces a number of improvements over the old system but is unlikely to help rationalize Moldova’s extremely fragmented administrative-territorial structure. The formula continues to favor small municipalities.

26. In some sectors, economies of scale could be sought independently of administrative-territorial reform, by reconsidering functional responsibilities for some public services. In the transport sector, it is planned to decentralize the management of local roads to raions. In the water and utility sector, substantial benefits could be gained from the regionalization of services. However, it is important to recognize that the creation of corporations jointly owned or operated by multiple local governments to reconcile the administrative map with the network nature of service delivery also carries challenges (related to the management and ownership structure of such enterprises, contingent liabilities, etc.) that will need to be addressed. Also, these sectoral approaches will not fully substitute for the much-needed rationalization of Moldova's administrative-territorial structure.
Improving intergovernmental transfer formulas

27. **As a general principle, intergovernmental transfer formulas should yield an efficient, equitable and stable distribution of general purpose grants.** It is important that transfers be rule-based and predictable. One way to preserve objectivity of the grant allocations is through the statistical estimation of impacts of various local characteristics (e.g., land area) on the per client costs of providing public services. Our estimates indicate that the relative weights on the allocation factors should be shifted away from the fixed allocation per municipality to make the grant amount more responsive to the population size. An alternative formula could improve efficiency and equity, while favoring less the smaller municipalities.

28. **In addition, other technical adjustments could improve the general-purpose transfer formulas.** In particular, the entire yield of PIT (as opposed to the locally retained share) would be a better proxy for the revenue capacity of own sources (in a formula that would take into account population when accounting for the per capita revenue gap). In the medium-term, the formula for transfers to raion governments should be reconsidered to quantify the possible inequities introduced by ignoring the revenue gap.

29. **Rather than helping entrench an inefficient pattern, political acceptability can be secured by a gradual transition to an efficient formula over a period of several years.** The likely reason that the ad hoc formula parameters favor smaller municipalities is to make the reform politically acceptable. A more gradual approach would typically make the changes in local funding more politically acceptable, since it would give time for the territorial units’ administrative structures to adjust (e.g., to merge or form cooperation with other municipalities).

30. **Several approaches to phasing in a new transfer system may be considered.** One approach is to compensate the losers at least in part for their loss in revenues due to the regime shift. The recent amendments introduce a compensatory transfer during the first two years for this purpose. An often adopted approach is to fix the base transfer or entitlement for the local governments in nominal terms. Thus, the transition to the new system can be achieved through real growth and inflation, both of which help to the shrinkage of the historical transfer. This could be a feasible option for Moldova as the envisioned additional funds could be used for holding harmless. The use of a hold-harmless scheme combined with an efficient formula may be a preferable alternative to no reform or to an inefficient grant formula.

31. **Introducing residence-based sharing of the PIT could improve fiscal equity in the short term.** If disparities increase as a result of the new transfer system and cannot be corrected by adjusting the equalization grant formula, government could consider switching to full formula-based sharing of the PIT for the bottom tier.
Raising own-source revenues of local governments to promote fiscal responsibility

32. **Raising own-source local revenues can be achieved through a combination of reforms related to tax administration and enforcement and tax assignment policy changes, while taking into account behavioral incentives and the political economy.** In the short term the focus should be on increasing the yield of user fees and local taxes (including by setting minimum rates were applicable), property taxes (which, at 0.3 percent of GDP in 2012, were less than half collection levels in Ukraine and Georgia, and a quarter of those in Bulgaria) and perhaps allowing new local taxes. In the medium term, increasing the degree of revenue autonomy through the assignment of other listed taxes could bring improvements into the system of intergovernmental relations including increased horizontal accountability of local officials to their residents and greater fiscal responsibility in expenditure and debt management at the subnational level.

33. **Moldova’s planned tax administration reforms (at the national level) could present opportunities for strengthening local tax administration and enforcement.** The uneven distribution of administrative capacity could be addressed through an asymmetric decentralization of tax administration functions.

34. **The yield of the current conventional real estate property tax could be increased substantially.** The review of the bands for property tax rates, the development of the property cadaster and appraisal of property values would be important steps to this end; yields can be further increased by improving billing and collections systems.

35. **Existing tax assignments for local governments could be improved.** A review of tax policy could identify taxes with larger potential yield that could be assigned at the local level. Tax instruments that could be considered to provide a more significant revenue base for local governments include “betterment levies”, and, for top tier local governments, local vehicle and transportation taxes and local surtaxes to central government taxes (such as PIT).

**Improving public investment management at the local level**

36. **Recent reforms to improve public investment management in Moldova will require accompanying measures to extend to the local level.** Rules in the recently adopted Government regulation on public investment management could be adapted to improve project preparation and selection at the local level.

37. While there are weaknesses at all stages of the public investment management process at the local level, the priority in the short term should be to:

   (a) improve preparation and pre-screening of local projects;

   (b) move away from direct selection and monitoring by the central government of small investment and repair objects by adopting a broader, programmatic definition of a project and ultimately adopting alternative allocation mechanisms for capital grants;
(c) establish the necessary frameworks and incentives for inter-municipal cooperation to allow economies of scale and reduce duplication.

**Ensuring sustainability of subnational debt**

38. **The framework for borrowing should ensure fiscal responsibility, as in the medium to longer term, local governments may increasingly seek to finance infrastructure investments through borrowing.** Such borrowing could be taken by local governments with more fiscal capacity, while capital grant financing leans toward financing local units with less fiscal capacity and therefore less ability to borrow, and for projects with large externality spillovers to other jurisdictions. Subnational external borrowing should be subject to authorization from central authorities. The future drafting of the fiscal responsibility law should seek to maintain fiscal discipline and responsibility among subnational governments, further updating ex ante limits. This could include an overall cap on subnational debt as a share of GDP and mechanisms to enforce this cap (including how to prioritize guarantee requests).

39. **It is necessary to develop monitoring systems (with properly digitized budget reports) that can be used by the Ministry of Finance to anticipate and manage the risks that could potentially arise going forward.** Adequate monitoring of subnational debt should be a precondition for subnational borrowing.
### Table 1: Summary of Proposed Priority Reforms

<table>
<thead>
<tr>
<th>PROPOSED REFORMS</th>
<th>TIME FRAME</th>
<th>EXPECTED IMPACT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Addressing the inefficiencies arising from the fragmented administrative-territorial organization to improve public services at the local level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adopt legal reforms and redesign the incentive framework to rationalize the territorial-administrative structure</td>
<td>Medium Term</td>
<td>Economies of scale and improved services</td>
</tr>
<tr>
<td><strong>Adjusting intergovernmental transfer formulas</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjust the relative weights on the allocation factors of the general-purpose grant formula, and adjust the general-purpose grant formula to use the entire yield of the PIT (rather than the locally retained share)</td>
<td>Short Term</td>
<td>Not to discourage consolidation of local governments, and to improve fiscal equity</td>
</tr>
<tr>
<td>Consider introducing residence-based sharing of the PIT, and consider full-formula based sharing of the PIT for the bottom tier</td>
<td>Short to Medium Term</td>
<td>Improve fiscal equity</td>
</tr>
<tr>
<td>Evaluate the impact of ignoring the revenue gap in the formula for grants to top-tier governments</td>
<td>Medium Term</td>
<td>Improve fiscal equity</td>
</tr>
<tr>
<td><strong>Raising own-source revenues of local governments to promote fiscal responsibility</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Set minimum rates on local taxes, where applicable</td>
<td>Short Term</td>
<td>Increased yield of local taxes</td>
</tr>
<tr>
<td><strong>Review rates, develop property cadaster, appraise property values, and improve local billing and collection systems</strong></td>
<td>Medium Term</td>
<td>Increase yield of the property tax</td>
</tr>
<tr>
<td>Consider taking advantage of planned tax administration reforms to strengthen local tax administration</td>
<td>Medium Term</td>
<td>Increased local tax collections</td>
</tr>
<tr>
<td>Consider assigning new taxes to local governments*</td>
<td>Medium Term</td>
<td>Increased own-source local revenue and accountability</td>
</tr>
<tr>
<td><strong>Improving public investment management at the local level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consider establishing a minimum value threshold for local objects to receive funding from State budget</td>
<td>Medium Term</td>
<td>Greater local accountability for small repairs and investments</td>
</tr>
<tr>
<td>Issue guidelines and build capacity at the local level for improved preparation and pre-screening of local projects requiring central funding</td>
<td>Short to Medium Term</td>
<td>Fewer projects with cost overruns or unrealistic benefits</td>
</tr>
<tr>
<td>Move away from direct selection and monitoring of small investment and repair objects by central government by adopting a broader, programmatic definition of a project</td>
<td>Medium Term</td>
<td>Improved policy relevance</td>
</tr>
<tr>
<td>Adopt alternative allocation mechanisms for transferring resources for local capital expenditures</td>
<td>Medium Term</td>
<td>More efficient decision-making</td>
</tr>
<tr>
<td><strong>Adopt enabling regulations and establish incentives for inter-municipal cooperation</strong></td>
<td>Medium Term</td>
<td>Economies of scale and improved services</td>
</tr>
<tr>
<td><strong>Ensuring sustainability of subnational debt</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Review framework for borrowing to ensure fiscal responsibility</td>
<td>Short Term</td>
<td>Ensuring sustainability of subnational debt</td>
</tr>
<tr>
<td>Develop systems (with properly digitized budget reports) that the Ministry of Finance can use to monitor local finances, especially subnational debt</td>
<td>Medium Term</td>
<td>Prevent local fiscal crises</td>
</tr>
</tbody>
</table>

Note: Highest priority actions are bolded.
1. INTRODUCTION AND MACROECONOMIC CONTEXT

A. INTRODUCTION AND COUNTRY CONTEXT

1.1 This report reviews intergovernmental fiscal relations in Moldova and recommends ways to improve the efficiency and equity of local public finance, while maintaining fiscal sustainability. It is part of programmatic fiscal work aimed at assisting the Government of Moldova by providing a review of its public expenditures and budget, as well as recommendations to improve the efficiency and equity of fiscal policy.

1.2 Local public authorities are responsible for meeting key public service delivery needs. They play a major role in education and bear primary responsibility for urban and rural functions such as water supply and local road construction and maintenance. The quality of these services is important for the poor, most of whom live in underserved rural areas\(^1\). Education is an important determinant of economic mobility, while living in rural areas is associated with a lower likelihood of moving out of poverty. There are large inequalities\(^2\) in access to public services such as improved water and sanitation resources, education and health. While Moldova’s recent economic performance reduced poverty and promoted shared prosperity, continued progress towards these goals should be supported in a fiscally sustainable way, by maintaining macroeconomic stability, fostering strong private-sector led growth, and improving the efficiency of public programs. To this end, intergovernmental fiscal relations have a role to play to reduce inequalities in the quality of public services and help enhance human capital and access to markets.

1.3 But local authorities are unable to fulfill this role due to their sub-optimal size, inadequate financial capacity, and low administrative capacity. The high fragmentation of Moldova’s administrative-territorial organization results in poor efficiency of expenditures at the subnational level. The intergovernmental transfer system is insufficiently transparent and discourages local governments from raising their own-source revenues. Problems with public investment management are heightened at the local level.

1.4 The Government of Moldova is reforming intergovernmental fiscal relations, as part of broader commitments under the National Decentralization Strategy (2012). A package of amendments was adopted by Parliament in November 2013. These amendments aim to reduce political influence over grant allocations and eliminate disincentives for local governments to raise their own revenues and rationalize their expenditures. They set new rates for sharing national taxes with the two tiers of local government, introduce formulas for transfers

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\(^1\) Poverty is mostly rural in Moldova. Rural poverty rates remain high at 30 percent (to compare with 10 percent in urban areas in 2010).

\(^2\) In water and sanitation, both urban and rural infrastructure is in an advanced state of disrepair, but inadequate resources and capacity constrain spending in areas where the need is most significant. In recent years, geographic disparities have increased, to the detriment of secondary and tertiary cities. Inequality in access to sewage is high: 90 percent of those with no access to sewage live in rural areas, and only about 5 percent of the rural population is connected to sewage systems. In rural areas, access to markets, health and education are also hampered by the particularly poor state of local roads: only 22 percent are in fair condition and the rest in poor to bad condition.
to local governments and remove subordination in financial relations between top and bottom-tiers of local government.

1.5 **The pace of implementation of reforms is uncertain.** Full implementation of the new amendments to the law on local public finance was delayed to 2015, while they applied in 2014 to three pilot raions and the Municipality of Chisinau. Upcoming national and local elections further question the implementation of these reforms, as well as broader administrative territorial reforms envisaged in the national decentralization strategy.

1.6 **Political uncertainty is high.** There are differing views in society on the appropriate direction, pace and depth of reforms. These are reflected in differences not only between the majority and the opposition but also within the ruling coalition, and have hampered reforms. Tensions led to the resignation of the Government after a no-confidence vote in March 2013. In May 2013, the Parliament elected a new Prime Minister who has formed a government from the ruling coalition. Parliamentary elections are planned by the end of 2014, and local elections during 2015.

**B. MACROECONOMIC AND FISCAL TRENDS AND OUTLOOK**

**Recent economic developments**

![Figure 1.1: GDP Growth, 2001-2013](image)

**Figure 1.2: GDP Growth Decomposition**

![Figure 1.2: GDP Growth Decomposition](image)

**Source:** National statistics.

**Source:** National statistics and World Bank staff estimates.

1.7 **As a small open economy in which agriculture has a significant role, Moldova’s growth performance has been strong but volatile.** The economy recovered from the 2008-09 global economic crisis with average annual GDP growth exceeding 5 percent over 2010-13. However, growth has been volatile, reflecting vulnerability to climatic and global economic conditions (Figure 1.1). In 2012, GDP contracted by 0.7 percent, as the economy was hit by a drought-induced contraction in agriculture (-22.3 percent) and weaker external demand due to

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3 On average, agriculture accounted for 12.5 percent of GDP in 2010-2013.
the Eurozone crisis. Finally, in 2013, growth rebounded, driven by a record harvest in agriculture, with GDP increasing by 8.9 percent. Food processing and machinery led manufacturing growth, which stood at 8.8 percent. Private consumption was the main growth driver on the expenditure side, fueled by remittances and wage growth (Figure 1.2).

Table 1.1: Main Macroeconomic Indicators, 2009-2013

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Real economy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal GDP, MDL billion</td>
<td>60.4</td>
<td>71.9</td>
<td>82.3</td>
<td>88.3</td>
<td>99.9</td>
</tr>
<tr>
<td>Real GDP, percent change</td>
<td>-6.0</td>
<td>7.1</td>
<td>6.8</td>
<td>-0.7</td>
<td>8.9</td>
</tr>
<tr>
<td>Imports, percent volume change</td>
<td>-23.6</td>
<td>14.3</td>
<td>19.7</td>
<td>2.2</td>
<td>5.5</td>
</tr>
<tr>
<td>Exports, percent volume change</td>
<td>-12.1</td>
<td>13.7</td>
<td>27.4</td>
<td>1.7</td>
<td>10.7</td>
</tr>
<tr>
<td>Unemployment rate, percent</td>
<td>6.4</td>
<td>7.4</td>
<td>6.7</td>
<td>5.6</td>
<td>5.1</td>
</tr>
<tr>
<td>GDP deflator, percent change</td>
<td>2.2</td>
<td>11.1</td>
<td>7.2</td>
<td>7.9</td>
<td>4.5</td>
</tr>
<tr>
<td>CPI (eop), percent change</td>
<td>0.4</td>
<td>8.1</td>
<td>7.8</td>
<td>4.1</td>
<td>5.2</td>
</tr>
<tr>
<td><strong>Fiscal Accounts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenditures, percent GDP</td>
<td>45.3</td>
<td>40.8</td>
<td>39.0</td>
<td>40.1</td>
<td>38.7</td>
</tr>
<tr>
<td>Revenues, percent GDP</td>
<td>38.9</td>
<td>38.3</td>
<td>36.6</td>
<td>38.0</td>
<td>37.0</td>
</tr>
<tr>
<td>General Government Balance, percent GDP</td>
<td>-6.3</td>
<td>-2.5</td>
<td>-2.4</td>
<td>-2.1</td>
<td>-1.8</td>
</tr>
<tr>
<td>PPG debt(^1) (eop), percent GDP</td>
<td>29.0</td>
<td>31.9</td>
<td>30.4</td>
<td>33.2</td>
<td>31.9</td>
</tr>
<tr>
<td><strong>Selected Monetary Accounts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base Money, percent change</td>
<td>-3.8</td>
<td>18.2</td>
<td>14.1</td>
<td>23.5</td>
<td>29.2</td>
</tr>
<tr>
<td>Credit to non-government, percent change</td>
<td>-5.0</td>
<td>12.7</td>
<td>15.0</td>
<td>16.1</td>
<td>18.6</td>
</tr>
<tr>
<td>Interest (key policy interest rate), percent</td>
<td>5.0</td>
<td>8.0</td>
<td>8.5</td>
<td>4.5</td>
<td>3.5</td>
</tr>
<tr>
<td><strong>Balance of Payments</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Account Balance,(^2) percent GDP</td>
<td>-8.2</td>
<td>-7.7</td>
<td>-11.3</td>
<td>-6.8</td>
<td>-4.8</td>
</tr>
<tr>
<td>Imports, percent GDP</td>
<td>73.4</td>
<td>78.7</td>
<td>86.0</td>
<td>83.9</td>
<td>81.9</td>
</tr>
<tr>
<td>Exports, percent GDP</td>
<td>36.8</td>
<td>39.4</td>
<td>45.0</td>
<td>43.4</td>
<td>44.1</td>
</tr>
<tr>
<td>Foreign Direct Investment, percent GDP</td>
<td>2.5</td>
<td>3.3</td>
<td>3.5</td>
<td>2.1</td>
<td>2.6</td>
</tr>
<tr>
<td>Gross Reserves(^3), million US$, eop</td>
<td>1480</td>
<td>1717</td>
<td>1965</td>
<td>2515</td>
<td>2820</td>
</tr>
<tr>
<td>In months of next year’s imports</td>
<td>4.4</td>
<td>3.4</td>
<td>3.9</td>
<td>4.7</td>
<td>5.0</td>
</tr>
<tr>
<td>Remittances, percent change, USD</td>
<td>-36.2</td>
<td>12.6</td>
<td>18.2</td>
<td>10.8</td>
<td>9.6</td>
</tr>
<tr>
<td>External Debt, percent GDP</td>
<td>79.6</td>
<td>81.0</td>
<td>76.4</td>
<td>82.1</td>
<td>83.4</td>
</tr>
<tr>
<td>Exchange Rate, MDL/US$ (average)</td>
<td>11.1</td>
<td>12.4</td>
<td>11.7</td>
<td>12.1</td>
<td>12.6</td>
</tr>
<tr>
<td><strong>Memo:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nominal GDP, US$ million</td>
<td>5437</td>
<td>5813</td>
<td>7016</td>
<td>7284</td>
<td>7933</td>
</tr>
</tbody>
</table>

Source: National authorities, WB staff calculations.
Notes: \(^1\) includes the state debt, debt of national bank, debt of administrative-territorial units, debt of public institutions, debt of majority state owned companies;\(^2\) based on standard representation of current account.\(^3\) Gross Reserves in months of next year’s imports is the ratio of total gross reserves to estimated next year’s average monthly import.

1.8 Moldova’s recent economic performance reduced poverty and promoted shared prosperity. The national poverty and extreme poverty rates\(^4\) fell from 30.2 percent and 4.5

\(^4\) The National Bureau of Statistics calculates national poverty indicators based on the Household Budget Survey. The extreme poverty line represents the monetary value of food items only, defined in terms of the minimum of daily calories intake, equal to 2.282 kcal per household member per day, adjusted to the adult equivalent.
percent in 2006 to 16.6 percent and 0.6 percent respectively in 2012, making Moldova one of the world’s top performers in terms of poverty reduction. Similarly, consumption growth among the bottom 40 percent of the population outpaced average consumption growth: estimates for 2006-11 suggest an annualized overall growth in consumption of 2.9 percent over the period, as compared to 5.8 percent for the bottom 40 percent (see Figure 1.3). These developments were driven by economic growth and the associated growth in labor earnings, as well as by an increase in private transfers such as remittances.

**Figure 1.3: National poverty rates in Moldova, percent**

![Graph showing national poverty rates in Moldova, percent](image)

*Source: National authorities, World Bank ECATSD*

1.9 **In this context, improved macroeconomic management has strengthened Moldova’s ability to deal with shocks.** Supported by an IMF program until April 2013, macroeconomic management has improved in recent years. Moldova’s policies of maintaining low fiscal deficits, flexible exchange rates and inflation targeting have reduced key macroeconomic risks. Since 2010, the National Bank of Moldova (NBM) has allowed greater flexibility of the exchange rate and has been implementing a policy shift toward inflation targeting. The NBM maintained consumer inflation within the target range of 5+/−1.5 percent for two years (Figure 1.4).

**Figure 1.4: Selected monetary indicators**

![Graph showing selected monetary indicators](image)

**Figure 1.5: Current account balance and external debt, percent of GDP**

![Graph showing current account balance and external debt, percent of GDP](image)

*Source: National authorities, World Bank staff calculations*

1.10 **The current account deficit narrowed to single digits, while the National Bank of Moldova (NBM) managed to boost foreign exchange reserves.** From 11.3 percent of GDP in 2011, the current account deficit narrowed to 6.8 percent in 2012 and 4.8 percent in 2013, as exports grew and import growth was contained (Figure 1.5). The inflow of remittances reached a record high level in 2013, largely driven by the CIS countries. However, in early 2014, remittance growth appeared to be weaker, as economic activity in Russia slowed down. Foreign
Direct Investment recovered to 2.6 percent of GDP. Overall, the external position enabled accumulation of foreign exchange reserves to 5 months of import cover.

1.11 **Nevertheless, recent developments in the banking sector are increasing risks.** The banking system’s liquidity ratio was at 34.7 percent by the end of the first quarter of 2014, largely unchanged during the past three years. The system’s capital adequacy ratio stood at 23.5 percent, well above the 16 percent required by NBM. The ratio of nonperforming loans, which peaked at 17.8 percent of total loans in mid-2010, decreased gradually over the last three years, reaching 13.2 percent as of 2014Q1. However, there is substantial variation among individual banks on each of these three prudential ratios. In addition, a domestic systemically important bank, partially owned by the state (Banca de Economii, BEM), has been experiencing serious asset quality and undercapitalization problems. Furthermore, weak governance throughout the system, as shown by the lack of shareholder transparency and protection of property rights, restraints further growth and competition in the financial sector. In addition, a Constitutional Court’s ruling on October 1, 2013 on the NBM Law raised risks to the effectiveness of monetary policy and banking regulation, although the government has put in place mitigating legislative measures and committed to further remedial actions. 

1.12 **The adjustment program started in 2010 restored fiscal sustainability.** After 2009, mounting imbalances and the impact of the crisis necessitated a sizeable fiscal adjustment. This was achieved under a three-year IMF-supported program (2010-13), which included tax policy reform and a rationalization of current expenditures while increasing public investment and targeted social spending. With an already high tax burden and weaknesses in revenue collection, adjustment has mostly been achieved by containing expenditures (Figures 1.6 and 1.7). Public wages declined from double digits to about 8.4 percent of GDP in 2013. The government also undertook reforms to improve efficiency, especially in the education sector (school network and staff rationalization) and in social assistance (introduction of a new targeted program and reduction of previous categorical compensation schemes). As a result, the fiscal deficit of the general government has declined by over 4 percentage points of GDP in the four years since 2009, to 1.8 percent in 2013. Moldova has managed to restrain transfers and public consumption (including the wage bill and purchases of goods and services). Meanwhile, capital expenditures increased to 7.1 percent of GDP in 2013.

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5 This Constitutional Court decision rendered all regulatory actions of the National Bank vulnerable to a stay, pending final decision of the court including those on monetary and currency policy, special administration of banks and other important supervisory measures. While the decision did not curtail NBM from exercising its powers under the law, it could affect the effectiveness of monetary policy and bank regulation measures. Legislative amendments adopted in December 2013 clarify the legal framework to strike a balance between the effectiveness of NBM’s actions as a central bank, supervisor, and resolution authority, and its accountability through judicial review. The authorities are working to continue strengthening the framework for contesting the NBM acts.

6 Against the backdrop of a political crisis, the final review was not completed as government took fiscal measures that put at risk the gains under the program in achieving and maintaining fiscal discipline, and as disagreements emerged on how to deal with the BEM’s financial situation. At the authorities’ invitation, an IMF mission discussed a possible precautionary program during January 2014 but no agreement was reached.
Macroeconomic and fiscal outlook

1.13 **GDP growth is expected to decelerate to 2 percent in 2014, before increasing to 4-4.5 percent in 2015-2017.** After its exceptional performance in 2013, growth in the agricultural sector is projected to be modest in 2014, leading to an overall growth deceleration. In addition, Russian-Ukrainian tensions led to lower growth expectations in Russia and Ukraine, which are among the main trade partners of Moldova. This will translate into slower export demand for Moldova’s goods and services. Sluggish investment demand would reduce potential for remittance inflows from the CIS countries (which account for some two thirds of the total). From 2015 onwards, exports, remittances and investments in Moldova could benefit from stronger economic activity in major trading partners, including the EU.

1.14 **A modest widening of the current account deficit can be expected, but it is projected to remain in single digits by the end of 2017.** In the base case, inflows of private and public external debt will ensure financing of this deficit and will allow a moderate increase in foreign exchange reserves.

1.15 **The budget deficit is projected to remain under 3 percent in the medium term.** The adopted Budget Law for 2014 targets a 2.6 percent deficit. After parliamentary elections, the budget deficit is projected to remain below 3 percent of GDP by the end 2016.

1.16 **However, maintaining fiscal sustainability will be challenged by the institutional and social context.** On the expenditure side, social and demographic challenges will intensify, including existing commitments on social insurance and pensions. Ageing will increase the pensions bill and fuel the demand for healthcare services, while public sector spending on health remains inefficient. Intergovernmental fiscal relations should be reformed in a way that is consistent with fiscal discipline and reduces the inefficiencies stemming from small, fragmented local governments. Further expenditure adjustments are needed to make space for pressing public investment needs in the medium term. On the revenue side, institutional weaknesses are
reflected in tax collection issues. The scope for raising overall revenues is limited, as tax revenue is already high as a percent of GDP, in comparison with countries in the region. Limited possibilities for raising revenues include real estate taxes, VAT (because it is the largest revenue source and there are numerous exemptions with zero or reduced rates) and excise taxes. Nevertheless, the main (albeit longer-term) possibilities for raising revenues should not be through raising taxes, which can reinforce compliance problems, but improving collection and therefore administration. Moreover, Moldova could experience a decline in external assistance, making it important to preserve fiscal sustainability in the medium term. To ensure fiscal discipline and efficient management of public financial resources, a draft Law on public finance and fiscal responsibility has been prepared and presented in Parliament. However, it remains under discussion and fiscal rules remain to be agreed.

1.17 While the Debt Sustainability Analysis (DSA) indicates a low risk of debt distress, overall debt sustainability is vulnerable to adverse exogenous shocks. The Joint IMF-WB DSA (2014) suggests that the overall public sector debt dynamics are sustainable. While the DSA framework points to a low risk of debt distress over the medium term, stress tests indicate that debt sustainability is vulnerable to exogenous shocks (Figure 1.8). All external debt indicators remain under the thresholds under the standard bound tests and alternative scenarios (Figure 1.9). However, there are risks related to the significant private external debt as well as potential recapitalization needs in the banking system. Given Moldova’s vulnerability to shocks, continued fiscal discipline is critical to ensure sustainability.

![Figure 1.8: Public and Publicly Guaranteed Debt Dynamics as a Share of GDP](image)

![Figure 1.9: External PPG Debt Dynamics as a Share of GDP](image)


1.18 Macroeconomic policies are expected to remain adequate, but with significant risks rooted in the volatile external environment, the financial sector and the domestic political cycle. Monetary policy is anticipated to remain prudent, with inflation projected to remain within the target range of 5 percent +/- 1.5 percent. In the short term, monetary policy is expected to take a more neutral stance (compared to easing during 2013). Meanwhile, the risks are non-trivial. A much sharper slowdown of economic activity in the eastern neighbors cannot be ruled out. Significant risks exist in the banking sector due to governance, credit quality, liquidity and capital adequacy concerns at select banks and due to concerns over effective enforcement powers of the regulator. In addition, upcoming parliamentary and local elections could disrupt achievements in macroeconomic management and reduce its flexibility.
2. CURRENT SUBNATIONAL FISCAL FRAMEWORK AND KEY ISSUES

A. ADMINISTRATIVE-TERRITORIAL ORGANIZATION OF MOLDOVA

Structure of Government

2.1 Moldova’s structure of government is comprised of three tiers:

- Republican (national) government
- 35 top tier jurisdictions, including 2 cities (Chisinau and Balti), 32 raions and ATU Gagauzia
- 896 bottom tier jurisdictions (primăria or mayoralty), including 844 rural municipalities and 52 cities

2.2 This administrative structure is the result of the reversal of a previous reform of administrative-territorial organization in 2001. The reform in 1998/1999 had sought to resolve the problems associated with sub-optimally small local governments by returning to the pre-soviet administrative-territorial structures, while reinforcing self-administration. Moldova adopted the European Charter of Local Self Administration in 1998, and raions were restructured into larger counties (județe). At the same time, the minimum population size of communes was increased to 2,500. However, decentralization of functions was not followed by adequate funding, public services were often grouped in new county ‘capitals’ (thus increasing distances that citizens had to travel to obtain services) and the reform was reversed by the Communist Party in 2001 (see Box 1). The reform was justified by the need to reduce the number of local government employees and to bring services closer to the people.

2.3 Moldova is also divided into three regions but these are not administrative-territorial units. The three regions – North, South and Central – do not represent juridical persons and they are mostly used in the context of planning, evaluating and implementing regional development policies.

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7 In Moldova’s legislation, local government at the bottom tier is referred to as the first tier, while the top tier is called the second tier. An ATU is an autonomous territorial unit with a special legal statute.
8 Not including 5 raions in Transnistria.
9 Autonomous Territorial Unit Gagauzia is an autonomous region of Moldova with special legal status, formed after Moldova became independent. Gagauzia is divided into three districts comprising around 23 communes. It has its own governor, as well as a local parliament.
10 The district of Dubăsari, comprised of two villages, does not have any cities.
Population and land area

2.4 A significant feature of the current territorial organization is an excessive level of fragmentation at the bottom tier of local self-government. There are 35 top-tier jurisdictions and 896 bottom-tier jurisdictions for a total population of 3.6 million in 2013 (Table 2.1). Fragmentation further increased after the 2003 reorganization from ten județe to the old raion structure, which was accompanied by the splitting of some bottom-level municipalities. The average municipality has about 4,000 residents, much lower than in most European countries (Figure 2.2).

Table 2.1: Population of subnational jurisdictions, 2013

<table>
<thead>
<tr>
<th></th>
<th>Chisinau</th>
<th>Balti</th>
<th>ATU Gagauzia</th>
<th>Raions</th>
<th>Bottom tier jurisdictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>771,947</td>
<td>128,667</td>
<td>156,228</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>32</td>
<td>52</td>
<td>844</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average population</td>
<td>73,667</td>
<td>12,146</td>
<td>2,394</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>28,139</td>
<td>653</td>
<td>218</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>119,177</td>
<td>37,285</td>
<td>11,733</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: National statistics.
2.5 **Most municipalities have a very small population.** About 93 percent of the rural municipalities have fewer than five thousand residents, and 50 percent of rural municipalities have fewer than two thousand residents (Figure 2.1). 12 29 percent of bottom-tier municipalities (totaling just ten percent of the population living in bottom-tier municipalities) have fewer than one thousand five hundred residents, which is by law, the minimum population required to establish a new settlement (although there are exceptions). 13 It is worth noting that this fragmentation does not derive from sparse settlement patterns: many of the municipalities with fewer than 1,500 inhabitants are geographically close or adjacent. 14 89 percent of bottom-tier municipalities have fewer than five thousand residents.

![Figure 2.1: Population and land area of rural municipalities (bottom tier)](image)

*Source: National statistics.*

2.6 **Moldova’s municipalities are also small in terms of land area.** The median land area of about 3 sq. km puts its average municipality size way below its peers. 15 Municipal land area is also much lower than in EU member states (Figure 2.2).

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12 Economies of scale in the delivery of local services are reported to be mostly exhausted at an average size of 10,000 inhabitants, even though there are some special services, such as urban transportation and solid waste brown fields, where economies of scale improve up to populations of 100,000 inhabitants (Lago-Peña and Martínez-Vázquez, 2013).

13 Article 17 of the Law on the territorial-administrative structure of the Republic of Moldova (2001) stipulates that a *primăria* “is set up if, as a rule, it has a population size of at least 1,500 inhabitants and has sufficient financial means to maintain the mayor’s office personnel and social sector institutions”. The Law also states that: “In some exceptional cases, the Parliament may establish through an organic law the set up of an independent administrative-territorial unit with a population size smaller than the one stipulated...” [above].


15 We benchmark Moldova against middle-income countries in Europe and Central Asia (including former soviet-union and new EU member state countries): Armenia, Azerbaijan, Belarus, Bulgaria, Croatia, Czech Republic, Cyprus, Estonia, Hungary, Latvia, Lithuania, Malta, Moldova, Poland, Romania, Slovakia, Slovenia and Ukraine. For these countries, the average land area of the bottom tier jurisdictions is 190 sq. km., while the average population is 19 thousand persons.
Recent trends in subnational expenditures

2.7 Significant fiscal consolidation after 2009 has been mirrored by expenditure restraint at the subnational level. Central government expenditures (excluding social funds) contracted from 17.2 percent of GDP in 2008 to 14.5 percent of GDP in 2013. Total subnational expenditures declined from 10.8 percent of GDP in 2009 to 9 percent in 2013. This was achieved by reducing the subnational wage bill as a share of GDP from a high of 5.9 percent in 2009 to pre-crisis levels at 4.4 percent in 2013 (Figure 2.3). Also, subnational capital expenditures declined, from an average 2.1 percent of GDP in 2003-2008 to an average 1.3 percent of GDP in 2009-2013. Subnational subsidies to enterprises (which hitherto mostly went to trolleybuses and other municipal passenger transport vehicles) also declined, from 1.4 percent of GDP in 2007 to 0.9 percent of GDP in 2013, as well as social benefits.
Given the current institutional setup, the potential for further consolidation in subnational recurrent expenditures is limited. First, subnational governments lack discretion over public wages, which is their largest category of expenditures. Second, expenditures at the subnational level tend to be less discretionary (as in the case of education or social entitlements). Also, the reduction in capital expenditures at the subnational level cannot be sustained given substantial infrastructure deficiencies, especially in rural municipalities. Third, political economy might have a role, as subnational authorities have narrower interests than the central government concerning overall budget balance and fiscal discipline. This raises the issue of possible trade-offs between higher levels of fiscal decentralization and fiscal flexibility and sustainability in the medium term. Overall, real subnational expenditures (total and recurrent) have been highly procyclical, with a coefficient of correlation with real GDP above 0.90 over the 2003-2013 period.

Responsibilities of tiers of Government and expenditure assignments

Subnational expenditures account for an average 25% of general government expenditures. Subnational governments account for over two thirds of general government expenditures in the education, and utilities and housing sectors, about half of expenditures in the sectors of environmental protection, recreation and culture, and about one quarter of expenditures in transport, and law enforcement (Figure 2.4). At the same time, subnational governments account for less than ten percent of public expenditures on healthcare.
Role of raion local governments

2.10 Until the recent centralization of schools to the raion level, the bulk of subnational expenditures were carried out by the highly fragmented bottom-tier jurisdictions. Thus, outside the cities of Chisinau and Balti, over eighty percent of subnational expenditures took place at the bottom-tier level in 2012. Raion governments account for about 5 percent of local expenditures on utilities and housing. With the implementation of the school financing reform, half of expenditures at the local level are now at the top-tier level (raions) (Figure 2.5). In particular, raion governments accounted for two-thirds of subnational expenditures on education in 2013 (to compare with less than ten percent in 2012). Raion governments also continue to dominate subnational expenditures on social benefits. This distribution of expenditures between top- and bottom-tier jurisdictions is consistent with mandated expenditure assignments (see table 2.2).

Figure 2.4 Central and local government expenditures in percent of GDP, by sector, 2013

<table>
<thead>
<tr>
<th>Sector</th>
<th>Central Government</th>
<th>Local Government</th>
</tr>
</thead>
<tbody>
<tr>
<td>Culture, arts, sports and youth activities</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Agriculture</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Utilities and housing</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Healthcare</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Social care and social insurance</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Transports, communications and IT</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Education</td>
<td>100%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Source: Moldova BOOST
Note: Excludes social insurance fund and health insurance fund spending.

Figure 2.5 The role of raion governments, percent of subnational expenditures, 2013

Source: Moldova BOOST
Note: These figures do not include the cities of Chisinau and Balti

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16 This is typical of the “Russian matryoshka-doll” type of hierarchical vertical structure inherited by many countries in the region. In that system, all the “outer dolls” are typically hollow, mostly playing the liaison role between the center and the bottom tier, with the latter being responsible for the delivery of most public services.

17 Despite the recent de facto reassignment of general education from the bottom to the top tier of local government, the legal delineation of functions between the two tiers has not been updated yet. The legislative amendments to the Law on Local Public Finance merely replaced the article on expenditures assignments with a reference to unspecified “legislation on local public administration and administrative decentralization.”
<table>
<thead>
<tr>
<th>Function</th>
<th>Responsibilities of the bottom tier</th>
<th>Responsibilities of raions and ATU Gagauzia</th>
<th>Cities of Chisinau and Balti</th>
</tr>
</thead>
<tbody>
<tr>
<td>General public services</td>
<td>Self-administration powers</td>
<td>Self-administration powers</td>
<td>Self-administration powers</td>
</tr>
<tr>
<td>Defense, public order and safety</td>
<td>Fire protection; designated aspects of military administration</td>
<td>Public order protection; coordination, organization and supervision designated aspects of military administration</td>
<td>Fire protection; Public order protection; coordination, organization and supervision designated aspects of military administration</td>
</tr>
<tr>
<td>Economic affairs</td>
<td>Construction and maintenance of local public roads, streets, bridges within the community area; local public transport</td>
<td>Raion-wide roads construction, operation and repairs; raion-wide local public transport</td>
<td>Construction and maintenance of local public roads, streets, bridges within the community area; local public transport</td>
</tr>
<tr>
<td>Environmental protection</td>
<td>Waste water management; Waste management; public sanitation</td>
<td>None</td>
<td>Waste water management; public sanitation</td>
</tr>
<tr>
<td>Housing and communal services</td>
<td>Urban planning; construction and maintenance of water supply, and sewage systems; maintenance of parks, green spaces, and cemeteries; social housing construction and maintenance</td>
<td>Construction of long-distance gas pipelines and other heat and power facilities of local importance</td>
<td>Urban planning; construction and maintenance of water supply and sewage systems, cemeteries; and social housing construction and maintenance</td>
</tr>
<tr>
<td>Health</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Recreation, culture, and religion</td>
<td>Maintenance of libraries, museums, other culture institutions and carrying out programs in culture, physical culture and sports</td>
<td>Coordination and implementation of sports and youth programs; maintenance of theaters and TV stations; Grants to the bottom tier earmarked for personnel expenses in libraries and other culture institutions other than museums</td>
<td>Maintenance of libraries, museums, theaters, TV stations, other culture institutions and carrying out of exhibitions, programs in culture, physical culture and sports;</td>
</tr>
<tr>
<td>Function</td>
<td>Responsibilities of the bottom tier</td>
<td>Responsibilities of raions and ATU Gagauzia</td>
<td>Cities of Chisinau and Balti</td>
</tr>
<tr>
<td>Education</td>
<td>Construction, operation, and maintenance of kindergartens</td>
<td>Construction, operation, and maintenance of primary schools, gymnasiums, lyceums, after-school and other educational institutions, boarding schools, colleges</td>
<td>Construction, operation, and maintenance of primary schools, gymnasiums, lyceums, after-school and other educational institutions, boarding schools, colleges</td>
</tr>
<tr>
<td>Social protection</td>
<td>Residual authority not covered by other tiers</td>
<td>Social protection and maintenance of social institutions</td>
<td>Residual authority not covered by other tiers</td>
</tr>
</tbody>
</table>

Fiscal equity

2.11 There is a considerable degree of equity in fiscal outcomes among raions. Total expenditures per capita on average deviate by only nine percent from the average for all raions (coefficient of variation 0.09, see table 2.3). The lowest variation is observed for education expenditures (coefficient of variation 0.08) and the highest variation is observed for law enforcement (coefficient of variation 0.60). Nevertheless, at the extremes, per capita expenditures range from MDL 2,021 in Ocnița raion to MDL 3,192 in Dubasari raion. Per capita expenditures in the City of Chisinau are 50 percent higher than the raion average.

Table 2.3: Disparities in per capita expenditures at the top tier, by type of jurisdiction, MDL per capita, 2012

<table>
<thead>
<tr>
<th>Type of jurisdiction</th>
<th>Public order</th>
<th>Education</th>
<th>Recreation</th>
<th>Social care</th>
<th>Transport</th>
<th>Utilities and housing</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier-1 cities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chisinau</td>
<td>154</td>
<td>1,689</td>
<td>171</td>
<td>302</td>
<td>405</td>
<td>484</td>
<td>266</td>
<td>3,471</td>
</tr>
<tr>
<td>Balti</td>
<td>126</td>
<td>1,489</td>
<td>171</td>
<td>203</td>
<td>43</td>
<td>310</td>
<td>136</td>
<td>2,477</td>
</tr>
<tr>
<td>Consolidated raions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>77</td>
<td>1,467</td>
<td>145</td>
<td>177</td>
<td>35</td>
<td>93</td>
<td>366</td>
<td>2,360</td>
</tr>
<tr>
<td>Minimum</td>
<td>46</td>
<td>1,178</td>
<td>104</td>
<td>105</td>
<td>11</td>
<td>41</td>
<td>265</td>
<td>2,021</td>
</tr>
<tr>
<td>Maximum</td>
<td>327</td>
<td>1,708</td>
<td>230</td>
<td>650</td>
<td>73</td>
<td>260</td>
<td>473</td>
<td>3,192</td>
</tr>
<tr>
<td>Coef. of Variation</td>
<td>0.60</td>
<td>0.08</td>
<td>0.22</td>
<td>0.51</td>
<td>0.41</td>
<td>0.48</td>
<td>0.14</td>
<td>0.09</td>
</tr>
</tbody>
</table>

Source: Ministry of Finance

2.12 At the bottom-tier level, the allocation of total spending also appears quite even within both the groups of rural municipalities and bottom-tier cities (Table 2.4). Total expenditures per capita on average deviate by 27 percent from the bottom-tier average. Furthermore, the average per capita expenditures in bottom-tier cities are roughly the same as the average for rural municipalities. While rural municipalities spend more in per capita terms on public administration, this is offset by lower per capita expenditure on communal amenities (such as transport or utilities).

18 For international comparison, the coefficient of variation for per capita local expenditures in Moldova (0.09) is much lower than in Belarus’s raions (0.18 estimated by Martinez-Vazquez and Timofeev, 2014), the United States’s counties (0.33 estimated by Martinez-Vazquez and Timofeev, 2010), Macedonia’s municipalities (0.41 estimated by Cyan et al. 2012), China’s county-level jurisdictions (0.65 estimated by Tsui, 2005), Georgia’s municipalities (0.70 estimated by Martinez-Vazquez and Timofeev, 2013) and Russia’s county-level jurisdictions (1.32 estimated by Martinez-Vazquez and Timofeev, 2008).
Table 2.4: Disparities in per capita expenditures at the bottom tier, by type of jurisdiction, MDL per capita, 2012

<table>
<thead>
<tr>
<th>Type of jurisdiction</th>
<th>Public order</th>
<th>Education</th>
<th>Recreation</th>
<th>Social care</th>
<th>Transport</th>
<th>Utilities/housing</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottom-tier cities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>0</td>
<td>1,313</td>
<td>84</td>
<td>33</td>
<td>17</td>
<td>182</td>
<td>239</td>
<td>1,867</td>
</tr>
<tr>
<td>Minimum</td>
<td>0</td>
<td>282</td>
<td>6</td>
<td>1</td>
<td>0</td>
<td>42</td>
<td>73</td>
<td>578</td>
</tr>
<tr>
<td>Maximum</td>
<td>4</td>
<td>2,153</td>
<td>534</td>
<td>140</td>
<td>302</td>
<td>1,327</td>
<td>782</td>
<td>3,933</td>
</tr>
<tr>
<td>Coef. of Variation</td>
<td>4.14</td>
<td>0.33</td>
<td>0.96</td>
<td>0.99</td>
<td>2.76</td>
<td>1.03</td>
<td>0.61</td>
<td>0.34</td>
</tr>
<tr>
<td>Rural municipalities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>0</td>
<td>1,333</td>
<td>89</td>
<td>29</td>
<td>12</td>
<td>61</td>
<td>313</td>
<td>1,838</td>
</tr>
<tr>
<td>Minimum</td>
<td>0</td>
<td>3</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>73</td>
<td>165</td>
</tr>
<tr>
<td>Maximum</td>
<td>69</td>
<td>4,102</td>
<td>704</td>
<td>1,108</td>
<td>379</td>
<td>747</td>
<td>2,993</td>
<td>5,294</td>
</tr>
<tr>
<td>Coef. of Variation</td>
<td>7.43</td>
<td>0.26</td>
<td>0.68</td>
<td>2.92</td>
<td>3.26</td>
<td>1.25</td>
<td>0.69</td>
<td>0.27</td>
</tr>
</tbody>
</table>

Source: Ministry of Finance
Note: These figures do not include the cities of Chisinau and Balti

The differences in the expenditure patterns of rural and urban municipalities (bottom-tier cities) reflect different expenditure needs but also issues related to diseconomies of scale. Urban municipalities can enjoy lower unit costs due to a large size allowing them to take advantage of economies of scale but also they need to spend more on urban infrastructure to deal with urban congestion. Rural municipalities typically need to spend less on infrastructure but are also less able to do so because their smaller size and the associated lack of economies of scale in public administration leaves them with less funds for infrastructure and communal amenities; this translates into the deterioration of infrastructure, particularly roads and utilities.

**Economies of scale and potential gains from consolidation**

2.13 The small size of municipalities suggests potentially large economies of scale for their own functions. Per capita expenditures on the own-functions of bottom-tier local governments are higher where the population is small and this is particularly true for municipalities with fewer than two thousand residents. The municipality with the highest per capita expenses (Marcauti municipality in Dubasari district) also has the smallest population (778 persons). Higher per capita expenses could reflect either higher costs for the same level of services or more extensive and/or a better quality of services. However, the analysis of the distribution of expenditures indicates that per capita expenditures on own functions decrease with population size due to the presence of fixed costs, accounting for about 40 percent of average local expenditures at the bottom tier (see Appendix B). The finances of local governments are constrained by the high share of personnel expenditure, which does not leave space for other expenditures (see Figure 2.6).
Figure 2.6: Possible economies of scale

Own functions expenditures per capita, bottom-level municipalities, 2013

Personnel expenditures, as a share of total exp., all cities and municipalities, 2013

Note: Own functions include all functions other than education and social protection.
Source: MOF, National Statistics

2.14 Rationalizing the territorial administrative structure could yield savings that could be used for much-needed improvements in public services at the local level. By taking the average per capita costs for own functions in 30 municipalities with around 5,000 residents and applying it to the population of 796 municipalities below that size (accounting for 63 percent of both bottom-tier population and expenditures on own functions), one can estimate potential savings from consolidation of municipalities to that minimum size to represent 6.2 percent of bottom-tier expenditures on own functions (or 0.1% of GDP). This estimate is likely to have a downward bias and thus is likely to be a lower bound of potential savings. Indeed, larger municipalities are able to provide a larger scope of services (and better quality of services) than very small municipalities and thus their per capita expenditures capture both lower costs and better services. Greater levels of territorial rationalization could bring in larger savings to be used for improving the quality of public services at the local level. Enforcing the legal threshold of 1,500 residents in a municipality through consolidation/amalgamation would bring smaller savings.

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19 At the same time, these calculations do not take into account possible transitory costs of consolidation of small local authorities.
20 A large number of empirical studies that have looked for evidence of economies of scale for local government services show that most economies of scale are exhausted for local governments with populations over 10,000 residents. Economies of scale means the average cost decreases as the volume of service provision increases; for example lower per-students costs of education in municipalities with more students.
21 By taking the average per capita costs for own functions in 30 municipalities with around 1,500 residents and applying it to the smaller municipalities, a rough estimate of the potential saving from consolidation would be about 32 million MDL or 20 percent of expenditures in these small municipalities. Because these 256 municipalities account for only 10 percent of bottom-tier expenditures on own functions, the savings would be approximately 6.4 percent of expenditures on own functions.
The current relatively small size of rural municipalities calls for a review of the functional organization of other public services that exhibit significant economies of scale (water supply, solid waste disposal, public transit systems). Some forms of public transportation services could also show the presence of economies of scale for larger populations.

Existing raions could become the basis for reassignment of some functional expenditure responsibilities. The median population of about 75 thousand puts Moldova’s average raion in a good position to provide some services at optimal cost. At the same time, Moldova’s raions are also very diverse in population size, ranging from 28 thousand to 156 thousand (see Figure 2.7).

In the education sector, a positive development has been the recent transfer of responsibility for general education from the bottom to the top tier of self-government units. Recognizing the demographic decline that reduced the student population by more than half since 1991, reforms were initiated with pilots in 2009 to improve the efficiency of resource allocation in primary and secondary education, with measures such as the introduction of per population and 13 percent of bottom-tier expenditures on own functions, these potential savings from consolidation represent only 2.7 percent of bottom-tier expenditures on own functions (or 0.04% of GDP).

For some services, such as healthcare, even the raion level is too small to effectively plan the health delivery system.
student financing (nationwide since 2013), needs-based contracting of retired staff and the change in the ownership of schools from bottom-tier municipalities to raion councils (in 2012), thus enabling the rationalization of the school network and staff. Through school network optimization, increases in class size and student-teacher ratio, the existing facilities are used more efficiently, freeing up resources for quality-enhancing inputs. Reforms of financing in the preschool sector have yet to be undertaken, and could help stimulate enrollment.

2.18 **In the transport sector, it is also planned to decentralize the management of local roads to raions.** The management of the local roads system in Moldova is in transition. Currently, the State Roads Administration (SRA) is responsible for the network of national and local roads. However, the top tier local authorities are involved with the identification and implementation of repair works on local roads. Some local roads are in the process of being identified as “regional roads”: these are roads connecting at least four communities, estimated to account for about half of the current length of local roads. These regional roads will remain the responsibility of SRA. The remaining local roads will be the responsibility of raions. Bottom-tier municipalities will continue to be responsible for communal roads and municipal streets.

2.19 **However, raion level governments also have capacity shortfalls.** The raion executive administrations have few technical staff, relative to the State Roads Administration. The decentralization of responsibility to them for local roads will introduce new and additional tasks for which they will need significant support.

2.20 **In some services, such as water and sewerage services, substantial benefits could be gained from the regionalization of services**, independently of broader administrative reform. Reflecting Moldova’s administrative organization, the sector is fragmented into a myriad of inefficient small-scale service providers. Organizational cooperation between utilities, the establishment of adequately sized regional utilities could thus, with strong leadership from central government, help reap the benefits of regionalization and improve affordability and equity of access to services.

2.21 **The reassignment of functional expenditure responsibilities from the bottom tier to raions is not a substitute for administrative-territorial reform.** Although closer to optimality from a production efficiency and economy of scale viewpoint for certain sectors, the size of raions may raise some issues with respect to representation and civic participation. From this perspective, other than for the few selected services requiring large populations to reach optimal scale (water supply, solid waste disposal, transit), the reassignment of functional expenditure responsibilities and regionalization of services may not substitute for the much needed consolidation at the bottom tier.

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23 Between 2009/10 and 2013/14, 131 schools (9 percent of the total) have been closed.
24 The challenges in the preschool sub-sector are different from those of primary and secondary education. There is a lack of “seats” in preschools, whereas the network of primary and secondary schools is oversized. Current allocations for pre-school are on a per-child basis (number of children aged 3 to 6 in the community, irrespective of attendance). The allocations have been revised to account for enrollment.
25 *i.e.* the grouping of service providers into a single administrative or physical structure to improve service and efficiency. Regionalization options should be assessed on the basis of a careful technical-economic analysis, taking into account local political constraints.
26 World Bank, 2013b.
C. LOCAL GOVERNMENT REVENUE

Recent trends in subnational revenue

2.22 Local government revenues fall into three main categories:

(a) Own-source revenues (including property taxes, other local taxes and local charges and fees)

(b) Shared revenues (from national taxes collected in the territory of the recipient local jurisdiction, such as the PIT, the CIT or the VAT)\(^{27}\)

(c) Grants from the central government

2.23 **Own-source revenues (non-tax\(^ {28}\), property taxes and other local taxes) have been declining both as a share of total subnational revenues and as a percentage of GDP over the past decade** (Figure 2.8). Revenue from recurrent taxes on immovable property plummeted from 0.7% of GDP in 2003 to 0.3% of GDP in 2013.

![Figure 2.8: Composition of subnational revenues, 2003-2013](image)

*Source: Ministry of Finance*

*Note: Property Taxes include taxes on immovable property and land. Non-Tax includes road tax, local taxes and other taxes. Grants include the revenues of special funds, revenues of special means, transfers from the state budget and transfers from the republican fund of social support.*

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\(^{27}\) Under derivation-based sharing, national government taxes are collected by the national tax authorities and then partially (or in some cases, fully) allocated to the budget of the local government in whose territory collection takes place. Being a form of intergovernmental transfers, derivation-based sharing of revenues from national taxes is defined in the corresponding section below.

\(^{28}\) Non-tax revenues refer to the “other revenue” category in the IMF GFS classification. It includes asset income (interest, dividends, rent), sales of goods and services, administrative fees and charges, fines, and private donations.
Own revenue

2.24 According to the Law on Local Public Finance\(^{29}\), own sources of local revenues for the bottom tier are comprised of:

- local levies and charges established by local councils as provided by the law;
- privatization tax (1 percent of the value of divested municipal property);
- business license fee (patent);
- rent from leasing land and other municipal assets;
- real estate tax;
- fees for services.

For the top-tier of local governments, the own sources of revenues are defined as:

- levy on the use of natural resources;
- privatization tax;
- fees for services.

2.25 The Tax Code authorizes several local revenue instruments (listed in Table 2.5). In particular, local authorities have the discretion to levy any of the allowed charges and are also free to set the rates virtually without any ceilings or floors (except for the real estate tax and levies on the use of natural resources). At the same time, the tax base is defined in the national legislation and the actual administration of these revenue instruments is carried out by the national revenue authority with the exception of tax bills for real estate taxes, which are issued by local authorities everywhere outside the City of Chisinau. Outside Chisinau, virtually all property taxes and over eighty percent of other own-source revenues are raised at the bottom tier.

\(^{29}\) No. 397-XV of October 16, 2003, last amended on November 1, 2013
Table 2.5: Local taxes and levies

<table>
<thead>
<tr>
<th>Tax name</th>
<th>Who can introduce</th>
<th>Who defines the base</th>
<th>Who sets the rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levy on the use of natural resources</td>
<td>National legislation</td>
<td>National legislation (volume/value of extracted/harvested resources; value of mineral exploration services)</td>
<td>National legislation</td>
</tr>
<tr>
<td>Real estate tax</td>
<td>National legislation</td>
<td>National legislation (taxable value through mass appraisal; local authorities can provide hardship relief for a given year)</td>
<td>National legislation (0.5-3 mils for urban properties; 1-3 mils for agricultural properties; 1 mil for other properties)</td>
</tr>
<tr>
<td>Levy on the ownership of vehicles*</td>
<td>Local authorities</td>
<td>National legislation (engine capacity, vehicle weight, axle weight)</td>
<td>Local authorities (in MDL per cu. cm, tonne)</td>
</tr>
<tr>
<td>Fee for landscaping and street cleaning in populated areas</td>
<td>Local authorities</td>
<td>National legislation (number of employees)</td>
<td>Local authorities (in MDL per employee)</td>
</tr>
<tr>
<td>Fee for the right to hold local auctions and lotteries</td>
<td>Local authorities</td>
<td>National legislation (sales)</td>
<td>Local authorities (%)</td>
</tr>
<tr>
<td>Levy on advertisement services (except outdoors)</td>
<td>Local authorities</td>
<td>National legislation (value of services)</td>
<td>Local authorities (%)</td>
</tr>
<tr>
<td>Fee for the right to use local symbols</td>
<td>Local authorities</td>
<td>National legislation (sales)</td>
<td>Local authorities (%)</td>
</tr>
<tr>
<td>Fee on retail outlets</td>
<td>Local authorities</td>
<td>National legislation (area, type of goods or services)</td>
<td>Local authorities (in MDL per outlet)</td>
</tr>
<tr>
<td>Market fee</td>
<td>Local authorities</td>
<td>National legislation (area)</td>
<td>Local authorities (in MDL per sq. meter)</td>
</tr>
<tr>
<td>Levy on temporary accommodation</td>
<td>Local authorities</td>
<td>National legislation (value of services)</td>
<td>Local authorities (%)</td>
</tr>
<tr>
<td>Health resort fee</td>
<td>Local authorities</td>
<td>National legislation (value of services)</td>
<td>Local authorities (%)</td>
</tr>
<tr>
<td>Levy on passenger transportation</td>
<td>Local authorities</td>
<td>National legislation (number of vehicles, capacity)</td>
<td>Local authorities (in MDL per vehicle)</td>
</tr>
<tr>
<td>Fee for parking of motor vehicles</td>
<td>Local authorities</td>
<td>National legislation (area)</td>
<td>Local authorities (in MDL per sq. meter)</td>
</tr>
<tr>
<td>Parking fee</td>
<td>Local authorities</td>
<td>National legislation (number of parking spots)</td>
<td>Local authorities (in MDL per spot)</td>
</tr>
<tr>
<td>Dog tag fee</td>
<td>Local authorities</td>
<td>National legislation (number of dogs)</td>
<td>Local authorities (in MDL per dog)</td>
</tr>
<tr>
<td>Levy on street vending outlets</td>
<td>Local authorities</td>
<td>National legislation (area, type of goods or services)</td>
<td>Local authorities (in MDL per outlet)</td>
</tr>
<tr>
<td>Fee for waste collection</td>
<td>Local authorities</td>
<td>National legislation (number of residents)</td>
<td>Local authorities (in MDL per person)</td>
</tr>
<tr>
<td>Outdoor advertisement fee</td>
<td>Local authorities</td>
<td>National legislation (area of the advertisement space)</td>
<td>Local authorities (in MDL per sq. meter)</td>
</tr>
</tbody>
</table>

Source: Tax Code (Sections VI and VII)
Note: *Local Levy on the ownership of vehicles was abolished in 2013. All revenues in this table are received by local governments.
2.26 **Business taxes are the most utilized taxes raised by local governments.** Out of the 18 local own taxes and fees (over which local governments have some form of discretion), the most utilized of them are essentially business taxes (real estate tax, landscaping fee, retail outlet fee, etc., see table 2.6). In contrast, the former local fee on vehicle ownership—abolished in 2013—had been utilized only by a handful of municipalities. Furthermore, for many of these revenue instruments, there are some municipalities where they generate non-negligible amounts of revenue.

<table>
<thead>
<tr>
<th>Revenue source</th>
<th>Average</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Coef. of Variation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levy on the use of natural resources</td>
<td>0.89</td>
<td>0.00</td>
<td>673.38</td>
<td>25.44</td>
</tr>
<tr>
<td>Real estate tax</td>
<td>101.34</td>
<td>0.00</td>
<td>622.02</td>
<td>0.55</td>
</tr>
<tr>
<td>Levy on the ownership of vehicles*</td>
<td>0.12</td>
<td>0.00</td>
<td>28.97</td>
<td>11.37</td>
</tr>
<tr>
<td>Fee for landscaping and street cleaning in populated areas</td>
<td>7.50</td>
<td>0.00</td>
<td>58.26</td>
<td>0.78</td>
</tr>
<tr>
<td>Fee for the right to hold local auctions and lotteries</td>
<td>0.20</td>
<td>-37.81</td>
<td>22.92</td>
<td>11.21</td>
</tr>
<tr>
<td>Levy on advertisement services (except outdoors)</td>
<td>0.12</td>
<td>-3.63</td>
<td>6.78</td>
<td>5.24</td>
</tr>
<tr>
<td>Fee for the right to use local symbols</td>
<td>0.11</td>
<td>-2.10</td>
<td>40.40</td>
<td>14.28</td>
</tr>
<tr>
<td>Fee on retail outlets</td>
<td>16.97</td>
<td>0.00</td>
<td>197.77</td>
<td>1.00</td>
</tr>
<tr>
<td>Market fee</td>
<td>0.68</td>
<td>-0.78</td>
<td>60.79</td>
<td>5.37</td>
</tr>
<tr>
<td>Levy on temporary accommodation</td>
<td>0.30</td>
<td>0.00</td>
<td>137.95</td>
<td>15.99</td>
</tr>
<tr>
<td>Health resort fee</td>
<td>0.26</td>
<td>0.00</td>
<td>158.89</td>
<td>21.08</td>
</tr>
<tr>
<td>Levy on passenger transportation</td>
<td>0.25</td>
<td>0.00</td>
<td>22.18</td>
<td>6.37</td>
</tr>
<tr>
<td>Fee for parking of motor vehicles</td>
<td>0.03</td>
<td>-0.72</td>
<td>8.21</td>
<td>11.41</td>
</tr>
<tr>
<td>Parking fee</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Dog tag fee</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Levy on street vending outlets</td>
<td>0.00</td>
<td>-4.32</td>
<td>4.00</td>
<td>54.47</td>
</tr>
<tr>
<td>Fee for waste collection</td>
<td>0.02</td>
<td>0.00</td>
<td>9.32</td>
<td>21.06</td>
</tr>
<tr>
<td>Outdoor advertisement fee</td>
<td>0.29</td>
<td>0.00</td>
<td>17.23</td>
<td>4.87</td>
</tr>
</tbody>
</table>

*Source:* Prepared by the authors based on Ministry of Finance data

*Note:* These figures do not include the top tier governments

2.27 **Overall, local revenue sources are under-utilized and could be significantly increased.** The yields of local revenue sources are lower in Moldova compared to other countries in the region (Figure 2.9). Property taxes were at 0.3 percent of GDP, less than
half collection levels in Ukraine and Georgia, and a quarter of those in Bulgaria. Likewise, nontax revenue collections at the local level average 0.4 percent of GDP, to compare with 1.4 percent in other Eastern European countries. In addition, many of the other tax sources now assigned are significantly underused.

![Figure 2.9: Yield of conventional sources of local revenue, percent of GDP (2012)](image)

Source: IMF GFS, WEO, World Bank
Note: Non-tax revenues refer to the “other revenue” category in the IMF GFS classification. It includes asset income (interest, dividends, rent), sales of goods and services, administrative fees, fines, and private donations.

2.28 Although the current formal revenue assignments are consistent with theory and best practice, they fall short of providing a significant revenue base for local governments. Consistent with theory and best practice, current local taxes are assigned from a closed explicit list of taxes and tax autonomy is granted for setting tax rates (often between maximum and minimum rates) and not on setting tax bases, which are uniform and set by national law.\(^{30}\) The legal maximum and minimum rates for real estate taxes fall well within the international practice. There may be some issues regarding the setting of other rates—for example lack of maximum and minimum limits on any local revenue instrument other than the real estate tax.\(^{31}\) Chapter 3 discusses possible tax instruments that could be considered to offer local governments more substantial revenue potential.

2.29 Tax administration and enforcement issues are also likely playing a significant role in weak local revenue collections. Currently all local taxes in Moldova

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\(^{30}\) For an extended discussion of these best practices and principles see Martinez-Vazquez (2014).

\(^{31}\) The advantage of setting a minimum rate is that it forces all jurisdictions to use that particular tax. The setting of a maximum rate may avoid political conflict in situations where some jurisdictions may focus on just some particular taxes as the main sources of revenue; also the excess burdens of taxation or efficiency losses increase rapidly with the tax rate, and therefore a wider portfolio of taxes is more desirable from an economic efficiency perspective. On the other hand, on January 28, 2014, the Constitutional Court of the Republic of Moldova declared unconstitutional those provisions in the country's 2014 budget-and-tax policy which stipulated the restringing of local taxes.
are administered and collected by the central tax administration agency. This can be justified given the low levels of administrative capacity of many sub-national governments but this tends to apply much less to larger and especially urban jurisdictions. It can also be the case that depending on the tax, because of information processing and similar issues, the central authorities may be more efficient administrators than even large urban local governments. The other important counter factor however is the low incentives that central authorities may have to collect small taxes whose revenues go fully to the local governments; the more qualified personnel and the scarce resources available are more likely to be devoted to enforcing large national taxes.

2.30 Until the adoption of the recent amendments, the Law on Local Public Finance had disincentives for raising own revenues: actual (past) local revenues in excess of 120% of the assessed expenditure needed to be transferred to the higher-level budget (from municipalities to raions and from raions to the center). Also, for the purpose of grant allocations, locally-derived revenues were projected based on past collections so that higher revenue collections today meant higher revenue projections in the future and as a result smaller transfers.

2.31 In addition (and in the absence of a hard budget constraint), political considerations may not have encouraged local governments to raise their own revenue. With highly contested elections and unstable coalition politics, local authorities can be reluctant to make unpopular decisions to raise their own taxes, for example using the allowed higher tax rates. Even though the central government has assigned numerous tax and fees to the local governments very few have any significant revenue potential; the property tax can be used much more effectively but it is a highly unpopular tax and with less revenue potential than for example personal income taxes. Local governments do not use all the sources available to them in the law or are not using higher tax rates when they are available.

**Intergovernmental transfers**

2.32 Local governments are assigned a share of revenues from national taxes (PIT) on a derivation basis, that is, the revenues are retained where they collected. Top-tier local governments also receive 50% of the revenue from the road tax. In addition, ATU Gagauzia is allowed to retain 50% of revenues collected in its territory through VAT and excises. Under this derivation-based sharing, national government taxes are collected by the national tax authorities and then partially (or in the case of PIT, fully, until the recent amendments established a new formula for revenue sharing)

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32 The political economy considerations involved in raising local own revenues leads in most countries to a low effort outcome, and one which tends to be supported by both central and local authorities. Central governments are reluctant to devolve taxing powers for fear of having to compete with local governments for the same tax bases and/or fear of losing control of fiscal policy. At the same time, local authorities tend to be reluctant to take on the responsibility of making politically unpopular decisions to raise their own taxes, for example using the allowed higher tax rates. Local governments may also be disincentivized for using their own tax and non-tax revenue sources because some of those revenues may be clawed back, that they are penalized by central authorities for example with lower transfers. Thus, using revenue sharing and other intergovernmental transfers for the most part to finance local governments comes out as a preferred solution for all the parties concerned.

33 Until 2008, local governments were also assigned a share of revenues from the Corporate Income Tax.
allocated to the budget of the local government in whose territory collection takes place. This revenue sharing can occur based on uniform sharing rates (so that all lower-level government jurisdictions receive the same share of revenues collected within their jurisdiction as for the 50% of the road tax revenues) or based on a differentiated sharing rate structure, in which different jurisdictions receive a different percentage of the shared revenue source. Thus, the national government shares 100% of PIT revenues with raion governments at the point of collection, which in turn can share these revenues with constituent localities, usually allowing a smaller share to be retained by raion seats and other bigger cities.

2.33 **The derivation-based sharing of revenues from national taxes is complemented with vertical transfers from the government level immediately above to cover the gap between assessed expenditure needs and the projected yield of own and assigned revenues.** Until the recent amendments to the Law on Local Public Finance, the total pool of transfer funds had been comprised of negative transfers from rich jurisdictions and topped up with annual appropriations from the national budget. Thus, the overall size of the available pool of funds had been ad hoc. As can be seen from Figure 2.8, subnational grants exhibited two major increases from 4.4 percent of GDP in 2005 to 5.2 percent in 2006 and then again from 5.6 percent of GDP in 2008 to 6.3 percent in 2009. These increases coincided with wage raises and in fact the total amount of grants from the central government closely tracks the total amount of the subnational wage bill. Aside from the wage hikes, grant increases also partially compensated local governments for revenues lost with the reduction in shared revenue from the corporate income tax during 2006-2012.  

2.34 **Under the Law on Local Public Finance (before the November 2013 amendments), expenditure needs are assessed by multiplying population by a per capita expenditure norm set for each sector and adjusted for local cost differences.** In practice, per capita norms have been used for some sectors, such as education, while for some other sectors (e.g. culture) expenditure norms have been defined per established staff positions and units of physical infrastructure.

2.35 In addition to derivation-based revenues sharing and general-purpose transfers, the Law on Local Public Finance also allows for special purpose transfers in the case of delegating additional functions to local authorities and as compensation for revenue losses or additional expenses inflicted on local budgets as a result of changes to the national legislation made in the course of a fiscal year. In practice, a large part of special purpose transfers have been grants for capital expenditures, which are discussed next in Section 2.D.

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34 The CIT rate was lowered from 28 percent in 2001 to 15 percent in 2006 and to zero in 2008.
D. Public Investment at the Local Level

Trends in local capital expenditures

2.36 Capital expenditures in Moldova are increasingly executed at the central rather than the local level. General government capital spending increased as a share of GDP, while subnational capital spending remained stable, at 1.3 percent of GDP in 2013. As a result, the share of general government capital spending executed at the local level has declined over the past 5 years to 20 percent in 2013 (Figure 2.10).

2.37 Repairs are the largest capital expenditure category at the local level. Local governments spent 36 percent of their capital budget on investments and 45 percent on major (capital) repair works over 2008-2013 (Figure 2.11).

2.38 At the local level, capital expenditures are mostly in the education, utilities and housing, and transport sectors. About one third of local capital spending over 2008-2013 went to the education sector, 20 percent to utilities and housing, and 11 percent to transport (Figure 2.13).

Source: Moldova BOOST
2.39 **Over-execution of the local capital budget is the norm.** The local capital budget was over-executed by a wide margin in 2013 (74 percent) (Figure 2.12).

**Allocation and management of local capital expenditures: key issues**

2.40 **Investment and repair needs are considerable.** Rural water and sanitation infrastructure is in an advanced state of disrepair: 44 percent of registered water supply systems and 40 percent of waste water management systems require full rehabilitation (Figure 2.14). In the health sector, local authorities (which have ownership of health facilities but no explicit mandate related to the state of the infrastructure) have invested very little, and capital spending has been mostly limited to refurbishments of primary health care centers, family doctor offices and other outpatient rural facilities. In education, raising pre-school enrollment rates (as called for in MDGs and Government strategies) will also require investments. Lastly, addressing the poor condition of local roads is instrumental to increasing access to markets as well as to social, educational and medical services in rural areas. Recently, increased funding (especially for national roads) has halted declining road condition. Still, in 2012, only 22 percent of local roads were in very good, good or fair condition, while the rest was in poor to bad condition. Better roads are important for the success of reforms in the health and education sector, as school network optimization and public hospital network restructuring may increase distances to public services for some citizens.

![Figure 2.14: Deficiencies in road and water and sanitation infrastructure](image)

**Local Roads**

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Good</td>
<td>100</td>
<td>80</td>
</tr>
</tbody>
</table>

**Pipe Breaks per Km/year**

<table>
<thead>
<tr>
<th>Country</th>
<th>2006</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russia</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hungary</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Poland</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Belarus</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lithuania</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Kyrgyz</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Moldova</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
| Source: Government of Moldova, World Bank

Note: “Good” designates roads classified as “Good” or “Very Good” or “Fair”; “Poor” designates roads classified as “Poor”, “Bad” or “Very bad”

2.41 **The available resources are not commensurate with those needs.** The current level of water and sanitation capital spending is not sufficient to meet the Government’s strategic objectives of halting the deterioration of existing infrastructure, let alone to increase the supply and the quality of services. Similarly in the transport sector, current funding levels are far short of what is required to adequately maintain the existing...
system. At the same time, given low traffic levels, justifying any substantial increase in funding for local roads on economic grounds is difficult, especially given Moldova’s fiscal constraints and numerous priorities.

2.42 **Local capital spending is mostly funded through transfers from the central government.** 78 percent of local capital expenditures were financed through budget funds transfers from central government over 2008-2013, 9 percent were financed by local authorities and budget organizations’ own revenues (and debt), and about 5 percent from transfers from special funds (Social Fund, Ecological Fund, Energy Efficiency Fund). The remaining 9 percent of capital spending were externally-funded (Figure 2.16).

![Figure 2.15: Financing sources of capital spending by local public authorities (2010-2013)](image)

**Source:** Moldova BOOST

2.43 **In addition, the Regional Development Fund finances, manages and executes projects of regional significance.** Regional Development Fund spending amounted to 191 million lei, or 0.2 percent of GDP in 2013. Funding was mostly in the transport sector (39 percent in 2011-2013), followed by utilities and housing (31 percent).

### Key issues in public investment management at the local level

2.44 **The weaknesses in Moldova’s public investment management cycle are particularly pronounced for projects at the local level.** There are important deficiencies with project preparation and appraisal, selection and budgeting, as well as implementation and monitoring. Funds (such as the road fund or the regional development fund) have better appraisal and selection processes but also have limited

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35 The Road Fund is used by the State Road Administration for maintenance of local roads. In 2013, spending of the road fund on maintenance of local roads was 445 million lei (0.4 percent of GDP).

36 World Bank, 2013
capacity. These funds have specific processes\textsuperscript{37}, and skills to apply them have been assembled or developed (sometimes with donor support).

\textbf{Appraisal}

2.45 \textbf{The domestically-funded part of capital investment is not subject to adequate appraisal.} The propensity to under-estimate costs, indicating optimism bias in project preparation is especially evident for projects of local authorities. In recent years, estimated cost at inception was exceeded in about a third of local investment objects, by 60 percent on average. There were cost over-runs in 20 percent of local government capital repair objects, and these over-runs averaged nearly 50 percent. Capacity for appraisal is very weak, including at the raion level.\textsuperscript{38}

\textbf{Project selection and budgeting}

2.46 \textbf{The allocation of capital grants to local authorities shows insufficient prioritization and is criticized for lacking transparency}\textsuperscript{39}. In its annual letter on budget formation, the Ministry of Finance provides some instructions and forms to local governments requesting capital grants. The Ministry of Finance then draws a list of projects submitted as part of the state budget law. Although the budget legislation does not contain specific norms or criteria for selection of projects, the ministry of finance gives some priority to completing ongoing activities. However, most local objects proposed by Government in the initial budget submission (mostly to complete ongoing activities) are dropped by Parliament, while those kept suffer budget cuts greater than 50 percent. Parliament introduces a multitude of small projects, the majority of which are small capital repairs to existing facilities. As a result of the process described above, resources are spread thinly on local investment objects. There is a proliferation of small capital objects with low value at the local level. The average estimated cost on local objects dropped from MDL 13.5 million in 2001 to MDL 222,000 in 2011.

2.47 \textbf{Capital expenditure allocations do not reduce inequalities in infrastructure access and quality.} Capital expenditures are not greater in more deprived areas, as measured by the Multiple Deprivation Index calculated by the Ministry of Economy for 2009 (latest year available), an indicator aiming at identifying the most deprived areas in Moldova and tackling inequalities in development across and within raions\textsuperscript{40}. There is no

\textsuperscript{37} For example, the Regional Development Fund includes an assessment of project concepts in its processes for assessing competitive submissions for funding.

\textsuperscript{38} Another indirect factor which may have a negative impact on the quality of project preparation (including value calculation), appraisal and implementation is the outdated regulatory framework for design and construction, the so-called construction and installation work norms and other similar documents.


\textsuperscript{40} While there is no representative survey that would allow estimating poverty rates or other indicators of socio-economic living conditions at the subnational level, studies on poverty in Moldova indicate that the phenomenon is still prevailing in small rural areas with poorly developed infrastructure. The Multiple Deprivation Index (MDI) is a multidimensional indicator encompasses a range of social, economic, business and housing issues into a single estimate for each locality in Moldova. The index ranges from 1 (which is equivalent to the most deprived area) to 843 (which is equivalent to the least deprived area). Higher values of the Multiple Deprivation Index correspond to better socio-economic and business environment in localities. It should be noted that the Index does not represent any measure of
correlation between per capita capital expenditures and local area multiple deprivation (Figure 2.16).

Figure 2.16: Local area deprivation and per capita capital expenditures

\[
y = -0.0097x + 106.23 \\
R^2 = 0.0003
\]

Source: Ministry of Economy, Moldova BOOST

2.48 The lack of continuity of funding for ongoing projects lowers the efficiency and effectiveness of public expenditure by lengthening implementation periods and delaying service improvements. Funding for ongoing capital activities is not continuous. During 2006-2011, between 30 and 50 percent of executed expenditures was effected on new rather than ongoing objects. Budget allocations to a given object were interrupted for a quarter of local capital repair objects for which there were multi-year allocations. As a result of inconsistent funding, a significant overhang of slow-moving, ongoing local objects remain to be cleared.

2.49 Resource allocations by raion governments to bottom tier municipalities are also not prioritized and lacking transparency. In the local roads sub-sector, unlike the procedures in place for national road rehabilitation and upgrading projects, there is no system for the prioritization of road works on local roads.

**Project implementation and monitoring**

2.50 Weaknesses in project implementation are particularly evident in infrastructure sectors. In the water and sanitation sector, Moldova has not been able to fully utilize available external funding due to project implementation weaknesses.

2.51 Insufficient human resources and poor capacity for development, implementation and monitoring of local investment projects is a significant

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There is a bottom up planning system that informs the prioritization process for road repairs and improvements but the decisions are viewed as subjective, lacking transparency and not based on consistent criteria.
constraint. For higher quality of strategic planning and systemic management of investments, the local public authorities require specialized staff. However, since sample organizational charts do not include positions for investment and management specialists, costs for such positions are not accounted for in the calculation of transfers. Given the low level of own revenues, even in the local governments where such positions have been introduced, the number and quality capacity of such staff are poor.

2.52 Monitoring systems are especially weak for local government projects. Monitoring is uniquely concerned with financial monitoring and largely passive. While more than 90 percent of total executed capital expenditure is included in the Capital Investment Division’s financial monitoring of spending by objects (which only includes project start date, initial cost estimate and disbursements), coverage is complete only at central level. Local level coverage is more uneven and is about a third of overall investment and repair spending. The budget procedures do not require consideration of the monitoring data in budget drafting for the next year. Furthermore, the Ministry of Finance lacks a data base on the number and qualitative characteristics of incomplete objects that were previously funded out of the budget, further limiting accountability, despite earlier costs incurred. Finally, projects are not evaluated after implementation.

E. SUBNATIONAL DEBT

2.53 The Law on Local Public Finance allows municipal borrowing for capital purposes both domestically and abroad, as well as issuing guarantees on borrowing (to municipal enterprises and fully or majority municipal-owned enterprises) as long as debt service, including repayment of principal and interest, is below 20 percent of annual municipal revenues.

2.54 Municipalities can also take short-term borrowing to cover current expenditures with the obligation to repay them by the end of the fiscal year as long as the total short-term borrowing is below 5 percent of municipal revenues in that year.

2.55 Current subnational debt ratios are increasing but low. Total outstanding local government debt was 0.7% of GDP at the end of 2013. This debt is in large part owed by the municipality of Chisinau. 42

2.56 Local governments also have arrears with creditors and providers. According to Ministry of Finance data, as of end 2013, local governments had unpaid bills totaling 37.9 million MDL (or about 0.3 percent of subnational revenues), down from 147.8 million MDL at the end of 2011. Almost half of outstanding payables are for goods and services, while another third corresponds to capital investment projects. The municipality of Chisinau, in particular, regularly accumulates arrears to district heating companies. The district heating sector is being restructured and it is planned that the municipality will divest its stake in the district heating companies.

42 In 2013, the municipality of Chisinau took loans from EBRD and EIB totaling EUR48 million.
3. REFORMING LOCAL PUBLIC FINANCE AND INTERGOVERNMENTAL FISCAL RELATIONS

A. REFORM OBJECTIVES

3.1 Recent fiscal decentralization reforms were undertaken as part of the implementation of the National Decentralization Strategy. The specific objective for fiscal decentralization in the strategy (approved by law in 2012) is to improve the current system of local finances “to ensure the financial autonomy of local public authorities, maximizing the efficiency and equity in allocation of resources while maintaining fiscal discipline.” Accordingly, the strategy plans to:

(i) strengthen the local revenue base and the related decision making autonomy;

(ii) reform the system of transfers and shared taxes, establishing it on a basis of objectivity and predictability, separating the budgets of the first and second levels of local public authorities, to ensure a minimum level of services, provided that the system does not discourage the own fiscal effort and the rational use of resources;

(iii) strengthen the autonomy and financial management of LPAs, ensuring financial discipline, increasing transparency and public participation.

3.2 The amendments to the Law on Local Public Finance and the Tax Code approved by Parliament on November 1, 2013 aim to reduce political influence over grant allocations, and eliminate disincentives for local governments to raise their own revenues and rationalize their expenditures. The reforms introduce a system of special-purpose transfers for delegated and shared (central-local) functions (education, and social protection), accounting for two thirds of local expenditures; currently these functions are funded through general revenue sharing and gap-filling transfers (see section 2.C above). For the remaining (own) local functions, intergovernmental financing will be coming in the form of general-purpose transfers. The Law does not explicitly define the objective of the general purpose transfers but they appear to aim at equalizing disparities in locally-derived (shared and indirectly own) revenue capacity.43 Currently the practice is equalizing norm-based needs combined with actual revenues, and in some

43 Actually, the law does not state an explicit intent of the general purpose grants. However, the explanatory notes accompanying the draft law link the proposed general purpose grants to the implementation of the priority actions in the National Decentralization Strategy aiming “to ensure a minimum level of services, conditioned that the system does not discourage the individual fiscal effort and the rational use of resources.” The formula includes the per capita amount of the local yield of the national PIT. To the extent that the PIT yield is very likely to be positively correlated with the local revenue base, it seems that the intent of the law is (at least indirectly) to equalize disparities in local tax capacity.
raions\textsuperscript{44} appears to have been also equalizing actual expenditures.\textsuperscript{45} Furthermore, the package of amendments removes the subordination in the financial relations between top and bottom tiers of subnational jurisdictions, sets sharing rules for revenues from the personal income tax (PIT), and defines formulas for the allocation of equalizing general-purpose transfers (on the bases of revenue capacity, and two main drivers of expenditure needs: population and land area).

**B. OVERVIEW OF RECENT FISCAL DECENTRALIZATION REFORMS**

**Revenue-sharing formula**

3.3 **The recent amendments introduce new rates of derivation-based sharing of revenue from the national PIT:**

- The City of Chisinau will receive 50% of the PIT revenue collected in its territory, excluding its bottom-tier municipalities;
- The City of Balti will receive 45% of the PIT revenue collected in its territory, excluding bottom-tier municipalities;
- 25% of the revenue will be allocated to the budget of the raion where collection takes place;
- 75% of the revenue will be allocated to the budget of the bottom-tier jurisdiction where collection takes place (except for raion government seats, which will only receive 20% of revenue collections with the remaining 55% accumulated in the national equalization fund).

3.4 Under the new formula, the total transfer fund is therefore to be formed with 50% of the PIT revenues collected in Chisinau’s territory, 55% of the PIT revenues collected in the territory of the City of Balti and 55% of PIT revenues collected in raion government seats. Thus, the determination of the total pool of transfers is to become rule-based.

3.5 **For general-purpose grants to bottom-tier local governments, the amendments introduce an allocation mechanism using an additive mathematical formula based on the population, land area and PIT revenue.\textsuperscript{46}** For general-purpose

\[ TE_i = \frac{w^1 \cdot FEB}{S} \cdot S_i + \frac{w^2 \cdot FEB}{P} \cdot P_i + \frac{w^3 \cdot FEB}{\sum (cf - cf_j)} \cdot [cf - cf_i], \]

where \( S_i \) and \( S \) stand for the land (surface) area of municipality \( i \) and the entire country respectively, \( P_i \) and \( P \) stand for the population of municipality \( i \) and the entire country respectively, \( cf \) stands for per capita revenue from PIT shared with municipality \( i \) on a derivation basis, \( cf \) stands for the PIT revenue benchmark set at the 1.3 national average, \( w^k \)'s are weights attached to the respective allocation factors, and FEB stands for the total amount of the equalization fund designated for this tier of local government.

\textsuperscript{44} Paragraph (4) of article 10 of the local public finance law says that raions should apply the same rules in dealing with municipalities as those applied by the central governments in dealing with raions. However, in practice some raions may implement different mechanisms.

\textsuperscript{45} As discussed further below, the standard international practice of general purpose transfers is to equalize disparities in revenue capacity and also disparities in expenditure needs.—as opposed to actual expenditures or revenues.

\textsuperscript{46}
grants to raions, an additive allocation formula is also introduced, but it uses only land area and population (not revenue capacity). An analysis of the formula is presented in Appendix A.

3.6 The law also introduces special-purpose transfers for education and other delegated functions (social benefits).47

3.7 The law also stipulates that Government can form a fund to compensate local governments that would stand to lose from the reform in the first two years of application. The compensation fund can amount to up to up to 1% of state budget revenues.

3.8 The new Law (incorporating the amendments voted in November 2013) is to be fully applied beginning in 2015. In 2014, the new legal amendments apply in only three “pilot” raions (Basarabeasca, Ocnita and Riscani) and the Municipality of Chisinau. For the rest of the raions, Balti municipality and ATU Gagauzia recent amendments will apply from January 1, 2015 whereas in 2014 the old mechanism of transfers is applied.

Subnational debt

3.9 The recent amendments change in a number of ways the legal framework for subnational debt. First, with the abolishment of the hierarchical structure of subnational governments, intergovernmental loans are not confined any longer to borrowing from the government level immediately above. This means that the new law allows bottom-tier jurisdictions to borrow from the central government or other bottom-tier governments. Furthermore, issuance of municipal bonds is now allowed for the bottom-tier jurisdictions, and now guarantee issuance is also allowed for the bottom-tier municipalities (to municipal enterprises and commercial enterprises whose capital is wholly or majority-owned by the municipality). For capital expenditures, the rule limiting debt service (including the payment of interest and repayment of principal) in any particular year to not exceed 20 percent of total annual municipal revenues remained. This rule has not been binding because the overall stock of debt has been well under the stated limits, even for the case of the Municipality of Chișinău.48 The rules on subnational debt do not place restrictions on foreign borrowing, which is laxer than is conventionally the case.49

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47 Before that, the law had mentioned special transfers for delegated functions, without mentioning what those functions were. In practice, education and social welfare had been financed by municipalities out of general revenue sharing and general purpose grants.

48 Supply–side constraints, lack of lenders, may also be reflected in these levels of total debt stocks; this is more likely to be the case for lower-tier local governments.

49 Typically, foreign borrowing is more restricted than domestic borrowing, requiring the prior permission from the central authorities, in this case the Ministry of Finance.
C. IMPLICATIONS OF RECENT AMENDMENTS TO THE LAW ON LOCAL PUBLIC FINANCE

3.10 The new additive formula makes the allocation of general-purpose grants more transparent and easy to understand. However, significant room is left for improving this recently amended structure.

3.11 The formula can be shown to be equivalent to narrowing the gap between a locality’s revenue capacity and its expenditure needs (defined through a standardized per capita financial norm and adjusted for differences in cost factors [population and land area]). This can be seen in appendix A. For this formula to accurately capture disparities between municipalities, the weights on the cost factors have to be close to the elasticity of actual local costs with respect to these cost factors.\(^\text{50}\)

3.12 Our analysis suggests that the legislated formula falls short of accurately capturing disparities between municipalities, especially for the bottom tier. The formula for bottom-tier local governments—assigning 30 percent weight to population, 10 percent to land area and 60 percent to the revenue gap—underweights the population factor and overweights the fixed cost term (which is part of the revenue gap factor in the new formula).\(^\text{51}\) (see Appendix A for a discussion of the formula). The positive weight to land area is not justified by historical elasticities of expenditure but was assigned to account for the need for local authorities to provide communal services.\(^\text{52}\)

3.13 By failing to adjust the compensation for per capita revenue capacity shortfalls for population size, the legislated formula essentially makes the compensation increasingly irrelevant to jurisdictions with larger populations and favors sub-optimally small municipalities. The legislated formula does not take into account population when adjusting the amount of the grant for differences in per capita revenue capacity (see Appendix A). This is unusual since a per capita shortfall in revenue capacity by definition requires compensation of that shortfall for each person and therefore has to be multiplied by the number of local residents. This also contrasts to the previous formula.\(^\text{53}\)

3.14 Overweighting of the fixed costs in the revenue-gap term of the new formula for the bottom tier also lowers incentives for the voluntary merger of two sub-optimally small municipalities. This is easy to see when considering two equally-poor and sub-optimally small municipalities. When being separate, each of them receives a fixed amount of compensation implied by the formula for low revenue capacity, which

\(^{50}\) Elasticity of expenditures with respect to a given factor is the percentage change in expenditures resulting from a percentage change in that factor. For more details, see Appendix C.

\(^{51}\) The legislated formula implies the weight on the population scale to be equal to \(w^3 \times N^2 \times (c_f - c_f)=0.6^2 \times 0.00179=0.96\). Thus the legislated formula puts six times more weight on the fixed costs than what is suggested by our estimations of cost elasticities (0.35:0.6 ratio instead of 0.35:0.65).

\(^{52}\) Note that having land area in the formula will not create an incentive for the merging of municipalities. If they merge, the joint municipality will receive the allocation based on land, which is just the sum of the respective allocations for the respective municipalities; that is, the land of the joint municipality will be just the sum of the land areas for the respective municipalities.

\(^{53}\) In the previous formula, the per capita gap is multiplied by the number of local residents to arrive at the total amount of grant.
depends on their per capita revenue but not on the size of the municipality. However, if they merge, the joint municipality will receive only one fixed amount while the allocation by other formula variables will not increase as the land and population of the joined municipality will be just the sum of these two variables for the two respective municipalities.\footnote{On the expenditure side, merging could however yield savings on administrative costs.}

3.15 The proxy for own-source revenue capacity could be improved by using the local yield of PIT\footnote{In a formula that would take into account population when accounting for the per capita revenue gap, as described above.} rather than retained PIT revenue, as is currently the case. While the local yield of PIT might be somewhat correlated with the revenue capacity for other (own) revenue instruments, it is less so for the revenue capacity measure used in the new formula due to differentiated rates for PIT revenue retention. Thus, a lower PIT retention rate set for raion seats, might reduce their potential revenue from PIT but not so for other own sources of revenues. While raion seats are allowed to retain three quarters less in PIT revenue than another municipality with the same PIT yield (20\% vs. 75\% retention rate), it does not mean that potential collections from other (own) revenue bases are three quarters lower than in the comparable municipalities. This is an important issue because, due to the scant yield of source-based PIT outside larger cities, own sources generate more revenue at the bottom tier than PIT retention.

3.16 For the allocation of grants to raions, the legislated formula underweights the population factor and fixed costs (see Appendix A and B for more detail). The legislated formula does not include any indicators of revenue capacity but only uses population with a weight of 0.6 and land area with a weight of 0.4.\footnote{Our estimation of elasticities for these factors suggests a negative relationship between land area and raion expenditures per capita. This suggests that historically more densely populated raions have had higher levels of expenditures per capita. At the same time, we find that the elasticity of raion expenditures with respect to the population scale is around 0.18. This suggests the presence of fixed costs all raions incur into regardless of the size of their population or land area. The estimated 0.18 elasticity means that these fixed costs account for about 18\% of an average raion budget (without education and social protection). In addition, our estimations imply that the weight on population should be one minus the sum of all other weights, that is 0.82 if land area is not used in the formula. A positive weight was assigned to land in the legislated formula to account for the need for local authorities to provide communal services.} An alternative closer to actual expenditure patterns could be to assign a 0.82 weight on population the remaining 0.18 of the total fund to be allocated as a fixed amount per raion (see appendix A).

**Expected distributional impact**

3.17 The legislated formula considerably narrows disparities among the bottom-tier municipalities resulting from the lopsided yield of the PIT revenue shared on a derivation basis (see table 7). The lopsidedness of the source-based PIT sharing is only marginally mitigated by lower retention rates set for raion government seats (as the coefficient of variation drops from 1.29 to 1.04). However, the disparity in local government revenue is further reduced by over 60 percent with the allocation of general purpose grants. In the next two columns, we attempt to predict the disparity in
expenditures on own functions of municipalities by taking into account the historical levels of other locally-derived revenues and capital grants respectively. If the local revenue-raising pattern does not change, then the ultimate disparity in own-function expenditures will be even lower than for the proposed allocation of PIT revenues and grants. This could be due to the fact that municipalities with historically lower yield of PIT might have had to exert greater effort to raise revenues from other sources. The predicted level of disparity is also lower than the disparity in historical expenditures on own functions of municipalities (all functions other than education, and social protection) as reported in the last column of table 3.1.

Table 3.1: Equalizing impact of the legislated grant formula, by type of LSG, MDL per capita, 2012

<table>
<thead>
<tr>
<th></th>
<th>PIT yield</th>
<th>PIT share</th>
<th>+ grants</th>
<th>+locally derived revenues</th>
<th>+capital grants</th>
<th>For reference: actual expenditures on own functions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Raions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>236</td>
<td>59</td>
<td>266</td>
<td>301</td>
<td>289</td>
<td>200</td>
</tr>
<tr>
<td>Minimum</td>
<td>142</td>
<td>35</td>
<td>70</td>
<td>102</td>
<td>120</td>
<td>106</td>
</tr>
<tr>
<td>Maximum</td>
<td>370</td>
<td>93</td>
<td>317</td>
<td>374</td>
<td>459</td>
<td>411</td>
</tr>
<tr>
<td>Coef. of Variation</td>
<td>0.23</td>
<td>0.23</td>
<td>0.15</td>
<td>0.15</td>
<td>0.24</td>
<td>0.29</td>
</tr>
<tr>
<td><strong>Bottom-tier municipalities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>131</td>
<td>83</td>
<td>314</td>
<td>475</td>
<td>577</td>
<td>478</td>
</tr>
<tr>
<td>Minimum</td>
<td>18</td>
<td>14</td>
<td>143</td>
<td>190</td>
<td>197</td>
<td>121</td>
</tr>
<tr>
<td>Maximum</td>
<td>1,760</td>
<td>1,320</td>
<td>1,372</td>
<td>2,383</td>
<td>3,227</td>
<td>3,139</td>
</tr>
<tr>
<td>Coef. of Variation</td>
<td>1.29</td>
<td>1.04</td>
<td>0.41</td>
<td>0.38</td>
<td>0.42</td>
<td>0.56</td>
</tr>
</tbody>
</table>

Source: World Bank Staff Estimates

**Winners and losers**

3.18 Identifying ex ante winners and losers of the reform is difficult because, among other issues, expenditure assignments have changed before and after the reform. The new formula allocates resources for own–function expenditures only. In the old system, lump-sum transfers were given for a broader range of functions. Also, the total pool of transfers (derivation- and formula-based) is not fixed. One possibility is to compare the new allocations plus estimates of own-source revenues and capital grants with historical own-function expenditures (see table 3.2).

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57 The Ministry of Finance prepared simulations to identify expected winners and losers prior to the adoption of the amendments in 2013. However, the final amendments (as adopted) had different shares for derivation-based transfers, and the new amendments were applied in 2014 in only 4 raions.
Table 3.2: Frequency of gain/loss in per capita terms from the formula legislated for the bottom-tier

<table>
<thead>
<tr>
<th>Percent gain/loss</th>
<th>All municipalities</th>
<th>Cities</th>
<th>Rural municipalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;=20%</td>
<td>533</td>
<td>24</td>
<td>509</td>
</tr>
<tr>
<td>10% to 20%</td>
<td>96</td>
<td>5</td>
<td>91</td>
</tr>
<tr>
<td>0 to 10%</td>
<td>73</td>
<td>3</td>
<td>70</td>
</tr>
<tr>
<td>0 to -10%</td>
<td>59</td>
<td>4</td>
<td>55</td>
</tr>
<tr>
<td>-10% to -20%</td>
<td>53</td>
<td>7</td>
<td>46</td>
</tr>
<tr>
<td>&lt;= -20%</td>
<td>82</td>
<td>9</td>
<td>73</td>
</tr>
<tr>
<td>Total</td>
<td>896</td>
<td>52</td>
<td>844</td>
</tr>
</tbody>
</table>

Source: World Bank Staff estimates

3.19 Simulations indicate higher aggregate expenditures at the bottom-level, especially for the smallest municipalities. With the new formula, it is estimated that bottom-tier expenditures on own functions would have been higher by about one fifth from 478 MDL per capita to 601 MDL per capita. Out of 896 municipalities, 702 will have more in the sum of the new grant allocation plus own-source revenues and capital grants compared to the current level of own-function expenditures. In particular for municipalities with fewer than 1,500 residents, the new formula implies a 23-percent increase in expenditures on own functions (Figure 8). This is a troublesome development given the previously pointed out inefficiently-low scale of service provision in the quarter of municipalities with less than 1,500 residents. The increase in the total amount of the grant pool could have been used to incentivize the rationalization of local expenditures by, for example, making the increase conditional on merging or forming cooperative arrangements with other municipalities.

Figure 3.1: Distribution of winners and losers by size for the legislated formula (bottom-tier municipalities)

Source: World Bank Staff estimates
3.20 An alternative formula using weights more aligned with the actual patterns of local expenditures could improve efficiency and equity. The alternative grant formula would have a somewhat more equitable fiscal incidence than the legislated one (see Appendix A) while favoring less the smaller municipalities.

**Expected impact on fiscal sustainability**

3.21 Application of the new system of intergovernmental transfers may increase subnational expenditures substantially. Assuming that the amount of special-purpose transfers for delegated functions (education and social protection) is equal to the historical level of these expenditures, the legislated formula implies a significant increase in subnational expenditures on the remaining (own) functions (based on the 2012 baseline expenditures). All in all, across subnational governments, the aggregate own-function expenditures would increase by 25 percent from MDL 2,902 million to MDL 3,139 million\(^5\)\(^8\), i.e. an additional 0.3 percent of GDP.\(^5\)\(^9\)

3.22 In 2014, in the pilot raions and the Municipality of Chisinau, parliament approved compensating transfers to the local governments that would have lost revenue as a result of the application of the law. In total 184.8 million lei was approved to be distributed as part of this compensation fund, equivalent to 0.2% of projected GDP and 0.7% of planned state revenue.

**D. Reform options**

3.23 The recent amendments to the law on local public finance improve the system of intergovernmental transfers in a number of dimensions but the system could still be improved. The new system makes intergovernmental fiscal relations more predictable and transparent and reduces existing disincentives for local governments to raise their own revenue. Nevertheless, although the formulas proposed for the general-purpose grant do follow the general logic of allocating grants according to the size of the fiscal gaps for subnational jurisdictions, there is room for increasing their accuracy in bridging objective differences among localities. A number of technical issues could also be corrected.

\(^{58}\) The aggregate own expenditures at the bottom tier would increase by 19 percent from MDL 1,171 million to MDL 1,390 million. For the top-tier governments other than the cities of Chisinau and Balti, the aggregate own-function expenditures would increase by 40 percent from MDL 497 million to MDL 697 million. The own-function expenditures in the city of Balti are expected to increase by 15 percent from MDL 86 million to MDL 100 million. Only in the City of Chisinau would own-function expenditures decrease by 17 percent from MDL 1,147 million to MDL 953 million.

\(^{59}\) According to the figures in simulations prepared by the Ministry of Finance in June 2013, the aggregate own-function expenditures would increase by 12 percent from MDL 2,927 million to MDL 3,379 million, i.e an additional 0.4 percent of GDP. However, those simulations assume local budget revenues from the road taxes of MDL 209 million while the budget reports shows only MDL 101 million received by all raions combined. Apart from the larger road tax revenues at the raion level, at the bottom tier, the government simulations project own-function expenditures to increase by MDL 312 million, which is even higher than the MDL 219 million increase in our simulations.
Addressing the inefficiencies arising from Moldova’s fragmented Administrative-Territorial organization to improve public services at the local level

3.24 The recent reform of intergovernmental transfers is unlikely to help rationalize Moldova’s administrative-territorial structure. The new formula for revenue transfers institutionalizes the current inefficient cost structure resulting from extremely fragmented local jurisdictions at the bottom tier. Overweighting of the fixed costs in the new formula for the bottom tier, in combination with no interaction of per capita revenue gap with the population size, favors sub-optimally small municipalities. Unlike the previous system of per capita norms, which was clearly linked to the number of clients local governments had to serve, the new formula might benefit from justifications for the choice of weights attached to the allocation factors. One way to preserve objectivity of the grant allocations is through the statistical estimation of impacts of various local characteristics (for example, land area) on the per client costs of providing public services. The legislated weights on the allocation factors do not accord well with our estimates of how actual per capita costs respond to variations in socio-economic characteristics of localities. The formula thus continues to favor small municipalities.

3.25 Beyond intergovernmental transfer formulas, achieving administrative-territorial organization reform would require stewardship and further legal changes. By law, the modification of the boundaries of territorial units is "a prerogative of the Parliament, after consultations with citizens". Historical experience in Moldova and other European and transition countries also underlines the importance of political commitment for such a reform to succeed (Box 3.1).

3.26 The Law is changing transfer rules and assuming these changes will provide incentives for ATUs for raising revenues, but it is likely that other specific measures will be required. In particular, enabling regulations and institutional support will be required to allow small municipalities flexible modes of service provision such as inter-municipal cooperation or outsourcing of services to the top-tier municipalities and private providers.

3.27 Independently of administrative-territorial reform, economies of scale could be achieved by reconsidering functional responsibilities or pursuing regionalization for some public services. In the water and utility sector, substantial benefits could be gained from the regionalization of services. However, it is important to recognize that the creation of corporations jointly owned or operated by multiple local governments to reconcile the administrative map with the network nature of service delivery also carries challenges (related to the management and ownership structure of such enterprises, contingent liabilities, etc.) that will need to be addressed.

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60 As we explain Appendix C, formula weights are nothing else but elasticities of the grant amount with respect to local characteristics. If we want the grant amount to be channeled to municipalities with greater expenditures needs, then the formula weights (i.e. the elasticities) should be aligned with the historic elasticities of actual expenditures with respect to the same local characteristics.

Improving intergovernmental transfer formulas

As already emphasized in the National Decentralization Strategy, it is important that intergovernmental transfer formulas yield an efficient, equitable and stable distribution of general purpose grants. The introduction of a transparent transfer formula is an improvement in this direction. It is important that transfers be rule-based and predictable.

3.28 To encourage consolidation of the smallest municipalities, or at least not to further entrench the existing fragmentation, the relative weights on the allocation factors should be shifted away from the fixed allocation per municipality to make the grant amount more responsive to the population size. Based on the elasticities developed in Appendix A, for the bottom tier we propose a 65 percent weight on population, 35 percent on fixed costs and zero (or a small weight) on the land area. For raions, we propose 82 percent weight on population, 18 percent on fixed costs and zero (or a small weight) on the land area.

Box 3.1: International experiences with consolidation of municipalities

During the early 1950s and up until the mid-1970s, many Northern European countries undertook consolidation of local jurisdictions in order to achieve a minimal size of basic authorities between 8-10 thousand inhabitants. This reorganization was prompted by the perception that public service delivery required higher levels of public investment. In addition, a meaningful size of local authorities was seen as a condition for decentralizing power from the center. However, after the consolidation took place, advisory and executive authorities were created at the sub-municipal level to bring public administration closer to citizens. Recently, some Northern European countries went through a new round of territorial reforms. Thus, in 2007 Denmark replaced its intermediary tier of counties with five regions while further consolidating its municipalities from 271 to 98. Most countries that have carried out major structural reforms of their subnational structures worldwide have done so on a compulsory basis, usually after the encouragement of voluntary consolidation had failed.

On the contrary, in Southern Europe, local opposition to consolidation, sometimes supported by court rulings, has preserved small authorities. In those countries, (small) local governments had to achieve technical efficiency by means of inter-municipal cooperation, upward delegation of functions, and contracting services out. It is conjectured that European countries such as France, Greece, Italy or Spain are less prone to restructuring because they have a so-called “fused hierarchy system” of central-local relations, in which delivery of local services is often ensured by central government field offices.

In many transition economies, such as the Czech Republic and Hungary, the introduction of local self-government in the 1990s led to excessive fragmentation of local authorities due to thousands of small villages claiming the status of an autonomous municipality, in part in reaction to the forced consolidations and deprivation of services and development under the previous, highly centralized system. Out of these transition countries, Lithuania was the first to undertake reforms that abolished the lowest level of the Soviet hierarchy and established municipalities at the rayon (district or county) level in 1995. In 2006 Georgia had a similar reform, reducing the number of subnational government units in the country from about one thousand to just seventy. Later Latvia changed the structure of its local government from 500 municipalities (pagasts) to 119 counties (novads) in 2009.

3.29 The new system reduces disincentives for revenue raising, as grants to the bottom-tier jurisdictions are only adjusted for the local yield of the national PIT but not for revenues from own sources. While the inclusion of shared revenues in the measure of revenue capacity is completely correct, ignoring the revenue capacity from own sources may solve the incentive issues of the past but it also misrepresents the revenue capacity of jurisdictions—discriminating in favor of those with larger tax bases per capita. Thus, with the recent reforms one has to weigh the convenience against the bias introduced by ignoring own revenue capacity in the formula. This issue can be dealt with in the future by developing sound objective measures and/or proxies for overall revenue capacity (of both shared and own revenue sources).\textsuperscript{62}

3.30 A compromise solution until better data bases are developed would be to use the entire yield of PIT (as opposed to the locally retained share) as a (better) proxy for the revenue capacity of own sources (in a formula that would take into account population when accounting for the per capita revenue gap).\textsuperscript{63}

3.31 At the same time, grants for raion governments disregard local revenues altogether by focusing merely on population and land area. Again this compromise for expedience, ignoring altogether the revenue side of the fiscal gap, can significantly bias the equalization results presumably pursued by the recent reforms. This issue should be flagged for review in the medium term, and studies should be conducted to quantify the horizontal inequities introduced in the system.

### Derivation-based revenue sharing

3.32 This reform could present an opportunity to revisit derivation-based revenue sharing\textsuperscript{64}. Derivation-based revenue sharing is less equitable and less predictable than formula-based sharing of revenue from national taxes. Furthermore, derivation-based revenue sharing makes fiscal equalization more difficult as there are no statistical indicators available that could objectively capture differences in taxable bases at the bottom-tier level. Revenue sharing entirely based on a formula, combined with adjustments for objective differences in expenditure needs, would provide each local government unit with a predictable budget envelope, allowing local governments to keep any gains they achieve in rationalizing their expenditures. Formula-based revenue sharing

\textsuperscript{62} Revenue capacity measures tend to be limited by the lack of general information and data on tax bases; nevertheless suitable proxies may be derived for example based on estimates of overall cadastral values for property taxes, and measures of regional product or overall collections from personal income taxes by the central government for other taxes.

\textsuperscript{63} This would of course require some rescaling of the revenue capacity measure, which can be done by regressing with data for the previous year own revenues on national PIT collections and then using that regression coefficient to transform national PIT collections in the jurisdiction into an estimate of revenue capacity of the jurisdiction.

\textsuperscript{64} Derivation-based sharing of national tax revenue—that is allocation of a share of tax revenue to the local budget where the taxpayer resides—has certain advantages but also important downsides. Generally establishing a link between the jurisdiction receiving revenue and the place where taxpayers receive local services may be beneficial because it gives local governments incentives to make their jurisdictions more attractive for new businesses and residents. But because it is not directly visible and linked to the local government budgetary decisions, revenue sharing generally does not promote accountability or enable local residents to evaluate the true marginal cost of public funds or what is the same, the efficiency of local government services. In addition, because localities cannot adjust the rate of the shared tax, there is likely to be a mismatch between the distribution of the local yield from the shared tax and the distribution of need for local services.
combined with a hard-budget constraint could give the right incentives for self-sufficiency.

3.33 One option to consider (for bottom-tier local governments) could be pooling the entire PIT into the equalization fund and allocating it per capita with some adjustment for cost differences due to economies of scale and possibly population density. Conceptually, there is no need to share with the bottom tier the extremely lopsided local yield of the PIT, especially when based on the place of work as opposed to residence. The lopsidedness of the source-based PIT sharing is only marginally mitigated by lower retention rates set for raion government seats. This lopsidedness would be eliminated altogether by a formula-based sharing of PIT revenue instead of using a derivation basis approach.

3.34 By contrast, for raions, a source-based sharing of PIT revenue is somewhat more equitable because most of the commuting from place of residence to place of work is likely to take place within the same raion. Thus, the per capita yield of the PIT on average deviates by only 23 percent from the raion average (coefficient of variation 0.23). However, while being equitable, derivation-based sharing of PIT with raions is not a substitute of a genuine source of own revenues. While derivation-based sharing has some of the same features of local surtaxes, only the latter can provide local revenue autonomy because—unlike revenue sharing—surtaxes allow local governments a certain measure of discretion over the tax rate, and thus the ability to control its revenue on the margin. Thus sharing of PIT might contribute to the financing of local governments but it does not contribute to achieving a level of revenue autonomy of local governments and therefore to their increased accountability and fiscal responsibility.

### Raising own-source revenues of local governments

3.35 Increased revenue autonomy can lead to greater accountability and it creates the basis for local creditworthiness. First, endowing local governments with a degree of revenue-raising authority allows them to increase or decrease those expenditures over which they are allocated responsibilities in response to the needs of their constituency.65 Second, local taxpayers will have a strong interest in ensuring that local officials use local budget resources wisely. Dependence of local governments on the revenue decisions of the central government (including decisions concerning sharing revenue from statewide taxes and most other forms of transfers) undermines the accountability of local officials to their constituency.

3.36 Raising own-source local revenues can be achieved through a combination of reforms related to tax administration and enforcement and tax assignment policy changes, while taking into account behavioral incentives and the political economy. Given that the most expensive local functions (education and social protection) are to be

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65 Thus revenue autonomy does not require that local governments control (i.e. determine bases and rates) for all their revenue sources. It would suffice if they could increase or decrease rates for a few taxes accounting for a meaningful share of their revenues with the rest coming from predictable and stable sharing of national tax revenues. However, there would be little revenue autonomy if any additional revenue from higher local taxes were almost entirely offset with a reduction in grants.
financed with earmarked grants, the remaining (own) local function can be to a large extent covered through fully utilizing the ‘tax handles’ that have been traditionally given to local authorities throughout the world (user fees, property taxes and betterment levies) as well some additional taxes—which are discussed in the section on revenue assignments—including vehicle and transportation taxes, a PIT surtax (or piggyback), and possibly a “local business tax”.

3.37 In the short term the focus should be on increasing the yield of user fees, property taxes and perhaps introducing new local taxes, such as betterment levies and transportation taxes. Establishing minimum rates for all existing subnational taxes (as is the case for the real estate tax) could be an effective way of making subnational governments assume at least to a minimal extent their responsibility to collect own revenues. In the medium term, increasing the degree of revenue autonomy through the assignment of those other listed taxes may bring desirable improvements into the system of intergovernmental fiscal relations including increased horizontal accountability of local officials to their residents and greater fiscal responsibility in expenditure and debt management at the subnational level.

Tax administration and enforcement

3.38 Moldova’s planned tax administration reforms (at the national level) could present opportunities for strengthening local tax administration and enforcement. The proposed tax administration modernization would include a move towards establishing a unified tax administration organization, with introduction of regional offices and establishment of a division for monitoring and information technology (IT) development.

3.39 The uneven distribution of administrative capacity could be addressed through an asymmetric decentralization of tax administration functions. For example, in terms of registration and collections, the real estate property tax could be enforced by the larger local governments, with assessments still being done centrally. For smaller local governments and for certain other potential taxes (for example a piggyback local personal income tax discussed below), the administration would still be carried out by the central tax administration.

3.40 The yield of the current conventional real estate property tax could be increased substantially. It is currently less than half of the collections in some other Eastern-European countries, such as Bulgaria, Ukraine and Georgia. The review of bands for property tax rates, development of the property cadaster and appraisal of property

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66 For nontax revenues, some fees and charges may not apply because particular services are not offered in some locations.

67 This reform will transform tax administration from the current situation of 35 separate legal entities, one for each local tax office and a large taxpayer office to a single tax administration under which the local tax offices will report to regional offices which report to Headquarters. This will be followed by moving the core tax functions (audit, enforced collection, appeals, and human resource management) to the proposed 3-5 regional offices, leaving the local offices with the function of taxpayer services including identification and registration of new taxpayers. A World Bank Tax Administration Modernization Project is being prepared.
values would be important steps to this end; yields can be further increased by improving billing and collections systems.

**Tax assignment policy changes**

3.41 **Existing tax assignments for local governments could be improved.** Existing tax assignments fall short of offering local governments a significant revenue base. A review of tax policy could identify taxes with larger potential yield that could be assigned at the local level. This could be carried out with a view to allowing local government to raise more significant amounts of tax revenue on their own, taking into account the existing political economy and tax administration constraints. These local taxes should have high revenue potential with high buoyancy or elasticity with respect to changes in the tax bases, adaptability to the benefit principle in local finance (correspondence between the jurisdiction in which a tax is levied and the area in which the benefits are received from the local services funded with that revenue source), geographically even distribution of tax bases, a fair distribution of burdens with respect to taxpayers income, high acceptability by taxpayers and politicians, and high visibility for taxpayers and therefore offering improved opportunities for local government accountability.

3.42 **Tax instruments that could be considered to provide a more significant revenue base for local governments include:**

(a) "betterment levies" or one time lump-sum payments exacted up front by sub-national governments from land and housing developers— and also potentially from homeowners— as a charge for public service improvements, such as road paving, drainage infrastructure, sidewalks, street lights etc., which all have a visible benefit on property values. Betterment levies can be useful in providing sub-national governments with liquidity to invest in needed infrastructure; they also have the advantage of being directly contractual and therefore reinforcing the benefit principle feature in sub-national government financing (see Appendix C for a review of international experience). The revenue from betterment levies will

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68 The unfinished reforms in delineation of government property and property of administrative and territorial units (ATU) narrow the possibilities for strengthening local taxes and duties. As noted in the National Decentralization Strategy, after independence the Republic of Moldova introduced sweeping reforms under which a large portion of property exclusively owned by the government was privatized, transferred into private property of citizens and that of administrative and territorial units. However, these reforms have not been finished yet. As a result, there are serious deficiencies that greatly diminish accuracy and transparency in the procedures of inventory-taking, appraisal, registration and accounting of property. The problem of the unfinished delineation of property has brought about an unclear legal status of many categories of property located within local administrative and territorial units (land, engineering networks and structures, water lines, gas lines, power system facilities, etc.).

69 The benefit principle of taxation requires the correspondence between the jurisdiction in which a tax is levied and the area in which the benefits are received from the local services funded with that revenue source. Adherence to this principle gives local governments the right incentives to fund an optimal amount of locally provided goods (where marginal costs equal marginal benefits). The correspondence principle would be violated by local taxes that can be "exported" to taxpayers in other jurisdictions. Tax exporting is not only unfair but also encourages over-expansion of public expenditures.

70 Characteristics that are not desirable would include: high mobility of the tax base which leads to distortions in the geographical location of economic resources, other potential efficiency costs due to changes in economic behavior by taxpayers, high sensitivity or collected revenues to the economic business cycle, high costs of administration by subnational governments, high compliance costs by taxpayers, offering higher potential for corrupt practices, and high exportability to other jurisdictions, which would reduce accountability and the overall efficiency of the local budgets.
depend on urban development and new housing activities but it will generally be significantly less than that for the annual real estate property tax. One significant advantage of betterment levies is that they yield revenue precisely when the demand for local infrastructure construction goes up and thus reduces the need for borrowing activity and the dependence on capital grants.

(b) vehicle and transportation taxes, which are generally attractive sub-national taxes because of the strong link between the ownership of vehicles and the use of local services and infrastructure (particularly roads). In addition, sub-national taxes and charges on vehicles can counteract the negative externalities associated with local traffic congestion and air pollution in the local area. An existing local levy on the ownership of vehicles, which was terminated in 2013, could be reinstated in the form of an annual tag fee and tax based on residual market at, for example rates set by national legislation between 0.2 and 0.5 mils (or 0.2 and 0.5 MDL in tax per 1000 MDL of taxable property value.)

(c) a local surtax (or a piggy-back local tax) to the central government tax (such as PIT), which would be collected by the central government tax administration authorities but allowing local governments to set a flat rate for the surtax within nationally legislated maximum and minimum rates and with the proceeds accruing to the local government where the taxpayer has residence (see Appendix C for a review of international experience). Such a tax would have high revenue potential. Two options may be considered for the rate structure at the local level: 1) Tax on tax, with the local government levying a tax in proportion to the national tax; 2) Tax on base, with the local rate is applied to the taxable income defined as in the national tax. The latter version is preferable for being more transparent and creating more accountability. The range of the local flat tax rate does not need to increase overall tax pressure provided the central government creates the necessary fiscal space by lowering its own rates and also adjusting current tax sharing arrangements. There are many options therefore for setting the range of the local surtax rates.

3.43 Two other forms of local taxation may be considered although these may be a bit more complex and therefore less attractive for introduction in Moldova. One is some form of a “local business tax,” perhaps in the form of a business license fee, as a way for local administrations to recoup the costs of the services and infrastructure provided to businesses. The second possibility is that subject to the area size, cross-border trade and smuggling limitations, excise taxes also have potential as piggyback taxes or special taxes at the sub-national level. Surtax excises tend to be more politically acceptable, and they can be easily administered in coordination with national wholesalers as withholding agents, and fit the benefit principle well.

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71 There are some other forms of broad-based levy on general local business activity that can achieve economic neutrality in the use of labor and capital inputs by businesses. However, they are much less used internationally. See, for example, Martinez-Vazquez (2013).

72 A possibility here could be the taxation of public utility services at the subnational level, such as in the case of electricity and phone services, since it removes the problem of cross-border trade and it facilitates collections through the billing for the services. As an example, in Macedonia, a surcharge on the electricity bill is levied by municipalities and is justified by the need to provide street lighting in the locality.
Ensuring sustainability of subnational debt

3.44 The framework for borrowing should ensure fiscal responsibility, as in the medium to longer term, local governments may increasingly seek to finance infrastructure investments through borrowing. Such borrowing could be taken by local governments with more fiscal capacity, while capital grant financing leans toward financing local units with less fiscal capacity and therefore less ability to borrow, and for projects with large externality spillovers to other jurisdictions. Subnational external borrowing should be subject to authorization from central authorities. The future drafting of the fiscal responsibility law should seek to maintain fiscal discipline and responsibility among subnational governments, further updating ex ante limits. This could include an overall cap on subnational debt as a share of GDP and mechanisms to enforce this cap (including how to prioritize guarantee requests).

3.45

3.46 In the medium-term, in order to prevent local fiscal crises, there is a need to develop monitoring systems. With properly digitized budget reports, the Ministry of Finance can construct a monitoring system (a database and analytical indicators) that can provide a useful information base for anticipating fiscal crises at the local level and for a local government credit rating system, a prerequisite for opening up subnational borrowing.

Improving public investment management at the local level

3.47 Recent reforms to improve public investment management in Moldova will require accompanying measures to extend to the local level. A Government regulation adopted in December 2013 improves the framework for preparing, appraising, selecting, implementing and monitoring investment projects in Moldova. It notably establishes requirements for project concepts for pre-screening and for appraising projects, and designates an inter-agency working group for better coordination of project selection. However, the regulation currently deals with projects costing more than 5 million lei, which hardly applies to local investment projects. This threshold should be gradually lowered as experience and capacities at the center develop. In the meantime, the framework established in the Government regulation can be adapted to improve pre-screening, selection and monitoring of local investment projects.

3.48 While there are weaknesses at all stages of the public investment management process at the local level, the priority in the short term should be to:

(a) improve preparation and pre-screening of local projects;

(b) move away from direct selection and monitoring by the central government and Parliament of small investment and repair objects by adopting a broader, definition of a project and ultimately adopting alternative allocation mechanisms for capital grants;
(c) establish the necessary frameworks and incentives for inter-municipal cooperation to allow economies of scale and reduce duplication.

3.49 **Rules in the recently adopted Government regulation on public investment management could be adapted to improve project preparation and selection at the local level.** Requiring local governments to submit information on the costs of investment projects for which they request central government funding and their state of preparedness could give some basis for excluding projects that are likely to be slow-moving. In addition to the issuance of simple guidelines, this would require building capacity for preparation and management of investment projects at the local level.

3.50 The Local Public Finance Law could be extended with basic notions, principles, criteria and procedures for public investments, including clear delineation of investment projects and other objects of government capital expenditures.

3.51 **Moldova’s budget system could allow for more strategic, “programmatic” projects that group together similar small projects or ‘objects’ with the same objective.** Adopting a higher-level definition of a project would encourage planning and budgeting to be more strategic and would help in making prioritization more manageable. A programmatic approach would group similar objects into a single investment project. This will greatly ease the tasks of appraisal, selection and monitoring of investment projects for local and central authorities. The level at which a programmatic project is defined and the level at which decisions are taken need to be linked to the allocation of functional responsibilities across government. A raion, for example, might develop a school building or rehabilitation project consisting of a number of individual objects (i.e., interventions at the school level). As the funding authority, the raion would need to establish a set of criteria and collect data on individual schools needs to determine annual capital allocations for the schools. The Ministry of Education might then scrutinize the design, policy relevance, cost effectiveness and criteria for selecting objects within such a project, but not the individual object decisions. Depending on the cost of the project, the Ministry of Finance might also have a review role. In other sectors, the allocation of responsibilities for designing and reviewing programmatic projects might be different according to the way the functions of government have been organized.

3.52 **Alternative mechanisms should be considered for transferring resources for capital expenditure to the local level.** Local governments could be granted more responsibility and flexibility for directly allocating local capital expenditure. With increased revenue autonomy, general purpose grants and other revenues (such as own revenues, as well as accumulated reserves and borrowing) should be considered an important source of funding for local capital expenditures. Funding through capital grants could either be through an unconditional capital transfer calculated on the basis of a

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73 This project concept or profile could be completed for investment projects, i.e. new facilities, improvements to existing facilities or replacement of fully depreciated facilities. Capital repairs could be excluded or bundled so that local governments complete a single profile for a group of ‘objects’, e.g., a generic primary school repair project.

74 For example, in 2014 three village community centers are to be built in the area of Cahul with the value of each being 500,000 lei; they could be united into a single investment project.)
formula\textsuperscript{75}, which local governments could then allocate to capital expenditure as they wished to meet their responsibilities, or through conditional capital transfers directed towards Government-determined priority areas and subject to competitive allocation on the basis of pre-announced and transparent criteria. Both approaches would remove the choice of specific objects from the central government budget process. This would signal the end of the list of local and capital repair objects annexed to the budget which takes so much government and parliamentary time.\textsuperscript{76}

3.53 Decentralization of the allocation of resources is especially needed for small, capital repair or low-value construction objects. A shift needs to be made away from state budget financing of small objects that are poorly linked with strategic goals and difficult to monitor and manage centrally\textsuperscript{77}. For small investment objects, a value threshold could be set for objects to receive funding from the state budget. Small investment objects and repairs would then be funded from the general resources of local governments.

3.54 Establishing a framework for inter-municipal cooperation could help pool financial, material and technical resources for implementation of joint investment projects, especially for local infrastructure projects. The National Decentralization Strategy acknowledges the importance of consolidation of all types of resources for achievement of the strategic goals in the development of administrative and territorial units.\textsuperscript{78} This would require defining financial arrangements for cooperation at the local level. Such arrangements may include pooling (transferring) of the fiscal base, exchange of special transfers, establishment of common funds, companies, etc. The Government may introduce financial incentives and state budget support for joint investment projects\textsuperscript{79} at the initial stage of the reform.

E. SEQUENCING OF REFORMS AND TRANSITION COSTS

3.55 The likely reason that the ad hoc general-purpose transfer formula parameters favor small municipalities is to make the reform politically acceptable. But rather than helping entrench an inefficient pattern, political acceptability can be secured by a gradual transition to the efficient formula over a period of several years. An

\textsuperscript{75} The unconditional equalization grant could be adapted to take into account the local needs and revenue capacity, for unconditional capital grants for local projects. This approach would, however, partly ignore the ability to borrow of different local governments.

\textsuperscript{76} Moving to such funding systems runs the risk of some delayed objects never being completed (which is also a risk of sticking to the status quo), but this may be a sacrifice worth making to escape the gross inefficiencies of the existing system. Local public authorities could still choose to complete the backlog of ongoing projects with their capital transfers, or the criteria for conditional capital transfers might be designed to favor completion.

\textsuperscript{77} The annual state budget law includes for example many objects of local area urban development, replacement of electric wires, fitting respective institutions with furniture and other objects with a value between 50,000-200,000 lei.

\textsuperscript{78} The National development Strategy refers to many options (“a voluntary territorial association, cross-municipal cooperation, growth poles, metropolitan zones, micro-regions and so on. These forms of territorial cooperation would foster territorial consolidation and, respectively, generate revenues with a direct impact on living standards of the local citizens”).

\textsuperscript{79} For example, joint investment projects can be considered as one of the priority criteria in distribution of government capital expenditures in parallel with unfinished projects. In case projects are finance through debt, central government support could entail issuance of guarantees.
important decision in the reform of the system of transfers is whether to phase-in the reforms over a period of years to smooth out the transition to the new regime. A more gradual approach would typically make the changes in local funding more politically acceptable, since it would give time for the territorial units’ administrative structures to adjust (e.g., to merge or form cooperation with other municipalities). The changes in transfers—and the losers that reform will generate—are often an impediment for the serious implementation of a new system that imply significant departures from the status quo. Drastic changes in the system of transfers and the overall level of funding can hurt local governments’ ability to carry through longer term plans, may create uncertainty, and may increase political friction, destabilizing the reforms.

3.56 **Several approaches to phase in a new transfer system may be considered.** One approach is to hold jurisdictions partially harmless, by compensating the losers at least in part for their loss in revenues due to the regime shift. For this purpose, the recent amendments introduce a compensatory transfer for the first two years of implementation of the new system. Often these approaches fix the base transfer or entitlement for the local governments in nominal terms. Thus, the transition to the new system can be achieved through real growth and inflation, both of which help to the shrinkage of the historical transfer. This could be a feasible option for Moldova as the envisioned additional funds could be used for holding harmless. The use of a hold-harmless scheme combined with an efficient formula may be a preferable alternative to no reform or to an inefficient grant formula.
REFERENCES


APPENDIX A: ANALYSIS OF THE GENERAL PURPOSE GRANT FORMULA

For general purpose grants to the bottom tier, the recent amendments introduce an allocation mechanism using an additive mathematical formula based on the population, land area and PIT revenue.\(^{80}\)

\[
TE_i = \frac{w^1 \cdot FEB}{S} \cdot S_i + \frac{w^2 \cdot FEB}{P} \cdot P_i + \frac{w^3 \cdot FEB}{\sum (cf - cf)} \cdot [cf - cf_j]
\]  

(1)

Where \(S_i\) and \(S\) stand for the land (surface) area of municipality \(i\) and the entire country respectively, \(P_i\) and \(P\) stand for the population of municipality \(i\) and the entire country respectively, \(cf_i\) stands for per capita revenue from PIT shared with municipality \(i\) on a derivation basis, \(cf\) stands for the PIT revenue benchmark set at the 1.3 national average, \(w^k\)‘s are weights attached to the respective allocation factors, and \(FEB\) stands for the total amount of the equalization fund designated for this tier of local government.

By specifying the allocation rule from an additive perspective, this formula adds up entitlements due to different factors. An advantage of this additive format is that it is easy to comprehend by a lay person, which thus makes the allocation of grants more transparent—a reason why such additive formulas are quite common in developing countries. While being transparent, such an additive formula might not be so apparently objective. In particular, although larger land areas may in some cases add to some additional costs of service provision, it is not immediately clear why having that much large land area entitles a municipality to that much larger allocation in grants.\(^{81}\)

The same allocation rule, resulting in the exactly the same amounts of grants, can be formalized in a different format that would appear less arbitrary. For example, the same grant allocation can be specified from a multiplicative perspective, where the grant amount is derived from the average per capita expenditure by applying adjustment coefficients to account for objective differences in service need and production costs (see Appendix B for more details).

Thus, the legislated grant formula (1) can be rearranged in a mathematically equivalent form as:\(^{82}\)

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\(^{80}\) Grant allocation to raions only uses land area and population but not revenue capacity.

\(^{81}\) Note that this will not be an incentive for the merging of municipalities. If they merge, the joint municipality will receive the allocation based on land, which is just the sum of the respective allocations for the respective municipalities; that is, the land of the joint municipality will be just the sum of the land areas for the respective municipalities.

\(^{82}\) This equivalence is not perfect since municipalities with a negative revenue gap (\(cf-cf\)) do not receive the part of the grant related to revenue capacity.
From this latter format, it becomes clearer that grants are allocated in way that closes the difference between the sum of the first three terms— that can be seen as measuring expenditure needs through a fixed cost term as well as costs varying with population and land area—and the last term, capturing the local revenue capacity. Furthermore, the expenditure needs part can be further rearranged in a multiplicative form, which is nothing else but a per capita expenditure norm adjusted for the relative cost using a weighted factor index:

\[
TE_i = \frac{w^1 \cdot FEB}{S} \cdot S_i + \frac{w^2 \cdot FEB}{P} \cdot P_i + \frac{w^3 \cdot FEB}{\sum (cf - cf_j)} \cdot cf - \frac{w^3 \cdot FEB}{\sum (cf - cf_j)} \cdot cf_i
\]

(2)

From this format, it is clear that the legislated grant formula essentially captures a municipality’s expenditure needs as its population \( P_i \) times the average per capita grant \( FEB/P \) times an adjustment coefficient, which is set higher for municipalities with a larger than average land area per capita and smaller than average population scale. In this way we can see that the proposed formula in reality uses a standardized per capita financial norm adjusted for differences in cost factor to define expenditure needs. The population scale term \([P/N]/P_i\) captures how much the population size of this municipality is smaller than population of an average municipality. For this formula to accurately capture disparities between municipalities, the weights on the adjustment factors have to be close to the elasticity of actual local costs with respect to these cost factors.\(^{83}\)

Our estimation of these elasticities suggests that the elasticity of local expenditures with respect to the population scale is around 0.35.\(^{84}\) At the same time there is a negative elasticity between land area and expenditures per capita. This suggests that historically more densely populated municipalities have had higher levels of expenditures per capita. If this historical pattern is deemed to be unjust, then the land area should have a zero weight, in other words dropped from the formula. By construction, the weight on population should be one minus the sum of the other

\(^{83}\) Elasticity of expenditures with respect to a given factor is the percentage change in expenditures resulting from a percentage change in that factor. For more details, see Appendix B.

\(^{84}\) The identified relationship between per capita expenditures and the population scale suggests the presence of fixed costs all municipalities incur into regardless of the size of their population and land area. The estimated 0.35 elasticity means that these fixed costs account for about 35% of an average local budget at the bottom tier. However, in larger and richer municipalities the same fixed costs will account for a smaller budget share while in smaller and poorer municipalities they will account for a larger share. For more details, see Appendix C.
two weights, that is 0.65 if land area is not used in the formula while the population scale assigned a 0.35 weight. This suggests that the legislated formula—assigning only 30 percent weight to population, 10 percent to land area each and 60 percent to the revenue gap—underweights the population factor and overweights the land area and the fixed cost term (which is part of the revenue gap factor in the new formula).  

Another observation, which becomes clear from equation (2), is that the legislated formula does not take into account population when adjusting the amount of the grant for differences in per capita revenue capacity. Indeed, the left hand side of equation (1) is the absolute amount of the grant for the entire municipality while on the right-hand side revenue capacity only enters in per capita terms without being multiplied by the population size. We find this unusual since a per capita shortfall in revenue capacity by definition requires compensation of that shortfall for each person and therefore has to be multiplied by the number of local residents. This also contrasts to the previous formula stated in paragraph (2) of article 10 of the Local Public Finance Law, where the per capita gap defined in sub-paragraph e is multiplied by the number of local residents to arrive at the total amount of grant in sub-paragraph f.  

While the local yield of PIT might be somewhat correlated with the revenue capacity for other (own) revenue instruments, it is less so for the revenue capacity measure used in the new formula due to differentiated rates for PIT revenue retention. Thus, a lower PIT retention rate set for raion seats, might reduce their potential revenue from PIT but not so for other own sources of revenues. Therefore, to approximate the capacity of own source of revenue the entire local yield of PIT should be used as opposed to the reduced share decreed for the local budgets. While raion seats are allowed to retain three quarters less in PIT revenue than another municipality with the same PIT yield (20% vs. 75% retention rate), it does not mean that potential collections from other (own) revenue bases are three quarters lower than in the comparable municipalities. This is an important issue because, due to the scant yield of source-based PIT outside larger cities, own sources generate more revenue at the bottom tier than PIT retention.  

For grants to raions, the legislated formula does not include any indicators of revenue capacity but only uses population with a weight of 0.6 and land area with a weight of 0.4. Our preliminary estimation of elasticities for these factors suggests a negative relationship between land area and raion expenditures per capita. This suggests that historically more densely populated raions have had higher levels of expenditures per capita. At the same time, we find that the elasticity of raion expenditures with respect to the population scale is around 0.18. This suggests the presence of fixed costs all raions incur into regardless of the size of their population or land area. The estimated 0.18 elasticity means that these fixed costs account for about 18% of an average raion budget (without education, and social protection). In addition, our estimations imply that the weight on population should be one minus the sum of all other weights, that is 0.82 if land area is not used in the formula. This suggests the legislated formula underweights the population factor and fixed costs while it overweights land area in the allocation of grants to raions.  

**Alternative formula options**

85 The legislated formula implies the weight on the population scale to be equal to \( w^3 = \frac{N \cdot \Sigma (cf cf) - 0.6 \cdot 896 \cdot 0.00179 = 0.96} {1} \). Thus the legislated formula puts six times more weight on the fixed costs relative to population than what is suggested by our preliminary estimations of cost elasticities (0.96:0.3 ratio instead of 0.35:0.65).

86 For more details, see Appendix C.
As explained above, the choice of the additive versus multiplicative formula affects its transparency and simplicity but not the actual grant allocations it produces. Therefore, as an alternative option, we will consider a formula in a similar additive format but using weights more aligned with the actual patterns of local expenditures.

\[ TE_i = \frac{w^1 \cdot FEB}{N} + \frac{w^2 \cdot FEB}{\sum (cf - cf_j) \cdot P_j} \cdot \left[ cf - cf_i \right] \cdot P_i \]

Here \( N \) stands for the total number of municipalities at the bottom tier, \( P_i \) and \( P \) stand for the population of municipality \( i \) and the entire country respectively, \( cf_i \) stands for per capita revenue from PIT shared with municipality \( i \) on a derivation basis, \( cf \) stands for the PIT revenue benchmark set as a certain multiple of the national average, \( w^1 \) and \( w^2 \) are weights attached to equal shares and the per capita fiscal gap respectively, and FEB stands for the total amount of the equalization fund designated for this tier of local government.

Since the grant amounts \( TE_i \) complement locally-derived revenues in covering the expenditures needs, the weights \( w^1 \) and \( w^2 \), while not exactly equal to the elasticities of expenditure needs, should ensure the same proportions between allocations based on equal shares and per capita respectively as the ratio of estimated elasticities of expenditures. Our estimates suggest a proportion \( \lambda = 0.65/0.35 = 1.9 \) between per capita based portion of expenditures needs and equal shares respectively. It can be shown that to ensure this proportion \( \lambda \), the grant formula weights should set as

\[ w^1 = \frac{1}{1 + \frac{\lambda \cdot \sum (cf - cf_j) \cdot P_j}{P \cdot cf}} \]

\[ w^2 = \frac{\lambda \cdot \sum (cf - cf_j) \cdot P_j}{P \cdot cf + \lambda \cdot \sum (cf - cf_j) \cdot P_j} \]

For the given bottom-tier data, these expressions imply weights \( w^1 = 0.58 \) and \( w^2 = 0.42 \).

For the raion level, following the legislated approach, an alternative option does not take into account locally-derived revenues but aligns weights on population and equal shares with the actual patterns of local expenditures.

\[ TE_i = \frac{w^1 \cdot FEB}{N} + \frac{w^2 \cdot FEB}{P} \cdot P_i \]

Here \( N \) stands for the total number of municipalities at the top tier, \( P_i \) and \( P \) stand for the population of municipality \( i \) and the entire country respectively, \( w^1 \) and \( w^2 \) are weights attached
to equal shares and population respectively, and FEB stands for the total amount of the equalization fund designated for this tier of local government.

For the given top-tier data, the estimated elasticities of expenditures imply weights $w^1=0.18$ and $w^2=0.82$.

**Table A1: Equalizing impact of the alternative grant formula, by type of LSG, MDL per capita, 2012**

<table>
<thead>
<tr>
<th></th>
<th>PIT yield</th>
<th>PIT share</th>
<th>+ grants</th>
<th>+ locally derived revenues</th>
<th>+ capital grants</th>
<th>Reference: actual expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>236</td>
<td>59</td>
<td>266</td>
<td>300</td>
<td>288</td>
<td>200</td>
</tr>
<tr>
<td>Minimum</td>
<td>142</td>
<td>35</td>
<td>70</td>
<td>102</td>
<td>129</td>
<td>106</td>
</tr>
<tr>
<td>Maximum</td>
<td>370</td>
<td>93</td>
<td>308</td>
<td>369</td>
<td>454</td>
<td>411</td>
</tr>
<tr>
<td>Coef. of Variation</td>
<td>0.23</td>
<td>0.23</td>
<td>0.15</td>
<td>0.14</td>
<td>0.23</td>
<td>0.29</td>
</tr>
</tbody>
</table>

|               |           |           |          |                           |                 |                                |
| Bottom-tier municipalities |           |           |          |                           |                 |                                |
| Average       | 131       | 83        | 317      | 477                       | 580             | 478                            |
| Minimum       | 18        | 14        | 152      | 210                       | 242             | 121                            |
| Maximum       | 1,760     | 1,320     | 1,397    | 2,388                     | 3,232           | 3,139                          |
| Coef. of Variation | 1.29      | 1.04      | 0.36     | 0.36                      | 0.40            | 0.56                           |

*Source: World Bank Staff Estimation*

The alternative formula can be evaluated against the legislated one by comparing fiscal outcomes in Tables 3.1 and Table A1 respectively. Such comparison reveals a somewhat more equitable fiscal incidence for the alternative grant formula than for the legislated one. Juxtaposing Figures 3.1 and A1 also reveals that the legislated formula favors more smaller municipalities.
Table A2. Frequency of gain/loss in per capita terms from the alternative formula legislated for the bottom-tier

<table>
<thead>
<tr>
<th>Percent gain/loss</th>
<th>All municipalities</th>
<th>Cities</th>
<th>Rural municipalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;=20%</td>
<td>533</td>
<td>24</td>
<td>509</td>
</tr>
<tr>
<td>10% to 20%</td>
<td>96</td>
<td>5</td>
<td>91</td>
</tr>
<tr>
<td>0 to 10%</td>
<td>73</td>
<td>3</td>
<td>70</td>
</tr>
<tr>
<td>0 to -10%</td>
<td>59</td>
<td>4</td>
<td>55</td>
</tr>
<tr>
<td>-10% to -20%</td>
<td>53</td>
<td>7</td>
<td>46</td>
</tr>
<tr>
<td>&lt; -20%</td>
<td>82</td>
<td>9</td>
<td>73</td>
</tr>
<tr>
<td>Total</td>
<td>896</td>
<td>52</td>
<td>844</td>
</tr>
</tbody>
</table>

Figure A1. Distribution of winners and losers by size for the alternative formula

Source: WB Staff estimates based on MOF data
APPENDIX B: ELASTICITY OF EXPENDITURE NEEDS

When designing a grant formula, one of the most important practical issues is how to determine factor weights. Several approaches can be used to arrive at a particular set of factor weights in a more or less objective manner. A more scientific approach is to utilize local budget data to establish how the cost of delivering standard services varies across subnational jurisdictions and in particular how these costs are responsive to variations in socio-economic characteristics of localities.

Consider an example of K factors: population $p_i$ and some other factors $x^1_i$, $x^2_i$, ..., $x^{K-1}_i$.

In this example, assigning weights $\lambda^k$ to factors $x^k_i$ and $1-\sum \lambda^k$ to population, can be interpreted as the share $1-\sum \lambda^k$ of aggregate expenditures being related to standard costs of providing public services in an average locality while the share $\sum \lambda^k$ comes from additional costs incurred due to presence of specific factors. The meaning of $\lambda^k$ will become even more clear if we perform an algebraic transformation of the expenditure need formula:

$$\text{Need}_i = \left(\frac{p_i}{P}\right) \cdot \left(1-\sum \lambda^k\right) \cdot \text{SEN} + \sum \lambda^k \cdot \left(\frac{x_i^k}{X^k}\right) \cdot \text{SEN}$$

where $P$ and $X^k$ stand for the total national population and the national total of factor $k$ respectively and SEN for the aggregate level of subnational expenditure needs. Dividing each term by $p_i \cdot (\text{SEN} / P)$ results in

$$\left(\frac{\text{Need}_i}{p_i}\right) / (\text{SEN} / P) = \left[\left(1-\sum \lambda^k\right) + \sum \lambda^k \cdot \left(\frac{x^k_i}{X^k}\right)\right] / (\text{SEN} / P)$$

Rearranging terms in the brackets yields

$$\left(\frac{\text{Need}_i}{p_i}\right) / (\text{SEN} / P) = 1 + \sum \lambda^k \cdot \left(\frac{x^k_i}{p_i} - \frac{X^k}{P}\right) / (\text{X^k} / P).$$

From the equation derived above, it is clear that the a municipality’s expenditure needs can be expressed as its population $p_i$ times the average per capita expenditure SEN/P times an adjustment coefficient, which is higher than one for municipalities with larger than average per capita values of the variables and smaller than one for below average municipalities.

However, such a multiplicative approach requires careful design to guarantee that allocations to individual localities sum to the total pool size, or in other words, that the client-weighted average of adjustment coefficients equals 1. One way to achieve this is for $x_i$ and $X$—values of each factor that is recorded in locality $i$ and the nation as a whole—to be expressed relative to the client population in municipality $i$ and the national
population, respectively. For example, the recently legislated formula uses $s_i/p_i$ and $S/P$ land area $s_i$ and population $p_i$. Unfortunately, this does not work for variables measured as indexes, such as the poverty rate. Some of such indexes can be transformed to an equivalent indicator expressed in terms of factor proportions. For example, a poverty rate can be expressed as the number of people below the poverty line so that $x/X$ would represent the share of the national poor residing in locality $i$. For other index variables, there is no such equivalent transformation, but we can still include them in a multiplicative formula by using $\text{index}_i \cdot (p/P)$ instead of $x/X$, where $p_i$ and $P$ stand for the local and national client populations, respectively, and $\text{index}_i$ is the variable indexed relative to the national average, such as the price level. However, for the allocations to individual localities to sum to the total pool size, the index variable must be indexed relative to the client-weighted national average.

One of such indexes implicitly used in the legislated formula is the population scale $[P/N]/p_i$, which captures how much the population size of this municipality is smaller than population of an average municipality. For this index we have

$$x_i = \text{index}_i \cdot (p/P) = \left(\frac{P/N}{p_i}\right) \cdot \left(\frac{p_i}{P}\right) = \frac{1}{N}.$$ 

Thus, the elasticity of per capita expenditures with respect to the scale elasticity index is equal to the weight on equal shares $I/N$ in the additive formula. Therefore, the population scale factor captures the presence of fixed (or equal) costs all municipalities incur into regardless of the size of their population and land area. The estimated 0.4 elasticity means that these fixed costs account for about 40% of an average local budget at the bottom tier. However, in larger and richer municipalities the same fixed costs will account for a smaller budget share while in smaller and poorer municipalities they will account for a larger share.

Finally, moving 1 to the left-hand side and bringing the latter to the common denominator give

$$\left(\frac{\text{Need}_i}{p_i} - \frac{\text{SEN} / P}{(S\text{N} / P)}\right) = \sum \lambda^k \cdot \left(\frac{x^k}{p_i} - \frac{X^k}{P}\right)/ \left(\frac{X^k}{P}\right).$$

From this latter expression it becomes clear that our weights $\lambda^k$ translate percentage differentials in proportion of factors $x^k_i$ into percentage differentials in per capita needs. The percentage response in expenditures resulting from a percentage change in a given factor is called elasticity of expenditures with respect to that factor, which can be estimated from actual expenditure data.

The elasticity coefficient is a parameter that indicates the percentage change that will occur in one variable (y) when another variable (x) changes one percent. Mathematically, $\beta$ is the elasticity of variable (y) with respect to variable (x) if $\Delta y/y = \beta \cdot \Delta x/x$.

As was discussed in the main text, elasticities of local government expenditures and revenues with respect to some factors can be used as weights for these factors in a grant distribution formula. Therefore, in this appendix we explain how these elasticity
Coefficients can be estimated in practice using data on actual expenditures and revenues for different local governments. The estimation strategy is based on two main steps. First, we use the fact that the elasticity for two variables approximates a linear relation between logarithms of those two variables. Second, we take advantage of the availability of a standard statistical method for estimating a linear relationship between two variables, called the linear regression.

First, let us see that logarithms capture elasticity. By definition of elasticity, \( \Delta y/y = \beta \cdot \Delta x/x \). At the same time from calculus, it is known that \( \ln(x+\Delta x) \approx \ln(x) + \Delta x/x \). Therefore, \( \ln(y+\Delta y) - \ln(y) \approx \beta \cdot [\ln(x+\Delta x) - \ln(x)] \). In other words, the elasticity coefficient roughly captures the linear relationship between \( \ln(y) \) and \( \ln(x) \). Indeed, if \( \ln(y) \) is a linear function of \( \ln(x) \), so that \( \ln(y) = a + b \cdot \ln(x) \), then \( \ln(y+\Delta y) - \ln(y) = [a + b \cdot \ln(x+\Delta x)] - [a + b \cdot \ln(x)] = b \cdot [\ln(x+\Delta x) - \ln(x)] \).

Ordinary least squares (OLS) estimation (or regression) is a statistical technique that is appropriate to use when the values of one variable—in our case \( \ln(y) \)—are systematically determined by the values of other variables—in our case \( \ln(x) \). It is obtained by minimizing the sum of squared residuals, where the residual is a difference between the actual values of \( \ln(y_i) \) and their linear approximations \( a + b \cdot \ln(x_i) \). It can be derived mathematically that the sum of squared residuals is minimized when

\[
b = \frac{\sum_i \left[ \ln(x_i) \cdot \ln(y_i) - \frac{1}{n} \sum_i \ln(x_i) \cdot \sum_i \ln(y_i) \right]}{\sum_i \left[ \ln(x_i) \cdot \ln(x_i) - \frac{1}{n} \sum_i \ln(x_i) \cdot \sum_i \ln(x_i) \right]}
\]

In practice, one does not have to use this formula for the calculations, because most statistical/spreadsheet applications have it pre-programmed as a standard command. Thus, in Microsoft Excel the least square regression can be performed using the worksheet function LINEST or the Regression Analysis Tool from the Analysis ToolPak.\(^87\)

Thus, the application of these regression analysis tools to the bottom-tier budgets finds the following relationships:

\[
\ln(ownexp_i/popi) = 7.82 - 0.23 \cdot \ln(popi)
\]

where \( ownexp_i \) stands for expenditures on own functions in locality \( i \) and \( pop_i \) stands for the population of locality \( i \).

Thus, according to this estimation, per capita expenditures on own functions have a negative elasticity of about 0.23 with respect to the population size, which implies a positive elasticity of about 0.23 with respect to the population scale.

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\(^87\) To access tools from the Analysis ToolPak, click Data Analysis in the Analysis group on the Data tab. If the Data Analysis command is not available, the Analysis ToolPak add-in program needs to be loaded.
APPENDIX C: OPTIONS FOR BROADENING LOCAL TAXING POWERS – INTERNATIONAL EXPERIENCE

International experience with betterment levies

Special assessment is a special property rate levied to cover the costs of specific capital works schemes which only benefit a limited number of properties in the local jurisdiction. This kind of charges (also known as betterment levies) is levied on property owners (as in Canada, Poland, Columbia, Argentina and Mexico) or on developers (as in Canada, Australia, Mexico). A related instrument is used to reap ‘unearned increments’ in property values arising from administrative acts such as rezoning (as in Poland, Columbia and Mexico). Below we provide more detail on the experiences of selected countries.

Poland
Local governments may impose an ‘adjacency fee’ to partially recover costs of infrastructure investment. The fee cannot exceed 50 percent of the increase in property value attributed to infrastructure improvement. Payment of the fee can be extended over the period of up to ten years (with interest). In addition, within five years of land plan change, a tax of up to 30 percent of the value increase can be imposed on the sale of affected property. At the same time, owners whose property value decreases as a result of land plan changes are entitled to compensation.

Canada
Canada has two kinds of special taxes on property aiming at recouping the costs of building local infrastructure. Special assessments (also known as improvement charges) on residential, commercial, and industrial properties are used to recoup the costs of additions and improvements to existing infrastructure that borders those properties. The charge is determined based on particular capital expenditures (street pavement, water mains and sewers, sidewalks, street lighting, etc.) in a given year, but the costs can be spread over a period of years. The most common base for special assessments is the front footage of properties, size of lot, assessed value of property or location zone.

By contrast, development charges (also known as exactions and lot levies) recoup growth-related capital costs from developers rather than final beneficiaries. The charge is determined by a special rule, for example, based on the forecasted growth in the need for services and the existence of excess capacity. While municipalities in British Columbia use a development-by-development approach, elsewhere this charge is levied uniformly for all developments in the municipality.

Colombia
Since 1921, Colombian municipalities have been authorized to impose special charges to pay for certain public works. According to the present system introduced in 1966 (under the name of ‘valorization’), each level of government can levy contributions on any

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benefit or appreciation of property arising from public works. Such contributions may be imposed before, during, or after the construction of public works. The cost of the works plus 30 percent is divided among affected properties in proportion to the benefit. Property owners can participate in budgeting of the works and assessing contributions.

A related tax (*impuesto a la plusvalía*) was introduced recently to tax the appreciation of land value arising from administrative decisions related to the use of land included in the master plans. This tax can range from 30-50 percent of the difference between the market value of property before and after the change of the master plan. Up to now, this second type of levies has not been utilized by Colombian cities.

*Other countries*

In Argentina, provinces and municipalities may finance certain public works by betterment taxes (contribuciones de mejoras) when those works raise land values. Governments identify the group of beneficiaries, and apportion some part of the construction costs among them in proportion to estimated benefits. In Australia, most states charge fees to developers to compensate local governments for improvements in infrastructure necessitated by development.

The United Kingdom have attempted to institute various forms of betterment taxes and other fiscal instruments intended to capture increments in land value attributed to public policy changes. However, these instruments have proved to be both politically highly contentious and administratively complex so that no such taxes existed until recently. In 2007 a new Community Infrastructure Levy (CIL) per square meter of new building was chosen by the UK Government as a preferred method of securing generalized contributions from developers. The UK Government legislated for CIL in the 2008 Planning Act. Implementing Regulations followed, and CIL came into force in England and Wales on 6 April 2010. A number of local authorities have already implemented a CIL.

In summary, country experiences with betterment levies vary. Potentially such levies can act as a form of marginal cost pricing of public infrastructure and hence induce more efficient development patterns and discourage urban sprawl. This requires several important conditions: 1) careful identification of beneficiaries for a particular project and the extent of benefits in terms of incremental property value; 2) careful costing of projects; 3) ensuring that costs do not exceed estimated benefits, which would be indicated by consent to this charge by affected property owners; 4) prompt construction of projects and collection of assessed contributions.

**International experience with a local surtax on the national PIT**

For a local surtax on the national tax, there are two options for the rate structure at the local level: 1) Tax on tax is when a local government levies a tax that is a proportion of the national tax; 2) Tax on base is where the local rate is applied to the taxable income defined for the national tax.
Table A3 describes the piggyback arrangement for income taxes in a variety of countries. In Croatia, the base for the surtax is the national PIT liability (that is tax on tax), and the rate of the surtax is set by the city or municipality in which the taxpayer resides. Before 2001, the surtax could have been introduced only by cities with populations of over 40,000. The maximum rate of the surtax they could introduce was 30% (60% for the city of Zagreb). Since 2001 all local government units except counties have been allowed to introduce a PIT surtax. The rate ceiling is set at 10% for rural municipalities, 12% for cities with populations up to 30,000, and 15% for units with populations above 30,000. The maximum rate of the surtax in the city of Zagreb is 30%. By January 1, 2007, 251 local government units had introduced this surtax.\footnote{Mihaela Bronić (2007), Personal income tax and surtax sharing in Croatia, Institute of Public finance Newsletter No. 27, April 2007.}

Other examples of countries with piggyback income taxes include Canada, Germany, Norway, Switzerland, and United States. Piggybacking arrangements provide local governments with considerable revenue autonomy because they can set the tax rate and even have limited ability to define the base. Piggybacking arrangements allow the local governments and the central government to exchange information which can increase the effectiveness of enforcement activities. A drawback of piggybacking arrangements is that local revenues may change whenever the national tax base is changed.
### Appendix Table A-1. Subnational government personal income taxes

<table>
<thead>
<tr>
<th>Country</th>
<th>Tax Base</th>
<th>Subnational Government’s Tax Rate Schedule</th>
<th>Tax base between localities</th>
<th>Assessment and Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Single Rate*</td>
<td>Separate progressive rate schedule</td>
<td></td>
</tr>
<tr>
<td>Belgium</td>
<td>Central government income tax paid</td>
<td>6-8</td>
<td>—</td>
<td>Residence</td>
</tr>
<tr>
<td>Croatia</td>
<td>Central government income tax paid</td>
<td>10 - 30</td>
<td>—</td>
<td>Residence</td>
</tr>
<tr>
<td>Denmark</td>
<td>Central government taxable income</td>
<td>20.2 – 33.5 (Av=27.1)</td>
<td>—</td>
<td>Residence</td>
</tr>
<tr>
<td>Finland</td>
<td>Central government tax base and separate tax relief structure</td>
<td>14 – 18.5 (Av=15.9)</td>
<td>—</td>
<td>Residence</td>
</tr>
<tr>
<td>Iceland</td>
<td>Central government tax base</td>
<td>8.4 – 9.2</td>
<td>—</td>
<td>?</td>
</tr>
<tr>
<td>Japan</td>
<td>Central government tax base and separate tax relief structure</td>
<td>—</td>
<td>4 to 18 + fixed amount</td>
<td>Residence</td>
</tr>
<tr>
<td>Spain</td>
<td>Central government tax base and separate tax relief structure</td>
<td>Split rate between the center and the regions, who can increase or decrease their rate</td>
<td>—</td>
<td>Residence</td>
</tr>
<tr>
<td>Sweden</td>
<td>Central government tax base and separate tax relief structure</td>
<td>26.4 - 33.2 (Av = 30)</td>
<td>—</td>
<td>Residence</td>
</tr>
</tbody>
</table>


*Notes*: * Minimum and maximum rates levied among subnational governments. Although a given subnational government uses a single rate, subnational governments are free to levy different rates. That different rates are applied by different subnational governments in a given country illustrates the advantage of greater revenue autonomy that can be achieved with a piggyback income tax.