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Fiscal federalism and prospects for metropolitan transportation authorities in Portugal

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ABSTRACT

Fiscal federalism refers to the attribution of public finance functions among different levels of government. We examine Portugal's metropolitan transportation sector through the fiscal federalist lens, in light of the country's decentralization efforts and new relevant legislation. We clarify basic principles of fiscal federalism and adapt them to the finance of metropolitan transportation systems – typically characterized by multiple jurisdictions, numerous externalities and equity concerns – showing the inadequacy of general practice. Portugal's overall public finance system partially adheres to fiscal federalist principles; the transportation sector less so. Metropolitan transportation faces particular troubles, with few direct user fees, prices inadequately reflecting costs, and heavy reliance on central government subsidies for public transportation investments and operations. A new law creating metropolitan transportation authorities is only modestly consistent with fiscal federalist principles, since it inadequately details financial responsibilities and remains under heavy central government control. Absent additional reforms, the new metropolitan authorities should aim to make the transportation finance system explicit and test incentive grants to induce inter-municipal cooperation.

1. Introduction

Fiscal federalism refers to the vertical structure of government authorities and the attribution of functions related to revenue collection and expenditures. While theoretical fiscal federalism offers well-defined principles for assigning responsibilities, in practice it faces several challenges, including institutional inertia and capacity, status quo political power and vested interests. Fiscal federalism's specific design requires transparency and flexibility, accounting for political, economic, and cultural conditions. Metropolitan transportation—which typically crosses local jurisdictions, involves multiple institutions, introduces externalities, and requires public-sector participation – could, in theory, benefit from analysis through the fiscal federalist framework.

Portugal's metropolitan transportation situation presents an opportune case for usefully applying the fiscal federalist optic. The sector depends heavily on central government, with discretionary annual appropriations from revenue sources un-linked to the sector or the geographic boundary of system benefits and costs. Since most of these accrue at a metropolitan scale, fiscal federalism suggests devolving administrative power and most financial responsibility to metropolitan-level institutions. While the Portuguese government has been decentralizing many services to *municipal* governments in recent years, the process has been relatively ad hoc, with municipalities attempting to do the possible with limited available mechanisms and in competition. Over the years national legislative efforts have attempted to create metropolitan-level (i.e., *inter*-municipal) administrative bodies, including for transportation. In early 2009 a new national law established the legal framework – including administrative and some financial responsibilities – for Metropolitan Transportation Authorities (*Autoridades Metropolitanas de Transportes*, or AMTs) in the nation's two largest metropolitan areas, Lisbon and Porto.

While the AMTs were created to support the devolution of transportation administration to an "appropriate" functional level, effective AMTs will require adopting fiscal federalism. We consider this a relatively universal condition: a more fiscal federalist-consistent metropolitan-level transportation system will produce "better" outcomes. While we cannot test such a hypothesis with a single case, the Portuguese situation illuminates key issues and challenges, with the fiscal federalist perspective clarifying pathways for enhancing current reforms in Portugal. The case may offer lessons for others grappling with similar challenges. Application of a fiscal federalist lens to the problem may offer

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generalizable lessons, particularly by analyzing additional cases similarly. Ultimately, we aim to show how to improve metropolitan transportation administration and performance *via* the finance system.

The next section introduces the concept of fiscal federalism and its relevance to transportation. The third section describes the context and structure of Portugal's transportation finance and administration system and analyzes it through the fiscal federalist lens. The fourth section assesses the new AMT Law, its implementation to date, and its strengths and weaknesses. We follow with a brief discussion of lessons learned and opportunities for the AMT framework to enable metropolitan transportation more consistent with fiscal federalism. A final section concludes.

2. Metropolitan transportation finance: theory and practice

The finance system plays a pivotal role in the efficiency, fiscal stability, and equity of metropolitan[3] transportation. For transportation users, prices paid should reflect relevant resource costs to society, thereby improving efficiency. For planners, a system operating with inaccurate prices will distort planning decisions (e.g., Vickrey, 1969) while an explicit and transparent user-based pricing and revenue system signals justifiable investments and ensures stable revenues. The finance system can also structure incentives for metropolitan transportation integration: among sectors, such as land use and transportation; among modes, such as private and public transportation; and among and between local, regional, and national governments. Finally, finance plays a key role in social equity.

2.1. Public goods, decentralization, and fiscal federalism

Public finance originates in the concept of a public good, which, in economic terms, is *non-rivaled* and *non-excludable*. In practice, few goods are purely "public." Whether societies treat a certain good as public or private depends on a combination of history, culture, laws, ideology, etc. (Douglas, 1992; Kaul and Conceição, 2006).

Decentralization relates to public finance implementation. Theoretical justifications for fiscal decentralization start with Tiebout (1956) and the idea that a person will choose to live in the local jurisdiction that provides her utility-maximizing combination of public goods and tax rates—an economically efficient outcome. Related arguments for decentralization include: increasing accountability and government responsiveness, creating incentives for local innovation in service provision, reducing interest group power, building local capacity, and improving regional balance of development (e.g., Bahl, 2008). Arguments against decentralization include: threats to national economic stability due to local government profligacy (Tanzi, 1995); failure to account for inter-jurisdictional externalities, such as transportation networks crossing political/administrative boundaries; inefficient tax/subsidy competition among local jurisdictions; and diluted technical capability (e.g., Bucovetsky, 1991; Prud'homme, 1995; Bahl, 2008).

2.1.1. Decentralization, coordination, and fiscal federalism

Policy/service domains such as transportation, land use, and public health tend to be organized functionally (i.e., vertical silos), with potentially different appropriate geographic scales of administration. In practice, these sub-systems are interrelated (i.e., inter-sectoral spillovers), requiring some form of inter-sector collaboration or integration (e.g., May et al., 2005; Stead, 2008). The typical metropolitan challenge: national government is too "distant" from the local context to adequately serve the metropolitan "good," while municipal governments have inadequate incentives to think and act beyond their own borders. Fiscal federalism offers a formal way to identify how the public finance system can induce effective metropolitan governance. Bird and Slack (2007) review various forms of metropolitan governance structure – from consolidated, to two-tier, to voluntary, to special districts – and their implications for fiscal structures.

Critical factors in assigning sub-national responsibilities relate to the nature of the service in question (e.g., public or private), the spatial extent of relevant externalities, and/or the existence of scale economies in service production. Regarding revenues, theory supports central government control over highly redistributive taxes, taxes on mobile capital, and taxes on natural resources, while "local" control should roughly correspond with user fees (for services) and taxes on non-mobile capital (e.g., land) (Oates, 1993). This allows for efficiency and administrative ease in revenue collection. For service provision, sub-national governments in a decentralized fiscal system will often have to provide more local services than those which can be funded entirely locally (due to, e.g., the presence of externalities). This introduces the need to coordinate with adjacent and/or higher-level political entities via, for example, financial transfers to resolve problems of horizontal ("equal treatment of equals") and vertical equity ("unequal treatment of unequals") and inter-jurisdictional pricing and delivery (e.g., for goods with spillovers or externalities).

2.1.2. Relevant principles of fiscal federalism

Fiscal equivalence provides the key theoretical link between administrative and fiscal responsibilities: public goods' beneficiaries should match with those who pay (Olson, 1969), implying sub-national production and resource generation for numerous public goods. Fiscal equivalence and user fee financing can lead to improved *efficiency*, especially if prices closely match marginal costs and price signals guide investment and management decisions; and *fiscal stability*, by helping to secure sufficient resources for the relevant service and jurisdiction. Prices should also reflect *externalities*, whether inter-system, intra-system, and/or inter-jurisdictional. Even with increased administrative and fiscal autonomy, sub-national governments must still face "*hard budget constraints*," that is spending limits, to ensure adequate consideration of costs and benefits in the case of transfers from higher level governments. The inter-related dimension of *equity* introduces additional challenges, including because societies judge many goods to be public and/or "basic rights" (e.g., clean water). Applying these principles should lead to more accountable and transparent service investment, operation, and pricing.

2.2. Fiscal federalism and metropolitan transportation

Scholars of fiscal federalism often focus on specific local issues, such as education (Calabrese et al., 2012) or tax competition (Brueckner, 2004), but rarely examine in detail the transportation sector. On the other hand, transportation scholars focusing on finance issues rarely apply, explicitly, the fiscal federalist lens. But, metropolitan transportation merits application of this lens, as it:

- is typically, *multi-jurisdictional*, crossing numerous local governments, implying the need for inter-jurisdictional transfers or some other level of administration, normally below the national and state/provincial, but above the local/municipal;
- produces numerous *externalities*, positive and negative, which might include labor productivity benefits due to increased mobility,

[3] Here metropolitan refers specifically to an urban-regional transportation system that crosses more than one local government (e.g., municipality) boundary.