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Grant Financing of Metropolitan Areas

A Review of Principles and Worldwide Practices

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Abstract

In the new information age in the globalized and interconnected world, metropolitan areas hold the key to the future prosperity and growth of nations. This paper takes a closer look at grant-financing regimes faced by metropolitan areas and their role in facilitating or hindering improvements in economic and social outcomes of residents of metropolitan areas. A review of 42 large metropolitan areas worldwide shows that, with a few notable exceptions, metropolitan areas in general are hamstrung from playing their potential role in economic advancement. Metro areas have large economic bases and therefore little a priori needs for grant financing, yet they have strong dependence on central transfers. This is because of the highly constrained fiscal autonomy given to these areas, especially in developing countries, with the singular exception of metro areas in China. Such a strong reliance on transfers undermines local autonomy and local accountability. General purpose transfers are formula based , transparent and predictable yet they discriminate against metropolitan areas as they utilize a one size fit all (common formula) for all local governments—large or small. Such formula typically incorporate equal per jurisdiction component that discriminates against large metropolitan areas. Compactness is rarely rewarded and the greater needs of metro areas for transportation, education, health, culture and welfare go unrecognized. Overall the emphasis in grant financing of metro areas deals with vertical fiscal gaps or project based specific purpose grants.

To ensure that metropolitan areas can play their dual roles in improving economic and social outcomes for residents, it is important to strengthen their fiscal autonomy while at the same time enhancing their accountability to local residents. The paper argues that results based grant financing of social and transportation services and tournament based approaches to encourage inter-jurisdictional competition need to be given serious consideration to ensure metropolitan autonomy while strengthening citizen based accountability.

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1. Introduction

The allure of metropolitan areas is irresistible for a large majority of people. Metropolitan areas promise good jobs, good homes, a good life, a good time for the young and the young at heart and sweet dreams of a prosperous future for all. In an information age with a borderless world economy where economic success is more closely tied to the competitive advantage as opposed to hackneyed notions of comparative advantage, metropolitan governments are at the core of the future prosperity of a nation. In an age of mistrust in governments, metropolitan governments serve as a tool to overcome a lack of trust and restore confidence in governments through their commitment to improve social and economic outcomes.

These great expectations however are critically linked with the fiscal health of metropolitan areas. Fiscal health is closely tied to the fiscal regimes available; in particular, the taxing powers and other financing options such as grant and bond financing. This paper is concerned with a critical aspect of this financing - mainly higher level fiscal transfers. While these transfers may not be the dominant source of revenues for a large number of metropolitan areas, they have a significant bearing on the incentives and accountabilities and associated impacts on fiscal health of metropolitan areas. The design of these transfers requires careful thought on special features of metropolitan areas that distinguish them from smaller local government entities.

Most metropolitan areas have large populations, typically in excess of one million. Mumbai, India has a population of 21 million and Istanbul, Turkey has population of 13 million. Metropolitan areas are larger and compact areas with higher population densities than the rest of the nation. This compactness facilitates agglomeration economies as well as making metropolitan areas centers of arts and culture and learning and sources of innovation, growth and productivity. They also afford better transportation and communication facilities and overall a better quality of life. This leads to a larger concentration of specialized skills and wealth, and on

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the downside, higher incidence of crime and poverty. Metro areas have typically much broader responsibilities than smaller local governments. Beyond municipal services, these encompass health, welfare, and hub functions for national and international finance, trade and economic links. Because of this in some countries metro areas are treated as provinces/states. Examples include Canberra in Australia, Bangkok in Thailand, Beijing and Shanghai in China, Tokyo in Japan, Seoul and Busan in South Korea, Berlin, Bremen and Hamburg in Germany, Helsinki in Finland and others. Metro areas typically have multiple local jurisdictions and in some cases multiple tiers of local jurisdictions. Metropolitan areas also have a typically larger revenue base and greater tax autonomy and therefore greater potential for self-finance.

In view of this, the grant financing needs of metro areas are very different from other local governments. If taxing powers are adequately decentralized, there may in fact be no need for grant financing of operating expenditures of metro areas as demonstrated by Tokyo and Seoul. This, however, is not the case for most metropolitan areas. They lack autonomy in taxing powers. They have limited access to dynamic productive tax bases. Existing tax bases, especially property tax bases are overtaxed to finance municipal and education services e.g. in USA and Canada, leaving little room to grow. In the USA, this problem is compounded by limits on local revenues and unfunded mandates in environmental and social spending. In most developing countries metro governments lack administrative and fiscal autonomy and act as wards of the state and pied pipers of national and provincial governments. They are hamstring to play a leadership role in local economic development. In these circumstances grant financing can play an important role but grants must be tailored to specific circumstances of metro areas especially their broader role in local, national and international governance with an expanded array of responsibilities associated with serving as nodes of national and international connectivity and special needs of a knowledge based local economy. Grant design also must incorporate incentives and accountability mechanisms to ensure responsible and accountable local governance. This paper provides a synthesis on conceptual underpinnings of this literature as well as providing a brief overview of practices across the world based upon a review of 41 metropolitan areas. It must be noted at the outset that the assignment of responsibilities must underpin any design of grant program (see McMillan, 2008). With appropriate assignments or reassignments, it is possible to minimize need for higher level assistance for metropolitan areas. However, this paper takes these assignments (or mis-assignments) in practice as given and examines options in grant design to facilitate better functioning of metropolitan governance. An overall theme of this paper is that grants can be (and should be) properly designed in most any institutional/organizational setting --- even if the organizational setting may not seem to be ideal.

The rest of the paper is organized as follows. Section 2 provides a typology of grant instruments and discusses their rationale and relevance for metro areas. Section 3 provides conceptual guidance on grant financing metropolitan services. Section 4 outlines stylized models of metropolitan governance and draws implications for the design of higher level transfers. It also discusses impliations of exsting institutional arrangements for developing a grant strategy for metropolitan financing. Section 5 provides a review of worldwide practices in grant financing of metro areas. This is done (a) by type of metropolitan governance and (b) by type of country. Section 6 highlights the divergence of the practice in grant financing from theory. Section 7 draws lessons from grant financing of metropolitan areas and develop and agenda for reform.

2. Grant Instruments, Rationale and Relevance for Metropolitan Areas

Grant Instruments

Instruments of intergovernmental finance have important bearings on efficiency, equity and accountability in governance. These are discussed below.

Tax Base, Tax Yield and Revenue Sharing Mechanisms

Tax base sharing (metropolitan areas levy supplementary taxes on national bases), tax yield sharing and revenue sharing mechanisms are customarily used to address fiscal gaps or mismatched revenue means and expenditure needs arising from constitutional assignment of taxes and expenditures to different levels of governments. Tax base sharing means that two or more levels of government levy rates on a common base. Tax base determination usually rests with the higher-level government with lower orders of government levying supplementary rates on the same base. Tax collection is by one level of government, generally the central government in most countries, with proceeds shared downward or upward depending on revenue collection arrangements. Metropolitan Bangkok levies a surcharge on central value added taxes, excise taxes, business taxes, liquor, gambling and horse racing licenses and taxes. Tax base sharing is quite common in Eastern Europe and East Asia but almost nonexistent in most developing countries in Asia and Africa.

A second method of addressing the vertical fiscal gap is tax yield sharing. Typically the central government collects shared taxes and apportions pre-specified shares on a tax by tax basis to jurisdictions of origin. Tax sharing contributes to collection efficiency but may introduce disincentives for the government collecting taxes to make relatively less effort on taxes it has to share with other governments. Tax by tax sharing is quite common in developing countries. Metropolitan Jakarta receives a fixed share of personal income, propoerty taxes and natural resource revenues collected by the central government in its jurisdiction.

A third method of addressing vertical fiscal gaps is revenue sharing, whereby one level of government has unconditional access to a specified share of revenues collected by another level. Typically not all revenues of the higher level government but only a specified set of revenue sources are subject to pooling for revenue sharing using a formula. Revenue sharing agreements typically specify how revenues are to be shared among national and lower level governments, with complex criteria for allocation among lower level governments and sometimes imposing conditions for the eligibility and use of funds. The latter limitations if imposed run counter to the underlying rationale of unconditionality. Revenue sharing mechanisms are quite common in developing countries. They often address multiple objectives, such as bridging fiscal gap, promoting fiscal equalization and regional development, and stimulating tax effort at lower levels. Metropolitan cities in India receive funds both from central and state revenue sharing mechanisms. Metropolitan areas in Brazil receive transfers from state revenue sharing mechanisms for municipal governments –the so-called Muncipal Participation Funds.

Intergovernmental Grants

Intergovernmental transfers or grants can be broadly classified into two categories: general-purpose (unconditional) and specific-purpose (conditional or earmarked) transfers.

General-Purpose Transfers

General-purpose transfers are provided as general budget support, with no strings attached. These transfers are typically mandated by law, but occasionally they may be of an ad hoc or discretionary nature. Such transfers are intended to preserve local autonomy and enhance inter-jurisdictional equity (equalization grants). General-purpose transfers are termed bloc transfers when they are used to provide broad support in a general area of sub-national expenditures (such as education) while allowing recipients discretion in allocating the funds among specific uses. General-purpose transfers simply augment the recipient's resources. Since the grant can be spent on any combination of public goods or services or used to provide tax relief to residents, general non-matching assistance does not affect relative prices. Formula-based general-purpose transfers are very common in developing countries. For the purpose of allocating these grants, metropolitan areas are typically treated just as another local government as is done by states in Brazil, India and Pakistan and by the Central Government in Indonesia. In some countries general purpose transfers are provided as equalization grants that are intended to enable different local jurisdictions to achieve reasonably comparable levels of public services at reasonably comparable levels of local taxation. Metropolitan areas in Indonesia, Russia, Poland and most Eastern European countries receive such transfers along with smaller local governments. Grouping metropolitan areas with smaller local governments leads to an understatement of fiscal needs and overstatement of fiscal capacity in metropolitaan areas. For example, Jakarta Metropolitan area is rated as a "fiscally surplus" area according to the existing formula for local autonomy (equalization) grants. Of course, it is possible to design measurement criteria that would overcome this anti-metro bias but it may also make the allocation criteria more complex and less transparent.

Specific-Purpose Transfers

Specific-purpose, or conditional, transfers are intended to provide incentives for governments to undertake specific programs or activities. These grants may be regular or mandatory in nature or discretionary or ad hoc.

Conditional transfers typically specify the type of expenditures that can be financed (input-based conditionality). These may be capital expenditures, operating expenditures, or both. Conditional transfers may also require attainment of certain results in service delivery (output-based conditionality). Input-based conditionality is often intrusive and unproductive, whereas output-based conditionality can advance grantors' objectives while preserving local autonomy.

Conditional non-matching transfers provide a given level of funds without local matching, as long the funds are spent for a particular purpose. Conditional non-matching grants are best suited for subsidizing activities considered high priority by a higher-level government but low priority by local governments.

Conditional transfers may incorporate matching provisions – requiring grant recipients to finance a specified percentage of expenditures using their own resources. Matching requirements can be either open ended, meaning that the grantor matches whatever level of resources the recipient provides, or closed ended, meaning that the grantor matches recipient funds only up to a pre-specified limit.

Matching requirements encourage greater scrutiny and local ownership of grant-financed expenditures; closed-ended matching is helpful in ensuring that the grantor has some control over the costs of the transfer program. Matching requirements, however, represent a greater burden for a recipient jurisdiction with limited fiscal capacity. In view of this, it may be desirable to set matching rates in inverse proportion to the per capita fiscal capacity of the jurisdiction in order to allow poorer jurisdictions to participate in grant-financed programs. If an equalization program is in vogue, it should recognize the equalization element of the conditional grant program to ensure there is no "double" equalization.

Conditional open-ended matching grants are the most suitable vehicles to induce lower- level governments to increase spending on the assisted function. If the objective is simply to enhance the welfare of local residents, general-purpose non-matching transfers are preferable, as they preserve local autonomy. To ensure accountability for results, conditional non-matching output-based transfers are preferable to other types of transfers. Output-based transfers respect local autonomy and budgetary flexibility while providing incentives and accountability mechanisms to improve service delivery performance.

Output based grants create an incentive regime to promote the results based accountability culture. Consider the case where the national government aims to improve access to education by the needy and poor as well as enhance quality of such education. A commonly practiced approach is to provide grants to government schools through conditional grants. These grants specify the type of expenditures eligible for grant financing, for example, books, computers, teachers' aids, etc. and also financial reporting and audit requirements. Such input conditionality undermines budgetary autonomy and flexibility without providing any assurance regarding the achievement of results. Such input conditionality, in practice, is difficult to enforce as there may be significant opportunities for fungibility of funds. Experience has also demonstrated that there is no one-one link between increase in public spending and improvement in service delivery performance (see Huther, Roberts and Shah, 1997). To bring about accountability for results, consider an alternate, output based design of such grants. Under the alternate approach, national government allocates funds to local governments based upon school age population. The local governments in turn pass these funds to both government and non-government providers based upon school enrollments. Conditions for receipt of these grant funds for non-government providers are that they must admit students on merit and provide a tuition subsidy to students whose parents do not have sufficient means to afford such fees. Conditions for the continuation of funds for all providers will be to improve or at the minimum maintain baseline achievement scores on standardized tests, improve graduation rates and reduce dropout rates. Lack of compliance with these conditions will invite public censure and in the extreme case a threat of discontinuation of funds with perpetual non-compliance. Meanwhile, reputation risks associated with poor performance may lead to reduced enrollments and associated reduction in grant funds. There are no conditions on the use of funds and schools have full autonomy in the use of grant funds and retain unused funds. Such grant financing would create an incentive environment for both government and non-government schools to compete and excel to retain students and establish reputation for quality education. In the final analysis it is parental choice that determines available grant financing to each school. Such an environment is particularly important for government schools where typically staff have life-long appointments and financing is assured regardless of school performance. Budgetary flexibility and retention of savings would encourage innovation to deliver quality education. Thus output based grants preserve autonomy, encourage competition and innovation while bringing strict accountability for results to residents. This accountability regime is self-enforcing through consumer (parental choice in the current example) choice. Such a school financing regime is especially helpful in developing countries and poorer jurisdictions in industrial countries plagued with poor quality of teaching and worse teacher absenteeism or lack of access to education in rural areas. The incentive regime provided by results based financing will create market mechanism to overcome these deficiencies over time.

A similar example of such a grant in health care would allocate funds to local governments based upon weighted population by age class with higher weights for senior citizens (65 years and over) and children (under 5 years). The distribution by local government to providers would be based upon patient use. Minimum standards of service and access to health care will be specified for the eligibility to receive such transfers.

Specific purpose transfers can also be used to promote inter-jurisdictional competition or public-private partnership or other collaborative or competitive approaches to enhance public services delivery and access. To achieve these ends, grant payments can be made either on the basis of achieving pre-set benchmarks ("certification") or higher ranks in relative quantitatively measured performance ("tournaments") (see Zinnes, 2009).

For metropolitan areas, output-based transfers are a useful canadidate for financing operating expenditures for education, health, public transit and infrastructure. Capital grants would be a useful financing tools for overcoming infrastructure deficiencies or setting national minimum standards in quality and accesss of infrastructure. Tournament based grants would be a useful tool to create a competition among metropolitan areas in improving slums or overcoming congestion and pollution.

Grant Objectives and the Choice of Grant Instruments – A Stylized View

In concluding this section, it is useful to summarize the choice of grant instrument in meeting specific objectives. This taxonomy of grants by objective is not specific to grant financing of metropolitan areas but is broadly applicable.

Bridging vertical fiscal gaps. Reassignment of responsibilities, tax decentralization, tax abatement accompanied by tax base sharing would be preferred instruments. Tax by tax sharing and deficit grants are less desirable alternatives.

Setting national minimum standards. Output based grants with conditions on service standards would be desirable. Conditional input based grants are less desirable.

Overcoming infrastructure deficiencies in establishing national minimum standards. Conditional capital grants based upon a planning view with matching rates that vary inversely with local fiscal capacity.

Compensating benefit spillovers. Matching grant with matching rate consistent with the spillover of benefits.

Influencing local priorities that are in conflict with national priorities. Open-ended matching grant desirable.

Promoting competition among local governments. Project or output based grants using certification to meet pre-specified standards or tournament based approach to reward top performers would be desirable.

Inter-local equalization. Fiscal capacity equalization with explicit standard using Robin Hood approach where richer jurisdictions contribute to the pool and poorer jurisdictions receive financing from the pool would be desirable.

3. Financing Metropolitan Services and the Role of Grant Finance

The role of grant financing is closely linked to the service delivery responsibilities of each metropolitan area as several metropolitan services are better financed through other tools as discussed below. For the purpose of our discussion, metropolitan services are grouped together either as people oriented services or services to both people and property.

People-Oriented Services

Primary and secondary education and public health. These are merit services that are redistributive in nature and as a result higher level grant financing would be important to ensure national minimum stanadards. Operating expenditures for these services are best financed by surcharges on personal income taxes and fees supplemented by output-based non-matching grants. Capital expenditures could be financed by borrowing and/or matching capital grants.

Welfare assistance. This service is again a strong candidate for grant finance if a local responsibility due to the redistributive nature of this service. Local governments that provide a generous package of welfare assistance from own resources are likely to lose tax base as happened in the early 1970s in the New York City and more lately in St. Louis, Missouri (see Inman, 2005).

Parks, recreation and libraries. These services are weak candidates for grant finance but good candidates for finance through residential property taxes, surcharges on personal income taxes and fees.

Museums, sports and fitness facilities and concert halls. These facilities are poor candidates for grant finance and instead are better financed locally perhaps through reserves, revenue bonds or other forms of capital finance which ultimately is funded by fees, and surcharges on local real property taxes and personal income taxes. However, if some of these facilities in metro areas are intended for preserving national heritage, holding global events (e.g. Olympics), and developing national caliber athletes and performers, then such facilities should receive at least some national funding.

Mixed People and Property-Oriented Services

Water, sewer, airports and ports. Capital costs could be covered by borrowing financed by reserves, real property taxes, surcharges on personal and corporate income taxes, frontage taxes, matching grants and public-private partnerships. Operating costs could be recovered by user fees and franchises.

Arterial roads and regional public transit. Higher level grant assistance would be important to finance partially both capital and operating costs. Capital costs could be financed by matching capital grants, borrowing, frontage taxes and reserves. Operating costs could be financed by fuel taxes, tolls, fines, general revenues, transit fees, congestion charges, and benefit spillover compensation by conditional matching grants.

Local streets, roads, public transit, street lighting and parking. These are purely local services and not appropriate for grant finance.

Fire protection and ambulance. These services are best financed from general revenues.

Police, courts and prisons. To the extent, these services may have some national externality, these could be partially financed by grants.

Garbage and Solid Waste disposal. These services are best financed by user charges/fees and franchises.

Local environmental protection, discouraging "sins" and "bads". These services are best financed by environmental charges, congestion tolls, and taxes on gambling, alcohol and tobacco.

General services. Grant financing is not appropriate and instead these services should be financed by local general revenues.

The above paragraphs have highlighted the relevance of service delivery responsibilities in determining relevant grant structures. The following section looks at the relevance of the governance structure and taxing powers of the metorpolitan area for grant finance.

4. Models of Metropolitan Governance and Implications for Higher Level Fiscal Transfers

Metropolitan areas could be broadly grouped into six areas based upon the level of coordination or centralization of metropolitan governance.

I. *Unitary governance*. Under this model, the metropolitan area has single unified or uni-city or single tier coordinated governance. Examples of this governance include Prague, Yogyakarta, Addis Ababa, Pretoria, Bern, London, Melbourne, and Toronto. Yogyakarta has a joint secretariat comprising heads of the Municipality of Yogyakarta, the districts of Slemen and Bantul for harmonization of infrastructure development with special emphasis on solid waste and waste water management. Such governance arrangements offers the potential that metropolitan area will be largely self-financed if it is given adequate fiscal autonomy. Canberra, Australia is unique in this group as it is a city-state with single tier governance. It has an elected assembly based upon proportional party representation. The Assembly chooses the Chief Minister.

II. *Vertically coordinated metropolitan governace.* These are typically provincial (state) cities having both the status of a state or province as well as being a metropolitan city. Governance structure usually comprises two tiers with the lower tier either serving as a deconcentrated arm of the upper tier although having a directly elected council to provide oversight on central administration at the district or ward level as in Bangkok or having autonomy for some local/neighbourhood services as in Beijing, Tokyo and Madrid. These jurisdictions by virtue of having city-state status have the potential to be largely self-financing. Also intra-metropolitan spillovers are internalized with such governance arrangements. Examples of metropolitan areas having cxity-state status include Istanbul, Tirana, Warsaw, Zagreb, Bangkok, Beijing, Shanghai, Berlin, Brussels, Busan, Madrid, Montreal, Seoul and Tokyo. Istanbul has a two tier unified structure. The metropolitan municiplaity has 73 lower tier municipalities. The upper tier municipality has the power to override or approve lower tier decisions. Tirana, Albania has two-tier coordinated governace with the upper tier governed by the Municipal Council and directly elected mayor and 11 sub-municipal units have directly elected councils and excutive heads. Warsaw is treated as an urban county with 18 districts. Each district has a directly elected district council and district executive. Warsaw capital region is governed by a directly elected Warsaw Council and is responsible for metropolitan tasks.It coordinates these tasks through district offices. Zagreb, Croatia has a two tier governance structure with the top tier comprising a joint council of the city and the Zagreb County. Both the city and the county assembly elect two members each to the joint council and the joint council is chaired on a rotating basis between the city mayor and the county governor. Bangkok, Thailand is a single tier provincial city covering the entire Bangkok metro area. The Bangkok Metropolitan Area Council comprises 57 councillors- one each for 100K people. The BMA is divided into 18 districts each with its own directly elected council to supervise BMA offices. The BMA chief executive is elected at large for a 4 year term. The Governor is assisted in executive functions by a centrally appointed civil servant – permanent secretary. Brussels Capital Region, Belgium has a higher tier region with an elected parliament and a centrally appointed government responsible for municipal laws and supervision and regional infrastructure, housing and environment. The lower tier has directly elected councils responsible for education, health, police and municipal services. Madrid, Spain comprises the Community of Madrid (CM) that includes 179 municipalities including the City of Madrid. The CM is responsible for regional infrastructure, education and health and at the lower tier Madrid City and municipalities have elected councils and mayors (with dual role as Council chair and Chief Exceutive) are responsible for all municipal services. Montreal, Canada comprises metropolitan cities of Montreal, Longueuil and Laval and 63 municipalities. It has a two tier governance structure with the upper tier – the so-called Montreal Metropolitan Community responsible for coordination of a few selected services. Seoul metropolitan area has an upper tier – Seoul Metropolitan Government with provincial status and 25 autonomous lower tier municipalities. Tokyo Metropolitan Government has a prefecture or regional government status with 23 special wards, 26 cities, 5 towns and 8 villages performing lower tier functions.

III. *Horizontally coordinated mandatory two tier metropolitan governance*. Under this structure both upper tier and lower tiers have well defined independent responsibilities. Examples include Belgrade, Serbia, Skopje, Macedonia and Copenhagen, Denmark. Belgrade has a directly elected city mayor and assembly as the first/upper tier and 17 municipalities with a directly elected municipal assembly and municipal chair elected by each assembly as the second/lower tier. Skopje, Macedonia has a similar governance structure with the city as the first/upper tier and 10 municipalities as the second/lower tier. Copenhagen Metropolitan Region, Denmark has a directly elected Regional Council as the first/upper tier responsible for inter-municipal coordination and health services and 45 municipalities delivering all local-municipal services including education at the second tier. Grant financing needs of such governments would be limited to mass transit, social services financing, benefit-spillover compensation and intra-metropolitan equalization.

IV. *Horizontally coordinated voluntary two-tier metropolitan governance*. Under this governance structure metropolitan areas comprise multiple local jurisdictions who voluntarily cooperate with each other on selected metro-wide functions as well as deliver some services jointly through partnership agreements. Examples include Helsinki, Finland (24 municipalities) and Vancouver, Canada. In both cases, upper tier represents partnership arrangement among municipalities in the metropolitan area. Grant financing needs of such areas are primarily for mass transit and social services and intra-metropolitan equalization.

V. *Uncoordinated two-tier metropolitan governance*. Regional and local governmengts co-exist with little formal coordination mechanisms either horizontally or vertically. Example include Bucharest in Romania and Chisinau in Moldova. Bucharest has a directly elected autonomous but uncoordinated two tier system with the City having a Council and a Mayor serving as the top tier and six sectors (districts) serving as second tier municipalities. Metropolitan Chisinau comprises the Capital city of Chisinau and 18 territorial local government units with each having independent legislative and administrative organs.The upper tier municipality has a directly elected Municipal Council and General Mayor. The Municipality is responsible for metro-wide regulation of land, and residential property, coordinaation of social and economic development, civil aand social protection, public order and emergency regime and respoinse. All other local functions are performed by the city and municipalities. These governance arrangements require separate and substntive needs for intergovernmental finance including intra-metroplitan equalization.

VI. *Uncoordinated/fragmented single tier metropolitan governance*. Several independent local jurisdictions sometimes belonging to different states and provinces deliver services in sub-areas with little coordination. Examples include Mexico city, Chennai, Delhi, Hyderabad, Jakarta, Kolkatta, Mumbai, Puna, Abuja, Cape Town, Milan and Washington DC metropolitan area. Mexico City Metropolitan Area comprises the Federal Capital district with 16 districts (delegaciones), 58 municipalities of the State of Mexico and one municipality of the State of Hidalgo. These jurisdictions are uncoordinated although a plethora of coordinating agencies/commissions and planning bodies exist. Chennai Metropolitan Area, India comprises one municipal corporation (Chennai), 8 municipalities, 26 town panchayats, and 1 Cantonment Board. These 36 governments are uncoordinated. Similarly Delhi, India has 3 uncoordinated local governments – Municipal Corporation of Delhi, New Delhi Municipal Corporation and Delhi Cantonment Board. Jakarta Metropolitan Area (JMA) comprises the City of Jakarta, three urban municipalities and three rural municipalities (districts) belonging to three provinces, Jakarta, Banten and West Java. Goverrnance structure in JMA is a single tier uncoordinated although a central coordinating agency –BKSP, has been established that bring together all heads of provincial and local governments to promote task coordination. Washington, DC Metropolitan Area includes Washington, DC, municipalites in Northern part of the State of Virgina and parts of the State of Maryland. Milan represents a special case as according to the 1990 law it is supposed to have a two tier structure with the higher tier – metropolitan city having a provincial status performing regional functions and lower tier municipalities within the metro region performing municipal functions. However, it still operates as a single tier uncoordinated metropolitan area with multiple jurisdictions. There is little coordination among multiple local jurisdictions in the metro area. Such fragmented governance maximizes the need for higher level financing.

Table 1 provides a stylized view of grant financing, taking inrto account the governance and finance model adopted for the metropolitan area. If the "finance follows functions" principle is adopted, then metropolitan areas should have significant taxing powers such that their revenue means would be largely consistent with their expenditure needs, then the needs for higher level transfers to metropolitan areas will be minimized. They would still need transfers or other compensatory arrangements to compensate them for spillover- of benefits to non-residents for use of metro services. It would also be desirable to provide them with assistance in financing redistributive services as local financing of such services would lead to an erosion of their tax bases. For horizontally coordinated or fragmented metro governance, in addition, some grant mechanisms for intra-metropolitan equalization would also have to be examined.

In the event, taxing powers are not commensurate with metropolitan responsibilities and a large vertical gap persists, a menu of tax decentralization and grant financing options would have to be explored regardless of the governance structure. In addition. for horizontally coordinated or fragmented governance models, intra-metropolitan equalization alternatives would have to be examined. Competitive grants also are important for improving metrowide performance through incentives for performance excellence (see Table 1).

So far, we have highlighted the implications of the metropolitan governance and finance models for grant design. These are critical elements for developing a grant strategy for metropolitan areas. Several additional issues in developing such a strategy also require discussion.

Table 1. Models of Metropolitan Governance and Finance and Implications for Grant Design		
Governance Model	*Revenue means match responsibilities or Finance Follows Functions*	*In the presence of large vertical fiscal gap*
Fully integrated metropolitan Governance Examples: uni-city model as in Toronto, and most developing countries	Grants or partnership agreements for spillovers to non-metro jurisdictions. Grants for redistributive services e.g. education, health and social welfare	Tax base sharing Grants for inter-jurisdictional spillovers Grants for redistributive services Equalization grants Capital grant
Provincial-city model with multiple tiers as in Beijing, Seoul, Tokyo, Bangkok	Grants or partnership agreements for spillovers to non-metro jurisdictions. Grants for redistributive services e.g. education, health and social welfare.	Tax base sharing Grants for inter-jurisdictional spillovers Grants for redistributive services Equalization grants Capital grant
Horizontally Coordinated Mandatory Two tier metro governance with multiple jurisdictions as in Copenhagen	Grants or partnership agreements for spillovers to metro and non-metro jurisdictions. Grants for redistributive services e.g. education, health and social welfare. Equalization grants (inter and intra) Capital grants Competitive grants	Tax base sharing Grants for inter-jurisdictional spillovers Grants for redistributive services Equalization grants (inter and intra) Capital grants Competitive grants
Horizontally coordinated Voluntary two tier metro governance with multiple jurisdictions as Vancouver and Helsinki	Grants or partnership agreements for spillovers to metro and non-metro jurisdictions Grants for redistributive services e.g. education, health and social welfare. Equalization grants (inter and intra) Capital grants Competitive grants	Tax base sharing Grants for inter-jurisdictional spillovers Grants for redistributive services Equalization grants (inter and intra) Capital Grants Competitive grants
Two-tier uncordinated as in Bucharest and Chisnau	Grants or partnership agreements for spillouts to metro and non-metro jurisdictions	Tax base sharing Grants for inter-jurisdictional spillovers Grants for redistributive

	Grants for redistributive services e.g. education, health and welfare. Equalization grants (inter and intra) Capital grants Competitive grants	services Equalization grants (inter and intra) Capital Grants Competitive grants
Uncoordinated/fragmented single tier metropolitan governance as in Washington Metro Area or Mexico city	Grants or partnership agreements for spillouts to metro and non-metro jurisdictions Grants for redistributive services e.g. education, health and welfare. Equalization grants (inter and intra) Capital grants Competitive grants	Tax base sharing Grants for inter-jurisdictional spillovers Grants for redistributive services Equalization grants (inter and intra) Capital Grants Competitive grants

Additional Considerations in Developing a Grant Strategy for Metro Areas

Autonomous public agencies for service delivery. Some metro wide services are delivered by autonomous public agencies run on commencial principles rather than by general government. Such practice is quite widespread for water, sanitation, gas, electricity and toll roads. These arrangements should have no bearing on grant design as the case for grant finance should be based on the objectives and results sought and should not be linked to the management paradigm for such services.

Functional, overlapping and competing jurisdictions. Under such arrangements jurisdictions are organized along functional lines but overlap geographically within the metropolitan areas. Individuals and communities express their preferences directly through inititives and referenda (see Frey and Eichenberger, 1995). The jurisdictions could have authority over their members and the power to raises taxes and fees to fulfill their tasks. The school communities of Zurich metropolitan areas and special districts and boards in Noth America follow this concept in practice. Output based grants are a suitable tool to finance such jurisdictions.

Fragmentation of metropolitan governance through proliferation of single purpose jurisdictions. Special purpose jurisdictions with access to tax finance are quite common in metropolitan areas in industrial countries. Most common example of such jurisdictions is school boards with access to supplementary rates on residential property tax base. Profileration of these agencies leaves municipal services with inadequate finance as existing tax bases especially property taxes are overtaxed with little or no room to grow. These problems are sometimes further compounded by limits on raising local revenues and unfunded higher level mandates in environmental and social spending, as has been the case for the metropolitan areas of San Francisco and Los Angeles in the USA. Decline in general purpose or equalization transfers exasperate this problem. Matching conditions for specific purpose transfers do not help either. In designing a metropolitan grant strategy, these considerations have to be kept in mind so as to ensure that metropolitan governments have adequate resources to deliver municipal services.

Contracting out metropolitan services. Metropolitan governments may choose to deliver some services through contractual arrangements or through concessions or franchises. For some services, they could use multiple providers to achieve more efficient provision outcomes. In such circumstances grant design must ensure that service quality and access to the poor are not compromised. Output based grants are an ideal tool to have this assurance.

5. Grant Financing of Metropolitan Areas: The Practice

A review of international practices on grant financing of metropolitan areas is constrained by the scant details available even for metro areas in industrial countries. The data limitations restricted our sample to 41 metropolitan areas worldwide. To capture the diversity of experiences, the sample was organized using two alternative classifications – (b) by type metropolitan governance and (b) by the use of four tier typology of countries.

(a) The Practice by Type of Metropolitan Governance

I. *Unitary goverance (unified or uni-city metro or unified single tier multi-jurisdiction governance).* Ten sample areas fall in this category. Contrary to expectations, grant financing is an important source of finance for most metro areas wth the notable exception of Addis Ababa, Pretoria and Melbourne, which are largely self-financed. Close behind these leaders are Toronto and Bern. London is an outlier receiving more than 80% of funds from central grant finance. Tax sharing is dominant for Prague only in this sample. Overall for the sample as a whole 9.4% of financing comes from tax sharing, 16.4% from general purpose or equalization transfers, 13.7% from specific purpose transfers and the remaining 60.9% is self-financed (see Table 2). In this cluster, Prague relies significantly on revenue sharing from personal income and value added taxes. Revenue sharing is by the number of inhabitants multiplied by the coefficient of the size category of municipality. Prague has a coefficient of 2.7611 (Kunatova nad Pavel, 2007). In this sample Prague is the only metropolitan area receiving special treatment due to its size class. All other metro areas are treated in similar manner to other municipalities. Metropolitan London is an outlier in view of its predominant reliance on central transfers and having the most constrained access to own finances. It receives 25.6% from revenue sharing transfers (the so-called Revenue Support plus redistributed non-domestic rate grant) and 55% as specific pupose transfers of which the police grant amounts to 5.3% and the area based grant contributes 2.4% to total amount of specific purpose transfers (UK Government, 2010).

<INSERT TABLE 2 HERE>

II. *Unified 2-tier governance – city-state metro areas.* 14 sample areas have this type of governance. However, there is a great diversity in central finacing of these areas.

Metro Istanbul is treated just like another local government with revenue sharing based upon population and 5% of centrally collected revenues returned by origin (OECD, 2008).

Tirana receives central general purpose transfers based upon population (70%), area (15%), urban services(15% for other local governments, 0% weight for Tirana). Corporate Income Tax Sharing is mandated by law but not implemented as 80% of national revenues are collected in Tirana. Thus in general the general purpose transfers discriminate against Tirana. It should be noted that Albania is among the handful of countries (Russia being another) that operates a competitive grant program. The program was initiated in 2006 with a pool as large as the general purpose transfers and finances local capacity investment in education, health, water supply, and general municipal infarstructure. The criteria for allocation includes: expected impact on economic and social development and compliance with local/regional development priorities; impact on poverty reduction and improved access to basic services; projects promoting cooperation among local governments; projects with community participation and funding; funding for the local counterpart of foreign funding; and ongoing projects that have contractual obligations (Dhimitri, Ikonomi and Dhuka, 2009).

In Warsaw, the most prominent central transfer is for financing the metro subway system. (Jefremienko and Wolksa, 2007).

Zagreb receives financing from a share of taxes on income (personal and corporate) and real estate transfers and specific purpose grants. Income tax proceeds are allocated to local government using the following criteria: by origin municipality or town share: 52%, county share :15%; share of decentralized functions:12% share of decentralized function realignment. In addition local government receives a supplementary allocation for decentralized functions: primary education:3.1%; secondary education:2.2%; social welfare centers 0.5%; nursing homes 1.7%; health care 3.2%; and fire protection:1.3%. The Metro region also receives 60% of the proceeds of the real estate transfer tax derived from the region. General purpose transfers are available to local governments with below average fiscal capacity based on PIT. Zagreb is not eligible for these transfers. The decentralized functions are financed through specific grants based upon standard costs (Kopric et al. 2007).

In Bangkok, Metropolitan Area (BMA) tax sharing. 5% of value added tax and 40% of revenues from natural resources and fisheries and teak wood are shared with provinces. 100% of BMA surcharges on central taxes such as VAT, specific business tax, liquor tax, excise tax, liquor and gambling licenses and gambling tax on horse races, are returned by origin. General purpose transfers have two components: (a) VAT transfer according to the Decentralization Act, 1999. 18.5 % of VAT revenues are allocated to local governments based upon a formula that includes population, area, revenue and budget needs. BMA received 5.8% of total pool in 2008. (b) The General Duty Transfer: 5% of total pool is set aside as deficit/expenditure need grants. Of the remaining 95% - 10% is allocated to the provinces with 65% allocated on a per capita basis and the remaining 35% equal per jurisdiction basis. Specific purpose transfers mostly fulfill central mandates for health, education, public transit, school lunch, support for elderly care, AIDS patients, and disabled persons, social services, and water and environmental services (Shah, Mohib et al, 2010).

The Brussels Metropolitan Region receives tax shares proportional to the yield of income taxes in the region. The region also receives equalization payments – under the National Solidarity Intervention (INS) program, when income tax receipts per capita are below the national average (Wynsberghe in Slack and Chattopadhyay, 2010).

In Madrid Metro Region, two regimes exist for central transfers for small vs large municipalities. Large municipalities with population in excess of 75k the general grant consists of two parts: a tax share of central government taxes and a grant from the Complimentary Fund. Tax shares are 1.7% of PIT, 1.8% of VAT and 2% of excise revenues. PIT is allocated among municipalities based upon taxes collected locally and VAT and excise shares are distributed by consumption and population shares (OECD,2007, p.208).

Washington, DC receives federal grant funds for Medicaid, community development, education, public welfare and public safety (Gandhi et al in Slack and Chattopadhyay, 2010).

For this sample, tax sharing is the most sugnificant if not the predominant source of revenues for metros in European and East Asian countries. For the sample as a whole tax sharing contributes 28.7%, general purpose transfers 6.4%, specific purpose transfers 12.2% to metro revenues and 53.7% of financing is raised from own sources (see Table 2). Being provincial cities, most of the metros in this group benefit from greater access to self-finance but given their greater responsibilities, only about half of their expenditures are self –financed. It is interesting in the sample countries, there is no special recognition of their metropolitan character. Only Spain accords limited recognition to this nature by grouping large urban municipalities together for grant financing. Competitive grant finance is practiced only in Tirana.

III. *Horizontally coordinated with mandatory two-tier governance.* Three sample jurisdictions fall into this category and they vary siginificantly in their dependence on grant finance.

For Belgrade, Serbia, tax sharing from personal income taxes by origin is the dominant source of revenue. In addition it receives financing from formula based general purpose transfers.

Equalization transfers are distributed to local governments with shared revenues per capita below the national average and of course Belgrade does not qualify (Gilorijevic et al, 2009).

Tax sharing from PIT and VAT is the dominant source of revenues for Skopje, Macedonia. 3% of the revenues from PIT and VAT are transferred to municipalities. Of the PIT pool, the City and its municipalities get a share of 10%. Of the VAT pool for municipalities, 12% of revenues go to City of Skopje (40% share) and its 10 municipalities (60% share) (Veljanovski, 2009).

Copehagen, Denmark is primarily self-financed. Denmark has a separate horizontal equalization program for metropolitan areas requiring richer jurisdictions to contribute to the pool and poorer jurisdictions receive assistance from this pool.

For this sub-group, tax sharing is the predominant source of central transfers financing 30.5% of metro expenditures, general purpose transfers finance 7.2%, specific purpose transfers 4.6% and 57.7% of financing is raised from local taxes and charges (see Table 3). Copenhagen is unique in this sub-group for its participation in horizontal equlization among metro areas.

<INSERT TABLE 3 HERE>

IV. *Horizontally coordinated volutary two-tier metro governance*. Of the sample metro areas, only Helsinki, Finland falls into this category. Helsinki is primarily sel-financed and just like Copenhagen, it contributes to a horizontal equalization program.

V. *Uncoordinated two-tier metro governance*. Of the sample jurisdictions, Bucharest, Romania and Chisinau, Moldova have uncoordinated two tier governance structure. Of these Bucharest is primarily transfer financed whereas in Chisinau, own source of finance dominates.

In Bucharest, Romania, PIT and VAT are shared taxes. Metro districts receive 23.5% of PIT and General Council receives 47.5% and an additional 11% for district equalization. VAT sharing is discretionary (past allocation indexed by inflation) and given as lump sum grants earmarked for salaries and social benefits. Specific purpose grants are mostly capital grants for streets, rural infrastructure and school rehabilitation, (Sorin Ionita, 2009).

Chisinau, Moldova, receives financing from personal income tax sharing and formula based general purpose transfers (Roscovan and Melnic, 2007).

For the sub-group, two thirds of financing is received from transfers mostly in the form of proceeds from shared taxes and one third from own sources. There is no special treatment of metro areas in this group.

VI. *Uncoordinated or fragmented single tier metro governance*. 12 sample jurisdictions have fragmented single tier metro jurisdiction i.e. several local governments operate in a metro area without any formal corrdination arrangements. There is a wide variation in the role of central/state transfers in financing metro expenditures with Mexico City Metropolitan Region having the highest depdency on these transfers and Pune, India the least. It should be noted, however, that Mexico delivers a wider range of local services than Pune. Jakarta is noteworthy as it receives only financing from shared taxes.

In the Mexico City Metropolitan Region, thre are wide variations in the sources of finance of various jurisdictions. Mexico Federal District finances 37% of expenditures from general purpose transfers and an additional 19% from specific purpose transfers and 45% of expenditures are self-financed. The municipality from the State of Hidalgo receives 27% of financing from general pupose transfers, and 66.8% from specific purpose and other transfers and fianncing 6.8% from own sources. The Mexico State municipality receives 39% of finnacing as general pupose transfers and 35% as specific pupose or other transfers and the reamining 26% raised from own sources (OECD, 2004).

Chennai, India, has access to state tax sharing from entertainment tax, motor vehicles tax, stamp duty surcharge. In addition, it receives general pupose transfers based upon formula allocation using population and deprivation index. It also rreceives specific pupose transfers for education and road maintenance (Kala Sridhar et al, 2008).

Hyderabad, India receives a state per capita grant that varies from Rs.4 (10 cents) in Metropolitan City of Hyderabad to Rs. 202 (US$5) for Alwal (Sridhar et al, 2008).

Jakarta, Indonesia is a provincial city. It receives both the provincial and city share from central taxes. Provinces receive by origin 8% of PIT and 16% of property taxes, property transfer taxes, mining land rent, mining royalty, forestry license and forestry royalty. Local governments receive by origin 12% of PIT, 64% of other taxes and 32% of forestry royalty. Provinces receive by origin 3% of oil and 6% natural gas revenues. Local governments receive by origin 6% of oil and 12% of natural gas revenues. It also receives compensation for public sector wages. Just like any other small or large local government, it is also eligible to receive financing of its fiscal gap based upon the difference in its revenues and fiscal needs using population, per capita GDP, Human Development index and construction price index as need factors. However, Jakarta is considered to have a fiscal surplus and therefore receives no funds from the general purpose gap filling transfer. Local governments with below average fiscal capacity are also eligible to receive specific purpose transfers to meet education, health, infrastructure and agriculture development needs. Again Jakarta does not qualify (Shah, 2011).

Abuja, Nigeria receives revenues from formula based revenue sharing transfers from Federal Excess Crude Oil Account, Value added tax and sale of government properties (Elaigwu in Slack and Chattopadhyay, 2010).

Cape Town, South Africa receives general pupose formula based transfers that incorporates factors such as relatively poor households, infrastructure deficiencies and needs for a limited range of services (OECD, 2008, p.279 and Steytler in Slack and Chattopadhyay, 2010).

Washington, DC receives federal grant funds for Medicaid, community development, education, public welfare and public safety (Gandhi et al in Slack and Chattopadhyay,2010).

There is no sample area receiving a special treatment for being a metropolitan area in this sub-group. For the sub-group as a whole, tax sharing finances about 10% of expenditures, grants 23% and financing from remaining 67.5% of expenditures come from own sources.

All Metro Areas

While this review has unearthed isolated examples of better practices in grant design (see Box 1) an overall conclusion is that almost all countries, industrial and developing alike, do not recognize the governance structure of metropolitan areas, their responsibilities, their unique roles in national and global connectivity in designing transfers to finance metropolitan expenditures. The only exceptions are Denmark and Finland and the Czech Republic. While there are significant differences in the composition of metropolitan finance across different models of metropolitan governance, these differences could not be explained by the nature of the underlying governance structure.

(b) The Practice by Typology of Countries

The sample of 42 metro areas were divided into four country groupings as discussed below and the results are reported in Table 4.

Metro areas in Type I countries

These are highly urbanized middle income countries with low to medium rates of expansion of metropolitan areas in a context of slow to medium economic growth performance (mostly Latin America, Europe and Central Asia, and Middle East and North Africa). A review of 10 metro areas was conducted. These include Belgrade, Bucharest, Chisinau, Istanbul, Mexico City, Prague, Skopje, Tirana, Warsaw, and Zagreb. Population range for this sample is from 600K in Tirana to 18.4 million in Mexico city. Metro areas in this sample with the exception of Mexico city have extensive local and metropolitan service responsibilities. Tax by tax sharing especially for income and value-added taxes with pre-specified central-local shares dominates central-local transfers. General purpose central-transfers are formula based, transparent and predictable. Typically these embody one size fits all formulae that do not recognize special needs of metropolitan areas. Metro areas are at a disadvantage for general purpose transfers but are assured reasonable financing due to return of fixed proportion of tax yield from major taxes by origin. Overall central-transfers inclusive of tax sharing finance 59% of metro expenditures (see Table 4).

<INSERT TABLE 4 HERE>

Metro Areas in Type II Countries

These are low to medium urbanized middle income countries with rapidly growing metropolises in the context of high economic growth (mostly Asia). A review of 12 sample metro areas were conducted. These include: Bangkok, Beijing, Brazil metro areas as a group, Chennai, Delhi, Hyderabad, Jakarta, Kolkata, Mumbai, Pune, Shanghai, and Yogyakarta. This represents a diverse sample with Yogyakarta with 2 million people as the smallest metro area and Mumbai with a population of 21 million as the largest metro area. These is also a great diversity in the metropolitan service responsibilities with Beijing and Shanghai having the status of provincial governments and having responsibilities for a wide range of metropolitan services with Chennai, Delhi, Hyderabad, Kolkata, Mumbai and Pune being responsible primarily for municipal services only with Bangkok (provincial status), Brazil metro areas, Jakarta and Yogyakarta having intermediate range of metropolitan responsibilities. Tax sharing and tax base sharing dominates for metro areas with wider powers such Shanghai and Beijing and also for intermediate range of powers such as Bangkok, Jakarta, and Yogyakarta. Specific purpose transfers have greater prominence in financing Brazil metro areas that have intermediate range of local service responsibilities. Formula based, one size fits all, general purpose transfers dominate for metro areas with constrained powers such as Indian metro areas. On average transfers finance 43.2% of expenditures in sample metro areas.

Metro Areas in Type III Countries

This grouping of countries include low to medium urbanized low income countries with high rates of metropolitan growth but low to medium rates of economic growth (mostly Africa). Four metro areas of Abuja, Addis Ababa, Cape town and Pretoria/Tshwane are reviewed. Population range for sample areas is 1.4 million in Abuja to 3.1 million in Addis Ababa. These metro areas have a narrow range of metropolitan responsibilities. Formula based, with a uniform formula for all local governments, revenue sharing general purpose transfers dominate. These formulae work to the disadvantage of metro areas. Grants on average finance 23.2% of metro expenditures. While local taxes finance most of the expenditures, taxing powers of local governments are highly constrained.

Metro Areas in Type IV Countries

This grouping includes industrial countries. The sample includes 16 metro areas that include: Berlin, Bern, Brussels, Busan, Canberra, Copenhagen, Helsinki, London, Madrid, Melbourne, Milan, Montreal, Seoul, Toronto, Tokyo and Washington. Population range for this sample is from a low of 340K in Canberra to 13 million in Tokyo. There is also wide diversity in the range of metropolitan responsibilities with Tokyo, Seoul, Busan and Helsinki (all with provincial status) at the high end of the spectrum and Melbourne and London at the lower end and the rest of the sample in between these ranges. Metro areas at the upper end of the spectrum are largely self-financing and at the lower end primarily grant financed. An extreme example is London which had central transfers finance 81% of its expenditures in 2008-09. For the sample as a whole specific purpose transfers with input conditionality dominate higher level financing. On average central and state transfers finance 34.3% of metro expenditures.

All Countries

For the sample as a whole there is a great diversity in the range of metropolitan responsibilities shared by the metro areas with Tokyo, Copenhagen, Helsinki, Seoul, Busan, Shanghai and Beijing at the top of the totem pole and Melbourne and Indian metro areas such as Mumbai at the bottom end. For the sample average, tax sharing has a slight edge over general and specific purpose transfers. Nearly 40% of metro finances are from central transfers.

6. Conceptual Guidance Versus Practice: Notable Points of Departure

Earlier sections highlighted conceptual considerations in the ue of grant instruments. This was followed by a review of worldwide practices in grant financing of metropolitan areas. This sections distills main points of departure of practice from the conceptual guidance.

One size does not fit all. The practice contradicts this and most countries treat metro governments in generic formula used for grant allocation to all local governments. But this introduces inequities and inefficiencies, as metro government fiscal needs are measured on a yardstick that includes small towns with widely divergent fiscal capacities and needs. This introduces injustice for metro areas as they have above average fiscal capacities as well as needs but they are treated as if they have above average fiscal capacity and average need. Fair treatment of metro areas requires a metro grant strategy that considers governance, finance and special needs of metro areas.

Nature of metropolitan services must be taken into consideration the design of grants and other instruments of finance. The practice provides no evidence of this. In fact, the practice even in industrial countries often contradicts this. For example, metropolitan areas in Canada, USA, UK and a number of developing countries including India use property taxes and input based conditional grants for school finance whereas as noted earlier surchages on personal income taxes and output based grants are more suitable for school finance. UK, and USA also use specific purpose grants for financing police protection in metro areas wheres general revenues are a more suitable instruments of police finance. Grant financing is relevant for financing a fraction of police expenditures that have externality for national security.   Matching capital grants with matching rates that vary inversely with fiscal capacity for financing school, health and transportation facilities are rarely practiced. Museums, sports and fitness facilities and concert halls are poor candidates for grant finance unless they serve national objectives yet grant finanacing of such facilities is widely practiced. Benefit spillovers compensation is rarely available to metro areas.

Model of metropolitan governance and finance matter for grant finance. In an ealier section, we highlighted how the models of metropolitan governance and finance matter for type and tools of grant financing. We did not discover any evidence that such considerations entered in to designing grant financing of metro areas in practice. This neglect is unfortunate as a holistic view of metropolitan financing and required tools for grant financing is not possible without explicit consideration of governance and finance arrangements. For example, in horizontally coordinated and uncoordinated metro governance, there is a need for intra-metro equalization and use of competitive grants for enhancing competition – the two tools that are rarely practiced. Output based grants could alsso be used to facilitate functional, overlapping and competing single purpose jurisdictions giving residents greater voice, choice and exit options. If metro governance is fragmented due to monopoly single purpose jurisdictions with preferred access to tax finance, then more funds have to be directed to municipal finance through equalization grants. Ouput based grants would also serve important tools in ensuring equitable access in the event services are contracted out.

Keep it simple. This principle is frequently ignored in practice especially in designing revenue sharing and equalization grants. Multiple factors that work at cross purposes are introduced leading to a scrifice in transparency and equity and efficiency of allocations.

Singular focus. Most general purpose grant programs have multiple objectives and as a result unlikely to achieve any of the specified objectives. Having each grant instrument focus on a single objective would enhance chances of success.

Input (or process) based or ad hoc conditional grant programs undermine metropolitan autonomy, flexibility, fiscall efficiency and fiscal equity objectives. Specific purpose transfers available to metro areas are mostly input control conditional grants. The only exceptions are school transfers available to metro areas in Brazil, Canada, Chile, Colombia, Finland, Sweden, Denmark, and Thailand and health transfers in Brazil, Denmark, Finland and Canada.

Introduce results based finance to incentivize excellence in service delivery performance. Output based transfers are rarely practiced but hold great promise for improving metropolitan government performance and accountability while preserving local autonomy.

Introduce sunset clause and review provisions. This is not practiced anywhere in grants to metropolitan areas.

7. Lessons from International Practice and an Agenda for Reform

A review of worldwide practices leads to the following stylized view of grant financing of metro areas. Metro areas have large economic bases and therefore little a priori needs for grant financing yet they have strong dependence on central transfers. This is because of the highly constrained fiscal autonomy given to these areas in most countries, especially developing countries with the notable exception of metro areas in China. Such a strong reliance on transfers undermines local autonomy and local accountability. Only Tokyo, Seoul, Busan, Melboune, Helsinki, Copenhagen, Mumbai, Pune and Cape Town stand out as being largely self-financed metro areas. The practice of tax base sharing is practiced only in a few metro areas such as Tokyo, Seoul and Bangkok. Tax by tax sharing is widely practiced. While such a practice is helpful in ensuring transparency and predictability of transfers yet it creates disincentives for the central tax administration to make lesser effort on taxes it has to share with metro areas. General purpose transfers are formula based, transparent and predictable yet they discriminate against metropolitan areas as they utilize a one size fit all (common formula) for all local governments – large or small. Such formula typically incorporate equal per jurisdiction components that discriminate against large metropolitan areas. Compactness is rarely rewarded and higher needs of metro areas for transportation, education, health, culture and welfare go unrecognized. Specific purpose transfers are typically ad hoc project based transfers with input conditionality. Such transfers typically address higher level mandates with inadequate financing. In general specific purpose transfers are intrusive, reward grantsmanship and distort local priorities. Egregious examples of specific purpose capital transfers can be seen in Bangkok where central financing for a section of above ground metro was withdrawn leaving poles that support no rails and in Jakarta where external financing of metro was blocked by the central government after local government had already initiated construction leaving an eyesore in its wake. Only a handful of examples of results based intergovernmental finance and of tournament based approaches to encourage inter-jurisdictional competition were discovered in grant financing of sample metropolitan areas. Grants to compensate metro areas for benefit spillovers are also not practiced. Overall emphasis in grant financing of metro areas remains in dealing with vertical fiscal gaps or project based specific purpose grants.

To assure that metropolitan areas can play their dual roles in improving economic and social outcomes for residents, it is important to strengthen their fiscal autonomy while at the same time also enhancing their accountability to local residents. This would be possible if metro areas have access to wide array of productive tax bases including income, sales and environmental taxes and charges. Given the special needs of metro areas, it would be best to have a separate and distinct treatment of these areas in grant financing. Results based grant financing of social and transportation services and tournament based approaches to encourage inter-jurisdictional competition need to be given serious consideration to ensure metropolitan autonomy while strengthening their citizen based accountability. Incidentally, these reforms have less demanding data requirements than needed for traditional input based conditional grants.

Overall, the practice of grant financing of metropolitan areas is at variance with the conceptual guidance in both industrial and developing countries. Such divergences represent important opportunities to reform metropolitan finances to enhance quality and access of metro services as well as making metro governments more responsive and accountable to local residents in both developing and industrial countries.

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Table 2. Grant Financing of Unicity and City-State Metro Areas (percent of total revenues)							
Metro	Pop.(M)	TS	GPT	SPT	TG	TT	OSR
I. Uni-city metro areas (n=9)							
Addis Ababa	3.1				3.1	3.1	96.9
Pretoria	2.0				9.9	9.9	90.1
Melbourne	3.5				14.2	14.2	85.8
Toronto	5.1			24.0	24.0	24.0	76.0
Bern	0.3				24.4	24.4	75.6
Canberra	0.3		27.8	14.6	42.4	42.4	57.6
Prague	2.3	40.4	na	na	19.3	59.7	40.3
Yogyakarta	2.0		66.5	7.2	73.7	73.7	26.2
London	7.2		25.6	53.0	80.6	80.6	19.4
Average (I)	2.9	4.5	16.4	13.7	32.4	36.9	63.1
II. Unified 2-tier governance – city-state metro areas (n=14)							
Tokyo	13.0				5.7	5.7	94.3
Seoul	10.4	0.8			8.3	9.1	90.9
Busan	3.7	3.0	2.0	13.0	15.0	18.0	82.0
Montreal	3.4				24.0	24.0	76.0
Tirana	0.6		8.5	17.9	26.4	26.4	73.6
Brussels	1.0	36.0	3.0		3.0	39.0	61.0
Bangkok	2.5	24.0	7.0	20.0	27.0	51.0	49.0
Beijing	15.0	29.2	16.6	5.2	21.8	51.0	49.0
Warsaw	1.7	40.0	Na	na	14.0	54.0	46.0
Shanghai	17.4	32.9	24.7	1.5	26.2	59.1	40.9
Zagreb	0.8	67.7	0	0.1	0.1	67.8	32.2
Madrid community(city)	6.0 (3.1)	64.0		5.0	5.0 (39.0)	69.0 (39.0)	31.0 (71.0)
Istanbul	13.4	65.0	10.0	0.0	10.0	75.0	25.0
Berlin	3.4	39.1	18.3	21.9	40.2	79.3	20.7
Average (II)	5.4	28.7	6.4	12.2	18.6	47.3	53.7

Notes: POP: Population in millions (most recent year) ; TS: tax sharing (may include tax base sharing); GPT: general purpose transfers; SPT: specific pupopse transfers; TG = total grants (=GPT+SPT); TT: total transfers (=TS+TG);OSR: own source revenues.

Sources: Various (see references)

Table 3. Grant Financing under Horizontally Coordinated or Fragmented Metro Governance (% of total revenues)							
Metro	POP(M)	TS	GPT	SPT	TG	TT	OSR
III. Horizontally coordinated with mandatory two tier governance (n=3)							
Copenhagen	2.4		7.0	10.0	17.0	17.0	83.0
Belgrade	1.7	41.5	9.0	0.1	9.1	50.6	49.4
Skopje	0.5	50.0	5.5	3.7	9.2	59.2	40.8
Average III	1.5	30.5	7.2	4.6	11.8	42.3	57.7
IV. Horizontally coordinated with voluntary two tier governance (n=1)							
Helsinki	1.2				10.3	10.3	89.7
V. Uncoordinated two tier governance (n=2)							
Chisinau	0.7	24.0	15.0	5.0	20.0	44.0	56.0
Bucharest	2.0	60.0	7.6	15.4	23.0	83.0	17.0
Average (IV)	1.3	42.0	11.3	10.2	21.5	63.5	36.5
VI. Fragmented single tier metro governance (n=12)							
Pune	3.8				9.0	9.0	91.0
Cape Town	3.0		20.0		20.0	20.0	80.0
Mumbai	21.0				20.0	20.0	80.0
Washington	5.0		12.0	14.0	26.0	26.0	74.0
Delhi	13.9	17.9			9.0	26.9	73.1
Milan	7.4				33.0	33.0	67.0
Mexico	18.4		38.0	32.0	70.0	70.0	30.0
Chennai	6.3	24.0			10.0	34.0	66.0
Hyderabad	4.1	25.0			15.0	40.0	60.0
Jakarta	18.9	46.3			0.0	46.3	53.7
Kolkatta	15.0				58.4	58.4	41.6
Abuja	1.4		60.0		60.0	60.0	40.0
Average (VI)	9.8	9.4			23.1	32.5	67.5

Table 4. Summary Statistics on Grant Financing of Metropolitan Areas – by Typology of Countries

Country Grouping	Sample Metro areas	Range of LG responsibilities	Population range	Tax sharing % (TS)	General purpose grants % (GPT)	Specific purpose grants % (SPT)	Total Grants % (TG)	Total transfers % (TT)	Own source revenues % (OSR)
Type I	10	wide	600K (Tirana) - 18.4 m (Mexico city)	38.6	14.0	13.9	27.9	59.0	41.0
Type II	12	Narrow to wider	2m (Yogyakarta) -21m (Mumbai)	25.2	19.7	9.7	29.4	43.2	56.8
Type III	4	narrow	1.4 m (Abuja)- 3.1m (Addis Ababa)	0	NA	NA	23.2	23.2	76.8
Type IV	15	wider	340K (Canberra)- 13 m (Tokyo)	8.9	13.2	21.4	25.4	34.3	65.7
ALL	41		340K (Canberra) - 21m(Mumbai)	18.2	15.6	15.0	26.5	39.9	60.1

Note: All transfers figures are simple averages of sample metro areas expressed in percentage of total revenues.

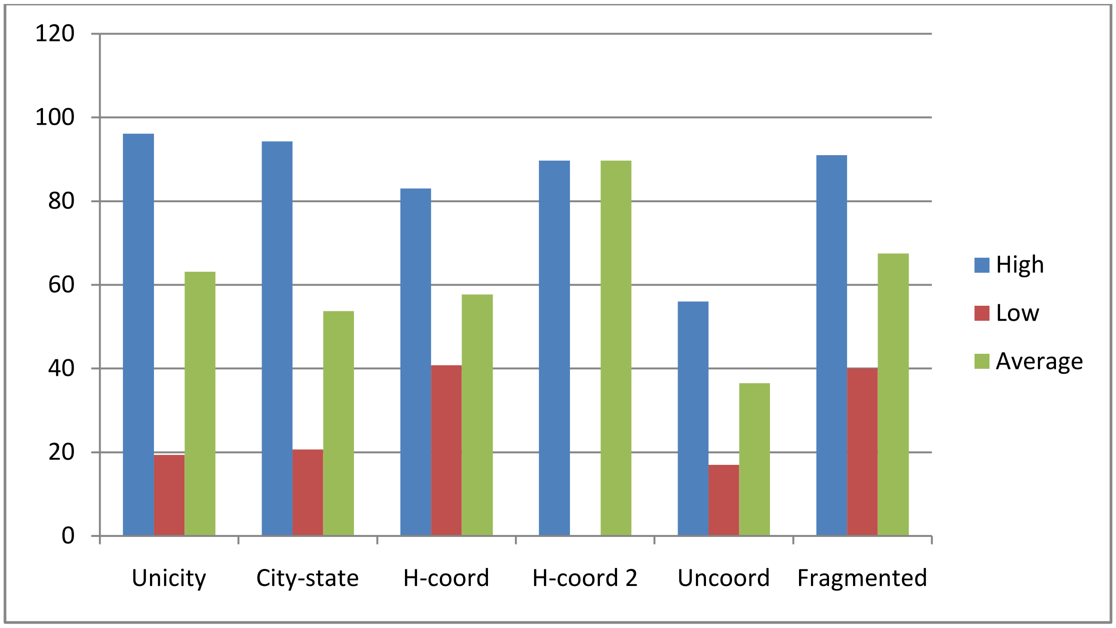
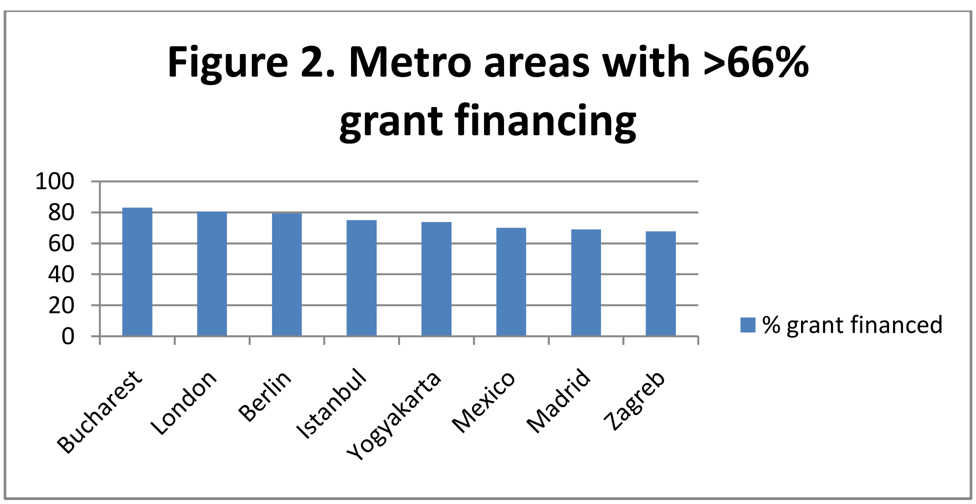


Figure 1. Own Source Financing of Metropolitan Expenditures by Type of Metro Governance



Box 1. Better Practices in Grant Financing of Metropolitan Areas

One size does not fit all. Prague, Czech Republic is the only metropolitan area receiving special treatment due to its size class. Prague relies significantly on revenue sharing from personal income and value added taxes. Revenue sharing is by the number of inhabitants multiplied by the coefficient of the size category of municipality. Prague has the highest coefficient of 2.7611 (Kunatova nad Pavel, 2007).

Grants to promote competition among local jurisdictions. Albania is among the handful of countries (Russia being another) that operates a competitive grant program. The program was initiated in 2006 with a pool as large as the general purpose transfers and finances local capacity investment in education, health, water supply, and general municipal infarstructure. The criteria for allocation includes: expected impact on economic and social development and compliance with local/regional development priorities; impact on poverty reduction and improved access to basic services; projects promoting cooperation among local governments; projects with community participation and funding; funding for the local counterpart of foreign funding; and ongoing projects that have contractual obligations (Dhimitri, Ikonomi and Dhuka, 2009).

Output-based grant for school finance. Bangkok Metropolitan Area public and private schools receives central grant financing based upon school enrollments. Somewhat similar practices prevail in Brazil (also for health finance), Canada (also for health finance), Chile and Australia. (Shah, 2010)

Inter-metropolitan and intra-metropolitan equalization based upon solidarity principle where rich jurisdictions contribute to the pool and poorer jurisdictions receive financing from the pool, is practiced in Denmark and Finland. (Shah, 2011)

Tax rebates by origin of collection. China returns 25% of VAT by origin to its local governments including Shanghai and Beijing (Shah and Shen, 2007)