

International Comparison of Global City Financing

A Report to the London Finance Commission

prepared by

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This report updates a 2013 study for the London Finance Commission which provided an international comparison of the methods of raising revenues in seven global cities and evaluated the benefits and risks associated with greater devolution of revenue tools to the Greater London Authority (GLA) (Slack, 2013). As noted in that study, cities are important drivers of productivity, innovation, and economic growth. To achieve their full economic potential, cities need to be able to provide a wide range of public services – “hard” services such as water, sewers, and roads but also “soft” services such as cultural facilities, parks, and libraries that will attract skilled workers. Cities that fail to provide these services will lose their economic advantage (Inman, 2005), (Chernick, Langley, & Reschovsky, 2010). The challenge cities face is to raise enough revenue to deliver high quality public services that will attract businesses and residents in a way that does not undermine the city’s competitive advantage.

The outline of this paper mirrors that of the earlier paper: the first section sets out information on the municipal finances of seven cities – London, Paris, Berlin, Frankfurt, Madrid, Tokyo, and New York. It begins with some background material on the cities in terms of the national context, governance structure, and other relevant information for comparing finances. It also explains the difficulties in comparing revenue information for different cities when there is no single source of data. The second section begins with a discussion of what is meant by local fiscal autonomy and looks at the extent of local fiscal autonomy in each of the seven cities. The third section reviews some of the implications of local fiscal autonomy for cities in general, and the ability to promote economic development and attract investment, in particular. The fourth section reviews the impact of local taxes on economic activity and evaluates the risks of cities becoming too reliant on locally-raised taxes. The fifth section summarizes the implications of greater local fiscal autonomy for London. There are two appendices: Appendix A provides a summary of the governance structures of the seven cities. Appendix B provides more detailed tables on the revenues and expenditures for the seven cities.

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1. Municipal Finances of Seven International Cities

Information for seven international cities on expenditure responsibilities and revenues is the starting point for understanding the extent to which they enjoy local fiscal autonomy. This section provides some background on the cities and information on the distribution of expenditures and revenues; the next section evaluates the extent to which they enjoy fiscal autonomy.

1.1 Background on the Seven International Cities

The nature of expenditure responsibilities, the types of revenue tools, and the extent of local fiscal autonomy will vary according to whether a city is located in a unitary country with a national government and local governments (but no state/provincial governments) or a federal country where there is a federal government plus state/provincial governments, and local governments. Three of the cities (London, Paris, and Tokyo) are located in unitary countries. Three cities (Berlin, Frankfurt, New York) are in federal countries and one city (Madrid) is in a country with regions which are similar to provinces or states in a federal country.²

Information on population, structure, governance, and roles and responsibilities for the seven cities is provided in Appendix Table A-1. The cities in this study vary in size from under 1 million people (the City of Frankfurt) to 13.5 million (Tokyo Metropolitan Government). The political boundaries of most of these cities rarely cover the entire economic region, however. New York City for example, is part of the New York metropolitan region which incorporates part of Southern Connecticut, Northern New Jersey, and lower New York State with more than 2,000 local government including school boards, villages, cities, special districts and other incorporated state agencies. Although there are some special purpose bodies that provide services that cut across beyond municipal boundaries (such as the Regional Plan Association and the Port Authority of New York and New Jersey), there is not one government that covers the entire metropolitan region. Similarly, there is not overarching regional government for the Frankfurt metropolitan area but there is a regional planning authority (Regional Verband FrankfurtRheinMain) which is responsible for planning in the Hessen Region and a regional transportation authority that connects Frankfurt and the surrounding regions.

Some cities are single-tier cities (e.g. New York) while others are two-tier cities (e.g. London with the Greater London Authority plus 32 borough councils and the City Corporation). Tokyo has the powers and revenues of two tiers of local government -- a prefecture and a municipality. Berlin is a city-state, meaning that it takes on the responsibilities of the city and the state government and can collect the revenues assigned to both the city and the state. It is thus not surprising that, depending on their structure, some cities carry out more functions and have more revenue sources than others.

² The Autonomous Community of Madrid (the state government) performs a number of local government functions; the City of Madrid also performs local functions.

1.2 Problems with Data Comparability

There is no comparable data on the municipal finances of individual cities. Although it is possible to find comparable information on the revenues and expenditures of all local governments within a country in sources such as (OECD, 2015) and (IMF, 2015), there is no comparable research on the municipal finances of individual local or metropolitan governments.³ As a result, the information in this report has been taken from local budgets and financial statements as well as data from national statistics offices.

Since there is not one source of information on the finances of the cities in this study, a number of problems of comparability have arisen:

- The data are available for different years in different cities. For four cities, information was available for 2015; for two cities, data were based on the 2014-15 fiscal year, and for one city, only 2014 data were available.
- Capital and operating expenditures/revenues are treated differently in different cities. For this report, the focus is on operating expenditures and revenues since these are the most readily available and the most straightforward to compare across cities. Operating expenditures also give an indication of the range of services delivered in a municipality.
- The categories of expenditure are different in different cities and it is not always clear what is included in each category. Moreover, the information is more disaggregated in some cities than others.
- In a number of cities, selected services are delivered by separate purpose bodies (e.g. transit commissions, water utilities). In some cities, the budgets of these agencies are consolidated with the municipal budget but in other cities they are not. In some cases, only the subsidy from the city to the separate agency is included in the municipal budget. For example, urban transport in the Paris region (Ile de France) is delivered by the Transport Syndicate of the Ile de France (STIF). The City of Paris contributes to the financial resources of STIF, along with the Region and other local authorities. STIF also receives revenues from a transport tax and fares. In Frankfurt, waste collection and disposal, economic development, culture, and parks and recreation are all delivered by separate companies.
- The information in this report focuses on individual cities and does not take account of overlapping governments. In Paris, for example, the City (commune) and Department of Paris each provide services in the City. In 2016, the Greater Paris Metropolitan Authority (Metropole du Grand Paris) was created and will eventually be responsible for housing, environmental protection, and local planning for Paris and 130 communes. In Madrid, the dominant local government in the metropolitan area is the Autonomous Community of Madrid which is, as noted earlier, a regional government that is roughly coterminous with the metropolitan area that includes the City of Madrid. It should thus not be surprising

³ This finding has been confirmed by authors such as (Bahl, 2010) and (Clark, 2012), among others.

that comparisons of expenditures and revenues across cities do not tell the whole story. Per capita expenditures for the City of Madrid, for example, are lower than for the other cities. Nevertheless, the information gathered for this study is restricted to cities so the provincial/regional government expenditures and revenues are omitted. As much as possible, these issues are noted throughout the report.

1.3 Municipal Finances

This section summarizes the findings gathered from the information on expenditures and taxes. More detailed information on the revenues and expenditures can be found in Appendix B.

Expenditures

Table 1 shows total municipal operating expenditures per capita for the seven cities. Operating expenditures range from a low of £1,049 per capita in the City of Madrid to £5,410 per capita in New York City and £5,447 in Berlin. Not surprisingly, some cities make larger expenditures per capita than others because they have both city and state responsibilities (e.g. Berlin) whereas as others make fewer expenditures because the regional government is delivering regional services in the city (e.g. Madrid).

Each of the cities provides a range of municipal services such as water and sewers, police and fire protection, transportation, social housing, social services, parks and recreation, and urban planning. The distribution of operating expenditures can be found in the tables in Appendix B where it can be seen that education accounts for about 30 percent of local operating expenditures in New York City, Berlin, and London (mostly at the borough level), 14 percent of total local operating expenditures in Tokyo, 9 percent in Paris, but is not listed in Madrid. Where education is not included under municipal operating expenditures or does not account for a large proportion of local expenditures, it may be delivered by a separate authority or by the state or national government.

Transportation is a significant expenditure in London (where highways and transportation account for 10 percent of expenditures of the GLA and boroughs combined). The expenditures of Transport for London are consolidated with the budget of the Greater London Authority. For the other cities, however, transportation does not account for a very large percentage of total municipal expenditures mainly because the expenditures of the separate transportation authority (often a regional body that extends beyond the city boundary) are not consolidated with the city budget. In some cases, only a subsidy from the city to the authority is provided. In New York, for example, expenditures on transportation services represent a small proportion of the municipal budget (2.4 percent) because transportation is delivered by the Metropolitan Transit Authority (MTA). As noted earlier, transportation services are delivered by a regional agency in Paris (STIF).

Table 1: Municipal Operating Expenditures and Taxes per Capita

	Municipal Operating Expenditure per capita– (£)	Municipal Taxes per capita (local and shared) (£)
London – GLA plus boroughs (2015)	3,005	420
Berlin (2015)	5,447	3,059
Frankfurt (2015)	3,446	2,453
New York (2015)	5,410	3,758
Madrid (2015)	1,049	513
Paris (2014)	2,503	1,649
Tokyo (2015)	2,728	2,174

Source: Author’s calculations based on tables in Appendix B.

Taxes

Table 1 also provides information on total municipal taxes per capita for the seven cities (including local and shared taxes). Tax sharing refers to a system whereby the central government collects revenue from a tax (e.g. the personal income tax) and shares that revenue with sub-national governments (provincial/state and/or local governments).⁴ Although tax sharing is often regarded as part of own-source revenues, it is really similar to an intergovernmental transfer because, in both cases, the central government transfers funds to sub-national governments that have no influence over how much they will receive (Bird R. M., 2011).⁵ In Table 4 and the discussion of local fiscal autonomy in section 3, shared taxes are separated from local taxes, where possible.

Although expenditures per capita are relatively high in London compared to the other cities in the table, taxes per capita (including the council tax and business supplementary rates) are much

⁴ Taxes can be shared on the basis of geographic origin, by a formula based on population, per capita income, or other factors.

⁵ The one potential difference between revenue sharing and an intergovernmental transfer is that, with revenue sharing, local revenues are tied to what the central government collects and automatically increase as that revenue source increases. They may also be a more reliable funding source than ad hoc transfers which can change from year to year.

lower. Taxes per capita are also low in the City of Madrid likely because the Autonomous Community of Madrid raises more taxes to deliver local services; expenditures per capita were also much lower in Madrid than in the other six cities. Taxes per capita are highest in New York City which has access to a wide range of taxes. Per capita taxes differ in part because of the number taxes levied and in part because of the dependence on intergovernmental transfers.

Table 2 lists the variety of local and shared taxes for all seven cities.⁶ Shared taxes are listed separately (where these have been clearly identified) because they entail less local autonomy than local taxes. London has only the ability to levy the council tax (residential property tax) plus a supplementary rate on the non-residential (business) property tax.⁷ With the exception of the supplementary rate, the non-residential property tax (non-domestic rates) in the UK is largely a national tax that is redistributed to local governments on a per capita basis as a general grant. Local authorities in the UK are permitted to retain 50 percent of business rate revenues but they have no ability to set the tax rate.⁸

The other cities in Table 2 levy a residential property tax and a non-residential property tax (although sometimes there are constraints on how much they can levy from these taxes) and they have access to a much wider range of other taxes than London:

- Because Berlin is a city-state, it has access to state and local taxes as well as shared taxes – as a local government, it shares in state taxes and as a state government, it shares in national taxes. Shared taxes (which include income and value added taxes) are the largest source of revenue for Berlin; property taxes are relatively small (accounting for less than 3 percent of revenues).
- The City of Frankfurt levies a local trade tax, a property tax, a tax on gambling, and dog license fees and it also receives a share of other taxes (value added tax and income tax). The main local tax is the trade tax (at 49 percent of revenues) which is levied on business profits. The tax rate is set by the municipality.
- The City of Madrid receives about 29 percent of its revenues from the property tax but also shares in personal income, value added, and various excise tax revenues.⁹

⁶ More detailed information is provided in the tables in Appendix B.

⁷ London also levies a congestion charge which is not included in Table 2 because it is considered to be a user fee.

⁸ The London Finance Commission recommended that 100 percent of business rates be devolved to London (London Finance Commission, 2013).

⁹ Municipalities in Spain with more than 75,000 inhabitants and capitals of provinces are eligible for shared tax receipts. The percentage shares are: 1.6875% of personal income tax, 1.7897% of VAT, and 2.0454% of excise taxes on hydrocarbons, tobacco, spirit and alcoholic beverages.

Table 2: Local and Shared Taxes, Seven Cities

London	Paris	Berlin	New York
Property tax (council tax plus business rate supplement)	Business value added tax	State (Land) taxes:	Real estate taxes (including payments in lieu)
	Property taxes (including residence tax, business owners' property tax and commercial floor area tax)	Race betting and lottery tax	
Frankfurt	Flat-rate tax on network companies	Beer tax	
Local trade tax	Household waste removal tax	Real estate transfer tax	Sales and use taxes:
Property tax	Street cleaning tax	Inheritance tax	General sales
Tax on gambling	Parking fees	Fire brigade tax	Cigarette
Dog tax	Electricity tax	Local taxes:	Commercial motor vehicle
	Land transfer tax	Trade tax	Mortgage
Shared taxes:		Property tax	Stock transfer
Income		Dog tax	Auto use
Value added tax	Tokyo	Entertainment tax	
	Metropolitan inhabitant tax on individuals, corporations, interest income	Second home tax	Income taxes:
Madrid	Enterprise tax on individuals and corporations		Personal income
Property tax	Real property acquisition tax	Share of state taxes:	General corporation
Business tax	Golf links tax	Income tax	Financial corporation
Vehicle tax	Automobile acquisition tax	Value added tax	Unincorporated business income
Tax on land value increase	Light-oil (gas-oil) delivery tax		Personal income (non-resident city employees)
	Automobile tax	Share of national taxes:	Utility
	Mine-lot tax	Wage tax	
Shared taxes:	Fixed assets tax	Allocated income tax	Other taxes:
Personal income tax	Special tax on land holding	Corporate tax	Hotel room occupancy
Value added tax	Hunter tax	Capital income tax	Commercial rent
Excise taxes	Establishment tax	Solidarity charge	Horse race admissions
- alcohol and spirits	Urban planning tax	Customs	Conveyance of real property
- beer	Accommodation tax		Beer and liquor excise
- tobacco			Taxi medallion transfer
- fuel	Shared taxes:		Surcharge on liquor licences
- construction	Local consumption tax		Refunds of other taxes
- other	Metropolitan tobacco tax		Off-track betting surtax
	Local transfer taxes		

- New York levies a broad array of taxes, more so than most other US cities. Although it receives 27 percent of its revenues from the property tax (residential and non-residential), it also receives over 10 percent from sales and use taxes, 24 percent of revenues from income taxes, and another 4 percent from other taxes.
- The City of Paris receives its revenues from property taxes (including a residence tax with an increase for second homes, a business owners' property tax, and a commercial floor area tax) as well as a contribution on business value added. The local business tax in France was replaced in 2010 with the local economic contribution which comprises a business premises contribution and a contribution on business value added (which accounts for 18 percent of total revenues). This reform significantly changed the way local authorities are funded in France. In particular, the tax rate on business value added is levied at a uniform rate across the country, resulting in less local autonomy.
- Tokyo levies a wide range of taxes – the largest is the fixed assets tax (almost 18 percent of general fund revenues) followed by the metropolitan inhabitants tax for corporations (14 percent), the metropolitan inhabitant tax for individuals (13 percent), and the enterprise tax for corporations (11 percent). The enterprise tax is largely based on business value added. A portion of the taxes collected by the Tokyo Metropolitan Government is allocated to the 23 wards within the metropolitan government area. In terms of shared taxes, Tokyo receives 6.5 percent of its revenues from a local consumption tax (a value added tax), 5.6 percent from transferred national taxes, and 0.3 percent from a tobacco tax. Transferred national taxes are national taxes of which a fixed percentage of the revenue collected is transferred to local governments. These taxes include local gasoline, special tonnage, petroleum and gas, automobile weight, aircraft fuel, and special local corporate transfer taxes. As part of revisions to the tax system in 2016, the national government abolished the special local corporate tax and transferred it to local governments as an interim measure to compensate for increasing the consumption tax rate to 10 percent in 2017 (of which the local consumption rate is 2.2 percent).

Generally, when local authorities levy local taxes, the funds collected go into the general revenues of the municipality rather than being hypothecated (earmarked) for specific purposes. There are examples of hypothecation through ballot initiatives (referenda) in the US for transit and public libraries. Since 2000, over 400 transportation funding measures have appeared on ballots throughout the US of which 70 percent were successful (Transportation for America, 2012). In Los Angeles, voters approved (by a two-thirds majority) in 2008 a half-cent sales tax which took effect in 2009 for 30 years under Measure R to fund specific new transportation projects and programs. Salt Lake City is another locale that passed ballot initiatives in 2000 and 2006 by significant majorities, each imposing ¼ cent sales taxes dedicated to transit expansion as

part of the region's comprehensive 30-year plan (Institute on Municipal Finance and Governance, 2012a). In Los Angeles, local residents supported a ballot initiative in 2011 to secure stable funding over four years for the public library system. Measure L amends the City Charter to increase the share of budget funding allocated to public libraries (Institute on Municipal Finance and Governance, 2012b). There is no increase in taxes but rather a reallocation of budget funds.

The literature on hypothecation suggests that there are both advantages and disadvantages. The case for hypothecation is largely based on benefit grounds. When there is a close link between the hypothecated tax and the use of revenues to finance additional expenditures, hypothecation reveals taxpayer preferences for the public services and sends a clear signal to the public sector about how much of the service to provide (Bird & Jun, 2007). Politicians like hypothecation because it reduces taxpayer resistance to higher taxes and taxpayers like the greater accountability that they perceive with how the funds will be spent. The most cited argument against hypothecation is that it leads to inefficient budgeting by creating rigidities in the expenditure allocation process and preventing the authorities from reallocating funds when priorities change (Bird & Jun, 2007). One way to avoid this problem is to tie the funds to the financing of infrastructure so that hypothecation will end when the project is completed (Kitchen & Slack, 2016).

2. Local Fiscal Autonomy

Before evaluating the extent to which each of the seven cities enjoys local fiscal autonomy, it is important to understand what we mean by fiscal autonomy. Although a city that relies more heavily on taxes is assumed to have more local fiscal autonomy than a city that relies more heavily on intergovernmental transfers, the extent of local fiscal autonomy in both cases depends on the characteristics of the revenue source.

In terms of local taxes, autonomy refers to the freedom that local governments have over their own taxes. A truly local tax is one for which the local government can (Bird R. M., 2011), (Blochliger & Rabesona, 2009):

- decide whether to levy the tax or not;
- determine the precise base of the tax;¹⁰
- set the tax rate;
- administer (assess, collect, enforce) the tax;
- keep all the revenue collected; and
- grant tax allowances or reliefs to individuals and firms.

¹⁰ Control over the tax base (but not the tax rate) is not common in OECD countries. This situation likely reflects the policy of banning tax reliefs and abatements as a tool for local and regional economic development, particularly in the European Union (Blochliger & Rabesona, 2009).

The OECD has set out a series of indicators that rank local fiscal autonomy for sub-central governments (SCGs) in decreasing order from highest to lowest taxing power (see Table 3). These indicators range from full power over tax rates and tax bases at one extreme to no power over rates and bases at the other extreme. Tax sharing, where the central government collects revenue from a tax and shares it with sub-national governments, appears towards the bottom of the table suggesting that it entails little or no local autonomy because the local government has no control over the tax rates or tax base. As noted earlier, tax sharing is virtually synonymous with intergovernmental transfers (Bird R. M., 2011).¹¹

Whatever tax or taxes are chosen at the local level, the most important element of fiscal autonomy is the ability of local governments to set their own tax rates.¹² Local tax rate setting also provides predictability for local governments and gives them the flexibility to change rates in response to different circumstances. Moreover, international experience tells us that the most responsible and accountable local governments are those that raise their own revenues and set their own tax rates (Bird R. , 2011). Unless local governments can alter the tax rates, they will not have local autonomy or the accountability that comes with it.

Tax autonomy can also lead to greater efficiency in the public sector. It provides voters with some ability to decide on tax levels and thereby makes them more aware of public service outcomes. Some limited empirical research on the impact of tax autonomy suggests that it has a positive impact on the efficiency of municipal spending (Blochliger & Pinero-Campos, 2011). With tax autonomy, local decision-makers are inclined to use their own resources better than if their funding comes from another level of government and, thus, local government is expected to be smaller (Martinez-Vazquez, Lago-Penas, & Sacchi, 2015). Using panel data for 19 OECD countries, (Liberati & Sacchi, 2013) show that tax decentralization based on taxes used solely by local governments (i.e. the property tax) facilitates local spending control but this is not necessarily the case for taxes where the base is shared with other levels of government (e.g. income and sales taxes).

¹¹ As noted by (Blochliger & Petzold, 2009), tax sharing and intergovernmental transfers are often difficult to disentangle and the dividing line is not drawn uniformly across OECD countries or across time in various statistical reports. What is recorded as tax sharing in one country may be recorded as intergovernmental grants in another.

¹² In some countries (such as Norway, Korea, and Japan) where sub-central governments have the authority to set tax rates, they set the same tax rate across the country (Blochliger & Rabesona, 2009).

Table 3: Taxonomy of Taxing Power

a.1	The recipient SCG sets the tax rate and any tax reliefs without needing to consult a higher level government.
a.2	The recipient SCG sets the rate and any reliefs after consulting a higher level government.
b.1	The recipient SCG sets the tax rate, and a higher level of government does not set upper or lower limits on the rate chosen.
b.2	The recipient SCG sets the tax rate, and a higher level of government does set upper or lower limits on the rate chosen.
c.1	The recipient SCG sets tax reliefs – but it sets tax allowances only.
c.2	The recipient SCG sets tax reliefs – but it sets tax credits only.
c.3	The recipient SCG sets tax reliefs – and it sets both tax allowances and tax credits.
d.1	There is a tax-sharing arrangement in which the SCGs determine the revenue split.
d.2	There is a tax-sharing arrangement in which the revenue split can be changed only with the consent of the SCGs.
d.3	There is a tax-sharing arrangement in which the revenue split is determined by legislation, and where it may be changed unilaterally by a higher level of government, but less frequently than once a year.
d.4	There is a tax-sharing arrangement in which the revenue split is determined annually by a higher level of government.
e	Other cases in which the central government sets the rate and base of the SCG tax.
f	None of the above categories a, b, c, d, or e applies.

Note: This is the classification used in the data collection exercise but there may be need for clarification in the future. For example, the sub-division of the “c” category cannot be applied to sales taxes (including VAT) where the concepts of allowances and credits (in the sense that they are used in income taxes) do not exist. Also, it may be more appropriate to qualify the definition of the “d.3” category to say that the change is normally less frequent than once a year, as specific legal restrictions on frequency may not exist.

Source: (OECD, 1999) as reproduced in (Blochliger & Rabesona, 2009).

Local governments that depend on transfers from senior levels of government have less fiscal autonomy than those that rely more heavily on own-source revenues (taxes, user fees, etc.). But, even with transfers, there can be more or less local autonomy depending on the type of transfer. The main focus of transfers is to stimulate spending on specific services or to equalize fiscal disparities, or, in some cases, both. Transfers can be unconditional (non-hypothecated) or conditional (hypothecated). Unconditional transfers have no strings attached to the use of funds; they can be spent on any expenditure function or used to reduce local taxes. In some cases, unconditional transfers are given on a per capita basis. In other cases, unconditional transfers provide equalization whereby the amount of the transfer depends on a formula that takes account of the expenditure needs of the municipality, the size of its tax base, population size, or other factors.

Conditional transfers, as the name suggests, have conditions attached to them. These transfers must be spent on specific functions, such as roads or parks. Conditional transfers can be lump-sum transfers (also known as block grants), which do not require the municipality to provide matching funds, or they can be matching transfers, which require the recipient to match donor funds. A donor may offer a transfer that covers 80 percent of the cost of road construction, for example. Under this type of transfer, municipalities would have to raise the funds to cover the remaining 20 percent of the cost. Matching transfers stimulate local spending and, by extension, local taxes.

Conditional transfers tend to offer less local autonomy because the donor government determines where the funds will be spent. Conditional grants are fungible, however, in the sense that, even though they come with strings attached, there is no guarantee that the recipient will spend the funds on what the donor government intended. This is particularly true for large cities, which are more likely to be spending substantial funds already in the area specified by the donor government.

Unconditional transfers result in more local fiscal autonomy but, as with any type of transfer, still raise concerns about accountability. When the level of government that makes the spending decisions (the local government) is not the same as the level of government that raises the revenues to pay for them (national or state government), accountability is blurred (Slack, 2015). The London Finance Commission made a case for substantial devolution of revenues to London on the grounds that it would improve accountability by linking locally raised revenues with the decisions on the use of those revenues (London Finance Commission, 2013). The importance of establishing a clear linkage between expenditure and revenue decisions (often referred to as the Wicksellian Connection after Swedish economist, Knut Wicksell) has been emphasized by other authors as well (see, for example, (Bird & Slack, 2014) and (Kitchen & Slack, 2016)).¹³

Local governments are more likely to carry out their expenditure responsibilities in a responsible manner if they have the autonomy to raise the revenues to pay for them. Governments should face the political consequences of levying their own taxes to cover at least part of the cost of the services they are providing (Mikesell J. , 2013).

Fiscal autonomy in the seven cities

One way to measure the extent of local fiscal autonomy is by the reliance of cities on own-source revenues versus intergovernmental transfers: a city that relies on revenues it has to raise on its own (such as taxes and user fees) has more local fiscal autonomy than a city that relies more heavily on transfers from senior levels of government.

Table 4 shows that, at almost 69 percent of the revenues of the GLA and boroughs combined, intergovernmental transfers in London are relatively high compared to the other cities. On this basis, London has far less local fiscal autonomy than the other six cities in the table. To the extent that local fiscal autonomy is determined by the reliance on own-source revenues, it appears from Table 4 that Tokyo, Paris, New York, and Frankfurt have the most fiscal autonomy (own-source revenues account for more than 65 percent of total revenues) and Berlin and

¹³ Other reasons given for devolution were that it would better align policy to the needs of local areas; be more efficient and effective because it would reduce the need to bid for central government funding; provide greater autonomy for London; allow London to simplify the revenue system with a view to making it more transparent; and rebalance the power dynamic between the central government and London's elected leaders.

London have the least (at 30 percent of total revenues). Although municipal taxes per capita in Berlin appeared to be significant (Table 1), a significant portion of those taxes are shared taxes over which the city has little control.

Yet, in order to assess the extent of local fiscal autonomy, it is necessary to understand exactly which level of government sets the tax rate and the extent to which limits are placed on local tax rate setting. Although it was not possible to delve into each and every tax for each of the seven cities, observations on selected taxes in a few of the cities give some idea of the extent of local autonomy with respect to taxes.

Table 4: Own-Source Revenues, Shared Taxes, and Transfers

	Own-Source Revenues (%)	Shared Taxes (%)	Intergovernmental Transfers (%)
London (2015)	31.2		68.8
Berlin (2014)*	30.3	36.5	33.2
Frankfurt (2015)	71.1	15.7	13.2
Madrid (2015)*	48.3	5.7	46.0
New York (2015)	74.0		26.0
Paris (2015)**	83.7		16.3
Tokyo (2015)*	81.9	12.5	5.6

*Shared taxes in Berlin and Madrid appear under taxes; in Tokyo, transferred national taxes appear under transfers.

** The business value added tax in Paris (18 percent of total municipal revenues) is a local tax but the city has no discretion over the tax rate, which is set by the central government.

Source: Author's calculations based on tables in Appendix B.

The council tax in London does not meet all of the criteria for local fiscal autonomy because the GLA and boroughs do not determine the base of the tax and tax rate setting is restricted by the national government. Non-domestic rates (with the exception of supplementary rates) are not included as a local tax because these rates are a national tax in which the central government determines the tax base, sets the tax rate, collects the revenues, and redistributes the funds to local governments. In 2009, provisions were made for the GLA (and other local authorities) to levy a supplement of up to a maximum of 2p on the pound on the national non-domestic rate for properties with a rateable value greater than £50,000. The revenue from the supplement is

retained by local authorities and can be used to promote economic development. In April 2010, London introduced a 2p levy on non-domestic properties with a rateable value over £55,000 to help pay for the Crossrail and the rate has remained the same for 2016-17.

For Tokyo, shared taxes include transferred national taxes (5.6 percent of total operating revenues), local consumption taxes (6.5 percent), and a metropolitan tobacco tax (less than 0.5 percent of total operating revenues).¹⁴ The local consumption tax (similar to a value added tax) is 8 percent nation-wide including the local consumption tax rate of 1.7 percent. The tax is collected by the central government and distributed to local governments on the basis of a calculation standard. Although this tax appears in the metropolitan government's budget as a local tax, the tax rate is legally fixed and local governments do not have the authority to set their own tax rates. For the majority of other local taxes, standard tax rates and maximum tax rates are established by law and local governments have the ability to set tax rates within a limited range (Mochida, 2006). Even with the property tax, when the assessed value of property was raised to 70 percent of market value, the national government imposed a limit on tax increases to 15 percent over a three-year period (Mochida, 2006). So, what appears to be extensive local autonomy in Tokyo is actually somewhat more restricted than it appears from their financial statements.

From the list of tax revenues in New York City, it would appear that the city government has considerable autonomy in raising revenues. Nevertheless, even New York City has to get approval from the state government in Albany to levy new taxes. In 2015, for example, the city asked the state government for the ability to levy a "mansion tax" (surtax on the transfer of high-valued residential properties) which would be added to the existing state tax. The city wanted to earmark the revenues for programs for youth, immigrants, and women. The state legislature rejected the proposal. In 2008, the state legislature also rejected a proposal for new taxing authority to implement a system of congestion pricing that would levy a charge on cars driving into Manhattan. The proposal was refused in large part because suburban voters and drivers were opposed to it (Kantor, 2010a). In 2011, New York State introduced a new capping law (effective in 2012) for property taxes (the most significant local tax in terms of revenues) that limits the annual growth of property taxes to 2 percent or the rate of inflation, whichever is less.¹⁵ In the last 30 years, a number of states in the US have imposed limits on the tax rates that cities can levy on residential and/or non-residential properties.¹⁶ The most famous tax limitation is Proposition 13 in California which bases the property tax on the acquisition value of property (or the 1975-76 assessment for those properties that have not changed hands since that time) plus the lesser of 2 percent per year or inflation until the property is sold.

¹⁴ In Tokyo's own financial statements, local consumption taxes and the tobacco tax are included in own-source revenues.

¹⁵ The tax levy can only exceed the cap if 60 percent of voters (for school districts) or 60 percent of the total voting power of the governing body (for local governments) approve such an increase.

¹⁶ For a detailed description of property tax limitations in US states, see (Haveman & Sexton, 2008) and for a more recent update, see (Youngman, 2016).

Local autonomy in Frankfurt is mainly derived from the property tax and trade tax. The property tax is calculated in two steps. Based on the value of properties, the tax office (central government) determines the tax rate. The city then applies a special multiplier (Hebesatz) to the tax rate to determine the property taxes. For Frankfurt, the multiplier is 460 percent. The trade tax is levied on business income. Again, the central government tax office determines the taxation base to which it applies a tax rate. The tax itself is determined and levied by the city on the basis of central government calculation to which the city applies a multiplier. There are no restrictions on the municipal tax rates (multipliers). As with the property tax, Frankfurt has a multiplier of 460 percent. There are also several other municipal taxes in Germany which are fairly small in terms in revenues – alcohol tax, entertainment tax, dog license tax, pub license tax, hunting license tax, fishing license tax, and a second home tax (Werner, 2006). Municipalities have autonomy to decide whether to levy these taxes and at what rates. But it is important to remember that German cities overall rely, to a great extent, on shared taxes.

Paris derives a significant portion of its revenues from own sources. In 2010, the *taxe professionnelle* was replaced by the “economic territorial contribution.” This tax has two parts – one is based on the annual rental value of real property for business and the other is based on value added (the difference between gross receipts and the cost of goods and services used in the business) (Bird R. , 2013). A tax rate of 1.5 percent is levied on the value added with partial tax relief for turnover less than EUR 50 million and vanishing at EUR 500,000. Because the city has no discretion over the tax rate, local fiscal autonomy is limited. There are no shared taxes between the central government and local governments in the sense that tax proceeds are shared but tax bases are shared. With the property tax, for example, both the commune and département councils can levy a tax rate on the same tax base. The local tax assessment and collection are done by the central government which hands over the revenues to the local governments minus a service fee but tax rates are set locally (Prud'homme, 2006). Local governments cannot raise new taxes on their own but they can set tax rates with some constraints on maximum tax rates for the main taxes.

Local fiscal autonomy also depends on other own-source revenues over which the city has control. In addition to taxes, these include user fees (such as the congestion charge, transit fees, charges for water and sewers, recreational facilities, etc.), and other own-source revenues such as investment income. User fees are an important source of revenue to pay for local services. In London, user fees (sales, fees, congestion charge, and other charges) account for almost 9 percent of total operating revenues of the GLA and boroughs combined, 11.3 percent of municipal operating revenues in Madrid, and 11.1 percent in Frankfurt. User fees appear to be less significant in New York City (3.5 percent of revenues), and Tokyo (1 percent of revenues) but these small numbers likely reflect that special purpose bodies are delivering some of the major services that are funded by user fees (especially transit).¹⁷

¹⁷ This information is taken from the tables in Appendix B.

The Implications of Local Fiscal Autonomy for Cities

Are cities with greater fiscal autonomy more successful than cities that rely more heavily on intergovernmental transfers? It is difficult to draw conclusions about local fiscal autonomy and the economic success of a city because it is not clear what is meant by economic success and it is difficult to isolate the impact of local fiscal autonomy. Nevertheless, Table 5 provides information on selected indicators of how well cities are doing -- Gross Metropolitan Product (GMP) per capita and two global city rankings. It also provides a projection of future potential of the seven cities. GMP per capita measures the size of the economy of the metropolitan area and is defined as the market value of all final goods and services produced within the area in a year. With the exception of Tokyo where GMP information is for Central Tokyo, GMP per capita for all other cities reflects the metropolitan area. It is likely that Central Tokyo has the highest GMP per capita at least in part because it does not include the entire metropolitan area.

If we compare dependence on own-source revenues (Table 4) with GMP per capita (Table 5), it is difficult to draw any firm conclusions in part because the data refer to different years but, more significantly, because the data on revenues refers to each city and the data on GMP refers to the metropolitan area.¹⁸ Nevertheless, there does appear to be some relationship between dependence on own-source revenues of a city and the size of its metropolitan economy – New York and Paris are at the upper end of both dependence on own-source revenues and GMP per capita. London is lower in the ranking of the seven cities on own-source revenues but high on GMP per capita.

In terms of city ranking studies, Table 5 provides rankings from the Global Power City Index for 2015, the Global Cities Index for 2016, and the Global Cities Index Outlook.¹⁹ There are many studies around the world that rank cities according to their economic competitiveness, cost of doing business, quality of life and other factors. The two studies here rank cities according to a composite index that includes most of these factors.²⁰ The Global Power City Index ranks 40 cities on 70 indicators in six categories: economy, research and development, cultural interaction, livability, environment, and accessibility.²¹ The Global Cities Index ranks 125 cities according to 27 metrics across five dimensions: business activity, human capital, information exchange, cultural experience, and political engagement.²² London, New York, Paris, and Tokyo

¹⁸ The opposite is true for Tokyo where revenues refer to the Tokyo Metropolitan Government and GMP refers to Central Tokyo.

¹⁹ The Global Cities Outlook has only been provided in the last two years so was not reported in Slack (2013).

²⁰ Although cities (and the media) like to look at city ranking studies, there are limitations to each of these studies. For example, it is important to understand the underlying rationale for undertaking these studies, who is doing them, the intended audience, the methodology used to calculate scores and rankings, the source of information, the way in which the data are manipulated, etc. For a good critique of city ranking studies, see (Taylor, 2011).

²¹ Compared to the Global Power City Index rankings for 2011, as reported in Slack (2013), London is still first. With the exception of Madrid, whose ranking did not change, all other cities improved their ranking.

²² Compared to the Global Cities Index rankings for 2012, as reported in (Slack, 2013), London has moved from second spot to first spot and New York has moved from first to second. London performed better in two dimensions – cultural exchange and business activity. Rankings for Paris and Tokyo are unchanged; Berlin and Madrid improved their rankings; and Frankfurt has fallen.

rank highest among the seven cities in both ranking studies. Looking to the future, the Global Cities Index Outlook has London in fourth position and New York staying in second position.²³ The Global Cities Outlook projects a city's potential based on rate of change in thirteen indicators across four dimensions: personal well-being, economics, innovation, and governance.

Table 5: Selected Indicators

	GMP per capita, (£)	Global Power City Index (2015) (40 cities)	Global Cities Index (2016) (125 cities)	Global Cities Index Outlook (125 cities)
London	£41,998 (2014)	1	1	4
Berlin	£25,655 (2013)	8	16	14
Frankfurt	£42,150 (2013)	11	29	40
Madrid	£25,744 (2013)	22	13	13
New York	£41,863 (2015)	2	2	2
Paris	£45,493 (2013)	3	3	13
Tokyo*	£52,349 (2014)	4	4	19

*GMP refers only to Central Tokyo and not the metropolitan area. The exchange rates used to convert values into GBP are derived from the average yearly exchange rate of the corresponding year of the GMP figure.

Sources: GMP: Eurostat, US Department of Commerce Bureau of Economic Analysis, Bureau of General Affairs Tokyo Metropolitan Government

Global Power City Index: Institute for Urban Strategies, The Mori Memorial Foundation, 2015

Global Cities Index: AT Kearney, 2016

Not much can really be concluded from these studies about the relationship between local fiscal autonomy and economic competitiveness -- London ranks low on fiscal autonomy but consistently high on global cities rankings.

Local tax autonomy and tax competition

The competitiveness of metropolitan areas could increase with more local fiscal autonomy which would allow them to raise the additional revenues they need to provide the goods and services to attract businesses and people (OECD, 2006). Tax competition, using the setting of tax rates to

²³ The Outlook results show San Francisco in first position and Boston in third.

promote local and regional economic development or to increase the size of the tax base, is only possible at the local level if cities have the fiscal autonomy to set the rates. In the American model of small, fragmented local governments and high dependence on own-source revenues, the pursuit of tax revenues is a high priority (Kantor, 2010b).

Tax competition is widespread in OECD countries and is used to attract mobile individuals and firms.²⁴ Since the mobility of individuals and firms is affected by tax levels (among other factors), governments use taxes as a way to attract mobile factors. Taxes most affected by tax competition are taxes on capital and capital income because they are more susceptible to tax base mobility (Blochliger & Pinero-Campos, 2011). Residential property taxes are the least affected by tax competition but tax-induced migration from differential business tax rates can be significant.²⁵ For example, the business tax base elasticity in Germany (percentage change in the tax base in response to a percentage change in the tax rate) is 1.4 suggesting an adverse impact of the tax rate on the local tax base (Buttner, 2003). A reduction in the local tax rate would lead to an increase in tax revenues.²⁶

Other factors also affect tax competition and tax base mobility. For example, large jurisdictions which benefit from agglomeration economies are less affected by tax base mobility and thus they can set higher tax rates. In Spain, for example, municipalities that enjoy agglomeration economies have higher tax rates and lower tax mobility than those located outside of the agglomeration (Blochliger & Pinero-Campos, 2011). Similarly, in the US, metropolitan areas levy local wage and income taxes that suburban areas are unable to levy. On the other hand, based on empirical findings in Germany from 1990 to 2008, (Eckhard & Osterloh, 2013) found that larger jurisdictions make less use of distortionary taxes than smaller jurisdictions because they have more competitors – they not only compete locally among geographically close neighbours but also nationally and internationally with cities that are geographically far away (but perhaps economically close).

²⁴ The New York City Industrial Development Agency (NYCIDA), for example, provides a number of tax incentives. Among these incentives are property tax abatements for new, renewal, and expansion leases for commercial offices and industrial spaces to increase tenant occupancy in a designated abatement zone; a property tax abatement and commercial rent tax special reduction for non-residential or mixed-use premises; and commercial tax incentives for companies that undertake major capital investments that result in the creation and retention of a significant level of jobs in the city. These latter commercial tax incentives may include sales and use tax exemptions, mortgage recording tax waivers, or real estate exemptions. Other incentives are provided by the state government. For a complete list of local and state commercial and industrial tax incentives in New York, see <http://www.nycedc.com/program/commercial-tax-incentives>.

²⁵ Property tax competition is more about “tax mimicking” whereby voters benchmark fiscal outcomes across jurisdictions and punish politicians if they get too out of line with tax rates in neighbouring jurisdictions. This is known as yardstick competition and exists when the local tax rate is significantly influenced by neighboring tax rates (Brett & Tardif, 2005).

²⁶ Several experts on subnational finance have suggested that a benefit-related business tax is preferable to a capital tax on equity and efficiency grounds. Benefit-related taxes are more closely approximated by a tax on production such as an origin-based value added tax (VAT) rather than a tax on capital or capital income (Gugl & Zodrow, 2015) and (Bird R. , 2013). A tax on production (output) is considered to be a uniform tax on all inputs (including public services) and would thus be more closely related to benefits received than a tax on capital. It also has a broader tax base.

Property tax capitalization reduces competition and mobility because, if property tax rate changes are capitalized into the value of properties, for example, moving after a tax hike would have no benefit --property values would be immediately lowered by the net present value of future tax payments. Spending on public services may also compensate for higher tax rates (especially spending on education and infrastructure). As noted by (Agrawal, Fox, & Slemrod, 2015), subnational fiscal competition should be viewed more broadly than the setting of tax rates. Fiscal competition also includes competition over spending and regulatory regimes all of which affect the location of economic activity. For local governments with little or no tax autonomy, competition tends to take the form of subsidies and spending programs. Finally, fiscal equalization reduces the incentive to lower tax rates and attract mobile tax bases because a much larger tax base would be accompanied by a reduction in grants (Buttner, 2003).

Tax incentives

Where local governments have tax autonomy, they can use tax incentives to pursue economic development goals. There is a significant literature on non-residential property tax incentives in the United States, in large part, because of the proliferation of these incentives in that country where they cost state and local governments between \$5 and \$10 billion per year (Kenyon, Langley, & Paquin, 2012a).²⁷ Property tax abatements are used to discourage existing businesses from leaving a city, to steer businesses to a particular location within the city, or to change the form of the property (Wassmer, 2014). The idea behind reducing the property tax is to compensate a business for pursuing an economic activity that is in the public interest but which may not necessarily be in its private interest (Wassmer, 2014).

Tax incentives can be helpful in some cases. When they succeed in attracting new business to a city, they can increase income and employment, expand the tax base, and revitalize distressed areas (Kenyon, Langley, & Paquin, 2012a). If the revenue generated by the business exceeds the cost of services provided to it, then the business generates a fiscal surplus for the city (Wassmer, 2014). Attracting a large facility can result in production efficiencies (agglomeration economies) through the greater exchange of ideas and access to a larger labour pool when firms locate in close proximity (Glaeser, 2002). Yet, the overall findings from the US literature suggest that property tax incentives have a poor record in promoting economic development. Some of the findings are reviewed below.

Studies show that property taxes are not a major factor in inter-metropolitan location decisions but they have played a role in intra-metropolitan location decisions (Bartik, 1991). The reason for this conclusion is that municipalities in different metropolitan areas are not as close

²⁷ A study of stand-alone property tax abatements in the U.S. indicates that 35 states allowed for these abatements in 2004 (Dalehite, Mikesell, & Zorn, 2005). In 2007, there were at least seven other states that allow municipalities to offer a reduction in property taxes but only in conjunction with a larger economic development program (Wassmer, 2007).

substitutes as municipalities within the same metropolitan area. These results are not surprising. In terms of inter-metropolitan location decisions, business activity is most influenced by market conditions, the availability and cost of a skilled labour force, the presence of necessary production materials, and proximity to markets. Different metropolitan areas have different labour markets with potentially large differences in wages and quality of available labour. There could be vast differences, as well, in the cost of transporting goods to and from the metropolitan area. Since property taxes account for a relatively small proportion of the total costs for most businesses, any reduction in the tax is unlikely to be large enough to initiate a relocation decision or to encourage significant business activity.

Intra-metropolitan location decisions, on the other hand, may be affected by property tax differentials. The smaller the area over which the business is choosing to locate, the more similar are the non-tax factors. Within a large urban or metropolitan area, for example, market conditions and cost variables (such as labour, transportation, and energy costs) tend to be reasonably uniform. In this context, fiscal factors take on more significance: lower property taxes in one community will generate lower costs at the margin and higher profits for businesses locating in that particular community (Bartik, 1991). The review of intra-metropolitan studies suggests an average elasticity of -2.0 for taxes with respect to business activity. This estimate means that a reduction in taxes of 10 percent will increase business activity by 20 percent. The elasticity within metropolitan areas is about four times the elasticity between metropolitan areas.

The impact of intra-metropolitan tax differentials is expected to be greater for non-property taxes as well. In the City of Frankfurt, for example, the main source of tax revenues is the business profits tax (trade tax). In the Rhein-Main region (which includes the City of Frankfurt), Frankfurt levies the highest rate of taxation. Lower tax rates in adjoining communities provide an incentive for businesses in Frankfurt to relocate to other parts of the metropolitan area and discourage business attraction in Frankfurt (Nelles, 2012). Indeed, Nelles describes the exit of a major taxpayer from the City to a surrounding municipality within the metropolitan region where taxes were lower. Another author also suggests that lower tax rates in a number of the surrounding suburban municipalities reduced tax revenues of the City of Frankfurt (Werner, 2006).

Higher taxes matched by better public services will not discourage firms from locating in a municipality because public services also influence economic development. Expansion of public services may reduce the prices paid for those services by business (for example, education expenditures may reduce the quality-adjusted prices of labour by increasing the supply of workers of a given quality) (Bartik, 1991). Firms prefer to locate in communities with extensive business-related services because, without local government provision of these services, the firms would likely have to provide them on their own.

The influence of taxes on business location, even within metropolitan areas, varies for different types of business activities because industries differ in terms of their responsiveness to fiscal variables. For example, tax-sensitive firms are more likely to locate in a low-tax jurisdiction.

According to studies that have been undertaken on different industries, manufacturing location decisions tend to be more sensitive to taxes than non-manufacturing location decisions. The reason is that the manufacturers are more oriented to the national and international markets. Local costs will have a greater effect on their profits because it will be more difficult to pass these costs on to consumers. Moreover, manufacturers tend to be more capital intensive and local property taxes are taxes on capital (Bartik, 1991). Empirical studies confirm that capital-intensive industries are more sensitive to taxes on capital than are other industries.

Where there are advantages to locating near similar activities (agglomeration economies), the tax will have a less significant impact. Some examples might include a trendy shopping area or the financial district where there are significant advantages from being in a particular location. In these cases, the property tax will be less important in the business location decision than in those cases where business is fairly mobile.

Finally, if one jurisdiction lowers its property tax rate on businesses and neighbouring jurisdictions keep their taxes the same, the expected impact on business activity in that jurisdiction is likely to be much greater than if all jurisdictions in the metropolitan area lower their business tax rates (Wassmer, 2007). Property tax incentives are effective for the first jurisdiction that implements them but once they proliferate across the metropolitan region, they lose their effectiveness in promoting economic growth (Kenyon, Langley, & Paquin, 2012b). Moreover, they can lead to destructive bidding wars.

In making a decision about whether or not to grant a tax incentive, information is needed on the cost to the firm of doing business in the city compared to other locations as well as the costs and benefits to the city of having the firm located there. Accurate information is not always available, however, because firms face the moral hazard of only offering information that supports their request for the tax incentive (Wassmer, 2014). Once the firm has made its location decision, it is difficult to know what would have happened if the tax break had not been offered.

Tax increment financing

Tax increment financing (TIF) is an economic development tool that is widely used by cities in the US to encourage the redevelopment of areas in need of revitalization.²⁸ Under a TIF arrangement, local governments designate a portion of the city for capital investment (known as the TIF district) and earmark any future growth in property taxes to pay for investments in infrastructure and other economic development initiatives (Merk, Saussier, Starpoli, Slack, & Kim, 2012). TIFs are not tax abatements in which property taxes are forgiven. Rather, TIFs use the increase in tax revenue generated from the development to pay back funds that have been borrowed to make capital investments.

²⁸ TIFs were first introduced in California in 1952 and, since that time, they have spread to almost all US states. They are probably most widely used in Chicago where, by 2005, 10 percent of all property taxes were earmarked for TIF purposes and TIF districts covered more than 25 percent of the geographic area of the city (Quigley, 2007).

TIFs have been permitted in the United Kingdom since 2013-14 when the Business Rates Retention Scheme was introduced. The legislation permits two TIF options (Sandford, 2016): under the first option, local authorities can borrow against their retained business rate revenues. Under the second option, they can borrow against business rate revenues in specific geographic areas (such as Enterprise Zones) and could retain 100 percent of business rate revenue growth for the next 25 years.

TIFs are relatively new in the UK but they have been successful historically at stimulating development in central cities of major US cities. There are some potential problems associated with TIFs, however. TIFs may not be able to generate the predicted tax revenues and the resulting lack of funds could threaten efforts to revitalize the designated area. The recent recession in the US, for example, saw a big decline in average growth rates of property values and tax increments (Dye, Merriman, & Goulde, 2014). Where more than one taxing authority is affected by the TIF (e.g. municipality, school district, county, etc.), there is often resentment that their property taxes are frozen at a time that they are experiencing growth in demand as a result of the revitalization. In Chicago, for example, there are 15 overlapping jurisdictions that face a freeze in assessment under TIFs including, for example the board of education, transit authority, park district, health and hospital commission, and Cook county (Youngman, 2016). TIFs target funds to a designated area and this targeting may be at the expense of areas on the periphery of the TIF district or at the expense of overall municipal growth. Moreover, the public does not know how they work or even that they exist. Yet, the frozen tax base may result in higher tax rates or new fees to fund ongoing government operations (Youngman, 2016).

Although originally designed to stimulate private investment in central cities so that they could compete for development with suburban areas, many authors have called into question the recent use of TIFs in the US.²⁹ In particular, the requirement that a TIF district has to be a “blighted” area and that the development would not take place “but for” the incentive have been compromised (Youngman, 2011) and (Talanker, Davis, & LeRoy, 2003).³⁰ In an era of fiscal restraint and declining intergovernmental transfers, municipalities are using TIFs simply to raise revenues and not necessarily to improve blighted neighbourhoods. As a result, cities are often extending TIFs to farm properties that offer the greatest potential for property value increases in part because they are undeveloped but also because of the potential to reclassify farmland (levied at a low tax rate) to commercial or industrial uses (levied at a high tax rate) (Merk, Saussier, Starpoli, Slack, & Kim, 2012).

The stipulation that development would not have taken place “but for” these expenditures has typically meant that expenditures are used for infrastructure for the development or to reduce the

²⁹ See, for example (Briffault, 2010) and (Youngman, 2016).

³⁰ In one state (Wisconsin), almost half of the 661 TIFs were used to develop open space including a superstore on what had previously been an apple orchard; other applications of TIFs include a golf course project on a greenfield in Des Moines, Iowa to pay for sewer lines and a shopping mall in St. Louis, Missouri (LeRoy, 2008).

risk to developers so that they are willing to undertake the development. The “but for” test has become a *pro forma* gesture, however, to justify that TIFs are not simply giveaways to developments that would have occurred anyway (LeRoy, 2008) and (Youngman, 2011).

From an economic development perspective, if the investment fails to improve local conditions at the same time that the freeze in the future tax base growth restricts services during the repayment period, TIFs could diminish a jurisdiction’s economic prospects. California, the first state to introduce TIFs over 60 years ago, brought an end to TIF initiatives in 2015 by eliminating hundreds of redevelopment agencies that implemented TIFs. They put an end to TIFs, in part, because they recognized the risks from the absence of private investment. The other reason is that the state government was forced to make up the property taxes that would have gone to schools. Studies of the impact of TIFs on economic growth yield no conclusive results that they have had a positive impact (Youngman, 2016) and (Greenbaum & Landers, 2014).³¹

3. The Impact of Local Taxes on Economic Activity: Is There a Downside to Devolution of Taxes to Local Governments?

If London were given access to more tax revenues, what are the risks of devolution and greater autonomy? There are two potential problems associated with more local taxing authority. First, tax differentials among neighbouring jurisdictions could result in tax base mobility – individuals and businesses leaving the metropolitan area in response to more taxes or higher taxes – and reduced economic activity. Second, an economic downturn could result in lower revenues collected (and lower expenditures) if the new taxes are responsive to economic growth.³²

*Impact on economic activity*³³

The impact on economic activity will be different for different taxes. A few examples are provided here.

³¹ It is also not clear how much can be raised through TIFs and if, for example, it would be sufficient to pay for major transit lines. In the North American context, TIFs are generally used for projects in the tens and hundreds of millions of dollars but not billions of dollars. In other words, although they might be used to pay part of the cost of new transit lines, they probably cannot cover the entire cost (Haider & Donaldson, 2016).

³² A potential third problem may arise for the central government. To the extent that further devolution reduces the ability of the central government to redistribute resources to other regions, more taxing authority for London may not be popular.

³³ This section of the study focuses on the impact of different taxes on economic activity and not the advantages and disadvantages of each tax. For a more detailed discussion of each tax, see (Nera Economic Consulting, 2005), (Loughlin & Martin, 2005), and (Kitchen & Slack, 2016). For a discussion of the implications of the country comparisons of taxes for the UK, see (Travers, 2005).

Sales and excise taxes

The concern about tax base mobility is probably most significant for local sales taxes because of the ability of shoppers to cross a municipal border where the tax rate is lower. Tax base mobility depends on the goods that are being taxed and the geography (Blochliger & Pinero-Campos, 2011): taxes on goods that are easy to transport (e.g. cigarettes) are more responsive to tax differentials than taxes on goods that are more difficult to transport (e.g. gasoline); taxes with a narrow tax base (e.g. excise taxes) are more prone to tax competition than broad-based sales taxes; origin-based taxes (taxes paid where the goods are produced) are more prone to tax competition than destination-based consumption taxes (taxes paid where the goods are consumed) because firms are more mobile than consumers.

Local governments in six US states are permitted to levy an additional tax on cigarettes sold in their jurisdiction. New York City levies a fairly high surcharge on cigarettes. Large differentials in tobacco tax rates, such as in New York, create an incentive to form illicit businesses that purchase cigarettes in low-tax cities and sell them in high-tax cities. The likelihood of illegal tax evasion constrains local own-source revenue autonomy in a devolved system (Schroeder, 2006).

Several authors have attempted to estimate the impact of a differential sales tax and the overall results suggest that a sales tax rate of 1 percentage point higher is associated with per capita sales along a state's border (in the US) that are between 1 and 7 percent lower (Sjoquist & Stephenson, 2010). Local sales taxes thus have a clear and negative impact on the local economy (Mikesell, 2010).

When the sales tax is an important local revenue source, there can be other impacts as well. For example, a recent empirical study on fiscal zoning and sales taxes in the US state of Florida using data from 1992 to 2006 concluded that total retail employment is not significantly affected by local variation in sales tax rates but that higher sales taxes lead to more employment in big box stores and department stores that anchor shopping malls (Burnes, Neumark, & White, 2014). Moreover, increased sales tax rates lead to lower manufacturing employment suggesting that efforts to attract retail land uses crowd out manufacturing. They also found that tax competition is more significant in border regions.³⁴ Since the likelihood that people will change jurisdictions in response to a sales tax differential will be less when the geographic area of the taxing jurisdiction is large, however, it would seem that metropolitan areas are better able than smaller local governments to take advantage of sales taxes and reduce potential competition (Slack, 2010).

Income taxes

One study of the effects of income taxes on city employment levels in New York City and Philadelphia suggests that these taxes have had significant negative effects on employment levels

³⁴ Florida has a state sales tax. Counties can also levy local sales taxes that are added to the state tax.

in both cities (Haughwout, Inman, Craig, & Luce, 2004). The authors' estimates indicate that Philadelphia lost almost 173,000 jobs between 1971 and 2001 because of an increase in wage tax rates over the period. Similarly, New York City lost 331,338 jobs (8.7 percent of total jobs) in 2001 because of an increase in city income tax rates. Cuts in these tax rates, according to the authors, would likely be an efficient way to increase city jobs.

Stamp duties

As David Ricardo pointed out two centuries ago, taxes on the transfer of property are in a sense the ultimate “anti-market” and anti-development tax. The Mirrlees Review recognized the inherent flaws in a stamp duty land tax.³⁵ Although it appreciated that the transactions on which the tax is levied are easy to identify and measure, the case for maintaining the tax is weak (Institute for Fiscal Studies, 2011). The tax is inefficient: “by discouraging mutually beneficial transactions, stamp duty ensures that properties are not held by the people who value them most” (Institute for Fiscal Studies, 2011, p. 403). The Review also concluded that the tax provides a disincentive for people to move thereby resulting in potential inflexibilities in the labour market and encouraging people to stay in properties of a size and location that they may not have otherwise chosen.³⁶

Their popularity around the world is presumably attributable primarily to administrative convenience (Bird & Slack, 2004). A more efficient way to raise revenue would be to increase the property tax by a small amount. Nonetheless, despite the economic advantages of encouraging efficient property transfers rather than discouraging them through lock-in effects, voters who adamantly resist increases in property taxes seem much more willing to accept taxes that are imposed on those who actually buy or sell properties (Bird, Slack, & Tassonyi, 2012).

³⁵ Historically, the stamp duty land tax (SDLT) in the UK was charged at a single rate on the whole purchase price of the property with different rates for different value bands. The SDLT was reformed in 2014 and is now levied on a “slice basis” which means that the rates would only apply to the part of a property’s selling price that falls within each value band. For residential property values less than £125,000, the tax is 0; for values between £125,000 and £250,000, the tax rate is 2 percent; for values between £250,000 and £925,000, the rate is 5 percent; for values between £925,000 and £1.5 million, the rate is 10 percent; and for values exceeding £1.5 million, the rate is 12 percent (Seely & Keep, 2016). As of April 1, 2016, new higher rates of SDLT apply on the purchase of additional properties such as second homes and buy-to-let properties. The commercial stamp duty has a zero rate band on purchases up to £150,000, a 2 percent rate on the next £100,000, and a 5 percent top rate on anything above £250,000. There is also a new 2 percent rate for those high-value leases with a net present value greater than £5 million (Seely & Keep, 2016).

³⁶ An empirical study of the municipal land transfer tax in the City of Toronto estimated that its effects were significant and detrimental (Dachis, Duranton, & Turner, 2012). The authors estimated that the tax decreased real estate transactions by 14 percent (or about 3,000 single-family homes sold in an average year). Moreover, the tax was almost fully capitalized into land values. Under the City of Toronto Act, 2006, Toronto was given permission to impose a municipal land transfer tax on top of the provincial land transfer tax.

The Mirrlees Review recommended replacing the stamp duty with a housing services tax for residential property and a land value tax for business property.³⁷

Property taxes

The evidence on property taxes suggests that some US cities cannot raise property taxes further without decreasing tax revenues. Haughwout et al. provide econometric estimates of the effects of property taxation on local economic activity in four major U.S. cities – Houston, Minneapolis, New York City, and Philadelphia (Haughwout, Inman, Craig, & Luce, 2004). In theory, each tax rate climbs a “revenue hill.” At low tax rates, an increase in the tax rate will raise revenue; at high rates, however, an increase in the tax rate would actually reduce revenue because people and businesses would leave and the tax base would shrink. At the very top of the ‘hill’ is the rate that will maximize revenues.

The peak of the hill is where the rate to base elasticity is -1.0. If the rate-base elasticity is greater than this – for example, -0.5 – then a small increase in the rate will increase revenues and the locality is on the upward-sloping part of the curve. If it is less-- for example, -1.3 – it is on the downward-sloping part of the curve and a rate increase will actually reduce revenues. If a city is already at the peak (the elasticity is -1.0), an increase in tax rates will not yield additional revenues.

The authors conclude that, although Minneapolis is the only one of the four cities studied that imposes only a property tax, it is also the only one positioned comfortably down the left-hand side of the hill, with substantial unused revenue capacity. The rate-base elasticity of the property tax was found to be close to or less than -1 in Houston (ranging from -0.89 to -1.13), New York (-0.77 to -0.90), and Philadelphia (-.41 to -0.80). In contrast, this elasticity (for the most recent tax base and rate) was only -0.16 to -0.36 in Minneapolis.³⁸

Impact in an economic downturn

A downturn in the economy would be expected to lead to a reduction in local revenues and expenditures. For example, the OECD Territorial Review for Madrid claimed in 2007 that the construction tax and land value tax, which have relatively unstable revenue streams, saw their revenues decrease following the earlier housing crisis (OECD, 2007). Similarly, the economy of Tokyo slumped considerably in 2008 following the global economic crisis and metropolitan tax revenue fell by about 1 trillion yen in 2009 (from 5.25 trillion yen in 2008 to 4.25 trillion yen in 2008) and by another .15 trillion yen in 2010 to 4.10 trillion yen (Tokyo, 2012).

³⁷ The Australian Capital Territory Government (ACT) is currently in the process of abolishing stamp duties and expanding the property tax base (Slack, 2016).

³⁸ A similar study for municipalities in the Greater Toronto Area, suggest that many are not at the peak of the revenue hill for residential property taxes; some were closer to the peak for non-residential property taxes, however (Tassonyi, Bird, & Slack, 2015).

A survey of municipal associations in 2009 on the global crisis found that the impact on municipal expenditures and revenues varied across cities in different countries (United Cities and Local Governments, 2009).³⁹ For example, local government capital expenditures and investments increased in some cities because they participated in national economic stimulus programs that targeted local infrastructure; in other cities, capital expenditures fell. In some cities, own-source revenues declined more quickly than transfers but in other cases the reverse was true. In terms of own-source revenues in European cities, 62 percent of respondents experienced a drop in taxes and 42 percent a drop in user fees. In US cities, revenues from sales and income taxes were expected to drop by 3.8 percent and 1.3 percent respectively, but property tax revenues were expected to remain stable.⁴⁰ In terms of shared taxes in European cities, 36 percent of respondents experienced a drop in revenues; 55 percent of respondents in a CEMR (Council of European Municipalities and Regions) survey experienced lower intergovernmental transfers.

Overall, the results of the survey suggested that the impact of the global crisis was likely worse for cities with limited fiscal autonomy and high dependence on transfers (United Cities and Local Governments, 2009). Although one might expect local governments to introduce new taxes and fees or increase existing ones in response to declining revenues, these actions were not taken by those surveyed. Although it is always difficult to raise taxes, the lack of action also reflects the inability of many local governments to introduce new taxes or to set their own tax rates. In the US, where cities have some tax autonomy, 25 percent of respondents increased property tax rates, 5 percent increased sales taxes, and 1 percent increased income taxes (United Cities and Local Governments, 2009).

The Great Recession and the housing crisis in the United States in 2008 caused significant financial stress for US cities. In 91 of the largest cities, real per capita property tax revenue fell by nine percent, on average, between 2009 and 2012 (Chernick, Reschovsky, & Newman, 2016). Housing price changes and the foreclosure rate were significant factors in the decline in property tax revenues over the period. Reduced property tax revenues were reinforced by declining income over the same time period.

The types of taxes that a city levies will determine, in part, its responsiveness to changes in the economy. The responsiveness of income and sales taxes to changes in the local economy represents an advantage for cities that levy these taxes in an economic boom but may be a problem in an economic downturn (Slack, 2010). Because the income tax, for example, is

³⁹ (Davey, 2011) suggests that, before the crisis, similar patterns of regional and local budget increases could be found across Europe with revenues growing faster than national GDP in each country but, after the crisis, the response was different in each country. In part, the reason is that the timing and severity of the downturn was different in different countries but also the size and functions of local governments are different.

⁴⁰ Mainly for Central and Eastern European countries, (Davey, 2011) found that the property tax was much more robust than the personal income tax in the time of economic crisis. Part of the explanation derives from the reality that property taxes, unlike income taxes, are revenues that local governments can control.

cyclically sensitive, it can leave a local government in a difficult financial position during an economic downturn. Local governments that rely on income tax revenues would thus need to be equipped to manage the risk (Lyons Inquiry into Local Government, 2007). As will be discussed below, this concern is greater where there is little revenue diversification.

4. Implications of Greater Local Fiscal Autonomy for London

London has very limited fiscal autonomy and much less than the other six international cities in this study – Berlin, Frankfurt, Madrid, New York, Paris, and Tokyo. In particular, it relies much more heavily than the other cities on intergovernmental transfers and much less on locally-raised revenues. It can only levy the council tax and user fees (such as the congestion charge) and a small supplementary charge on non-domestic rates. Other international cities can, at the very least, levy a non-residential property tax (although the rates are sometimes constrained by higher levels of government) and most have the ability to levy other taxes as well.

Local fiscal autonomy for a metropolitan area is an important factor in making it more attractive to residents and businesses because it can raise the additional revenues needed to provide the goods and services to be internationally competitive (OECD, 2006). The ability to attract and retain skilled workers, particularly in the wake of the Brexit vote, will help London keep international businesses and retain its comparative advantage (Brown, 2016). The challenge for economic competitiveness, as noted earlier, is to raise sufficient taxes to provide services without providing a disincentive for businesses and residents to locate in the city. Tax increases that are not matched by tax-financed compensating service benefits for taxpayers have the potential to drive taxpayers (residents and businesses) from the city (Haughwout, Inman, Craig, & Luce, 2004).

Flexibility to attract development

More local autonomy for London, in particular the flexibility to levy taxes on businesses (such as the non-domestic rates) at the local level, would mean that it would be able to engage in tax competition with other cities to attract development. Because London is a large metropolitan area, some of the border problems arising from differential tax rates on a variety of taxes (e.g. income and sales taxes) may be less of a problem than in smaller jurisdictions where people and businesses may be more mobile between places. But, since the area of the GLA does not cover the entire economic region of South East England, there may still be border problems for some taxes. The use of tax incentives to attract development should be treated with caution, however, because the experience with tax incentives has been mixed, at best. Higher tax rates in London would not necessarily discourage investment if they are matched by high quality public services and, given the attraction of London for doing business because of agglomeration economies, tax incentives may not be needed.

Benefits from a mix of taxes

The property tax (council tax) is a good tax for local governments but, given that it is relatively inelastic (does not grow automatically as the economy grows), highly visible, and politically contentious, it is unlikely to be sufficient to fund the complex and increasing demands of London. Moreover, it may not be the most appropriate tax to pay for services such as education, social services, or housing. A mix of taxes would give London more flexibility to respond to local conditions such as changes in the economy (for example, changes arising from Brexit), evolving demographics and expenditure needs, changes in the political climate, and other factors. A mix of taxes would also allow London to benefit from revenue growth from some taxes, revenue stability from others, and equity overall.

The choice of taxes (and fees) depends on the types of services being delivered. For example, for those services with private good characteristics (such as water, sewers, garbage collection and disposal, transit), user fees are efficient and fair. Services with public good characteristics (for example, police and fire protection, neighbourhood parks, local streets, and street lighting) generate collective benefits that are enjoyed by local residents. Benefits from these services cannot be assigned to individual beneficiaries and therefore, it is difficult to levy specific charges. For these services, some form of local benefit-based taxation such as the property tax (or income or sales tax) should be adopted. These taxes permit individuals to express their collective demand for services. Sales taxes would also have the advantage of taxing tax non-residents and commuters who use services in London but do not pay taxes there. Services that redistribute income (such as social assistance or social housing, for example) should be funded from income tax revenues because it is the most progressive tax.

There are tradeoffs with other taxes, however. Sales and income taxes, for example, grow more quickly than the property tax but the revenues can be less stable.⁴¹ Based on an analysis of data from 28 US states over the period from 1984/5 to 2005/6, one author found that the annual change in local property tax revenue is less than for sales taxes (and income taxes) (Mikesell, 2010). In terms of revenue stability, however, he found that the revenues from the property tax are the most stable and the revenues from the sales tax least stable. Access to a mix of taxes would provide London with stability (through the property tax) and elasticity (through income, sales, or business taxes).

A more diversified revenue structure could result in higher municipal revenues overall. An analysis of government revenues for 109 central cities in the US (combining city, district, and county taxing authorities) found that a more diverse revenue portfolio (one that is less dependent on property taxes) allows a city to raise more revenue (Chernick, Langley, & Reschovsky, 2010). Using data from 1997 to 2008, and controlling for other variables that are likely to have an

⁴¹ Since income taxes increase or decrease in response to changes in wages and salaries, tax revenues respond immediately to changes in the economy.

impact on levels of revenue, per capita revenues in a city with a relatively diversified tax base (in the 75th percentile) were about 10 percent higher than a city in the 25th percentile.

To levy a given amount of revenue, relying on many sources means that the local government can set lower tax rates for any single tax base. Since the excess burden of a tax increases with the tax rate (i.e. the distortions increase as the tax rate increases),⁴² a more diversified system should yield any given amount of revenue more efficiently (with a smaller negative impact on the overall tax base) (Chernick, Langley, & Reschovsky, 2010).⁴³

Final comments

London would benefit from greater fiscal autonomy – access to a mix of taxes and the ability to set tax rates. A mix of taxes would allow it to match taxes with services and give it the flexibility it needs to respond to changing economic circumstances. Local fiscal autonomy and, in particular the ability to set tax rates, is also important for accountability: governments that raise their own revenues and set their own taxes to meet local expenditure requirements tend to be more responsible and more accountable to taxpayers.

⁴² For example, a residential property tax discourages investment in housing improvements; a retail sales tax discourages consumption of goods, etc. A mix of taxes can reduce the distortion of any one tax by keeping the tax rate low.

⁴³ The authors also argue that greater revenue diversity likely means a more complex tax system that people do not understand and they are thus less likely to resist tax increases.

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Appendix A

Table A-1: Structure and Governance of Seven Cities

	Structure	Governance	Responsibilities
London (Population 8.7 million)	Two-tier government structure: Greater London Authority and 33 boroughs (including the City of London) London Metropolitan Region: Greater London, South East, and East of England: 50 local governments in 3 regions	Mayor of GLA directly elected for 4-year term. London Assembly is made up of 25 members – 14 elected by simple majority in single-member districts; 11 by system of proportional representation for the whole city. No institution for metropolitan area	GLA: economic development, transport, police and emergency services, culture and health Boroughs: education, housing, social services, street cleaning and maintenance, solid waste management, local urban planning, culture and recreation
New York City (Population 8.5 million)	1 city with 5 boroughs Metro area: 30 counties in 4 states	Mayor is directly elected for 4-year term. Councillors are elected by majority vote from 51 districts and serve 4-year terms. Borough presidents are directly elected. Special purpose bodies such as the Port Authority of New York and New Jersey; Regional Plan Association	Building of houses, urban planning, transport, education, social services, police, assistance to boroughs, consumer affairs, prisons, culture, economic development, primary and secondary education, emergency services, environment, public health
Madrid (Population 3.3 million)	City of Madrid: 1 municipality with 21 districts and 128 wards (barrios) Autonomous Community of Madrid – 1 province with 179 municipalities	Mayor indirectly elected by council. Council elections every 4 years. Provincial/state government with 179 municipalities	Urban planning and development, housing, economic promotion, management of public services of other administrations, public transport, traffic, telecommunications infrastructure, environment, public health, consumer affairs and health, person services (education, culture, sport, social care), public safety. Organization of local system, management of the territory, urban development, housing, public works, highways, railroads, transport, ports and water resources. Shared authority with national government on economic planning, industry, security, education, health

	Structure	Governance	Responsibilities
Paris (Population 2.2 million)	<p>City of Paris covers two administrative areas: the commune or municipality of Paris with 20 city districts (arrondissements) and the Department of Paris</p> <p>Metro area (Ile de France Region): 1 region, 8 departments plus 1281 municipalities</p> <p>The Greater Paris Metropolitan Authority (Metropole du Grand Paris) (created on January 1, 2016) includes Paris and 130 communes.</p>	<p>Mayor indirectly elected from council for a 6-year term. 163 councillors elected according to the list system. Each arrondissement has a council presided by an arrondissement mayor.</p> <p>The Department is administered by a General Council; President of Council is indirectly elected</p> <p>Regional authority with 209-member regional assembly indirectly elected for a 6-year term by councils of communes; president indirectly elected by regional councilors</p> <p>Metropolitan Assembly administered by a Metropolitan Council of 209 councilors plus a President. Councilors are indirectly elected by the councils of the member communes.</p>	<p>Urban planning and development, road infrastructure, construction and maintenance of city facilities, education (nursery and primary schools) and assistance to student life, public health and public assistance, the environment (cleanliness, green areas, management of urban waste), transport, traffic and parking, economic development, housing, culture, solidarity and social affairs. Security and law and order are the competence of the Police Prefect of Paris.</p> <p>Social action and solidarity, health care protection for families and children, construction, capital expenditure and running costs of secondary schools, administration and maintenance of department archives and museums, land consolidation, school transport beyond urban fringe.</p> <p>Economic development, social, cultural and scientific development, regional town and country planning, transport, education, health care, environment</p> <p>Housing, environmental protection, local planning</p>

	Structure	Governance	Responsibilities
Frankfurt am Main (Population 709, 000)	<p>Frankfurt am Main - 1 city with 16 area districts and 46 city districts</p> <p>Regional bodies in Frankfurt Metropolitan Area such as: (1) Frankfurt/Rhein-Main Regional Planning Agency – includes 75 municipalities; (2) regional transportation authority (RMV) – includes the state plus 11 cities and 15 counties</p>	<p>Mayor is indirectly elected by council which is elected every 5 years; members of districts are elected by a proportional system every 5 years.</p> <p>Regional planning body comprised of the mayors of municipalities</p>	<p>Waste management, public health, sports, planning, urban development, urban regeneration, land management, public housing, job promotion and technological development, citizen participation, libraries, traffic, youth policies, environment, parks and schools</p> <p>Regional planning; transportation</p>
Berlin (Population 3.5 million)	<p>City-state and two-tier government structure: 1 federal state with 12 boroughs</p> <p>Berlin Metropolitan Agglomeration: Berlin's 12 boroughs plus 53 municipal entities from Brandenburg</p>	<p>Mayor elected by 141-member House of Representatives who are elected for a 4-year term. Up to 78 representatives are elected by simple majority in single-member districts and 63 in a proportional open-list system. Senate (executive) exercises state functions and the 8 members are elected by the House of Representatives at the proposal of the mayor.</p> <p>No political or administrative institution</p>	<p>Economy, employment and women's affairs, education, youth affairs and sport, science, research and culture, health consumer and social affairs, urban development, transport, environment.</p>

	Structure	Governance	Responsibilities
<p>Tokyo (Population 13.5 million)</p>	<p>Central Tokyo with 23 districts</p> <p>Tokyo Metropolitan Government (TMG): 1 Prefecture (state) including Central Tokyo plus 26 cities, 5 towns, 8 villages</p> <p>Greater Tokyo: 4 prefectures</p> <p>National Capital Region: 8 prefectures</p>	<p>Each district directly elects a mayor and council for a 4-year term</p> <p>Governor is directly elected for a 4-year term. Assembly comprises 127 members from 42 electoral districts.</p> <p>No administration at this territorial level.</p> <p>No administration at this territorial level.</p>	<p>Districts administer most municipal services but have granted some metropolitan powers to TMG</p> <p>Coordination of metropolitan urban planning, environment (waste management, environmental impact assessment, pollution measures), social and health care services, supervision of private health care, economic and tourist promotion, promotion and management of public housing, management of port infrastructure, public health, universities, education.</p>

Sources: Based on (Picorelli, Barros, Tomas, & Molle, 2009); (Bahl, 2010); (Travers, 2005); (OECD, 2007); (Slack & Chattopadhyay, 2013) plus city and regional websites.

Appendix B

Table B-1: Distribution of Operating Expenditures,
London (GLA plus City of London and boroughs), 2014-15

Category	(£ millions)	(%)
Education Services	8,455	32.4%
Highways and Transport Services	2,654	10.2%
Children Social Care	1,658	6.4%
Adult Social Care	3,046	11.7%
Public Health	604	2.3%
Housing Services (GFRA only)	1,228	4.7%
Cultural and Related Services	727	2.8%
Environmental and Regulatory Services	1,124	4.3%
Planning and Development Services	458	1.8%
Police Services	3,323	12.7%
Fire and Rescue Services	413	1.6%
Central Services	2,327	8.9%
Other Services	51	0.2%
Total	26,067	100.0%

Source: United Kingdom Department for Communities and Local Government (2014-15)
Revenue Outturn – Service Expenditure Summary (RSX): 2014-15 data for ENGLAND.

Table B-2: Distribution of Operating Revenue,
London (GLA plus City of London and boroughs), 2014-15

Category	(£ millions)	(%)
Taxes:		
Council Tax	3,423	9.8%
Business Rate Supplement	220	0.6%
Total Taxes	3,643	10.4%
Community Infrastructure Levy	108	0.3%
Sales, Fees and Charges	3,108	8.9%
Other Income	4,076	11.6%
Total Own-Source Revenue	10,938	31.2%
Transfers, including: Specific and special revenue grants outside AEF, Specific and special revenue grants inside AEF, Local Services Support Grant (LSSG), Revenue Support Grant, Police Grant, Retained income from Rate Retention Scheme, Other items		
Total Transfers	24,117	68.8%
Total Revenue	35,052	100.0%

Source: United Kingdom Department for Communities and Local Government (2014-15) *Revenue Outturn Summary (RS): 2014-15 data for ENGLAND*; United Kingdom Department for Communities and Local Government (2014-15) *Revenue Outturn – Service Expenditure Summary (RSX): 2014-15 data for ENGLAND*; United Kingdom Department for Communities and Local Government (2014-15) *Financing of revenue expenditure in 2014-15 by local authority classification*.

Table B-3: Distribution of Current Account Expenditures,
Berlin, 2014

Category	(£ millions)	(%)
Education, Research, Innovation and Culture	5,187	27.4%
Social Safety and Family & Youth Services	5,112	27.0%
General Services	4,025	21.3%
Financial Sector	2,085	11.0%
Transport and Communications	960	5.1%
Energy and Water Services	544	2.9%
Health, Sports, and Environment	500	2.6%
Urban Planning and Housing	473	2.5%
Food, Agriculture and Forestry	15	0.1%
Total Expenditure	18,900	100.0%

Source: City of Berlin Budget; Exchange rates from US FOREX, yearly average for 2014 (1 EUR = 0.806492 GBP).

Table B-4: Distribution of Current Operating Revenues,
Berlin, 2014

Category	(£ millions)	(%)
Land (State) of Berlin Taxes:	903	4.2%
Race Betting Tax and Lottery Tax	43	0.2%
Beer Tax	22	0.1%
Real Estate Transfer Tax	624	2.9%
Inheritance Tax	172	0.8%
Dog Tax	0	0.0%
Entertainment Tax	22	0.1%
Second Home Tax	0	0.0%
Fire Brigade Tax	0	0.0%
Local Taxes:	1,893	8.8%
Trade Tax	1,247	5.8%
Property Tax	624	2.9%
Other Income	3,742	17.4%
Total Own-Source Revenue	6,517	30.3%
Shared Taxes:	7,850	36.5%
Share of Shared Taxes	7,850	36.5%
Transfers:	7,141	33.2%
Federation Taxes	6,022	28.0%
Transfer from Federation	860	4.0%
Federal Grants	258	1.2%
Total Revenues	21,508	100.0%

Source: City of Berlin Budget; Exchange rates from US FOREX, yearly average for 2014
(1 EUR = 0.806492 GBP).

Table B-5: Distribution of Operating Expenditures, New York City
for fiscal year 2015

Category	(£ millions)	(%)
General government	1,616	3.5%
Public safety and judicial	5,777	12.6%
Education	13,389	29.1%
City University	592	1.3%
Social services	9,059	19.7%
Environmental protection	1,662	3.6%
Transportation services	1,083	2.4%
Parks, recreation, and cultural activities	363	0.8%
Housing	580	1.3%
Health	1,118	2.4%
Libraries	211	0.5%
Pensions	5,556	12.1%
Judgements and claims	445	1.0%
Fringe benefits and other benefit payments	3,837	8.4%
Other	555	1.2%
Lease payments for debt service	97	0.2%
Total operating expenditures	45,939	100.0%

Source: The City of New York (2015) Comprehensive Annual Financial Report of the Comptroller for the Fiscal Year Ended June 30, 2015, Table on Page 50 (Actual figures); Exchange rates from US FOREX, yearly average for 2015 (1 USD = 0.654441 GBP).

Table B-6: Distribution of Operating Revenues,
New York City, fiscal year 2015

Category	(£ millions)	(%)
Real Estate Taxes (Net of Refunds)	14,082	27.4%
Sales and Use Taxes:		
General Sales	4,421	8.6%
Cigarette	33	0.1%
Commercial Motor Vehicle	40	0.1%
Mortgage	755	1.5%
Auto Use	19	0.0%
Total Sales and Use Taxes	5,268	10.3%
Income Taxes:		
Personal Income Taxes	7,391	14.4%
General Corporation	2,183	4.3%
Financial Corporation	1,085	2.1%
Unincorporated Business Income	1,351	2.6%
Personal Income (Non-Resident City Employees)	95	0.2%
Utility	260	0.5%
Total Income Taxes	12,366	24.1%
Other Taxes:		
Payment in Lieu of Taxes	200	0.4%
Hotel Room Occupancy	366	0.7%
Commercial Rent	515	1.0%
Horse Race Admissions	0	0.0%
Conveyance of Real Property	1,160	2.3%
Beer and Liquor Excise	16	0.0%
Taxi Medallion Transfer	2	0.0%
Surcharge on Liquor Licenses	4	0.0%
Refunds of Other Taxes	-22	0.0%
Off-Track Betting Surtax	1	0.0%
Penalties and Interest on Delinquent Taxes	33	0.1%
Total Other Taxes	2,274	4.4%

Charges for Services (User fees):		
General Government Charges	637	1.2%
Water and Sewer	942	1.8%
Housing	31	0.1%
Rental Income	186	0.4%
Total charges for services	1,796	3.5%
Other Revenues:		
Licenses, Permits, Privileges and Franchises	460	0.9%
Fines and Forfeitures	628	1.2%
Total Investment Income	20	0.0%
Miscellaneous	1,090	2.1%
Total Other Revenues	2,197	4.3%
Total Own-Source Revenues	37,987	74.0%
Total Federal Grants - Categorical	4,440	8.6%
Total State Grants - Categorical	7,917	15.4%
Total Non-Governmental Grants - Categorical	436	0.8%
Unrestricted Federal and State Aid	268	0.5%
Provisions for Disallowances of Federal, State, and Other Categorical Aid	-72	-0.1%
Other financing (Bond sales + Transfer from general and non-major debt service fund)	361	0.7%
Total Transfers	13,349	26.0%
Total Revenues	51,334	100.0%

Source: The City of New York (2015) Comprehensive Annual Financial Report of the Comptroller for the Fiscal Year Ended June 30, 2015, Table on Page 50 (Actual figures); Exchange rates from US FOREX, yearly average for 2015 (1 USD = 0.654441 GBP).

Table B-7: Distribution of Expenditures,
Madrid, for the fiscal year 2015

Category	(£ millions)	(%)
General Administration	1,213	38.5%
Environment, Water, and Urban Mobility	978	31.1%
Security and Emergency Services	555	17.7%
Urban Planning and Housing	147	4.7%
Culture, Sports, and Tourism	100	3.2%
Family, Social Services and Social Inclusion	153	4.9%
Total Operating Expenditure	3,147	100.0%

Source: City of Madrid Budget; Exchange rates from US FOREX, yearly average for 2015 (1 EUR = 0.726112 GBP).

Table B-8: Distribution of Revenue,
Madrid for the fiscal year 2015

Category	(£ millions)	(%)
Direct Taxes:	1,488	46.8%
Property Tax	928	29.2%
Vehicle Registration Tax	98	3.1%
Tax on Land Value Increase	374	11.7%
Tax on Business Activities	88	2.8%
Other	0	0.0%
Indirect Taxes:	41	1.3%
Construction Tax	41	1.3%
Other	0	0.0%
User Fees	360	11.3%
Garbage Disposal Services Fee	1	0.0%
Fire Services	12	0.4%
Construction Licenses	10	0.3%
Vehicle Towing Fee	8	0.2%
Parking Fees	63	2.0%
Fines and Penalties	77	2.4%
Other	190	6.0%
Other Revenues	124	3.9%
Total Own-Source Revenue	2,013	63.3%
Shared Taxes	137	4.3%
Personal Income Tax	80	2.5%
Added-Value Tax	46	1.4%
Beer Tax	0	0.0%
Tobacco Tax	5	0.1%
Fuel Tax	5	0.2%
Alcohol and Spirits Tax	1	0.0%
Transfers	1,032	32.4%
Autonomous Community of Madrid	58	1.8%
Federal Administration	969	30.4%
Private companies	5	0.1%
Other	0	0.0%
Total Operating Revenues	3,182	100.0%

Source: City of Madrid Budget; Exchange rates from US FOREX, yearly average for 2015
(1 EUR = 0.726112 GBP).

Table B-9: Distribution of Operating Expenditures,
Paris, for fiscal year 2015

Category	(£ millions)	(%)
Housing	21	0.4%
Urban development, services and the environment	1,026	18.5%
Economic development	34	0.6%
Culture	227	4.1%
Welfare and solidarity	1,325	23.8%
Family	292	5.3%
Sport and youth	156	2.8%
Education and training	508	9.1%
Safety and Security	254	4.6%
General Services (including Personnel)	1,713	30.8%
Total operating expenditures	5,557	100.0%

Source: Direction des Finances et des Achats de la Mairie de Paris, Rapport Financier 2015; Exchange rates from US FOREX, yearly average for 2015 (1 EUR = 0.726112 GBP).

Table B-10: Distribution of Operating Revenues,
Paris, for fiscal year 2015

Category	(£ millions)	(%)
Direct Taxes:		
Contribution on business value added	1,033	18.1%
Property taxes	718	12.6%
Residence tax (with second homes increase)	551	9.7%
Business owners property tax	226	4.0%
Commercial floor area tax	11	0.2%
Flat-rate tax on network companies	8	0.1%
Additional rolls	18	0.3%
Total direct taxation	2,565	44.9%
Indirect Taxes:		
Household waste removal tax	333	5.8%
Street cleaning tax	76	1.3%
Parking fees	80	1.4%
Electricity tax (city + department)	49	0.9%
Land Transfer Tax	738	12.9%
Other taxes and duties	57	1.0%
Total indirect taxation	1,332	23.3%
Other Income:		
Rental income	123	2.2%
Recovery from beneficiaries	65	1.1%
Works for third parties	30	0.5%
Compensation for skills transfers	256	4.5%
Operating income	330	5.8%
ESA repayment	20	0.4%
Repayment of staff costs	56	1.0%
Total Other Income	882	15.5%
Total Own-Source Revenues	4,779	83.7%
Transfers:		
State subsidies	721	12.6%
Contributions and grants	209	3.7%
Total Transfers	930	16.3%

Total Operating Income	5,709	100.0%
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Source: Direction des Finances et des Achats de la Mairie de Paris, Rapport Financier 2015; Exchange rates from US FOREX, yearly average for 2015 (1 EUR = 0.726112 GBP).

Table B-11: Distribution of General Account Expenditures,
Tokyo Metropolitan Government, 2014-2015

Category	(£ millions)	(%)
Metropolitan Assembly	32	0.1%
General Administration	984	2.7%
Tax Collection	374	1.0%
Citizens and Cultural Affairs	156	0.4%
Sports Promotion	123	0.3%
Urban Development	600	1.6%
Environmental Protection	236	0.6%
Social Welfare and Public Health	5,466	14.9%
Industry and Labor Affairs	2,053	5.6%
Public Works	2,206	6.0%
Port and Harbor	451	1.2%
Education and Educational Affairs	5,278	14.3%
Police	3,443	9.4%
Fire Fighting and Prevention	1,392	3.8%
Debt Service	2,993	8.1%
Miscellaneous	11,010	29.9%
Total Expenditure	36,797	100.0%

Source: Bureau of Finance, Tokyo Metropolitan Government (2014) Budget and Settled Account of General Account by Item. Exchange rates from US FOREX, yearly average for 2014, (1 JPY = 0.005746 GBP)

Table B-12: Distribution of General Account Revenues,
Tokyo Metropolitan Government for year 2014-2015

Category	(£ millions)	(%)
Metropolitan Inhabitant Taxes:		
- For individuals	4,854	13.0%
- For Corporations	5,252	14.1%
Interest Income Rate	253	0.7%
Enterprise Tax:		
- For Individuals	276	0.7%
- For Corporations	4,183	11.2%
Real Property Acquisition Tax	436	1.2%
Golf Links Tax	4	0.0%
Automobile Acquisition Tax	53	0.1%
Light-Oil (gas-oil) Delivery Tax	227	0.6%
Automobile Tax	611	1.6%
Mine-lot Tax	0	0.0%
Fixed Asset Tax	6,552	17.6%
Special Tax on Land Holding	0	0.0%
Hunter Tax	0	0.0%
Establishment Tax	565	1.5%
Urban Planning Tax	1,264	3.4%
Accommodation Tax	9	0.0%
Arrears Carrying Forward	164	0.4%
Total Metropolitan Tax	24,703	66.4%
Fees and Charges	431	1.2%
Metropolitan Debt	798	2.1%
Carried Over from Preceding Fiscal Year	462	1.2%
Others	4,101	11.0%
Total Own-Source Revenues	30,495	81.9%
Subsidy for Local Government	0	0.0%
Local Special Grants	28	0.1%
Special Grants	17	0.0%
National Treasury Disbursement	2,046	5.5%
Total Transfers	2,091	5.6%

Transferred municipal tobacco tax	0	0.0%
Transferred national taxes	2,096	5.6%
Local consumption tax	2,429	6.5%
Metropolitan tobacco tax	104	0.3%
Total Shared Taxes	4,629	12.5%
Total Revenues	37,216	100.0%

Source: Bureau of Finance, Tokyo Metropolitan Government (2014) Budget and Settled Account of General Account by Item. Exchange rates from US FOREX, yearly average for 2014, (1 JPY = 0.005746 GBP)

Table B-13: Distribution of Expenditures,
Frankfurt am Main for the fiscal year 2015

Category	(£ millions)	(%)
Personnel and Benefits Expenditure	452	18.5%
General Expenditure	426	17.5%
Depreciations and Amortization	131	5.4%
Transfer to Federal Social Service Departments*	516	21.1%
- Transportation Services	25	1.0%
- Youth and Family Services	59	2.4%
- Heath Services	17	0.7%
- Education and Development	306	12.5%
- Sports and Culture	96	3.9%
- Miscellaneous	15	0.6%
Compulsory Contributions to the State**	343	14.1%
Interest	52	2.1%
Other Expenses	4	0.2%
Total Expenses	2,442	100.0%

*Frankfurt's contribution to largely federal funded social services.

**Contributions made to state-run departments (e.g. Frankfurt/Rhein-Main Regional Planning Agency)

Source: City of Frankfurt a.M. Budget; Exchange rates from US FOREX, yearly average for 2015
(1 EUR = 0.726112 GBP).

Table B-14: Distribution of Revenues,
Frankfurt am Main, for fiscal year 2015

Category	(£ millions)	(%)
Local Trade Tax	1,198	49.2%
Property Tax	147	6.1%
Tax on Gambling	11	0.4%
Dog License Fees	1	0.0%
Total Local Tax Revenue	1,357	55.8%
Income Tax	283	11.6%
Sales Tax	98	4.0%
Total Shared Taxes	381	15.7%
Fees and Charges	271	11.1%
Financial Income	36	1.5%
Other Income	67	2.7%
Total Own-Source Revenue	1,731	71.1%
Revenue from Social Services	118	4.8%
Revenues from Subsidies	176	7.3%
Revenues from Special Reserves	27	1.1%
Total Transfers	321	13.2%
Total Revenue	2,433	100.0%

Source: City of Frankfurt a.M. Budget; Exchange rates from US FOREX, yearly average for 2015 (1 EUR = 0.726112 GBP).