

Growth and Taxes in Mumbai

This note is an attempt to estimate the fiscal contribution of Mumbai to the budgets of the Union, of the State of Maharashtra, and of Mumbai's local governments, and how this contribution would be affected by different growth scenarios. This note is a very incomplete and imperfect draft, and is aimed at (i) providing a framework for additional work, checking, changes, improvements and (ii) producing tentative estimates of the various magnitudes involved. This note does not necessarily represent the views of the World Bank.

Mumbai here is defined as the metropolitan region comprising Mumbai district (Greater Mumbai), and the urbanized part of Thane and Raigad districts, inhabited by 22 million people, with a GDP of 130,000 Rs crores (30 billion US\$). It represents about 22% of the population of the State and 2.2% of the population of India, but 37% of the GDP of the State and 4.7% of the GDP of India, and, as we shall see, contributes larger shares of the taxes pocketed by the State and by the Union. The magnitude of these taxes is first estimated for 2005, then projected to 2020 under different GDP growth scenarios.

Overview of the tax system

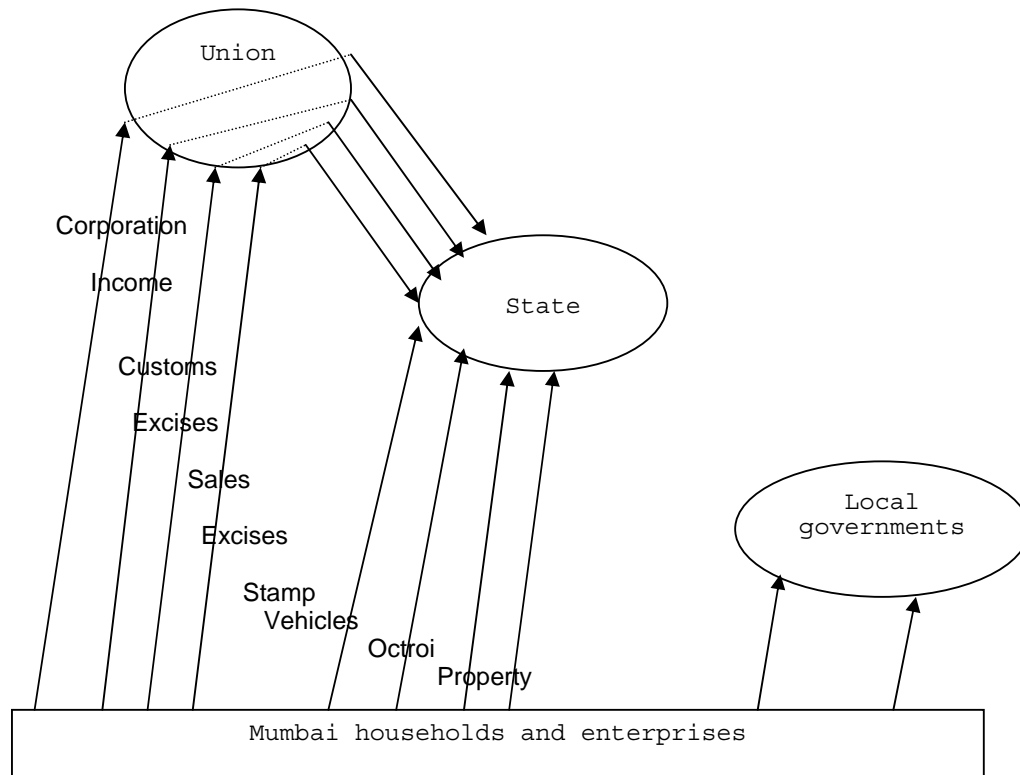
Mumbai households and enterprises pay taxes to the three levels of government: to local governments (that is mostly to seven municipal corporations), to the State, and to the Union. The eleven most important taxes are shown in a simplified fashion in Figure 1.

There are four main taxes paid to the Federal budget:

- *Excise duties*, assessed on specific goods, which are in principle consumption taxes, but which are in practice collected at production sites.

- A *corporate income tax*, assessed on the benefits of corporations, and collected at the place where the headquarters of the corporation are located. The amount of tax paid in a place, for instance in Mumbai, does not reflect at all the "contribution" of that place, since the burden of a corporate income tax is shifted to its customers, to its workers, and to its owners—all of whom who may be located in the entire country (and even abroad).

Figure 1 – Main Taxes Paid by Mumbai Households and enterprises



- *Custom duties*, which are obviously collected at ports of entry, such as Mumbai, but which cannot be considered as contributed by the place where they are collected.

- A *personal income tax*, assessed on the income of each household. By and large, what is paid in a particular location can be assumed to be borne by the people and households of that location.

Although these four taxes are Federal taxes, the rate of which is decided by the central government, and the bulk of which accrues to the Union budget, a certain share of the amount collected in the State is actually sent back to the State budget, and appears in its account under the name of "Share in Central Taxes". In reality, however, the Maharashtra "share" of a given Federal tax, such as the personal income tax, is independent of the amount of personal income tax collected in Maharashtra. It is a share of the personal income tax collected in India, which is allocated to the various States by means of an allocation formula produced by the Finance Committee.

There are five main State taxes decided by the State of Maharashtra, and collected by its services¹.

- The *sales tax* is by far the most important one. It is a cascading tax, imposed upon sales, at rates that vary with the type of good or service considered (from 0% for bread to 35% for diesel oil, with 4% the most common rate). This sales tax is presently being replaced by a value-added tax that will be a Federal tax, a share of which will be sent back to the State.

- The *stamps duties* are taxes paid on the sale of immovable properties. The tax base is the sales value. The rate, which used to be 8% [Check] has been recently [When?] reduced to 5%.

- The *State excise tax* (not to be confused with the Union Excise tax) is a mostly a tax on alcohol production, particularly “country liquor” (28% of total proceeds), “Indian made foreign liquor” (37%) and beer (15%). It is collected at the production sites, not at the place of consumption.

- The *electricity duty* is a tax on electricity consumption.

- The *vehicles tax* is a tax assessed on the registration of vehicles and on the ownership of commercial vehicles.

Table 1 indicates the relative importance of these taxes for the State of Maharashtra (not the contribution of Mumbai to these tax proceeds). For the State, the picture is dominated by the Sales tax, which accounts for 53% of its tax resources, and 42% of its total resources. The substitution of the sales tax by the value-added tax is going to be a major change.

¹ They are presented here in decreasing order of importance for the State of Maharashtra.

Table 1 – Nine Most Important Tax Resources of the State of Maharashtra, 2004-2005

	Rs crores	Million \$	Share
Share of Union taxes			
Excise tax	1,136	258	3%
Corporate income tax	1,049	238	3%
Custom duties	700	159	2%
Personal income tax	570	129	1%
State taxes			
Sales tax	16,890	3,834	42%
Stamps duties	3,375	766	8%
State excise tax	2,600	590	6%
Electricity duty	1,290	293	3%
Vehicles tax	1,155	262	3%
Other taxes & non-tax revenues ^a	11,629	2,639	29%
Total revenue receipts	40,394	9,169	100%

Source : *Economic Survey of Maharashtra 2004-5*, p.T-5

Note : ^aOf which other taxes account for 3,340 Rs cr, and grants in aid from the Central government for 3,548 Rs cr.

In addition, Mumbai households and enterprises pay taxes to the local governments in which they live or are registered. There are two main local government taxes in Mumbai: octroi and property tax. In addition, people pay, for a smaller amount², water and sewerage charges, which could be seen a hybrid of pure taxes and of pure user fees. They can be called user fees when the charge is actually based on water actually consumed (and metered), which is often the case in the Mumbai Metropolitan corporation; and even when they are not because the proceeds are ear-marked for water and sewerage services. But when water charges are not based on water consumption (because water consumption is not metered), and are assessed on the property tax base [Check that this is the case], then water charges can be called a tax.

Octroi is an *ad valorem* tax paid on goods entering a local government territory. Trucks are actually stopped on the road, their cargo is inspected, its value is assessed and the tax is paid. For rail cargo, a similar valuation and tax payment is done at the rail station where goods are unloaded. Both economically and administratively, octroi is widely recognized to be a bad tax. Economically, it distorts competition, it imposes delays and costs on transportation, and in many cases it doubles the sales tax and/or excise taxes. Administratively, it invites arbitrariness in assessment, tax evasion and corruption. It has been abolished in most Indian States, but not in Maharashtra. But it is a high yield tax.

The *property tax* is a tax levied on the rental values of structures, at rates that vary with the type of structure and which are much higher for non-residential property than for residential property, and also in some areas than in other areas. It is reported that the bulk [How much exactly? Find additional data on that] of the property tax is paid by non-residential properties. There are

² In the case of Mumbai Municipal corporation, water and sewerage charges represent in 2004-5 about 20% of octroi plus property tax

proposals to replace the present system by a system based on the capital value of structures. In theory, this should not make much difference. In a well-functioning market, there is a ratio of rental value to capital value which constant for all properties. The proposed change of tax base would therefore imply a change of tax rate: a multiplication by . But Mumbai is not a well-functioning market for real estate, and the proposed change might make significant differences that would be worth exploring. The present effective tax rate obtained by dividing the effective value of properties in Mumbai by the effective property tax proceeds in Mumbai is 0.17%. It is low by international standards.

Table 2 – Two Most Important Tax Resources for Mumbai Local Governments, 2004-5

	Rs crores	Million \$	Share
Taxes			
Octroi	3,035	227	
Property tax	1,515	343	
Total taxes	4,550	570	
Non tax resources			
Water & sewerage charges	772	175	
Other	1,436	326	
Total revenues	5,503	1,249	

Sources & notes [The numbers given are base on data for Mumbai Corporation for 2004-5, and for data on the four largest other corporations of Thane district for 1999-2000. These numbers could be greatly improved with fresher data for the other corporation]

Estimates of the taxes borne by Mumbai

For local government taxes, it is easy to find out what is borne by Mumbai households and enterprises. It is equal to what is actually collected in the MMR area: 5,500 Rs cr, or 1.2 billion US\$.

It is more difficult to know what share of the various taxes paid to the Sate of Maharashtra is borne by Mumbai. For the Sales tax, we do have an estimate of what is collected in Mumbai metropolitan area: 74% of what is collected in the entire State³. The State sales tax is collected at both the retail and production level. What is paid at the retail level is borne by Mumbai. What is paid at the production level, on intermediary goods, and services is in part borne by outsiders, but the reverse is also true, namely that Mumbai enterprises pay a share of sales taxes paid elsewhere. We can assume that the two cancel each other out, and therefore that the amount collected in MMR is representative of what is borne or contributed by MMR. 74% of 16,900 Rs crore are 12,890 Rs crore, or 2.8 billion \$. For the stamps duties, which are imposed on localized land and housing sales, the amount collected in the Mumbai Metropolitan Region, 2,363 Rs cr (or 0.5 billion \$) is representative of what is borne by the MMR.

³ The numbers are 14,939 Rs cr for MMR and 20,288 Rs cr for the State ; they refer to the Sales tax plus some other taxes such as a professional tax, but the ratio can be assumed to be valid for the sole sales tax.

For the vehicles tax and the State excise tax, the contribution of the MMR must be estimated. The total State vehicles tax was allocated to MMR pro-rata the ratio of cars and taxis in the MMR to cars and taxis in the State, Which is equal to 65%. This produces a contribution of 694 Rs cr (157 M \$). For the excise tax on liquor, a more complicated procedure was utilized. We estimated, for the entire State, over the 1994-2004 period⁴, the income elasticity of the liquor tax yield: is equal to 3.3. When per capita income increases by 10%, per capita tax yield increases by 33% (all in constant prices terms). We assume that this elasticity calculated over time holds over space. Knowing that per capita income in the MMR is 114% greater than per capita income in the rest of Maharashtra, this means that per capita liquor tax contribution in the MMR will be 342% (or 4.3 times) greater than per capita liquor tax in the rest of the State. This makes it possible to apportion the State tax between MMR and the rest of the State. It turns out that MMR contributes 55% of the tax, or 538 Rs cr (122 M \$). For the electricity duties, we have assumed a ratio equal to the ratio calculated for vehicles [This last ratio could and should be improved]

Table 3 regroups these estimates. The share of MMR is calculated as the weighted average of the share of the five taxes. Tables shows that Mumbai Metropolitan regions contributes yearly about 18,000 Rs cr or 4 billion US\$ in taxes to the State of Maharashtra budget. This represents about 70% of the tax resources of the State.

Table 3 – Contribution of MMR to Maharashtra Taxes, 2004-5

	State taxes (Rs cr)	MMR share (%)	MMR taxes (Rs cr)	(M US\$)
Sales tax	16,890	74 ^a	12,440	2,827
Stamp duties	3,375	70 ^b	2,363	537
State excise tax	2,600	55 ^c	1,430	325
Vehicles tax	1,155	65 ^d	694	157
Electricity duty	1,290	65 ^e	838	190
Total	25,310	70	17,765	4,037

Sources and notes : MMR = Mumbai Metropolitan Region. ^aCalculated from collection data on a slightly larger than sales tax concept. ^bCalculated on collection data for a total slightly different from the one utilised here. ^cCalculated through the income elasticity of the tax (itself estimated from a time series) applied to the difference between per capita income in MMR and rest of of the State. ^dRatio of cars registered in the MMM and cars registered in the State. ^eAssumed to be equal to the share estimated for vehicles [Could and should be improved] .

It is more delicate, but not impossible, to estimate the fiscal contribution of Mumbai to the Government of India budget. The data available for the personal income tax (the amount collected in MMR) can be taken to be representative of MMR's contribution for this tax. We only found data for 1999-2000. In that year, 18% of the national income tax was collected in MMR. Assuming this ratio holds for 2004-5, and applying it to the tax collected nationally in 2004-5, produces an MMR contribution of about 9,200 Rs crores, or about 2 billion US \$. The same procedure is applied for the Union excise tax.

⁴ The calculation assumes that the tax rates have remained constant over the period.

A ratio of 11.3% is estimated, which yields a contribution of about 11,400 Rs crores, or 2.6 billion US \$.

Allocating the corporate income tax is difficult. Data on collection is obviously not significant, and is ignored here. The corporate income tax is borne by customers, workers, and capital owners, in proportions that vary over time and over sectors; and these tax bearers are distributed all over the country. We assume that the ratio utilized for the excise tax (11.3%) is also meaningful for the corporate income tax. This produces a contribution of 9,400 Rs crores, or 2.1 billion US\$. To allocate the custom duties, the data on collection is also without meaning, and is ignored. The ratio of the MMR contribution can only be larger than the share of MMR in the national GDP estimated to be about 4% [Check that number]. We assumed a 5% ratio, which produces a MMR contribution to the budget of about 2,800 Rs crores, or 0.6 billion US \$.

Table 4 summarizes these estimates. It shows that Mumbai, defined as the metropolitan region contributes about 33,000 Rs crores, or 7.4 billion US \$ to the national budget. This represents about 11% of the total budget. There is nothing surprising nor shocking in that. Mumbai is one of the richest area of the country, and it is only natural and fair that it contributes much more than its share of population and even of GDP.

Table 4 – Contribution of MMM to the national budget, 2004-5

	Nation taxes (Rs cr)	MMR share (%)	MMR taxes (Rs cr)	MMR taxes (M \$)
Personal income tax	50,924	18.0	9,166	2,083
Excise tax	100,720	11.3	11,381	2,586
Corporate income tax	83,100	11.3	9,390	2,134
Custom duties	56,250	5.0	2,812	639
Total	290,994	11.2	32,749	7,443

This makes it possible to estimate the total tax burden borne by Mumbai, which appears in Table 5. MMR contributes about 55,000 crores of Rs, or 12 billion US\$ to the three levels of government. This represents more than 40% of its GDP. Such a number is very high. It is higher than the tax to GDP ratio found in many —indeed most— countries. Yet, in a country taken as a whole, households and enterprises get back in services and in money what they contribute to government. Not so in the case of Mumbai. Although we do not have estimates of what is spent in or for Mumbai by the State and Federal governments, we have every reason to believe that it is less, much less, than 55,000 Rs crores or 12 billion US\$. MMR, therefore is a an important loser at the State and Federal budget game. This is true of every large city, but probably not to the extent found in Mumbai. This is of course justified by redistribution reasons. It nevertheless is an obstacle to the rapid growth of Mumbai.

Table 5 – Tax to GDP Ratios, Mumbai Metropolitan Region, 2004-5

	In Rs crores	in M US\$	% of GDP
Union taxes	32,749	7,442	25.1
State taxes	17,765	4,037	13.6
Local taxes	4,550	570	3.5
Total taxes	55,064	12,049	42.2
GDP	130,350	29,625	100.0

The surprisingly high 42% ratio arrived at can be explained by three reasons. First, it could be that our estimate of taxes contributed by Mumbai is too high. We have explained how we produced it, and might have made mistakes that others will hopefully correct. Second, it could be that our estimate of MMR GDP is too low. It is based on published statistics, that could possibly ignore the informal or hidden economy. The contribution of a gangster to the GDP is probably not accounted for, but the tax paid by this gangster on his consumption of luxury goods is recorded. Third, it could be that the tax burden in Mumbai is indeed exceptionally high. The three reasons might jointly operate.

Impacts of growth scenarios on tax yields

The growth of Mumbai will automatically lead to a growth of the taxes paid by Mumbai households and enterprises to the Federal, State and local governments. Simultaneously, over the course of time, the expenditure needs of these governments will also increase. It is nevertheless interesting to find out what the magnitude of the increase in taxes contributed by Mumbai could be, and to do it in the two growth scenarios studied: the low growth scenario (with a 6% GDP growth of Mumbai) and the high growth scenario (with a 12% GDP growth of Mumbai). This is done in Table 6, which is built with the conservative hypothesis of an elasticity of tax to GDP equal to 1. This is conservative in the sense that in the absence of changes in the tax system, the tax to GDP ratio is likely to greater than 1.

Table 5 – Cumulated Mumbai Tax Contributions to Various Levels of Government, 2005-20

	Low (6%) GDP growth	High (12%) GDP growth	Difference
In thousand crores of Rs :			
Government of India	849	1,500	+691
State of Maharashtra	462	836	+374
Mumbai MMR local gov	119	216	+96
Total	1,430	2,592	+1,162
In billion US\$			
Government of India	193	350	+157
State of Maharashtra	105	190	+85
Mumbai MMR local gov	27	49	+22
Total	325	589	+265

Sources and notes : Cumulated taxes are = $\sum_{i=1}^{15} T_i (1+g)^i$ with T_1 = taxes in 2004-5 and g = growth rate of both GDP and taxes.

The outcomes are rather impressive. Cumulated taxes over a period of 15 years (i.e. taxes of year 1 plus taxes of year 2, etc.) represent hundreds of thousands of crores of Rs, and hundreds of billion dollars. The difference

between the two scenarios indicates what the various levels of government stand to gain from a faster growing Mumbai. If Mumbai GDP increases at 12% rather than at 6%, this will mean an additional 700,000 Rs cr, or an additional 150 billion US\$, for the Government of India. What is at stake for the State of Maharashtra is slightly more than half these amounts. The potential gain for local governments is smaller but remains substantial: about 100,000 Rs crores, or 22 billion US\$. These tax additions have to be seen in relation to the infrastructure investments required (in conjunction with land and housing markets reforms) over the same period of time to achieve the increase in the growth rate of Mumbai—that will generate such tax additions. These infrastructure investments have been estimated to be in the 220,000-300,000 Rs crores (or 50-70 billion US\$). This is more than what will accrue in taxes to the MMR local government, but much less than what will accrue in taxes to the GOI or to the State of Maharashtra.