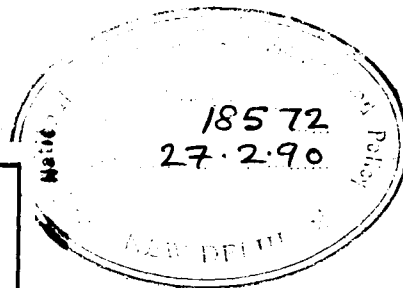
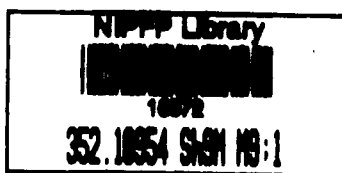


MANAGEMENT OF URBAN LOCAL FINANCES IN NON-OCTROI STATES

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March 1989



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PREFACE

The National Institute of Public Finance and Policy is an autonomous non-profit organisation whose primary functions are to undertake research, consultancy and training in the field of public economics and related policy.

The present study was commissioned by the Planning Commission, Government of India in June 1987. The objectives of the study were to compare the pattern of urban local finances and public services in octroi and non-octroi States with special reference to the arrangements regarding grants from and tax sharing by the State governments, and to study whether entry tax revenue in the States which have introduced it in place of octroi has been adequate to compensate for the loss of octroi. The study thus investigates the impact of the absence or abolition of octroi on levels of municipal services and local government fiscal response to generate additional revenues from the existing sources. Certain conclusions have been drawn from the finding of this study, bearing on the question whether octroi should be abolished and, if so, what could be its substitute.

The study was conducted by a team consisting of Shyam Nath and Brijesh C Purohit, with the assistance of O P Bohra. We hope that the findings of this study will be useful in focussing the issues covered by the terms of reference and also evoke wide interest.

The Governing Body of the Institute does not take any responsibility for the views expressed in this report. This responsibility belongs to the Director and staff of the Institute, and more particularly to the authors of the report.

March 1989
New Delhi

AMARESH BAGCHI
Director

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We take this opportunity to especially thank the Directors of Municipal Directorates and Commissioners of Municipal Corporations in the States of West Bengal, Uttar Pradesh, Bihar, Karnataka, Kerala, Tamil Nadu, Madhya Pradesh, Maharashtra and Rajasthan. Thanks are also due to the Secretaries of Urban Development and Municipal Administration Departments, and to various officials of these Departments who assisted us in data collection.

We express gratitude to our colleagues in the Institute for their cooperation and hard work. Among them, Shri O P Bohra bore most of the burden of collecting information from various sources and processing them into a presentable form. S/Shri L M Pathak, J K Pandey and Sharad Shukla also rendered valuable help in data collection. Thanks are due to Dr V S Renganathan and Shri Rajiv Kumar for providing eleventh hour help in completing the project.

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SHYAM NATH
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CONTENTS

	<u>Page</u>
1. INTRODUCTION AND FRAMEWORK OF STUDY	1
1.1 Fiscal Significance of Octroi and Background of the Present Study	1
1.2 Plan of the Study	3
2. PATTERN OF URBAN LOCAL FINANCES IN OCTROI AND NON-OCTROI STATES	8
2.1 Introduction	8
2.2 Classification of States into Homogeneous Groups	9
2.3 Data	10
2.4 Pattern of Urban Local Finances	12
2.5 Statistical Significance of Difference Between Averages	17
2.6 Analysis of Results	18
2.7 Basic Results: An Overview	20
Annexure: Shared Taxes, Cesses and Grants-in-Aid to Urban Local Bodies in Selected States	24
3. REVENUE NEUTRALITY OF ENTRY TAX	56
3.1 Introductory	56
3.2 Entry Tax Systems	57
3.3 Entry Tax as a Substitute	61
3.4 Measurement of Revenue Neutrality - Method	62
3.5 Empirical Testing of Revenue Neutrality	65
3.6 Summary and Conclusions	67

	<u>Page</u>
Annexure: Projecting Octroi Collectible (OTC)	69
4. RELATIVE SERVICE LEVELS	80
4.1 Introductory	80
4.2 Nature of Urban Local Services	80
4.3 Approaches to Measurement of Service Levels	81
4.4 Level of Revenue Expenditure	82
4.5 Physical Indicators of Service Levels	87
4.6 Testing Statistical Significance of Findings	88
4.7 Conclusions	89
5. MAIN FINDINGS	107
5.1 Issues	107
5.2 Findings	108
REFERENCES	111

LIST OF TABLES AND CHARTS

		<u>Page</u>
CHART I.1	Octroi Status of States and Union Territories	6
TABLE I.1	Share of Octroi in Total Revenue of Urban Local Bodies	7
CHART II.1	Name of Sample States	11
TABLE 2.1	Per Capita Income and Urbanisation Levels of States	29
TABLE 2.2	Budgetary Deficit (-) Surplus (+)	30
TABLE 2.3	Level of Revenue and Expenditure State Aggregate of Municipalities and Municipal Corporations	31
TABLE 2.4	Level of Revenue and Expenditure Municipal Corporations	32
TABLE 2.5	Revenue and Expenditure/Income Ratios State Aggregate	33
TABLE 2.6	Per Capita Property Tax (State Aggregate)	34
TABLE 2.7	Percentage of Property Tax and Octroi in Own Revenue	36
TABLE 2.8	Average Growth Rates of Per Capita Local Revenue and Expenditure (State Aggregate)	37
TABLE 2.9	Growth Rates of Revenue, Expenditure and Property Tax (Corporation Series)	38
TABLE 2.10	Buoyancy Estimates of Property Tax and Total Tax Revenue (Municipal Corporations) (1961-81)	39
TABLE 2.11	Tax Effort Indices (Corporation Series)	40
TABLE 2.12	Revenue Composition of Local Bodies (State Aggregate)	41

	<u>Page</u>
TABLE 2.13 Revenue Composition of Local Bodies (Corporation Series)	43
TABLE 2.14 Revenue Composition of Local Bodies (Municipalities)	45
TABLE 2.15 Per Capita Compensation and Assignments to Urban Local Bodies	47
TABLE 2.16 Per Capita Selected State Taxes	49
TABLE 2.17 Results of Test of Difference between Means	50
TABLE 2.18 Ordinary Least Square Regression Results Cross-Section 1974-75	52
TABLE 2.19 Ordinary Least Square Regression Results Cross-Section 1974-75	53
TABLE 2.20 Ordinary Least Square Regression Results Cross-Section 1979-80	54
TABLE 2.21 Ordinary Least Square Regression Results Cross-Section 1979-80	55
TABLE 3.1 Growth Rates of Octroi for Revenue Projection	71
TABLE 3.2 Octroi Collectible, Entry Tax and Compensation to Local Bodies	72
TABLE 3.3 Octroi Collectible, Entry Tax and Compensation to Municipal Corporations (Madhya Pradesh)	73
TABLE 3.4 Octroi Collectible, Entry Tax and Compensation to Municipal Corporations (Karnataka)	75
TABLE 3.5 Revenue Loss due to Abolition of Octroi Kumta Town Municipality (Karnataka)	76
TABLE 3.6 Revenue Collections from Octroi in Municipal Corporations of Madhya Pradesh and Karnataka	77

	<u>Page</u>
TABLE 3.7 Revenue Collections from Octroi in Madhya Pradesh and Karnataka (State Aggregate)	78
TABLE 3.8 Revenue Composition of Kumta Town Municipality (1972-73 to 1978-79)	79
TABLE 3.8 Revenue Composition of Kumta Town Municipality (1979-80 to 1985-86)	79
TABLE 4.1 Per Capita Revenue Expenditure (State Aggregate)	92
TABLE 4.2 Per Capita Expenditure (Aggregate of Municipal Corporation)	93
TABLE 4.3 Buoyancy Estimates of Aggregate Local Revenue Expenditure	94
TABLE 4.4 Gap Between Desired Expenditure and Ordinary Revenue in Octroi and Non-Octroi States	95
TABLE 4.5 Adjustment Parameter (λ) ¹	96
TABLE 4.6 Expenditure Stimulation Impact of Grants (Linear Estimates)	97
TABLE 4.7 Expenditure Stimulation of Grants (Log Linear Estimates)	98
TABLE 4.8 Expenditure Stimulation of Revenue Composition (Linear Estimates)	99
TABLE 4.9 Expenditure Stimulation of Revenue Composition (Log Linear Estimates)	100
TABLE 4.10 Level of Municipal Services in Octroi, Non-Octroi and Entry Tax States (1979-80)	101
TABLE 4.11 t' Values of Financial Indicators	103
TABLE 4.12 t' Values for Physical Indicators	104

	<u>Page</u>
TABLE 4.13 Service Levels: Ordinary Least Square Regression Results	105
TABLE 4.14 Service Levels: Ordinary Least Square Regression Results	106

1. INTRODUCTION AND FRAMEWORK OF STUDY

1.1 Fiscal Significance of Octroi and Background of the Present Study

1.1.1 Octroi is one of the major sources of revenue of the urban local bodies in India. It contributed a little over one-third of the aggregate revenues of all municipal corporations and municipalities during 1970-85 (Table 1.1). Though condemned almost universally as an obnoxious impost, octroi continues to be an important revenue source for municipal governments and has maintained its share in the local government revenues. In fact, its share in the total revenue of municipal corporations has increased from 31.46 per cent during 1970-75 to 37.45 per cent during 1980-85. The fiscal significance of octroi, however, varies considerably from State to State. For example, during 1980-85, as a proportion of total revenue, collections from octroi formed only 9.37 per cent in West Bengal while in Rajasthan it was 55.54 per cent. It was about 64 per cent in the municipal corporations of Madhya Pradesh before its abolition in 1976.

1.1.2 While there are variations in its operational form, essentially, octroi is a tax on entry of goods into a local jurisdiction for sale, consumption or use. Goods in transit to other areas are generally exempt and so are personal baggages subject to certain limits. Under the Indian Constitution, the power to levy octroi rests with the States (entry 53, List II of the Seventh Schedule to the Constitution). In some States/Union Territories the tax is levied in the form of a terminal tax in exercise of the powers conferred under entry 89 of List II of the Seventh Schedule to the Indian Constitution. Terminal tax does not provide any exemption for goods passing through an area in transit to another. By and large, the State governments delegate the power to levy octroi to local governments, although in some States (e.g., West Bengal), the tax is collected by the State

government but shared with the local bodies.

1.1.3 Even though authorised by the Constitution to levy it, not all States in India make use of octroi for their municipal finances. In fact several States never had any octroi at all while some have abolished it in recent years (see Chart I). It can be seen that eight States, namely, Punjab, Haryana, Maharashtra, Gujarat, Orissa, Rajasthan, Uttar Pradesh and West Bengal, continue to levy octroi while two, namely, Karnataka and Madhya Pradesh, have abolished it and replaced it with entry tax. Andhra Pradesh, Assam, Bihar, Kerala and Tamil Nadu never had octroi at all. Among the Union Territories, octroi/terminal tax is levied in Delhi, Pondicherry and Andaman & Nicobar Islands, while there is no octroi/terminal tax in Chandigarh, Dadra and Nagar Haveli and Lakshadweep.

1.1.4 For reasons which are well known, octroi is almost universally considered to be an undesirable levy. It is believed that checkpoints, which constitute the key element in the administration of any form of octroi are susceptible to malpractices, besides being a source of harassment to transit vehicles and enormous loss in terms of idle time. Abolition of octroi has been recommended by almost all expert panels and committees which have gone into the question of its continuance. Very recently a committee set up by the Maharashtra Government strongly recommended its replacement by some other levy. The Central Government also has been trying to persuade the concerned State Governments to withdraw it. Even so, as noted earlier, not all States have found it possible to do away with it.

1.1.5 Reasons for reluctance to remove octroi despite its vexatious nature are obvious. Octroi provides a ready source of revenue for many municipalities in the absence of which they would be hard put to meet their immediate and growing revenue expenditures. Unless they are assured of a viable alternative, it would be unrealistic to expect the governments of States where the tax is in operation since long and constitutes the principal

source of revenue for the urban local governments, to forgo it. It is pointed out by those who advocate its abolition that several States never had any octroi at all while at least two have replaced it with an alternative, viz., the entry tax. It is also argued that an efficient arrangement for tax sharing or devolution of funds from the States to the local bodies should in principle be adequate to take care of the revenue needs of the local bodies.

1.1.6 It is in this context that the Planning Commission commissioned a study in this Institute with the following terms of reference:

- i. To compare the pattern of urban local finances in octroi and non-octroi States with special reference to the arrangements regarding grants from and tax sharing by the State governments;
- ii. To study whether the collection from entry tax in Madhya Pradesh and Karnataka have been adequate to compensate for the loss of octroi; and
- iii. To compare the level of urban public services in octroi and non-octroi States and examine whether there is any systematic variation in service levels.

1.1.7 The case for abolition of octroi throughout the country hinges crucially on answers to the questions posed in the terms of reference.

2. Plan of the Study

1.2.1 An empirical analysis of local government fiscal behaviour requires a critical examination of revenues and expenditures of urban local bodies both in octroi and non-octroi States. Non-octroi States can be grouped under three categories (i) States which did not have octroi at any time. The notable

examples are Kerala, Tamil Nadu, Bihar, Andhra Pradesh and Assam. (ii) States which had octroi but substituted it by another tax. Madhya Pradesh and Karnataka come within this category, having introduced entry tax to compensate for the loss of octroi. Recently (June 1987) Andhra Pradesh has also introduced entry tax. Andhra Pradesh, however, did not have octroi except in Telengana region upto 1966. (iii) States which scrapped octroi without going in for any specific substitute. Examples of such States are few. Himachal Pradesh for instance eliminated octroi in 1982 without introducing any alternative.

1.2.2 Keeping this in mind, for the present analysis, the status of States with regard to presence or absence of octroi is categorised as follows:

- i. Octroi States
- ii. Non-octroi States
- iii. Entry tax States

Keeping in view the terms of reference, selected States in each category were taken up for study. In each State, analysis of local finances was first carried out in terms of State aggregates. Next, finances of major municipal corporations taken together in the sample States were analysed. Finally, finances of municipalities arranged according to their grade or category were examined.

1.2.3 The study is divided into three parts. Part one portrays trends and composition of urban local finances in octroi and non-octroi States in an attempt to highlight developments in the fields of local government own resource mobilisation and intergovernmental fiscal transfers in the absence of octroi. Part two examines adequacy of entry tax revenue to compensate for the loss of octroi. Part three presents an empirical analysis of the impact of presence and absence of octroi on urban local service standards.

1.2.4 The analysis is carried out in terms of current revenues and expenditures of local bodies. Capital side of the financial operations has been excluded from the present study as financing of local capital expenditures is largely a State government responsibility. Further, local government budgetary practices in respect of capital account lack uniformity and there are no consistent sources of data on capital receipts and disbursements. Moreover, octroi, being a current revenue item, goes primarily to finance current expenditures.

CHART I.1

OCTROI STATUS OF STATES AND UNION TERRITORIES

Octroi States

Non-octroi States

	<u>Non-Octroi</u>	<u>Entry Tax</u>
1) Punjab	Andhra Pradesh ¹	Karnataka
2) Haryana	Assam	Madhya Pradesh
Himachal Pradesh ²		
Jammu & Kashmir ³	Bihar	
3) Maharashtra	Kerala	
4) Gujarat		
5) Orissa	Nagaland	
Rajasthan 6	Sikkim	
Uttar Pradesh 7	Tamil Nadu	
West Bengal ⁴	Tripura	
	Manipur	
	Meghalaya	
	Mizoram	
	Arunachal Pradesh	
	Goa	

Octroi Union Territories

Non-Octroi Union Territories

Delhi ⁵ (abolished in 1995)	Chandigarh
1) Pondicherry	Dadra & Nagar Haveli
2) Andaman & Nicobar Islands	Lakshadweep

1. Entry tax introduced w.e.f. June 1987.
2. Abolished in 1982.
3. Abolished recently.
4. Collected at the checkpost under the name of entry tax.
5. A variant of octroi, namely, terminal tax.
6. Abolished in 1988.
7. Abolished in 1985 and replaced by 6 our change in trade tax.

was abolished in 1994

TABLE 1.1

**Share of Octroi in Total Revenue of
Urban Local Bodies**

	(per cent)		
State	1970-75	1975-80	1980-85
State Aggregate			
(municipal corporations and municipalities)			
Maharashtra	34.78	36.68 ^a	38.78 ^b
West Bengal*	7.65 ^c	12.66	9.37 ^d
Uttar Pradesh	n.a	24.69 ^e	32.12 ^f
Karnataka	37.49 ^g	n.a	-
Rajasthan	59.68 ^h	63.34 ⁱ	55.54
Average	34.91	34.34	33.95
Average of Municipal Corporations			
Maharashtra	32.55	32.58	40.46
Gujarat	41.80	46.43	54.24 ^j
West Bengal*	0.29	2.58	18.30 ^j
Uttar Pradesh	20.84	25.14	36.82 ^j
Karnataka	30.14	51.11 ^k	-
Madhya Pradesh	63.73 ^l	-	-
Average	31.46	31.57	37.45

- Notes: n.a. Not available Source: Computed.
- * Octroi is collected here under the head "entry tax"
- a. Based on 1975 and 1980's data
- b. Based on four years ending 1984-85
- c. Excludes 1972 and 1973
- d. Excludes 1983-85
- e. Based on 1979-80 data only
- f. Excludes 1984-85
- g. Excludes 1974 and 1975
- h. Excludes 1974
- i. Excludes 1975 and 1979
- j. Excludes 1985
- k. Excludes 1980
- l. Relates to 1975-76 only.

2. PATTERN OF URBAN LOCAL FINANCES IN OCTROI AND NON-OCTROI STATES

2.1 Introduction

2.1.1 Finances of local governments comprise, on the revenue side, own tax and non-tax revenues, on the one hand, and revenue from assigned taxes and share in non-local taxes and grants-in-aid from the States, on the other.

2.1.2 The pattern of urban local finances in non-octroi States as compared to that of octroi States depends essentially on how the local bodies respond to the absence or removal of octroi. Octroi being one of their major revenue sources, local governments respond to its absence in the following ways.

2.1.3 First, they may resort to a do-it-yourself strategy whereby additional funds are raised either from existing sources of revenue or by tapping entirely new local revenue sources. The second alternative, which seems equally attractive, is to rely more on intergovernmental transfers in the form of assigned taxes, share in State taxes and/or grants-in-aid. The third alternative is to reduce expenditure or costs on a programme or cut programmes. Such a strategy can help contain expenditures but usually result in either deterioration in service standards or insufficient municipal response to service demand, or both. The problem of declining service standards or reduction in services provided due to resource constraint can also be tackled by expenditure reassignment to the States or privatisation of some of them. If shifting of some of the local functions to State governments and privatisation of municipal services seem difficult, deterioration in services takes place.

2.1.4 A careful analysis of revenue-expenditure level, budgetary position and revenue structure is required in a compara-

tive study of variations in urban local finances that can be attributed to the presence or absence of octroi. The questions which arises for consideration in this context are:

- (1) Do the pattern of municipal finances and budgetary position of States which have abolished octroi or never had octroi differ significantly from those which have octroi?
- (2) To what extent attempts to raise additional resources through local tax effort and/or intergovernmental transfers compensate for removal or absence of octroi?
- (3) Do the octroi and non-octroi States differ appreciably in their levels of municipal services?

2.1.5 In an attempt to examine the issues set out above, octroi and non-octroi States have been compared in terms of budgetary position, revenue-expenditure level, revenue structure and local resource mobilisation. To facilitate comparison, current revenues and expenditures are expressed in per capita terms, and also as a proportion of urban income. Revenue structure is analysed by looking at the relative shares of tax revenue, non-tax revenue, grants and shared taxes in the total revenue. Local resource mobilisation is indicated by growth and buoyancy¹ of local revenue and tax effort² by urban local governments. Before undertaking a comparative analysis, however, it is necessary to isolate the impact of factors other than octroi which are likely to contribute to differences in the level and structure of municipal finances. This exercise is undertaken in the following section.

2.2 Classification of States into Homogeneous Groups

2.2.1 Level and structure of revenue of local authorities in a State depend, among other things, on the level of economic development of the State in question. Hence for comparing the finances of municipal bodies in octroi and non-octroi States, one

has to carry out the comparison between States with similar per capita incomes.

2.2.2 Table 2.1 gives figures of per capita income (SDP) and urbanisation status of different States. States have been grouped into below and above all-India average income States, hereafter referred to as low income and high income States respectively. In principle, high income octroi and entry tax States should be compared with high income non-octroi States and low income octroi/entry tax States with low income non-octroi States. However, all non-octroi and entry tax States happened to be of the low income category. Similarly in terms of urbanisation, they fall below the national average, except Kerala and Andhra Pradesh. Given that all non-octroi and entry tax States come within the low income category, comparison is undertaken in two pairs: between non-octroi States and low income octroi States and between non-octroi States and entry tax States. Sample States for the present analysis are indicated in Chart II.1.

2.3 Data

2.3.1 Data for the sample States were collected from the State-level municipal directorates by sending a detailed proforma. This set of data represents State aggregates which comprise aggregate revenue and expenditure, tax revenue, non-tax revenue and grants in respect of all municipal bodies in the respective States. For a few States, namely Kerala, Karnataka and Madhya Pradesh, local government share in State taxes is also available. One major problem with this set of data is that States which do not report shared taxes separately club them with tax revenue or grants.

2.3.2 The second source of data is Annual Statistical Abstracts of the Central Statistical Organisation. This source reports data in respect of selected municipal corporations under

CHART II.1

Name of Sample States

<u>Octroi</u>	<u>Non-Octroi</u>	<u>Entry Tax</u>
---------------	-------------------	------------------

Above all-India Average Income
(High income States)

Maharashtra
Gujarat
West Bengal

Below all-India Average Income
(Low income States)

Rajasthan	Andhra Pradesh	Karnataka
Uttar Pradesh	Bihar	Madhya Pradesh
	Kerala	
	Tamil Nadu	

the following heads: tax revenue, service charges, non-tax revenue with grants. Here again shared tax is either aggregated with tax revenue or grants. The third source of information is a report by the National Institute of Urban Affairs (NIUA) published in 1983. This report is the single source of information that gives most disaggregated data on municipal finances for two years, namely, 1973-74 and 1979-80. Data are available in aggregate terms for individual States which are further disaggregated into municipal corporations and municipalities. The fourth source is individual State government budgets, which provide data on local share in State taxes and compensation and assignments to local bodies. A comparative picture of the latter data is also reproduced in Combined Finance Accounts, an annual publication of the office of the Comptroller and Auditor General; Indian Economic Statistics - Part II: Public Finance, published by the

Ministry of Finance, and Reserve Bank of India monthly bulletins. For data on individual municipal corporations, their annual budgets and administration reports constituted the major data source.

2.3.3 All the data used here are in per capita terms averaged five-yearly for three periods: 1970-75, 1975-80 and 1980-85. Any variations are indicated appropriately. Depending on the availability of data, comparable data have been prepared in three forms: State aggregates, aggregates of municipal corporations and aggregates of municipalities.

2.4 Pattern of Urban Local Finances

a. Budgetary position

2.4.1 A look at the overall State aggregates would indicate that there is no consistent pattern to show whether urban local bodies in States without octroi experience deficit budgets or financial stringency on the revenue side (Table 2.2). Kerala, a non-octroi State, had deficit budgets while Tamil Nadu, also a non-octroi State, had surplus budgets during the quinquennium 1980-85. Bihar, another non-octroi State, witnessed both surplus and deficit budgets. The picture is similarly mixed in the case of octroi States. Maharashtra, one of the major octroi States, produced both deficit and surplus budgets. West Bengal and Uttar Pradesh also show a similar pattern. Karnataka, an entry tax State for which data were made available to us, showed surplus budgets all along.

2.4.2 Thus these data do not indicate that deficit budgets are characteristic only of non-octroi States. In fact, both low income and high income States with and without octroi have produced both surplus and deficit budgets. An analysis of the second set of data on aggregate of municipal corporations also confirms the above findings.

b. Level of revenue and expenditure

2.4.3 It may be argued here that budgetary balance cannot be used as an indicator of financial soundness. In the case of local bodies, particularly municipalities in most States, there is a statutory requirement of balancing the budget in an accounting sense. Faced with revenue shortage, the municipal authorities, therefore, have to cut their expenditures. This may result in surplus local budgets.

2.4.4 A comparison of revenue and expenditure levels is therefore called for. It can be postulated that States with similar levels of income should have comparable revenue levels. If non-octroi States show lower revenue levels, it can be attributed at least partly to absence of octroi.

2.4.5 Data presented in Tables 2.3 and 2.4 show that the level of revenue and expenditure on an average is higher in octroi States. However, the level of revenue and expenditure in Kerala and Tamil Nadu is higher than that in West Bengal, which is one of the high income octroi States. When revenues and expenditures are expressed as a proportion of urban income of respective States, hereafter revenue and expenditure income ratios (Table 2.5), in most cases, octroi/entry tax States stand higher than non-octroi States, only Tamil Nadu being an exception. Moreover, performance of two non-octroi States, namely, Bihar and Kerala, is not much different from that of West Bengal, an octroi State.

2.4.6 ✓ Among the local taxes, property tax is the most important revenue item next to octroi in a few States. Per capita property tax and its share in own revenue are higher in non-octroi States than in octroi States (Tables 2.6 and 2.7).

c. Growth of local revenue

2.4.7 Attempts to mobilise additional resources from the existing revenue sources to compensate for the loss of octroi can be

evaluated in terms of growth rate and buoyancy of total revenue in general and property tax in particular. Tax effort indices are also used to assess the performance of individual governments. Results pertaining to these indicators are presented in Tables 2.8 - 2.11. Average growth rate of State aggregate of local revenues is higher in low income octroi States than that in non-octroi States. But individual variations again distort this average picture. For instance, some of the non-octroi States such as Kerala performed better in terms of growth rate than some of the octroi States, for instance, Uttar Pradesh. Entry tax States too are closer to low income octroi States. Mixed results are obtained when other indicators such as buoyancy and tax effort are analysed. Although average performance of non-octroi States is better in respect of growth of property tax, variations within the group are noticeable. From these results, it is rather difficult to conclude that local bodies in non-octroi States have exploited their existing revenues more vigorously to compensate for the loss of octroi than their counterparts who levy octroi.

d. Revenue structure with special reference to inter-governmental fiscal transfers

2.4.8 Presence and absence of octroi may be presumed to generate revenue structures of the local authorities with distinguishing features. Share of intergovernmental transfers, namely, grants and share in State taxes may be expected to be higher in non-octroi States, given the local revenue effort. To test this hypothesis, an analysis of revenue composition of urban local bodies has been attempted here.

2.4.9 Like Central and State government revenue structures, local revenue structures also are characterised by dominance of tax revenues (Tables 2.12 - 2.14). In some cases, however, grants are more important than taxes. One octroi State, namely, West Bengal derived about 59 per cent of its aggregate local revenue from State transfers in the form of grants during 1980-85. Similarly, grants from State government constituted about 60-70 per cent of the municipal corporations' total revenue in one non-octroi State,

namely, Bihar. This shows that grants may be used as a substitute for tax revenues in the municipal budgets, particularly when an important tax such as octroi is not present.

2.4.10 To assess the relative significance of grants along with another mode of State transfers, namely, shared taxes as between octroi and non-octroi States, it is instructive to compare the revenue structures of Karnataka, an octroi State before 1980, and Tamil Nadu and Kerala, two non-octroi States for which comparable data are available (Table 2.12). Karnataka's municipalities derived about 45 per cent of their revenue from transfers from the State government during 1975-80 whereas for Kerala this proportion was about 20 per cent during 1975-80 and 28 per cent during 1980-85. It can also be seen that this proportion has increased in both the States over time. The share of transfers from the State government is about 43 per cent in Tamil Nadu during 1980-85, which is higher than in Kerala, but comparable to Karnataka's.

2.4.11 Taking grants to local bodies separately, one would find that among octroi States it comprised about 59 per cent of total revenue in West Bengal and 30 per cent in Uttar Pradesh as against approximately 22 per cent in Tamil Nadu and 9 per cent in Kerala, among the non-octroi States. Available data on municipal corporations show that in octroi States the share of grants ranged between 4 per cent in Maharashtra and 30 per cent in West Bengal - two octroi States - as against roughly 1 per cent in Andhra Pradesh and 7 per cent in Kerala, both non-octroi States (Table 2.13). For Bihar and two entry tax States, namely, Madhya Pradesh and Karnataka, available data on grants seem to include shared taxes. Hence these States are not included in the analysis. Revenue structure data pertaining to municipalities reveal that the share of grants in non-octroi States is higher than that in low income octroi States (Table 2.14). After a look at the limited information available on shared taxes, one would be inclined to conclude that shared taxes constituted a higher proportion in the total revenue of non-octroi States than that in Madhya Pradesh and

Karnataka, two octroi States which later replaced octroi with entry tax. However, in the case of municipalities, one finds that shared tax component is significantly higher in non-octroi States than those having octroi.

e. Intergovernmental fiscal transfers - further evidence

2.4.12 Conceptually, the significance of tax shares and grants should be higher in non-octroi States relative to octroi States if intergovernmental transfers are used as a device to neutralise the revenue impact of the absence of octroi. However, a higher level of intergovernmental transfers can be sustained only if selected State taxes are used to generate additional resources to finance devolution. An attempt is made here to ascertain as to whether per capita State transfers and per capita level of selected State taxes such as sales tax, motor vehicles tax and entertainment tax are higher in non-octroi States at comparable levels of income.

2.4.13 It has been pointed out earlier that no comparable appropriate data on shared taxes and grants are available, as arrangements pertaining to transfers vary quite widely among States (see Annexure II.1). Hence, data on compensation and assignments to local bodies available from individual State budgets have been used. This set of data represents aggregate of State transfers to local bodies including panchayati raj institutions. It gives information on shares of local bodies in various taxes, compensation paid in lieu of taxes, grants and transfers through tax assignments. Land revenue, motor vehicles tax and entertainment tax are the three frequently used taxes for revenue sharing with local bodies. An important limitation of these data is that the category 'miscellaneous' is quite large in some cases and in some others only aggregate transfer is reported. In addition, inclusion of assigned taxes distorts tax sharing and grants enormously. Assuming that these variations would not distort the picture significantly and that land revenue is meant primarily for rural local bodies, namely, panchayati raj institutions, State

transfers to urban local bodies can be approximated by the aggregate of compensation and assignments net of land revenue. As regards information on State taxes, it is obtained directly from State government budget documents.

2.4.14 A comparison of per capita State transfers to urban local bodies as described above indicates that such transfer is higher in non-octroi States, particularly in Andhra Pradesh and Kerala which have surpassed even Maharashtra and Gujarat in this respect (Table 2.15). However, variations within the group are quite striking. As regards the level of selected State taxes, non-octroi States generally have higher per capita sales and motor vehicles taxes (Table 2.16). However, there is no consistent trend in respect of entertainment tax. In the presence of such within-the-group variations, conclusions based on the comparison of average levels of State transfers to local bodies and State taxes cannot be taken as firm. Thus this analysis does not lead to any conclusive evidence as to whether the level of intergovernmental fiscal transfers is consistently higher in non-octroi States.

2.5 Statistical Significance of Difference between Averages

2.5.1 An analysis of level and composition of local revenue in individual States presented a highly mixed picture. Not only is there no consistent pattern as between high and low income States but variations exist within the low income States also. However, on average, non-octroi local bodies seem to have witnessed higher budgetary deficits, lower levels of revenues and expenditures, lower local resource mobilisation and higher share of intergovernmental fiscal transfers in their revenue structures. An attempt is made in this section to test the reliability of the pictures generated by group averages. This is done by testing significance of differences in averages with the help of standard statistical techniques. Two methods employed here are: mean difference test and regression technique.

2.5.2 The first method is based on 't' statistic. It attempts to establish whether the sample States categorised into octroi and non-octroi come from the respective populations. In the present context, two populations are two categories of States, namely, low income octroi/entry tax States and low income non-octroi States. If 't' statistic is significant, the relevant groups are established to be belonging to different populations and difference between means is taken to be statistically significant. If 't' is not significant difference between means may be attributed to sampling fluctuations. Since States have been classified by income levels it is taken for granted that differences due to income level variations are neutralised.

2.5.3 In the second method, that is, regression analysis, statistical significance of dummy for presence and absence of octroi is tested. Dummy equal to one and zero represent presence and absence of octroi respectively. Income effect is isolated by using income as an additional explanatory variable in the regression equation. The effect of urbanisation is also taken out in the second set of exercises. Urbanisation rate may systematically influence revenue performance of urban local bodies and policies towards State transfers to them.

2.6 Analysis of Results

a. Test for difference between means

2.6.1 The results are presented in Table 2.17. The exercise is performed on time series data and 5-yearly average of data on urban local finances of the sample States. Positive 't' indicates that octroi/entry tax State averages are higher than that of non-octroi State averages and vice versa when 't' is negative. The significance of 't' statistic is tested at 5,10 and 20 per cent levels of significance. A significant 't' ratio indicates that difference between averages is statistically significant. The results show that the per capita levels of budgetary surplus, per capita revenue and expenditure and ratios of revenue and expendi-

ture to income are higher in octroi/entry tax States, except in the case of budgetary surplus of municipal corporations which is higher in non-octroi States. Barring a few instances, the difference between averages is also statistically significant, as indicated by their 't' values pertaining to State aggregates. None of the 't' ratios for municipal corporations, however, is statistically significant. This suggests that inter-State variations in revenue and expenditure levels are probably attributable to the presence or absence of octroi as a revenue source in their municipalities.

2.6.2 Average growth rate and buoyancy of local revenue are higher for octroi/entry tax States, indicating better performance by them while average tax effort is higher in non-octroi States. These results, however, lack statistical significance. The higher level of per capita property tax in non-octroi States is statistically significant only in one period, although share of property tax in own local revenues is significantly higher in non-octroi States as compared to octroi States. This result, however, is not valid for entry tax States.

2.6.3 As regards revenue composition in terms of relative shares of intergovernmental fiscal transfers vis-a-vis other revenue sources, 't' ratios have yielded negative signs indicating higher share of intergovernmental transfers in revenues of non-octroi local bodies, which is only to be expected. However, excepting one result pertaining to entry tax States vis-a-vis non-octroi States, none of the 't' ratios is statistically significant. The average level of State taxes is found to be higher in non-octroi States relative only to octroi States and not entry tax States, though in terms of statistical significance, with two exceptions - one relating to sales tax and another relating to motor vehicles tax - 't' ratios are not significant.

b. Analysis of regression results

2.6.4 The results are set out in Tables 2.18 to 2.21. (For

regression results pertaining to expenditures, see Tables 4.13 and 4.14 appended to Chapter 4.) The exercise is performed on the data for the two cross-sections of 16 States for 1974-75 and 1979-80. A positive coefficient on dummy for octroi indicates a higher level of fiscal indicator in octroi States. Although in a good number of equations the degree of fit shown by R^{-2} is not good, the analysis is carried out basically in terms of signs and significance of regression coefficients. In the 1974-75 cross-section with only income as an additional explanatory variable, none of the coefficients on dummy is found significant. For the same year, with income and urbanisation as additional explanatory variables, dummy is significant with negative sign only for entertainment tax, indicating that the level of entertainment tax is higher in non-octroi States than in octroi States.

2.6.5 The exercise with the 1979-80 cross-section, however, yielded some significant results. When income is used as an additional explanatory variable, octroi dummies are significant with positive sign for per capita property tax, per capita grant, per capita other grants, and entertainment tax. This shows that in respect of these indicators, octroi States are placed higher than that of non-octroi States. However, significant negative coefficients on per capita assigned revenues and assigned revenue as a proportion of total revenue indicate higher level of assigned revenues in non-octroi States relative to octroi States. When urbanisation is added to the list of explanatory variables, positive coefficients on octroi dummy are significant only for per capita property tax and per capita other grants. This shows that the level of these indicators is higher in octroi States. However, non-octroi States have exhibited higher levels of per capita grants, per capita assigned revenues and per capita motor vehicles tax as revealed by significant and negative coefficients on octroi dummy.

2.7 Basic Results: An Overview

2.7.1 The two sets of exercises yield divergent results. The

same set of exercise has yielded different results for different periods and samples. However, a few generalisations that can be made are presented here. Using the State aggregate data (combined municipalities and municipal corporations), budgetary balance criterion has revealed better performance of octroi/entry tax States in mean difference test but not in regression analysis. Similarly in terms of per capita revenue and expenditure levels and revenue-and expenditure-income ratios, octroi States are placed higher than non-octroi States. However, differences in the performance of municipal corporations in octroi and non-octroi States are not found statistically significant. This result may be interpreted to mean that the absence of octroi may have resulted in significantly lower revenue-expenditure levels only in the municipalities of non-octroi States.

2.7.2 Tests pertaining to higher share of transfers from the State government in the local finances of non-octroi States yielded some interesting results but in the regression analysis only. Non-octroi local bodies have shown greater dependence on State transfers. Differences in the level of State taxes, particularly sales tax which is the most important State tax, is not found significant in either method. It is difficult to determine from this whether non-octroi State governments have undertaken additional resource mobilisation as a matter of policy to finance State transfer programme.

2.7.3 Although the share of property tax in total revenue as well as its per capita level are higher in non-octroi States, statistical tests for significant differences establish higher per capita property taxes in octroi States. Thus no significant results are obtained to confirm that local bodies do undertake additional resource mobilisation to compensate for the loss of octroi.

2.7.4 The variation in the results can be attributed partly to the two different methods employed using different sets of sample and data. However, two important conclusions seem to be

emerging. First, in view of the fact that octroi would have contributed substantially to the local revenues, non-octroi local governments have by and large diversified their fiscal attempt. They have depended on fiscal transfers from the respective State government to a greater extent, but at the same time modest attempts have been made to raise additional resources locally, with the help of property tax. Despite these efforts, it seems, however, that non-octroi local bodies have ended up at a lower revenue expenditure level. Secondly octroi and non-octroi municipal corporations do not seem to differ significantly in revenue and expenditure levels. Thus the differences between octroi and non-octroi States in the matter of revenue and expenditure levels pertain mainly to the municipalities.

NOTES

1. Buoyancy of revenue with respect to State Domestic Product (SDP) refers to percentage point change in revenue as a result of one percentage point change in SDP.
2. Tax effort of any governmental unit represents its willingness to tax the people. Usually the tax ratio, defined as the relationship between actual amount of tax collection and some measure of taxable capacity (commonly, income) is the starting point towards any measurement of tax effort. Following the regression approach, regression is performed on tax ratio using tax capacity factors as explanatory variables. The difference between the actual tax ratio and the one estimated on the basis of this regression is taken as an unexplained variance representing tax effort.

ANNEXURE 1

Shared Taxes, Cesses and Grants-in-Aid to Urban Local Bodies in Selected States

Taxes shared	Assigned revenue	Ordinary grant	Compensatory grant	Specific purpose grant	Specific cess (shared or assigned)
STATE					
ANDHRA PRADESH					
	a. Entertainment tax (90%)	90 Paise per head of population	a. Motor vehicle tax	a. For D.A.	a. Education cess on land revenue (assigned)
	b. Profession tax (100%)		b. Compensation for abolition of surcharge on property tax, & raising of exemption limit	c. Environmental improvement	
			c. Octroi loss compensation	d. For constructing school buildings	
				e. Improvement of roads	
GUJARAT					
a. Entertainment Duty: (shared as grant, based on various criteria like area, population density and per capita revenue; these criteria determine the basis of sharing for 75% of the yield)		Per capita grant for:		a. D.A. grant - on percentage of salary	a. Local fund cess on land revenue @ 50 paise per rupee of land revenue
b. 10% of the yield meant for loans		a. Maintenance of health services		b. Road grant @ Rs. 250/- per 1.6 km.	b. Local cess on stamp duties leviable by Taluk and District Panchayats with prior permission of the government
c. 15% given on the basis of "matching"		b. Implementing town planning schemes		c. For urban community development projects	
		c. For development plan scheme		d. Subsidy grant for conversion of dry latrines	
		d. Reimbursement grant is given for transferred function viz. primary education			
MARYANA					
				a. For environmental improvement of slums	
				b. Ad-hoc grant for financing revenue earning scheme	
				c. For some select development works	

Contd...

ANNEXURE I Contd'

Taxes shared	Assigned revenue	Ordinary grant	Compensatory grant	Specific purpose grant	Specific cess (shared or assigned)
STATE					
HIMACHAL PRADESH					
-	-	-	-	-	Local rate on land revenue @ 35% of the land revenue (assigned to Panchayati Raj Department)
JAMMU & KASHMIR					
Entertainment Tax (40%)	-	-	-	-	a. Environmental improvement of slums b. For provision of some civic amenities c. For D.A. payments
KARNATAKA					
-	a. Entertainment tax excluding surcharge, show tax and additional tax (90%) b. Duty on transfer of property (90% on bill production) c. Additional stamp duty (97%)	-	a. In lieu of octroi since 1979-80 (collection in 1978-79 as the base; after three years 10% increase on the base) b. In lieu of profession tax since April 1, 1976 (an amount equivalent to the highest collection made by local body in any year during the period of three years preceding 1975-76)	For road maintenance purpose	Local cess @ 50% on all items of land revenue (assigned to Taluka Boards)
KERALA					
-	-	Per capita grant on the basis of the population under the local body	-	Road maintenance grant (on the basis of kms. of pucca road maintained by the local body)	-

Contd...

ANNEXURE I Contd'

Taxes shared	Assigned revenue	Ordinary grant	Compensatory grant	Specific purpose grant	Specific cess (shared or assigned)
STATE					
MADHYA PRADESH					
		Per capita grant based on population (for municipal corporation Rs. 0.50 per head and for other categories of municipalities between Rs. 0.75 and Rs. 1.50).	Grant in lieu of octroi	<ul style="list-style-type: none"> a. Water supply/ drainage charges b. Dwelling houses for municipal conservancy staff c. Public works, roads, etc. d. Sanitary and other municipal purposes e. For construction of rampart or bund f. For bus stands, hotels & shops etc. g. Parks, playing grounds etc. 	Panchayat cess levied on the land held by every tenure holder and government lessee in the gram panchayat area (the proceeds transferred to local bodies)
MAHARASHTRA					
a. Entertainment duty (40%)			a. In lieu of motor vehicle tax	a. D.A.	a. Cess and land revenue along with a matching grant for amounts above the minimum (assigned to rural local bodies: urban local bodies can get the proceeds spent by the State Government on specified services and activities through their own resolution)
b. Land revenue and non-agricultural assessment revenue			b. In lieu of fines collected for offences under Municipal Acts.	b. For implementing development plans (33% as grant and 67% as loans)	b. Cess on water rates (assigned)
			c. In lieu of tolls	c. For converting dry latrines	
			d. In lieu of collections under Shops & Establishment Act.	d. For primary & secondary education	
				e. Capital grants for water supply and drainage schemes besides loans.	

Contd...

ANNEXURE I Contd'

Taxes shared	Assigned revenue	Ordinary grant	Compensatory grant	Specific purpose grant	Specific cess (shared or assigned)
STATE					
ORISSA					
Entertainment Tax (50%)	-	-	-	<ul style="list-style-type: none"> a. For D.A. (53%) b. For road maintenance (based on the type of roads e.g. per km. Rs. 26.50/- for black top) c. A part of road tax as grant d. Loans from LIC guaranteed and 1/3rd of cost given as grant e. For remunerative schemes, a grant of 25 to 40% rest amount of loan is guaranteed f. Ad-hoc miscellaneous grants for some non-remunerative schemes of local importance. 	Land cess on lands other than those held for mining operation (50% assigned to rural local bodies).
RAJASTHAN					
-	-	General grants on the basis of 50 paise per capita (Non recurring)	In lieu of Entertainment tax (Recurring)	<ul style="list-style-type: none"> a. D.A. ad-hoc grants (Recurring) b. Development grant (in the ratio of 3:2: non-recurring) c. Harijan uplift programmes 	<ul style="list-style-type: none"> a. Local cess @ 45 paise per rupee of land revenue (distributed between panchayat and panchayat unions) b. A local cess surcharge matching grant to the panchayat unions.
TAMIL NADU					
-	<ul style="list-style-type: none"> a. Entertainment tax including surcharge and show tax (90%) b. Local bodies can impose a surcharge upto 100% of Entertainment tax and upto 150% of show tax 	-	-	-	<ul style="list-style-type: none"> a. Local cess and surcharge on land revenue (assigned to panchayats and panchayat unions) b. A matching grant on the local cess mentioned in (a) above goes to

Contd...

ANNEXURE I Contd

Taxes shared	Assigned revenue	Ordinary grant	Compensatory grant	Specific purpose grant	Specific cess (shared or assigned)
STATE					
					panchayat union councils.
UTTAR PRADESH					
	An entry fee on transport vehicles entering the State at a flat rate per vehicle (since May 1, 1979 to compensate local bodies for proposed abolition of octroi)	-	-	In lieu of fines collected for violation of municipal laws	<ul style="list-style-type: none"> a. D.A. grants (22% of the total amount) b. For maintenance of roads (this grant constitutes 50% of the proceeds of Motor Vehicle Taxation. Given only to urban local bodies, the quantum is fixed on the basis of road mileage, population and the importance of the town) c. Primary education maintenance (75% of the approved expenditure) d. For health and medical relief schemes e. For certain projects included in the Five Year Plan such as housing conservancy staff.
WEST BENGAL					
	Entry tax (shared in the following percentage: Calcutta Municipal Corporation: 25%, Urban Local Bodies under CMA: 18%, Calcutta Municipal Development Authority: 50%)	-	-	-	For construction and maintenance of district roads and other works of public utility (given to Zilla Parishads on the basis of their annual collections).

Source: Compiled from State government budgets and memoranda submitted to Finance Commissions.

TABLE 2.1

Per Capita Income and Urbanisation Levels of States

State	1970-71				1984-85			
	SDP per capita (Rupees)	Rank	Urbanisation	Rank	SDP per capita (Rupees)	Rank	Urbanisation	Rank
OCTROI STATES								
Gujarat	829	4	27.51	4	2901	5	37.39	2
Haryana	877	3	17.88	10	3529	3	24.66	8
Himachal Pradesh	651	7	07.02	18	-	-	-	-
Jammu & Kashmir	548	13	18.72	9	2079	10	22.56	11
Karnataka	641	9	24.55	6	-	-	-	-
Madhya Pradesh	484	16	16.50	12	-	-	-	-
Maharashtra	783	5	31.38	2	3203	4	37.39	2
Orissa	478	17	8.58	17	1534	17	14.25	14
Punjab	1070	2	23.95	7	4103	2	30.17	5
Rajasthan	651	8	17.82	11	1990	13	23.23	9
Uttar Pradesh	486	15	14.23	14	1782	15	20.07	13
West Bengal	722	6	24.85	5	2594	6	27.48	6
Delhi	1199	1	81.88	1	4765	1	94.46	1
NON-OCTROI STATES								
Andhra Pradesh	585	11	19.53	8	1996	12	25.91	7
Assam	535	14	8.95	16	1821	14	11.18	16
Bihar	402	18	10.12	15	1481	18	14.10	15
Himachal Pradesh	-	-	-	-	2217	7	7.99	17
Kerala	594	10	16.38	13	2078	11	20.30	12
Tamil Nadu	581	12	30.40	3	2128	9	34.56	3
ENTRY TAX STATES								
Karnataka	-	-	-	-	2189	8	31.82	4
Madhya Pradesh	-	-	-	-	1693	16	22.94	10
All India Average	633		20.10		2335		25.06	

Source: For SDP, Reserve Bank of India Bulletins; For Urbanisation, computed on the basis of census results.

TABLE 2.2

Budgetary Deficit (-) Surplus (+)

(Rs. per capita)

State	State Aggregate			Municipal Corporations		
	1970-75	1975-80	1980-85	1970-75	1975-80	1980-85
OCTROI STATES						
<u>High Income</u>						
Maharashtra	-1.62	+1.93	+0.90	-2.82	+24.76	+40.93
Gujarat	-	-	-	+5.17	+8.36	+38.98
West Bengal	-0.03	+0.05	+0.11	-1.63	+1.59	+23.27
Average ^a	-0.825	+0.99	+0.50	+0.24	+47.69	+87.19
<u>Low Income</u>						
Uttar Pradesh	-	+0.83	-0.27	-1.16	+1.74	+2.36
Rajasthan	+0.07	+0.39	+0.03	-	-	-
Karnataka	+0.15	+0.64	-	-17.13	-34.30	-
Madhya Pradesh	-	-	-	+8.61	-	-
Average	+0.11	+0.62	-0.12	-3.16	-19.79	+2.36 ^b
NON-OCTROI STATES						
<u>Low Income</u>						
Andhra Pradesh	-	-	-	+15.12	+10.94	+15.51
Bihar	-0.27	+0.22	-	+7.27	+4.25	+3.46
Kerala	-0.30	-0.40	-0.53	+0.06	+1.16	-1.63
Tamil Nadu	-	-	-	-4.23	+9.47	-4.00
Average	-0.28	-0.09	-0.53 ^c	+4.68	+6.58	+3.34
ENTRY TAX STATES						
<u>Low Income</u>						
Karnataka	-	-	+1.24	-	-	-59.20
Madhya Pradesh	-	-	-	-	+3.55	+0.08
Average	-	-	+1.24 ^d	-	+3.55 ^e	-26.58

Notes:

Source: Computed.

- These figures are derived by subtracting per capita expenditure (average) from the respective per capita revenue (average) given in the previous tables.
- Based on Uttar Pradesh only.
- Based on Kerala only.
- Based on Karnataka only.
- Based on Madhya Pradesh only.

TABLE 2.3

Level of Revenue and Expenditure
State Aggregate of
Municipalities and Municipal Corporations

(Rs. per capita)

State	Revenue			Expenditure		
	1970-75	1975-80	1980-85	1970-75	1975-80	1980-85
OCTROI STATES						
<u>High Income</u>						
Maharashtra	6.44	12.75	22.54	8.06	10.82	21.64
West Bengal	0.86	1.62	2.39	0.89	1.56	2.19
Average	3.65	7.18	12.46	4.47	6.19	11.91
<u>Low Income</u>						
Uttar Pradesh	-	3.73	4.65	-	2.90	4.73
Rajasthan	1.54	3.66	5.84	1.46	3.26	5.80
Karnataka	2.60	3.90	-	2.45	4.01	-
Average	2.07	3.76	5.24	1.95	3.39	5.26
NON-OCTROI STATES						
<u>Low Income</u>						
Bihar	0.80	1.16	-	1.08	1.09	-
Kerala	1.34	1.99	2.31	1.65	2.39	2.72
Average	1.07	1.57	2.31 ^a	1.36	1.74	2.72 ^a
ENTRY TAX STATES						
<u>Low Income</u>						
Karnataka	-	-	6.14	-	-	4.69
Average	-	-	6.14 ^b	-	-	4.69 ^b

Notes: a. Based on Kerala only
b. Based on Karnataka only

Source: Computed.
Original Source: Directorates of Municipalities, State Governments.

TABLE 2.4

**Level of Revenue and Expenditure
Municipal Corporations**

(Rs. per capita)

State	Revenue			Expenditure		
	1970-75	1975-80	1980-85	1970-75	1975-80	1980-85
OCTROI STATES						
<u>High Income</u>						
Maharashtra	92.95	182.76	275.39	95.77	158.00	234.45
Gujarat	79.57	148.41	195.75	74.40	140.05	156.77
West Bengal	50.89	74.28	121.48	52.52	72.79	92.39
Average	74.47	126.89	183.89	74.23	79.20	96.70
<u>Low Income</u>						
Uttar Pradesh	48.82	54.70	50.83	49.80	59.96	48.47
Karnataka	41.56	67.73	-	58.69	102.03	-
Madhya Pradesh	36.54	-	-	27.91	-	-
Average	42.31	61.21	50.83 ^a	45.47	81.00	48.47 ^a
NON- OCTROI STATES						
<u>Low Income</u>						
Andhra Pradesh	26.72	39.91	59.94	11.60	27.97	44.43
Bihar	25.76	20.66	19.13	17.99	16.91	15.66
Kerala	22.08	34.46	40.08	22.02	33.30	41.70
Tamil Nadu	67.61	121.38	107.49	71.83	111.92	111.49
Average	35.54	54.10	56.66	30.86	47.52	53.32
ENTRY TAX STATES						
<u>Low Income</u>						
Karnataka	-	-	96.16	-	-	149.40
Madhya Pradesh	-	57.16	50.99	-	53.62	50.91
Average	-	57.16 ^b	73.57	-	53.62 ^b	100.15

Notes: a. Based on Uttar Pradesh only
b. Based on Madhya Pradesh only

Source: Computed.
Original Source: CSO, Annual Statistical Abstracts.

TABLE 2.5

**Revenue and Expenditure/Income Ratios
State Aggregate**

State	Revenue-Income Ratio			Expenditure-Income Ratio		
	1970-75	1975-80	1980-85	1970-75	1975-80	1980-85
OCTROI STATES						
<u>High Income</u>						
Maharashtra	0.31	0.37	0.44	0.39	0.34	0.42
Gujarat	-	-	-	-	-	-
West Bengal	0.06	0.06	0.06	0.06	0.06	0.06
Average	0.18	0.21	0.25	0.22	0.20	0.24
<u>Low Income</u>						
Uttar Pradesh	0.17	0.15	0.12	0.17	0.17	-
Rajasthan	0.12	0.18	0.17	0.11	0.16	0.17
Karnataka	0.21	0.18	-	0.20	0.18	-
Madhya Pradesh	0.12	-	-	-	-	-
Average	0.16	0.17	0.14	0.16	0.17	0.17 ^a
NON-OCTROI STATES						
<u>Low Income</u>						
Andhra Pradesh	-	-	-	-	-	-
Bihar	0.04	0.05	-	0.05	0.04	-
Kerala	0.06	0.06	0.05	0.08	0.07	0.06
Tamil Nadu	-	-	-	-	-	-
Average	0.05	0.06	0.05 ^b	0.07	0.06	0.06 ^b
ENTRY TAX STATES						
<u>Low Income</u>						
Karnataka	-	-	0.20	-	-	0.17
Madhya Pradesh	-	-	-	-	-	-
Average	-	-	0.20 ^c	-	-	0.17 ^c

Notes:

- a. Based on Rajasthan only
 b. Based on Kerala only
 c. Based on Karnataka only

Source: Computed.

TABLE 2.6

**Per Capita Property Tax
(State Aggregate)**

(Rs.)			
State	1970-75	1975-80	1980-85
OCTROI STATES			
<u>High Income</u>			
Maharashtra	1.47	3.47 ^a	4.89 ^b
West Bengal	0.15	0.26 ^c	0.25 ^d
Average	0.81	1.86	2.57
<u>Low Income</u>			
Uttar Pradesh	0.19 ^e	0.31 ^f	-
Rajasthan	0.11 ^g	0.13 ^h	0.16
Karnataka	0.58 ⁿ	0.74	-
Madhya Pradesh	-	-	-
Average	0.29	0.39	0.16 ^p
NON-OCTROI STATES			
<u>Low Income</u>			
Andhra Pradesh	-	-	-
Bihar	0.16 ⁱ	0.15 ^j	-
Kerala	0.50	0.75	0.78 ^k
Tamil Nadu	n.a.	n.a.	0.87 ^l
Average	0.33	0.45	0.82
ENTRY TAX STATES			
<u>Low Income</u>			
Karnataka	-	-	0.80 ^m
Madhya Pradesh	-	-	-
Average	-	-	0.80 ^q

Source: Computed.

- Notes: (a) Average of two years 1976 and 1980.
 (b) Average of four years except for 1984-85.
 (c) Average of three years excluding 1972 and 1973.
 (d) Average of two years 1981 and 1982.
 (e) For 1974-75 only.
 (f) For Uttar Pradesh, years are 1978-79 and 1979-80.
 (g) For Rajasthan year 1973-74 excluded for want of data.
 (h) For Rajasthan years 1975-76 and 1978-79 excluded for want of data.
 (i) For year 1974-75 only.
 (j) For year 1979-80 only.
 (k) Four-year average only, excluding the year 1984-85.
 (l) For Tamil Nadu data are not available upto 1981-82.

- (m) For Karnataka, 1983 and 1985 could not be included for want of data.
- (n) Excludes 1973-74 and 1974-75 as data are not available.
- (p) Based on Rajasthan only
- (q) Based on Karnataka only

TABLE 2.7

Percentage of Property Tax and Octroi in Own Revenue

State	PT/own				OC/own			
	1970-71	1975-76	1980-81	1985-86	1970-71	1975-76	1980-81	1985-86
OCTROI STATES								
<u>High Income</u>								
Maharashtra	33.46	25.18	40.97	24.64	35.96	45.43	53.81	59.17
West Bengal	38.25	36.04	25.34	25.07	0.09	17.13	35.17	20.40
Average	35.85	30.61	33.15	24.85	18.02	31.28	44.49	39.78
<u>Low Income</u>								
Uttar Pradesh	n.a	15.92	15.91	n.a	n.a	52.14	59.19	62.14
Karnataka	35.42	79.74	-	-	61.33	n.a	-	-
Rajasthan	12.14	7.38	4.73	11.40	81.90	90.88	90.63	83.46
Average	23.78	34.35	10.32	11.40	71.61	71.51	74.91	72.80
NON-OCTROI STATES								
<u>Low Income</u>								
Bihar	n.a	38.75	34.46	n.a	-	-	-	-
Tamil Nadu	n.a	n.a	99.11	99.20	-	-	-	-
Kerala	60.48	73.03	54.82	22.34	-	-	-	-
Average	60.40	55.89	62.80	60.77	-	-	-	-
ENTRY TAX STATES								
<u>Low Income</u>								
Karnataka	-	-	82.69	n.a	-	-	n.a	n.a
Madhya Pradesh	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Average	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a

PT = Property tax
OC = Octroi

Source: Computed

TABLE 2.8

**Average Growth Rates of Per Capita Local
Revenue and Expenditure
(State Aggregate)**

(Per cent per annum)

State	Total revenue	Total expenditure
OCTROI STATES		
<u>High Income</u>		
Maharashtra	18.214	13.845
West Bengal	13.313	12.058
Average	15.76	12.95
<u>Low Income</u>		
Uttar Pradesh	10.729	14.716
Rajasthan	8.833	19.433
Average	14.78	17.07
NON-OCTROI STATES		
<u>Low Income</u>		
Bihar	1.400	2.264
Kerala	13.556	12.480
Average	7.48	7.37
ENTRY TAX STATES		
<u>Low Income</u>		
Karnataka	12.941	12.065
Madhya Pradesh	17.041	-
Average	14.99	12.065

Source: Computed.

Notes:

1. For Maharashtra, period is 1971-1986 excluding 1977, 1978 and 1979 (for TR and TE).
2. For Uttar Pradesh, period is 1976-1983 excluding 1977 and 1978.
3. For Rajasthan, period is 1971-1986 excluding 1974, 1976 and 1979 (for TR and TE).
4. For Bihar, period is 1975-1980 excluding 1977, 1978 and 1979.
5. For Kerala, period is 1971-82.
6. For Karnataka, period is 1971-1981 excluding 1974, 1975 and 1976.

TABLE 2.9

**Growth Rates of Revenue, Expenditure
and Property Tax
(Corporation Series)**

(Per cent per annum)

State	Total revenue	Total expenditure	Per capita property tax
OCTROI STATES			
<u>High Income</u>			
Maharashtra ¹	13.476	12.691	5.880
Gujarat ²	14.867	15.148	7.407
West Bengal ³	5.292	4.500	4.332(a)
Delhi ⁴	12.857	12.753	8.888
Average	11.623	11.273	6.627
<u>Low Income</u>			
Uttar Pradesh ⁵	6.825	6.488	7.594(b)
Average	6.825	6.488	7.594
NON-OCTROI STATES			
<u>Low Income</u>			
Andhra Pradesh ⁶	11.02	18.617	8.133
Bihar ⁷	n.c.	n.c.	5.940(c)
Tamil Nadu ⁸	-	-	6.405(d)
Kerala ⁹	11.452		12.349
12.035(e)			
Average	11.237	10.483	8.128
ENTRY TAX STATES			
<u>Low Income</u>			
Karnataka ¹⁰	13.206	14.612	8.437(f)
Madhya Pradesh ¹¹	8.708	9.783	8.000(g)
Average	10.957	12.198	8.219

Source: Computed.

Notes: 1. 1961-86	a. 1961-62
2. 1961-84	b. deleted year 1983
3. 1961-84	c. 1975-83
4. 1961-83	d. 1961-72
5. 1961-84	e. 1961-82
6. 1961-81	f. 1961-83
7. 1961-83	g. 1961-84
8. 1961-83	
9. 1961-81	
10. 1961-84	
11. 1961-87	

TABLE 2.10

**Buoyancy Estimates of Property Tax and
Total Tax Revenue (Municipal Corporations)
(1961-81)**

State	Property Tax	Tax Revenue
OCTROI STATES		
<u>High Income</u>		
Maharashtra (1961-85)	0.7544 (38.4299)	1.0608 (64.0528)
Gujarat (1961-84)	0.8695 (17.1414)	1.1256 (27.8362)
West Bengal (1961-83)	0.9171 (7.8895)	1.1099 (10.0212)
Delhi (1961-83)	1.0764 (8.0420)	1.0841 (25.4797)
Average	0.9049	1.0949
<u>Low Income</u>		
Uttar Pradesh (1961-84)	0.7123 (4.3457)	0.7232 (7.2266)
Average	0.7123	0.7232
NON-OCTROI STATES		
<u>Low Income</u>		
Andhra Pradesh	0.9756 (15.6549)	0.9395 (24.8315)
Bihar (1961-83)	-0.0144 (-1.4999)	-0.0653 (-0.9350)
Kerala (1961-84)	0.7714 (4.2321)	0.9277 (6.2292)
Tamil Nadu (1961-83)	- -	-0.0172 (-0.3072)
Average	0.5775	0.4461
ENTRY TAX STATES		
<u>Low Income</u>		
Karnataka (1961-84)	0.7496 (6.3897)	1.0045 (25.3428)
Madhya Pradesh (1961-84)	0.9446 (5.6596)	0.7706 (9.3179)
Average	0.8471	0.8875

Source: Estimated.

TABLE 2.11

**Tax Effort Indices
(Corporation Series)**

State	Tax Effort Indices			
	1970-71	1974-75	1980-81	1984-85
OCTROI STATES				
<u>High Income</u>				
Maharashtra	0.97	0.92	0.94	1.09
Gujarat	1.06	0.99	1.05	1.01
West Bengal	0.99	1.01	1.00	1.06
Average	1.01	0.98	0.99	1.05
<u>Low Income</u>				
Uttar Pradesh	1.01	0.95	0.97	0.93
Karnataka	0.71	1.01	-	-
Madhya Pradesh	0.93	1.14	-	-
Average	0.89	1.03	0.97 ^a	0.93 ^a
NON-OCTROI STATES				
<u>Low Income</u>				
Andhra Pradesh	0.98	0.93	1.01	-
Bihar	0.99	0.73	0.84	1.61
Kerala	0.97	1.01	1.04	0.99
Tamil Nadu	1.03	0.98	-	-
Average	0.99	0.91	0.96	1.30
ENTRY TAX STATES				
<u>Low Income</u>				
Karnataka	-	-	0.73	1.45
Madhya Pradesh	-	-	0.85	1.07
Average	-	-	0.79	1.26

Source: Estimated.

Note: a = based on Uttar Pradesh only.

TABLE 2.12

**Revenue Composition of Local Bodies
(State Aggregate)**

(Per cent)

State	T/TR			NTR/TR		
	1970- 75	1975- 80	1980- 85	1970- 75	1975- 80	1980- 85
OCTROI STATES						
<u>High Income</u>						
Maharashtra	80.86	75.51	68.77	21.28	24.76	37.42
West Bengal	50.45	47.20	33.02	6.78	6.77	7.78
Average	65.65	61.35	50.90	14.03	15.76	22.60
<u>Low Income</u>						
Uttar Pradesh	-	55.27	53.04	-	17.35	17.67
Rajasthan	70.61	69.15	61.10	24.33	19.30	26.60
Karnataka	61.59	23.16	-	16.46	5.92	-
Madhya Pradesh	70.55	-	-	16.56	-	-
Average	67.58	49.19	57.10	19.12	14.20	22.13
NON-OCTROI STATES						
<u>Low Income</u>						
Andhra Pradesh	-	-	-	-	-	-
Bihar	48.69	40.53	-	7.51	19.37	-
Kerala	59.31	60.33	61.34	17.09	13.29	15.08
Tamil Nadu	-	-	30.56	-	-	25.97
Average	54.00	54.43	45.95	12.30	16.33	20.52
ENTRY TAX STATES						
<u>Low Income</u>						
Karnataka	-	-	14.17	-	-	3.87
Madhya Pradesh	-	-	-	-	-	-
Average	-	-	14.17 ^a	-	-	3.87 ^a

Contd...

TABLE 2.12 contd.

(Per cent)

State	G/TR			ST/TR		
	1970- 75	1975- 80	1980- 85	1970- 75	1975- 80	1980- 85
OCTROI STATES						
<u>High Income</u>						
Maharashtra	8.30	11.22	17.00	-	-	-
West Bengal	42.77	46.03	59.21	-	-	-
Average	25.53	28.62	38.10	-	-	-
<u>Low Income</u>						
Uttar Pradesh	-	16.08	28.92	-	-	-
Rajasthan	5.16	11.33	12.61	-	-	-
Karnataka	10.59	7.77	-	11.39	38.81	-
Madhya Pradesh	12.58	-	-	3.35	-	-
Average	9.44	11.73	20.76	7.39	38.81 ^a	-
NON-OCTROI STATES						
<u>Low Income</u>						
Bihar	40.19	40.00	-	-	-	-
Kerala	12.63	8.73	9.05	11.11	10.86	19.38
Tamil Nadu	-	-	22.07	-	-	21.39
Average	26.41	24.36	15.56	11.11 ^b	10.86 ^b	20.38
ENTRY TAX STATES						
<u>Low Income</u>						
Karnataka	-	-	-	-	-	50.21
Average	-	-	-	-	-	50.21 ^a

Source: As for Table 2.2.

Notes:

- T Tax revenue
 TR Total revenue
 NTR Non-tax revenue
 G Grants
 ST Shared taxes

a. Based on Karnataka only

b. Based on Kerala only

TABLE 2.13

**Revenue Composition of Local Bodies
(Corporation Series)**

State	(Per cent)					
	T/TR			NTR/TR		
	1970- 75	1975- 80	1980- 85	1970- 75	1975- 80	1980- 85
OCTROI STATES						
<u>High Income</u>						
Maharashtra	83.66	80.21	81.54	12.74	15.56	14.10
Gujarat	76.46	77.16	79.87	12.31	10.86	6.06
West Bengal	51.05	55.47	62.01	10.02	12.73	7.61
Average	70.40	71.00	74.17	11.70	13.05	9.92
<u>Low Income</u>						
Uttar Pradesh	60.67	66.66	62.89	21.08	15.24	15.29
Karnataka	77.04	80.64	-	22.73	9.90	-
Madhya Pradesh	76.08	-	-	15.41	-	-
Average	71.26	73.65	62.89 ^a	19.74	12.57	15.29 ^a
NON-OCTROI STATES						
<u>Low Income</u>						
Andhra Pradesh	79.19	85.03	85.18	19.65	14.65	14.14
Bihar	20.88	23.36	35.73	4.27	6.34	4.96
Kerala	68.68	75.71	72.53	23.12	17.68	20.54
Tamil Nadu	68.56	-	-	29.06	-	-
Average	59.33	61.37	64.48	19.02	12.90	13.21
ENTRY TAX STATES						
<u>Low Income</u>						
Karnataka	-	-	56.97	-	-	9.87
Madhya Pradesh	-	42.50	38.70	-	18.03	15.98
Average	-	42.50 ^b	47.83	-	18.03 ^b	12.92

Contd...

TABLE 2.13 Contd.

(Per cent)

State	G/TR		
	1970- 75	1975- 80	1980- 85
OCTROI STATES			
<u>High Income</u>			
Maharashtra	3.92	4.23	4.35
Gujarat	11.23	11.96	12.92
West Bengal	38.98	32.30	30.38
Average	18.04	16.16	15.88
<u>Low Income</u>			
Uttar Pradesh	18.25	18.13	21.82
Karnataka	7.55	9.47	-
Madhya Pradesh	7.94	-	-
Average	11.25	13.80	21.82 ^a
NON-OCTROI STATES			
<u>Low Income</u>			
Andhra Pradesh	1.15	0.32	0.68
Bihar	74.85	70.29	58.97
Kerala	8.00	6.60	6.94
Tamil Nadu	2.39	-	-
Average	21.60	25.74	22.20
ENTRY TAX STATES			
<u>Low Income</u>			
Karnataka	-	-	33.17
Madhya Pradesh	-	42.20	45.01
Average	-	42.20 ^b	39.10

Notes:

Source: As for Table 2.3.

a. Based on Uttar Pradesh only

b. Based on Madhya Pradesh only

TABLE 2.14

**Revenue Composition of Local Bodies
(Municipalities)**

(Per cent)

State	T/TR			NTR/TR		
	1974- 75	1979- 80	1984- 85	1974- 75	1979- 80	1984- 85
OCTROI STATES						
<u>High Income</u>						
Maharashtra	68.0	67.0	-	8.0	6.0	-
Gujarat	74.0	68.0	-	10.0	8.0	-
West Bengal	34.0	29.0	-	31.0	6.0	-
Average	59.0	55.0	-	16.0	7.0	-
<u>Low Income</u>						
Uttar Pradesh	61.0	62.0	-	17.0	14.0	-
Karnataka	67.0	-	-	15.0	-	-
Madhya Pradesh	77.0	-	-	11.0	-	-
Average	68.0	62.0 ^a	-	13.34	14.0 ^a	-
NON-OCTROI STATES						
<u>Low Income</u>						
Andhra Pradesh	44.0	09.0	-	13.0	9.0	-
Bihar	51.0	50.0	-	8.0	10.0	-
Kerala	59.0	70.0	-	31.0	17.0	-
Tamil Nadu	55.0	57.0	-	20.0	18.0	-
Average	52.0	47.0	-	18.0	14.0	-
ENTRY TAX STATES						
<u>Low Income</u>						
Karnataka	-	34.0	-	-	11.0	-
Madhya Pradesh	-	26.0	-	-	10.0	-
Average	-	30.0	-	-	10.5	-

Contd...

TABLE 2.14 Contd.

(Per cent)

State	GR/TR			AR/TR		
	1974-75	1979-80	1984-85	1974-75	1979-80	1984-85
OCTROI STATES						
<u>High Income</u>						
Maharashtra	24.0	27.0	-	01.00	01.00	-
Gujarat	17.0	24.0	-	01.00	03.00	-
West Bengal	36.0	66.0	-	03.00	03.00	-
Average	26.0	39.0	-	01.34	02.34	-
<u>Low Income</u>						
Uttar Pradesh	23.0	24.0	-	-	01.0	-
Karnataka	18.0	-	-	10.0	-	-
Madhya Pradesh	12.0	-	-	03.0	-	-
Average	18.0	24.0 ^a	-	6.5	1.0 ^a	-
NON-OCTROI STATES						
<u>Low Income</u>						
Andhra Pradesh	28.0	46.0	-	11.0	25.0	-
Bihar	42.0	40.0	-	3.0	4.0	-
Kerala	10.0	13.0	-	4.0	8.0	-
Tamil Nadu	25.0	25.0	-	16.0	4.0	-
Average	26.0	31.0	-	9.0	10.0	-
ENTRY TAX STATES						
<u>Low Income</u>						
Karnataka	-	55.0	-	-	10.0	-
Madhya Pradesh	-	64.0	-	-	5.0	-
Average	-	59.5	-	-	7.5	-

Notation:

Source: NIUA (1983).

T Tax revenue
 TR Total revenue
 GR Grants
 AR Assigned revenue

a. Based on Uttar Pradesh only

TABLE 2.15

**Per Capita Compensation and Assignments
to Urban Local Bodies**

(Rs.)			
State	1970-75	1975-80	1980-85
OCTROI STATES			
<u>High Income</u>			
Maharashtra ^a	0.13	2.54	3.65
Gujarat	0.59	1.33	2.31
West Bengal ^b	3.53	13.49	25.80
Haryana ^c	0.41	0.73	0.57
Punjab ^d	0.95	1.46	1.12
Average	1.12	3.91	6.69
<u>Low Income</u>			
Uttar Pradesh ^e	3.70	5.53	9.57
Rajasthan ^f	0.26	0.30	0.29
Karnataka ^g	3.10	3.42	-
Madhya Pradesh	1.32	-	-
Himachal Pradesh ^h	0.16	-	-
Orissa	2.59	9.72	10.38
Average	1.85	4.74	6.74
NON-OCTROI STATES			
<u>Low Income</u>			
Andhra Pradesh ⁱ	6.61	13.92	21.96
Bihar ^j	0.45	2.74	5.72
Kerala ^k	1.49	1.74	1.97
Tamil Nadu ^l	7.22	3.61	10.03
Assam	0.81	7.56	-
Average	3.31	5.91	9.92
ENTRY TAX STATES			
<u>Low Income</u>			
Karnataka	-	-	20.88
Madhya Pradesh	-	18.59	29.44
Average	-	18.59 ^m	25.59

Source: Budget Documents of
respective States.

Notes:

- a. Last average for Maharashtra includes four years 1980-84.
- b. Last average for West Bengal is based on years 1980-82
- c. For Haryana, year 1974-75 is considered in the first average. The years 1980-83 are used in the last average.
- d. For Punjab, year 1974-75 is considered in the first average.

- e. For Uttar Pradesh, year 1974-75 is considered in the first average.
- f. For Rajasthan, years 1980-84 are included in the last average.
- g. For Karnataka, years 1975-79 and 1979-85 are included respectively under the octroi and entry tax category.
- h. The figure for Himachal Pradesh relates to 1973-74 only.
- i. For Andhra Pradesh first average relates to the years 1974-75 and the last average excludes the year 1974-75.
- j. For Bihar, last average excludes the year 1981-82.
- k. For Kerala, last average includes the years 1980-83.
- l. For Tamil Nadu second and third average include respectively the years 1976-78 and 1980-84.
- m. For Madhya Pradesh only.

TABLE 2.16

Per Capita Selected State Taxes

(Rs.)

State	Sales Tax			Motor Vehicle Tax			Entertainment Tax		
	1971-75	1976-80	1981-85	1971-75	1976-80	1981-85	1971-75	1976-80	1981-85
OCTROI STATES									
<u>High Income</u>									
Maharashtra	38.87	81.34	153.72	3.20	4.85	9.87	4.13	6.40	11.07
Gujarat	31.63	67.47	146.69	2.90	4.82	8.46	2.10	6.78	8.79
West Bengal	9.76	20.05	34.98	1.73	2.52	4.21	1.60	3.27	4.79
Average	26.75	56.29	111.80	2.64	4.06	7.51	2.64	5.48	8.22
<u>Low Income</u>									
Uttar Pradesh	9.66	24.16	41.42	1.14	1.89	2.97	1.09	1.95	3.77
Karnataka	20.42	43.66	-	3.55	8.17	-	1.80	3.47	-
Madhya Pradesh	12.62	-	-	-	-	-	0.93	-	-
Average	14.23	33.91	41.42 ^a	2.35	5.03	2.97 ^a	1.27	2.71	3.77 ^d
NON-OCTROI STATES									
<u>Low Income</u>									
Andhra Pradesh	14.87	33.70	75.65	4.00	7.00	12.24	1.61	3.61	5.90
Bihar	8.45	18.58	35.45	0.83	1.52	3.04	0.47	0.94	1.01
Kerala	22.70	51.74	103.27	3.07	6.96	10.41	-	-	-
Tamil Nadu	28.55	55.93	127.21	5.72	11.46	16.44	2.85	5.19	8.20
Average	18.64	39.99	85.40	3.40	6.73	10.53	1.64	3.24	5.03
ENTRY TAX STATES									
<u>Low Income</u>									
Karnataka	-	-	90.14	-	-	15.59	-	-	7.34
Madhya Pradesh	-	27.27	54.22	-	-	-	-	2.71	3.02
Average	-	27.27 ^b	72.18	-	-	15.59 ^c	-	2.71 ^e	5.18

- Notes: a. Based on Uttar Pradesh only
b. Based on Madhya Pradesh only
c. Based on Karnataka only
d. Based on Uttar Pradesh only
e. Based on Madhya Pradesh only

Source: State Government budget documents.

TABLE 2.17

Results of Test of Difference between Means

Fiscal indicator	t Value for difference of Means between					
	Low income octroi States and low income non-octroi States			Low income entry tax States and low income non-octroi States		
	Period ¹			Period ¹		
	I	II	III	I	II	III
<u>Budgetary Surplus</u>						
State aggregate	+9.13*	+1.90**	-	-	-	-
Corporation series	-0.61	-1.43	-	-	-	-0.98
<u>Per Capita Total Revenue</u>						
State aggregate	+1.68	+5.19*	-	-	-	-
Corporation series	+0.35	+0.18	-	-	-	+0.43
<u>Revenue-Income Ratio</u>						
State aggregate	+2.74**	+7.40*	-	-	-	-
<u>Per Capita Revenue Expenditure</u>						
State aggregate	+1.03	+2.56***	-	-	-	-
Corporation series	+0.27	+0.95	-	-	-	0.77
<u>Expenditure-Income Ratio</u>						
State aggregate	+2.38**	+6.47*	-	-	-	-
<u>Revenue Composition</u>						
State aggregate						
T/TR	+2.00***	-0.06	0.70	-	-	-
NTR/TR	+1.13	-0.32	0.23	-	-	-
G/TR	-1.20	-0.79	0.49	-	-	-
Corporation Series						
T/TR	+0.50	+0.44	-0.75	-	-	-0.73
NTR/TR	+0.74	-0.06	+0.32	-	-	-0.04
G/TR	-0.33	-0.37	-0.01	-	-	+0.63
Municipalities ²						
T/TR	+1.88***	+0.65	-	-	-0.73	-
NTR/TR	-0.45	-	-	-	-0.74	-
G/TR	-0.67	-0.54	-	-	-2.11***	-
ASR/TR	-0.94	-	-	-	-0.22	-

Contd....

TABLE 2.17 Contd.

Fiscal indicator	t Value for difference of Means between					
	Low income octroi States and low income non-octroi States			Low income entry tax States and low income non-octroi States		
	Period ¹			Period ¹		
	I	II	III	I	II	III
Property Tax to Own Revenue ³	-3.15 ^{***}	-0.59	-1.90 ^{***4}	-	-0.74	-
Per capita property tax	-0.15	-0.15	-16.5 [*]	-	-	-
Per capita sales tax	-0.50	-0.34	-	-	+3.29 ⁺	-0.34
Per capita motor vehicles tax	-0.49	-0.36	-1.56	-	-	1.04
Per capita entertainment tax	-0.35	-0.28	-0.42	-	-0.30	-0.04
Per capita compensation and assignments	-0.41	-0.13	-0.193	-1.0	+2.31 ^{**}	+1.81 ^{***}
<u>Growth Rate of Total Local Revenue⁵</u>						
State aggregate	+1.00	-	-	-	-	-
Corporation series	0.61 ⁶	-	-	-	-	-
Growth rate of property tax ⁴	+0.05	-	-	-	-	-
<u>Buoyancy</u>						
Total local revenue	+0.81	-	-	-	-	-
Property tax	+0.51	-	-	-	-	-
Tax Effort ^{3,4}	-0.83	+0.89	-0.07	-	-1.64 ^{**}	-0.12

Notes:

Source: Computed.

1. Periods I 1970-75, II 1975-80 and III 1980-85
2. Periods 1974-75 and 1979-80
3. Periods 1970-71, 1975-76, 1980-81 and 1985-86
4. For 1985-86, t=1.21
5. Time series estimate
6. Octroi group includes entry tax States also

Significance level

- * 5 per cent
- ** 10 per cent
- *** 20 per cent

TABLE 2.10

Ordinary Least Square Regression Results
Cross-Section 1974-75

Dependent variable	Constant	Per capita urban income	Octroi dummy	R ²	F	DW
DEF	1.9056 (0.4564)	0.3103 (0.2121)	-1.4297 (-0.3554)	-0.1400	0.0700	1.4954
TR	14.0066 (1.0100)	13.3178* (2.7405)	-1.1460 (-0.00587)	0.2700	3.7736	2.2782
PT	4.0091*** (1.4709)	-	-2.8188 (-0.0049)	-0.0078	0.9418	2.8194
PT/TR	1.9633* (2.5237)	-0.4843*** (-1.4529)	-0.0700 (-1.1109)	0.1230	0.0353	2.2948
G	2.0006 (0.00910)	2.5807* (2.0791)	-1.6185 (-0.65147)	0.2997	4.2099	2.4127
G/TR	0.1557* (2.4119)	0.0345** (1.0057)	-0.0030 (-1.3345)	0.0501	1.3956	1.9968
GI	67.0144* (4.3090)	-2.2200 (0.7151)	19.0481 (1.2451)	-0.0910	0.4160	1.9032
GI/TR	42.2095* (2.5015)	-9.7386*** (-1.5309)	-16.0968 (-0.9000)	0.0842	1.0168	2.0031
ASR	36.5369* (2.4059)	-3.0060 (-0.7153)	-7.2005 (-0.4921)	-0.0043	0.4168	1.0903
ASR/TR	1.6501* (4.2529)	-0.2600** (-1.9128)	-0.4539 (-1.2140)	0.1960	2.0200	2.1749
TR/Y	320.7665 (1.1974)	-166.1039*** (-1.7263)	264.5199 (0.9990)	0.1001	1.8338	2.4381
ST	33.0752* (3.9036)	-2.2007 (-0.7563)	-4.6398 (-0.5799)	-0.0709	0.5037	1.9667
ENT	2.5903* (3.3551)	-0.0107 (-0.0394)	-0.0074 (-1.0019)	-0.0569	0.5965	2.0278
MVT	3.1573* (2.6977)	-0.1105 (-0.2693)	0.0941 (0.0834)	-0.1472	0.0379	2.4289

Notation:

DEF Budgetary deficit
 TR Per capita total revenue
 PT Per capita property tax
 G Per capita ordinary grants
 GI Per capita other grants
 ASR Per capita assigned revenue
 ST Per capita sales tax
 ENT Per capita entertainment tax
 MVT Motor vehicles tax

Source: Estimated.

‡ denotes significance at 5 per cent level
 †† denotes significance at 10 per cent level
 ††† denotes significance at 20 per cent level

TABLE 2.19

Ordinary Least Square Regression Results
Cross-Section 1974-75

Dependent variable	Constant	Per capita Urbanisation income	Octroi dummy	R ²	F	DM	
DEF	3.5716 (0.4238)	0.1784 (0.1099)	-0.0675 (-0.2305)	-1.4431 (-0.3433)	-0.2296	0.0664	1.4921
TR	-38.8571** (-1.7919)	17.5034* (4.1896)	2.1419* (2.8431)	-0.7218 (-0.0671)	0.5274	6.5809	2.4350
PT	-6.2598 (-1.1310)	2.1956** (2.0506)	0.4517* (2.3491)	-2.7291 (-0.9944)	0.2521	2.6855	1.7623
PT/TR	1.8404 (1.1461)	-0.3942 (0.3065)	0.0052 (0.0932)	-0.9652 (-1.2122)	0.0514	1.2712	2.3126
G	-4.9826 (-1.0000)	3.1448* (4.9514)	0.2862** (1.7054)	-1.5537 (-0.6792)	0.4006	4.3415	2.0419
G/TR	0.1920*** (1.4765)	0.0228 (0.9104)	-0.0014 (-0.3753)	-0.0033 (-1.2922)	-0.0201	0.9017	1.9882
GI	01.8374* (2.7196)	2.3520 (0.7153)	-0.7445 (-0.7127)	7.0527 (0.4734)	-0.1271	0.4364	1.6869
GI/TR	42.3548 (1.1930)	96.1679* (2.2350)	0.0223 (0.0181)	-19.9129 (-1.0049)	-0.0497	1.2356	2.3151
ASR	10.1626 (0.6036)	-2.3520 (-0.4057)	0.7445 (0.7121)	-7.0527 (-0.4721)	-0.1271	0.4364	1.6869
ASR/TR	1.0075* (2.3081)	-0.2724** (-1.0051)	-0.0066 (-0.2343)	-0.4552 (-1.1722)	0.1330	1.7670	2.2167
TR/Y	691.1771* (1.2755)	-194.7980** (-1.8658)	-14.6836 (-0.7800)	261.6063 (0.9737)	0.0721	1.3885	2.3621
ST	-5.8586 (-0.5578)	0.8020 (0.4359)	1.5775* (4.3234)	-4.3268 (-0.8309)	0.5464	7.0235	1.4847
ENT	-1.6684* (-2.6683)	0.3271* (2.7153)	0.1729* (7.9579)	-0.7731* (-2.4934)	0.0176	23.4138	1.9648
MVT	-1.1567 (-0.6186)	0.2311 (0.6415)	0.1748* (2.6907)	0.1288 (0.1389)	0.2249	2.4507	1.9448

Notation:

DEF	Budgetary deficit
TR	Per capita total revenue
PT	Per capita property tax
G	Per capita ordinary grants
GI	Per capita other grants
ASR	Per capita assigned revenue
ST	Per capita sales tax
ENT	Per capita entertainment tax
MVT	Motor vehicles tax
*	denotes significance at 5 per cent level
**	denotes significance at 10 per cent level
***	denotes significance at 20 per cent level

Source: Estimated.

TABLE 2.26

Ordinary Least Square Regression Results
Cross-Section 1979-88

Dependent variable	Constant	Per capita urban income	Octroi dummy	R ²	F	DW
DEF	6.3360 (0.8468)	-0.2909 (-0.1448)	-2.3129 (-0.3899)	-0.1418	0.0686	1.6191
TR	15.5966 (0.8012)	9.1446*** (1.7500)	28.2100*** (1.4531)	0.2214	3.1324	2.0629
PT	4.1045 (0.0007)	0.3680 (0.3548)	6.2424*** (1.6201)	0.0653	1.5239	1.7223
PT/TR	0.7325* (2.6940)	-0.1693 (0.3487)	-0.1310 (-0.4830)	0.1137	1.2712	2.3580
G	14.8872* (2.2503)	-0.1435 (-0.0808)	0.6372* (6.5056)	-0.1236	0.0095	1.7927
G/TR	0.3638 (0.0003)	-0.0090 (-0.2863)	-0.1491 (-1.2734)	-0.0069	0.9481	1.9221
GI	74.0038* (6.9040)	-1.9972 (-0.5552)	21.1242*** (1.5846)	0.0202	1.2947	2.4422
GI/TR	15.6714* (2.6696)	-3.0212** (-1.9172)	-3.0023 (-0.5128)	0.1390	1.9748	2.0096
ASR	25.0092** (1.9368)	1.9922 (0.5552)	-21.1242*** (-1.5846)	0.0378	1.2947	2.4422
ASR/TR	0.0089** (1.8777)	0.0420 (0.3630)	-0.7738** (-1.0012)	0.0767	1.6233	2.3353
TR/Y	665.4918* (2.3582)	-139.7468* (-1.0448)	-136.2642 (-0.4842)	0.1217	2.0395	2.6963
ST	52.3081* (3.6701)	-2.6920 (-0.7037)	12.7217 (0.0950)	-0.0632	0.5543	1.8435
ENT	3.6388* (3.4071)	-0.2018 (-0.9829)	1.6795*** (1.5767)	0.0624	1.4995	2.6295
MVT	9.7310** (1.9373)	-0.1074 (-0.1390)	-4.4186 (-0.8820)	-0.0017	0.4337	2.3515

Notation:

DEF Budgetary deficit
 TR Per capita total revenue
 PT Per capita property tax
 G Per capita ordinary grants
 GI Per capita other grants
 ASR Per capita assigned revenue
 ST Per capita sales tax
 ENT Per capita entertainment tax
 MVT Motor vehicles tax

* denotes significance at 5 per cent level
 ** denotes significance at 10 per cent level
 *** denotes significance at 20 per cent level

Source: Estimated.

TABLE 2.21

Ordinary Least Square Regression Results
Cross-Section 1979-80

Dependent variable	Constant	Per capita urban income	Urbanisation	Octroi dummy	R ²	F	DW
DEF	-10.1763 (-0.5859)	1.0692 (0.4490)	0.6185 (1.0524)	-6.4722 (-0.7689)	-0.1324	0.4152	1.5362
TR	-79.3959* (-2.1945)	16.9691* (3.4210)	3.5583* (2.9066)	4.2822 (0.2442)	0.5050	6.1009	1.8563
PT	-12.0394*** (-1.6087)	1.5969*** (1.4432)	0.5588* (2.0466)	6.3822* (2.4232)	0.1887	2.6613	1.4413
PT/TR	0.6816 (1.0335)	-0.1276*** (-1.4113)	0.0078 (0.3008)	-0.1438 (-0.4500)	0.0404	1.2105	2.3575
G	0.8476 (0.0550)	-0.1435 (-0.0088)	0.5259 (1.0085)	-4.1692*** (-1.4007)	-0.1506	0.4467	1.7068
G/TR	0.4148*** (1.4793)	-0.0132 (-0.3392)	-0.0019 (-0.1986)	-0.1363 (-0.9904)	-0.0873	0.5985	1.9375
GI	98.8208‡ (2.7196)	-2.1930 (-0.4145)	-0.9256 (-0.8697)	27.3485** (1.7942)	0.0194	0.7947	2.3325
GI/TR	18.4480 (1.2978)	-3.2499*** (-1.6675)	-0.1040 (0.2155)	-2.3029 (-0.3343)	0.0709	1.3817	2.3654
ASR	1.1792 (0.0375)	4.0276 (0.9339)	0.9256 (0.8697)	-27.3485** (-1.7942)	0.0194	1.0991	2.3325
ASR/TY	1.2060 (1.1625)	0.0092 (0.0651)	-0.0149 (-0.4238)	-0.6738 (-1.3403)	0.0145	1.0738	2.4069
TR/Y	1247.8** (1.8937)	-187.7086** (-2.0779)	-21.8111 (-0.9783)	10.4066 (0.0376)	0.1180	1.6742	2.5582
ST	-30.9458*** (-1.4011)	4.1656*** (1.3757)	3.1186* (4.1730)	-8.2493 (-0.7708)	0.5301	6.6409	1.3917
ENT	-3.4055* (-2.6541)	0.2985*** (1.6966)	0.2639* (6.0777)	-0.0949 (-0.1527)	0.7509	16.0761	1.6566
MVT	-18.3915 (-2.2345)	2.1290** (1.8867)	1.0537* (3.7026)	-11.5025** (-2.0039)	0.4655	5.3546	1.8655

Notation:

DEF	Budgetary deficit
TR	Per capita total revenue
PT	Per capita property tax
G	Per capita ordinary grants
GI	Per capita other grants
ASR	Per capita assigned revenue
ST	Per capita sales tax
ENT	Per capita entertainment tax
MVT	Motor vehicles tax

‡ denotes significance at 5 per cent level
 ** denotes significance at 10 per cent level
 *** denotes significance at 20 per cent level

Source: Estimated.

3. REVENUE NEUTRALITY OF ENTRY TAX

3.1 Introductory

3.1.1 Entry tax has replaced octroi in Madhya Pradesh and Karnataka. One of the major gains that this tax substitution has brought to the State economies is that, with the removal of checkpoints, there is no impediment to the free flow of trade and commerce from one locality to another. Estimation of all the ensuing gains is a formidable task, but it would help in determining whether entry tax has proved to be a good substitute for octroi or not. However, what concerns the State local tax administration most is the viability of entry tax as an equally good source of revenue.

3.1.2 The three points to be considered would thus be, (i) whether entry tax has proved to be revenue-neutral in Madhya Pradesh and Karnataka; (ii) whether liquidity position of local authorities subsequent to the levy of State-level entry tax through the mechanism of compensation is comparable to what existed under octroi regime and (iii) whether the changeover has had any perceptible impact on service levels in these States. As regards (ii), a workable solution can always be found out through intergovernmental transfer arrangement. A well designed monthly or quarterly instalment system may go a long way in meeting the liquidity requirements of local bodies comparable to what existed in octroi regime. The question of service standards can be addressed in terms of adequacy of revenue transfers to compensate for the loss of octroi. Thus, much depends on the revenue raising capability of entry tax.

3.1.3 The plan of the present chapter is as follows. Section 2 discusses the existing entry tax systems in Madhya Pradesh and Karnataka, and also examines the mechanisms of compensation paid out of State level entry tax collections in the two States. Section 3 discusses entry tax as a revenue substitute for octroi.

Section 4 presents a methodological note to measure the revenue neutrality of entry tax, while section 5 attempts to test revenue neutrality of entry tax empirically. The final section contains summary and conclusions.

3.2 Entry Tax Systems

a. Madhya Pradesh

3.2.1 There are three schedules in the entry tax enactment. Schedule I enumerates goods which are exempt from entry tax, and includes more or less the same set of goods covered by the Madhya Pradesh General Sales Tax Act, 1958. Sugar, cotton textile and tobacco are not included here because these three commodities are covered by additional excise duties in lieu of sales tax. Schedule II mainly consists of goods which have been declared as goods of special importance and are taxed under the Central Sales Tax Act, 1956. For entry tax purposes, sugar, textiles and tobacco are included in this schedule. Goods covered under Schedule II carry rates from 0.5 to 3 per cent. Schedule III includes residuary goods not included in the earlier schedules. This schedule includes most of the items included in Schedule II of the State General Sales Tax Act. In respect of these goods, rates of entry tax range from 0.5 to 7.75 per cent. The State government is empowered to increase the rates upto 20 per cent by notification.

3.2.2 When entry tax replaced octroi on May 1, 1976, it was conceived as a multi-point tax to be payable at the point of each entry of goods into any local area by every dealer liable to pay tax under the Sales Tax Act. Further, whereas Schedule II goods were subject to tax when they entered into a local area for consumption, use or sale therein, it was payable in respect of Schedule III goods on their entry into a local area only for consumption or use and not for sale therein. This is because the sale or purchase of Schedule III goods was subjected to a turnover tax in addition to sales tax (surcharge and additional tax

subsequently). The intention was to exclude goods bearing turnover tax (or surcharge or additional tax) from entry tax. However, from September 1, 1976 when the Entry tax Act came in operation, the proposed multi-point levy in respect of Schedule II was converted into a single-point tax leviable on the entry of goods into a local area for the first time only. Further, since entry tax is leviable on all items under Schedule III, additional sales tax was abolished on August 24, 1982.

3.2.3 The liability of this tax falls on all sales tax dealers whose turnover exceeds Rs. 10,000 in the case of importers, Rs. 20,000 in respect of manufacturers and Rs. 50,000 for all other dealers. It may be clarified here that entry tax is payable only by the first dealer liable to pay sales tax who effects the entry of any goods into a local area. In other words, no entry tax is payable if the entry of any goods into a local area is effected by a dealer not liable to pay sales tax or any other person. Similarly, if goods are purchased by a dealer who is liable to pay sales tax, the entry is deemed to have been effected by the latter who is also liable to pay entry tax.

3.2.4 When octroi was abolished, the aggregate revenue from the levy to the State was about Rs. 18 crore. As entry tax was supposed to bring in revenue to the State exchequer, a system of compensation grant to local bodies was introduced. During May 1976 - March 1977, each local body which levied octroi on the day of its abolition, received a grant equivalent to its octroi revenue in 1975-76. From the financial year 1977-78, the compensation was allowed to grow at a rate of 10 per cent per annum, except during 1983-84 when no growth was allowed for. For those local bodies which either did not impose octroi or came into existence after May 1, 1976, compensation is worked out on the following pro rata basis, using 1971 population, and is payable in monthly instalments through bank draft.

Local bodies	Population	Pro rata(per capita per annum)
I	50,000 +	Rs. 29.00
II	20,000 - 50,000	Rs. 25.00
III	- 20,000	Rs. 22.00

b. Karnataka

3.2.5 The approach of the government of Karnataka while designing entry tax was essentially to follow the Madhya Pradesh model. However, some variations are worth noting. In Madhya Pradesh, entry tax alone was expected to make good the loss of octroi. Turnover tax/surcharge/additional tax which coexisted with entry tax upto 1982 was done away with. However, in Karnataka, the second State to introduce entry tax, a package consisting of 10 per cent surcharge on sales tax, a 10 per cent surcharge on motor vehicles tax and a levy of entry tax at the rate of 2 per cent on certain items like sugar, textiles and tobacco on which sales tax was not leviable, was introduced. Motor vehicles surcharge, however, was not levied at all. But in addition to sales tax surcharge at the rate of 10 per cent, a rural development cess of 10 per cent on sales tax was introduced in April 1984. Later, in August 1985, a new levy, called development cess, of 30 per cent of sales tax replaced both sales tax surcharge and rural development cess. This cess has now been merged with the basic sales tax.

3.2.6 The tax is levied on the entry of scheduled goods into any local area for consumption, use or sale. The government of Karnataka faced difficulties in terms of getting clearance from the Government of India and from trader dealers who took the matter to court. Thus entry tax could be introduced only in the latter half of 1980-81. The rate of 2 per cent proposed initially was reduced to 1 per cent when this tax was levied for the first time. In view of its multi-point nature, a rate of 2 per

cent was considered to be high.

3.2.7 All sales tax dealers in scheduled goods, irrespective of whether their place of business falls within a local area or outside, are subject to compulsory registration for the purposes of entry tax. However, the tax is payable only by dealers in the scheduled goods doing business in an area. A person who is not a dealer is not liable to entry tax. No exemption limit was set initially for the levy of this tax in respect of small dealers. With a view, however, to exempting the petty dealers doing business in scheduled goods in the rural area, the levy of this tax is confined only to corporations and municipal cities/towns. Thus, village/town panchayats are excluded from the purview of this tax. With effect from April 1, 1984, a turnover limit of Rs. 40,000 has been set for dealers to become liable to pay entry tax.

3.2.8 The commodity coverage has been expanded from time to time to raise adequate revenue. It covered three items during 1979-82, 16 items during 1982-83, 10 items during 1983-84 and eight groups of commodities since 1984. The final basket of taxed commodities comprises additional excise duty items, declared goods, raw materials and inputs. The rates vary between 1 and 2 per cent.

3.2.9 As in Madhya Pradesh, compensatory grants to local bodies do not have any relation with the amount of entry tax collection. It depends on the octroi collections in earlier years with an allowance, however, for some growth. The base year figure was allowed to grow at the rate of 5 per cent upto 1981-82. Thereafter, a 10 per cent growth rate was allowed. It is contended that this growth rate along with some saving on account of cost of octroi collection would be able to neutralise loss of octroi revenue. In respect of local bodies which were not collecting any octroi as on April 1, 1979 (27 out of 227 municipalities), compensation grant is paid at the rate of Rs. 6.83 per capita per annum as per 1971 census. Compensation is

paid to local bodies quarterly.

3.3 Entry Tax as a Substitute

3.3.1 Entry tax is a tax on entry of goods into a local area for consumption, use or sale. Viewed thus, it is similar to octroi. However, entry tax is different from octroi in the following respects. First, it is not collected at the checkpost. It is payable by sales tax dealers by furnishing returns as to how much of their purchases are from outside the local area. Thus entry tax is less costly to administer. Secondly, it has been conceived as an **ad valorem** tax as against octroi which is a combination of specific and **ad valorem** levies. Thirdly, entry tax is a State-level levy as against octroi which is a local levy. Its revenue, however, is treated as local revenue because it is passed on to local bodies to compensate them for the loss of octroi revenue. Thus entry tax is a revenue substitute of octroi only in the form of a compensatory grant. Finally, it is restrictive in application as only selected commodities transacted by registered dealers are subjected to entry tax. The commodities covered by entry tax are generally those which either fall outside the sales tax legislation, namely, goods covered under additional excise duties in lieu of sales tax or goods subject to tax rate limitation under the category of declared goods. Only recently the coverage of this tax has been extended to non-additional excise duty items and non-declared goods. Despite recent attempts to increase the number of goods taxable under entry tax legislation, the commodity coverage continues to be restricted. Besides fewer commodities taxable under entry tax, exemption limits for the registration of sales tax dealers also exclude a portion of the transactions of even taxable goods.

3.3.2 Because of these differences, octroi and entry tax may have differential impact on sales tax revenue which also operates on the same tax base. The possibility of inter-tax spill-over is higher between entry tax and sales tax because both are administered by the same taxing authority. It has been noted ear-

lier that surcharge and additional sales tax which constituted sales tax revenue were scrapped in Madhya Pradesh and Karnataka after the introduction of entry tax. This impact would, however, be confined to the taxation of goods common to sales tax and entry tax lists. The likelihood of a greater dampening impact on sales tax revenue under entry tax regime as compared to octroi regime may, however, be reduced if introduction of entry tax at the State level to tap one of the components of the sales turnover is taken to enhance sales tax collection because of cross-checking.

3.3.3 To sum up, octroi and entry tax have both similarities and dissimilarities having different revenue implications. Whether the two are substitutes in terms of revenue productivity requires empirical analysis. This is attempted in the following exercise.

3.4 Measurement of Revenue Neutrality - Method

3.4.1 The issue of revenue neutrality of entry tax can be addressed in two ways. One, the gains due to octroi elimination would be transmitted to different tax bases through impetus to economic activities in the various sectors of the economy, in which, besides entry tax, collections from other taxes also should gain. If all such gains in tax revenues plus entry tax collection is equivalent to octroi revenue forgone, entry tax can be termed as revenue-neutral. Two, entry tax collections as such may be compared with octroi revenue forgone to determine its revenue neutrality.

3.4.2 To test revenue neutrality of entry tax using the first approach would require a macro-economic framework with all possible interlinkages neatly identified. Data requirement for such an exercise are difficult to meet. Thus an attempt is made here following the second method. A study is made of the trends in entry tax collections and the existing intergovernmental transfer mechanism instituted to restore local fiscal balance in Madhya

Pradesh and Karnataka in order to judge whether the substitution of octroi by entry tax has indeed been revenue neutral.

3.4.3 The objective of revenue neutrality can be taken as accomplished if entry tax revenue to local bodies equalled net octroi collectible (projected octroi revenue had it continued).

Symbolically,

$$\text{OTC} - \text{COC} = \text{ET} \quad (1)$$

$$\text{ET} = \text{SET} + a \text{ST} + b \text{COC} - \text{CET} \quad (2)$$

where

OTC	Octroi collectible
COC	Cost of octroi collection
ET	Entry tax revenue to local bodies
SET	Entry tax collection at the State level
ST	Sales tax revenue
CET	Cost of collecting entry tax
a	Impact on sales tax revenue ($0 < a < 1$)
b	Cost saving coefficient ($0 < b < 1$)

3.4.4 Relation (2) states that a substitute entry tax (ET) should be equal to entry tax collection at the State level (SET) if the impact of entry tax on sales tax and cost of collection of octroi net of cost of entry tax collection are adjusted for.

3.4.5 Whether introduction of entry tax on the abolition of octroi has a positive effect on the growth of sales tax revenue is difficult to test empirically in the absence of requisite data. Hence this is not attempted in the present exercise.

3.4.6 As regards cost saving, there are two aspects of cost relevant in this context, saving in cost because of octroi abolition and the cost of entry tax collection. If local bodies are

able to save the entire cost of octroi collection, (b) in relation (2) will be unity. It would be possible only when the surplus octroi staff are redeployed in other governmental departments without any dislocation. This may take a number of years. The Maharashtra Committee on octroi substitution (1987) considered a period of five years adequate to absorb or phase out the octroi staff rendered surplus when octroi is abolished in Maharashtra. Thus cost saving from the abolition of octroi will be negligible in the initial years, but should materialise with the absorption of the surplus octroi staff. Much would depend on public sector employment and staff transfer policy. If the State government gave grant to local bodies to neutralise the cost of redundant octroi staff, the grant amount cannot be treated as cost saving for the simple reason that State finances are adversely affected. It is assumed for the present exercise that cost saving is zero. This assumption seems to be plausible at least in the short run.

3.4.7 If the entire entry tax revenue net of cost of collection can be passed on to local bodies, the revenue neutrality conditions require that their shares in the entry tax collected by the State government net of cost of collection plus grants if any equals the amount which they would have collected from octroi (again, net of collection costs).

3.4.8 The pattern of entry tax collection, local jurisdiction-wise may closely follow the collection pattern in sales tax. This, however, may differ from that obtained under octroi regime. Thus introduction of entry tax in lieu of octroi may place different municipal corporations and municipalities quite differently in terms of collections (see Tables 3.2 and 3.3). If the objective of the policy of revenue neutrality is to generate entry tax revenue at each local government level in such a way that entry tax collections and collectible octroi coincided, at least approximately, revenue neutrality at the State level will not be enough. It would be further necessary to equate entry tax collections to octroi collectible for each

locality.

3.4.9 This would entail institution of fiscal transfer mechanism from 'excess' entry tax localities to those whose entry tax collections do not match what the local governments were getting or could get from octroi.

3.5 Empirical Testing of Revenue Neutrality

3.5.1 Results of tests carried out to determine figures of octroi collectible along with compensation paid in lieu of octroi and entry tax collections in selected towns of Madhya Pradesh and Karnataka are presented in Tables 3.2 to 3.4. Octroi collectible was obtained by applying growth rate of octroi to the octroi collection in the base year. Growth rate was derived by employing two alternative methods, namely annual compound growth rate of octroi and buoyancy of octroi with respect to SDP. (See Annexure to the chapter for details). Octroi collection stood at Rs. 1,800 lakh in Madhya Pradesh in 1975-76 when the levy was abolished. It would have grown to Rs. 16877 lakh in 1984-85 and to Rs. 27662 lakh in 1986-87, if time trend method is used to project octroi revenue (Table 3.2). If buoyancy method is used, it would have grown to Rs. 36811 lakh in 1986-87. Compared to these, entry tax could collect only Rs. 6649 lakh in 1986-87. However compensation was paid to the tune of Rs. 4978 lakh in the same year. Two things are thus evident: First, entry tax does not prove to be a revenue substitute of octroi in any way and, secondly, whatever is collected as entry tax is not passed on fully to local bodies. If compensation paid is taken to be a substitute, it has been far from adequate to make up for the loss of revenue of the municipal bodies in Madhya Pradesh. In fact the grants have been less than 20 per cent of the octroi collectible (time trend estimate) in 1986-87. A slightly different picture emerges when we look at the figures for Karnataka. Although, as in Madhya Pradesh, entry tax does not prove to be a revenue substitute for octroi, compensation paid is consistently larger than the entry tax collection.

3.5.2 Why compensation exceeded entry tax in Karnataka and not in Madhya Pradesh calls for some comments. When entry tax was thought of as a substitute for octroi in Karnataka, two other taxes, namely, surcharge on sales tax and surcharge on motor vehicles tax also constituted the package that was put forth to replace octroi. Thus, entry tax was designed to offset the revenue loss due to octroi abolition only partially. For this reason, while designing the compensation mechanism, the State government might have decided to supplement entry tax revenue by other measures in order that the quantum of fiscal transfer was adequate. The picture for Madhya Pradesh, however, is slightly different. Entry tax was conceived as a complete substitute by itself since with its introduction, turnover tax/additional sales/surcharge on sales tax was discontinued. In this way, entry tax interfered with sales tax revenue directly. It was, therefore, perhaps considered appropriate to set aside a part of entry tax revenue out of the divisible pool to compensate for the loss of sales tax revenue. This might have led to a situation in which octroi compensation grants worked out to be lower than entry tax collections.

3.5.3 Analysis of corporation-wise results (Tables 3.3 and 3.4) would reveal that octroi compensation grants have not been able to wipe out the revenue loss from octroi abolition. Similar results are obtained for Kumta town municipality of Karnataka State as a case study (Table 3.5). Entry tax collections have not matched the performance of projected octroi collection. Further, the finding noted earlier that compensation grants exceeded entry tax collections only in Karnataka is further substantiated. Karnataka corporations got more than what was collected in terms of entry tax. In the case of municipal corporations of Bhopal, Raipur and Ujjain, however, compensation lagged behind entry tax collections. Indore, Gwalior and Jabalpur, however, presented a different picture.

3.5.4 It should be noted that the growth rates used here are derived for the time trends which vary widely. It was between

10.28 per cent in Jabalpur and 28.03 per cent for the State of Madhya Pradesh as whole. For Bangalore, it was 16.03 per cent and 18.56 per cent for the State of Karnataka. A growth rate of 28.03 per cent during 1973-76 for Madhya Pradesh seems to be rather high. However, it is a fact that octroi growth rates have been quite high.

3.5.5 Even if lower growth rates are used, octroi collectible would still be fairly high and stand ahead of the growth in entry tax. If lower growth rates are assumed, entry tax collected would no doubt form a larger proportion of octroi collection. But in no case it would exceed 50 or 60 per cent. If the coverage of entry tax is enhanced or the rates raised, entry tax collections might possibly rise to the level of octroi collection. The revenue gap between the two would persist even if one takes into account the cost saving due to substitution of octroi by entry tax. The cost of octroi collection formed about 15-20 per cent of octroi yield. The corresponding figure for entry tax however is less than 2 per cent. The administrative cost differential between octroi and entry tax definitely leaves scope for saving, provided the surplus octroi staff is absorbed or phased out in the short run. However, this cost saving cannot wipe out the revenue gap generated by octroi elimination. With all the saving in collection costs, it appears that net gain to the State-local exchequer due to entry tax introduction may not exceed 70-75 per cent of octroi collectible.

3.6 Summary and Conclusions

3.6.1 Revenue neutrality of entry tax is tested in terms of whether entry tax collections equalled octroi that would be collectible had it not been abolished, both at the State level and also for individual local authorities (corporation/municipality) and whether compensation paid by the State government met the shortfalls if any.

3.6.2 The experience so far of Madhya Pradesh and Karnataka shows that these conditions are scarcely satisfied. Entry tax in no way serves as a revenue-neutral device as it constitutes not more than 20 per cent of octroi collectible. Even if one takes lower growth rates to estimate octroi collectible, this proportion may not cross 50 or 60 per cent. If State-local governments are able to phase out the surplus octroi staff, cost saving may possibly be in the neighbourhood of 15-20 per cent after adjusting for the cost of entry tax collection. However, cost saving along with entry tax collections may not constitute more than 70-75 per cent of octroi collectible, rendering entry tax again an imperfect revenue substitute for octroi. Thus even under extremely liberal assumptions, substitution of octroi by entry tax does not seem to be revenue-neutral. The liberal assumptions also include those relating to almost an insignificant revenue dampening impact of entry tax substitution on sales tax collections.

ANNEXURE TO CHAPTER III

Projecting Octroi Collectible (OTC)

In order to measure revenue neutrality of entry tax, the selection of an appropriate revenue projection technique would be of prime importance. Governments which have introduced entry tax in lieu of octroi have used some rule of thumb to project the growth of octroi in order to determine the amounts to be devolved among the constituent local bodies. Generally octroi revenue in the base year are grown at a rate averaging that of the past two or three years. To be specific, to estimate octroi yield in $(n+1)^{th}$ year, growth rate of octroi over the years (n) , $(n-1)$ and $(n-2)$, or over the years n and $(n-1)$ is applied to the octroi yield in n^{th} year. It can be argued here that the use of percentage annual growth rate described above for revenue projections is not appropriate. Revenue forecasting based on historical growth rate has the implicit assumption that tax collection is basically a function of time as if there is no relationship between the growth in tax revenues and the growth in economic activity.

Recognising that revenue yields result from an application of given rates to some tax base and tax base depends on the level of economic activity, represented by income level, an alternative method known as buoyancy method is employed. This method is based on the historical relationship between actual tax collection and income and the growth of income in future. The projection, however, would involve the assumption that all discretionary tax changes, which occurred during the estimation period, would be replicated and would have the same effect over the period for which forecasting is contemplated.

A choice between the two methods is a difficult task. Compound growth rate method is widely used in short-term and medium-term forecasting. However, as income buoyancy method

utilises the rate-base-income relationships in revenue forecasting, it should be preferred. For estimating the future growth of octroi in order to determine the revenue neutrality of entry tax, both the methods have been used as a cross-check. The estimates are contained in Table 3.1. As regards the validity of the assumption regarding the impact of discretionary tax changes in the historical sample period for the forecast period in the second method, it may be noted that octroi structure did not undergo any drastic change during the decade preceding the year of its abolition.

TABLE 3.1

Growth Rates of Octroi for Revenue Projection

Municipal Corporation/ State	Time trend (compound growth rate) per cent per annum	Buoyancy with respect to SDP
Madhya Pradesh	28.03 (73-76)	2.4874 (73-79)
Bhopal	27.22 (67-76)	
Indore	12.52 (60-76)	
Raipur	14.30 (67-76)	
Gwalior	16.61 (60-76)	
Jabalpur	10.28 (60.76)	
Ujjain	11.39 (60.76)	
Karnataka	18.56 (70-79)	1.2879 (70-79)
Bangalore	16.03 (60-79)	
Dharwar	16.34 (61-79)	
Note: Figures within parentheses indicate period.	Source of Primary Data: C.S.O. <u>Annual Statistical Abstracts</u>	

TABLE 3.2

**Octroi Collectible, Entry Tax and
Compensation to Local Bodies**

(Rs. lakh)

Year	Madhya Pradesh					Karnataka				
	Octroi collectible		Entry tax	Short-fall*	Compen-sation	Octroi collectible		Entry tax	Short-fall*	Compen-sation
	Using trend growth rate	Using buoyancy				Using trend growth rate	Using buoyancy			
1976-77	2337.81	2417.34	891.00	1446.81	1506.70	-	-	-	-	-
1977-78	2993.07	3150.99	1148.00	1845.07	2143.96	-	-	-	-	-
1978-79	3831.99	3488.93	1643.00	2188.99	2262.70	-	-	-	-	-
1979-80	4906.05	4711.49	1889.00	3017.05	2488.97	2747.68	2863.77	6.00	2741.68	2433.49
1980-81	6281.16	7201.37	2396.00	3885.16	2780.80	3251.67	3224.25	42.00	3209.67	2555.08
1981-82	8041.70	10058.14	3090.00	4951.70	3001.95	3862.31	3907.45	518.87	3343.44	2682.83
1982-83	10295.69	14800.79	3657.00	6638.69	3790.76	4579.18	4500.99	1110.06	3469.12	2951.12
1983-84	13181.45	20347.94	4038.00	9143.45	3740.00	5429.11	5279.25	1116.34	4312.77	3246.23
1984-85	16876.66	25983.98	4907.00	11969.66	4114.00	6436.78	6074.89	1723.63	4713.15	3570.85
1985-86	21606.22	30933.33	6499.00	15107.22	4525.00	7631.49	8231.33	2681.00	4950.49	3927.94
1986-87	27662.19	36810.63	6649.00	21013.19	4977.94	9047.95	11391.90	3158.00	5889.95	4320.73

n.c. not computed.

*Shortfall = Octroi collectible (using Trend Growth Rate)
- Entry Tax

Sources: 1. Computed
2. State Directorates of Economics and Statistics
3. State Sales Tax Departments.

TABLE 3.3

Octroi Collectible, Entry Tax and Compensation to Municipal Corporations
(Madhya Pradesh)

(Rs. Lakh)

Year	Bhopal				Indore				Raipur			
	Octroi collectible	Entry tax	Short-fall*	Compensation	Octroi collectible	Entry tax	Short-fall*	Compensation	Octroi collectible	Entry tax	Short-fall*	Compensation
1976-77	198.86	60.99	137.87	123.26	373.58	159.94	213.64	265.62	113.82	72.92	40.90	89.96
1977-78	252.99	103.39	149.60	166.05	420.34	185.33	235.01	276.35	130.09	108.33	21.76	106.03
1978-79	321.06	103.13	218.73	199.62	472.97	189.29	283.68	392.99	148.68	136.41	12.27	117.79
1979-80	409.48	93.23	316.25	209.31	532.18	226.07	306.11	424.49	169.94	135.33	34.61	126.87
1980-81	520.94	245.83	275.11	232.38	598.81	264.10	334.71	440.17	194.23	126.48	67.75	138.58
1981-82	662.75	407.62	255.13	266.29	673.77	312.53	361.24	489.09	222.00	178.26	43.74	152.50
1982-83	843.17	344.13	499.04	313.16	758.12	346.18	411.94	590.64	253.74	239.63	14.11	153.71
1983-84	1072.69	420.30	652.39	286.18	853.03	367.16	485.87	306.24	290.01	270.98	19.03	n.a.
1984-85	1364.69	433.60	931.09	304.31	959.83	443.49	516.34	241.37	331.48	354.10	-22.62	n.a.
1985-86	1736.18	580.39	1155.79	353.47	1079.96	565.41	514.55	688.25	378.86	382.43	-3.48	n.a.
1986-87	2208.80	548.04	1660.76	470.84	1215.16	594.99	620.17	680.29	433.02	387.48	45.54	n.a.

Contd.....

TABLE 3.3 (contd.)

Year	Gwalior				Jabalpur				Ujjain			
	Octroi collectible	Entry tax	Short-fall*	Compensation	Octroi collectible	Entry tax	Short-fall*	Compensation	Octroi collectible	Entry tax	Short-fall*	Compensation
1976-77	140.17	41.35	98.82	106.69	161.05	30.03	131.02	110.00	71.40	58.87	655.13	45.30
1977-78	163.46	55.55	107.91	123.01	177.61	51.91	125.07	146.32	79.53	53.33	26.20	55.94
1978-79	190.62	57.98	132.64	152.07	195.87	104.54	91.33	167.61	88.59	60.35	28.24	72.53
1979-80	222.29	63.80	158.49	162.28	216.01	95.79	120.22	190.54	98.68	63.02	35.66	145.12
1980-81	259.22	74.78	184.44	178.70	238.23	151.08	87.15	200.04	109.92	72.38	37.54	110.99
1981-82	302.29	85.67	216.62	196.37	262.73	187.27	75.46	234.96	122.44	93.61	28.83	97.99
1982-83	352.52	88.96	263.56	216.05	289.74	200.03	89.71	233.37	136.39	122.64	13.75	114.71
1983-84	411.09	98.72	312.37	n.a	319.53	285.21	34.32	n.a	151.93	165.88	-13.95	119.28
1984-85	479.39	100.63	378.76	n.a	352.40	331.40	21.00	n.a	169.23	144.48	-24.75	n.a
1985-86	559.04	116.69	442.35	n.a	388.63	476.69	-88.06	n.a	188.51	180.96	7.55	n.a
1986-87	651.93	139.03	512.90	n.a	420.60	523.68	-95.08	n.a	209.98	212.23	-2.25	n.a

n.a. = not applicable

Source: As for Table 3.1

* Shortfall = Octroi collectible less Entry Tax

TABLE 3.4

**Octroi Collectible, Entry Tax and
Compensation to Municipal Corporations (Karnataka)**

(Rs. lakh)

Year	Bangalore				Dharwar			
	Octroi collectible	Entry tax	Short-fall*	Compensation	Octroi collectible	Entry tax	Short-fall*	Compensation
1979-80	1221.96	n.a	n.a	615.74	213.83	n.a	n.a	48.57
1980-81	1417.87	n.a	n.a	1594.32	248.76	n.a	n.a	171.36
1981-82	1645.19	221.42	1423.77	1229.17	289.40	37.57	251.83	272.18
1982-83	1908.96	652.62	1256.34	1285.32	336.67	52.60	284.07	n.a
1983-84	2215.01	584.50	1630.51	n.a	391.68	55.22	336.46	n.a
1984-85	2570.13	1047.32	1522.81	n.a	455.66	92.60	363.06	n.a
1985-86	2982.19	1453.77	1528.42	n.a	530.10	170.69	359.41	n.a
1986-87	3460.31	1840.09	1620.22	n.a	616.70	168.75	447.95	n.a

n.a. = not available

Source: As for Table 3.1.

*Shortfall = Octroi collectible less Entry Tax

TABLE 3.5

**Revenue Loss due to Abolition of Octroi
Kumta Town Municipality
(Karnataka)**

(Rs. lakh)

Year	Possible octroi collec- tion	Octroi compens- ation assured	Octroi compens- ation granted	Revenue loss (col.2- col.4)
1979-80	5.21	4.60	3.97	1.24
1980-81	5.90	4.60	3.97	1.93
1981-82	6.67	4.75	4.60	2.07
1982-83	7.55	5.23	3.73	3.82
1983-84	8.55	5.75	5.39	3.16
1984-85	9.68	6.32	5.98	3.70
1985-86	10.96	6.96	4.88	6.08

Source: Receipts and expenditure statements of Kumta Town Municipality.

TABLE 3.6
Revenue Collections from Octroi in Municipal Corporations of
Madhya Pradesh and Karnataka

(Rs. lakh)

Year	Madhya Pradesh						Karnataka	
	Bhopal	Indore	Raipur	Gwalior	Jabalpur	Ujjain	Bangalore	Dharwar
1960-61	n.a.	47.18	n.a.	16.00	30.08	11.25	47.65	n.a.
1961-62	n.a.	50.91	n.a.	16.00	34.81	13.43	75.45	2.31
1962-63	n.a.	52.94	n.a.	15.00	36.96	14.55	66.27	25.06
1963-64	n.a.	60.18	n.a.	17.00	44.30	19.95	94.25	26.94
1964-65	n.a.	68.02	n.a.	20.53	47.44	17.93	104.28	28.20
1965-66	n.a.	74.33	n.a.	22.83	53.58	18.22	118.62	31.79
1966-67	n.a.	78.33	n.a.	29.00	56.37	25.48	129.08	34.68
1967-68	18.24	84.81	34.84	33.77	58.59	30.13	158.23	38.61
1968-69	35.63	100.13	36.89	42.54	70.16	30.84	167.68	44.52
1969-70	42.33	108.69	39.46	54.23	71.37	35.18	190.05	46.23
1970-71	50.80	126.17	40.39	62.02	78.14	36.62	212.99	53.20
1971-72	70.50	137.28	51.89	70.89	78.14	36.53	242.48	64.97
1972-73	81.32	150.34	68.28	78.33	97.71	40.50	275.07	73.94
1973-74	94.97	173.87	68.31	87.81	105.38	42.75	343.03	n.a.
1974-75	125.03	254.31	76.65	112.40	138.46	60.46	444.03	6.03
1975-76	156.31	332.00	99.58	120.20	146.03	64.10	683.50	118.83
1976-77	-	-	-	-	-	-	781.79	139.86
1977-78	-	-	-	-	-	-	868.15	156.22
1978-79	-	-	-	-	-	-	1053.12	183.80

Source: Central Statistical Organisation,
Statistical Abstracts.

TABLE 3.7**Revenue Collections from Octroi in
Madhya Pradesh and Karnataka
(State Aggregate)****(Rs. lakh)**

Year	Madhya Pradesh	Karnataka
1970-71	n.a.	627.66
1971-72	n.a.	733.70
1972-73	n.a.	806.10
1973-74	1114.00	949.27
1974-75	1781.00	1151.38
1975-76	1826.00	1518.11
1976-77	-	1795.58
1977-78	-	1941.25
1978-79	-	2317.53
1979-80	-	-

Sources: For Madhya Pradesh, Directorate of Local Bodies, Government of Madhya Pradesh.

For Karnataka, Committee on Substitution of Octroi, Government of Maharashtra (1987).

TABLE 3.8

**Revenue Composition of Kumta Town Municipality
(1972-73 to 1978-79)**

(Rs. lakh)

Year	Octroi (net)	Other taxes	Grants	Other non- tax revenue	Total revenue
1972-73	2.18	0.81	0.58	0.42	3.99
1973-74	1.26	0.75	1.02	0.35	3.38
1974-75	2.84	0.70	0.45	0.34	4.33
1975-76	2.97	1.07	0.62	0.41	5.07
1976-77	4.12	1.38	0.75	0.40	6.65
1977-78	4.32	1.22	0.68	0.29	6.51
1978-79	4.60	0.82	0.33	2.00	7.75

(1979-80 to 1985-86)

(Rs. lakh)

Year	Tax revenue	Octroi compen- sation	Other grants	Other non- tax revenue	Total revenue
1979-80	1.43	3.97	2.56	0.65	8.61
1980-81	1.98	3.97	1.11	0.86	7.92
1981-82	2.69	4.60	1.92	1.11	10.32
1982-83	2.47	3.73	0.87	2.68	9.75
1983-84	2.89	5.39	1.07	0.88	10.23
1984-85	2.81	5.98	2.89	0.71	12.39
1985-86	3.52	4.90	2.39	1.62	12.43

Source: As for Table 3.5.

4. RELATIVE SERVICE LEVELS

4.1 Introductory

4.1.1 This chapter attempts to compare local government expenditures and other measures of service output in octroi and non-octroi States to form an idea as to whether presence or absence of octroi in the local budgets makes any difference. Besides, certain hypotheses in regard to local expenditure decisions having a bearing on service standards have also been empirically tested.

4.2 Nature of Urban Local Services

4.2.1 Urban local governments are responsible for a wide range of public services. These services are basically in the nature of merit goods. Their production and consumption entail external economies and diseconomies. Many of the local services are, however, property-based and can be attached to individuals. These services can be provided through the market mechanism also. However, they are considered to be so meritorious that their supply is undertaken through the governmental budgetary process. These services can be grouped into three categories: (i) Locality specific services such as local administration, transport, traffic control, public safety and street lighting, (ii) property-based services public utilities such as water supply, sewerage and sanitation and (iii) general services like health and education. The first two categories of local services are meant primarily for the citizens of the locality, although benefits extend to visiting citizens as well. Health and education services are, however, designed keeping in view the interest of the nation as a whole. Thus the provision of these services involves substantial inter-jurisdictional spillover and may require State and national governmental intervention.

4.3 Approaches to Measurement of Service Level

4.3.1 Because of external economies and diseconomies and interjurisdictional spillover, measurement of level of local services is a formidable task. Although non-residents too enjoy the benefits of a few local services, their availability to local residents can be measured in terms of their provision within the political boundary of a locality. Provision can be measured in terms of either annual budgetary allocations on a particular service or the physical flow of services. While in the former, local government expenditure may be used as a surrogate for local public service output, in the latter, service output themselves in physical terms serve as indicator of service level¹.

a. Budgetary allocation

4.3.2 Using the budgetary allocation approach, per capita revenue expenditure on a particular service may be taken to represent the level of service availability. The level of local expenditures of different cities and towns, however, cannot be taken to represent the level of service availability as the cost per unit of civic services provided may differ between different local bodies for reasons of input price differences and economies of scale. Provision of urban public services requires inputs like land (for parks and recreation in schools, local transport and solid waste disposal), employees (both skilled and unskilled), and construction materials and energy (for street lighting and for the pumping and treatment of water and sewage). The prices of these inputs invariably differ across States.

b. Physical availability of services

4.3.3 Quantitative availability of local services may be measured in terms of physical flows of facilities. Researchers have used several measures of local public outputs. Hamber et al. (1973) measured educational output by the probability of a student in the State passing the national selective service test.

Brown (1972) chose to measure school system performance directly by pupil test scores. Getz (1979) measured fire services by the number of fires per dwelling and the average property loss per fire or number of fire stations per square mile. Per day per capita availability of water in gallons or any other unit has been a widely used measure of urban water availability.

4.4 Level of Revenue Expenditure

4.4.1 By assuming away inter-State price and cost differences, per capita revenue expenditure of local bodies can be used as a measure of level of municipal services. Further, given that nominal expenditure on local services is price times quantity, deflation of nominal expenditure by a suitable price index may yield a measure which can be used as an index of the level of services when the inter-State price differences are ironed out, very crudely.

4.4.2 An attempt is made in this section to compare per capita service expenditure of local bodies in real and nominal terms. Results presented in Tables 4.1 and 4.2 indicate a mixed trend. However, some generalisations can be made. One would find that nominal expenditure per capita (State aggregate) in octroi and entry tax States is higher on an average than that for non-octroi States. However, for the municipal corporations taken together, the picture is different. Tamil Nadu, a non-octroi State, exhibited higher per capita level than West Bengal, a high income octroi State and Madhya Pradesh, an entry tax State. Both the series have shown intra-group variations. Barring a few exceptions, this conclusion also holds good when States are compared in terms of real expenditures. Non-octroi States, however, have also not fared well in terms of expenditure-income ratios (see Table 2.5 of Chapter 2).

4.4.3 Although per capita nominal and real expenditures and expenditure-income ratio indicate lower service levels in non-octroi States than those in octroi States, it may be more in-

structive to relate current service levels represented by expenditure on services to some normative service levels and then compare the two categories of States in terms of performance. If it is assumed that the expenditure requirement of a locality should grow at least in proportion to city domestic product (Bahl and Schroeder, 1983), a norm in terms of expenditure buoyancy with unit value can be worked out. This assumption may not be implausible as a number of studies which attempted to quantify Wagner's Law of the increase of State activity obtained more than unitary buoyancy of government expenditure with respect to GNP (Gupta, 1967; Reddy 1970; Bird, 1971; Pluta, 1979; Subramanyam and Kolluri, 1979). Thus local governments may be taken to be attempting to expand expenditure levels in response to the local income growth such that there is at least a proportionate expenditure growth in response to income growth.

4.4.4 Buoyancy coefficients which measure responsiveness of municipal expenditures to local income growth are reported in Table 4.3. These estimates are obtained for three periods: 1961-85, 1961-71 and 1971-85. The aggregate period has been decomposed in order to ascertain whether expenditure growth rates accelerated or slackened over time. The results obtained for this purpose indicate the following:

- a. Expenditure buoyancies are greater for octroi and entry tax States than for non-octroi States;
- b. expenditure buoyancies for non-octroi States are generally less than unity for the entire period. However for the period 1961-71, most of them exhibited buoyancy of more than unity;
- c. expenditure buoyancies have shown a declining trend in most of the States.

4.4.5 If it is postulated that local expenditure should have grown faster than the income of the locality, then presumably all

the States would be shown as lagging behind the desired level of local services. Estimates by the National Institute of Urban Affairs of gaps between desirable expenditures (worked out on the basis of the Zakaria Committee, 1963, norms) and ordinary revenues (available with the local bodies to meet the expenditure needs) also contribute to this contention (NIUA, 1983). Per capita gap between desirable expenditures and ordinary revenues in octroi States varied between Rs. 18.9 in Maharashtra and Rs. 98.8 for Uttar Pradesh (Table 4.4). However, the range of this gap in non-octroi States was found to be between Rs. 82.2 in Kerala and Rs. 122.6 in Bihar which is substantially higher than that in octroi States. Even for an entry tax State, namely, Madhya Pradesh the gap was as high as Rs. 87.0. The level of ordinary revenues prevailing in non-octroi States was enough only to meet the desired level of expenditures in the range of 10.4 per cent in Bihar and 39.1 per cent in Kerala. In contrast, the revenue capacity of octroi States to meet expenditure needs was higher, ranging from 26.7 per cent in Rajasthan to 77.2 per cent in Gujarat and 89.8 per cent in Maharashtra.

a. Response to expenditure needs

4.4.6 The preceding analysis shows that in all States, there is a wide gap between current and desired levels of urban local government expenditures and the gap is on an average higher in non-octroi States.

4.4.7 It is possible that local governments do try to reach the desired levels of public services but there is a lag. A prudent management of urban local finances would aim at reducing the lags in the adjustment of actual expenditures to the desired levels. An attempt is made here to estimate the speed by which actual expenditures adjust to desired expenditures in octroi and non-octroi States and conjecture about the role of presence and absence of octroi in this context.

4.4.8 We postulate that the local budgetary process is able to eliminate only a fraction of the difference between the level of actual expenditure attained and the desirable one. To test this a partial adjustment model of the traditional type² is used. The testing uses the State-wise data available from a cross-section of municipal corporations for the period 1960-85. The results are reported in Table 4.5.

4.4.9 The estimates of adjustment parameter are significant at 5 and 10 per cent levels of significance in most of the cases. However, in many cases, estimates seem to be inconsistent with the postulated hypothesis. For example, the value of speed parameter exceeds unity, indicating more than anticipated adjustments. However, such estimates are insignificant. A conclusion based on significant coefficients indicating speed of adjustment would indicate that it is higher in octroi States. For instance, in Gujarat log linear estimates yield 0.20 without grant and 0.44 with grant as an explanatory variable. This means that local expenditure policies are able to meet 20 per cent of the desired increase in expenditure if only local taxable capacity represented by urban income is taken into account. If external funds, however, are available, a higher adjustment is possible. With grants, about 44 per cent of the desired increase in local expenditures is met. The corresponding figures for Uttar Pradesh are 43 per cent and 41 per cent (based on linear estimates) and 39 per cent and 57 per cent (based on log linear estimates). Contrary to this, the same estimates are 45 per cent, 43 per cent, 40 per cent and 32 per cent for Madhya Pradesh. As against the estimates of adjustment parameter for octroi and entry tax States, the values for at least one non-octroi State, namely Andhra Pradesh only, for which values of adjustment coefficient are significant, are respectively 15 per cent and 25 per cent. In other words, not more than 25 per cent of the desired increases in local government expenditures can be met. Even though full adjustments are conspicuous by their absence even in octroi States, the performance of non-octroi States do not seem to be any better.

b. Revenue composition and service level

4.4.10 It is evident that resource scarcity affects service levels and non-octroi States have been found to be adjusting their actual expenditures to expenditure needs only slowly, due to fiscal stress. The level of resource availability thus becomes a major determinant of service levels. What is essential to note here is that the local decision-making process may be influenced by, besides the level of revenue availability, the composition of revenue resources, i.e., own revenue sources vis-a-vis flow of funds from the States. It is contended that decisions regarding local service levels are guided mainly by the availability of own resources (Fossett, 1986, 295-96). This is done basically to minimise uncertainty in service provisions emanating from the sporadic and ad hoc nature of grants. In other words, local governments may respond more to predictable revenue items such as their own revenues and grants may be treated as ad hoc and a portion of it may go to citizens in the form of tax relief. The shares of substitute taxes levied by the State governments may also amount to flows from higher level governments which may have effects comparable to grants on the local decision-making process.

4.4.11 In the light of the above arguments, two distinct revenue categories, namely, own revenues and grants, may be taken to have differential impacts on the local government spending propensities. If the stimulation impact of grants is lower than that of own revenues, it would prove that octroi abolition and subsequent grants-cum-tax-sharing strategy has generated dampening impact on expenditure levels and in turn on service standards.

4.4.12 To test the above hypothesis, expenditure stimulation impact of grants is quantified, using the standard methodology of local government response to intergovernmental fiscal transfers. Per capita revenue expenditures are regressed on per capita urban incomes and per capita grants. Grant has been entered into the

estimation equation in an alternative form also by relating it to total revenue. Thus grant as a proportion of total revenue is used to determine if revenue composition has any effect on expenditure levels. Coefficient on grant greater than unity indicates expenditure stimulation. Coefficient equal to or less than unity indicates neutrality and substitution (tax relief) respectively. To test this hypothesis, estimation is based on the aggregate of municipal corporations representing the State level picture for selected States. The results of the estimation are presented in Tables 4.6 to 4.9.

4.4.13 In eight out of 18 estimates, the coefficients on grants are statistically significant and yield value less than unity. A less than unit coefficient indicates expenditure substitution, signifying the fact that local bodies possibly treat grants as a convenient means of granting relief to taxpayers. If statistical insignificance is interpreted as substitutive (Bishop, 1964, 135), State tax burdens are found to be substituted for local tax burdens. In other words, grants do slacken local government own revenue raising efforts. When grant is entered as a proportion of total revenue, the results presented in Tables 4.8 and 4.9 show that coefficients on revenue composition variable (G/TR) are both positive and negative. Many of the coefficients are insignificant. Leaving aside this, a negative sign indicates that as the share of grants rises in total revenue, there is a dampening impact on local expenditures. In other cases, however, grants may stimulate expenditure. These results largely go to support the contention that local governments tend to base their expenditure decisions keeping in view the availability of local funds in order to avoid uncertainty. Thus substitution of octroi by any form of intergovernmental transfers may not contribute to raising the level of municipal services.

4.5 Physical Indicators of Service Levels

4.5.1 Data for the present exercise were taken from the NIUA

sample survey results for the year 1979-80 (NIUA, 1983) (Table 4.10). These pertain to urban water supply in litres per capita, disposable liquid waste (underground and open drainage, sq. kms. per 10000 persons), road length per 10000 persons, number of fire stations per square km and per 10000 persons and health and educational facilities per 10000 persons. It is taken for granted that the entire maintenance expenditures on these services are borne by local bodies. A comparison of these physical indicators would reveal that service levels vary across the two categories of States quite significantly. Marked variations are noticed within the categories also. For instance, per capita water availability per day per person in litres varies between 12 for Manipur (21 for Assam) and 107 for Andhra Pradesh in the non-octroi group. The corresponding figures are 49 for Haryana and 205 for Delhi (107 for J&K) for octroi States. The percentage of supply to demand for water varies between 10 and 77 in non-octroi States but it ranges between 38 and 111 for octroi States. Number of health institutions per 10000 persons is recorded between 0.1 and 5.4 for non-octroi States and between 0.2 and 7.4 for octroi States. To take another example, number of teachers per 1000 students varies between 15 and 238 for category I in non-octroi States as against between 24 and 44 in octroi States. But in category III, the corresponding ranges are 30 - 55 and 42 - 63 respectively.

4.6 Testing Statistical Significance of Findings

4.6.1 Analysis of available data on service levels across octroi and non-octroi States yielded a highly mixed picture. On an average, octroi and entry tax States are placed above non-octroi States in terms of many indicators. However, within each category of States, wide variations distort the average picture and generalisations based on these results. To obtain a more clear picture, statistical tests are performed to test significance of differences in averages. The two tests are the same used in Chapter 2, namely, test for mean differences and regression technique.

4.6.2 t statistics for mean differences are presented in Tables 4.11 and 4.12. Of the various financial indicators discussed above, most of the t values are positive, indicating better performance of octroi and entry tax States vis-a-vis non-octroi States. However, only two indicators, namely, per capita revenue expenditure and expenditure-income ratio are found to be statistically significant. t values for none of the physical indicators is statistically significant. On the basis of algebraic sign of t values, one finds that in terms of physical indicators, non-octroi States are not worse than octroi and entry tax States.

4.6.3 Regression analysis is carried out using per capita revenue expenditure and expenditure-income ratio as dependent variable. Results are contained in Tables 4.13 and 4.14. Ordinary least square regressions using per capita revenue expenditure have shown better fit than those using expenditure-income ratio. Positive coefficients on octroi dummy show that octroi and entry tax States are placed higher in terms of service levels than non-octroi States. But of the eight estimates, only two are statistically significant.

4.7 Conclusions

4.7.1 The conclusions that flow from these results are as follows. When State aggregate data are used for testing the statistical significance of differences between average service levels of low income octroi and non-octroi States, it is found that the former have fared better in respect of average expenditures on services provided. Some evidence to this effect is also obtained when regression technique is used to measure the effect of presence or absence of octroi on service levels. Such evidence, however, is lacking when averages of municipal corporations in octroi and non-octroi States are compared as none of the t -ratios is statistically significant. In other words, the expenditures of octroi and non-octroi municipal corporations do not diverge significantly. The above results suggest that a good part

of inter-State variations in municipal expenditures may be attributed to disparities between octroi and non-octroi municipalities. These disparities have also had adverse effects on the municipal service levies in non-octroi municipalities.

4.7.2 As regards the other indicators of service levels such as buoyancy of expenditure with respect to SDP, gap between actual and desired expenditure and speed at which actual expenditures adjust to desired ones and expenditure stimulation impact of revenue composition, the performance of non-octroi States seems to be inferior to that of octroi/entry tax States. In the absence of statistically significant t-ratios for these indicators, however, one may only conjecture about the behaviour of urban local governments. One important result, however, is worth mentioning. Grants or other financial flows to local bodies, instead of stimulating expenditures, are used to extend tax relief to the citizens. In other words, local governments probably attempt to base their expenditure decisions on the availability of local funds in order to avoid uncertainty. Thus the substitution of octroi by any other form of intergovernmental fiscal transfers may not have contributed to raising the level of municipal services.

NOTES

1. There is a third approach which uses local public sector employment in different service departments as a proxy for local sector output (See Bahl et al. 1978). This approach bases its argument on the assumption that output and employment are proportional. This assumption may hold good in local services that are labour-intensive.
2. A partial adjustment model of the local decision-making process is presented below:

$$E_t - E_{t-1} = \lambda[E_t^* - E_{t-1}] \quad 0 < \lambda < 1 \quad (1)$$

or

$$E_t = E_t^* + (1 - \lambda)E_{t-1} \quad (2)$$

where

E_t = Per capita actual expenditure in year t
 E_t^* = Desired level of expenditure in year t
 λ = a partial adjustment parameter;

Since E_t^* is unobservable, it can be postulated as

$$E_t^* = a + bY_t + cG_t \quad (3)$$

where Y_t = per capita level of community income in year t;

it is a variable representing demand for local service output along with the capacity to pay for them.

G_t = State lump sum grants per capita in year t

Substituting (3) in (2) and rearranging terms yield

$$E_t = a + bY_t + cG_t + (1 - \lambda)E_{t-1} \quad (4)$$

Speed of adjustment (λ) thus can be derived by subtracting the coefficient on E_{t-1} from 1. Higher value of λ indicates higher speed of adjustment.

TABLE 4.2
Per Capita Expenditure
(Aggregate of Municipal Corporation)

(Rs.)

State	Nominal			Real		
	1970-75	1975-80	1980-85	1970-75	1975-80	1980-85
OCTROI STATES						
<u>High Income</u>						
Maharashtra	95.77	158.00	234.45	0.49	0.49	0.54
Gujarat	74.40	140.05	195.96	0.37	0.48	0.49
West Bengal	52.52	72.79	92.39	0.28	0.27	0.26
Average	74.23	123.61	161.20	0.38	0.41	0.43
<u>Low Income</u>						
Uttar Pradesh	29.88	52.96	48.45	0.15	0.17	0.12
Karnataka	58.69	102.03	-	0.30	0.34	-
Madhya Pradesh	27.91	-	-	0.13	-	-
Average	38.83	77.49	48.45 ^a	0.19	0.25	0.12 ^a
NON-OCTROI STATES						
<u>Low Income</u>						
Andhra Pradesh	11.60	27.97	44.43	0.06	0.09	0.12
Bihar	17.99	16.41	15.66	0.06	0.056	0.04
Kerala	22.02	33.00	41.70	0.11	0.11	0.09
Tamil Nadu	71.83	89.78	111.49	0.33	0.26	0.27
Average	30.86	41.79	53.32	0.14	0.13	0.13
ENTRY TAX STATES						
<u>Low Income</u>						
Karnataka	-	-	149.41	-	-	0.34
Madhya Pradesh	-	53.62	50.91	-	0.17	0.12
Average	-	53.62 ^b	100.16	-	0.17 ^b	0.23

Notes: a. Based on Uttar Pradesh only Source: Computed.
b. Based on Madhya Pradesh only

TABLE 4.3

**Buoyancy Estimates of Aggregate
Local Revenue Expenditure**

State	Period		
	1961-85	1961-71	1971-85
Octroi States			
Gujarat	1.1570 ¹ (26.0270)	1.6705 (13.3913)	0.9879 ^a (18.3136)
Maharashtra	1.0118 (87.8643)	1.0321 (34.9647)	.9569 (43.3308)
Uttar Pradesh	0.6206 (7.2881) ¹	0.6451 (14.8339)	0.4289 ^a (1.9422)
West Bengal	1.0342 ² (27.3675)	1.0129 (10.4998)	1.0193 ^b (10.2353)
Non-Octroi States			
Andhra Pradesh	0.7347 ³ (7.0678)	0.5149 (2.4627)	1.5396 ^c (8.2272)
Bihar	0.0261 ² (3.4192)	0.0158 (1.1792)	0.1227 ^d (0.5295)
Kerala	0.7347 ¹ (7.0698)	1.5271 (12.1068)	0.4833 ^a (1.6114)
Tamil Nadu	-	1.0611 (30.0262)	-0.0339 ^d (-1.8790)
Entry Tax States			
Karnataka	1.0624 ¹ (25.5389)	1.1103 (13.5448)	-
Madhya Pradesh	1.2427 ⁴ (35.1232)	1.2833 (9.0874)	1.2213 ^e (17.0880)

1. 1961-84 a. 1971-84

2. 1961-83 b. 1971-83

3. 1861-81 c. 1971-81

4. 1961-82 d. 1975-83

Source: Estimated.

Figures in parentheses are 't' ratios which are mostly highly significant.

TABLE 4.4

**Gap Between Desired Expenditure and
Ordinary Revenue in Octroi
and Non-Octroi States**

----- 1979-80 -----		
State	Per capita gap (Rs.)	Revenue as a % of desired expenditure
Octroi States		
Gujarat	35.2	77.2
Haryana	72.8	41.9
Maharashtra	18.9	89.8
Orissa	84.7	34.9
Punjab	43.2	64.7
Rajasthan	93.5	26.7
Uttar Pradesh	98.8	29.5
West Bengal	97.6	36.3
Non-Octroi States		
Andhra Pradesh	85.6	42.9
Assam	115.5	17.3
Bihar	122.6	10.4
Kerala	82.2	39.1
Tamil Nadu	95.8	38.0
Entry Tax States		
Karnataka	85.9	36.7
Madhya Pradesh	87.0	36.4

Source: NIUA (1983).

TABLE 4.5
Adjustment Parameter (λ)¹

State	Linear Estimates		Log Linear Estimates	
	Without grant	With grant	Without grant	With grant
Octroi States				
Maharashtra	0.94	0.95	0.82	0.81
Himachal Pradesh	0.90	0.97	0.94*	0.99*
Gujarat	0.15**	0.69*	0.20**	0.44***
Uttar Pradesh	0.70**	0.72*	0.65**	0.86***
West Bengal	0.41*	0.43*	0.39*	0.57**
Delhi (UT)	0.49*	0.38*	0.36*	0.27*
Non-Octroi States				
Andhra Pradesh	0.25*	0.20*	0.15*	0.16*
Kerala	1.11	0.88	1.03	0.93
Bihar	0.98	0.92	0.76	0.82
Entry Tax States				
Madhya Pradesh	0.32*	0.40*	0.43*	0.45*
Karnataka	0.30***	1.31***	1.12	1.12

Source: Estimated.

$\lambda = 1 - c$
 c is the estimated coefficient on E_{t-1} , in the following equation:

$$E_t = a + by + cE_{t-1}$$

- * 5% level of significance
- ** 10% level of significance
- *** 25% level of significance

TABLE 4.6

Expenditure Stimulation Impact of Grants
(Linear Estimates)

State	Dependent variable: Revenue Expenditure				
	Intercept	Explanatory variable		R ⁻²	DW
		Urban income	Grants		
Octroi States					
Gujarat	6.470 (1.608)	.016 (2.987)	4.686 (5.973)	.984	7.730
Himachal Pradesh	46.819 (4.659)	.009 (5.117)	.081 (.988)	.875	2.082
Uttar Pradesh	4.055 (2.125)	.009 (4.449)	2.226 (4.166)	.940	1.251
West Bengal	2.467 (.929)	.023 (8.947)	.381 (1.784)	.964	1.285
Delhi (UT)	.823 (.175)	.057 (10.031)	.758 (1.078)	.965	1.045
Non-Octroi States					
Andhra Pradesh	2.202 (.534)	.011 (5.45)	-.056 (-.005)	.596	0.749
Kerala	-1.106 (-.341)	.005 (3.191)	7.592 (4.763)	.798	2.344
Entry Tax States					
Karnataka	-7.512 (-.709)	.051 (6.040)	-.279 (-.659)	.794	2.534

Source: Estimated

TABLE 4.7

Expenditure Stimulation of Grants
(Log Linear Estimates)

Dependent variable: Revenue expenditure					
State	Intercept	Explanatory variable		R ⁻²	DW
		Urban income	Grants		
Octroi States					
Gujarat	.017 (.017)	.435 (2.712)	.501 (5.273)	.979	0.805
Himachal Pradesh	-.605 (-.691)	.587 (5.386)	.044 (1.001)	.843	0.087
Maharashtra	-3.478 (-11.657)	1.056 (22.808)	-.031 (-.761)	.993	2.019
Uttar Pradesh	.180 (.396)	.298 (3.759)	.616 (7.184)	.952	1.362
West Bengal	-2.195 (-3.769)	.765 (8.614)	.122 (2.772)	.971	1.528
Delhi (UT)	-2.535 (-7.113)	.948 (11.581)	.073 (.652)	.966	0.748
Non-Octroi States					
Andhra Pradesh	-1.779 (-1.656)	.647 (4.261)	.043 (.394)	.467	0.496
Kerala	-1.828 (-1.641)	.614 (4.115)	.420 (4.051)	.863	0.093
Entry Tax States					
Karnataka	-3.369 (-3.747)	1.026 (7.856)	.021 (.531)	.921	2.781
Madhya Pradesh	-5.733 (-6.491)	1.254 (9.539)	.045 (1.048)	.966	1.345

Source: Estimated

TABLE 4.8

**Expenditure Stimulation of Revenue Composition
(Linear estimates)**

State	Intercept	UI	Grants/TR	R ⁻²	F	D.W
Octroi States						
Maharashtra	3.514 (.617)	.045 (50.974)*	-.583 (-.544)	.992	1318.55	2.279
Uttar Pradesh	-8.138 (-7.609)*	.018 (12.686)*	.696 (1.356)**	.894	081.923	1.923
West Bengal	-.918 (-.328)	.026 (17.143)*	.116 (1.055)***	.960	232.711	1.777
Gujarat	-28.362 (-2.216)	.043 (118.70)*	2.988 (1.678)**	.961	267.286	1.235
Delhi (UT)	18.615 (1.849)	.06 (8.405)*	-.603 (-1.533)**	.967	302.246	1.888
Himachal Pradesh	36.978 (3.294)*	.010 (8.115)*	.187 (.953)**	.874	033.891	2.141
Non-octroi States						
Andhra pradesh	.969 (.166)	.011 (4.444)*	.608 (.251)	.599	014.994	0.763
Kerala	2.175 (.287)	.009 (5.486)*	-.241 (-.286)	.574	015.083	1.634
Entry Tax States						
Karnataka	-7.076 (-.770)***	.654 (6.776)*	-.665 (-1.078)***	.802	044.235	2.612
Madhya Pradesh	-6.981 (-3.497)*	.025 (12.013)*	.213 (3.098)*	.973	372.839	2.016

Notes: UI = Urban Income
TR = Total Revenue

Source: Estimated

TABLE 4.9

**Expenditure Stimulation of Revenue Composition
(Log linear estimates)**

State	Intercept	UI	Grants/TR	R ⁻²	F	DW
Octroi States						
Maharashtra	-3.196 (-20.855)*	1.021 (60.222)*	-.039 (-.916)***	.994	1875.971	2.014
Uttar Pradesh	-3.678 (-2.839)*	.810 (9.714)*	.424 (1.268)***	.832	48.315	1.043
West Bengal	-3.211 (-9.217)	.902 (14.918)*	.105 (1.934)*	.966	275.487	1.360
Gujarat	-4.658 (-10.296)*	1.011 (5.569)*	.597 (2.324)*	.961	262.879	0.685
Delhi (UT)	-1.900 (-3.181)*	.942 (17.642)*	-.142 (-1.458)**	.969	325.726	1.510
Himachal Pradesh	-1.256 (-1.523)**	.655 (7.323)*	.066 (1.099)***	.847	27.042	2.182
Non-Octroi States						
Andhra Pradesh	-1.886 (-1.356)**	.652 (3.322)*	.014 (.124)	.465	9.006	0.469
Kerala	-5.198 (-5.021)*	1.071 (8.091)*	-.007 (-.039)	.751	32.977	1.384
Entry Tax States						
Karnataka	-3.567 (-5.424)*	1.053 (10.667)*	.020 (.461)	.921	125.910	2.275
Madhya Pradesh	-6.361 (-11.928)*	1.343 (15.745)*	.024 (.577)	.965	284.017	1.294

Source: Estimated

TABLE 4.10

**Level of Municipal Services in Octroi,
Non-Octroi and Entry Tax States
(1979-80)**

State	Water Supply		Drainage		Road length (kms per 10,000 persons)
	Per capita (Ltrs)	Percentage of supply to demand	Under ground drain- age (sq.kms per 1,000 persons)	Open drainage (sq.kms per 1,000 persons)	
Octroi States					
Gujarat	83	59	0.08	0.16	0.7
Haryana	49	41	0.23	0.20	0.8
Jammu & Kashmir	107	71	0.14	0.10	0.1
Maharashtra	73	59	0.08	0.25	0.5
Orissa	94	71	0.24	0.34	0.3
Punjab	66	58	0.18	0.25	0.7
Rajasthan	53	38	0.04	0.38	0.7
Uttar Pradesh	72	56	0.16	0.17	0.9
West Bengal	58	41	0.04	0.30	0.6
Delhi (UT)	205	111	0.01	0.0	2.3
Non-Octroi States					
Andhra Pradesh	107	76	0.06	0.22	0.9
Assam	21	16	0.13	0.21	0.5
Bihar	36	26	0.06	0.18	0.5
Kerala	81	61	1.04	0.31	1.2
Nagaland	NA	NA	NA	NA	NA
Sikkim	-	-	-	0.20	0.4
Tamil Nadu	106	77	0.16	0.23	0.7
Tripura	-	-	-	-	-
Manipur	12	10	-	0.34	0.5
Meghalaya	60	35	-	0.09	0.4
Entry Tax States					
Karnataka	50	40	.08	0.25	0.9
Madhya Pradesh	86	69	.21	0.22	0.9

Contd...

TABLE 4.10 (Contd')

State	Health Institutions (per 10000 persons)			Education Facilities								
	No. of insti- tutions	No. of doct- ors	No. of beds	Number of educa- tional institutes (per 10000 persons)			Total number of students (per school)			Number of teachers (per 1000 students)		
				I	II	III	I	II	III	I	II	III
Octroi States												
Gujarat	1.5	2.4	15	0.2	0.0	0.0	363	585	184	44	29	42
Haryana	7.4	7	19	0.0	0.0	0.0	409	743	545	24	25	39
Jammu & Kashmir	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0
Maharashtra	1.1	1.2	4	1.1	0.2	0.0	340	580	411	24	31	58
Orissa	0.2	0.4	1.7	0.1	0.0	0.0	177	261	347	24	33	63
Punjab	3.1	4	NA	1.5	1.3	0.3	251	523	398	24	31	46
Rajasthan	0.9	2.7	2.0	0.3	0.2	0.0	168	414	335	43	43	52
Uttar Pradesh	2.6	4	6	1.4	0.7	0.2	286	631	842	29	32	47
West Bengal	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Delhi (UT)	0.4	1.3	2	0.0	0.0	0.0	103	376	0.0	41	376	0.0
Non-Octroi States												
Andhra Pradesh	0.13	2.9	11.5	1.6	0.6	0.2	281	622	662	26	29	30
Assam	1	2.9	17	4	1.4	0.5	85	390	870	43	41	41
Bihar	0.1	0.3	3.5	0.3	0.2	0.0	107	0.2	1037	230	22	31
Kerala	2.1	5	44	1.3	1.1	0.3	541	83	499	15	24	55
Nagaland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sikkim	0	0	0	0.3	0	0	250	0	0	30	0	0
Tamil Nadu	1.4	3.1	14.7	1.2	0.9	0.3	444	800	313	31	41	60
Tripura	0	0	0	0	0	0	0	0	0	0	0	0
Manipur	2.7	0.0	34	6.5	6.8	1.2	13	357	336	50	40	53
Meghalaya	0	0	0	0	0	0	0	0	0	0	0	0
Entry Tax States												
Karnataka	1.8	2	12	1.7	1.2	0.2	116	266	305	27.1	32.5	38
Madhya Pradesh	0	0	0	0	0	0	0	0	0	0	0	0

Notes: I represents primary schools, II represents secondary schools, III represents other educational institutions. NA not available.

Source: National Institute of Urban Affairs (1983) A Study of the Financial Resources of Urban Local Bodies in India and the Level of Services Provided, Part II, New Delhi.

TABLE 4.11

(t) Values of Financial Indicators

Fiscal indicator	t values for difference of means					
	Between low income octroi and non-octroi States			Between entry tax and non-octroi States		
Period	I	II	III	I	II	III
<u>Revenue expenditure</u>						
State aggregate						
Per capita nominal	+1.03	+2.56***	-	-	-	-
Per capita real	1.37	+2.60***	-	-	-	-
<u>Municipal Corporations</u>						
Per capita nominal	+0.27	+0.95	-	-	-	-0.77
Per capita real	+0.37	+1.05	-	-	-	+0.72
Buoyancy	+1.12 ²	+0.37 ²	+0.41 ⁴	-	-	-
<u>Expenditure-Income ratio</u>						
State aggregate	+2.38**	+6.47*	-	-	-	-
Per capita gap between desired and actual	+0.06 ⁵	-	-	-	-	+0.05 ⁵
<u>Speed of adjustment⁶</u>						
Linear with grant	+0.28					
- without grant	-0.81					
Log linear with grant	+0.39					
- without grant	+0.17					
<u>Impact of grant on expenditure</u>						
Linear	-0.70					
Log Linear	-0.002					
<u>Impact of revenue composition on expenditure</u>						
Linear	-0.14					
Log linear	+0.81					

1. Periods I. 1970-75 II. 1975-80 III. 1980-85
 2. 1961-85 3. 1961-71 4. 1971-85
 5. 1979-80 6. 1960-84.

Source: Computed.

TABLE 4.12

`t` Values for Physical Indicators

Service*	`t` values for difference of means between	
	Octroi and non-octroi States	Entry tax and non-octroi States
1. Number of health institutions	-0.007	0.58
2. Number of doctors	-0.48	-0.72
3. Number of beds	-1.25	-0.63
4. Number of primary schools	-0.69	-0.23
5. Number of secondary schools	-0.61	-0.28
6. Number of other educational institutions	-0.84	-0.84
7. Number of students in primary schools	-0.001	-0.72
8. Number of students in secondary schools	0.19	-0.39
9. Number of students in other educational institutions	-0.0007	-0.86
10. Number of teachers in primary schools	0.043	-0.48
11. Number of teachers in secondary schools	0.33	-0.042
12. Number of teachers in other educational institutions	0.67	-0.60
13. Per capita water supply	0.315	0.19
14. Percentage of water supply to its demand	0.41	0.39
15. Underground drainage	-0.36	-0.39
16. Open drainage	0.60	n.c
17. Road length in kms	-0.03	0.998

Note: * For units see Table 4.8.
n.c Not computed as the numerator is zero.

Source: Computed.

TABLE 4.13

Service Levels: Ordinary Least
Square Regression Results

Dependent variables: Per capita revenue expenditure				
	1974-75		1979-80	
Constant	12.1010 (0.8989)	-42.4287** (-2.1059)	9.2606 (0.6267)	-69.2196* (-2.7020)
Per capita urban income	13.0075* (2.7548)	17.3249 (4.4632)	9.4355* (2.3787)	15.8998* (4.5269)
Urbanisation	-	2.2093* (3.1560)	-	2.9307* (3.3914)
Octroi dummy	0.2829 (0.2018)	0.7213 (0.0722)	30.5299** (2.0711)	10.7544 (0.8663)
R ⁻²	0.2747	0.5707	0.4014	0.6689
F	3.8401	7.6462	6.8293	11.1004
DW	2.6483	2.1230	2.4173	1.9794

* 1 per cent level of significance
 ** 5 per cent level of significance
 *** 10 per cent level of significance

Source: Estimated.

TABLE 4.14

Service Levels: Ordinary Least
Square Regression Results

Dependent variable: expenditure-income ratio				

	1974-75		1979-80	

Constant	296.1099 (1.2202)	610.4963 (1.2734)	487.8081* (2.4037)	904.4743** (1.9081)
Per Capita Urban income	-147.3889*** (1.7331)	-172.2807** (-1.8654)	-101.9451 (-8.8654)	-136.2662** (-2.0968)
Urbanisation	-	-12.2378 (-0.7649)	-	-15.6079 (-0.9731)
City dummy	230.2160 (0.9845)	227.6884** (0.9579)	97.1826 (0.4802)	7.7741 (0.0338)
-2	0.0999	0.0702	0.1269	0.1233
	1.8326	1.3777	2.0896	1.7031
N	2.4179	2.3397	2.6735	2.5335

* 1 per cent level of significance
 ** 5 per cent level of significance
 *** 10 per cent level of significance

Source: Estimated.

5. MAIN FINDINGS

5.1 Issues

5.1.1 The study attempts to portray the distinguishing features of urban local finances that can be attributed to octroi. Octroi being one of the principal sources of revenue to urban local bodies, its absence may result in relative financial stringency or a change in the structure of finances or both. Attempts to raise additional resources locally or through increased reliance on intergovernmental fiscal transfers to finance expenditures may further impair the pattern of urban local finances. Thus the crucial fiscal issues to be settled individually or in combination are:

- i. Whether non-octroi States have exhibited greater dependence on State fiscal transfers;
- ii. whether they have undertaken additional resource mobilisation measures at the local level;
- iii. whether entry tax has yielded requisite amount of revenue to compensate for the loss of octroi revenue, and
- iv. whether revenue and expenditure levels in non-octroi States have allowed municipal service levels to deteriorate.

5.1.2 The study is carried out with the help of a sample comprising selected octroi/entry tax and non-octroi States. Since all non-octroi and entry tax States are below the all-India average income States, comparison has been undertaken between the two homogeneous groups of States, namely, low income octroi and non-octroi States and entry tax and non-octroi States.

5.2 Findings

5.2.1 The revenue compositions of octroi and non-octroi local bodies do not seem to be significantly different. Own revenues constitute the bulk of the total revenue. The proportion of shared taxes, grants and other non-tax revenues do have a little higher share in non-octroi States. A different revenue sharing arrangement seems to have been devised in non-octroi States. However, it cannot be concluded that local bodies could receive as much as they would have raised had octroi featured in their tax strategy. Per capita State transfers either in the form of grants or tax shares is not found significantly higher in non-octroi States than that in octroi States. Further, there is an absence of a concerted effort on the part of the State governments to raise from the State level taxes to finance the grants and tax devolution programmes. Though the share of property tax in the total revenue as well as its per capita level are higher in non-octroi States, these are not statistically significant to prove that property tax has been used to raise additional resources to compensate for the loss of octroi.

5.2.2 With these results, one may conclude that in view of the fact that loss or absence of octroi is significant, urban local bodies have most probably diversified their fiscal attempts. They have depended on intergovernmental fiscal transfers to a greater extent, but at the same time modest attempts have been made to raise additional resources with the help of property tax. Despite these efforts, it seems that non-octroi local bodies have ended up at a lower revenue expenditure level which may be indicative of relative financial stringency resulting in lower service standards.

5.2.3 However, octroi and non-octroi municipal corporations do not seem to differ significantly in terms of revenue and expenditure levels. One of the important implications of this result is that a good part of inter-State variations in municipal revenue and expenditure levels may be attributed to disparities

between octroi and non-octroi municipalities. These disparities have also had adverse effects on the municipal service levels in non-octroi municipalities.

5.2.4 Another important result which has implications for the municipal service levels is that in general grants or other financial flows to local bodies instead of stimulating expenditures are probably used to extend tax relief to the citizens. One corollary of this result is that local bodies in all likelihood tend to base their expenditure decisions in view of the availability of local funds in order to avoid uncertainty. Thus substitution of octroi by any other form of intergovernmental transfers may not contribute to raising the municipal service levels.

5.2.5 Revenue neutrality of entry tax is tested in terms of (i) whether entry tax collection equalled octroi collectible, defined as future octroi yield if it continued to be levied both at the State level and the locality (corporation/municipality) level and (ii) whether compensation paid equalled octroi collectible at the locality level.

5.2.6 None of the conditions is satisfied by entry tax. If compensation paid is taken to be a substitute for octroi, entry tax is in no way a revenue neutral tax device as it is less than 20 per cent of octroi collectible. By adopting lower growth rates for octroi, entry tax collections may be proved to constitute not more than 50 or 60 per cent of the octroi collectible in any case. If State-local governments are able to phase out the surplus octroi staff, cost saving may be in the neighbourhood of 15-20 per cent, after adjusting for the cost of entry tax collection. Thus entry tax collection plus cost saving due to absence of octroi would have constituted not more than 70-75 per cent of the octroi collectible.

5.2.7 It has been noted that the revenue and expenditure levels of entry tax States (all low income States) are found to be

higher than those of non-octroi States (all low income States) but not higher than those of low income octroi States. This result may be interpreted to mean that entry tax has not proved to be a good revenue substitute for octroi.

5.2.8 An important problem with entry tax is that it competes with sales tax more than octroi used to do. This is mainly because both sales tax and entry tax are State-level levies. The State governments may tend to collect less on account of entry tax revenue for entry tax is used to finance compensatory grants. There could be a tendency in shareable entry tax to stick where it is collected, affecting thereby the liquidity position of local bodies adversely. These attributes of a shareable tax such as entry tax may hamper its growth as a viable substitute for octroi.

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