2. Structure and Growth of Octroi in Gujarat

As mentioned in the previous chapter, octroi plays a pivotal role in the finances of urban local bodies in Gujarat. Therefore, the policy decision to abolish the levy could have a considerable impact not only on the finances of urban local bodies but also on the economic activities within their jurisdictions. In order to assess the future repercussions on the finances of the local bodies, and to examine the possible impact on their economy, it is necessary to analyse the structure and growth of octroi in the State. The analysis of the structure of octroi will provide us with a better understanding of the strength and weaknesses of the levy which would be useful for desiging the entry tax.

Presently, a major portion of revenue from octroi is collected in Municipal Corporations and the Municipalities. In 1977-78, for example, as much as 91 per cent of the total octroi revenue was realised from the Municipal Corporations and Municipalities, their respective contributions being 65 per cent and 26 per cent. Though 337 of the 12,663 Gram Panchayats and 80 out of 92 Nagar Panchayats levy the tax, their total collections amount to a mere 9 per cent of the total octroi revenue in the State. Therefore, the analysis of the structure and growth of octroi in the Municipal Corporations and Municipalities in the State should adequately represent the situation existing in the whole of the State. Further the data on octroi collections in the required disaggregation are not available for these Gram and Nagar Panchayats. In addition, the constraint of time has forced us to confine ourselves to the

analysis of octroi in the Municipal Corporations and Municipalities in the State.

Salient Features of Octroi

Almost all goods that enter into a local jurisdiction are subject to the tax. However, exceptions are made depending upon expediency of the local bodies, and the list of goods thus exempted differs from one local body to another. In general, the goods exempt from octroi are bonafide personal luggage which include certain specified items for personal use subject to a ceiling, personal effects of a public servant transferred on duty, raw materials used in the production of goods produced by Khadi and Village Industries and Cottage Industries, goods imported by organisations for providing relief for persons affected by natural calamities or goods imported for free distribution by organisations such as the Indian Red Cross Society and the UNICEF. It should however be mentioned that while exempting the goods, considerations such as equity and administrative convenience have not been taken account of, unlike in the case of the Sales Tax Acts of the State. This is so because perhaps it is conceived that the role of local bodies in achieving the objective of equity, if anything, is only minimal and as the tax is checkpost-based rather than account-based, the administrative problems incidental to the sales tax do not arise in the case of octroi.

As mentioned above, very few items imported into the jurisdiction of local areas are exempted from octroi and differences in the items exempted among the different local bodies alone may not cause perceptible differences in the effective rate of tax from one region to another. However, non-uniformity is found not merely with regard to the exempted items but is a prominent feature in the rates of tax levied on different commodities in different jurisdictions. This could cause substantial differences in the effective rates of tax, leading to misallocation of resources.

It is not possible at the present juncture to go into the question of rate differences among the 51 Municipalities in the State in detail. Suffice it to say that the rates vary rather wide-

ly among the Municipalities. Even among the Muncipal Corporations which are better organised and where one can thus expect a certain degree of uniformity, hardly on any commodity do we find the same rate being levied in the four Municipal Corporations. It may be seen from Annexure II.1 that not only do the rates vary widely among the Municipal Corporations, but also the character of the levy on commodities is marked in some cases by lack of uniformity. The same commodity can be subjected to a specific levy in some Corporations whereas an *ad valorem* levy exists in the others. For example, items such as sugar, hydrogenated oil, butter and dry fruits are subjected to specific levy in Ahmedabad, Baroda (excepting hydrogenated oil) and Surat but in Rajkot the levy is *ad valorem*. Another interesting feature of the tax structure is that economic considerations have been largely ignored in determining the rate structure. For instance, in Ahmedabad raw materials such as silk, artificial silk, staple and synthetic yarn and iron and steel are subject to the same rate of tax of 2 per cent as some semi-durable finished goods such as cutlery articles, glassware and chinaware. In fact, on goods like binoculars, opera glasses, raincoats, toys and sports goods the rates of tax are much lower. A careful study of the rate structure, shown in Annexure II.1, would highlight similar examples also in other Municipal Corporations.

On the whole, in the Municipal Corporations (excluding Rajkot) as may be seen from Table 2.1, in 1979-80 as much as 41.9 per cent of the total yield was realised from raw materials and capital goods. It is further seen that the extent of taxation of inputs and capital goods has been showing an increasing trend, albeit only marginally. It increased from 40.6 per cent in 1971-72 to 41.9 per cent in 1979-80. The analysis of octroi in each of the Municipal Corporations also reveals, as seen in the table, that the proportion of input and capital goods taxation is very high. This high proportion of the tax on raw materials and capital goods which leads to cascading and other undesirable economic consequences shows without doubt that economic considerations have not been adequately taken into account in the designing of the structure of octroi.

The differences in the list of exempted goods and the rate structure among the local authorities result in different tax-income ratios or effective rates of tax among them. But, as we do not have data on the income accruing or originating in these jurisdictions we are unable to estimate the extent of this difference. However, in order to obtain a broad idea, we have computed a crude measure of effective rates of tax as follows. Assuming away inter-jurisdictional differences in the levels of per capita private consumption, we have first worked out the total consumer expenditure on the basis of the 32nd round National Sample Survey (NSS) data relating to the year 1977-78. Based on these figures and by making adjustments for changes in the price level, consumer expenditure levels in the different urban local jurisdictions in 1975-76 and 1979-80 were worked out. The proportion of tax yield to total consumption expenditure with in each local jurisdiction gives a rough approximation of effective tax rate. As savings are excluded from the denominator, the effective rate of tax is an overestimate, but this need not be a cause of concern as we are interested in examining the rate differences among the local jurisdictions and their trend over time.

TABLE 2.1

Octroi on Inputs and Capital Goods

(Rs lakh)

Municipal Corporations	*Nature of the Commodity*	*1971-72*	*1974-75*	*1979-80*
I. AHMEDABAD				
1.	Revenue from raw materials	181.84 (30.83)	287.64 (27.09)	645.66 (29.13)
2.	Revenue from building materials	40.66 (6.89)	72.67 (6.84)	119.54 (5.36)
3.	Revenue from capital goods	52.44 (8.89)	65.64 (6.18)	176.48 (7.91)
4.	Revenue from inputs and capital goods	274.94 (46.61)	425.95 (40.11)	945.68 (42.40)
5.	Total octroi yield	589.83	1061.75	2230.01
II. SURAT				
1.	Revenue from raw materials	15.47 (10.09)	26.16 (11.04)	70.22 (13.27)

TABLE 2.1 (Contd.)

Municipal Corporations	*Nature of the Commodity*	*1971-72*	*1974-75*	*1979-80*
2. Revenue from building materials		16.16 (10.54)	27.73 (11.70)	36.30 (6.86)
3. Revenue from capital goods		5.55 (3.62)	9.92 (4.19)	51.40 (9.72)
4. Revenue from inputs and capital goods		37.18 (24.25)	63.81 (26.93)	157.92 (29.85)
5. Total octroi yield		153.33	236.96	528.98
III. BARODA				
1. Revenue from raw materials		25.90 (17.39)	58.38 (24.18)	121.36 (38.59)
2. Revenue from building materials		10.93 (7.20)	19.68 (8.15)	29.03 (9.23)
3. Revenue from capital goods		12.87 (8.64)	24.68 (10.22)	32.21 (10.24)
4. Revenue from inputs and capital goods		49.70 (33.23)	102.74 (42.55)	182.60 (58.06)
5. Total octroi yield		148.97	241.40	314.47
IV. TOTAL OF THREE MUNICIPAL CORPORATIONS				
1. Revenue from raw materials		223.21 (15.02)	372.18 (24.17)	841.24 (27.37)
2. Revenue from building materials		67.75 (7.59)	120.08 (7.80)	184.87 (6.02)
3. Revenue from capital goods		70.86 (7.94)	100.24 (6.51)	260.09 (8.46)
4. Revenue from inputs and capital goods		361.82 (40.55)	592.50 (38.47)	1286.20 (41.85)
5. Total octroi yield		892.13	1540.11	3073.46

Note: 1. Commodity-wise details of octroi yield are not available for Rajkot for these years. Hence, these are not included in the analysis.

2. Figures in brackets represent percentages of total octroi revenue in the respective Muncipal Corporations.

Source: Offices of different Municipal Corporations and Municipalities.

The effective tax rates for 1975-76 and 1979-80 for the Municipalities and Municipal Corporations are presented in Annexure II.2. From the table, we observe wide variations in the effective rates existing among the urban local bodies.

TABLE 2.2

Effective Rates of Octroi in Urban Local Bodies in Gujarat

(Rs lakh)

	Revenue from octroi 1975-76	*Revenue from octroi 1979-80*	*Consumer expenditure in 1975-76*	*Consumer expenditure in 1979-80*	*Effective tax rate 1975-76*	*Effective tax rate 1979-80*	*% increase in effective rate*
Municipal corporations	1633.89	3447.56	34231.32	44480.15	4.77	7.75	62.5
Class A municipalities*	316.55	510.47	11068.81	14571.04	2.86	3.50	22.4
Class B municipalities**	312.18	496.62	12480.04	16515.28	2.50	3.01	20.4
Class C municipalities***	140.42	222.20	7187.60	9203.04	1.95	2.49	27.7
Urban local bodies	2403.04	4676.85	64967.77	84769.51	3.70	5.52	49.1

* Municipalities having population of more than 1 lakh.

** Municipalities having population in the range of 50,000 to 1 lakh.

*** Municipalities having population less than 50,000.

Source: See Annexure II.2.

Among the Municipal Corporations, though in 1975-75 we do not find marked variations in the rates (it varied from 4.04 per cent in Rajkot to 5.34 per cent in Ahmedabad), in 1979-80 we find that the rates vary substantially (from 5.20 per cent in Rajkot to 9.20 per cent in Ahmedabad). Heterogeneity in the effective rates is even more marked among the Municipalities: The rates varied from 0.72 in Patan and Upleta to 6.73 in Dhoraji in 1975-76 and from 0.92 in Visnagar to 5.56 in Kalol in 1979-80. The effective rates for the different classes of Municipalities and Municipal Corporations are summarised in Table 2.2.

Two important facts emerge out of the above summary table. Firstly, the effective rate of the tax is higher in the larger urban bodies than in the smaller ones. In both 1975-76 and 1979-80, we find that the highest rate was found in the Municipal Corporations. Among the Municipalities, the highest rate is levied in Municipalities having population of over a lakh (A class) and the lowest rate is found in smaller Municipalities with a population of less than 50,000. Secondly, both in the case of Municipal Corporations and the different classes of Municipalities, the effective rates of tax increased significantly by varying percentages over the period from 1975-76 to 1979-80.

The most important issue from the point of view of the efficiency in resources allocation is the extent of rate differentiation among the urban local bodies. We have worked out the coefficient of variation of the effective tax rate in 1975-76 and 1979-80. These are presented in Table 2. 3 below:

TABLE 2.3

Variations in Effective Tax Rates

	1975-76		*1979-80*	
	Standard deviation	*Coefficient of variation*	*Standard deviation*	*Coefficient of variation*
Municipal Corporations	0.4892	0.1087	1.3436	0.1914
Municipalities	1.0165	0.4235	1.1012	0.3771
All urban local bodies	1.1402	0.4433	1.5340	0.4711

The table shows that not only the coefficient of variation of the effective tax rates among the urban local bodies is very high, but also the trend is one of increasing diversity. For the urban local bodies as a whole, the coefficient of variation was as high as 44.3 per cent in 1975-76 and it increased to 47.1 per cent in 1979-80. Among the Municipal Corporations, it was rather low in 1975-76 at 10.9 per cent but increased substantially to 19.1 per cent in 1979-80. While among the Municipal Corporations we observe a divergent trend in the rate structure, for the Municipalities, a convergent trend, albeit minor, is observed. The coefficient of variation of effective tax rates in Municipalities declined from 42.3 per cent in 1975-76 to 37.7 per cent in 1979-80.

We mentioned earlier that the divergence in the tax rates among different regions within a State leads to resource allocation distortions. The extent of distortion caused by these tax rate differentials, however, depends upon the factor mobility detween the regions. Whatever the magnitude of these distortions, the abolition of octroi would certainly result in their removal. This should enhance the productivity and income levels which, in turn, should result in higher yield from the various State and local taxes.

TABLE 2.4

Share of Specific Levy in Total Octroi Yield

(Rs. lakh)

	Ahmedabad	*Baroda*	*Surat*	*Total of 3 municipal corporations*
1971-72	141.02	37.82	20.87	199.71
	(23.91)	(25.39)	(13.61)	(22.39)
1974-75	248.88	37.77	21.49	308.14
	(23.35)	(15.65)	(9.07)	(20.02)
1979-80	263.67	13.83	32.44	309.94
	(11.82)	(4.40)	(6.13)	(10.08)

Note: Figures in brackets represent percentages of total octroi yield in the respective Municipal Corporations.

Another important characteristic of the levy is that unlike the sales tax which is completely *ad valorem*, octroi is a mix of specific as well as *ad valorem* levies. The commodity-wise data on octroi collections are not available for all urban local bodies. Our analysis of the data relating to three Municipal Corporations of Ahmedabad, Baroda and Surat is presented in Table 2.4.

It is seen from the table that in 1979-80 about 10 per cent of the octroi yield was realised from specific levies in the three Municipal Corporations taken together. The share of yield from specific levies was the highest in Ahmedabad (11.8 per cent) and the lowest in Baroda (4.4 per cent). Further, it is seen from the table that the importance of specific levies has been falling over time in each of the Municipal Corporations. Taken together, the specific levies declined drastically from 22.4 per cent of the yield in 1971-72 to 10 per cent of the yield in 1979-80.

Growth of Revenue from Octroi

One of the terms of reference requires us to compute the elasticity of octroi in the State. Generally, elasticity is taken to mean income elasticity which represents percentage automatic change in the tax revenue with respect to a per cent change in income. On the other hand, percentage change in the yield of the tax which is composed of both automatic and discretionary changes, in response to a per cent increase in income is called 'buoyancy'. However, as we do not have data on the income originating or accruing within the jurisdiction of each of the urban local bodies, it is not possible to compute the elasticity and buoyancy of the tax in the above sense. We can only relate the increase in tax revenue, both total as well as automatic, to the time factor and estimate buoyancy and elasticity of the tax with respect to time from which compound growth rate of the tax could be computed. However, we have computed the elasticity with respect to non-primary sectoral incomes for the Municipal Corporations and Municipalities put together.

Estimating the growth of the tax in the urban local bodies is necessary for deciding the rate of growth at which the compensation to the various urban local bodies should be made over the years. Also, it is important for the designing of the structure of the entry tax in the State which is required to compensate the local bodies not only the present loss of revenue arising from the abolition of octroi but also the loss that would occur in subsequent years.

Before going into the measurement of the growth of the tax in different Municipalities and Municipal Corporations, it may not be out of place to analyse the trends in the levels of the tax in different urban local bodies and the fiscal importance of the tax. The per capita octroi revenue and the percentages of revenue from octroi in the total revenue collected by the local bodies in 1971-72 and 1979-80 are shown for each of the urban local bodies in Annexure II.3. This is summarised for the Municipal Corporations and different classes of Municipalities in Table 2.5.

From the table, it is seen that the per capita revenue from octroi registered an almost three-fold increase over the period of nine years in the Municipalities and Municipal Corporations taken together. It increased from Rs 21.74 in 1971-72 to Rs 66.45 in 1979-80. In the Municipal Corporations, it increased from Rs 27.25 in 1971-72 to Rs 93.28 in 1979-80 and the increase of revenue in the Municipalities during the corresponding period was from Rs 16.03 to Rs 36.78. It is also seen that the level of the tax was higher in the bigger Municipalities and Municipal Corporations. For instance, in Ahmedabad, per capita revenue from octroi in 1979-80 was the highest at Rs 110.75, and this is higher than the revenue from the tax collected in class C Municipalities (Rs 29.16) by as many as 3.8 times. These figures broadly indicate the extent of differences in the capacity to provide public services among the different urban local bodies.

As regards the fiscal importance of the levy, we see a diverse trend. Though, for the urban local bodies as a whole, the importance of the revenue from octroi increased, albeit mar-

TABLE 2.5

Revenue from Octroi—Level and Importance

	1971-72		*1975-76*		*1979-80*	
	Per capita revenue from octroi (Rs)	*Per cent of total revenue*	*Per capita revenue (Rs)*	*Per cent of total revenue*	*Per capita revenue (Rs)*	*Per cent of total revenue*
1. Ahmedabad	26.78	38.4	54.64	42.7	110.75	54.4
2. Surat	30.45	50.7	51.97	45.8	76.89	46.4
3. Baroda	28.78	41.1	42.46	38.9	78.11	43.1
4. Rajkot	22.34	58.5	41.34	32.8	63.47	49.1
All municipal corporations	27.25	42.1	50.62	41.6	93.28	50.7
Class A municipalities	18.15	39.4	29.26	42.4	42.18	40.0
Class B municipalities	16.44	43.7	25.00	41.6	36.25	36.5
Class C municipalities	12.24	36.2	20.12	35.5	29.16	34.0
All municipalities	16.03	40.4	25.40	40.6	36.78	37.4
All urban local bodies	21.74	41.4	38.47	41.2	66.45	46.3

Source : See Annexure II.3.

ginally from 41.4 per cent of their total tax revenue collections in 1971-72 to 46.3 per cent in 1979-80, it either marginally declined or remained stable in each class of Municipality. The increase in the fiscal importance of the levy in the urban local bodies as a whole was largely due to the increase registered in the Municipal Corporations. Even among the Municipal Corporations, only in Ahmedabad we see a perceptible increase in the importance of the levy from 38.4 per cent in 1971-72 to 54.4 per cent in 1979-80, while in other Municipal Corporations relative importance, in fact, declined.

We have computed buoyancy and elasticity of the tax in each of the Municipalities and Municipal Corporations in Gujarat. For this, we have generally taken an 11-year reference period, 1971-72 to 1981-82. The buoyancy and elasticity coefficients were computed with respect to time by regressing the yield from the tax in logarithmic form on the time variable. For computing elasticity, we are required to separate the yield due to the discretionary measures from that resulting from the automatic expansion of the tax base. To do so, we have employed the proportional adjustment method. [1] However, to obtain realistic estimates of elasticity using this method, we require accurate estimates of revenue from dis-

[1] According to this method, tax yield at the base year rates are obtained as follows:

$$T_{11} = T_1$$
$$T_{12} = T_2 - D_2$$
$$T_{13} = \frac{T_3 - D_3}{T_3} \cdot T_{12}$$
$$\vdots \quad \vdots$$
$$T_{KJ} = \frac{T_I - D_I}{T_J} \cdot T_K\,(j-1)$$

T_{11}, T_{12}, T_{13} = Tax yield in year 1,2,3 according to the first year's rate structure

T_{KJ} = Tax yield in the $_J$th year according to $_K$ th year's rate structure

T_J = Tax yield in the $_J$th year

D_J = Yield from discretionary measures in the $_J$th year.

cretionary measures. Many a time doubts are cast on the quality of data on the revenue from discretionary measures. We have therefore employed also an alternative method of computing elasticities through the use of dummy variables. Dummy variables are specified as zero for the years before a discretionary measure and 1 for all the succeeding years. For every discretionary measure a separate dummy variable was introduced in the model, to obtain the elasticity coefficients.[2]

From the buoyancy and elasticity coefficients, growth rate of the tax revenue, both total and automatic, were computed.[3] The coefficients derived by using the two methods and the growth rates computed therefrom for each of the Municipalities and Municipal Corporations are presented in Annexure II.4. The major results from these are summarised in Table 2.7.

From the table it is clear that octroi shows fairly high buoyancy and elasticity with respect to time, both for each of the Municipal Corporations and for each class of Municipalities. The buoyancy coefficient for the Municipal Corporations and Municipalities taken as a whole has the value of 0.07 and the elasticity coefficient is 0.05. Both buoyancy and elasticity coefficients in Municipal Corporations are higher than those in Municipalities. Among the Municipal Corporations, Ahmedabad has the highest buoyancy (0.078) but Rajkot has the highest elasticity (0.067) under the proportional adjustment method while Baroda has the highest elasticity under the dummy variable method.

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[2] $\ln T_J = A + t \ln b + C_1D_1 + C_2D_2 + \ldots + C_ND_N + \varepsilon$

Where

T_J = is the tax yield, t = time.

D_I to D_N = Dummy variable representing discretionary measure taking value 0 for years before the discretionary change and 1 afterwards.

b_1 = is the elasticity coefficient.

a, C_1 to C_N — other parameter estimates and ε the random error term.

[3] Antilog (ln b) — 1 × 100, gives the growth rate.

In order to get an idea of the elasticity of the tax with respect to incomes, we have related the revenue from octroi in the Municipalities and Municipal Corporations taken as a whole with the non-primary sectoral incomes originating in the State in a log-linear regression model. The results are summarised below.

TABLE 2.6

Buoyancy and Elasticity of Octroi in Gujarat (1970-71 to 1979-80)

	Buoyancy	*Elasticity*
All municipal corporations	1.357	1.056
All municipalities	0.924	0.812
All urban local bodies	1.221	0.974

It is seen from the above table that for the urban local bodies as a whole, the elasticity of the tax with respect to non-primary sectoral incomes is slightly less than one, i.e., the yield from octroi increases by a little less than one per cent for every percentage increase in income originating in the non-primary sector of the State. The elasticity of the tax is around unity in the Municipal Corporations and approximates 0.8 in the Municipalities. As the elasticity of non-primary sectoral incomes with respect to total State Domestic Product (SDP) is as high as 1.17, the elasticity of the tax with respect to total SDP in the urban local bodies as a whole works out to 1.14. The corresponding estimate for the Municipal Corporations is 1.24 and for Municipalities 0.95.

The above analysis shows that the growth of octroi in the urban local bodies of the State has been quite impressive, having an elasticity of around unity. While a part of this growth has clearly been caused by the growth in real economic activity, some portion of it has to be attributed to the increase in prices.

During the period 1970-71 to 1981-82, the consumer price index for urban non-manual employees increased at an annual

TABLE 2.7

Growth of Octoi 1970-71 to 1981-82

Municipal Corporations/ Municipalities	*Buoyancy coefficient*	*Growth rate (nominal)*	*Growth rate (real)*	*Elasticity coefficient (Prest method)*	*Automatic growth rate (Prest method) (nominal)*	*Automatic growth rate (Prest method) (real)*	*Elasticity coefficient (dummy variable method)*	*Automatic growth rate (dummy variable method) (nominal)*	*Automatic growth rate (dummy variable method) (real)*
1. Ahmedabad	0.0781	19.74	12.10	0.0543	13.24	5.60	0.0666	16.6	8.96
2. Surat	0.0686	17.10	9.46	0.0569	14.04	6.40	0.0644	16.0	8.36
3. Baroda*	0.0708	17.65	10.16	0.0667	16.61	9.12	0.0704	17.6	10.11
4. Rajkot	0.0715	17.86	10.22	0.0671	16.69	9.05	0.0656	16.3	8.66
All municipal corporations	0.0752	18.88	11.24	0.0581	14.25	6.61	0.0595	14.7	7.06
Class A municipalities	0.0547	13.14	5.50	0.0504	12.33	4.69	0.0531	13.0	5.36
Class B municipalities	0.0508	12.39	4.75	0.0430	10.42	2.78	0.0401	9.6	1.96
Class C municipalities	0.0437	11.62	3.92	0.0426	10.29	2.65	0.0451	10.9	3·26
All municipalities*	0.0457	11.05	3.41	0.0398	9.60	1.96	0.0451	10.9	3.26
All urban local bodies*	0.0677	16.89	9.40	0.0539	13.18	5.69	0.510	12.5	5.01

Notes : 1. All coefficients are significant at 1 per cent level
2. * Relates to the period 1970-71 to 1980-81

Sources : See Annexure II.4

rate of 7.64 per cent (the growth rate for the period 1970-71 to 1980-81 was 7.49%). Assuming elasticity of octroi with regard to prices[4], we may infer that 7.64 per cent growth of octroi during the period could be attributed to increase in prices. The growth rate after deducting this would be due to rising real economic activity. These are summarised in Table 2.7.

It is seen from the table that in urban local bodies as a whole, the tax in real terms registered a compound rate of growth of about 9.4 per cent over the period 1970-71 to 1980-81 of which about 5 per cent was due to the automatic expansion of the tax base in response to increase in real economic activity. In Municipal Corporations taken together the tax increased at the rate of 11.2 per cent, the automatic increase being 6.6 per cent under the proportional adjustment method and 7.1 per cent under the dummy variable method. The variation in the rate of growth of the tax among the Municipal Corporations is not very substantial as it ranges from 9.5 per cent in Surat to 12.1 per cent in Ahmedabad, though the variation in automatic growth is higher from 5.6 per cent in Ahmedabad to 9.1 per cent in Rajkot when the proportional adjustment method is used for estimation. However, when the dummy variable method is employed the variation in automatic growth among the Municipal Corporations is much lower, from 8.4 per cent in Surat to 10 per cent in Baroda. Among the Municipalities, the rate of growth varied from 3.9 per cent in class C Municipalities to 5.5 per cent in class A Municipalities, the range of automatic growth rate being from 2.7 per cent to 4.7 per cent under the first method and from 2 per cent in class B Municipalities to 5.4 per cent in class A Municipalities.

It would not be possible to predict the behaviour of prices and the resulting growth of revenue from octroi to decide about the compensation to be paid to the urban local bodies for abolishing octroi. In view of this, it would be reasonable

[4] Our estimate of partial elasticity for non-primary sectoral SDP deflator shows that it is not significantly different from unity.

to suggest that the State Government, in addition to compensating the urban local bodies for the loss of existing revenue from octroi, should guarantee that it would be enhanced by 9 per cent per year. However, should there be appreciative inflation, the rate of growth of the yield of the entry tax could be expected to be higher than 9 per cent per annum. This amount should be distributed among the local bodies.

ANNEXURE II.1

Rates of Octroi in the Municipal Corporations in Gujarat

Sl. No.	*Name of the commodity*	*Basis*	*Rates (Rs)*			
			Ahmedabad	*Baroda*	*Rajkot*	*Surat*
	(*1*)	(*2*)	(*3*)	(*4*)	(*5*)	(*6*)
A.	**FOOD GROUP**					
1.	Grain, pulses and cereals of all sorts, including gavar	Quintal	0.25	0.20	0.35	0.20
2.	Flour	—do—	0.25	0.25	0.35	0.20
3.	Sugar and sugarcandy including bura and khandsari	-- do -	1.30	1.65	2%	2.25
4.	Edible oils	—do—	1.00	2.00	1.00	1.25
5.	Hydrogenated vegetable oil including vanaspati	—do—	2.60	0.85%	2.25%	6.70
6.	Butter	—do—	2.70	2.50	1.75%	4.00
7.	Malai, cream and mava	—do—	3.00	2.50	1.75%	4.00
8.	Oilseeds, cottonseeds	—do—	0 30	0.50	0.325	0.20
9.	Tea	Ad valorem (per cent)	13.00/Ql.	2.00	1.75	1.00
10.	Coffee including coffee beans	—do—	13.00/Ql.	4.00	2.00	1.00
11.	Dry fruits and their cakes	—do—	4.00/Ql.	3.00	1.50%	1.50

ANNEXURE II.1 (Contd.)

Sl. No.	Name of the commodity	Basis	Rates (Rs)			
			Ahmedabad	Baroda	Rajkot	Surat
	(1)	(2)	(3)	(4)	(5)	(6)
12.	Camphor, musk, saffron, and spices including cinnamon, nulmeg and mace but not spices included elsewhere in the Schedule	—do—	4 00	0.45	2.25	1.50
13.	Pepper, cloves and piprinul and dried ginger	—do—	1.00	0.45	2.25	0.50
14.	Dried chillies, coriander seeds (dhana) cumin seeds, dried turmeric, mustard seeds, methy seeds, tamarind, garlic, kokam, aniseeds (varaili), ajma, sewa and sewa dal, dhana's dal and varaili's dal	Quintal	0.65	0.45	1.75%	0.50%
B.	**CLOTH AND YARN GROUP**					
15.	Cotton textiles, hosiery and ready-made garments	Ad valorem (per cent)	1.50	1.50	2.00	1.50
16.	Knitting yarn, sewing and other threads	—do—	1.25	1.00	2.00	1.05
17.	Hosiery goods and readymade garments made from silk, artificial silk, wool and synthetic materials	—do—	2.50	1.50	2.50	1.50
18.	Silk and artificial silk piecegoods	—do—	2.50	0.50	2.60	1.50
19.	Woollen piecegoods	—do—	2.50	1.00	2.00	1.50

(ANNEXURE II.1 Contd.)

(1)	(2)	(3)	(4)	(5)	(6)
20. Terenewool, terene & polyester fibre cloth and other synthetic materials and its hosiery and readymade garments	—do—	2.50	0.50	2.60	1.50
21. Cotton yarn	—do—	1.00	1.00	0.25	1.05
22. All yarns other than cotton yarn including silk, artificial silk, staple and synthetic yarns	—do—	2.00	1.00	0.50	1.05
C. BUILDING MATERIALS GROUP					
23. Iron and steel not otherwise specified in the Schedu'e	—do—	2.00	1.70	1.00	1.60
24. Pig iron and iron scrap	—do—	1.00	1.10	1.00	1.60
25. Stone lime, kapachi, grit, rubble stone, lime stone, road metal, slaked/unslaked lime, cholia, kankar, mineral stone & mineral stone powder not otherwise specified	Quintal	0.15	0.30	1.00%	0.50
26. All kinds of clay and earth	Ad valorem (per cent)	1.00	0.30/ Tonne	1.00	1.50
27. Cement	—do—	1.75	3.70	2.00	3.10
28. Articles made from cement not otherwise specified	—do—	1.00	3.00	2.25	3.10
29. Asbestos sheets	—do—	1.00	3.30	2.25	3.10
30. Bricks	1000 Nos.	1.00	1.00	1.75	1.00

ANNEXURE II.1 (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)
31. Timber including rafters, scantling, planks, logs and beams	Pc. Adv.	1.00	0.50 (per quintal)	1.50	3.10
32. All kinds of wooden sheets and boards	—do—	1.75	2.00	2.00	2.50
33. Furniture made of wood or cane	—do—	2.00	2.00	2.75	3.00
34. Wooden doors and windows and staircases and other articles not specified in item 35	—do—	1.75	2.00	2.75	3.10
35. Sanitary fittings	—do—	3.50	2.00	2.60	3.10
36. Flooring tiles	Ad valorem	1.75	3.00	2.60	3.10
37. Oil paints and colours used for painting, varnish, linseed oil, turpentine, zinc oxide, red oxide, french polish, bitumen tar and coal tar and shellac	—do—	3.00	2.60	2.60	3.10
38. Varnish and french polish	—do—	3.00	2.00	2.60	3.10
39. Marble	—do—	3.00	2.50	3.00	3.10
40. Marble chips	—do—	2.00	2.50	3.00	3.10
D. PROVISIONS AND ARTICLES OF CONSUMPTION GROUP					
41. Foodstuffs and food provision including confectionery items	—do—	3.00	3.00	2.00	1.00
42. Tinned food and preserved provisions	—do—	3.00	3.00	2.00	2.00
43. Cigars, cigarettes, their holders, cigarette papers, and smoking requisites and tinned and other tobacco	Pc. Adv.	8.00	3.00	3.00	3.00

ANNEXURE II.1 (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)
44. Toilet articles including cosmetics, perfumes and beauty aids	—do—	5.00	4.00	2.75	5.00
45. Shaving soap, cream, sticks, toothpowder, toothpaste and toothbrushes	—do—	5.00	4.00	2.75	2.00
46. Charcoal	M. ton	1.00	1.50	0.75	1.00
47. Tobacco and snuff	Ad valorem	1.00	5.00	3.00	4.00/Ql.
48. Bidis	—do—	1.00	0.35	2.00	4.00/Ql.
49. Watches, clocks and timepieces, their spares and accessories	—do—	3.00	2.00	2.00	2.00
50. Umbrellas, their fittings, umbrella sticks, rain coats	—do—	1.00	2.00	2.60	1.60
51. Drugs and medicines including medical herbs, ayurvedic moorabba used for medicinal purposes, honey disinfectants, germicides and insecticides	—do—	0.80	1.00	2.00	0.90
52. Soap and chemical detergents	—do—	1.40	1.50	2.00	1.60
53. Optical goods and their parts and accessories, sound amplifying apparatus adapted for use as hearing aid, artificial limbs, binoculars, telescopes and opera glasses	—do—	0.85	1.75	2.60	1.60
54. Surgical instruments, scientific apparatus, hospital requisities not specified elsewhere in the Schedule	—do—	0.85	2.00	2.60	1.60
55. Cutlery articles including scissors, razors, safety razors, knives, penknives. stove, needle, petromax	—do—	2.00	1.50	2.60	3.00

ANNEXURE II.1 (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)
lamps, all haberdashery including hair pins, comb and shoe polish					
56. Glassware, chinaware, porcelain and earthenware articles	—do—	2.00	3.00 (glassware) 2.00 (chinaware & crockery ware)	2.60	1.60
57. Ordinary and safety match boxes	—do—	0.10/ gross	1.75	2.00	0.50
58. Candles	—do—	0.50	0.75	2.00	0.50
E. MACHINERY MOTORS AND INDUSTRIAL GROUP					
59. All kinds of machinery, their components and spares, machine tools, teleprinters, typewriters, duplicators, bright steel bars, including shifting, carbon steel, alloy steel, C.R. & H.R. sheets	Ad valorem	2.50	1.25	1.25	2.50
60. Electric machinery and appliances, excluding electric machinery and goods used as components of motor vehicles and not elsewhere specified in the Schedule	—do—	2.50	1.60	2.60	2.50

ANNEXURE II.1 (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)
61. Millgin stores, including crucibles, cotton ropes, packing and line threads, pick glass and moulding sand	—do—	2.50	1.25	2.60	1.60
62. Colour and dyes including indigo and painting paste	—do—	3.00	1.50	2.00	1.60
63. All sorts of chemicals excluding those not elsewhere specified in the Schedule	—do—	2.50	1.70	2.00	1.60
64. Hides and skins	—do—	2.00	0.75	2.00	2 50
65. Hardware articles	—do—	2.00	1.70	2.60	2.50
66. Wines, beers, spirits, liquors and all other alcoholic beverages	Pc. adv.	15.00	4.00	10.00	5.00
67. Stationery, diaries, punching machines, invitation and greeting cards, paper weights and calling bells not electrically operated	Pc. adv.	0.60	1.00	2.50	2.50
68. Toys and articles of games and sports	—do—	0.50	1.75	2.00	2.00
69. Crackers and fireworks	—do—	4.00	4.00	3 00	4.70
70. Mineral and lubricating oils of all sorts and their by products not specified elsewhere in the Schedule	Ad valorem	2.00	2.00/ Q1	2.00	2.25/ Q1
71. Inflammable gas supplied in closed containers	Pc. adv.	1.50	3.00	2.00	2.00
72. Motor vehicles, excavators and all other vehicles drawn by motor power and chasses of these vehicles, their components and spare parts	—do—	3.00	2.50	2.75	2.50

ANNEXURE II.1 (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)
73. Motor cycles, mopeds, scooters and auto-rickshaws and their spare parts	—do—	2.50	2.50	2.75	2.50
74. Bicycles, tricycles, their accessories and spare parts	—do—	1.00	1.25	2.25	1.60
75. Crude oil and diesel oil not elsewhere specified	M. ton	5.00	2.00	0.60%	1.00
76. Motor spirit including petrol, aviation spirit and high-speed diesel oil	100 litres	1.50	2.00	2.75%	2.00
77. Kerosene	—do—	0.70	1.25	1.50%	1.00
78. Cotton	Pc. adv.	1.00	0.30	0.25%	0.50
F. OTHER MATERIALS GROUP					
79. Refrigerators, water-coolers, airconditioners, airconditioning plants, equipments, cooling, chilling and freezing equipments, their spare parts and accessories	—do—	4.00	3.50	3.00	2.50
80. Wireless receiving instruments and apparatus, including transistors (at Rs 3.00% adv. for transistors worth Rs 350/-) and their spare parts and accessories but excluding sound amplifying apparatus adapted for use as hearing aid; telephone and telegraphic	—do—	4.00	3.50	3.00	2.50

ANNEXURE II.1 (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)
instruments and television sets, their spare parts and accessories					
81. Television sets, spare aparts and accessories	—do—	5.00	3.50	3.00	2.50
82. Gramophone records including L.P. records	—do—	4.00	2.50	3.00	2.50
83. Musical instruments, their components and spare parts not specified elsewhere in the Schedule	—do—	3.00	3.50	3.00	2.50
84. Photographic and other cameras and enlargers and their spare parts and accessories	—do—	4.00	3.50	3.00	2.50
85. Cinematographic equipments and their spare parts and accessories	—do—	5.00	3.50	3.00	2.50
86. X-ray machines, X-ray apparatus, electrotherapic machines, equipments, components and spare parts required for use therewith, X-ray films and plates	—do—	3.50	3.50	2.50	1.60
87. Cinema films and reels	Per reel	4.00	2.50	3.00	2.00
88. Electronic computers, calculating machines and other electronic equipments	Pc. adv.	4.00	3.50	2.60	2.50

Source: Octroi Rules, By-Laws and Schedules modified upto the current period by the Municipal Corporations.

ANNEXTURE II.2

Revenue from Octroi —Changes in its Effective Rates

Municipal corporations/ Municipalities	*1975-76*			*1979-80*		
	Revenue from octrol (Rs. lakh)	*Estimated consumer expenditure (Rs. lakh)*	*Effective rate of tax (per cent)*	*Revcnue from octroi (Rs. lakh)*	*Estimated consumer expenditure (Rs. lakh)*	*Effective rate of tax (per cent)*
(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*
I. MUNICIPAL CORPORATIONS						
1. Ahmedabad	955.23	17881.84	5.34	2134.33	23195.06	9.20
2. Surat	296.22	7034.69	4.21	528.98	8276.46	6.39
3. Vadodara	237.34	5720.22	4.15	523.36	8064.65	6.49
4. Rajkot	145.10	3594.58	4.04	260.89	4943.98	5.27
All municipal corporations	1633.89	44480.15	4.77	3447.56	34231.32	7.75
II. CLASS A MUNICIPALITIES						
1. Nadiad	29.60	1234.47	2.40	37.34	1618.83	2.31
2. Jamnagar	71.98	2342.61	3.07	107.53	3131.03	3.43
3. Porbander	36.03	1062.62	3.39	56.00	1340.58	4.18
4. Bharuch	19.20	1007.38	1.98	34.45	1274.39	2.70
5. Navsari	30.17	868.98	3.47	57.06	1190.02	4.79

ANNEXURE II.2 (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
6. Bhavnaagar	61.92	2606.73	2.38	121.35	3467.89	3.50
7. Junagadh	40.33	1063.95	3.79	53.12	1363.45	3.90
8. Veraval	26.62	882.07	3.02	43.62	1184.85	3.68
All class A municipalities	316.55	11068.81	2.86	510.47	14571.04	3.50
III. CLASS B MUNICIPALITIES						
1. Patan	5.16	716.05	0.72	11.46	914.06	1.25
2. Anand	21.19	695.69	3.05	29.79	941.14	3.17
3. Kalol	16.20	586.55	2.76	43.74	786.49	5.56
4. Moroi	16.65	669.61	2.49	9.77	845.82	1.16
5. Dharnghardra	8.71	458.48	1.90	16.61	589.96	2.82
6. Palanpur	8.52	525.89	1.62	15.22	797.62	1.91
7. Sidhpur	10.96	457.15	2.40	14.91	593.21	2.51
8. Botad	9.14	393.42	2.32	15.92	553.25	2.88
9. Surendranagar	25.40	767.81	3.31	48.60	1017.20	4.78
10. Bulsar (Uslsad)	21.70	483.64	4.49	22.92	621.97	3.69
11. Mahuwa	11.30	456.12	2.48	20.54	605.96	3.39
12. Gandhidham	7.19	476.89	1.51	19.07	673.68	2.83
13. Bhuj	15.32	597.70	2.56	26.19	787.45	3.33
14. Khambhat	10.77	660.71	1.63	14.36	808.63	1.78

ANNEXURE II.2 (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
15. Amrelli	11.05	465.54	2.37	19.03	630.63	3.02
16 Dahod	9.07	496.12	1.83	13.31	636.05	2.09
17. Godhara	5.44	752.16	0.72	15.96	979.77	1.63
18. Upleta	12.99	431.06	3.01	19.47	605.12	3.22
19. Dhoraji	14.68	674.93	2.18	25.74	876.51	2.87
20. Jetpue	33.94	504.00	6.73	35.67	696.95	5.12
21. Gondal	22.18	604.65	3.67	36.76	765.43	4.80
22. Mehsana	14.62	605.18	2.41	22.18	818.38	2.71
All class B municipalities	312.18	12480.04	2.50	496.62	16515.28	3.01
IV. CLASS C MUNICIPALITIES						
1. Umreth	2.85	263.61	1.08	5.00	330.00	1.52
2. Viramgam	9.16	465.23	1.97	15.75	568.41	2.77
3. Kadi	4.05	310.97	1.30	6.22	398.72	1.56
4. Kapadvanj	6.85	331.74	2.06	8.79	411.84	2.13
5. Dholka	9.01	396.28	2.27	11.60	508.36	2.28
6. Borsad	4.63	344.93	1.34	7.32	445.17	1.64
7. Limbdi	7.35	281.20	2.61	11.68	357.08	3.27
8. Wankaner	4.83	302.58	1.78	9.68	376.09	2.57
9. Unjha	5.65	316.90	1.60	8.71	425.08	2.05

ANNEXURE II.2 (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
10. Vishnagar	3.39	400.27	0.84	4.88	528.58	0.92
11. Wadwan	4.28	344.52	1.24	6.09	446.38	3.89
12. Ankleswar	6.92	294.71	2.35	15.66	402.45	3.89
13. Billimora	14.50	329.79	4.40	21.36	475.62	4.49
14. Dabhoi	6.57	412.85	1.59	9.18	517.38	1.77
15. Anjar	5.75	303.51	1.89	10.41	388.13	2.68
16. Mandvi	5.04	301.56	1.67	7.86	375.49	2.09
17. Rajpipla	6.23	277.11	2.25	11.15	342.76	3.25
18. Saveakundka	11.17	432.60	2.58	19.36	567.21	3.41
19. Petlad	8.32	464.61	1.79	10.93	546.63	2.00
20. Palitana	8.84	307.29	2.88	13.61	397.03	3.43
21. Mangrol	5.03	305.34	1.65	6.96	394.63	1.76
All class C municipalities	140.42	7187.60	1.95	222.20	9203.04	2.49
All municipalities	769.15	30736.45	2.50	1229.29	40289.36	3.05
All urban local bodies	2403.04	75716.60	3.19	4676.85	74520.68	6.28

Note: Consumer expenditures were estimated on the basis of NSS (32nd round) data. These pertain to 1977-78, but were adjusted for price changes to arrive at the estimates in 1975-76 and 1979-80.

Source: For octroi revenue, different Municipal Corporations and Municipalities.

ANNEXURE II.3

Increase in Per Capita Revenue from Octroi and Changes in its Composition

Municipal Corporations/ municipalities	*1970–71*		*1975-76*		*1979-80*	
	Per capita Octroi revenue (Rs)	*Octroi revenue as a percentage of total revenue*	*Per capita Octroi revenue (Rs)*	*Octroi revenue as a percentage of total revenue*	*Per capita Octroi revenue (Rs)*	*Octroi revenne as a percentage of total revenue*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
I. MUNICIPAL CORPORATIONS						
1. Ahmedabad	26.78	38.44	54.64	42.67	110.75	54.42
2. Surat	30.45	50.72	51.97	45.82	76.89	46.43
3. Vadodara	28.78	41.05	42.46	38.86	78.11	43.10
4. Rajkot	22.34	58.46	41.34	32.75	63.47	49.06
All municipal corporations	27.25	42.06	50.62	41.58	93.28	50.67
II. CLASS A MUNICIPALITIES						
1. Bhavnagar	16.21	32.01	24.28	37.45	42.14	44.47
2. Jamnagar	17.85	47.30	31.43	55.01	41.36	54.11
3. Nadiyad	10.65	23.36	24.46	29.75	27.66	23.24

ANNEXURE II.3 (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
4. Junagadh	22.28	53.54	38.78	62.84	47.01	47.89
5. Porbander	21.25	55.00	34.64	51.43	50.46	49.92
6. Bharuch	19.08	34.70	20.31	22.25	32.50	19.76
7. Navsari	24.26	40.54	35.49	45.25	57.64	41.24
8. Versaval	19.30	41.78	30.95	43.64	44.51	40.05
All class A municipalities	18.15	39.42	29.26	42.38	42.18	39.97
III. CLASS B MUNICIPALITIES						
1. Surendernagar	18.70	54.22	33.87	59.30	57.18	50.89
2. Godhra	7.18	20.40	7.35	17.35	19.70	21.31
3. Anand	24.22	37.17	31.16	28.58	38.19	21.39
4. Patan	7.09	29.55	7.37	18.89	15.08	22.23
5. Dhoraji	16.60	57.67	22.24	61.27	34.44	50.61
6. Mehsana	16.00	47.03	24.78	48.17	32.62	38.27
7. Morvi	15.20	61.23	25.62	52.56	13.96	16.39
8. Kalol	18.70	38.59	28.42	53.80	67.29	61.09
9. Palanpur	12.12	45.41	16.71	23.41	24.16	30.45
10. Bhuj	12.31	59.37	26.41	57.38	40.29	49.40
11. Khambat	11 52	29.64	16.57	28.97	21.45	26.22
12. Gondal	22.69	51.83	37.59	45.80	57.44	43.27

ANNEXURE II.3 (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
13. Jetpur	34.95	63.41	54.33	72.06	61.50	67.23
14. Gandhidham	7.69	38.07	15.30	50.03	34.05	53.51
15. Amreli	16.33	45.07	24.02	45.51	36.60	38.59
16. Dahod	10.16	26.74	18.90	26.99	25.11	24.75
17. Upleta	22.09	40.90	30.93	36.38	38.94	30.97
18. Valsad	29.79	52.74	46.17	42.67	44.08	22.37
19. Mahuva	23.38	35.63	25.11	32.00	41.08	38.60
20. Sidhpur	14.90	40.07	24.36	41.31	30.59	32.26
21. Dhrangadhra	11.12	59.84	19.36	53.83	33.90	64.43
22. Boted	17.72	41.63	24.08	48.08	34.61	45.59
All class B municipalites	16.44	43.67	25.00	41.58	36.25	36.53
IV. CLASS C MUNICIPALITIES						
1. Savarkundla	11.21	33.44	26.60	67.57	41.19	70.25
2. Viramgam	13.09	44.96	20.38	38.46	33.51	46.23
3. Petlad	12.00	20.78	19.81	21.01	24.29	23.28
4. Vishnagar	6.57	22.66	8.69	21.13	11.11	19.43
5. Dabhoi	13.74	36.71	16.43	27.17	21.35	29.02
6. Dholka	13.69	52.90	23.10	51.78	27.62	56.15
7. Bilimora	27.58	36.98	45.31	43.27	53.40	28.74

ANNEXURE II.3 (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
8. Wadwan	6.65	47.91	12.62	31.38	16.49	37.42
9. Borsad	7.74	20.39	13.62	19.34	19.78	26.80
10. Unjha	15.00	34.85	18.23	24.88	24.89	21.53
11. Ankleswar	20.04	38.54	23.86	41.34	47.45	34.96
12. Kapadvanj	14.19	28.87	21.44	31.24	25.88	27.01
13. Kadi	10.00	42.04	13.53	30.53	18.85	36.04
14. Palitana	16.19	36.91	29.47	46.82	41.24	37.26
15. Mangrol	9.85	53.41	16.77	58.69	21.09	52.97
16. Anjar	7.33	39.29	19.17	50.57	32.53	48.55
17. Wankaner	11.64	38.00	16.13	34.67	31.23	37.37
18. Mandvi	7.71	48.21	17.38	60.14	25.35	41.52
19. Limbdi	19.60	57.31	27.26	28.77	38.93	36.56
20. Rajpipla	19.19	45.36	23.07	39.43	39.82	35.76
21. Umreth	9.08	31.37	10.96	29.41	18.52	25.80
All class C municipalities	12.24	36.17	20.12	35.48	29.16	34.03
All urdan local bodies	21.74	41.43	38.47	41.26	66.45	46.34
All municipalities	16.03	40.36	25.40	40.61	36.78	37.37

Source: Different Municipal Corporations and Municipalities.

ANNEXURE II.4

Buoyancy and Elasticity of Octroi in Gujarat (1970-71 to 1981-82)

Municipal corporations/ municipalities	*Buoyancy co-efficient*	*Growth rate (real) per cent per annum*		*Elasticity co-efficient (proportional adjustment method)*	*Automatic growth rate (proportional adjustmment method) nominal real*		*Elasticity co-efficient (dummy variable method)*	*Automatic growth rate (dummy variable method) nominal real*	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
I. MUNICIPAL CORPORATIONS									
1. Ahmedabad	0.0781	19.74	12.10	0.0543	13.24	5.60	0.0666	16.60	8.96
2. Surat	0.0686	17.10	9.46	0.0569	14.04	5.40	0.0644	16.00	8.36
3. Baroda*	0.0708	17.65	10.16	0.0667	16.61	9.12	0.0704	17.60	10.11
4. Rajkot	0.0715	17.86	10.22	0.0671	16.69	9.05	0.0656	16.30	8.66
All municipal corporations	0.0752	18.88	11.24	0.0581	14.25	6.61	0.0595	14.70	7.05
II. CLASS A MUNICIPALITIES (*Population 1 lakh*)									
1. Bhavnagar	0.0515	15.20	7.56	0.0476	11.55	3.91	0.0619	15.20	7.56
2. Jamnagar	0.0615	15.23	7.59	0.0615	15.23	7.59	0.0615	15.30	7.66
3. Nadiyad	0.0489	11.95	4.31	0.0390	9.35	1.71	0.0618	15.30	7.66
4. Junagadh	0.0496	12.06	4.42	0.0496	12.06	4.42	0.0496	12.86	5.22
5. Porbandar	0.0461	11.23	3.59	0.0378	9.16	1.52	0.0450	10.90	3.26
6. Bharuch	0.0370	8.92	1.28	0.0233	5.47	(—) 2.17	0.0163	3.90	(—) 3.74

ANNEXURE II.4 (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
7. Navsari	0.0581	14.29	6.65	0.0581	14.29	6.65	0.0581	14.29	6.65
8. Veraval	0.0547	13.43	5.79	0.0407	9.84	2.20	0.0554	13.60	5.96
III. CLASS B MUNICIPALITIES (*Population 50,000 to 1,00,000*)									
1. Surendernagar	0.0626	15.45	7.81	0.0492	12.01	4.37	0.0580	14.30	6.66
2. Godhra	0.0528	12.85	5.21	0.0528	12.85	5.21	0.0130	3.00	(—) 4.64
3. Anand	0.0277	6.63	(—) 1.01	0.0277	6.63	1.01	0.0277	6.63	(—) 1.01
4. Patan	0.0445	10.78	3.14	0.0257	6.05	1.59	0.0172	4.00	(—) 3.64
5. Dhoraji	0.0489	11.18	3.54	0.0489	11.18	3.54	0.0489	11.18	3.54
6. Mehsana	0.0457	11.14	3.50	0.0457	11.14	3.50	0.0457	11.14	3.50
7. Morvi	0.0410	9.88	2.24	0.0410	9.88	2.24	0.0410	9.88	2.24
8. Kalol	0.0752	18.89	11.25	0.0504	12.31	4.67	0.0521	12.70	5.06
9. Palanpur	0.0539	13.23	5.59	0.0515	12.58	4.94	0.0544	13.30	5.66
10. Bhuj	0.0675	16.81	9.17	0.0225	5.32	(—) 2.32	0.0510	12.50	4.86
11. Khambat	0.0378	9.05	1.41	0.0378	9.05	1.41	0.0378	9.05	1.41
12. Gondal	0.0605	14.87	7.23	0.0461	11.23	3.59	0.0606	15.00	7.36
13. Jetpur	0.0422	10.18	2.54	0.0422	10.18	2.54	0.0422	10.18	2.54
14. Gandhidham	0.0853	21.71	14.05	0.0701	17.50	9.86	0.0833	21.20	13.56
15. Amreli	0.0543	13.30	5.66	0.0543	13.30	5.66	0.0543	13.30	5.66
16. Dahod	0.0450	10.86	3.22	0.0220	5.21	(—) 2.43	0.0337	8.10	0.46
17. Upleta	0.0437	10.59	2.95	0.0414	10.02	2.38	0.0471	11.40	3.76
18. Valsad	0.0298	7.13	(—) 0.51	0.0155	3.42	(—) 4.22	0.0457	11.10	3.46

ANNEXURE II.4 (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
19. Mahuwa	0 0465	11.29	3.65	0.0465	11 29	3.65	0.0465	11.29	3.65
20. Sidhpur	0.0426	10.33	2.69	0.0426	10.33	2.69	0.0426	10.33	2.69
21. Dhrangadhra	0.0605	15.96	8.32	0.0539	13.18	5.54	0.0593	14.70	7.06
22. Botad	0.0515	12.55	4.91	0.0394	9.48	1.84	0.0403	9.70	2.06
IV. CLASS C MUNICIPALITIES (*Population 50,000*)									
1. Savarkundla	0.0638	15.84	8.20	0.0638	15.84	8.20	0.0638	15.84	8.20
2. Viramgam	0 0465	11.30	3.69	0.0465	11.30	3.66	0.0465	11.30	3.66
3. Petlad	0.0430	10.43	2.79	0.0273	6.51	(—) 1.13	0.0409	9.90	2.26
4. Vishnagar	0.0374	9.00	1.36	0.0330	7.94	0.30	0.0366	8.70	1.06
5. Dabhoi	0.0286	6.77	0.87	0.0142	3.06	(—) 4.58	0.0287	6.80	(-) 0.84
6. Dholka	0.0430	10.37	2.73	0.0430	10.37	2.73	0.0430	10.37	2.73
7. Bilimora	0.0539	13.16	5.52	0.0539	13.16	5.52	0.3539	13.16	5.52
8. Wadwan	0.0472	11.48	3.84	0.0378	9.09	1.45	0.0479	11.70	4.06
9. Borsad	0.0394	9.49	1.85	0.0233	5.20	(—) 2.44	0.0309	7.40	(—) 0.24
10. Unjha	0.0370	8.89	1.25	0.0318	7.62	(—) 0.02	0.0303	7.20	(—) 0.44
11. Ankleswar	0.0562	13.82	6.18	0.0410	9.89	2.25	0 0290	6.90	(—) 0.74
12. Kapadvanj	0.0342	8.16	0.52	0.0281	6.67	(—) 0.97	0.0341	8.10	0.46
13. Kadi	0.0318	7.62	(—) 0.02	0.0265	6.27	(—) 1.37	0.0280	6.60	1.04
14. Palitana	0.0528	12.87	5.23	0.0528	12.87	5.23	0.0528	12.87	5.23
15. Mangrol	0.0441	10.66	3.02	0.0441	10.66	3.02	0.0441	10.66	3.02
16. Anjar	0.0752	18.90	11.26	0.0600	14.78	7.14	0.0725	18.20	10.56

ANNEXURE II.4 (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
17. Wankaner	0.0592	14.61	6.97	0.0472	11.47	3.83	0.0490	11.90	4.26
18. Mandvi	0.0528	12.89	5.25	0.0528	12.89	5.25	0.0528	12.89	5.25
19. Limbdi	0.0433	10.54	2.90	0.0433	10.54	2.90	0.0433	10.54	2.90
20. Rajpipla	0.0407	9.77	2.13	0.0407	9.77	2.13	0.0407	9.77	2.13
21. Umreth	0.0394	9.47	1.83	0.0195	4.64	(—) 3.00	0.0218	5.20	(—) 2.44
Municipalities class A	0.0547	13.14	5.50	0.0504	12.33	4.69	0.0531	13.00	5.36
Municipalities class B	0.0508	12.39	4.75	0.0430	10.42	2.78	0.0401	9.60	1.96
Municipalities class C	0.0437	11.62	3.98	0.0426	10.29	2.65	0.0446	10.90	3.26
Total municipalities	0.0457	11.05	3.41	0.0398	9.60	1.96	0.0451	10.90	3.26
All urban local bodies*	0.0677	16.89	9.40	0.0539	13.18	5.69	0.0510	12.50	5.01

Notes : All coefficients are significant at 1 per cent level.

*Relates to the period 1970-71 to 1980-81.

Source : Computed on the basis of the data supplied by Municipal Corporations and Municipalities.