Quantitative Analysis of Entertainment Tax Revenue : A Case Study of Gujarat

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Introduction

RESOURCE mobilisation in different States in India has come to receive considerable attention in recent years. This is due to an increase in the pace of planned economic development as well as growing demands on the States in their discharge of non-development functions, both of which have necessitated a vigorous search for greater financial resources[1].

Among the avenues of taxation open to the States, sales tax occupies an important place. There are a number of studies available on the subject of sales taxation in India in general and with reference to some specific States[2]. Apart from the studies on sales taxation, there are no specific studies on particular taxes levied by the States. This deficiency has been noticed in a recent study on composition of tax revenues of States[3]. Next to sales tax, motor vehicles tax, State excise, electricity duty and passenger and goods taxes rank in the descending order of importance. Though there is some variation among the States in regard to the role of entertainment tax in the total tax revenues of the States, it has grown in importance over time. Entertainment tax is a service tax and increase in revenue from this source reflects its nature of being elastic with respect to income.

The objective of this paper is to examine the role of entertainment tax in the total tax revenues of the Gujarat State by undertaking a quantitative analysis of the revenue from the tax with a view to arrive at its determinants. The first section gives a descriptive account of the entertainment tax in the State and a comparative picture with that of the rest of the country. In the second section, an attempt is made to build an econometric model of the entertainment tax. The third section presents the results of empirical analysis. A summary of the study and policy conclusions are offered in the final section of the paper.

I

THE Constitution of India empowers the States to levy a tax on entertainments by virtue of the entry 62 in the list II of its Seventh Schedule. This takes the form of a levy on the price charged for admission to places of entertainment or amusement which include cinemas, theatrical performances, exhibition, sports and games and variety entertainment.

Historically speaking, this tax was levied for the first time by Bengal in 1922, which was followed by Bombay in 1923. Other provinces adopted the levy since 1936. To-day all the State Governments levy the entertainment tax [4].

There are two ways of levying entertainment tax. One is to charge the tax on the tickets sold and the other is to collect the tax on the basis of a specified percentage of gross total collections. As part of the first method it is insisted that the tickets be serially numbered and properly accounted for. The tax would be a percentage of the gross admission charge. This would mean that the tax element is included in the admission charge itself[5].

The tax rates can be of a specified amount or in percentage terms, on a slab basis. Keeping a specified amount per each class of admission has certain disadvantages; if the admission rates are changed, the specific amount by its nature remains the same and thus there is a lack of flexibility always associated with a specific duty[6].

Hence an ad valorem percentage basis has been advocated for[7]. Now almost all the States have adopted this model. The distinction in classes of admission may differ according to degree of urbanness. Further, a certain degree of differentiation is effected in percentage rates applicable to different classes of tickets.

The entertainment tax thus levied is not a generalised tax. Each State has a scheme of exemptions from the tax on a selective basis[8]. Entertainments, whose proceeds are applied to philanthrophic ends, are generally exempt from the tax, provided the whole of the proceeds or the remainder, after deducting a certain percentage for expenditure towards the arrangement of the entertainment are devoted to the purpose. Further, entertainments of educational and cultural value also enjoy exemption. Appreciating the difficulties in defining a given entertainment being one of cultural or educational value, certain States have issued executive instructions which generally exempt whole categories such as dance or classical music performances provided rates of admission charged do not exceed certain maximum level[9]. Further, in some States committees of advisory character function to preview films or performances, the producers of which seek to obtain exemption on the ground that their productions are of cultural or educational value[10].

In Gujarat State, the levy of entertainment tax is regulated by a statute—The Bombay Entertainments Duty and Advertisements Tax Act (1923). For the purpose of levying a differential tax structure, ten major cities[11] have been singled out from the rest of the State. The criterion behind the choice of the cities seems to be population, density of which is intimately connected with the urban characteristics such as relatively higher degree of industrialisation. Towns other than these ten cities come under the description "other areas".

The rates of entertainment tax on a slab basis for the urban areas are higher than those for the rural areas. This is based on the principle of ability to pay. It is assumed that the people in the urban areas can bear a higher degree of incidence than those residing in rural areas.

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The rates for ten major cities[12] are:

Slab rates of admission	*Entertainment duty as a percentage*
First 100 paise or part	37.5
Next 100 paise or part	55
Next amount to any extent	65

The rates for the other areas[13] are:

Slab rates of admission	*Entertainment duty as a percentage*
First 100 paise or part	33
Next 100 paise or part	47.5
Next amount to any extent	60

The scheme of exemption is on the lines indicated earlier. Entertainments of a wholly educational character are exempt from the payment of entertainment duty. Further, benefit performances in aid of philanthropic or charitable institutions are exempt provided the expenses for such performances do not exceed 25% of total proceeds from them. Further, the State Government has special powers under the Act to exempt any entertainment or class of entertainments from liability to entertainment duty[14].

In addition to the above provision, executive instructions have been issued to exempt the following performances from entertainment tax provided the rates of admission do not exceed certain maximum scales[15]. They are entertainments performed in aid of Famine Relief Fund and Police Welfare Fund, all-India dramatic performances including ballet, bhavai and puppet shows, Indian classical and light music and Kavi sammelan to which tickets of admission do not exceed Rs. 10.

Occasional sports events such as cricket matches are also exempted by executive orders provided the rates of admission do not exceed Rs. 10 per day[16]. The main idea is to promote interest in sports and encourage talents in games.

Movies provide the chief source of entertainment tax revenue. This is understandable since other kinds of entertainment are either seasonal such as circus or run on non-commercial lines such as classical music performances or performances put up by amateurs, rates of admission to which are usually below the permissible maximum scales for exemption purpose.

The State Government has designed a scheme for encouragement to local movie industry. Films produced in the studios situated in Gujarat and produced with equipment locally installed in those studios are exempt from payment of entertainment tax for a period of six months and the studios are given a cash subsidy. The infant industry promotion scheme has been in operation since mid-1975 and is likely to be of a short-term nature[17].

Revenue from entertainment tax in Gujarat has been steadily increasing over time. From a figure of Rs. 0.64 crores in 1960-61 when the State came into being, it has grown to Rs. 8.73 crores in 1974-75, for which comparable figures are available for other States as well (Table 1).

While the State's total tax revenues have recorded a growth rate of 13.2% per annum over the fourteen-year period, the entertainment tax revenue has grown at the rate of 18.8% per annum as against the growth rate of 18.4% per annum in regard to the revenue from sales tax, the chief source of tax revenue[18].

On the all-India level, the corresponding annual rates of growth of all States' total tax revenue, and revenues from entertainment tax and sales tax are 12.0%, 16.6% and 16.6% respectively (Table 2).

In 1969-70 the first year of the Fourth Plan, entertainment tax contributed 3.41% to the total tax revenue of Gujarat State as against 2.44% in 1964-65 and 4.52% in

Table—1

Total tax revenues and revenues from sales tax and entertainment tax of all States and Gujarat State : 1960-61 to 1975-76

(Rupees in crores)

Year	*Gujarat State's total tax revenue excluding share in Central taxes*	*Gujarat sales tax revenue*	*Gujarat entertainment tax revenue*	*All States total tax revenues excluding share in Central taxes*	*All States sales tax revenue*	*All States entertainment tax revenue*
1960–61	20.65	10.53 (50.99)	0.64 (3.10)	430.90	158.78 (36.85)	9.81 (2.28)
1961–62	35.96	13.82 (38.43)	0.97 (2.70)	483.60	181.40 (37.51)	15.10 (3.12)
1962–63	48.20	15.37 (31.89)	1.12 (2.32)	570.00	208.90 (36.65)	18.20 (3.19)
1963–64	54.88	19.60 (35.71)	1.33 (2.42)	939.06	268.31 (28.57)	22.56 (2.40)
1964–65	63.17	24.80 (39.26)	1.54 (2.44)	1022.42	318.42 (31.14)	25.11 (2.46)
1965–66	67.46	26.98 (39.99)	1.75 (2.59)	1117.75	367.79 (32.90)	29.44 (2.63)
1966–67	81.34	35.14 (43.20)	2.35 (2.89)	1305.68	442.69 (33.90)	35.25 (2.70)
1967–68	69.02	39.22 (56.82)	2.48 (3.59)	1065.52	509.10 (47.78)	25.80 (2.42)
1968–69	77.83	45.89 (58.96)	2.70 (3.47)	1205.00	580.76 (48.20)	30.53 (2.53)
1969–70	92.94	54.57 (58.72)	3.17 (3.41)	1355.51	667.96 (49.28)	50.42 (3.72)
1970–71	108.08	63.83 (59.06)	3.77 (3.49)	1527.85	766.21 (50.15)	57.52 (3.76)
1971–72	125.09	73.62 (58.85)	4.94 (3.95)	1695.28	839.38 (49.51)	62.79 (3.70)
1972–73	140.97	87.42 (62.01)	7.05 (5.00)	1928.48	976.49 (50.64)	76.56 (3.97)
1973–74	151.19	93.97 (62.15)	6.83 (4.52)	2305.37	1142.82 (49.57)	99.59 (4.32)
1974–75	201.15	134.52 (66.88)	8.73 (4.34)	N.A.	N.A.	N.A.
1975–76	235.91	155.84 (66.06)	10.03 (4.25)	N.A.	N.A.	N.A.

SOURCE:—Reserve Bank of India, *R.B.I. Monthly Bulletin*, various issues.
NOTE:—Figures in parentheses denote proportion of total tax revenue in percentage terms. N.A. = Not available.

Table—2

Exponential trend equations fitted for total tax revenue, sales tax revenue and entertainment tax revenue of all States and Gujarat State and the compound rate of growth (r)

Period	*Nature of revenues*	*Exponential trend equation fitted* $\text{Log } Y = \text{Log } a + T \text{ Log } (1+r)$	R^2	*Compound rate of growth (in percentage)*
	All States all tax revenue	Log Y=4.667+0.047 T (116.2) (10.46)	0.903	12.02
	All States sales tax revenue	Log Y=4.152+0.066 T (325.0) (44.05)	0.994	16.57
1960-61 to	All States entertainment tax revenue	Log Y=3.023+0.066 T (72.85) (13.51)	0.939	16.56
1973-74	Gujarat State all taxes revenue	Log Y=3.453+0.054 T (81.49) (10.82)	0.906	13.21
	Gujarat State sales tax revenue	Log Y=2.993+0.073 T (204.5) (42.62)	0.997	11.84
	Gujarat State entertainment tax revenue	Log Y=1.801+0.075 T (74.79) (26.40)	0.934	18.76
	Gujarat State total tax revenue	Log Y=3.441+0.056 T (92.33) (14.52)	0.937	13.76
1960-61 to	Gujarat State sales tax revenue	Log Y=2.985+0.074 T (220.3) (53.21)	0.996	18.74
1975-76	Gujarat State entertainment tax revenue	Log Y=1.798+0.075 T (86.19) (34.86)	0.988	18.90
	Gujarat State entertainment tax revenue	Log Y=2.277+0.084 T (64.02) (10.51)	0.956	21.3
	Gujarat State net entertainment tax revenue	Log Y=2.341+0.044 T (187.0) (15.77)	0.980	10.7
1967-68 to	Gujarat State rural entertainment tax revenue	Log Y=1.653+0.073 T (40.72) (8.05)	0.929	18.3
1973-74	Gujarat State rural net entertainment tax revenue	Log Y=1.718+0.033 T (36.34) (3.15)	0.666	7.9
	Gujarat State urban entertainment tax revenue	Log Y=2.157+0.087 T (45.84) (8.15)	0.931	22.2
	Gujarat State urban net entertainment tax revenue	Log Y=2.221+ 0.47 T (86.85) (8.29)	0.931	11.4

NOTES:—*1.* Y and T refer to tax revenues, the dependent variable and the time trend respectively.
2. Figures in parentheses denote 't' values.
3. R coefficient of determination.

1973-74, the last year of the Fourth Plan. The corresponding all-India average contributions of entertainment tax to total tax revenue in percentage terms are 3.72, 2.46 and 4.32 for the years 1969-70, 1964-65 and 1973-74.

As observed in our general discussion, entertainment tax is levied on the gross admission charge and hence becomes part of it. Thus, the whole of the tax is passed on to the patron of the entertainment. Overall incidence of the tax can be assessed by relating the per capita tax revenue to per capita consumer expenditure.

Table 3 presents the per capita consumer expenditure for different States and the corresponding per capita entertainment tax for the year 1963-64. As no recent figures are available, the 1963-64 figures of per capita expenditure are used for arriving at the per capita expenditure in 1973-74 prices[19]. The per capita tax revenue from entertainment tax is then shown as a percentage of the per capita consumer expenditure. There is an heroic assumption made here that the pattern of consumer expenditure has remained unchanged over the ten-year period.

From Table 3 it may be seen that for Gujarat the entertainment tax as a percentage of consumer expenditure is 0.3 for 1973-74. The corresponding figures for leading States such as Maharashtra and Tamil Nadu are 0.5 and 0.4 respectively.

II

An Econometric Analysis

IN this section an attempt will be made to construct a simple econometric model of entertainment tax revenue.

As observed earlier entertainment tax is made part of the gross admission fee charged to the patron and is thus borne by the latter. Aggregate entertainment tax revenue of the State can, therefore, be hypothesised to depend on the aggregate consumer expenditure or aggregate State income. As time series figures of aggregate income of the State are more readily available than those of consumer expenditure and income is to positively associate with consumer expenditure the former can be utilised as a candidate variable. Apart from this variable, yet another variable affects the tax revenue and this is the number of theatres in the State. While information is available to form a time series of number of theatres, information relating to number of seats in each particular slab is not available. Hence, if we use the number of theatres as a variable, we are forced to assume that there is no year to year variation in regard to the distribution of total number of seats among different slab rates of admission.

Thus a simple functional relationship could be formulated:

$$ED_G = f(Y, TR) \qquad (1)$$

where, ED_G = Gross entertainment tax revenue,
Y = Net domestic State product, and
TR = Number of theatres.

If we assume that this functional relationship takes a specific form such as $ED_G = a\, Y^b\, TR^c$, b and c the parametric coefficients would signify the estimates of elasticities of gross entertainment tax revenue with respect to net domestic State product and with respect to number of theatres respectively. The regression equation for estimation purpose would then be:

$$\log ED_G = \log a + b \log Y + c \log TR + e \qquad (2)$$

where, in addition to the symbol already explained above, e is the stochastic error term.

Table—3

Incidence of sales tax and entertainment tax as expressed in terms of percentage of consumer expenditure for States and All-India

States	Per capita consumer expenditure (in rupees at 1973-74 prices)	Population in 1971 (in crores)	Total consumer expenditure (in rupees crores at 1973-74 prices)	Sales tax collected in 1973-74 (in Rs. crores)	Sales tax as proportion of total consumer expenditure (in percentage)	Entertainment tax collected in 1973-74 (in Rs. crores)	Entertainment tax as proportion of total consumer expenditure (in percentage)
Andhra Pradesh	667.66	4.59	3064.56	73.86	2.41	7.01	0.229
Assam	829.97	1.63	1352.85	16.18	1.20	1.30	0.096
Bihar	505.23	5.99	4137.44	52.40	1.27	3.57	0.086
Gujarat	758.82	2.87	2177.81	93.97	4.31	6.83	0.315
Haryana	929.63	1.06	985.41	31.05	3.15	2.76	0.280
Jammu & Kashmir	853.50	0.49	418.21	3.49	0.83	0.81	0.194
Kerala	655.28	2.27	1487.49	53.80	3.62	0.71	0.048
Madhya Pradesh	724.49	4.47	3238.47	59.03	1.82	4.66	0.144
Maharashtra	785.40	5.36	4209.74	231.15	5.49	22.78	0.541
Mysore	653.07	3.10	2024.52	68.22	3.37	7.08	0.350
Orissa	606.93	2.33	1414.15	22.47	1.59	0.79	0.049
Punjab	929.63	1.42	1320.07	52.51	3.98	3.26	0.247
Rajasthan	761.77	2.75	2094.87	44.88	2.14	2.20	0.105
Tamil Nadu	771.83	4.35	3357.46	132.25	3.94	14.45	0.430
Uttar Pradesh	673.83	9.28	6253.14	101.18	1.62	12.35	0.198
West Bengal	854.33	4.74	4049.52	101.69	2.51	8.39	0.207
All-India	733.07	58.15	42628.02	1142.82	2.68	99.59	0.234

NOTES:—*1.* Per capita expenditure figures were drawn from the Government of India, Ministry of Finance, *Incidence of Indirect Taxation, 1963-64* and were converted into 1973-74 prices.

2. Population figures were drawn from Government of India, Registrar General, *Report of Expert Committee on Population Projections, 1973-74.*

3. Figures relating to sales tax and entertainment tax revenue for the year 1973-74 were drawn from the Reserve Bank of India, *R.B.I. Monthly Bulletin*, September 1975, pp. 871-894.

Gross entertainment tax revenue is made up of two components: (*i*) due to the influence of gross domestic State product; and (*ii*) due to revisions in tax structure resorted from time to time. Hence 'b' can be more appropriately called a coefficient of exploitation of tax revenue source[20]. In order to obtain a true estimate of income elasticity, we have to remove the influence of revisions in rate structure and obtain the net yield of tax revenue.

The net yield of tax revenue can then be regressed on the same independent explanatory variables.

$$\log ED_N = \log a_1 + b_1 \log Y + c_1 \log TR + e_1 \quad (3)$$

where, in addition to the variables already explained above, ED_N would denote net tax yield of entertainment tax. The estimated b_1 would be the measure of income elasticity.

As there are divergences between the urban and rural sectors in their contribution to the State income and in the distribution to the State income and in the number of theatres available to them, it would be appropriate to conduct disaggregated analyses into urban and rural sectors. Further, such an approach would be more meaningful in regard to the coefficient of exploitation of revenue, since there is a differential rate structure operating between these two sectors, the one applicable to the urban being more progressive than the one applicable to the rural sector.

Through linear regression analysis, the following equations can be fitted:

$$\log ED_{G,S} = \log a_{11} + b_{11} \log Y_S + c_{11} \log TR_S + e_{11} \quad (4)$$

$$\log ED_{N,S} = \log a_{21} + b_{21} \log Y_S + c_{21} \log TR_S + e_{21} \quad (5)$$

$$\log ED_{G,U} = \log a_{31} + b_{31} \log Y_U + c_{31} \log TR_U + e_{31} \quad (6)$$

$$\log ED_{N,U} = \log a_{41} + b_{41} \log Y_U + c_{41} \log TR + e_{41} \quad (7)$$

$$\log ED_{G,R} = \log a_{51} + b_{51} \log Y_R + c_{51} \log TR_U + e_{51} \quad (8)$$

$$\log ED_{N,R} = \log a_{61} + b_{61} \log Y_R + c_{61} \log TR_U + e_{61} \quad (9)$$

where, subscripts G and N refer to the nature of revenues, gross and net and S, U and R refer to areas, State, urban and rural respectively, log a_{i1}'s (i=1, 2 ...6) denote intercepts, b_{i1}'s (i=1, 2 ...6) and c_{i1}'s (i=1, 2 ...6) (i=1, 2 ...6) and c_{i1}'s (i=1, 2 ...6) signify measures of elasticities of entertainment tax revenue, gross or net with reference to State, urban or rural areas with respect to income of the State, urban or rural sector as the case may be and with respect to theatres in the State, urban or rural as the case may be respectively, e_{i1}'s (i=1, 2 ...6) refer to error terms.

The above model assumed an aggregative approach. It can be modified to fit a per capita model as well. The regression equations are:

$$\log \left(\frac{ED}{P}\right)_{G,S} = \log a_{12} + b_{12} \log \left(\frac{Y}{P}\right)_S + c_{12} \log\left(\frac{TR}{P}\right)_S + e_{12} \quad (10)$$

$$\log \left(\frac{ED}{P}\right)_{N,S} = \log a_{22} + b_{22} \log \left(\frac{Y}{P}\right)_S + c_{22} \log\left(\frac{TR}{P}\right)_S + e_{22} \quad (11)$$

$$\log \left(\frac{ED}{P}\right)_{G,U} = \log a_{32} + b_{32} \log \left(\frac{Y}{P}\right)_U + c_{32} \log\left(\frac{TR}{P}\right)_U + e_{32} \quad (12)$$

$$\log \left(\frac{ED}{P}\right)_{N,U} = \log a_{42} + b_{42} \log \left(\frac{Y}{P}\right)_U + c_{42} \log\left(\frac{TR}{P}\right)_U + e_{42} \quad (13)$$

Table—4

Results of log linear regression analysis of aggregate gross and net entertainment tax revenue for State, urban and rural areas: 1967-68 to 1973-74

(Figures in parentheses denote 't' values)

Dependent variable	Intercept	Independent explanatory variables						R^2	*D.W.*	*Degree of freedom*
		log Y_S	*log* Y_U	*log* Y_R	*log* TR_S	*log* TR_U	*log* TR_R			
log $ED_{G \cdot S}$	−3.868* (−3.67)	0.218 (0.46)	—	—	2.555* (3.40)	—	—	0.906	1.554	4
log $ED_{N \cdot S}$	−0.890 (−1.61)	0.275 (1.11)	—	—	1.109* (2.81)	—	—	0.904	2.147	4
log $ED_{G \cdot U}$	0.976 (0.65)	—	0.207 (0.52)	—	—	1.302* (4.32)	—	0.933	1.644	4
log $ED_{N \cdot U}$	0.017 (0.02)	—	0.256 (1.03)	—	—	0.610* (3.23)	—	0.912	2.496	4
log $ED_{G \cdot R}$	−5.778 (−0.93)	—	—	1.289* (2.40)	—	—	0.563 (0.19)	0.597	2.389	4
log $ED_{N \cdot R}$	−5.685 (−1.92)	—	—	0.582* (2.27)	—	—	2.292 (1.64)	0.682	2.384	4

NOTES:—*1.* *Signifies that the estimated coefficients are significant at 5% level.
2. D.W.=Durbin Watson Statistic.
3. For explanation of symbols, see the text.

$$\log\left(\frac{ED}{P}\right)_{G,R} = \log a_{52} + b_{52}$$
$$\log\left(\frac{Y}{P}\right)_R + c_{52}\log\left(\frac{TR}{P}\right)_R + e_{52} \quad (14)$$
$$\log\left(\frac{ED}{P}\right)_{N,R} = \log a_{62} + b_{62}$$
$$\log\left(\frac{Y}{P}\right)_R + c_{62}\log\left(\frac{TR}{P}\right)_R + e_{62} \quad (15)$$

where, in addition to the symbols explained earlier P refers to population of the whole State or in urban or rural areas, as the case may be, log a_{i2}'s (i=1, 2 ...6) denote intercepts, b_{i2}'s (i=1, 2 ...6) signify elasticity measures of per capita entertainment tax revenue, gross or net, of the State, urban or rural areas with respect to per capita income of the State, urban or rural sectors as the case may be and c_{i2}'s (i=1, 2 ...6) refer to the elasticities of per capita tax gross or net revenue of the State, urban or rural sectors with respect to number of theatres in State or urban or rural areas, as the case may be.

III

Results of Regression Analysis

THE gross and the net entertainment tax revenues were subject to regression analysis. Equations from (*4*) to (*9*) and equations from (*10*) to (*15*) pertaining to aggregate and per capita revenue were fitted by the OLS method. The choice of the period was influenced more by the data limitations than by any other considerations. The period covered is from 1967-68 to 1973-74 and in all we have seven observations. An appendix to this paper lists the data sources and describes the procedure adopted for constructing data for the purpose of analysis.

Empirical results are presented in Tables 4 and 5. Aggregate entertainment tax revenue analysis shows that the estimated equations are fairly good fits as reflected in the R^2 obtained. However, the coefficients of exploitation of tax revenue (elasticity measure of gross entertainment tax revenue with respect to income) are not significant except in the rural sector. The rural coefficient of exploitation is greater than unity (1.3) and is significant, the level of significance being chosen 5%. This means a given 1% increase in rural income would result in an 1.3% increase in income in gross entertainment tax revenue for the rural sector. The result is not surprising. The consumer earmarks his resources for entertainment only after he meets his expenditure on essentials such as food, clothing, shelter. Whereas the urban sector offers a wide sphere for consumer expenditure including food and entertainment, the rural sector offers a limited scope for such expenditure. In other words, the consumer in rural sector devotes his residual expenditure on movies relatively to greater extent than his counterpart in the urban areas. Hence, the coefficient of exploitation of tax revenue source is significantly higher in the rural region.

The above view is confirmed when we take up the analysis of net tax revenue. Again the elasticity coefficient with respect to income is not significant except in the rural sector. However, it is less than one (0.6). In other words, a given 1% increase in rural income would give rise to only 0.6% increase in net tax revenue.

As regards the other independent explanatory variable, namely the number of theatres, its impact is significant for the State as a whole. The gross revenue elasticity coefficient with respect to the number of theatres is higher than net revenue elasticity coefficient. A 1%

Table—5

Results of log linear multiple regression analysis of per capita gross and net entertainment revenue of the State, urban and rural areas: 1967-68 to 1973-74

(Figures in parentheses denote 't' values)

Dependent variable	*Intercept*	*Independent explanatory variables*						R^2	*D.W.*	*Degree of freedom*
		$log\left(\frac{Y}{P}\right)_S$	$log\left(\frac{Y}{P}\right)_U$	$log\left(\frac{Y}{P}\right)_R$	$log\left(\frac{TR}{P}\right)_S$	$log\left(\frac{TR}{P}\right)_U$	$log\left(\frac{TR}{P}\right)_R$			
$\log\left(\frac{ED}{P}\right)_{G,S}$	—0.849 (—0.46)	0.532 (0.89)	—	—	3.067* (2.53)	—	—	0.783	1.443	4
$\log\left(\frac{ED}{P}\right)_{N,S}$	—0.719 (0.87)	0.348 (1.29)	—	—	1.133 (2.07)	—	—	0.769	1.961	4
$\log\left(\frac{ED}{P}\right)_{G,U}$	—0.714 (—0.36)	—	0.297 (0.56)	—	—	1.557* (3.88)	—	0.806	1.610	4
$\log\left(\frac{ED}{P}\right)_{N,U}$	—1.131 (—1.03)	—	0.529 (1.63)	—	—	0.529 (1.63)	—	0.774	2.695	4
$\log\left(\frac{ED}{P}\right)_{G,R}$	—3.673* (—2.47)	—	—	0.869 (1.52)	—	—	2.232 (1.32)	0.607	2.603	4
$\log\left(\frac{ED}{P}\right)_{N,R}$	—1.825 (—1.84)	—	—	0.508 (1.34)	—	—	0.243 (0.22)	0.318	2.594	4

NOTES:—*1.* *Signifies that the estimated coefficients are significant at 5% level.
2. D.W.=Durbin Watson Statistic.
3. For explanation of symbols, see the text.

rise in number of theatres would increase gross revenue for the State as a whole by 2.6%, and the net tax revenue by 1.1%.

In the disaggregated study, the influence of theatres on either gross or net tax revenue in the rural sector is not significant, whereas it is significant in the urban sector. A 1% increase in number of theatres would increase gross revenue by 1.3% and net revenue by 0.61% in the urban areas.

If we turn to the per capita tax revenue analysis, we find generally the explanatory power of the independent variables is less, as reflected in the relatively low R^2 obtained.

None of the coefficients of exploitation of tax revenue source and none of the measures of income elasticity is significant. But the coefficients of elasticity of gross per capita tax revenue basis with respect to per capita number of theatres for the State as a whole and for urban areas are significant. An increase in the number of theatres per capita by 1% in the whole State and urban areas would result in an increase in gross tax revenue per capita from entertainment tax by 3.1% and 1.6% respectively. These two elasticity measures are not significant for rural areas.

As regards the estimates of elasticity of net tax revenue with respect to number of theatres, only the estimate in regard to the whole State is significant, the measures in regard to the urban and rural areas where disaggregated analysis was done, being insignificant. An increase in the number of theatres by 1% would result in an increase in net tax revenue by 1.1%.

To sum up, the aggregate model seems to be more appropriate from the point of view of explanatory power of the independent variables. Rural sector seems to be responding significantly to the tax exploitation effort whereas the urban sector has a higher elasticity of gross tax revenue with respect to number of theatres. For the State as a whole, income as an explanatory variable has no impact on the gross or net tax revenue but the number of theatres as a variable does have a significant positive influence on the gross and net tax revenue from the entertainment tax.

Summary and Conclusions

Entertainment tax as a source of tax revenue has been playing an increasingly important role in the States' finances. At the all-India level, total tax revenues have grown at 12.0% per annum over 1960-61 to 1973-74, whereas entertainment tax revenue has grown at 16.6% annually. In Gujarat State, the corresponding growth rates of total tax revenues and of the revenue from entertainment tax are 13.2% and 18.4%, respectively.

A regression analysis of entertainment tax revenue on an aggregated level under certain assumptions conducted with a view to arriving at its determinants reveals that variations of income in the rural sector have been significantly influencing the variations in gross or net tax revenues compared to variations of income in the urban sector.

Theatres in the State as a whole are a significant determinant. The magnitude of elasticities of both gross and net tax revenues with respect to theatres is more than unity. A 1% rise in the number of theatres leads to 2.6% rise in gross revenue and 1.1% rise in net tax revenues for the State as a whole. The disaggregated study reveals that it is in the urban sector that the theatres are the influential determinant. Their influence on the rural tax revenues, both gross and net, is not significant.

The policy conclusions emerging from the study are:

—Rural sector offers a good exploitation potential for entertainment tax revenue; and

—The tax base, namely, the number of theatres needs to be augmented.

As regards the first conclusion, rise in income in the rural sector is part of overall growth in the economy, especially in the agricultural sector. The planned efforts both at the Central and the State levels are already directed towards this objective.

With regard to the second policy implication, deliberate allocation of investible resources in the Movie theatres construction industry seems justified. At the all-India level, certain State Governments have taken up the matter very seriously[21]. In Gujarat, efforts are underway but the progress has been slow[22].

One obvious solution would be to earmark a percentage of entertainment tax revenue and transfer it to the State Investment Corporations for disbursement of loans to Movie theatres construction industry. The administrative aspects of the loan programme would be part of the investment corporations' activities and this would not entail any administrative burden to the State Governments.

References

1. For a detailed account of problems faced in this area and efforts made towards mobilisation of resources, see Joshi, M.D., (Ed) *Mobilisation of State Resources,* New Delhi: Impex India, 1967.
2. Some notable studies are:
   (a) Lakdawala, D.T. and Nambiar, K.V., *Commodity Taxation in India,* Bombay: Popular Prakashan, 1972.
   (b) Mahler (Jr.), William, *Sales and Excise Taxation in India,* Bombay: Orient Longman, 1969.
   (c) National Council of Applied Economic Research, *Incidence of Taxation in Gujarat,* New Delhi: NCAER, 1970.
   (d) National Council of Applied Economic Research, *Review of Sales Tax in Andhra Pradesh,* New Delhi: NCAER, 1971.
   (e) Purohit, M.C., *Sales Taxation in India,* New Delhi: S. Chand & Co., 1975.
3. Purohit, M.C., "Growth and Composition of States' Tax Revenues in India", *Artha Vijnana,* Vol. XVIII, No. 2, June 1976, p. 105.
4. For a historical account, see Ministry of Finance, Deptt. of Economic Affairs, Govt. of India, *Report of the Taxation Enquiry Commission,* Vol. III, Chapter VIII, pp. 110-111, Delhi: Manager of Publications, 1955.
5. In the earlier days special adhesive stamps were provided for being applied to tickets. In some cases tax is collected on the basis of a specified percentage of the gross collections.
6. Previously in Uttar Pradesh and the former Bombay State, specific amount was levied on a slab-basis on tickets. Reviewing the position the Film Enquiry Committee set up by the Government of India in 1957 favoured the tax being levied on a percentage basis.
7. *Report of the Taxation Enquiry Commission,* p. 113.
8. A general impression is that the scheme of exemption is needlessly complicated from the point of view of Government and needlessly harrassing from the point of view of those who provide the entertainment.
9. Taxation Enquiry Commission recommended that entertainment should be divided into two categories: professional and non-professional and that all non-professional entertainments should be exempted from the liability of payment of tax.
10. These Committees owe their existence to the recommendation of the Taxation Enquiry Commission. *Report of the TEC,* p. 114.
11. The ten major cities are Ahmedabad, Baroda, Rajkot, Surat, Jamnagar, Bhavnagar, Broach, Junagadh, Nadiad and Porbandar.
12. Section 3 (b) (I) of the Bombay Entertainments Duty Act (1923).
13. Section 6 (b) (II) of the B. Es. D. Act (1923).
14. Section 6 (3) of the B. Es. D. Act (1923).
15. The exempted performances are listed in the notification No. ENT-1062-TH of October, 24 1962 of Finance Department issued under Section 6 (3) of the Act.
16. Cricket matches of the exempted kind are the Ranji and Duleep Trophy matches and first class matches played against the international teams.
17. This is known as incentive scheme to film industry in Gujarat State. Details are given in the Government Resolution No. FLM 1072/4044-G of July 25, 1975 of Industries, Mines and Power Department.
18. For estimating the growth rate, exponential trend equations were fitted. The equation takes the form log $R=a+b$ T where R is the tax revenue, a intercept, T is the year and $b=\log (i+r)$, r will be calculated as antilog of b *minus* one.
19. The source for per capita State expenditures is Ministry of Finance, Government of India, *Incidence of Taxation in India, 1958-59 and 1963-64,* New Delhi, Ministry of Finance, 1965.
20. This is also called the 'buoyancy' of tax revenue. For a discussion on various concepts and methodology, see Chelliah, R.J., "Elasticity and Rate of Growth of State Taxes" in Joshi, M.D. (Ed.), *Mobilisation of State Resources,* op. cit., pp. 34-58.
21. Among the various schemes adopted by the State Governments to finance theatre construction, the following are worth mentioning:
    (a) The Andhra Pradesh Film Development Corporation set up by the State Government is to be allotted each year 75 per cent of the entertainment tax revenue collected. The Corporation sanctions loans to theatre construction industry only if the cost of a theatre exceeds Rs. 6 lakhs and the maximum amount in each case is Rs. 3 lakhs. The loan is repayable in 84 monthly instalments and the rate of interest charged is 13 per cent with a rebate of one per cent for prompt repayment.
    (b) The Tamil Nadu State Government has set up the Tamil Nadu Theatre Corporation Limited for advancing loans on easy terms for construction of semi-permanent and permanent theatres. Loans are also available for conversion of semi-permanent theatres into permanent ones.
    (c) The West Bengal State Government has announced a scheme of subsidising the new cinema theatres. The subsidy would be equal to the entertainment tax proceeds collected from such new theatres for a period of three years.
22. In Gujarat, the State Industrial Investment Corporation Limited was financing theatre construction activity through a loan programme in 1969 and 1970. The programme has been discontinued since 1971. Total amount disbursed under this scheme is about Rs. 91 lakhs and the number of theatres so financed is 14. The maximum loan sanctioned for theatres was Rs. 11 lakhs.