C H A P T E R - III

INDUSTRIALISATION AND REVENUE OF THE
ICHALKARANJI MUNICIPALITY

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3.1 INTRODUCTION :

In this chapter we discuss the role of industrilisation and revenue growth of the Ichalkaranji Municipality. The main items of revenue are municipal rents and taxes, taxes under special Acts, income drived from properties, grants and contribution etc.

3.2 THE ROLE OF THE INDUSTRIALISATION IN THE GROWTH OF THE ICHALKARANJI MUNICIPALITY :

The role of the industrilisation in revenue growth of the Ichalkaranji Municipality, is explained by the mathematical instrument i.e. correlation between net income or*revenue* and population, net income and labour force, net income and shops and commercial establishment, net income and electricity etc.

TABLE NO.3.1

CORRELATION BETWEEN NET INCOME AND POPULATION

Sr. No.	Year	Net Income(Rs.)	Population
1.	1951	2,75,487	27,423
2.	1961	13,99,311	50,973
3.	1971	71,17,259	87,731
4.	1981	3,36,45,091	1,33,704

SOURCE : Annual Reports of Ichalkaranji Municipality.
NOTE :   Here net income means income from municipal rents and taxes, income from properties and grants and contributions. It does not include income from capital account.

3.2.1 The Table No. 3.1 shows that the relationship between net income and population since 1951 to 1981, has a high degree of positive correlation(r = 0.93). The correlation calculated as above between two variables is 0.93. The correlation of 0.93 means 86 per cent of the variation between net income and population is explained.

It is sufficiently clear that, due to the increase of population in the area of the Ichalkaranji Municipality there is a constant growth in the municipal income(Ichalkaranji Municipality).

As population increases net income from octroi tax, property tax also increases. With an increase in the population consumption of various goods increases which leads to higher revenue from octroi, and secondly, various construction activities like houses and commercial shops establishments also increases with increasing population. It also results in more revenue from property tax.

The method of the calculating r i.e. correlation of above table is given below.

TABLE NO. 3.2

CORRELATION BETWEEN NET INCOME AND LABOUR FORCE

Sr. No.	Year	Net Income(Rs.)	Labour Force
1.	1982	4,35,36,786	39,697
2.	1983	5,31,81,652	42,113
3.	1984	5,73,57,579	44,388
4.	1985	6,31,75,234	45,039
5.	1986	7,83,20,555	45,138
6.	1987	7,37,16,130	47,185

SOURCE : Same as for Table No.3.1

3.2.2 In the above table, we have calculated 'r' value only for the period 1982 to 1987 as earlier data regarding labour force is not available.

The table No. 3.2 shows the correlation between net income and labour force which is 0.89. This high correlation means about 79 per cent of the variation between net income and labour force is explained.

The 'r' value for net income and labour force is positive and very high. It means net income varies directly with change in the labour force. An increase in the labour force is the result of industrialization in the area. As a result of if we get positive very high correlation value for net income and labour force.

TABLE NO. 3.3

CORRELATION BETWEEN NET INCOME AND SHOPS AND COMMERCIAL

ESTABLISHMENT

Sr. No.	Year	Net Income(Rs.)	Shops and Commercial establishment
1.	1982	4,35,36,786	4,733
2.	1983	5,31,81,652	5,186
3.	1984	5,73,57,579	5,780
4.	1985	6,31,75,234	5,699
5.	1986	7,83,20,555	5,699
6.	1987	7,37,16,130	6,392

SOURCE : Same as for Table No. 3.1

3.2.3 In the above table, we have calculated 'r' value only for the period 1982 to 1987 as earlier data regarding shops and commercial establishment is not available.

The table No. 3.3 shows that, the correlation between net income and shops and commercial establishment is 0.88. This correlation is positive and high. A correlation of 0.88 means that 77 per cent of the variation is explained between net income and shops and commercial establishment.

It is sufficiently clear that due to the increase of shops and commercial establishment in the area of the Ichalkaranji municipality, there is a constant growth in the income of Ichalkaranji Municipality.

TABLE NO.3.4

CORRELATION BETWEEN NET INCOME AND ELECTRICITY

Sr. No.	Year	Net Income(Rs.)	Electricity units in Million
1	1985	6,31,75,234	191.195
2	1986	7,83,20,555	214.66
3.	1987	7,37,16,130	210.304

SOURCE : same as Table No.3.1

3.2.4   In the above table, we have calculated 'r' value only
for the period 1985 to 1987, as earlier data regarding consumption
of electricity is not available.

The table No. 3.4 shows correlation of 0.99 between net
income and electricity, it is a high degree of positive correlation.
The percentage of variation explained between two variable i.e.
net income and electricity is 98.

It is sufficiently clear that, higher consumption of
electricity in the area of the Ichalkaranji Municipality.   Indicates
expanding industrial activity which causes constant growth in
the income of Ichalkaranji Municipality.

TABLE NO. 3.5

CORRELATION VALUES FOR NET INCOME AND THE RELEVANT VARIABLES

Sr. No.	Variable	' r' value
1.	Net Income and Population	0.93
2.	Net Income and Labour Force	0.89
3.	Net Income and Shops and Commercial establishment	0.88
4.	Net Income and Electricity consumption	0.99

SOURCE : SAME As for Table No.3.1

3.2.5 In the above table No. 3.5 'r' values for net income and relevant variables are given. The 'r' values for all the variables are very strong and positive. It means net income increases with an increase in population, labour force, shops and commercial establishment and electricity consumption.

TABLE NO. 3.6

CORRELATION BETWEEN OCTROI TAX AND POPULATION

Sr. No.	Year	Octroi Tax(Rs.)	Population
1	1951	1,53,712	27,423
2	1961	6,69,177	50,973
3	1971	41,41,942	87,731
4	1981	2,25,36,618	1,33,704

SOURCE : Same as for Table No.3.1

3.2.6 The table No.3.6 shows that the relationship between octroi tax and population. The correlation between octroi tax and population is 0.92.

It is sufficiently clear that, due to the increase of population in the area of the Ichalkaranji municipality. There is a constant growth in the income of octroi tax of the Ichalkaranji municipality.

When population of any particular area increases it creates demand for various consumption and capital goods. It leads to higher import of various commodities in that area and as a result octroi revenue increases.

TABLE NO.3.7

CORRELATION BETWEEN OCTROI TAX AND SHOPS AND COMMERCIAL ESTABLISHMENT

Sr. No.	Year	Octroi Tax(Rs.)	Shops and commercial establishment
1	1982	2,27,80,421	4,733
2	1983	3,46,74,827	5,186
3	1984	3,67,38,019	5,780
4	1985	3,99,69,017	5,699
5	1986	4,87,94,029	5,699
6	1987	4,67,02,971	6,392

SOURCE : Same as for Table No. 3.1

3.2.7 In the above table, we have calculated 'r' value only for the period 1982 to 1987 as earlier data regarding shops and commercial establishment is not available.

The table No. 3.7 shows that the correlation between octroi tax and shops and commercial establishment. This correlation value is positive and very high 0.79. It explains almost 62% variations in the relevant variables.

It is sufficiently clear that due to the increase of shops and commercial establishment in the area of the Ichalkaranji municipality, there is a constant growth in the income of octroi tax of the Ichalkaranji Municipality.

Increasing number of shops and commercial establishment is the result of increasing industrialization and business and so the octroi had increased with increasing number of shops and establishments.

TABLE NO.3.8

CORRELATION BETWEEN OCTROI TAX AND LABOUR FORCE

Sr. No.	Year	Octroi Tax(Rs.)	Labour Force
1	1982	2,27,80,421	39,697
2	1983	3,46,74,827	42,113
3	1984	3,67,38,019	44,388
4	1985	3,99,69,017	45,039
5	1986	4,87,94,029	45,138
6	1987	4,67,02,971	47,185

SOURCE : Same as for Table No.3.1

3.2.8 In the above table, we have calculated 'r' value only for the period 1982 to 1987 as earlier data regarding labour force is not available.

The table No. 3.9 shows that the relationship between octroi tax and labour force for the years 1982 to 1987. It is positive and high (0.92). The correlation of 0.92 between two variables, explains 85% of variations in the variable concerned.

It is sufficiently clear that due to the increase of labour force in the area of the Ichalkaranji Municipality, there is a constant growth in the income of octroi tax of the Ichalkaranji Municipality.

With the growth of various industries in the Ichalkaranji municipality jurisdiction the demand for labour also increased. so here we get very strong and positive 'r' value for octroi and labour force.

TABLE NO.3.9
CORRELATION BETWEEN OCTROI TAX AND ELECTRICITY

Sr. No.	Year	Octroi Tax(Rs.)	Electricity units in Million
1	1985	3,99,69,017	191.195
2	1986	4,87,94,029	214.66
3	1987	4,67,02,971	210.304

SOURCE : Same as for table No.3.1

3.2.9 In the above table we have calculated 'r' value only

for the period 1985 to 1987 as earlier data regarding consumption

of electricity is not available.

The table No.3.'9 shows that the correlation between octroi

tax and electricity is 0.99, which is a high degree of positive

correlation. The correlation of 0.99 means 98% of the variation

between octroi tax and electricity is explained.

It is sufficiently clear that due to the higher consumption

of electricity in the area of the Ichalkaranji Municipality.

There is a constant growth in the income of octroi tax of the

Ichalkaranji Municipality.

The consumption of electricity increases with an increase

in the population and for with an increase in industrial

activities is the concerned area. In case of Ichalkaranji

Municipality both factors contributed for higher consumption

of electricity. So the positive and high correlation between

octroi tax and electricity consumption can be explained as higher

consumption of electricity means more population and more

industrial activities and naturally it leads to higher octroi

tax revenue.

TABLE NO.3.10

CORRELATION VALUES FOR OCTROI TAX REVENUE AND RELEVENT VARIABLE

Sr.No.	Variable	'r' value
1	Octroi tax revenue and population	0.92
2	Octroi tax revenue and shops and commercial establishment	0.79
3	Octroi tax revenue and labour force	0.92
4	Octroi tax revenue and electricity	0.99

3.2.10 From the table No.3.10, it is clear that the 'r' values

for octroi tax revenue and relevant variables are very strong

and positive. It means octroi revenue increases with an increase

in population labour force shops and commercial establishment and

electricity consumption.

TABLE NO.3.11

CORRELATION BETWEEN PROPERTY TAX AND POPULATION

Sr. No.	Year	Property Tax (Rs.)	Population
1	1951	26,072	27,423
2	1961	1,59,982	50,973
3	1971	7,54,642	87,731
4	1981	23,39,609	1,33,704

SOURCE : Same as for Table No. 3.1

3.2.11 The table No. 3.11 shows that, the correlation between

property tax and population is 0.96. This is very high and positive

correlation between the two variables. The correlation of 0.96

means 92%. of the variation between property tax and population

is explained.

It is sufficiently clear that due to the increase of population in the area of the Ichalkaranji Municipality. There is a constant growth in the income of property tax of Ichalkaranji Municipality. With increasing population various construction activities also expand as the demand for housing and commercial premises increases. With increasing number of such constructions the revenue from property tax also increases. So here we get positive and high correlation between the two variables i.e. property tax and population.

TABLE NO. 3.12

CORRELATION BETWEEN PROPERTY TAX AND LABOUR FORCE

Sr. No.	Year	Property Tax(Rs.)	Labour Force
1	1982	26,29,074	39,697
2	1983	28,46,784	42,113
3	1984	37,87,784	44,388
4	1985	53,70,072	45,039
5	1986	53,87,484	45,138
6	1987	55,07,668	47,185

SOURCE : . same as for table No. 3.1

3.2.12 In the above table, we have calculated 'r' value only for the period 1982 to 1987 as earlier data regarding labour force is not available.

The Table No. 3.12 shows that the correlation between above mentioned two variables is 0.92. That means about 85% variation

between property tax and labour force is explained. The correlation between the two variables is a high degree of positive correlation.

It is sufficiently clear that with the increase of labour force in the area of the Ichalkaranji Municipality, there is a constant growth in the income of property tax of the Ichalkaranji Municipality. An increase in labour force is the result of increasing industrialization, which augmented construction of factories, shops and houses. So the tax revenue from such property also increased. As a result we get very strong and positive correlation between property tax and labour force.

TABLE NO. 3.13

CORRELATION BETWEEN PROPERTY TAX AND SHOPS AND COMMERCIAL
ESTABLISHMENT

Sr. No.	Year	Property Tax(Rs.)	Shops and commercial establishment
1	1982	26,29,074	4,733
2	1983	28,46,784	5,186
3	1984	37,87,784	5,780
4	1985	53,70,072	5,699
5	1986	53,87,484	5,699
6	1987	55,07,688	6,392

SOURCE : Same as for Table No. 3.1

3.2.13 In the above table, we have calculated 'r' value only for the period 1982 to 1987 as earlier data regarding shops and commercial establishment is not available.

The table No. 3.13 shows that the correlationship between property tax and shops and commercial establishment from the year 1982 to 1987. It is 0.46, which is positive and fairly strong. This correlation means about 21 per cent of the variation between the above mentioned two variables is explained.

It is sufficiently clear that due to the increase of shops and commercial establishment in the area of the Ichalkaranji municipality, there is a constant growth in the income of property tax of the Ichalkaranji Municipality.

TABLE NO.3.14

CORRELATION BETWEEN PROPERTY TAX AND ELECTRICITY

Sr. No.	Year	Property Tax(Rs.)	Electricity units in million
1	1985	53,70,072	191.195
2	1986	53,87,484	214.66
3	1987	55,07,688	210.304

SOURCE : Same as for table No. 3.1

3.2.14 In the table No. 3.14 we have calculated 'r' value only for the period 1985 to 1987 as earlier data regarding consumption of electricity is not available.

The Table No. 3.14 shows that, the correlation of 0.45 between property tax and electricity is positive and fairly strong. Thepercentage of variation between two variables is very low (i.e. 20%).

It is sufficiently clear that with the higher consumption of electricity in the area of the Ichalkaranji Municipality, there is a constant growth in the income of property tax of the Ichalkaranji Municipality.

In the case of property tax only two factors namely population and labour force have largely influenced the growth of revenue. While other two factors namely shops and commercial establishment and electricity are less responsible for it.

The statistical analysis given already sufficiently shows that growing industrial, commercial activities and urbanisation have greatest impact on the growth of municipal financial resources.

TABLE NO.3.15

CORRELATION VALUES FOR PROPERTY TAX AND RELEVANT VARIABLES

Sr.No.	Variable	'r' Values
1	Property tax and population	0.96
2	Property tax and labour force	0.92
3	Property tax and shops and commercial establishments	0.46
4.	Property tax and electricity consumption	0.45

3.2.15   In the above table No. 3.15 correlation values for property tax and relevant variables are given. In case of property tax and population, and property tax and labour force the 'r' values are very strong and positive. It means the revenue from property tax increases with an increase in population and labour force.

In case of other two variables i.e. shops and commercial establishments and electricity consumption the 'r' values are fairly strong and positive. It means property tax revenue increases with an increase in the number of shops and commercial establishments and electricity consumption to some extent.