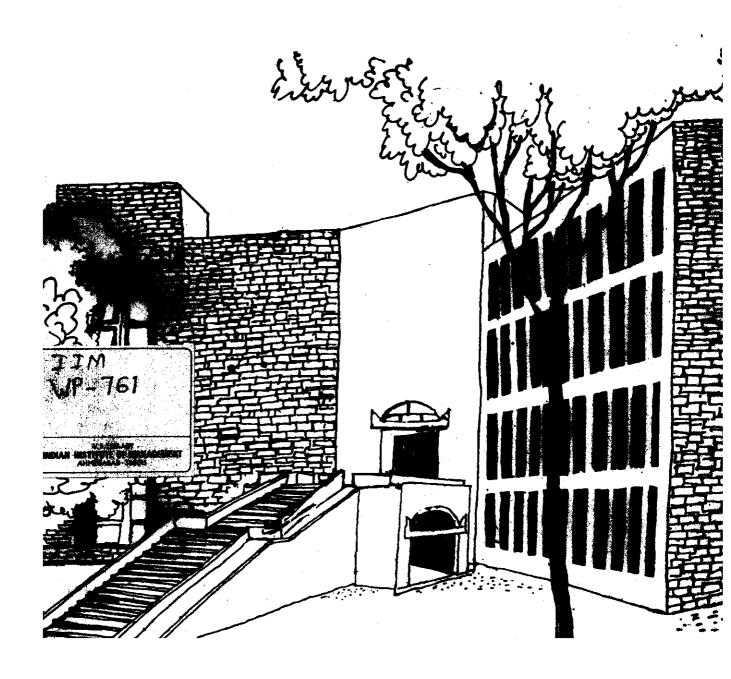


# Working Paper



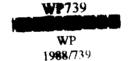
### ECONOMY DEMAND FACTOR IN REGIONAL INDUSTRIALISATION

Bv

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### ECONOMY DEMAND FACTOR IN REGIONAL INDUSTRIALISATION

- Ravindra H. Dholakia and Ramesh Bhat

#### **Abstract**

In the present study it is argued that policies to achieve reduction in regional inequalities in industrialization in India so far have been guided by theories emphasising the role of supplies of factors of production, particularly capital stock. This has resulted in only increasing the incremental capitaloutput ratios rather than achieving the desired reduction in the regional inequalities. The present study advocates policies based on theory emphasising the role of national demand factors. It discusses critically the earlier studies attempting to test the role of demand factors in determining the extent of regional industrialization and suggests a more acceptable specification of the model for testing the hypothesis. State is taken as the regional unit and time series data on SDP are used for empirically testing the hypothesis. Indian regional data seem to support the hypothesis of national demand factor playing a major role in determining the extent of regional industrialization.

## ECONOMY DEMAND FACTOR IN REGIONAL INDUSTRIALIZATION IN INDIA

- Ravindra H. Dholakia and Ramesh Bhat

#### I. <u>Introduction</u>

Urbanization and industrialization are considered to be the major indicators of economic development of a Industrialization is so closely linked with the concept of development that a regional unit without any industries generally gets classified as economically backward region. Since the Indian government like most other national governments, is committed to reduce/ remove regional disparities in the level of economic development, there has been very serious policy considerations for starting and/or/subsidizing industries in industrially backward regions. Although there is a controversy about the appropriate regional unit for this purpose, regional planners and policy makers in India seem to have accepted the overall policy mix based on theories emphasising the role of supply of factors of production in determining the growth of industry in the region. theories stressing the role of external demand factors are thoroughly ignored while designing the strategy for industrializing the given region in India. The distinction between the two sets of theories — one based on economy demand factor and the other based on factor supplies — is crucial because, as it is argued, the strategies implied by them are quite different (Dholakia, 1986). The strategy of the Indian government for tackling the problem of regional disparity has been reflecting the government's immense faith in the 'magic of investment'.

Some scholars have argued that neither the Planning Commission nor the Finance Commission have taken any significant policy measures to specifically tackle the problem of interstate disparity in the income levels (see, Nair, 1983). This is largely on account of the confusion in deciding the appropriate regional unit for the purpose. Some policy measures implicitly or explicitly consider state as an appropriate regional unit while the others consider district as the unit. However, all these measures were largely in terms of providing government expenditures and/or direct incentives for boosting private investment in backward areas besides the licensing policy. measures operate by affecting the supply of the factors of production, particularly of capital stock, in the regional economies. As is shown in Dholakia (1986), all our past efforts based on the theories emphasizing the supply of the factors of production have not made any significant dent

on the problems of regional disparity. Even at present, our strategy does not seem to have changed. The long term fiscal policy announced recently contains broadly the same components of tax incentives and subsidies to encourage industrial investments in the backward regions. Schemes based on the concept of the zero-industry districts also suggest the government's immense faith in the theories based on the magnitude of the factor supplies, particularly investment, governing the industrial output.

On the other hand, the pattern of the indirect taxation can significantly affect the relative prices of the commodities and thereby directly affect their demands in the national market. If the national demand governs the regional output of industry, the pattern of indirect taxation would have direct bearing on the growth of industries in the regional economies and hence on the regional disparities in the extent and output of industry. In this context, therein sectors like industry and mining fore, the limitations of decentralized decision making/should also be well appreciated. In the Seventh Plan, more and more emphasis has been placed on the decentralized decision making. Such a pattern of planning particularly in the industrial sector is likely to lose the sight of broader perspectives and the demand factors of supra-regional nature. After all, the states constitute integral parts of the common national market and to that extent the growth of state economies

gets determined by the growth of national demand for the output. In the next section, we present a framework for testing this alternative hypothesis.

#### II. The Framework

The basic hypothesis in the demand oriented theories is that the regional growth, especially in the industrial sector, is largely governed by the external demand factors. This is because of the uniform currency and a large magnitude of commodity flows across the regions in the nation. Development of transport and communication facilities also contribute in creating a stronger national market. The role of national market, therefore, in determining the relative growth of a regional economy cannot be ignored. Thus, the degree of access of a region to the national market is considered an important determinant of the relative advantage of a region for its relative growth. (See Perloff and Wingo. 1975).

The hypothesis of external (national) demand determining the regional economic growth has interesting implications for the approach to tackle the problem of regional imbalance in industrialization. Instead of pouring capital investments and offering incentives in terms of subsidy to affect the locational decisions or to control the location of projects directly through the licensing policy, the approach would

be to influence consumer preferences, remove market imperfections and encourage specialization. In order to promote industrialization in a region, according to the external demand hypothesis, we need to administer and encourage the demand for such products in the national market where the lagging region has a comparative advantage.

In order to examine the contribution of economy demand factor in regional industrialization we begin by postulating it as a function of economy demand. Symbolically, it may be represented as:

MODEL I 
$$\widetilde{X}_{j_1} = \alpha_j + \beta_j \widetilde{X}_{i_2}^{\xi} + \widehat{\epsilon}_{j_1}$$
 (1)

where  $\widetilde{X}_{jt}$  stands for the regional industrialization of j<sup>th</sup> state index represented by per capita industrial output of j<sup>th</sup> state,  $\widetilde{X}_t^E$  represent the economy wide factors. The parameters  $\alpha_j$  and  $\beta_j$  are constants and the subscript j and t represent the j<sup>th</sup> state and time respectively. The expression (1) provides straight measure through R<sup>2</sup> to indicate the variation explained in  $\widetilde{X}_{jt}$  by the economy wide factors.\* However, the following specification apply to model (1).

$$E(\widetilde{\varepsilon}_{jt})=0 \qquad \forall j,t$$

$$E(\widetilde{\varepsilon}_{jt},\widetilde{\varepsilon}_{is})=0 \begin{cases} 0 & \text{if } i \neq j \text{ on } t \neq s \\ \overline{\sigma}_{ij} & \text{if } i = j \text{ and } t = s \end{cases}$$

$$E(\widetilde{X}_{t}^{E},\widetilde{\varepsilon}_{jt})=0 \qquad \forall j,t$$

\* 
$$Var(\widetilde{X}_{jt}) = \beta Var(\widetilde{X}_{t}^{E}) + Var(\widetilde{E}_{jt})$$

$$R^{2} = \beta \frac{Var(\widetilde{X}_{t}^{E})}{Var(\widetilde{X}_{jt})} = 1 - \frac{Var(\widetilde{E}_{jt})}{Var(\widetilde{X}_{jt})}$$

The economy wide factors have been represented by per capita industrial output of the economy, measured as follows:

$$\widetilde{X}_{t}^{E} = \frac{\sum_{j} \widetilde{P}_{jt} \widetilde{X}_{jt}}{\sum_{j} \widetilde{P}_{jt}} = \frac{\sum_{j} \widetilde{P}_{jt} \widetilde{X}_{jt}}{\widetilde{P}_{t}}$$
(2)

where P<sub>jt</sub> represents the population of j<sup>th</sup> state and t<sup>th</sup> point of time. As will be demonstrated below via empirical results, the results from use of this scheme have some important undesirable properties. These undesirable properties are also revealed by specification tests. Here we are primarily concentrating on the specifications concerning thousand order/sectional correlation and first order serial correlations.

Multiplying Model 1 on both sides by  $\widetilde{P}_{jt}/\widetilde{P}_{t}$  and summing up across states we get

$$\sum_{j} \frac{\widetilde{\beta}_{j_{t}}}{\widetilde{p}_{t}} \widetilde{X}_{j_{t}} = \sum_{j} \frac{\widetilde{p}_{j_{t}}}{\widetilde{p}_{t}} \alpha_{j} + \sum_{j} \frac{\widetilde{p}_{j_{t}}}{\widetilde{p}_{t}} \beta_{j} \widetilde{X}_{t}^{E} + \sum_{j} \frac{\widetilde{p}_{j_{t}}}{\widetilde{p}_{t}} \widetilde{\epsilon}_{j_{t}}$$

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$$\widetilde{X}_{t}^{M} = \widetilde{\alpha}' + \widetilde{\beta}' \widetilde{X}_{t}^{M} + \widetilde{\epsilon}_{t}'$$
 (3)

where

$$\widetilde{\alpha}' = \sum_{j} \frac{\widetilde{\rho}_{jt}}{\widetilde{\beta}_{t}} \alpha_{j} , \qquad \widetilde{\beta}_{j}' = \sum_{j} \frac{\widetilde{\rho}_{jt}}{\widetilde{\beta}_{t}} \beta_{j}$$
 and 
$$\widetilde{\varepsilon}' = \sum_{j} \frac{\widetilde{\rho}_{jt}}{\widetilde{\rho}_{t}} \widetilde{\varepsilon}_{jt}$$

If the weights  $\widetilde{P}_{jt}/\widetilde{P}_{t}$  for all t's and for a given j are constant, then for validity of expression (3)

$$\widetilde{\alpha}'=0$$
,  $\widetilde{\beta}'=1$ , and  $\widetilde{\varepsilon}'_{\pm}=0$   $\forall$  t (4)

However, the weights in the expression (3) are random variables. The expression must hold for all realizations of  $\widetilde{X}_t^E$  for all t. This can happen if and only if there is perfect correlation among some or all of the random variables  $\widetilde{X}_t^E$ ,  $\widetilde{\alpha}'$ ,  $\widetilde{\beta}'$ , and  $\widetilde{\mathcal{E}}_t'$  for all t. If one assumes that there is no perfect correlation among some or all of the random variables  $\widetilde{X}_t^E$ ,  $\widetilde{\alpha}_t'$ ,  $\widetilde{\alpha}_t'$ ,  $\widetilde{\alpha}_t'$ ,  $\widetilde{\alpha}_t'$ ,  $\widetilde{\alpha}_t'$  o then the equation (3) does not hold. In that case it will hold if and only if  $\widetilde{\alpha}_t' = 0$ ,  $\widetilde{\beta}_t' = 1$  and  $\widetilde{\mathcal{E}}_t' = 0$  for all t.

The first assumption about perfect correlations between the variable  $\widetilde{X}_t^E$ ,  $\widetilde{\alpha}'$ ,  $\widetilde{\beta}'$  and  $\widetilde{\varepsilon}_{\tau}'$  is going to violate some of the assumptions of model (1). Hence, the first specification for this model has to satisfy the following identities.

$$\widetilde{\alpha}'=0$$
  $\widetilde{\beta}'=1$  and  $\widetilde{\epsilon}'=0$   $\forall +$ 

In other words, the if this condition has to be satisfied, then one of the j regression equations would necessarily turn out to be spurious in order to satisfy the linear constraint on the system of equations.

Moreover, we find in the system of j (j = 1 to number of states in the study) equation there is no exogeneous variable. The independent variable for each regression equation is weighted average of the regional industrialization variable for each state. Defining the independent variable in each of the regression equation in this way leads to another specification problem also. This relates to the first order serial correlation. Malinvaud (1966, Ch. 13, pp.518-520) suggests that the first order serial correlation estimates of error term are affected by the serial correlation dependent variable in the model. As pointed out in Manlinvand each is a biased estimate of the serial correlation exhibited by the corresponding model's error. The magnitude and direction of the bias depend upon the autocorrelation function of model's errors and that of the the dependent variable used in the model. On account of these two problems, two alternative formulations are provided as follows:

The first alternative formulation is based on the assumption that regional industrial demand has two distinct

and independent components - one due to internal demand forces and the other due to the external demand forces. Symbolically, it may be represented as:

$$\widetilde{X}_{jt} = f \left(D_{jt}^{I}, D_{jt}^{E}\right)$$
 (5)

Now, we may assume that component due to internal demand  $D_{jt}^{I}$  is a function of time, whereas the component of external demand  $D_{jt}^{E}$  is due to the external demand forces which are determined by the national demand for the industrial output. On that basis we have Model II as follows:

Model II: 
$$\widetilde{X}_{jt} = \beta_{0j} + \beta_{ij} \widetilde{X}_{t}^{M} + \beta_{2j} + \widetilde{\mu}_{jt}$$
 (6)

The coefficient  $eta_{i,j}^{\beta}$  in equation (6) represents the annual increase/decrease in the per capita output of industrial sector in the j<sup>th</sup> state on account of forces internal to the state j. The  $eta_{i,j}^{\beta}$  represent the contribution of external demand factors in regional industrialisation. The formulation was suggested by Dholakia(1986). But examining the above formulation closely, we find the similar specifications and problems afflict this model as afflict Model I. The results provided in Dholakia (1986) confirm this by making one regression equation spurious.

The specification as given in Model II also suffers from the limitation of not including any other exogenous variable than time which is largely taken as a catchall factor. Secondly, both the models, I and II are based on the same definition of the 'independent' variable representing national demand factors, viz. the per capita industrial product. It can be argued that the domestic product from secondary sector can be considered to represent both the demand as well as the supply factors because these are ex-post aggregates. The estimates of these at current prices, however, ensures that these are representing the demand factors more closely than the supply factors because in ex-post terms, price of the product is dictated by the demand curve rather than the supply curve. The more relevant criticism of our measure for national demand factors in our Models I and II, however, is that the demand for industrial production is governed by the total income rather than the income originating in the industrial sector alone. The justication for considering total income is not only based on the inter-industry transactions as contained in the input-output flows, but also on the nature of final demand for industrial output. from the household sector, government sector, investment demand etc.

In the case of Indian economy, exports of industrial products constitute a negligible proportion of the final

demand for the sector output. As such, exports are not so important a component of our national income. We contribute less than 0.5% of the total world exports. It is still possible to argue that exports may be extremely important source of final demand for some individual industries. Since our concern in the present study is not with the individual industries but with the overall industrialization in general, we may safely exclude from our consideration the export demand. We must, therefore, include in our specification a variable reflecting the extent of domestic market alone. Population for the country is usually considered a reasonably good proxy for the purpose.

On the basis of the above discussion, we may now propose the following model:

$$\tilde{x}_{jt} = f(sz, DI)$$
 (7)

where SZ represents the size of the market and DI represents per capital domestic income. Based on the above discussion the size of the market may be measured through population of the country as a whole whereas the domestic per capita income could be further decomposed into three sub-sectors viz., the primary sector, secondary sector and tertiary sector. Since, the weighted average of  $\widetilde{X}_{it}$  would in case

sector, the inclusion of this variable as an exogeneous variable would lead to the same specification errors that afflict Model I and II. Hence, in order to estimate the state industrial product equation, the per capita industrial product in secondary sector has been excluded from the equation. The proposed equation may, therefore, be modified as follows:

Model III

$$\widetilde{X}_{j+} = \beta_{0j} + \beta_{j1} \widetilde{\rho_0} P_{+} + \beta_{j2} \widetilde{\rho_R} M_{+} + \beta_{j3} \widetilde{\tau_E} R_{+} + \widetilde{E}_{t}$$
 (8)

where POP<sub>t</sub> represents total population meaning the size of the national market for industrial goods and services, PRM<sub>t</sub> and TER<sub>t</sub> represent the per capita product in primary and tertiary sectors respectively, measuring the influence of income variable on the demand for industrial good and services in the nation.

#### III. Data Sources and Definitions

For the present study, we have taken state as the regional unit. Moreover, we have followed a broader concept of industrialization, in which we include not only the registered manufacturing units but also unregistered manufacturing units as well as mining, quarrying, construction

activity, electricity, gas and water supply. In other words, the whole secondary sector as defined in the national accounts is considered in the study. We have considered sixteen major state economies and union territory of Delhi as the regions. The sixteen states are:

Andhra Pradesh, Bihar, Gujarat, Haryana, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal.

The data on regional incomes are obtained from CSO (1984) which is a single source which presents compiled data/different state statiscal bureaux. Model I and II have been tested with somewhat different set of data on state incomes in Dholakia (1986). The results there suggested on the whole that economy demand factor is an important determinant of industrialization in the state economies in India. As we have noted in section II above. however, the whole exercise suffers from some inherent problems of specification. We need, therefore, to carry out the testing of the same hypothesis by considering Model III which takes care of the specification problems. testing this model, we are also using a somewhat different set of data so as to get not only a longer time series of data but also an idea of the sensitivity of the hypothesis to different data sets.

It may be pointed out at this stage that our variable of population of the country over years is a variable which is strictly speaking not measured in the way in which the income variables are measured from year to year. in fact, interpolated and extrapolated taking the benchmark census population figures. Thus, although theoretically population is a good proxy for the size of the domestic market, in practice, it is a variable growing at a constant rate over years. Similarly, it is also well-known that the method of estimating income originating in the tertiary sector is also far from satisfactory. A large proportion of tertiary sector's income is also calculated using indirect income approach. Here also the method of interpolation and extrapolation is frequently used for generating time series estimates. We may, therefore, expect a very high degree of multi-collinearity between these two variables. Moreover. both these variables, the way they are measured in practice reflect more or less the same type of forces operating in the system. We may, therefore, be better placed if, on practical considerations, we make a choice between these two variables and include only one of them at a time in the regression equation to be estimated for each region. We may choose the one which gives better statistical fit. With this modification, the results of the regression equation for

Model III are presented for the 17 regional economies in India in Table 1.\*1

#### IV. Empirical Results

Table 1 clearly reveals that our Model III specifying the determinants of industrialization largely in terms of the economy demand factor performs very satisfactorily in each of the seventeen regions of India considered in this study. The overall explanatory power of the model is more than 90% in all regions except Tamil Nadu where it is about 75%. It can also be observed from the table that per capita income in tertiary sector is a significant determinant of the extent of industrialization in all regions. In Tamil Nadu and Manipur, national population rather than the tertiary income was performing better. Basically this particular factor captures the national demand factors representing influence of urbanization and the size of the domestic market.

Only two state economies, viz. Andhra Pradesh and Gujarat seem to be affected by the per capita income in the primary sector. Income in primary sector reflects the purchasing power with the rural population. It would also

<sup>\*1.</sup> In order to see the point about expected multi-collinearity discussed here, we are reporting the results of regressions with all the three variables as given in Model III in Appendix Table 1.

capture the effect of intermediate demand for industrial products arising in the primary sector. In both these state economies, it may be observed, the coefficient of primary income is only 20 to 25% of the coefficient of the tertiary income. Thus, on the whole primary incomes do not seem to play a very major deterministic role in the regional industrialization in the first place and wherever it plays some role, its importance is substantially lower than the tertiary incomes. A one rupee increase in the per capita tertiary income in the national economy would have largest impact of increasing the secondary sector's per capita income by Rs.1.5158 in Maharashtra, closely followed by Punjab (Rs.1.4440). The lowest impact, on the other hand, is on Andhra Pradesh's secondary sector (Rs.O.4621) closely followed by Orissa (Re.O.4809) and Bihar (Re.O.4883). As it is clear from the table, the coefficient of the tertiary income is higher in industrially more developed states as compared to the one in industrially less developed states. This could be one of the important reasons why inequalities in the industrial sector is persisting in India.

#### V. Concluding Remarks

From the exercise carried out in the present study, it becomes clear that the basic philosophy behind our past policy to tackle the problem of regional imbalance in

industry is questionable. In the past, we relied heavily on the ultimate neo-classical solutions of operating through monitoring and administering the factor supplies directly, particularly the investments. We displayed immense faith in the dictum 'supply creates its own demand'. The exercise of the present paper on the contrary, suggests that it is better to create demand in the directions where we want the supply to emerge. The policy of directly injecting the investment or increasing the factor growth in general in the lagging region would generally lead to inefficiency in resource allocation resulting in slower growth rates. happens because increase in investment in a lagging region in an industrywhere it does not have comparative advantage only raises the real cost of production of the commodity in the economy. The incremental capital-output ratio, therefore, tends to rise. If, however, the investment is directly injected into the industry where the lagging region has comparative advantage, the incremental capital-output ratio would tend to increase when excess capacity in the industry If demand factors are ignored, deficiency of results. effective demand can lead to the excess capacity and ultimately to the slow growth of output by increasing the measured incremental capital output ratio. Such a policy, therefore, is likely to result into the wastage of scarce

resources in the sense of sacrificing growth without reducing the disparities. This is precisely what seems to have happened in India where we find the index of regional disparity in capital stock declining with the index of the regional disparity in output increasing during the sixties (see Dholakia and Dholakia, 1980).

Finally, we may conclude by stressing the need to consider the demand oriented theories of regional growth for tackling the regional problem in India. It is high time now for us to start planning more effectively at the central level by properly and carefully administering the demand for industrial product to achieve the twin objectives of growth and equity. This approach does not rule out the simultaneous measures and policies to provide social capital or infrastructural investment in the lagging regions. It only recognizes the market forces and tries to utilize them rather than negate them. Unlike the theories of regional growth emphasizing factor supplies, the demand oriented theories advocate tackling of the regional problem by utilizing the logic of rational locational choice based on efficiency grounds.

Table 1

RESULTS OF MODEL III FOR REGIONS IN INDIA, 1965-66 TO 1981-82

Regions		Estimates of Coefficients		t-values			_ · · · ·	<u>Intercept</u>		
	·	Primary Sector	Tertiary Sector	PS	TS	₹ <sup>2</sup>	DW	Estimate	t- value	
1.	Andhra	0.0905	0.4621	2.47	12.42	0.994	1.85	-26.50	-4.51	
2.	Bihar	0.0117	0.4883	0.10	3 <b>.9</b> 0	0.932	1.58	- 2.30	-0.12	
3. (	Gujarat	0.2490	0.9689	3.24	12.40	0.995	1.38	<b>-67.</b> 90	<b>- 5.5</b> 0	
4. i	Haryana	-0.1235	1.2034	-1.30	11.61	<b>0,98</b> 8	1.03	-44.6	-2.72	
5.	J & K	-0.0332	0 <b>.69</b> 38	-0.56	11.40	0.989	1.83	<b>~</b> 38.3	-3.98	
6. I	Karnataka	0.1174	O.5905	1.36	6 <b>.7</b> 3	0,980	1.87	-20.0	-1.51	
7.	Kerala	0.0532	0.6151	0.81	9 <b>.2</b> 6	0.987	0.84	-37.7	-3.59	
8. 1	MP	0.0819	0.5005	1.75	10.54	0.991	1.30	-28.5	-3.80	
9. 1	Maharashtı	ra 0.1348	1.5158	1.17	12.93	0.993	2.43	-50.2	-2.71	
10. (	Orissa	-0.0911	0.4809	-1.49	7.72	0.968	1.78	9.7	0.98	
11. 1	Punjab	0.0037	1.4440	0.04	14.21	0.994	1.40	-108.6	<b>-6.7</b> 7	
12. E	Rajasthan	0.0124	0.5280	0.35	14.49	0.994	2.28	-14.2	-2.47	
13. (	U.P.	-0.0282	0.5518	-0.39	7.48	0.974	1.11	-23.5	-2.02	
14. 1	W.Bengal	0.0723	0.7370	0.88	8.79	0.986	1.45	31.5	2.38	
15. 1	Delhi	0.0570	1.2272	0.47	10.05	0.988	2.14	86.9	4.51	
		Popn.	PS	t (Pop) t(PS)		R <sup>2</sup>	DW	Intercept Estimate t-value		
	TN	0.2322	<b>-</b> 0.4665	2,80	-1.21	0.753	1.60	-889.0	-2.85	
J.	Manipur	0.0184	-0.0022	4.07	-0.10	0.948	2.50	<b>-</b> 61.5	-3.61	

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Appendix Table 1
REGRESSION RESULTS OF MODEL III WITH THREE VARIABLES

Regions	Estimates of coefficients of			T-values of the estimates Popula- Per capita income in				D-W	Inter-
Megions .	Popula- tion	Per capita Tertiary Sector	a income in	Popula- tion	Tertiary Sector	Primary Sector	<del></del>	Stati- stics	cept (with t-value
1. Andhra	0.0196	0.4136	0.0476	1.597	8.890	1.082	0.995	1.82	-104.9 (-2.123)
2. Bihar	0.0717	0.3114	-0.1453	1.766	2.025	-1.001	0.933	1.58	-288.9 (-1.769)
3. Gujarat	<b>-</b> 0.0563	1.1077	0.3722	-2.392	12.436	4.426	0.996	5 2.11	157.0 (1.660)
4. Haryana	-0.0121	1.2332	-0.1060	-0.324	8.734	-0.795	0.987	7 1.05	3.7 (0.025)
5. J&K	-0.0035	0.7025	<b>-0.02</b> 56	-0.160	8.447	<b>-</b> 0.326	0.988	3 1.86	-24.2 (-0.274)
6. Karnataka	0.0153	0,5528	0.0839	0.487	4.651	0.748	0.979	9 1.80	-82.0 (-0.650)
7. Kerala	-0.0168	0.6566	0.0900	-0.714	<b>7.3</b> 65	1.070	0.98	7 0.92	29.5 (0.312)
8. M.P.	-0.0234	0.5583	0.1332	-1.476	9.291	2.347	C.99	2 1.47	65.1 (1.021)
9. Maharashtr		1.4107	0.0415	1.048	9.162	0.286	0.99	3 2.41	-220.5 (-1.348)
O. Manipur	0.0194	-0.0059	-0.0012	3.149	-0.251	-0.551	0.94	5 2.61	- 65.9 (-2.657)
ll. Orissa	-0.0491	0.6019	0.0164	-2.739	8.872	0.256	0.97	8 2.71	205.8 (2.856)
L2. Punjab	0.0065	1.4279	-0.0107	0.178	10.283	-0.081	0.99	3 1.38	-134.7
13. Rajasthan	-0.0106	0.5542	0.0357	-0.828	11.408	0.777	0.99	4 2.51	(=0.914 28.2 (0.547)

contd.

14. T.Nadu	0.2329	-0.0042	-0.4658	2.056	-0.010	-1.150 0.734 1.60 -892.1 (-1.957)
_	-0.0251	0.6138	0.0269	-0.978	6.305	0.292 0.974 1.27 76.9 (0.744)
15. U.P.	0.0050	0.7248	0.0615	0.164	6.323	0.568 0.985 1.43 11.6
16. W.Bengal			0.0610	-0.042	7.376	0.387 0.987 2.15 94.3 (0.531)
17. Delhi	-0.0018	1.2318	0.0010	_0 <b>,</b> 0, <b>L</b>	. • -	(0.531)