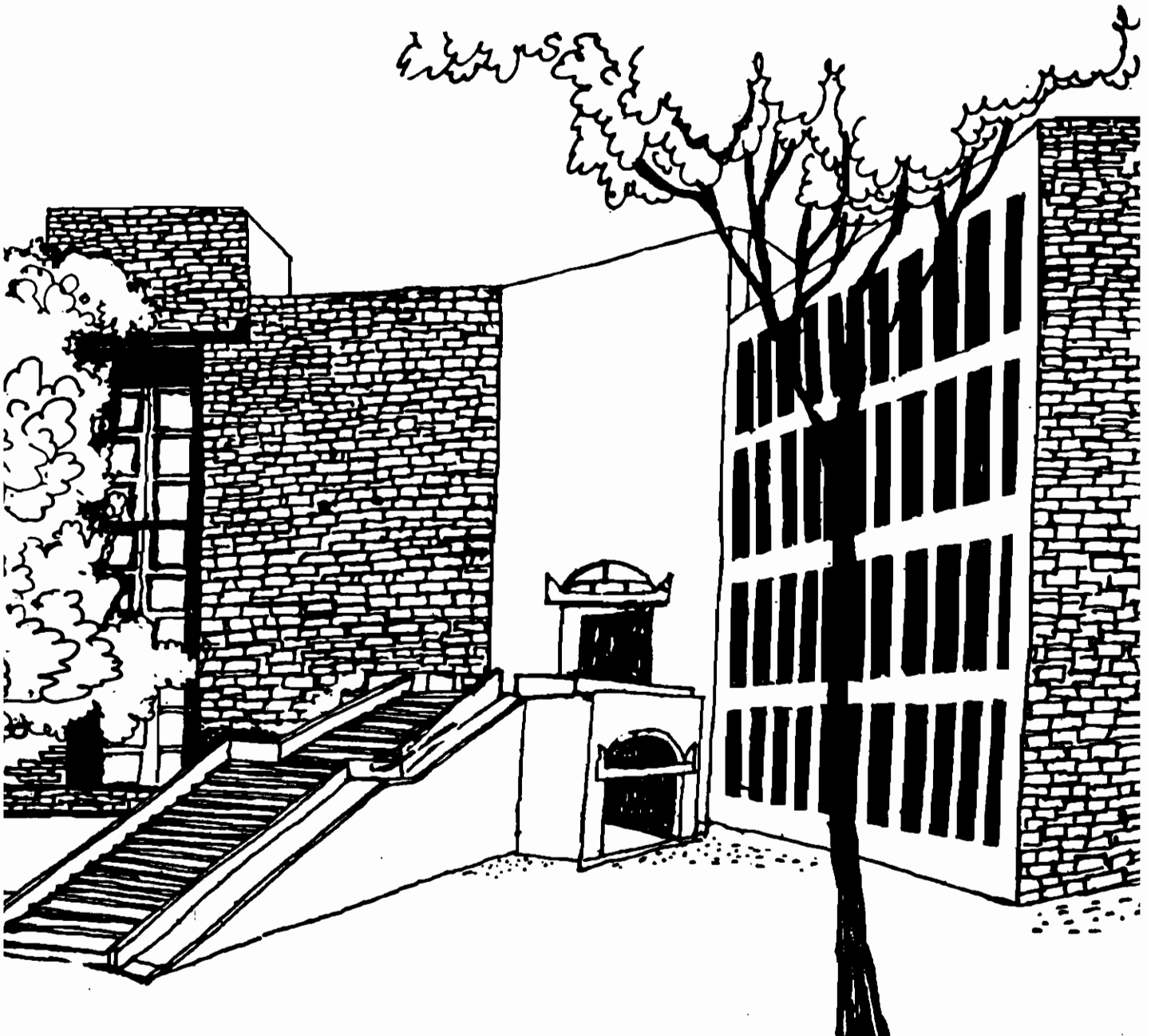




Working Paper



**URBAN - RURAL INCOME
DIFFERENTIALS IN INDIA:
AN INTER-REGIONAL ANALYSIS**

by

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URBAN - RURAL INCOME DIFFERENTIALS IN INDIA:
AN INTER-REGIONAL ANALYSIS

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The distribution of domestic product between urban and rural sectors of the regional economy constitutes an important link in the preparation of regional accounts to facilitate the crucial task of multi-level planning in a vast and underdeveloped country like India. In order to be effective, multi-level planning obviously requires compilation of different macro-economic aggregates and their break-up for the areas within regions, and the rural-urban demarcation is evidently quite significant in this context. Moreover, a study of urban-rural income differentials within a given region forms an integral part of the study of regional disparity. It is for this reason that the Committee on Regional Accounts has stated that, "For full use of the regional income statistics for planning purposes, the analysis has to extend beyond the measure of differentials among states and among big cities and should also cover those among big cities and rural and urban areas".*1

However, the task of allocating India's domestic product between the urban and the rural sectors even at a given point of time is rendered very difficult by the non-availability of the basic statistical source material that is required for this purpose. This

is perhaps the main reason why very little work seems to have been done so far in this important field.² Again, the few studies that have already been made in this direction have the following common features: Firstly, the work relates to distant years of past utilising 1951 and 1961 census data on population and workers. In other words, no published estimate for relatively recent years, utilising the information provided by the 1971 census is available.

Secondly, the studies present the estimates only at the all India level and do not give any idea about the extent of urban-rural income differential in different States of India. No systematic study of the interstate variations in the extent of urban-rural income differential seems to have been made so far.

Thirdly, the available studies heavily depend on the method of taking the urban-rural wage differential observed for a few sectors to reflect the urban-rural productivity differential in the corresponding and the related sectors of the economy. This is a very objectionable method of estimation from the point of view of pure economic logic especially for an underdeveloped country like India for several reasons. In fact, the method of using urban-rural wage differentials in a given sector of a given region to measure the corresponding productivity differentials implies that the relative share of labour in total income is identical between the rural and the urban areas. When stated in this way, the hypothesis perhaps sounds quite implausible. Relative share of labour in a given sector depends primarily on the relative factor endowments or factor intensities, the degree of factor substitutability, technology, skill composition of the working

force, and the structure of the given sector itself. Obviously, these are precisely the factors that differentiate the urban areas from the rural areas. Stated in technical jargon, the method of using the urban-rural wage differentials to measure the corresponding urban-rural productivity differential in a given sector amounts to making the following specific assumptions: (1) Both the urban areas and the rural areas have the identical production function in a given sector. (2) The production function is Linear Homogeneous, *i.e.*, the production function shows constant returns to scale in rural as well as urban areas. (3) The production function exhibits equal degree of substitutability among the factors of production in both rural and urban areas. (4) Perfect competition prevails both in the urban sector and the rural sector of the economy. (5) The economic units operating in the rural as well as urban areas behave rationally and are in equilibrium.

It is evident that most of these assumptions are not likely to be valid in many sectors of the economy. Since the extent to which the actual situation in a given sector deviates from the one implicit in the above assumptions is largely unknown the estimates derived by this method may contain error of an unknown margin. Moreover, since the actual situation obtaining in different sectors is likely to vary considerably, there is a reason to believe that the error-margin may vary from sector to sector again to an unknown extent. Under these conditions, the urban-rural wage differentials can at best be regarded as a very crude proxy for the required urban-rural productivity differentials.

It follows from the above discussion that there is a need for systematic studies on urban-rural income differential for a relatively recent year with explicit state dimension using the method of productivity differential. The present study, therefore, aims at initiating a systematic effort directed towards filling in this crucial gap in our regional accounts.

The basic objectives of the present study are: (1) To estimate roughly the probable magnitude of the urban-rural per capita income differential in Indian Economy for a recent year. (2) To get a broad dimensional idea about the likely extent of interstate variations in the urban-rural per capita income differential. (3) To examine the contribution of the structural factors to the urban-rural income differential. (4) To examine the overall sensitivity of urban-rural income differential to sectoral productivity differentials. (5) To identify the major gaps in the availability of basic data required for satisfactory measurement of urban-rural per capita income differential.

The present study relates to the year 1970-71 for which the required data on population and workers are readily available from the 1971 census. Moreover, it is also a year for which reliable and comparable estimates of Net Domestic Product are also available from a recent study.⁴³ We have estimated the urban-rural differential for fifteen major states of India whose population exceeded one percent of the total population of India in 1971, the remaining small states and union Territories being lumped under the heading of 'Other States and Union Territories'.

The present paper is divided into five sections. In the

next section the basic framework to derive the estimates of urban-rural income differential is presented. In the third section, the estimates of the urban-rural productivity differentials are derived. The fourth Section is then devoted to the analysis of the results of the present study and the fifth and the final section presents the main conclusions of the study.

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If we denote the income of a particular sector of a particular state as Y and the corresponding urban and rural incomes by UY and RY respectively, then we have,

$$Y = UY + RY \quad \dots \quad (1)$$

Now, let us also denote the productivity per worker of that sector in that region by P , and the number of workers in that sector in that region by W . Then,

$$W.P = U.W.UP + R.W.RP \quad \dots \quad (2)$$

It is known that there exists some definite relation between the UP (which stands for urban productivity per worker in a particular sector of a particular State) and RP (which stands for the corresponding rural productivity per worker) such that, at a given point of time,

$$\frac{UP}{RP} = b, \text{ i.e. } RP = \frac{UP}{b} \quad \dots \quad (3)$$

Replacing (3) in (2) above, we get

$$\begin{aligned} W.P &= U.W.UP + R.W.\frac{UP}{b} \\ \text{i.e. } W.P &= UP\left(UW + \frac{RW}{b}\right) \\ \text{i.e. } \frac{UP}{P} &= \frac{RW}{b.UW+RW} = a \quad \dots \quad (4) \end{aligned}$$

Here 'b' stands for the urban-rural productivity differential in a given sector of a given State, whereas 'a' stands for the corresponding urban-total productivity differential. Once we have the value of 'a', we can find out the value of urban productivity per worker in a given sector because the total productivity per worker in that sector is known and $UP = a \cdot P$. We can get the value of 'a' if we have the value of 'b', the urban-rural productivity differential, because the data on U, UW and RW can be readily obtained from the population census. Thus, the crucial variable is 'b' which needs to be estimated.

Once we estimate the urban-rural productivity differentials in each sector of each State, the total urban income is quite easy to obtain. If we denote b_{ij} for the urban-rural productivity differential in i^{th} sector of j^{th} State, and if we have estimated b_{ij} for each i and j , then, we get the corresponding estimates of a_{ij} (which denotes the urban-total productivity differential for i^{th} sector of j^{th} State). If UY_{ij} , UW_{ij} and P_{ij} represent respectively the urban income, urban workers and productivity per worker (in all areas) in i^{th} sector of j^{th} State, then we have,

$$UY_{ij} = a_{ij} P_{ij} UW_{ij} \quad \dots \quad (5)$$

$$\text{Hence, } UY_j = \sum_{i=1}^n a_{ij} P_{ij} UW_{ij} \quad \text{where } UY_j \text{ is the total urban income of } j^{\text{th}} \text{ State.}$$

$$\text{and } UY = \sum_{j=1}^m \sum_{i=1}^n a_{ij} P_{ij} UW_{ij} \quad \text{where } UY \text{ stands for total urban income in the economy.}$$

If we take the summation over j , we get total urban income in the sector for the economy as a whole; while if we take the summation over i , we get total urban income in j th State. The information on UW_{ij} is available from the 1971 Census. The F_{ij} 's are calculated on the basis of Appendix Table 1 below and the 1971 census. The a_{ij} 's are calculated on the basis of the b_{ij} 's using equation (4). The estimation procedures adopted for deriving b_{ij} 's are described in the next section.

III

For the purpose of estimating the sectoral productivity differentials between urban and rural areas, we have divided the economy into ten different sectors, viz., (1) agriculture, (2) forestry and fishing, (3) mining and quarrying, (4) registered manufacturing including electricity, gas and water supply, (5) unregistered manufacturing, (6) construction, (7) trade and commerce including banking and insurance, (8) transport including railways and communication, (9) services including public administration and defence, and (10) ownership of dwellings and real estate.

While the required data on working force by sectors and rural-urban residence are directly available for the year 1970-71 from the 1971 Census, no direct information is available on urban-rural productivity differentials for most of the sectors. And, it has to be admitted at the very outset that due to paucity of the required type of data, fairly satisfactory and reliable estimates of urban-rural productivity differentials in each state are difficult to obtain for certain sectors. We have, therefore, been compelled to derive the required estimates on the basis of whatever relevant source material

that is found to be currently available.

Of the ten sectors distinguished above, we have assumed that no significant urban-rural productivity differentials exist within a given state for the first three sectors which constitute the primary sector of the economy. These sectors are largely unorganized and low productivity sectors irrespective of their rural-urban location. The labour productivity in these sectors is governed to a considerable extent by external factors, such as weather conditions or quality of natural resources, which by their very nature are not specific to rural-urban location as such within a given region, although they are often found to be specific to different regions or states. Thus, while there is a considerable scope for inter-state variation in labour productivity in the primary sector, there is perhaps a very limited scope for urban-rural differential per se in the average labour productivity within a given state as far as the primary sector is concerned. Thus, D_{1j} has been assumed to be unity for these three sectors in each state. The procedures adopted for estimating the value of D_{1j} for the remaining sectors are described below:

Registered Manufacturing Sectors

No direct information is available on urban-rural productivity differential in the registered or organized manufacturing sector for different states. However, we can expect significant urban-rural differentials to exist in this sector for certain obvious reasons. Rural areas are generally characterized by lack of social overhead, basic infrastructure and other required facilities. As a result, the type of factories that exist in rural areas generally have a significantly different structure

(industry-mix) and are of a smaller average size as compared to their counterpart in urban areas. This readily suggests the use of the average productivity differential observed in each state between the ASI census sector factories and the corresponding sample sector factories (both taken as a whole) as a fairly plausible proxy for the required urban-rural productivity differential in registered manufacturing sector in each state. We have, accordingly, used the information available from Annual Survey of Industries, 1970 to compute b_{1j} for this sector.

Unregistered Manufacturing

Direct information on urban-rural productivity differential is available for this sector from NSS Report No. 204 at the all India level for the year 1968-69. Moreover, fairly detailed and comprehensive information at the state level as well as the all India level is also available from NSS Report No. 94 for the year 1958-59. What we have done, therefore, is to apply the average annual growth rates of rural productivity and urban productivity, observed at the all India level over the decades 1958-59 to 1968-69 (derived from the NSS data) respectively to the rural and urban productivity observed for the year 1958-59 in each state to arrive at the corresponding figures relating to the year 1970-71. The urban-rural productivity differentials for this sector in each state are then directly computed from these figures.

Conclusion:

For want of directly relevant and reliable data relating to this sector, we have assumed that the values of b_{1j} for this sector are the same as those computed for the unregistered manufacturing sector.

Trade and Commerce

Structure on the Revised Series of National Product 1950-51 to 1964-65 issued by Central Statistical Organisation give some information about the average labour productivity in the urban and the rural areas at the all India level for the sector 'Trade, Hotels and Restaurants' relating to the year 1960-61. In the absence of any other source material, we have used this information to derive the estimate of urban-rural productivity differential in this sector (at the all India level) and assumed the same to be valid for each state in the year 1970-71.

Transport

This sector consists of three sub-sectors, viz., railways, communication and transport by other means. No urban-rural productivity differentials are assumed to exist in the case of railways and communication. Since the non-mechanised transport is predominant largely in rural areas, and since some reliable information is available in the Structure (op.cit.) about the average productivity differential among the workers engaged in mechanised and non-mechanised transport for the year 1960-61, we have used the same as the proxy for the urban-rural productivity differential in the sub-sector 'transport by other means'. The productivity differentials for the three sub-sectors are, then, combined using the reported workers in each sub-sector in the year 1970-71 to derive the estimate of urban-rural productivity differential for this sector, which has been used for each state.

Agriculture

The same method that has been used for estimating urban-rural productivity differential in the sector trade and commerce has been

used for this sector also.

Ownership of Dwellings and Real Estate:

The sub-urban break up of net rental income from ownership of dwellings is directly available at the all India level for the year 1970-71 from the National Accounts Statistics (Disaggregated Tables) issued by the Central Statistical Organization. We have, therefore, computed the per capita urban-rural net rental differential at the all India level using this information along with the corresponding population figures obtained from the 1971 census, and, in the absence of any other related source material, used the same for each state.

Using the estimates of b_{ij} 's so derived, we have obtained the corresponding estimates of a_{ij} 's on the basis of equation (4), and, in turn, the estimates of urban income originating in each sector in each state using the equation (5). These estimates have been presented in Appendix Table 1. ^{3 and 4} The estimates of rural income by sectors and states have, then, been obtained as the difference between the figures shown in Appendix Table 1 and the corresponding figures given in Appendix Table 2.

The distribution of net domestic product between urban and rural areas in different states evolved as per the estimation procedures described above is presented in Table 1. The share of urban areas in the total income originating in each State is shown in Table 2 along with the corresponding figures for total population and working force.

TABLE I

Estimated and Actual Expenditure on the Development of Rural Areas
 During the Period 1951-52

(Figures in Lakhs of Rupees)

State	All India	Developed Areas	Rural Areas
1. Andhra Pradesh	252750	25275	227475
2. Assam	94650	19675	74975
3. Bihar	244750	24475	220275
4. Gujarat	123250	12325	110925
5. Haryana	94650	9465	85185
6. Karnataka	152770	15277	137493
7. Kerala	137250	13725	123525
8. Madhya Pradesh	234650	23465	211185
9. Madras State	752150	75215	676935
10. Orissa	140275	14027	126248
11. Punjab	144250	14425	129825
12. Rajasthan	150250	15025	135225
13. Tamil Nadu	272450	27245	245205
14. Uttar Pradesh	432750	43275	389475
15. West Bengal	202500	20250	182250
16. Other States & the Territories	272500	27250	245250
All India	342500	34250	308250

Source: Annual Report, 1952-53

Table 2

Share of Urban Areas in Total Population, Working Force, and
Net Domestic Product in Different States, 1970-71

(Figures in Percentage)

States	Percentage Share of Urban Areas in		
	Total Population	Working Force	Net Domestic Product
1	2	3	4
1. Andhra Pradesh	19.3	14.3	29.0
2. Assam	9.2	9.6	18.8
3. Bihar	10.0	9.1	30.6
4. Gujarat	28.1	24.6	43.1
5. Haryana	17.7	17.6	25.8
6. Karnataka	24.3	20.7	39.1
7. Kerala	16.2	15.0	21.6
8. Madhya Pradesh	16.3	12.5	30.5
9. Maharashtra	31.2	27.2	60.5
10. Orissa	8.4	8.2	19.2
11. Punjab	2.7	23.1	29.3
12. Rajasthan	17.6	14.6	29.8
13. Tamil Nadu	30.3	25.6	48.5
14. Uttar Pradesh	14.0	12.5	26.9
15. West Bengal	24.7	26.7	41.9
16. Other States & Un. Territories	33.0	30.2	55.6
All India	19.9	17.7	37.6

Source: (1) Census of India 1971, Series I-India, Paper No. 3 of 1972, Economic Characteristics of Population.

(2) Table 1 above.

We can readily observe from the Table 2 that the absolute degree of urbanisation would differ considerably if we adopt either workers or income as the criterion instead of the conventional criterion of population. However, the pattern of difference turns out to be fairly uniform for different criteria. Thus, barring the exceptions of Assam and West Bengal, we find that the degree of urbanisation is highest according to the income criterion (col.4) and lowest according to the working force criterion (col.3). The difference between columns 2 and 3 of Table 2 is accounted for by the urban-rural worker rate differentials. Similarly, the difference between columns 3 and 4 is accounted for by urban-rural productivity per worker differentials while the difference between columns 2 and 4 is accounted for by the urban-rural per capita income differentials. It, therefore, follows from Table 2 that the urban-rural income differentials are less than the corresponding productivity differentials, because the urban-rural worker rate differential is generally less than unity. The reason why Assam and West Bengal turn out to be exceptions is that the urban-rural worker rate differential is greater than unity in these two States.

Our estimated per capita income in urban and rural areas and the implicit urban-rural per capita income differentials are shown in Table 3. It can be seen from this table that the rural areas of Bihar represent the region with lowest per capita income whereas (barring other States and Union Territories) the urban areas of Maharashtra represent the region with the highest per capita income, the per capita income of the latter being 4.4 times that of the former. Another interesting

observation that can be made on the basis of our estimates of per capita income is that the relative disparities among different States is quite low in urban areas as compared to its counterpart in rural areas. For instance, the ratio of the highest to the lowest per capita income is found to be as high as 2.9 in the case of rural areas while the same turns out to be only 1.7 in the case of urban areas (barring other States and Union Territories). This implies that economic distance between urban areas is not as high as that between rural areas of different States.

The figures given in Table 3 also reveal a few interesting cases. For instance, Andhra Pradesh is the State in which the per capita income in rural areas is higher than the corresponding national average, but still the State per capita income is below the national average because of the relatively lower per capita income in the urban areas. Bihar represents exactly the opposite case. As against this, Assam is a State where the per capita income in both the rural as well as the urban areas is higher than the corresponding national average and still the State per capita income is below the national average because it shows the lowest degree of urbanisation.

These observations clearly suggest that there cannot be any significant relationship between the rankings of different States according to per capita income in rural and urban areas. This is readily reflected in the coefficient of rank correlation between rural and urban per capita incomes for fifteen states which turns out to be only +0.22. This implies that relatively high level of urban per capita income does not necessarily suggest relatively high level of rural per capita income in a given state and vice versa. Hence there is no evidence of the economic complementarity of rural and urban areas within States in India.

Table 3Estimates of Per Capita Income in Urban and Rural Areas of
Different States, 1970-71

States	Per Capita Income (in Rupees) in			Urban-Rural Income Differential
	All Areas	Urban Areas	Rural Areas	
1	2	3	4	5
1. Andhra Pradesh	603	905	530	1.71
2. Assam	594	1212	531	2.28
3. Bihar	434	1330	335	3.97
4. Gujarat	836	1282	662	1.94
5. Haryana	945	1363	855	1.59
6. Karnataka	532	854	428	1.99
7. Kerala	643	855	602	1.42
8. Madhya Pradesh	491	920	408	2.25
9. Maharashtra	759	1474	436	3.38
10. Orissa	512	1172	451	2.60
11. Punjab	1048	1288	969	1.33
12. Rajasthan	583	966	497	1.96
13. Tamil Nadu	672	1077	497	2.17
14. Uttar Pradesh	491	943	417	2.26
15. West Bengal	682	1153	527	2.19
16. Other States & Un. Territories	1856	2517	1032	2.54
All India	637	1202	497	2.42

Source: Same as Table 2 above.

Finally, we can observe from Table 3 that there exists considerable interstate variation in the urban-rural income differential. The highest differential is observed in the case of Bihar (3.97) which is also the State with lowest per capita income, and the lowest differential is found in the case of Punjab (1.33) which again happens to be the State with the highest per capita income. This suggests a negative rank correlation between the State per capita income and the urban-rural income differential. In fact, the coefficient of rank correlation between the two turns out to be -0.59 which is found to be statistically significant. It is important to note in this connection that Professor S. Kuznets advanced the hypothesis that urban-rural income differentials have a tendency to narrow down with economic development.^{*4} Evidently, the interstate variation in the urban-rural income differentials in India for the year 1970-71 seem to support this hypothesis.

It is also an interesting exercise to separate the effects of structural factors and the productivity or technological factors on the overall urban-rural income differential in each State. Table 4 gives per capita incomes in rural and urban areas of different States derived on the basis of alternative assumptions about the urban-rural productivity differentials. Series A in Table 4 refers to the per capita income in the two areas derived on the basis of the assumption that in each sector, the productivity per worker in urban areas is the same as that in rural areas, is on the assumption that $b_{ij} = 1$ for all i and j . The urban per capita income differs from the rural per capita income in series A only inasmuch as the structure of the working force and the worker rate differ in the urban areas from those in rural areas. It can be seen from the Table 4

Table 4

Per Capita Income Differentials Between Urban and Rural Areas, 1970-71

Series	Per Capita Income in Rural Areas			Urban-Rural Income Differentials		
	Series A	Series B	Series C	Series A	Series B	Series C
5	570	530	530	1.24	1.30	1.71
6	554	531	531	1.57	1.79	2.28
7	360	335	335	2.61	3.06	3.97
8	746	713	662	1.43	1.62	1.94
9	913	895	855	1.20	1.32	1.59
10	477	462	428	1.47	1.62	1.99
11	650	643	602	0.93	1.00	1.42
12	439	429	408	1.73	1.90	2.25
13	523	483	436	2.45	2.83	3.38
14	481	473	451	1.77	1.98	2.60
15	1049	1015	959	0.98	1.12	1.33
16	546	526	497	1.38	1.62	1.98
17	596	549	497	1.42	1.74	2.17
18	450	440	417	1.65	1.83	2.26
19	564	560	527	1.68	1.81	2.19
20	1273	1149	1032	1.67	2.07	2.54
21	553	532	497	1.76	1.99	2.42

that the urban areas in Bihar and Maharashtra have highly favourable structure as compared to the respective rural areas, whereas the urban areas in Kerala and Punjab have significantly unfavourable structure as compared to the respective rural areas. On an average, the urban areas in India have quite favourable structure as compared to the rural areas.

Series B in Table 4 refers to the per capita incomes in the two areas derived on the assumption that $b_{ij} = 1$ for all sectors in each state except the sectors registered manufacturing, unregistered manufacturing and construction which taken together constitute the secondary sector. For these sectors our estimates of b_{ij} are used to derive the per capita incomes given in series B of Table 4, which captures the effects of differential structure of working force, worker rates and productivity differentials in the secondary sector alone between the urban and rural areas. It can be seen from the table that again Bihar and Maharashtra have relatively high effect of the productivity differential in the secondary sector on the urban-rural income differential. In Kerala, the urban-rural productivity differentials in the secondary sector are just sufficient to compensate the structural inefficiency of the urban areas as compared to the rural areas, while in Punjab, the former more than compensate for the latter.

The series C of Table 4 refers to our estimates of the urban and rural per capita incomes which are derived on the assumption that $b_{ij} = 1$ only for the sectors included in the primary sector, viz., agriculture, forestry, fishing and logging and mining and quarrying. For all other sectors b_{ij} are not taken to be unity. The difference between the

Series B and Series C in Table 4 is that for Series B, we assume $b_{ij} = 1$ for sectors included in the tertiary sector, viz., trade & commerce, transport, services and ownership of dwellings and real estate, whereas in series C we drop this assumption and have non-unity b_{ij} for these sections also. Thus, Series C captures almost all those influences that can be directly measured in the light of the present state of data availability. It can be seen from the table that the urban-rural income differential in each State without exception increases from Series A to Series B and from Series B to Series C. However, the increase between the Series A and Series B is uniformly less than that between series B and series C. This only implies that urban-rural productivity differentials in the tertiary sector are more important than those in the secondary sector from the viewpoint of overall urban-rural income differentials.

At this stage, it is worthwhile to examine the relative contributions of the structural and the productivity or technological factors to the overall urban-rural income differential. Table 5 presents these contributions for each state. From the table, it can be readily seen that at the all India level, the structural factors are more important than the technological factors in the overall urban-rural income differential. However, only in five States, viz., Bihar, Madhya Pradesh, Maharashtra, Uttar Pradesh and West Bengal, the structural factors turn out to be more important than the technological factors. In the remaining States, the technological factors are relatively more important. Maharashtra turns out to be the State for which the relative contribution of the structural factors is the highest, whereas the relative contribution of technological factors is maximum in Kerala.

**Relative Contribution of Structural and Productivity Factors to
Urban-Rural Income Differentials in India, 1970-71**

(Figures in Percent)

States	Structural Factors	Productivity			Productivity Differential in all Sectors	Totals Urban- Rural Income Differential
		Differential in Secondary Sector	Differential in Tertiary Sector	Differential in all Sectors		
1	2	3	4	(5) = (3)+(4)	(6) = (2)+(5)	
1. Andhra Pradesh	33.80	6.45	57.75	66.20	100.00	
2. Assam	44.53	17.19	39.28	55.47	100.00	
3. Bihar	54.21	15.15	30.64	45.79	100.00	
4. Gujarat	45.75	20.21	34.04	54.25	100.00	
5. Haryana	33.90	29.34	45.76	66.10	100.00	
6. Karnataka	47.47	15.15	37.39	52.53	100.00	
7. Kerala	-- 16.67	16.67	100.00	116.67	100.00	2
8. Madhya Pradesh	58.40	13.60	29.00	41.60	100.00	
9. Maharashtra	60.92	15.97	23.11	39.08	100.00	
10. Orissa	48.13	13.12	38.75	51.87	100.00	
11. Punjab	-- 6.06	42.42	63.64	106.06	100.00	
12. Rajasthan	36.78	24.49	36.73	61.22	100.00	
13. Tamil Nadu	35.90	27.35	36.75	64.10	100.00	
14. Uttar Pradesh	51.59	14.28	34.13	48.41	100.00	
15. West Bengal	57.15	10.92	31.93	42.85	100.00	
16. Other States & Un. Territories	43.51	25.97	30.52	56.49	100.00	
All India	53.52	16.20	30.29	46.49	100.00	

If we take the rank correlation between the urban-rural income differential (Series C of Table 4) and the relative contribution of structural factors (from Table 5), it turns out to be as high as +0.818 which is statistically significant. This only implies that structural factors have relatively high contribution to make when the urban-rural income differential is high and vice versa. It is primarily because of the structural superiority of the urban areas in comparison to the rural areas that the urban-rural income differential turns out to be high in Indian States.

It can also be observed from Table 5 that the relative contribution of urban-rural productivity differentials in the Secondary Sector ranges from about 0.5% in Andhra Pradesh to about 42.5% in Punjab, whereas the relative contribution of the urban-rural productivity differentials in the Tertiary sector ranges from about 23% in Maharashtra to 100% in Kerala. For each State, the relative contribution of the productivity differentials in the secondary sector turns out to be less than that in the tertiary sector. At all India level, the relative contribution of the former turns out to be almost half that of the latter. This clearly implies that we need to give more attention to the tertiary sector as compared to the secondary sector in order to reduce the urban-rural income differentials. However, more important policy to follow for narrowing the differential is to diversify economic activities the rural areas in India in general and those five States in particular. In other words, we need to concentrate more on bringing about a structural transformation of rural areas vis-à-vis urban areas if our objective is to reduce the extent of urban-rural income differential.

The main findings of the present study can now be summarized in the form of the following broad conclusions that emerge from the above analysis:

1. The magnitude of urban-rural per capita income differential at the all India level existing at the beginning of the seventies appears to be of the order of around 2.4 to 2.5.
2. There exists a considerable interstate variation in the urban-rural per capita income differentials in India, the ratio of urban per capita income to the corresponding rural per capita income ranging all the way from 1.33 to 3.97. Moreover, the urban-rural income differential seems to vary invariably with the level of development as measured by the per capita state income.
3. Per capita income shows a much greater interstate variation in rural areas as compared to urban areas. Moreover, there does not seem to be any significant rank correlation between the per capita incomes in rural and urban areas.
4. The structural factors contribute on an average around 50 to 55 per cent of the observed urban-rural income differentials in India. However, there exists considerable interstate variation in the relative contribution of the structural factors to the urban-rural income differential, there being a significant positive rank correlation between the two.

5. On the whole, the urban-rural productivity differentials in the tertiary sector appear to contribute more to the overall urban-rural income differential as compared to those in the secondary sector, the former contributing about twice as much as latter. Moreover, urban-rural income differentials in some states are highly sensitive to the corresponding productivity differentials.
6. There exist crucial gaps in the basic statistical source material required to derive an accurate and precise estimate of rural-urban productivity differentials in some sectors like construction, unorganised trade and commerce, unorganised transport, and services, especially at the state level. National sample surveys with specifically designed for this purpose with an adequate sample size and coverage at the state level need to be conducted to bridge this gap. Moreover, such surveys need to be repeated on a periodical basis to get a broad idea about the likely trends in urban-rural productivity differentials over a given period of time.

NOTES AND REFERENCES

(The authors are grateful to Mr. Bipin D. Patel for providing valuable computational assistance)

- ^{*1}The Committee on Regional Accounts: First Report, issued by CSO, November 1974, p.9; See also p.11
- ^{*2}The major studies on the subject that have already been published include the followings: (i) S.K. Dhakravarti, Uma Datta and V.Srinivasan: "Share of Urban and Rural Sectors in the Domestic Product in India in 1952-53," in V.K.R.V. Rao, S.R.Sen, M.V. Divatia and Uma Datta (eds.): Papers on National Income And Allied Topics, Vol.1 (Asia Publishing House, 1960); and (ii) V.K.R.V. Rao: "Economic Growth and Rural-Urban Income Distribution 1950-51 - 1960-61," The Economic Weekly, February 20, 1965, pp. 373-376.
- ^{*3}Ravindra H. Dholakia: Interstate Variations in Economic Growth in India, a Ph.D. Thesis submitted to the M.S. University of Baroda, April 1977; Ch.2.
- ^{*4}S.Kumata: "Quantitative Aspects of Economic Growth of Nations-II: Industrial Distribution of National Product and Labour Force," in Economic Development and Cultural Change, Supplementary Vol. V, July 1957.

Net Domestic Product of Different States by Industry of URU

(Rupee Lakhs at Current Prices)

States	1	2	3	4	5	6	7	8	9	10	11	12
	Agri- culture	Forestry & Fishing	Mining & Quarrying	Regu- lated Manu- facturing	Unregu- lated Manu- facturing	Construc- tion	Trade & Commerce	Transport	Owner- ship of Dwellings and Real Estate	Services	Total Gross Net Domestic Product	
1. Andhra Pradesh	138262	4804	1456	12610	14381	9856	36423	13173	4871	26354	262190	
2. Assam	58054	4232	2019	5762	2548	4716	7103	2732	1929	7745	94844	
3. Bihar	124558	4971	10532	12864	13864	14780	22713	18469	3407	21482	244740	
4. Gujarat	104723	1470	2264	24419	10722	11662	38826	8232	5196	15764	223257	
5. Haryana	56390	271	106	6734	5758	4800	9941	4716	1043	8385	94644	
6. Karnataka	71333	5145	1456	13566	7833	8179	22192	6689	4098	15225	155776	
7. Kerala	71067	4425	126	9370	4003	5021	18328	8745	2688	13467	137230	
8. Madhya Pradesh	107093	11446	4900	10956	13875	7726	18052	8275	3930	18332	204685	
9. Madhprashtra	106551	4784	745	77025	20202	27417	76136	24860	9769	35054	382737	
10. Orissa	65935	4066	1823	4627	5993	3507	7058	3344	1832	14188	112373	
11. Punjab	84993	358	69	5749	6286	11512	16081	6309	1593	8672	141622	
12. Rajasthan	89588	1011	1087	6444	7790	6175	17681	5464	2488	12566	180264	
13. Tamil Nadu	107827	2896	1344	29195	21797	13281	48599	13714	5116	33280	277049	
14. Uttar Pradesh	256496	6414	799	19081	23190	19937	42926	16904	9013	38996	433786	
15. West Bengal	126718	6299	5623	37510	14766	17879	42622	16065	9571	25177	302230	
16. Other States & Union Territories	83499	8928	720	51866	9292	23952	6719	5409	3087	82829	273301	
All India	1653300	68500	35100	325900	182400	198100	431400	160100	69600	374500	3490900	

Sources: (1) Revindra H. Dhelkial Inter-State Variations in Economic Growth in India, Ph.D. Thesis submitted to the PS University of Baroda, April, 1960-61 to 1972-73, Central Statistical Office, Government of India; January 1975. (2) National Accounts Statistics, 1960-61 to 1972-73, Central Statistical Office, Government of India; January 1975.

Average Productivity of Labour in Different Sectors of the State Economies, 1970-71

(Rupees at current prices)

States	Agricul- culture	Forestry & Fishing	Mining & Quarrying	Registered Manufac- turing	Unregis- tered Manufac- turing	Construc- tion	Trade & Commerce	Transport	Ownership of Dwellings & Real Estates	Services	
	1	2	3	4	5	6	7	8	9	10	11
1. Andhra Pradesh	1095	919	1523	1670	1647	3484	3707	3347	11.1	1877	
2. Assam	1832	923	13196	3174	4107	10371	2885	2503	12.0	1676	
3. Bihar	866	2549	4075	2612	3208	15059	3983	8842	6.0	2510	
4. Gujarat	1901	883	6482	3146	4532	9726	6664	3434	19.4	2184	
5. Madhya Pradesh	3254	753	2157	3789	6647	9202	8573	7305	10.3	1662	
6. Karnataka	1050	1226	2883	2285	1786	4490	3707	2451	13.9	1846	
7. Kerala	2357	1018	422	1316	1506	4673	3240	3612	12.3	1595	
8. Madhya Pradesh	882	4626	5018	2356	2510	6410	3583	4011	9.4	1923	
9. Maharashtra	895	1611	1650	4205	3586	9919	6182	4435	19.3	2118	
10. Orissa	1243	2767	3526	2941	2411	9278	3113	3378	8.3	2459	
11. Punjab	3466	958	12897	1888	5065	14882	8002	8756	11.7	1836	
12. Rajasthan	1500	491	3015	2501	2820	6188	4935	3408	9.6	1847	
13. Tamil Nadu	1185	718	2553	2242	3254	5670	4211	2946	12.4	2440	
14. Uttar Pradesh	1213	3928	7148	1928	2315	11970	3862	3869	10.2	1725	
15. West Bengal	1753	1734	4869	2668	4426	14382	4343	3109	21.5	1935	
16. Other States & Un. Territories	2646	4222	3071	13173	5102	12544	1532	2431	17.6	7844	

Per Capita figures derived as the ratio of GDP originating in this sector to total population of the region.

Sources: (1) Appendix Table 1

(2) Census of India 1971, Series I-India, Paper No. 3 of 1972, Economic Characteristics of Population (Selected Tables), Registrar General, India, October 1972.

Appendix Table 3

Estimated Ratios of Labour Productivity in Urban Areas to Labour Productivity in All Areas for Selected Sectors, 1970-71

States	Registered Manufacturing	Unregistered Manufacturing	Construction	Trade & Commerce	Transport	Ownership of Dwellings & Real Estate	Services	
	1	2	3	4	5	6	7	8
1. Andhra Pradesh	1.22	1.09	1.06	1.36	1.14	2.53	1.40	
2. Assam	1.30	1.52	1.39	1.41	1.21	3.13	1.52	
3. Bihar	1.44	1.56	1.31	1.57	1.24	3.08	1.44	
4. Gujarat	1.08	1.94	1.27	1.19	1.13	2.17	1.20	
5. Haryana	1.00	1.90	1.59	1.24	1.19	2.61	1.41	
6. Karnataka	1.25	1.20	1.15	1.23	1.09	2.31	1.31	
7. Kerala	1.53	1.02	1.02	1.61	1.35	2.69	1.51	
8. Madhya Pradesh	1.09	1.39	1.43	1.23	1.10	2.69	1.26	
9. Maharashtra	1.09	1.59	1.27	1.12	1.07	2.07	1.19	
10. Orissa	1.51	1.35	1.22	1.43	1.20	3.19	1.51	
11. Punjab	1.13	1.83	1.49	1.19	1.17	2.34	1.32	
12. Rajasthan	1.07	2.04	1.54	1.26	1.14	2.62	1.31	
13. Tamil Nadu	1.21	1.89	1.28	1.21	1.09	2.10	1.29	
14. Uttar Pradesh	1.24	1.40	1.25	1.26	1.11	2.82	1.36	
15. West Bengal	1.09	1.31	1.15	1.18	1.11	2.30	1.24	
16. Other States & Un. Territories	1.13	1.98	1.48	1.13	1.12	2.01	1.22	

Appendix Table 4

Estimates of Net Domestic Product Deriving in Urban Areas of Different States by Industry of Origin, 1970-71

(Rupees Lakhs of Current Prices)

States	Agriculture	Forestry & Fishing	Mining & Quarrying	Registered Manufac-turing	Unregis-tered Manufac-turing	Construc-tion	Trade & Commerce	Transport	Owner-ship of Dwellings & Real Estate	Services	Totals Net Domestic Product
1	2	3	4	5	6	7	8	9	10	11	12
1. Andhra Pradesh	4593	328	511	9760	2557	4719	26085	10764	2361	15364	76032
2. Assam	524	82	678	2278	951	2594	4733	1957	554	3487	17873
3. Bihar	2612	535	5710	10371	3768	10845	18283	10325	1042	11472	74933
4. Gujarat	3914	267	607	20075	5450	10073	32609	6715	3156	12449	96125
5. Haryana	1594	27	2	3889	1416	2289	7970	3487	477	3021	24172
6. Karnataka	3586	508	555	12073	3060	4514	19022	5867	2286	10277	60848
7. Kerala	3091	470	12	3535	524	1082	9065	4504	1165	6174	29625
8. Madhya Pradesh	2079	1560	2509	9191	4669	5628	14625	7195	1717	13229	62400
9. Maharashtra	4095	1268	274	70897	9535	20557	68129	22711	6284	27815	231563
10. Orissa	1012	465	422	3427	758	1570	4576	2398	489	6512	21627
11. Punjab	3175	51	5	4495	1959	6849	13458	4783	881	5761	41426
12. Rajasthan	2391	45	200	4807	4568	4864	13810	4445	1132	8539	44798
13. Tamil Nadu	5853	879	275	23112	16449	9362	40064	12002	3241	22954	134231
14. Uttar Pradesh	4099	1079	181	15179	8451	12111	33588	14184	3568	24434	116794
15. West Bengal	2630	442	325	31234	5471	12516	36299	13535	5418	18628	126498
15. Other States & Un.Territories	1599	1203	76	47709	5672	19293	6009	4530	2053	63756	151902
17. All India	46920	9205	12542	271636	75278	128864	347295	429402	35825	253980	1310847

Source: See the text, Section III