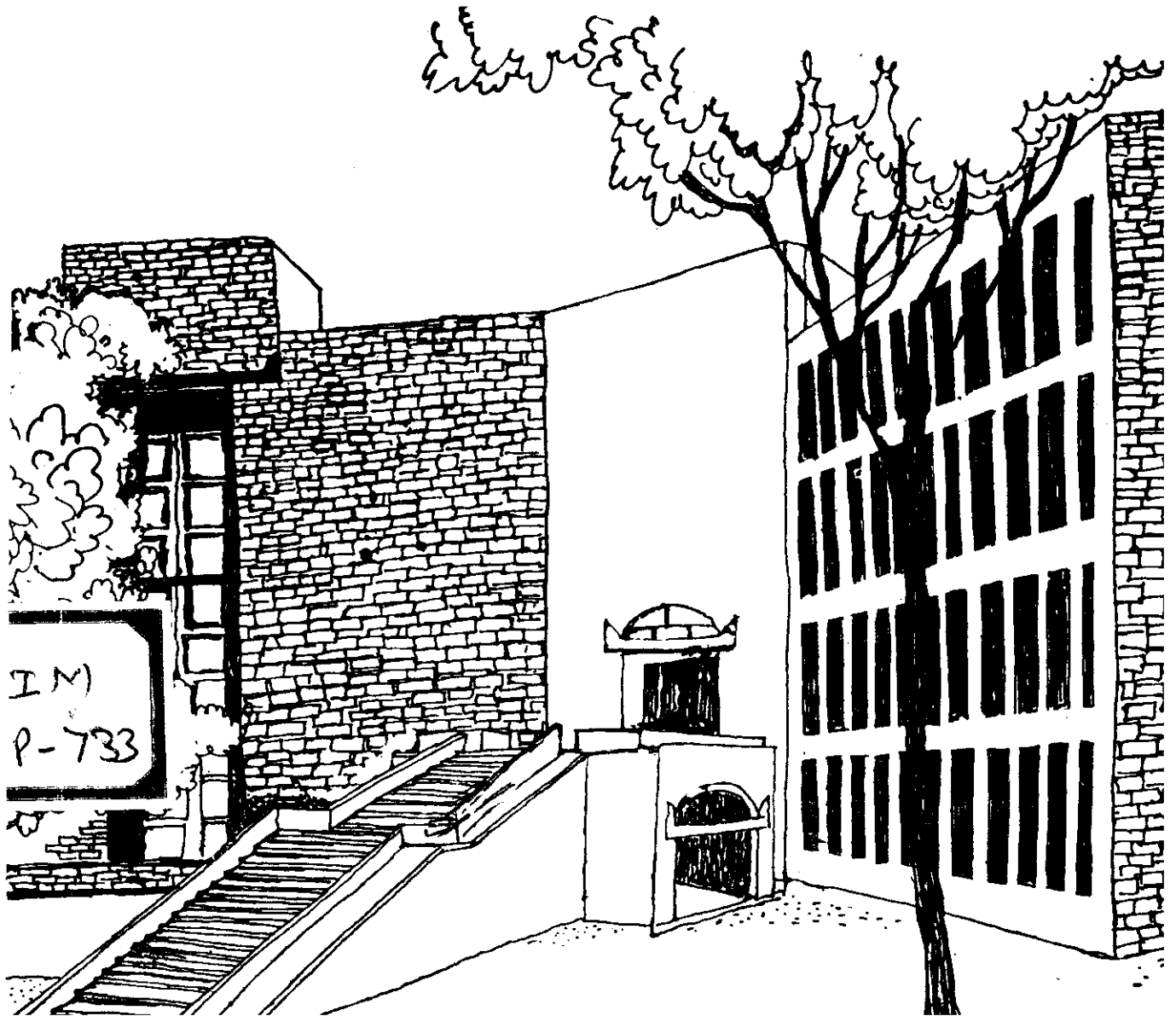


Working Paper



INTER-INDUSTRY TABLES FOR GUJARAT :
METHODOLOGY AND ESTIMATES

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ABSTRACT

Regional Input-Output tables compatible with the national input-output table can play a crucial role in formulating realistic regional plans and also in ensuring that the spatial dimension is properly incorporated into the national planning model in a large sized multi-region economy like India. The regional I/O table captures the basic differences between the state economy and the national economy in terms of the production structure and technology. An attempt has been made in the present paper to construct the input-output table for Gujarat compatible and consistent with the national I/O table for 1984-85, which formed the basis for the national 7th Five Year Plan. Accordingly, the I/O table prepared for Gujarat consists of 50 sectors and represents commodity flows at current (1984-85) prices. Both the input-output coefficient matrix as well as the input transactions matrix have been presented in the paper.

There are two alternative methods for constructing regional I/O tables : The survey-based method and the non-survey based method. The latter involves regionalising the national I/O matrix. The paper presents both sets of estimates for Gujarat for the year 1984-85. A detailed comparison of the results indicates that if the purpose of constructing regional I/O table is to capture sector-activity -specific differences in the regional technology, the survey-based method should be given priority over the non-survey based method, although the former involves much greater time and effort.

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1. Need for Regional Tables

Inter-Industry table, popularly known as input-output (I/O) table, is an accounting device to represent the flows of transactions taking place in an economy over a given period of time which is generally taken to be a year. It captures the sectoral inter-dependence, basic structure and broad technology in the economy. Since development planning in the economy aims at achieving different goals by carefully avoiding bottlenecks and imbalances in the system, the detailed description of the economy provided in the inter-industry table assumes special importance in the planning models. After the Third Five Year Plan, the macro planning models used in India have been based on an input-output table for the whole economy. While such aggregative planning models based on I/O tables ensure internal consistency at the macro level for the specific sectoral targets, they fail to capture the dimension of space. Recent studies on regional disparities have clearly

shown that not only the levels of technology and production structure differ substantially but their rates of change over time also vary considerably across the regions in India (R.H. Dholakia, 1985). In order to make the plan targets more realistic, it is, therefore, necessary to incorporate the spatial dimension explicitly into the planning model.

One approach to tackle this problem is to decentralize the planning process by adopting the multi-level planning framework so as to capture the local circumstances and information more effectively. This would require preparation of state plans in the framework of the national plan. The requirement of the internal consistency of the state plans can be met only when the sectoral interdependence and sectoral links existing in the state are clearly spelt out. In other words, an inter-industry table at the state level should be used as the basis for the state plan just as the national inter-industry table is used as the basis for national plan. The state I/O table is expected to capture the basic differences between the state economy and the national economy in terms of the production structure and technology. The method of decentralized planning can thus result in a direct incorporation of the spatial dimension into the overall planning model.

The other approach to deal with the spatial dimension in the national planning is to directly attack the problem by replacing regional I/O tables for the national I/O matrix. In other words, the planning model itself can be modified by decentralizing the I/O table rather than the plan itself. The specific requirement of such an approach is that (i) I/O table for each of the regions in the nation must be prepared; (ii) the reference year for all regional I/O tables must be the same; (iii) the sectoral dimensions of all regional I/O tables should also be the same; and (iv) broad methodology for constructing I/O tables must be the same for all regions.

It is evident that, in both these approaches designed to incorporate the spatial dimension in the national plan model, we require estimation of the regional I/O matrix compatible with the national I/O matrix. Since the I/O tables prove most useful in deriving a consistent estimate of the target of gross output for different sectors on the basis of given levels of final demands, the regional I/O tables are required essentially to get more realistic targets of the gross output in different sectors of the economy.

Another important use of the regional I/O tables is in estimating or forecasting the region specific total demand of critical input industries in future. The regional I/O table

can predict with greater degree of reliability the input demand implications of various alternative developmental strategies under consideration at the regional level. It can also be used to predict the likely effects of any type of supply shocks like drought on the regional economy. Thus, the inter-industry transaction structure in a regional economy is a valuable tool for forecasting the demand for inputs and supply of outputs in the specific regional developmental context. It can also serve as a basis for transport planning since a complete system of regional I/O tables provides the implicit estimates of interregional flows by commodities.

In short, the importance of regional I/O tables compatible with the national I/O table cannot be overstated in the context of realistic planning for economic development in any large sized multi-region national economy like India.

II. Previous Studies for Gujarat

Efforts in the direction of preparing regional I/O matrices in India were initiated in the 1950's. Subsequently, several individual researchers and institutions have constructed I/O tables for different states during the last two decades. A detailed survey of the availability of regional I-O tables in different states in India has been presented in Prasad and Dalvi (1982). Brief surveys of available studies on regional I-O tables are also presented in Venkatramaiah et. al. (1979) and Saluja (1980).

For Gujarat, the first attempt for constructing regional I-O matrix was made by Alagh and Kashyap (1971) for the reference year 1964-65. Subsequently, Kashyap (1979) updated and improved upon the earlier attempt to construct I-O matrix for the year 1969-70. However, the sectoral classification attempted in Kashyap's study (1979) was highly aggregative as it consisted of only 12 industrial sectors and 5 non-industrial sectors. The most detailed and relatively comprehensive sectoral classification attempted so far for constructing regional I-O table for Gujarat has been the one presented in the wider study carried out by Venkataramaiah et al. (1979). This study presents a rectangular 64 x 72 input coefficients matrix for Gujarat for the year 1965. After 1979, no serious attempt seems to have been made either for updating the existing I-O matrix or for constructing a fresh one for the Gujarat State. On the other hand, at the national level, the Seventh Plan is based on an I-O matrix of 50 x 50 for the year 1984-85. It is an updated but abridged version of the I-O table for the year 1973-74 prepared and published by CSO (1981). However, no effort is made to construct compatible I-O matrices at regional level even for the base year 1973-74. The latest year for which the I-O table of Gujarat is available as of now is 1969-70. It not only involves a much higher degree of sectoral aggregation as compared to the latest national I-O table, but it is also very outdated in

terms of the reference year as well as the basic source material. It, therefore, cannot capture adequately the regional differences in technology and production structure. For the same reason, we also cannot use the table prepared by Venkatramaiah et al (1979) as the basic reference table. In view of this, we have to necessarily think in terms of a direct approach to construct the I-O table for Gujarat compatible and consistent with the latest national I-O table.

III. Basic Approaches for Constructing Regional I-O Tables

There are basically two alternative approaches for estimating the regional I-O matrix, viz., the Survey Method and the Non-Survey Method. In the survey-based method of estimating regional matrix, all the actual input-output transactions are estimated by using whatever information is available on such transactions from the secondary and primary sources for the regional unit. If some gaps in the availability of data are found, they are sought to be bridged by conducting specific primary surveys in the region. On the other hand, the non-survey method of estimating the regional I-O matrix uses the national I-O matrix as the basic reference and modifies it to the necessary extent by using the corresponding estimates of the gross output, value added and other relevant data readily obtainable for the regional unit. In particular, the two approaches differ on the following grounds :

1. While the compatibility and consistency of the regional matrix with the national matrix need to be carefully ensured in the survey method, these are always ensured in the non-survey method.
2. The survey method requires enormous time and effort whereas the non-survey method requires significantly less time and effort.
3. Voluminous amount of data collection and processing is involved in the survey method with the result that its requirement in terms of appropriate software and computer time is substantial. The amount of data collection and processing and hence software requirements are minimal for the non-survey method.
4. As against all the above mentioned disadvantages of the survey method vis-a-vis the non-survey method, the relative merit of the former lies in its ability to capture all of the regional variations in the production technology. While the non-survey method captures some regional variation, it fails to capture all relevant regional variations in production technology including major changes in the input structures of individual industries that may be found at the regional level.

In the present paper, we construct the I-O table for Gujarat based on both the survey and the non-survey methods. An attempt has also been made to present some comparisons of our regional tables with the national I-O table of 50 x 50 sectors for the year 1984-85. The basic table that we have constructed is the one showing input coefficients of 50 commodity x 50 commodity matrix for Gujarat. The input, transaction table has also been derived by using the corresponding estimates of gross outputs.

IV. Data Sources and Method of Estimation for Survey-Based I-O Matrix

As we have already discussed above, in the survey method we have to take special care to ensure compatibility and consistency of the regional I-O table with the national I-O table. Accordingly, in the present case, we have to ensure compatibility with the national table in the following aspects :

- i) Coverage in terms of the number of sectors and their precise definitions in the I-O table. The Technical Note on Seventh Five Year Plan provides the relevant information about the number and definition of sectors in National I-O matrix. The reference year for the national I-O table is 1984-85 and the table is at current prices. Moreover, it is based on 50-sector

classification of the economy. We have to use the same number and definitions of sectors and the reference year for Gujarat.

- ii) Concepts used for the regional I-O table should be the same as the ones used for constructing the national I-O table. Particularly, we should ensure that the I-O table should be in terms of commodity x commodity matrix. Further, it should be based on the 'industry technology assumption' which states that the input structure of a secondary product is considered to be similar to that of the industry where it has been produced (see, CSO 1981). Finally the regional I-O table should be in terms of producers' prices for inputs and outputs.

- iii) Apart from the similarity of broad methodology followed in the estimation of input coefficients in different sectors, the adjustment for the following aspects should be on similar lines in the regional I-O table as in the national I-O table : (a) unregistered manufacturing; (b) trade-margins; and (c) indirect taxes.

Keeping these requirements in view to ensure compatibility of the regional I-O table with the national I-O table, we may now outline the details of the methodology adopted in the present paper to construct the survey-based I-O table for Gujarat for the year 1984-85.

As a first step in the methodology, we divide the regional economy into four broad categories. Since the national I-O table describes the whole economy with 50 sectors/commodities, we classify the same 50 commodities describing the whole economy of Gujarat into four broad categories based on the following criteria : (i) the level of the sectoral disaggregation given in the national I-O matrix; (ii) the nature of the data availability at the regional level; and (iii) the nature of the activity. The four categories are :

- A. Industry including Electricity (30 sectors)
- B. Agriculture and Animal Husbandry (8 sectors)
- C. Fishing, Forestry and Mining (7 sectors)
- D. Supra-regional Transactors and Services (5 sectors).

We may now discuss the details of the methodology to derive the I-O coefficients for Gujarat in each of the four above-mentioned categories.

IV-A: Industrial Sector: The industrial sector including electricity covers 30 out of the total of 50 commodities of the economy. It consists of not only the registered manufacturing and electricity sectors but also the unregistered manufacturing sector in the income accounts of the state. Since the basic source material and nature as well as availability of data differ substantially in these two sub-sectors, we distinguish these two segments of the industrial sector and treat

them separately to begin with. Later on we add them to derive the required estimates for the industrial sector.

IV-A (a) : Registered Manufacturing and Electricity

The basic source material in this sub-sector is the detailed tabulation of the factory sector of the Annual Survey of Industries (ASI). The latest year for which these detailed tables of the ASI are available is 1978-79. We have, therefore, made use of this information as the basic source.*¹ Tables 4, 5 and 7 in the ASI detailed tabulation provide very useful information on the inputs and outputs of the registered factories at four digit level of industrial aggregation. These data are both in the physical units and value terms. The data on inputs were classified first into three categories:

- (i) Material inputs
- (ii) Fuel Inputs
- (iii) Other Inputs

Having first identified the four digit level industries for which the data on all these 3 types ^{of} inputs are separately available for Gujarat State, an exhaustive list of the value of material input items by each of the 4-digit level industries was made. This information is available from Tables of the ASI

*1. It may be noted here that the national I-O table for 1984-85 as available in the Technical Note on the 7th Plan, uses the detailed tabulation of ASI for the year 1973-74. However, the tabulation of 1978-79 ASI data was completed subsequently, but it was only in the year 1987 that the corresponding results in the form of relevant detailed tables were available from CSO. We have made use of this most recently available information for constructing the I-O table for Gujarat.

detailed tabulation. Using the NIC (1970) codes for 8-digit level product/commodity classification, we identified each of the items used as material inputs in each of the ASI 4-digit level industries in the State. Using the definitions of the 50 sectors of the national I-O matrix as given in the Technical Note on 7th Plan and CSO (1981), we then arrived at the aggregation of the 8-digit level inputs item codes into our required sectors for each of 4-digit level ASI industries in the state for the year 1978-79.

Table 4 in the ASI detailed tabulation for the factory sector provides information on the fuel inputs and lubricants used in the production of outputs in different industries at 4-digit level. It provides data on physical units as well as in value terms on 15 categories of fuels and lubricants. The values of these items were collected and aggregated into our required 50 sectors by using the definitions of the sectors for each of the 4 digit level industries.

In the case of other inputs, the information was obtained from Table 7 of the detailed tabulation of ASI, 1978-79 for each of the 4-digit level industry in the state. The broad treatment of different items in Table 7 was similar to the one followed in CSO (1981) which underlies the national I-O matrix for the year 1984-85. Table 7 in ASI detailed tabulation provides information in value terms on the following items which deserve special mention : (i) addition to stock of semi-

finished products, (ii) work done for customers, (iii) sale value of goods sold in the same condition as purchased, (iv) cost of contracts and commission, (v) products reported for sale in last year but used for further manufacture, (vi) miscellaneous charges, (vii) office supplies, (viii) purchase value of goods sold in the same condition as purchased, (ix) cost of repair and maintenance. Whereas the first 3 items relate to output, the remaining 6 items are essentially input items. The difference between (iii) and (viii) is taken as the trade input. Items (iv) and (vi) are allocated to the "other services" sector (Sector No. 50). Item (v) is considered as commodity produced and consumed in the same industry. Item (vii) is broken up equally into two groups of items, viz., paper & stationery and other office equipments. Item (ix) is allocated to "other manufacturing" sector (Sector No. 44).

IV-A (b) : Unregistered Manufacturing

In terms of availability of reasonably detailed information on inputs and outputs, the unregistered manufacturing sector is not at all comparable to the registered manufacturing sector. The data for unregistered manufacturing is collected only through sample surveys which are not very frequently conducted. The latest year for which a detailed sample survey in this sector was conducted through NSSO and for which the results are now available, is 1978-79. It provides information

on aggregate inputs, gross outputs, value added, depreciation, etc. by 2-digit industry groups for major state economies. The results of the central sample are published recently by CSO (1985). Since our required sectoral classification does not match with the 2-digit industrial classification, the first step is to enlarge and match the two classifications. This was accomplished by assuming that within the given 2-digit level industry group, the further disaggregation pattern in the unregistered manufacturing sector is similar to the one in the registered manufacturing sector in the state economy. This method was followed in respect of the aggregates like gross value added and gross output.

Since we do not have any details for the input structure within the unregistered manufacturing, although we have the overall gross value added proportion by industry groups, we have to generate the total input proportions by our required industrial sectors within the unregistered manufacturing in Gujarat. For the same industry groups, we also have the total input proportions from the ASI tabulations. By adjusting the input-use proportions for the registered manufacturing based on the ASI data to the total input-use proportion in the unregistered manufacturing in each of the required sectors, the required input-use proportions were obtained for the unregistered manufacturing for the year 1978-79.

As we can see from the above discussion, the input-use coefficient matrices for all the sectors covered under the registered as well as unregistered manufacturing pertained to the year 1978-79. We can, therefore, take their weighted average and combine the registered and unregistered manufacturing technologies in the "average" input-use proportions prevalent in the economy. It may be pointed out here that such a procedure of taking weighted average, which is also followed in the national I-O matrix, would necessitate changes in the input-use proportions whenever the relative weightage of the registered and unregistered manufacturing changes in the economy. If we consider any change in the input-use coefficient as revealing the technological change as is often treated in the literature (see for instance, Ramachandra Rao and Narayana 1987), we should treat the changing proportion of registered and unregistered manufacturing as a source for technological change in the economy.

Having obtained the input-use coefficients for the industry sectors for the year 1978-79, the problem was to carry it forward to the year 1984-85. Basically, two different but related phenomena occur in any economy over time in this context : (i) prices of inputs and outputs change at different rates over time; and (ii) the input substitution on account of either changing relative input prices and/or

changing technology takes place. The latter is usually related to the former. It is well-known that relatively cheaper inputs are substituted for relatively costlier inputs. Thus, two opposite effects are likely to operate on the input use coefficients over time. The net impact could be in any direction as far as the input use coefficient in value terms is concerned. We compared the total input use proportions for all the industry sectors covered under registered manufacturing for the year 1978-79 with the ones in the year 1982-83 obtained from the ASI factory sector's summary results for Gujarat State. The two proportions were found to be remarkably similar in most of the sectors. On the other hand, when we made price adjustments by using the data on price indices by sectors from Finance Ministry (1979; 1983 and 1985) and deflators for state domestic product estimates, the total input use proportions in several sectors were considerably distorted, even to the extent of indicating negative value added proportions in some cases, for both the years 1982-83 and 1984-85. One of the main reasons for this phenomenon may perhaps lie in the fact that such price adjustments at best represent only partial adjustments inasmuch as the corresponding changes in input use proportions in physical terms are not captured by these adjustments. Moreover, it may also be noted that detailed product-wise price information is not readily available at the state level in the required form. In view of

this, it is preferable not to make any price adjustments while deriving regional I-O matrix, especially in the light of available empirical evidence on relative stability of input use coefficients in the short run. Thus, we are in effect assuming that the net impact of relative price changes and inter-input substitution taken together is negligible on the input use coefficients in value terms over the period 1978-79 to 1984-85 in Gujarat.

In order to generate the transaction matrix, we require to estimate gross output for the year 1984-85 in different industrial sectors covered in our 50 x 50 sector framework. The latest ASI results for the factory sector are available only in the summary form for Gujarat state for the year 1982-83. Moreover, these summary results are available for the 3-digit level disaggregation only. On the other hand, the state income data provide the estimates of net value added at current prices in the registered and unregistered manufacturing sectors separately for the year 1984-85. Using the estimate for the rate of depreciation for the registered and unregistered manufacturing sectors from CSO (1987), we generated the gross value added at current prices for these two sectors in 1984-85. Then, by applying the profile of the gross value added for our required industrial sectors from the ASI summary results for the year 1982-83, we obtained the estimates of gross value added in 1984-85 for our different industrial sectors consistent with the

corresponding overall estimate of the gross value added for the entire registered manufacturing sector provided by the official state income statistics. Applying the ratio of gross value added to gross output from the 1982-83 ASI data for Gujarat by industry groups, the corresponding estimates of gross output by the required sectors were obtained for the registered manufacturing for the year 1984-85.

The 1978-79 data on unregistered manufacturing by the required 30 sectors were similarly processed to obtain the percentage share of gross value added. These percentages were applied to the estimated gross value added for the unregistered manufacturing sector in 1984-85 to get the series of gross value added by the required sectors in 1984-85. The 1978-79 value added proportions for these sectors were used to obtain the corresponding estimates of gross output from gross value added for unregistered manufacturing in 1984-85. The gross outputs in the registered and unregistered manufacturing by the required sectors were then added so as to obtain the corresponding input use transactions matrix for manufacturing in Gujarat for the year 1984-85 at current prices.

IV-B Agriculture and Animal Husbandry

The main source of data on these sub-sectors is the basic set of worksheets of the state income unit of the Bureau of Economics and Statistics, Government of Gujarat. From this

source, we obtained the data on gross output by different crops and animal husbandry sub-sectors. However, data on inputs by different items and depreciation were available only for the agriculture and animal husbandry sector as a whole. These data were readily available both at constant and current prices for the year 1984-85. However, in order to allocate the input cost by items to different crops and animal husbandry, we have to use other sources of information. Very useful supplementary information on input use by different crops is provided by the regularly conducted sample surveys on cost of cultivation in the state. Cost of diesel and electricity were allocated to crops using the statistics on area under irrigation by crops available from the Directorate of Agriculture, Government of Gujarat. Having generated the transaction columns for the 8 sub-sectors of agriculture in the required 50 x 50 sector I-O table, these transactions were added to the manufacturing transactions matrix already derived as per the methodology described in the section IV-A above.

In order to adjust these transactions for the trade and transport margins, commodity specific margin rates for Railways, Other Transport and Trade were obtained from the Technical Note on the Seventh Plan. These rates were applied to the transaction table for manufacturing and agricultural sectors. The aggregated margins in each column were then added to their respective sector rows.

IV-C. Fishing, Forestry and Mining :

The main source of data for these sectors is again the state domestic product accounts. From this source, we get the data on net domestic product, depreciation rates and other inputs used by the required sub-sectors at current prices for the year 1984-85. It was, therefore, possible to calculate the total input use proportions and gross value added proportions in these sub-sectors in Gujarat. The allocation of inputs by commodities in the state was obtained by adjusting the national input use coefficients in each sub-sector at the same rate as the overall input use proportion in the respective sector. The inter-industry transactions were then added to the already obtained transaction matrix for the manufacturing and agriculture.

IV-D. Supra-Regional Transactors and Services :

The main source of data in this sector is also the state income accounts and the CSO. Official estimates of Net State Domestic Product at current prices for the year 1984-85 in these sub-sectors were converted into gross value added by applying sector-specific depreciation rates obtained from the CSO. In the case of the supra-regional transactors like railways, communication, banking and insurance, etc., even the estimates of SDP are received by the state statistical bureau from the CSO. Moreover, in the case of most of

these services, the technology is unlikely to show significant regional variations. National input use coefficients were, therefore, adopted in these sectors and the corresponding transactions were generated.

When these transactions were added to the already derived transaction table, a complete 50 x 50 sector transaction table for Gujarat State was formed. It was then converted into the input use coefficient form. By post-multiplying this input use coefficient matrix by the Make Matrix obtained from the Technical Note on 7th Plan, the required input-output coefficient matrix for Gujarat was obtained. The input-output coefficient matrix for Gujarat for 1984-85, so derived, is presented in Appendix Table 1. The inter-industry transaction table for Gujarat corresponding to the input-output coefficient matrix for the year 1984-85 at current prices is presented below in Appendix Table 2.

V. Data Sources and Method of Estimation for Non-Survey-Based I-O Matrix

There are several non-survey methods available to regionalize the national inter-industry table. The method that is conventionally used for this purpose is the well-known RAS method (for discussion of RAS method, see Kundu et al., 1978; and Saluja, 1980). Further improvements and refinements in the application of the RAS method is suggested in Braschler et al., (1984). Dalvi and Prasad (1981 and 1982)

have proposed another non-survey method based on the generalized inverse technique. They have also compared the performance of their method based on the Moore-Penrose inverse and the RAS method in the case of the two Indian states. They have found that use of generalized inverse for regionalization of a national I-O matrix can be made for empirical research with a larger degree of confidence as compared to RAS method (see Dalvi and Prasad, 1982 a). Subsequently, Dholakia and Choudhry (1986) have modified the Dalvi-Prasad (1981) method based on generalized inverse by explicitly introducing the value added constraints. They have demonstrated with the help of the Canadian regional input-output tables for the year 1974 that their method performs far better than the method of Dalvi and Prasad based on the Moore-Penrose generalized inverse. We have, therefore, used the Dholakia-Choudhry method of regionalizing the national I-O matrix for Gujarat.

Central to the non-survey method based on the generalized inverse technique is the proposition that the national coefficients are weighted averages of the corresponding regional coefficients, the weights being the proportion of regional gross outputs to national gross output in a given industry (j). Symbolically,

$$a_{ij} = \sum_{r=1}^K p_j^r \cdot a_{ij}^r \quad \dots \quad (1)$$

where a_{ij} is the national input use coefficient for the i^{th} commodity in the j^{th} industry, p_j^r is the r^{th} region's share

of j^{th} industry's national gross output and a_{ij}^r is the input use coefficient for the i^{th} commodity in the j^{th} industry for the r^{th} region. In matrix form, (1) may be expressed as :

$$\begin{matrix} A \\ (m \times mn) \end{matrix} = \begin{matrix} P \\ (m \times mk) \end{matrix} \cdot \begin{matrix} A^R \\ (mk \times mn) \end{matrix} \dots (2)$$

where n is number of commodities, m is number of industries, and k is the number of regions. All these matrices are defined for the sake of convenience in row diagonal and block diagonal matrix form. (for details, see Dholakia and Choudhry, 1986).

From (2), we obtain :

$$A^R = P^+ \cdot A \dots (3)$$

where P^+ is a generalized inverse of P . Dalvi and Prasad (1981) use the Moore-Penrose generalized inverse of P to get the solution as :

$$a_{ij}^r = p_j^r \cdot a_{ij} / \sum_{r=1}^K (p_j^r)^2 \dots (4)$$

Dholakia and Choudhry (1986) on the other hand, impose the value added constraint and obtain the solution as :

$$a_{ij}^r = a_{ij} \left(\sum_{i=1}^n a_{ij}^r \right) / \left(\sum_{i=1}^n a_{ij} \right) \dots (5)$$

Since the Dholakia-Choudhry method worked far more satisfactorily than the Dalvi-Prasad method, which in turn worked more efficiently than the traditional RAS method, we have used the Dholakia-Choudhry solution to generate the non-survey based Gujarat matrix from the national input use matrix for the year 1984-85.

The data requirements for this method are relatively less as compared to the other methods. We require the estimates of the value of gross output and total inputs used in each of the 50 sectors for Gujarat for the given reference year. The most comprehensive source of such data at the state level is generally the state income division of the Bureau of Economics & Statistics of the state government. Although the required data are available at the aggregate sectoral level in the state economy, the same are not always available at the required disaggregated sectoral levels. In such cases, allocation of the aggregates particularly the total inputs used among the corresponding sub-sectors has been made by using appropriate methods.

In order to allocate the total inputs used in a sector, say agriculture, to the sub-sectors covered in our 50 x 50 classification, we have used the value added proportions obtained from the national table for each of the sub-sectors. Since at the aggregate sector level, we have the regional value added proportion which may be different from the corresponding proportion for the national sector, we adjust the value added proportions in the sub-sectors at the national level in the same direction and rate for estimating the Gujarat proportions. For the industrial sub-sectors' gross output and total input use proportions, the same data sources and methods were used as described above in section IV-A.

For supra-regional transactors and services, we adopt the national input use coefficients for the respective columns for Gujarat state.

The input use coefficient matrix for Gujarat based on the non-survey method was obtained by consolidating the above estimates for the respective coefficients. After post multiplying the input use coefficient matrix by the make matrix for 1984-85 obtained from the Technical Note on 7th Plan, we get the input-output coefficient matrix for Gujarat, which is presented below in Appendix Table 3. The corresponding transaction table for Gujarat State for the year 1984-85 at current prices based on the non-survey method is presented in Appendix Table 4.

VI. Analysis of the Results

The two alternative methods of estimating the regional I/O matrices give two different sets of estimates of the coefficients. Since both are estimates, their comparison has to be made with respect to some well^ldefined common characteristic. As we have discussed in the beginning, the need for regional matrices is felt basically to capture the extent of regional variation in the technology. We should, therefore, examine the deviations of the regional matrices obtained by the two alternative methods from the national matrix. The summary of the results in terms of frequency distributions

of deviations from the national input-use matrix of the estimated regional matrix by the survey and the non-survey methods are presented below in a tabular form :

Frequency Distribution of the Deviations of
Gujarat Input-Use Coefficients from the National
Coefficients, 1984-85

Frequency Range	Frequency of Differences Between	
	Survey Based - National	Non-Survey Based - National
-0.15 or less	7	4
-0.149999 to -0.1	11	2
-0.099999 to -0.05	26	10
-0.049999 to -0.01	111	59
-0.009999 to -0.001	267	196
-0.000999 to -0.0001	103	262
-0.000099 to -0.00001	12	33
-0.000009 to +0.000009	1450	1342
0.00001 to 0.000099	67	173
0.0001 to 0.000999	166	306
0.001 to 0.009999	167	85
0.01 to 0.049999	75	23
0.05 to 0.099999	21	4
0.1 to 0.149999	6	1
0.15 or more	11	0
	----	----
Total	2500	2500
	----	----

From these frequency distributions of the deviations of regional coefficients from the national coefficients, it is evident that the Gujarat input use coefficients differ on the whole from the national ones. Although most of the coefficients of Gujarat are not different from the national coefficients in the first three decimal places, about 3% of the total coefficients of Gujarat differ from the national ones by 0.05 or more. In specific sectors or activities, therefore, there appears to be considerable regional differences in the technology as reflected by input use coefficients. The most interesting question in this regard is whether the non-survey based method of estimating regional I/O matrix performs as efficiently as the survey based method in capturing the regional variations in the coefficients. We may use the test of mean difference for this purpose on the distributions of differences of regional input use coefficients and national coefficients. When we consider all the observations (i.e. 2500 coefficient differences), the calculated t-value turns out to be only 0.9268 which is statistically insignificant. This implies that the average overall difference of the regional coefficient from the national coefficient remains statistically the same whether we use the survey based method or non-survey based method to estimate the regional coefficients. Thus, if the purpose is to capture the overall difference of the regional technology from the national technology, both the survey based and non-survey based methods of estimating the regional coefficients appear to perform almost equally.

If, however, our purpose is to look into the differences of regional technology from national technology in the sector-activity-specific context, we need to consider those ranges of differences which are more than 5 percentage points in absolute terms. If we apply the mean difference test only to these ranges of differences in the two methods, we get the calculated t-value of 2.5127 which is significant at 5% level of significance. This implies that on an average the differences in regional coefficients from national coefficients when exceed 0.05 in absolute terms, the two methods of estimating regional coefficients differ statistically significantly. Thus, if our interest is to capture sector-activity -specific differences in the regional technology, we have to make a conscious choice between the two alternative methods of estimating the regional coefficients. It is obvious at this stage that survey based method should be given priority over the non-survey based method if the estimates based on the former are available for any regional economy.

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APPENDIX TABLE 1

GUJARAT I/O COEFFICIENT MATRIX 1984-85 [SURVEY METHOD]

sector code\item	1	2	3	4	5	6	7	
1 paddy	0.026656	0.000967	0.000000	0.004627	0.000000	0.000000	0.001469	0.013
2 wheat	0.001406	0.049894	0.000000	0.000967	0.000000	0.000000	0.001738	0.003
3 other cereals	0.000043	0.000023	0.009922	0.000057	0.000000	0.000000	0.000331	0.003
4 pulses	0.003100	0.001838	0.000000	0.097471	0.000000	0.000000	0.023622	0.029
5 fibre crops	0.000038	0.000025	0.000000	0.000261	0.002208	0.000000	0.000030	0.000
6 tea, coffee	0.000036	0.000019	0.000000	0.000047	0.000000	0.000000	0.000094	0.000
7 other crops	0.000996	0.000927	0.000000	0.001691	0.000000	0.000000	0.038059	0.250
8 animal husbandry	0.057334	0.050702	0.064128	0.042350	0.044197	0.000000	0.020164	0.000
9 forestry & logging	0.000034	0.000001	0.000000	0.000023	0.000000	0.000000	0.000014	0.000
10 fishing	0.000013	0.000007	0.000000	0.000017	0.000000	0.000000	0.000034	0.000
11 coal & lignite	0.000005	0.000008	0.000000	0.000031	0.000000	0.000000	0.000011	0.000
12 crude petroleum & natural gas	0.000001	0.000001	0.000000	0.000002	0.000000	0.000000	0.000003	0.000
13 iron ore	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000
14 other metallic minerals	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000
15 non-metallic minerals	0.000001	0.000005	0.000000	0.000001	0.000000	0.000000	0.000002	0.000
16 sugar	0.000007	0.000004	0.000000	0.000009	0.000000	0.000000	0.000018	0.000
17 khandhari & boora	0.000000	0.000000	0.000000	0.000002	0.000000	0.000000	0.000000	0.000
18 other food & beverage indu.	0.000283	0.000154	0.000000	0.000306	0.000000	0.000000	0.000742	0.053
19 cotton textiles	0.000023	0.000014	0.000000	0.000116	0.000000	0.000000	0.000056	0.011
20 art silk & synthetic fibre textiles	0.000002	0.000001	0.000000	0.000014	0.000000	0.000000	0.000000	0.000
21 woollen textiles	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000
22 other textiles	0.000206	0.000222	0.000000	0.000714	0.000000	0.000000	0.000402	0.000
23 wood based industries	0.000005	0.000003	0.000000	0.000008	0.000000	0.000000	0.000012	0.000
24 paper & paper based industries	0.000011	0.000012	0.000000	0.000028	0.000000	0.000000	0.000019	0.000
25 leather & leather products	0.000000	0.000000	0.000000	0.000001	0.000000	0.000000	0.000000	0.000
26 rubber products	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000
27 plastics	0.000001	0.000002	0.000000	0.000002	0.000000	0.000000	0.000004	0.000
28 petroleum products	0.103546	0.221978	0.065456	0.022045	0.096950	0.000000	0.069483	0.000
29 coal tar products	0.000000	0.000005	0.000000	0.000001	0.000000	0.000000	0.000000	0.000
30 fertilizers	0.057431	0.131594	0.038812	0.012979	0.057437	0.000000	0.040937	0.000
31 pesticides	0.001055	0.000772	0.000454	0.000008	0.034969	0.000000	0.001595	0.000
32 synthetic fibre resin	0.000000	0.000001	0.000000	0.000001	0.000000	0.000000	0.000001	0.000
33 other chemicals	0.000041	0.000213	0.000000	0.000318	0.000000	0.000000	0.000119	0.000
34 cement	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000
35 other non-metal mineral products	0.000001	0.000007	0.000000	0.000002	0.000000	0.000000	0.000003	0.000
36 iron & steel	0.000001	0.000001	0.000000	0.000002	0.000000	0.000000	0.000002	0.000
37 non-ferrous metal	0.000000	0.000006	0.000000	0.000000	0.000000	0.000000	0.000000	0.000
38 non-electrical machinery	0.000001	0.000000	0.000000	0.000002	0.000000	0.000000	0.000000	0.000
39 electrical machinery	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000
40 rail equipments	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000
41 motor vehicles	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000
42 other transport equipment	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000
43 communication & electronic equipments	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000
44 other manufacturing	0.000206	0.000173	0.000000	0.000148	0.000000	0.000000	0.000390	0.000
45 rail transport service	0.013840	0.031506	0.009080	0.004351	0.014136	0.000000	0.009937	0.000
46 other transport service	0.006054	0.011900	0.004423	0.003195	0.006884	0.000000	0.004725	0.000
47 electricity	0.024463	0.055799	0.016397	0.006066	0.024286	0.000000	0.017538	0.000
48 construction	0.018673	0.020250	0.031594	0.012827	0.009881	0.000000	0.006372	0.000
49 communication	0.000333	0.000385	0.000099	0.000073	0.000119	0.000000	0.000074	0.000
50 other services	0.022819	0.041127	0.017377	0.013241	0.032735	0.000000	0.017516	0.070
51 total 1 to 50	0.338663	0.619647	0.257741	0.223604	0.323953	0.000000	0.255569	0.460
52 indirect taxes	-0.011189	-0.030968	0.000160	0.002140	-0.005159	0.000000	-0.008710	0.010
53 val added	0.672526	0.411321	0.742099	0.774256	0.681306	0.000000	0.753141	0.510
54 gross output	1.000000	1.000000	1.000000	1.000000	1.000000	0.000000	1.000000	1.000

APPENDIX TABLE 1 (Contd.)

GUJARAT I/O COEFFICIENT MATRIX 1984-85 [SURVEY METHOD]

sector code/iten	9	10	11	12	13	14	15	
1 paddy	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000001	0.00
2 wheat	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
3 other cereals	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
4 pulses	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
5 fibre crops	0.000000	0.000000	0.000009	0.000000	0.000000	0.000000	0.000000	0.00
6 tea, coffee	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
7 other crops	0.000013	0.000000	0.000001	0.000000	0.000000	0.000000	0.000000	0.00
8 animal husbandry	0.000005	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
9 forestry & logging	0.000022	0.000000	0.000000	0.000000	0.000000	0.000000	0.000003	0.00
10 fishing	0.000400	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
11 coal & lignite	0.000002	0.000000	0.031602	0.000000	0.000000	0.000094	0.000111	0.00
12 crude petroleum & natural gas	0.000001	0.000000	0.000001	0.017476	0.000000	0.000000	0.000013	0.00
13 iron ore	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
14 other metallic minerals	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000004	0.00
15 non-metallic minerals	0.000002	0.000000	0.000002	0.000000	0.000000	0.000000	0.000020	0.00
16 sugar	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
17 khandsari & boora	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
18 other food & beverage indu.	0.000003	0.000917	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
19 cotton textiles	0.000000	0.000000	0.000004	0.000000	0.000000	0.000000	0.000000	0.00
20 art silk & synthetic fibre textiles	0.000000	0.000000	0.000001	0.000000	0.000000	0.000000	0.000000	0.00
21 woollen textiles	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
22 other textiles	0.000330	0.061310	0.002561	0.000000	0.000000	0.000000	0.000009	0.02
23 wood based industries	0.002319	0.001093	0.000001	0.000000	0.000000	0.000000	0.000006	0.00
24 paper & paper based industries	0.002646	0.000000	0.000900	0.000000	0.000000	0.000000	0.000006	0.00
25 leather & leather products	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
26 rubber products	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
27 plastics	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
28 petroleum products	0.001464	0.052184	0.001309	0.011026	0.000000	0.021009	0.035173	0.02
29 coal tar products	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000002	0.00
30 fertilizers	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
31 pesticides	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
32 synthetic fibre resin	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000001	0.00
33 other chemicals	0.000003	0.001190	0.011334	0.000336	0.000000	0.011648	0.010701	0.00
34 cement	0.000003	0.000000	0.000003	0.000802	0.000000	0.000000	0.000036	0.00
35 other non-metal mineral products	0.000010	0.000000	0.000010	0.002354	0.000000	0.000000	0.000129	0.00
36 iron & steel	0.000010	0.000925	0.000001	0.000000	0.000000	0.000000	0.000012	0.00
37 non-ferrous metal	0.000010	0.000090	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
38 non-electrical machinery	0.000553	0.000000	0.045722	0.013713	0.000000	0.036605	0.023095	0.00
39 electrical machinery	0.001677	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
40 rail equipments	0.000002	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
41 motor vehicles	0.004199	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
42 other transport equipment	0.000200	0.117289	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
43 communication & electronic equipments	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
44 other manufacturing	0.000983	0.000034	0.000442	0.018414	0.000000	0.000000	0.000035	0.00
45 rail transport service	0.000951	0.000827	0.000938	0.000600	0.000000	0.000502	0.000465	0.00
46 other transport service	0.006798	0.002691	0.001825	0.000829	0.000000	0.001159	0.000890	0.00
47 electricity	0.000862	0.000000	0.045155	0.001577	0.000000	0.069232	0.020359	0.00
48 construction	0.010929	0.000000	0.017686	0.002888	0.000000	0.008618	0.006309	0.00
49 communication	0.001880	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
50 other services	0.009271	0.019113	0.045496	0.016746	0.000000	0.010803	0.008113	0.01
51 total 1 to 50	0.045555	0.257663	0.205001	0.086759	0.000000	0.159670	0.105494	0.08
52 indirect taxes	0.006047	0.006865	0.007929	0.015405	0.000000	0.013132	0.013024	0.00
53 val added	0.948398	0.735472	0.787070	0.897836	0.000000	0.827198	0.881482	0.01
54 gross output	1.000000	1.000000	1.000000	1.000000	0.000000	1.000000	1.000000	1.00

APPENDIX TABLE 1 (Contd.)

GUJARAT I/O COEFFICIENT MATRIX 1984-85 [SURVEY METHOD]

sector code	liten	25	26	27	28	29	30	31	
1	paddy	0.000001	0.000017	0.000010	0.000010	0.000000	0.000019	0.000500	0.00
2	wheat	0.000002	0.000518	0.000000	0.000000	0.000000	0.000000	0.000010	0.00
3	other cereals	0.000003	0.001014	0.000000	0.000000	0.000000	0.000000	0.000013	0.00
4	pulses	0.000000	0.000102	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
5	fibre crops	0.000006	0.000187	0.000038	0.000038	0.000000	0.000076	0.001934	0.00
6	tea, coffee	0.000003	0.000835	0.000000	0.000000	0.000000	0.000000	0.000004	0.00
7	other crops	0.000102	0.313609	0.002577	0.000175	0.000000	0.000342	0.008987	0.00
8	animal husbandry	0.361054	0.008734	0.000083	0.000027	0.000000	0.000051	0.001367	0.00
9	forestry & logging	0.001890	0.002174	0.000214	0.000007	0.000000	0.000020	0.000416	0.00
10	fishing	0.000001	0.000301	0.000000	0.000000	0.000000	0.000000	0.000005	0.00
11	coal & lignite	0.000012	0.004628	0.000241	0.000066	0.000000	0.000157	0.003370	0.00
12	crude petroleum & natural gas	0.000007	0.000038	0.000873	0.630116	0.000000	0.008996	0.000237	0.01
13	iron ore	0.000000	0.000000	0.000000	0.000000	0.000000	0.000003	0.000000	0.00
14	other metallic minerals	0.000001	0.000000	0.000005	0.000005	0.000000	0.000026	0.000238	0.00
15	non-metallic minerals	0.000008	0.006050	0.000107	0.000058	0.000000	0.040008	0.015140	0.00
16	sugar	0.000001	0.000158	0.000002	0.000002	0.000000	0.000004	0.000099	0.00
17	khandsari & boora	0.000000	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
18	other food & beverage indu.	0.000030	0.006576	0.002195	0.000032	0.000000	0.000046	0.019641	0.00
19	cotton textiles	0.000441	0.001144	0.002925	0.000018	0.000000	0.000007	0.000199	0.00
20	art silk & synthetic fibre textiles	0.000019	0.000036	0.003610	0.000000	0.000000	0.000000	0.000000	0.00
21	woollen textiles	0.000032	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
22	other textiles	0.000278	0.003927	0.022203	0.000086	0.000000	0.039899	0.008755	0.00
23	wood based industries	0.000015	0.000124	0.001604	0.000185	0.000000	0.000007	0.017559	0.00
24	paper & paper based industries	0.000643	0.002560	0.002865	0.003751	0.000000	0.000416	0.004700	0.00
25	leather & leather products	0.184648	0.000257	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
26	rubber products	0.000033	0.054181	0.000656	0.000001	0.000000	0.000000	0.000000	0.00
27	plastics	0.000295	0.004055	0.084608	0.000017	0.000000	0.002172	0.015062	0.00
28	petroleum products	0.005716	0.035669	0.012584	0.081555	0.000000	0.040328	0.011117	0.00
29	coal tar products	0.001377	0.001687	0.000072	0.000050	0.000000	0.000179	0.002558	0.00
30	fertilizers	0.000000	0.000000	0.000001	0.000001	0.000000	0.046630	0.000207	0.00
31	pesticides	0.000000	0.000027	0.000000	0.000068	0.000000	0.008057	0.155856	0.00
32	synthetic fibre resin	0.000780	0.063294	0.210128	0.000066	0.000000	0.000027	0.000521	0.00
33	other chemicals	0.013919	0.071522	0.049044	0.020018	0.000000	0.297290	0.185546	0.30
34	cement	0.000008	0.000000	0.000000	0.000001	0.000000	0.000000	0.000000	0.00
35	other non-metal mineral products	0.001256	0.000220	0.019311	0.000087	0.000000	0.000200	0.007866	0.00
36	iron & steel	0.000233	0.006817	0.001171	0.000028	0.000000	0.004787	0.000143	0.00
37	non-ferrous metal	0.000171	0.001330	0.005496	0.000074	0.000000	0.001516	0.003325	0.00
38	non-electrical machinery	0.000041	0.000132	0.000563	0.000022	0.000000	0.000000	0.000000	0.00
39	electrical machinery	0.000007	0.000123	0.000233	0.000004	0.000000	0.000000	0.000000	0.00
40	rail equipments	0.000000	0.000022	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
41	motor vehicles	0.000024	0.000642	0.000206	0.000000	0.000000	0.000000	0.000000	0.00
42	other transport equipment	0.000000	0.000062	0.000001	0.000000	0.000000	0.000000	0.000000	0.00
43	communication & electronic equipments	0.000000	0.000116	0.000002	0.000000	0.000000	0.000000	0.000000	0.00
44	other manufacturing	0.013942	0.023245	0.016376	0.011826	0.000000	0.033081	0.033094	0.00
45	rail transport service	0.000988	0.006452	0.001910	0.003756	0.000000	0.025180	0.012755	0.00
46	other transport service	0.012977	0.015070	0.019365	0.002236	0.000000	0.017948	0.017227	0.00
47	electricity	0.007213	0.027885	0.024662	0.013793	0.000000	0.071367	0.014404	0.00
48	construction	0.000634	0.007627	0.000710	0.000127	0.000000	0.004002	0.002891	0.00
49	communication	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00
50	other services	0.113104	0.092307	0.111685	0.026536	0.000000	0.108158	0.170093	0.00
51	total 1 to 50	0.721913	0.765478	0.589334	0.794843	0.000000	0.751003	0.715889	0.00
52	indirect taxes	0.045737	0.121268	0.273727	0.122353	0.000000	0.020422	0.016818	0.00
53	val added	0.232350	0.113254	0.136939	0.082804	0.000000	0.228575	0.267293	0.00
54	gross output	1.000000	1.000000	1.000000	1.000000	0.000000	1.000000	1.000000	1.00

APPENDIX TABLE 1 (Contd.)

37

GUJARAT I/O COEFFICIENT MATRIX 1984-85 [SURVEY METHOD]

sector code\item	49	50
1 paddy	0.000000	0.002701
2 wheat	0.000000	0.000808
3 other cereals	0.000000	0.000000
4 pulses	0.000000	0.000476
5 fibre crops	0.000000	0.000000
6 tea, coffee	0.000000	0.000000
7 other crops	0.000000	0.004765
8 animal husbandry	0.000000	0.028312
9 forestry & logging	0.000000	0.000000
10 fishing	0.000000	0.006056
11 coal & lignite	0.000000	0.001004
12 crude petroleum & natural gas	0.000000	0.000252
13 iron ore	0.000000	0.000000
14 other metallic minerals	0.000000	0.000000
15 non-metallic minerals	0.000000	0.000000
16 sugar	0.000000	0.000984
17 khandsari & boora	0.000000	0.000000
18 other food & beverage indu.	0.000000	0.003108
19 cotton textiles	0.000000	0.000034
20 art silk & synthetic fibre textiles	0.000000	0.000000
21 woollen textiles	0.000000	0.000000
22 other textiles	0.000026	0.003969
23 wood based industries	0.003147	0.003985
24 paper & paper based industries	0.007138	0.011271
25 leather & leather products	0.000000	0.000000
26 rubber products	0.000000	0.000036
27 plastics	0.000001	0.000118
28 petroleum products	0.013999	0.001110
29 coal tar products	0.000000	0.000013
30 fertilizers	0.000000	0.000000
31 pesticides	0.000000	0.000020
32 synthetic fibre resin	0.000000	0.000000
33 other chemicals	0.000000	0.044234
34 cement	0.000000	0.000000
35 other non-metal mineral products	0.000000	0.000422
36 iron & steel	0.000000	0.000018
37 non-ferrous metal	0.000000	0.000000
38 non-electrical machinery	0.000243	0.000715
39 electrical machinery	0.001212	0.000781
40 rail equipments	0.000000	0.000000
41 motor vehicles	0.007881	0.000625
42 other transport equipment	0.000189	0.000718
43 communication & electronic equipments	0.002819	0.000031
44 other manufacturing	0.002534	0.014291
45 rail transport service	0.016852	0.004101
46 other transport service	0.011250	0.030571
47 electricity	0.008318	0.004167
48 construction	0.024002	0.033512
49 communication	0.000000	0.008615
50 other services	0.014319	0.081783
51 total 1 to 50	0.113930	0.293607
52 indirect taxes	0.009610	0.014186
53 val added	0.876460	0.692207
54 gross output	1.000000	1.000000

APPENDIX TABLE 2

GUJARAT TRANSACTION MATRIX 1984-85 (SURVEY METHOD) (RS IN LAKHS)

sector code	1	2	3	4	5	6	7
1 paddy	778.956	1.843	0.000	115.194	0.000	0.000	325.490
2 wheat	41.084	1382.753	0.000	1.657	0.000	0.000	396.270
3 other cereals	1.262	0.647	379.819	1.415	0.000	0.000	73.364
4 pulses	98.578	50.936	0.000	2426.546	0.000	0.000	5235.545
5 fibre crops	1.096	0.684	0.000	6.505	121.644	0.000	6.637
6 tea, coffee	1.039	0.532	0.000	1.165	0.000	0.000	20.883
7 other crops	29.182	25.687	0.000	42.089	0.000	0.000	8435.272
8 animal husbandry	1675.475	1485.154	2454.832	1054.296	2435.176	0.000	4469.028
9 forestry & logging	0.995	0.839	0.000	0.581	0.000	0.000	3.123
10 fishing	0.375	0.192	0.000	0.420	0.000	0.000	7.583
11 coal & lignite	0.149	0.235	0.000	0.777	0.000	0.000	2.361
12 crude petroleum & natural gas	0.838	0.830	0.000	0.852	0.000	0.000	0.740
13 iron ore	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14 other metallic minerals	0.000	0.011	0.000	0.001	0.000	0.000	0.006
15 non-metallic minerals	0.024	0.139	0.000	0.037	0.000	0.000	0.534
16 sugar	0.196	0.105	0.000	0.228	0.000	0.000	3.924
17 khandsari & boora	0.086	0.003	0.000	0.044	0.000	0.000	0.008
18 other food & beverage indu.	0.268	4.259	0.000	20.068	0.000	0.000	164.475
19 cotton textiles	0.681	0.305	0.000	2.880	0.000	0.000	12.438
20 art silk & synthetic fibre textiles	0.050	0.027	0.000	0.352	0.000	0.000	0.070
21 woollen textiles	0.000	0.000	0.000	0.001	0.000	0.000	0.000
22 other textiles	6.019	6.165	0.000	17.771	0.000	0.000	89.005
23 wood based industries	0.135	0.077	0.000	0.190	0.000	0.000	2.575
24 paper & paper based industries	0.328	0.345	0.000	0.696	0.000	0.000	4.270
25 leather & leather products	0.005	0.003	0.000	0.036	0.000	0.000	0.009
26 rubber products	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27 plastics	0.035	3.043	0.000	0.042	2.000	0.000	0.076
28 petroleum products	3025.922	6151.891	2505.664	548.810	5341.733	0.000	15399.784
29 coal tar products	0.004	0.126	0.000	0.025	0.000	0.000	0.102
30 fertilizers	1678.312	3647.000	1405.739	323.111	3167.393	0.000	9073.131
31 pesticides	30.027	21.389	17.371	0.194	1926.748	0.000	353.461
32 synthetic fibre resin	0.014	0.027	0.000	0.034	0.000	0.000	0.304
33 other chemicals	1.196	5.913	0.000	7.925	0.000	0.000	26.396
34 cement	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35 other non-metal mineral products	0.031	0.207	0.000	0.057	0.000	0.000	0.783
36 iron & steel	0.033	0.019	0.000	0.040	0.000	0.000	0.444
37 non-ferrous metal	0.002	0.161	0.000	0.012	0.000	0.000	0.002
38 non-electrical machinery	0.021	0.004	0.000	0.052	0.000	0.000	0.020
39 electrical machinery	0.002	0.000	0.000	0.000	0.000	0.000	0.000
40 rail equipments	0.000	0.000	0.000	0.000	0.000	0.000	0.000
41 motor vehicles	0.000	0.000	0.000	0.000	0.000	0.000	0.000
42 other transport equipment	0.000	0.000	0.000	0.000	0.000	0.000	0.000
43 communication & electronic equipments	0.000	0.000	0.000	0.000	0.000	0.000	0.000
44 other manufacturing	6.021	4.790	0.000	3.694	0.000	0.000	86.398
45 rail transport service	484.433	873.167	347.594	188.313	778.871	0.000	2202.357
46 other transport service	176.901	329.800	169.297	79.538	379.315	0.000	1047.148
47 electricity	714.876	1546.422	627.670	151.007	1338.100	0.000	3887.113
48 construction	545.678	561.218	1209.404	319.324	544.439	0.000	1412.276
49 communication	9.727	10.665	3.772	1.828	6.577	0.000	16.308
50 other services	666.841	1139.784	665.178	329.630	1803.627	0.000	3882.237
51 total 1 to 50	9896.739	17172.807	9866.341	5566.629	17843.630	0.000	56642.758
52 indirect taxes	-326.976	-858.247	6.125	53.275	-284.251	0.000	-1930.432
53 val added	19653.237	11399.360	28407.535	19275.896	37538.621	0.000	166921.674
54 gross output	29223	27714	38280	24895	55098	0	221634

sector code	10	11	12	13	14	15	16
1 paddy	0.001	0.000	0.000	0.000	0.000	0.000	0.000
2 wheat	0.005	0.000	0.000	0.000	0.000	0.000	0.000
3 other cereals	0.003	0.000	0.000	0.000	0.000	0.000	0.000
4 pulses	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5 fibre crops	0.001	0.000	0.013	0.000	0.000	0.000	0.000
6 tea, coffee	0.003	0.000	0.000	0.000	0.000	0.000	0.000
7 other crops	0.002	0.000	0.001	0.000	0.000	0.000	0.001
8 animal husbandry	0.029	0.000	0.000	0.000	0.000	0.000	0.000
9 forestry & logging	0.139	0.000	0.000	0.000	0.000	0.000	0.010
10 fishing	2.519	0.000	0.000	0.000	0.000	0.000	0.000
11 coal & lignite	0.014	0.000	44.496	0.000	0.000	0.022	0.389
12 crude petroleum & natural gas	0.007	0.000	0.001	727.023	0.000	0.000	0.047
13 iron ore	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14 other metallic minerals	0.002	0.000	0.000	0.000	0.000	0.000	0.013
15 non-metallic minerals	0.010	0.000	0.002	0.000	0.000	0.000	0.072
16 sugar	0.001	0.000	0.000	0.000	0.000	0.000	0.000
17 khandhari & boora	0.001	0.000	0.000	0.000	0.000	0.000	0.000
18 other food & beverage indu.	0.020	16.981	0.000	0.000	0.000	0.000	0.000
19 cotton textiles	0.002	0.000	0.005	0.000	0.000	0.000	0.000
20 art silk & synthetic fibre textiles	0.000	0.000	0.001	0.000	0.000	0.000	0.000
21 woollen textiles	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22 other textiles	2.078	1135.213	3.606	0.000	0.000	0.000	0.032
23 wood based industries	14.613	20.238	0.001	0.000	0.000	0.000	0.022
24 paper & paper based industries	16.675	0.000	1.267	0.000	0.000	0.000	0.023
25 leather & leather products	0.001	0.000	0.000	0.000	0.000	0.000	0.000
26 rubber products	0.002	0.000	0.000	0.000	0.000	0.000	0.000
27 plastics	0.000	0.000	0.000	0.000	0.000	0.000	0.002
28 petroleum products	9.225	966.237	1.043	458.607	0.000	4.895	123.564
29 coal tar products	0.001	0.000	0.000	0.000	0.000	0.000	0.007
30 fertilizers	0.009	0.000	0.000	0.000	0.000	0.000	0.000
31 pesticides	0.000	0.000	0.000	0.000	0.000	0.000	0.000
32 synthetic fibre resin	0.006	0.000	0.000	0.000	0.000	0.000	0.003
33 other chemicals	0.018	22.040	15.950	13.962	0.000	2.714	37.593
34 cement	0.017	0.000	0.004	33.375	0.000	0.000	0.125
35 other non-metal mineral products	0.063	0.000	0.013	97.925	0.000	0.000	0.452
36 iron & steel	0.064	17.119	0.001	0.000	0.000	0.000	0.041
37 non-ferrous metal	0.062	1.663	0.000	0.000	0.000	0.000	0.000
38 non-electrical machinery	3.487	0.000	64.377	570.477	0.000	0.529	0.134
39 electrical machinery	10.564	0.000	0.000	0.000	0.000	0.000	0.000
40 rail equipments	0.010	0.000	0.000	0.000	0.000	0.000	0.000
41 motor vehicles	26.461	0.000	0.000	0.000	0.000	0.000	0.000
42 other transport equipment	1.259	2171.730	0.000	0.000	0.000	0.000	0.000
43 communication & electronic equipments	0.000	0.000	0.000	0.000	0.000	0.000	0.000
44 other manufacturing	6.193	0.624	0.623	766.039	0.000	0.000	0.123
45 rail transport service	5.993	15.317	1.320	24.959	0.000	0.117	1.635
46 other transport service	42.837	49.833	2.570	34.474	0.000	0.270	3.125
47 electricity	5.434	0.000	63.579	65.602	0.000	16.131	71.519
48 construction	68.865	0.000	24.901	120.150	0.000	2.000	22.162
49 communication	11.848	0.000	0.000	0.000	0.000	0.000	0.000
50 other services	58.417	353.892	64.050	696.660	0.000	2.517	20.500
51 total 1 to 50	207.043	4770.007	200.641	3609.341	0.000	37.203	370.600
52 indirect taxes	38.102	127.112	11.164	640.079	0.000	3.060	45.753
53 val added	5975.055	13618.001	1100.195	37351.700	0.000	192.737	3096.647
54 gross output	6301	10516	1400	41602	0	233	3513

Appendix Table 2 (Contd.)

GUJARAT TRANSACTION MATRIX 1984-85 [SURVEY METHOD] (RS IN LAKHS)

40

sector code	17	18	19	20	21	22	23	
1 paddy	1.516	57.584	2.315	0.000	0.000	0.043	0.086	0.0
2 wheat	14.042	1537.488	14.889	0.042	0.009	0.029	0.556	0.0
3 other cereals	27.410	3009.315	9.168	0.000	0.016	0.043	1.088	0.0
4 pulses	4.335	308.302	3.780	0.000	0.002	0.004	0.109	0.0
5 fibre crops	4.364	522.425	57255.827	240.715	4.745	38.612	0.987	0.0
6 tea, coffee	497.211	2551.063	7.542	0.000	0.013	0.035	0.895	0.0
7 other crops	54586.655	58445.407	3392.245	18.409	1.903	31.658	26.708	266.0
8 animal husbandry	225.024	24430.857	86.669	8.647	361.349	25.658	10.584	0.0
9 forestry & logging	420.312	48.331	263.434	30.512	0.072	0.996	11125.707	12.0
10 fishing	0.139	893.569	2.723	0.000	0.005	0.013	0.323	0.0
11 coal & lignite	207.204	279.430	2130.920	447.985	6.022	13.410	1.371	151.0
12 crude petroleum & natural gas	0.795	89.255	92.633	0.725	12.764	0.157	0.256	17.0
13 iron ore	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.0
14 other metallic minerals	0.000	2.182	0.231	0.000	0.000	0.021	0.055	0.0
15 non-metallic minerals	703.874	80.526	7.315	0.021	0.001	0.322	0.896	0.0
16 sugar	1151.303	468.032	1.499	0.000	0.003	0.015	0.105	2.0
17 khandhari & boora	1745.028	0.340	398.166	1.674	0.033	0.269	0.033	12.0
18 other food & beverage indu.	272.021	19443.354	889.539	26.298	0.611	8.702	7.238	27.0
19 cotton textiles	6.986	779.701	23464.237	1415.431	141.041	2238.136	131.770	68.0
20 art silk & synthetic fibre textiles	0.000	1.423	5455.340	28589.074	21.134	92.972	0.066	0.0
21 woollen textiles	0.000	0.033	9.501	4.762	451.022	2.364	0.000	0.0
22 other textiles	2042.204	800.756	3960.788	254.490	61.730	1021.569	4.201	145.0
23 wood based industries	2.776	307.962	438.331	211.601	3.860	14.477	8054.499	14.0
24 paper & paper based industries	53.779	202.033	1145.794	228.302	6.409	60.210	164.766	4486.0
25 leather & leather products	0.000	3.104	332.248	1.397	1.148	0.300	42.357	0.0
26 rubber products	0.000	0.023	4.455	5.113	1.371	25.009	45.565	0.0
27 plastics	0.751	87.307	29.168	155.618	2.013	18.011	6.039	0.0
28 petroleum products	4653.471	1273.043	1300.906	712.768	10.961	60.196	217.934	78.0
29 coal tar products	197.343	27.036	124.507	10.171	0.034	0.606	1.050	2.0
30 fertilizers	2.005	14.064	4.043	0.000	0.000	0.005	0.007	0.0
31 pesticides	0.760	79.960	0.310	0.000	0.000	0.002	0.030	0.0
32 synthetic fibre resin	0.247	32.007	272.291	1036.422	232.402	196.228	436.411	114.0
33 other chemicals	59.496	3466.376	10044.031	5276.323	22.282	87.361	140.406	493.0
34 cement	0.000	0.020	0.300	0.000	0.000	0.001	0.247	0.0
35 other non-metal mineral products	1097.948	100.537	00.394	27.360	0.242	5.250	25.395	21.0
36 iron & steel	0.475	53.895	141.476	1.235	0.189	1.306	200.777	55.0
37 non-ferrous metal	0.000	30.809	3.954	1.003	0.000	2.357	91.674	63.0
38 non-electrical machinery	0.000	0.360	483.747	9.142	1.942	33.908	732.603	7.0
39 electrical machinery	0.000	0.163	0.024	0.000	0.000	0.221	305.351	1.0
40 rail equipments	0.000	0.000	0.000	0.000	0.000	0.001	4.694	0.0
41 motor vehicles	0.000	0.000	0.001	0.000	0.000	0.000	0.174	0.0
42 other transport equipment	0.000	0.000	0.000	0.000	0.000	0.002	12.701	0.0
43 communication & electronic equipments	0.000	0.001	0.001	0.000	0.000	16.002	0.037	0.0
44 other manufacturing	1732.952	5977.270	4120.172	1110.666	51.764	86.919	1369.073	200.0
45 rail transport service	545.908	504.160	1144.111	309.559	5.156	27.157	415.562	96.0
46 other transport service	1318.451	2395.713	4495.048	927.741	37.945	146.260	740.215	220.0
47 electricity	2270.759	1662.976	8486.649	1154.908	43.655	91.063	471.460	460.0
48 construction	41.021	232.661	894.265	257.683	7.952	3.105	27.210	111.0
49 communication	0.014	0.055	0.023	0.000	0.000	0.000	0.000	0.0
50 other services	12315.740	14467.131	17944.360	13091.043	260.026	1259.103	9306.009	1623.0
51 total 1 to 50	86134.163	144758.607	149739.308	55560.521	1754.225	5610.983	34213.449	8776.0
52 indirect taxes	2302.002	7402.058	5124.597	16254.012	82.868	212.762	1097.051	664.0
53 val added	16193.035	13014.535	62372.015	5934.467	1149.907	2658.254	7331.500	3029.0
54 gross output	104630	165176	217236	77757	2987	8482	42642	12000.0

sector code\item	25	26	27	28	29	30	31
1 paddy	0.000	0.032	0.066	1.643	0.000	1.510	3.208
2 wheat	0.000	0.969	0.001	0.037	0.000	0.024	0.067
3 other cereals	0.001	1.898	0.001	0.050	0.000	0.026	0.085
4 pulses	0.000	0.190	0.001	0.002	0.000	0.000	0.003
5 fibre crops	0.002	0.350	0.263	6.481	0.000	5.987	12.723
6 tea, coffee	0.001	1.563	0.000	0.018	0.000	0.000	0.025
7 other crops	0.026	586.762	17.054	29.512	0.000	26.858	57.642
8 animal husbandry	90.263	16.342	0.572	4.597	0.000	4.025	8.765
9 forestry & logging	0.472	4.067	1.479	1.195	0.000	1.602	2.666
10 fishing	0.000	0.564	0.000	0.017	0.000	0.010	0.030
11 coal & lignite	0.003	0.660	1.670	11.201	0.000	12.310	21.612
12 crude petroleum & natural gas	0.002	0.071	6.047	106301.864	0.000	706.003	1.518
13 iron ore	0.000	0.000	0.000	0.000	0.000	0.214	0.000
14 other metallic minerals	0.000	0.000	0.032	0.799	0.000	2.071	1.524
15 non-metallic minerals	0.002	11.320	0.742	9.712	0.000	3143.475	97.109
16 sugar	0.000	0.295	0.013	0.325	0.000	0.297	0.635
17 khandhari & boora	0.000	0.001	0.001	0.000	0.000	0.000	0.000
18 other food & beverage indu.	0.000	12.304	15.207	5.428	0.000	3.650	125.977
19 cotton textiles	0.110	2.140	20.262	3.005	0.000	0.501	1.274
20 art silk & synthetic fibre textiles	0.005	0.067	25.011	0.024	0.000	0.011	0.000
21 woollen textiles	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22 other textiles	0.070	7.348	153.020	14.446	0.000	3134.979	56.152
23 wood based industries	0.004	0.232	11.110	31.293	0.000	0.570	112.626
24 paper & paper based industries	0.161	4.789	19.052	633.237	0.000	32.724	30.140
25 leather & leather products	46.162	0.401	0.003	0.005	0.000	0.000	0.000
26 rubber products	0.000	101.373	4.547	0.175	0.000	0.005	0.000
27 plastics	0.074	7.506	586.163	2.011	0.000	170.662	96.605
28 petroleum products	1.429	66.737	87.101	13760.925	0.000	3160.673	71.307
29 coal tar products	0.344	3.157	0.500	0.405	0.000	14.004	16.404
30 fertilizers	0.000	0.000	0.009	0.205	0.000	3663.793	1.326
31 pesticides	0.000	0.050	0.002	11.529	0.000	633.092	999.663
32 synthetic fibre resin	0.195	110.424	1455.760	11.093	0.000	2.141	3.345
33 other chemicals	3.400	133.017	277.424	3379.611	0.000	23350.692	1190.094
34 cement	0.002	0.000	0.000	0.219	0.000	0.000	0.002
35 other non-metal mineral products	0.314	0.412	133.784	14.666	0.000	15.746	50.451
36 iron & steel	0.050	12.754	0.111	4.772	0.000	376.133	0.910
37 non-ferrous metal	0.043	2.409	30.074	12.456	0.000	119.006	21.320
38 non-electrical machinery	0.010	0.247	3.099	3.790	0.000	0.034	0.000
39 electrical machinery	0.002	0.230	1.614	0.620	0.000	0.026	0.000
40 rail equipments	0.000	0.041	0.000	0.000	0.000	0.000	0.000
41 motor vehicles	0.006	1.202	1.430	0.000	0.000	0.000	0.000
42 other transport equipment	0.000	0.117	0.005	0.000	0.000	0.000	0.000
43 communication & electronic equipments	0.000	0.217	0.012	0.001	0.000	0.000	0.000
44 other manufacturing	3.406	43.492	113.456	1996.541	0.000	2599.226	212.265
45 rail transport service	0.247	12.073	13.231	634.151	0.000	1978.425	01.011
46 other transport service	3.244	20.196	134.162	377.504	0.000	1410.194	110.496
47 electricity	1.003	52.173	170.050	2320.500	0.000	5607.421	92.306
48 construction	0.150	14.269	4.910	21.410	0.000	314.443	10.545
49 communication	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50 other services	20.276	172.707	773.753	4400.050	0.000	0490.206	1090.977
51 total 1 to 50	100.470	1432.209	4002.907	134192.503	0.000	59007.027	4591.711
52 indirect taxes	11.434	224.092	1046.301	20656.735	0.000	1604.597	107.071
53 val added	50.000	211.099	946.770	13979.762	0.000	17959.576	1714.410
54 gross output	250	1871	6920	160029	0	78572	6414

Appendix Table 2 (Contd.)

GUJARAT TRANSACTION MATRIX 1984-85 (SURVEY METHOD) (RS IN LAKHS)

42

sector code	33	34	35	36	37	38	39
1 paddy	329.660	0.018	28.022	0.015	0.001	0.030	0.117
2 wheat	95.488	0.000	0.101	0.000	0.000	0.000	0.017
3 other cereals	180.540	0.000	0.197	0.000	0.000	0.000	0.032
4 pulses	17.820	0.000	0.021	0.000	0.000	0.000	0.003
5 fibre crops	1350.324	0.000	0.053	0.003	0.000	0.036	0.141
6 tea, coffee	173.525	0.000	0.234	0.000	0.000	0.000	0.026
7 other crops	9196.058	0.005	11.986	0.245	0.007	11.365	4.483
8 animal husbandry	2312.890	0.000	1.690	2.700	0.055	4.387	1.143
9 forestry & logging	225.759	0.712	54.518	22.749	0.022	178.415	7.724
10 fishing	54.120	0.000	0.059	0.000	0.000	0.000	0.010
11 coal & lignite	2212.773	1797.224	560.302	90.503	0.390	32.643	3.441
12 crude petroleum & natural gas	1560.379	0.225	269.435	17.020	0.020	31.477	0.994
13 iron ore	0.000	0.030	0.001	9.112	0.000	0.592	0.006
14 other metallic minerals	155.007	41.070	72.767	57.544	0.055	3.016	0.269
15 non-metallic minerals	1913.373	1239.229	409.760	8.962	0.031	216.471	2.300
16 sugar	91.469	0.000	0.032	0.001	0.000	0.002	0.012
17 khandhari & boora	0.274	0.000	0.000	0.003	0.001	0.001	0.000
18 other food & beverage indu.	1955.143	0.022	1.675	7.497	0.000	3.300	207.977
19 cotton textiles	196.900	0.000	0.171	0.059	0.071	0.313	0.077
20 art silk & synthetic fibre textiles	21.104	0.000	0.360	0.007	0.006	0.009	0.165
21 woollen textiles	0.672	0.000	0.000	0.000	0.000	0.000	0.000
22 other textiles	2041.667	2060.600	104.070	22.720	0.171	13.619	3.629
23 wood based industries	180.670	0.447	125.016	5.093	0.317	299.950	107.569
24 paper & paper based industries	2601.057	30.921	130.062	20.316	0.460	142.272	107.259
25 leather & leather products	12.905	0.000	0.002	0.069	0.001	14.763	0.059
26 rubber products	2.070	0.000	0.310	5.701	0.100	377.023	77.120
27 plastics	405.305	4.795	10.340	0.634	0.717	67.694	6.624
28 petroleum products	5629.627	519.341	1003.033	0.911	135.146	597.910	500.400
29 coal tar products	1665.612	3.097	37.373	265.051	1.426	106.725	11.549
30 fertilizers	210.921	0.000	0.029	0.000	0.000	0.001	0.004
31 pesticides	615.042	0.000	0.633	0.000	0.000	0.000	0.002
32 synthetic fibre resin	572.924	0.053	10.051	16.070	0.154	49.402	275.046
33 other chemicals	74237.732	26.410	459.259	111.770	2.620	373.257	145.435
34 cement	4.754	15.521	712.907	0.359	0.020	0.740	2.094
35 other non-metal mineral products	2625.161	312.705	2569.203	163.731	0.357	219.352	42.307
36 iron & steel	116.527	101.327	239.943	16060.033	17.607	9647.904	1072.137
37 non-ferrous metal	2331.550	9.264	10.320	2925.273	303.321	2037.430	3990.703
38 non-electrical machinery	7.076	0.005	0.010	60.167	0.290	11002.909	140.426
39 electrical machinery	1.069	0.004	2.094	25.900	1.004	1902.401	2699.924
40 rail equipments	0.069	0.000	0.000	2.000	0.031	11.061	0.371
41 motor vehicles	0.720	0.000	0.262	3.903	0.071	201.932	21.742
42 other transport equipment	0.100	0.000	0.001	3.920	0.005	4.352	1.029
43 communication & electronic equipments	12.737	0.000	0.019	1.600	1.530	7.679	101.267
44 other manufacturing	7014.050	554.605	703.735	1769.727	13.096	1270.034	206.674
45 rail transport service	3100.034	919.125	371.729	510.419	6.900	399.946	101.705
46 other transport service	4111.059	674.199	349.556	397.057	19.670	695.024	294.990
47 electricity	6153.400	1364.914	613.552	901.273	12.670	729.512	170.910
48 construction	923.493	24.390	120.046	91.090	11.100	145.761	46.421
49 communication	0.022	0.000	0.000	0.000	0.000	0.001	0.070
50 other services	20473.006	1950.671	2244.204	5979.616	150.633	0174.395	3551.639
51 total 1 to 50	157125.350	11675.015	11409.325	30411.415	769.277	39944.096	14012.947
52 indirect taxes	15679.771	530.779	993.007	2217.070	90.703	4733.067	1957.065
53 val added	44745.079	2415.406	5032.060	5545.515	200.020	12031.236	3300.900
54 gross output	217551	14622	10236	30174	1066	56710	20151

sector code	41	42	43	44	45	46	47	48
1 paddy	0.000	0.001	0.000	6.961	0.000	75.590	0.252	0.000
2 wheat	0.000	0.000	0.000	0.277	0.000	0.000	0.219	0.000
3 other cereals	0.000	0.000	0.000	0.438	0.000	12.228	0.409	0.000
4 pulses	0.000	0.000	0.000	0.040	0.000	7.411	0.041	0.000
5 fibre crops	0.000	0.004	0.000	27.250	0.000	0.000	50.285	0.000
6 tea, coffee	0.000	0.000	0.000	0.265	0.000	0.000	191.043	0.000
7 other crops	1.147	0.179	0.003	130.034	0.000	600.007	20.605	0.000
8 animal husbandry	0.014	0.019	0.060	273.301	0.000	0.000	7.270	0.000
9 forestry & logging	26.338	10.230	0.046	46.535	0.146	0.000	5.019	2199.000
10 fishing	0.000	0.000	0.000	0.141	0.000	0.000	0.122	0.000
11 coal & lignite	13.009	0.913	0.011	65.099	1219.639	0.000	3500.302	134.000
12 crude petroleum & natural gas	0.023	0.010	0.023	325.744	0.000	0.000	601.112	0.000
13 iron ore	0.001	0.001	0.001	0.260	0.000	0.000	0.100	0.000
14 other metallic minerals	0.009	0.009	0.003	5.029	0.000	0.000	1.602	0.000
15 non-metallic minerals	0.137	0.050	0.006	62.045	0.000	0.000	20.679	3025.500
16 sugar	0.000	0.000	0.000	1.410	0.000	0.000	2.205	0.000
17 khandasari & boora	0.000	0.000	0.000	0.073	0.000	0.000	0.704	0.000
18 other food & beverage indu.	0.197	0.014	0.202	19.942	0.000	145.993	5.359	0.000
19 cotton textiles	0.000	0.009	0.001	24.214	0.000	34.460	30.100	0.000
20 art silk & synthetic fibre textiles	0.000	0.000	0.002	0.364	0.000	0.000	20.642	0.000
21 woollen textiles	0.000	0.000	0.000	0.000	0.000	0.000	0.400	0.000
22 other textiles	4.249	0.012	0.023	09.593	0.000	7.164	49.496	0.000
23 wood based industries	2.225	3.190	0.197	140.007	0.000	22.974	2.713	5033.400
24 paper & paper based industries	3.040	2.000	2.620	264.016	27.543	69.160	107.529	6.200
25 leather & leather products	0.009	0.000	0.000	6.120	0.000	0.000	1.793	0.000
26 rubber products	1236.166	5.059	0.132	130.325	0.000	2267.216	5.700	0.000
27 plastics	6.050	0.177	0.521	15.175	0.000	0.371	1.265	26.200
28 petroleum products	155.061	11.574	1.703	549.100	1013.320	27795.140	0.000	1650.500
29 coal tar products	14.363	0.144	0.039	02.590	0.000	0.000	7.072	1031.600
30 fertilizers	0.000	0.000	0.000	7.794	0.000	0.000	10.105	0.000
31 pesticides	0.000	0.000	0.000	1.330	0.000	0.000	1.719	0.000
32 synthetic fibre resin	14.119	2.059	0.521	200.191	0.000	0.000	23.010	0.000
33 other chemicals	56.169	0.271	0.331	2006.555	0.000	9.307	210.112	1023.200
34 cement	0.000	0.000	0.000	0.794	0.000	0.000	0.769	7601.900
35 other non-metal mineral products	7.204	0.730	6.942	204.460	0.701	0.000	12.466	15533.400
36 iron & steel	650.526	150.799	9.016	6567.035	17.934	0.000	304.269	20311.600
37 non-ferrous metal	566.042	166.960	21.051	4471.070	0.000	0.000	129.739	0.000
38 non-electrical machinery	01.009	23.029	0.214	101.450	152.174	12.351	14.564	1.200
39 electrical machinery	99.976	91.033	3.640	69.177	734.669	50.023	32.707	4070.300
40 rail equipments	0.003	29.022	0.000	2.630	2213.119	0.000	9.694	0.000
41 motor vehicles	1474.000	2.094	0.037	56.499	0.000	2340.735	3.560	32.000
42 other transport equipment	6.930	70.166	0.000	6.463	0.003	2021.916	22.507	0.000
43 communication & electronic equipments	0.210	0.001	164.446	40.590	26.346	0.000	1.412	0.000
44 other manufacturing	256.076	36.109	7.373	3576.507	05.229	27.544	711.970	270.000
45 rail transport service	34.672	6.252	1.010	299.600	563.422	144.307	1526.119	1019.000
46 other transport service	100.122	15.997	0.429	437.042	1234.243	1393.230	1130.056	1797.000
47 electricity	01.223	14.212	14.776	545.402	1066.034	70.300	0954.349	00.000
48 construction	3.006	2.146	1.249	94.123	4330.524	03.001	672.230	0.000
49 communication	0.000	0.000	0.000	0.001	0.350	420.193	0.001	39.000
50 other services	1166.400	223.252	120.579	5090.270	1006.129	2007.591	2001.665	10335.000
51 total 1 to 50	6062.200	007.116	366.903	27024.100	14579.524	40515.192	29374.340	94300.000
52 indirect taxes	1523.097	121.000	50.097	3616.714	013.100	9660.552	2420.911	0091.000
53 val added	3304.623	225.017	252.121	21004.170	13015.296	73330.256	10533.740	57945.000
54 gross output	10090	1234	670	52525	29200	123514	50337	161

sector code\item	49	50	51	52	53
			total	f.d.	gross output
1 paddy	0.000	1479.899	4529	24694	29223
2 wheat	0.000	442.526	4282	23432	27714
3 other cereals	0.000	0.000	4067	34213	38280
4 pulses	0.000	268.374	11349	13546	24895
5 fibre crops	0.000	0.000	59679	-4581	55098
6 tea, coffee	0.000	0.000	3149	-2449	0
7 other crops	0.000	2609.305	107157	34483	221634
8 animal husbandry	0.000	15503.187	56897	43194	180291
9 forestry & logging	0.000	0.031	14807	-8506	6301
10 fishing	0.000	3315.938	4287	14229	18516
11 coal & lignite	0.000	549.678	13577	-12169	1400
12 crude petroleum & natural gas	0.000	137.845	111390	-69788	41602
13 iron ore	0.000	0.000	10	-10	0
14 other metallic minerals	0.000	0.000	348	-115	233
15 non-metallic minerals	0.000	0.000	11067	-7554	3513
16 sugar	0.000	538.799	2421	25877	28290
17 khandsari & boora	0.000	0.000	2161	102469	104630
18 other food & beverage indu.	0.000	1701.751	31831	134145	165176
19 cotton textiles	0.000	18.598	29919	187317	217236
20 art silk & synthetic fibre textiles	0.000	0.000	34265	43492	77757
21 woollen textiles	0.000	0.000	470	2517	2987
22 other textiles	0.296	2173.182	20336	-11854	8482
23 wood based industries	35.982	2181.999	10207	24435	42642
24 paper & paper based industries	81.300	6171.949	17103	-4633	12470
25 leather & leather products	0.000	0.000	463	-213	250
26 rubber products	0.000	19.692	4326	-2455	1871
27 plastics	0.011	64.547	1004	5244	6928
28 petroleum products	159.617	607.709	111572	57257	160929
29 coal tar products	0.000	7.365	4475	-4475	0
30 fertilizers	0.000	0.000	23353	55219	78572
31 pesticides	0.000	10.740	4712	1702	6414
32 synthetic fibre resin	0.000	0.000	6465	12241	18706
33 other chemicals	0.000	24221.341	159118	58433	217551
34 cement	0.000	0.000	8375	6247	14622
35 other non-metal mineral products	0.000	230.951	23793	-5557	18236
36 iron & steel	0.000	9.646	57092	-18918	38174
37 non-ferrous metal	0.000	0.000	17556	-16490	1066
38 non-electrical machinery	2.771	391.655	14961	41749	56710
39 electrical machinery	13.819	427.757	10716	9435	20151
40 rail equipments	0.000	0.000	2290	-1779	511
41 motor vehicles	89.859	342.425	4608	6282	10890
42 other transport equipment	2.155	393.296	5535	-4301	1234
43 communication & electronic equipments	32.142	16.957	425	245	670
44 other manufacturing	20.893	7025.425	46132	6393	52525
45 rail transport service	192.147	2245.726	23141	6067	29208
46 other transport service	120.270	16740.071	45379	78135	123514
47 electricity	94.842	2281.863	55205	-4868	50337
48 construction	273.671	18350.343	33001	120056	161137
49 communication	0.000	4717.573	5239	6163	11402
50 other services	163.265	44702.204	227816	319759	547575
51 total 1 to 50	1299.028	160771.826			
52 indirect taxes	109.573	7767.899			
53 val added	9993.399	379035.276			
54 gross output	11402	547575			

GUJARAT(1984-85) INPUT USE COEFFICIENT MATRIX (NON SERVEY METHOD)

	9	10	11	12	13	14	15
1 paddy	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2 wheat	0.000002	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
3 other cereals	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
4 pulses	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
5 fibre crops	0.000000	0.000000	0.000011	0.000000	0.000000	0.000000	0.000000
6 tea, coffee	0.000002	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
7 other crops	0.000015	0.000000	0.000000	0.000000	0.000000	0.000000	0.569000
8 animal husbandry	0.000002	0.000000	0.000000	0.000000	0.000000	0.000000	0.000005
9 forestry & logging	0.000009	0.000000	0.000000	0.000000	0.000000	0.000000	0.000007
10 fishing	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
11 coal & lignite	0.000401	0.000000	0.031601	0.000000	0.000000	0.000093	0.000092
12 crude petroleum & natural gas	0.000000	0.000000	0.000000	0.017476	0.000000	0.000000	0.000000
13 iron ore	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
14 other metallic minerals	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000001
15 non-metallic minerals	0.000006	0.000000	0.000005	0.000000	0.000000	0.000000	0.000073
16 sugar	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
17 khandsari & boora	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
18 other food & beverage indu.	0.000003	0.000017	0.000000	0.000000	0.000000	0.000000	0.000000
19 cotton textiles	3.200000	0.000000	0.000002	0.000000	0.000000	0.000000	0.000001
20 art silk & synthetic fibre textiles	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
21 woollen textiles	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
22 other textiles	0.000330	0.001310	0.002561	0.000000	0.000000	0.000000	0.000006
23 wood based industries	0.002336	0.001093	0.000002	0.000000	0.000000	0.000000	0.000020
24 paper & paper based industries	0.002646	0.000000	0.000099	0.000000	0.000000	0.000000	0.000004
25 leather & leather products	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
26 rubber products	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
27 plastics	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
28 petroleum products	0.001459	0.052184	0.001306	0.011026	0.000000	0.021007	0.035137
29 coal tar products	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000003
30 fertilizers	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
31 pesticides	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
32 synthetic fibre resin	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000001
33 other chemicals	0.000005	0.001190	0.011333	0.000336	0.000000	0.011650	0.010705
34 cement	0.000002	0.000000	0.000002	0.000002	0.000000	0.000000	0.000027
35 other non-metal mineral products	0.000003	0.000000	0.000003	0.002354	0.000000	0.000000	0.000042
36 iron & steel	0.000010	0.000025	0.000002	0.000000	0.000000	0.000000	0.000021
37 non-ferrous metal	0.000001	0.000090	0.000000	0.000000	0.000000	0.000000	0.000000
38 non-electrical machinery	0.000555	0.000000	0.045724	0.013713	0.000000	0.036607	0.023110
39 electrical machinery	0.001671	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
40 rail equipments	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
41 motor vehicles	0.004201	0.000000	0.000000	0.000000	0.000000	0.000000	0.000003
42 other transport equipment	0.000204	0.117289	0.000000	0.000000	0.000000	0.000000	0.000000
43 communication & electronic equipments	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
44 other manufacturing	0.000985	0.000034	0.000440	0.018414	0.000000	0.000000	0.000016
45 rail transport service	0.000951	0.000027	0.000937	0.000600	0.000000	0.000501	0.000465
46 other transport service	0.006798	0.002691	0.001825	0.000829	0.000000	0.001158	0.000891
47 electricity	0.000864	0.000000	0.045155	0.001577	0.000000	0.069232	0.020353
48 construction	0.010929	0.000000	0.017686	0.002888	0.000000	0.008616	0.006307
49 communication	0.001881	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
50 other services	0.009272	0.019113	0.045500	0.016746	0.000000	0.010883	0.008158
51 total	0.045544	0.257663	0.204997	0.086761	0.000000	0.159667	0.105449
52 i.tax	0.006047	0.006865	0.007929	0.015405	0.029156	0.013132	0.013024
53 val add.	0.948409	0.735472	0.787074	0.897034	0.970044	0.827201	0.881527
54 gross output	1	1	1	1	1	1	1

Appendix Table 3 (Contd.)

GUJARAT (1984-85) INPUT USE COEFFICIENT MATRIX (NON SERVEY METHOD)

	49	50
1 paddy	0.000000	0.002704
2 wheat	0.000000	0.000000
3 other cereals	0.000000	0.000000
4 pulses	0.000000	0.000476
5 fibre crops	0.000000	0.000000
6 tea, coffee	0.000000	0.000000
7 other crops	0.000000	0.004739
8 animal husbandry	0.000000	0.020342
9 forestry & logging	0.000000	0.000000
10 fishing	0.000000	0.006062
11 coal & lignite	0.000000	0.001001
12 crude petroleum & natural gas	0.000000	0.000252
13 iron ore	0.000000	0.000000
14 other metallic minerals	0.000000	0.000000
15 non-metallic minerals	0.000000	0.000000
16 sugar	0.000000	0.000905
17 khandsari & boora	0.000000	0.000000
18 other food & beverage indu.	0.000000	0.003111
19 cotton textiles	0.000000	0.000034
20 art silk & synthetic fibre textiles	0.000000	0.000000
21 woollen textiles	0.000000	0.000000
22 other textiles	0.000026	0.003972
23 wood based industries	0.003147	0.003989
24 paper & paper based industries	0.007130	0.011282
25 leather & leather products	0.000000	0.000000
26 rubber products	0.000000	0.000036
27 plastics	0.000001	0.000110
28 petroleum products	0.013999	0.001089
29 coal tar products	0.000000	0.000013
30 fertilizers	0.000000	0.000000
31 pesticides	0.000000	0.000020
32 synthetic fibre resin	0.000000	0.000000
33 other chemicals	0.000000	0.044230
34 cement	0.000000	0.000000
35 other non-metal mineral products	0.000000	0.000422
36 iron & steel	0.000000	0.000011
37 non-ferrous metal	0.000000	0.000000
38 non-electrical machinery	0.000243	0.000716
39 electrical machinery	0.001212	0.000782
40 rail equipments	0.000000	0.000000
41 motor vehicles	0.007981	0.000626
42 other transport equipment	0.000189	0.000719
43 communication & electronic equipments	0.002019	0.000031
44 other manufacturing	0.002534	0.014203
45 rail transport service	0.016052	0.004102
46 other transport service	0.011250	0.030599
47 electricity	0.000310	0.003970
48 construction	0.024002	0.033547
49 communication	0.000000	0.000622
50 other services	0.014319	0.001534
51 total	0.113930	0.293220
52 i. tax	0.009160	0.014186
53 val add.	0.076910	0.692586
54 gross output	1	1

APPENDIX TABLE 4

52

GUJARAT TRANSACTION MATRIX 1984-85 [NON SURVEY]

sector code\item	1	2	3	4	5	6	7	8
1 paddy	2468.75	11.06	0.00	26.98	0.00	0.00	1116.84	1665.28
2 wheat	2.95	3578.75	0.00	5.42	0.00	0.00	983.71	453.34
3 other cereals	0.13	6.81	621.32	0.23	0.00	0.00	86.58	463.64
4 pulses	13.95	92.82	0.00	2555.70	0.00	0.00	336.89	3867.23
5 fibre crops	5.21	0.63	0.00	8.87	494.89	0.00	10.25	0.02
6 tea, coffee	5.05	2.59	0.00	5.67	0.00	0.00	101.20	2.26
7 other crops	69.20	169.63	0.00	177.90	0.00	0.00	5534.76	33402.43
8 animal husbandry	1992.05	1633.70	4470.99	1836.61	2749.94	0.00	6428.21	0.85
9 forestry & logging	1.59	0.36	0.00	0.10	0.00	0.00	3.54	0.03
10 fishing	0.50	0.26	0.00	0.56	0.00	0.00	10.07	0.22
11 coal & lignite	0.49	0.57	0.00	0.13	0.00	0.00	1.34	0.02
12 crude petroleum & natural gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13 iron ore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14 other metallic minerals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 non-metallic minerals	0.00	0.10	0.00	0.01	0.00	0.00	0.14	0.00
16 sugar	0.32	0.18	0.00	0.36	0.00	0.00	6.47	0.14
17 khandsari & boora	0.05	0.06	0.00	0.05	0.00	0.00	0.98	0.02
18 other food & beverage indu.	7.17	4.11	0.00	15.06	0.00	0.00	142.87	6790.60
19 cotton textiles	0.78	0.56	0.00	1.77	0.00	0.00	10.89	1486.43
20 art silk & synthetic fibre textiles	0.02	0.01	0.00	0.16	0.00	0.00	0.07	0.00
21 woollen textiles	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00
22 other textiles	27.85	22.75	0.04	9.73	0.06	0.00	26.81	0.14
23 wood based industries	8.88	13.47	2.26	3.79	3.36	0.00	32.91	0.37
24 paper & paper based industries	1.43	1.90	0.23	0.82	0.28	0.00	7.16	0.11
25 leather & leather products	0.00	0.11	0.00	0.00	0.00	0.00	0.07	0.00
26 rubber products	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
27 plastics	0.08	0.06	0.00	0.09	0.00	0.00	1.54	0.03
28 petroleum products	757.12	768.25	1011.66	547.41	836.00	0.00	2884.26	0.22
29 coal tar products	0.01	0.18	0.00	0.12	0.00	0.00	0.31	0.01
30 fertilizers	1363.62	2188.71	1020.62	454.24	2019.78	0.00	7933.87	0.00
31 pesticides	41.52	28.93	22.01	0.29	2397.92	0.00	517.42	0.00
32 synthetic fibre resin	0.01	0.04	0.00	0.03	0.00	0.00	0.24	0.00
33 other chemicals	1.12	5.00	0.00	7.03	0.00	0.00	17.91	477.92
34 cement	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35 other non-metal mineral products	0.18	0.47	0.00	0.21	0.00	0.00	3.89	0.08
36 iron & steel	0.13	0.18	0.00	0.15	0.00	0.00	1.68	0.04
37 non-ferrous metal	0.02	0.22	0.00	0.04	0.00	0.00	0.56	0.01
38 non-electrical machinery	52.13	162.85	236.30	86.90	63.75	0.00	259.71	0.14
39 electrical machinery	2.10	2.37	0.92	0.57	1.32	0.00	4.37	0.00
40 rail equipments	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41 motor vehicles	2.81	4.19	1.11	0.86	1.65	0.00	6.75	0.03
42 other transport equipment	0.06	0.06	0.00	0.00	0.00	0.00	0.04	0.00
43 communication & electronic equipmen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44 other manufacturing	1.64	1.76	0.08	1.16	0.17	0.00	16.45	0.34
45 rail transport service	82.18	104.01	54.89	28.18	201.60	0.00	237.86	174.40
46 other transport service	85.29	85.28	70.44	48.79	191.80	0.00	335.63	768.30
47 electricity	265.82	1449.80	298.39	253.96	563.93	0.00	1378.97	0.30
48 construction	577.48	579.50	1433.43	497.28	544.42	0.00	1811.45	979.04
49 communication	10.28	11.01	4.48	2.84	6.56	0.00	20.35	0.00
50 OTHER SERVICES +TOTAL OF TRADE MATR	620.20	606.13	548.48	379.52	1995.98	0.00	2987.17	4478.90
51 total 1 to 50	8470.18	11539.47	9797.65	6959.63	12073.40	0.00	33262.35	55012.90
52 indirected taxes	-326.71	-858.03	6.12	53.28	-283.75	0.00	-1930.43	1999.72
53 54-(51+52)	21079.53	17032.56	28476.22	17882.10	43308.35	0.00	190302.08	43078.38
54 gross output	29223.00	27714.00	38280.00	24895.00	55098.00	0.00	221634.00	100091.00

Appendix Table 4 (Contd.)
GUJARAT TRANSACTION MATRIX 1984-85 [NON SURVEY]

sector code\item	9	10	11	12	13	14	15	16
1 paddy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
2 wheat	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.22
3 other cereals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
4 pulses	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06
5 fibre crops	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.01
6 tea, coffee	0.01	0.00	0.00	0.00	0.00	0.00	0.00	1.39
7 other crops	0.09	0.00	0.00	0.00	0.00	0.00	0.00	16103.65
8 animal husbandry	0.01	0.00	0.00	0.00	0.00	0.00	0.02	0.64
9 forestry & logging	0.05	0.00	0.00	0.00	0.00	0.00	0.02	36.42
10 fishing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14
11 coal & lignite	2.52	0.00	44.49	0.00	0.00	0.02	0.32	14.13
12 crude petroleum & natural gas	0.00	0.00	0.00	727.04	0.00	0.00	0.00	0.00
13 iron ore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14 other metallic minerals	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 non-metallic minerals	0.04	0.00	0.01	0.00	0.00	0.00	0.26	87.80
16 sugar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.50
17 khandsari & boora	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.09
18 other food & beverage indus.	0.02	16.98	0.00	0.00	0.00	0.00	0.00	2.41
19 cotton textiles	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
20 art silk & synthetic fibre textiles	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21 woollen textiles	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22 other textiles	2.08	1135.22	3.61	0.00	0.00	0.00	0.02	665.21
23 wood based industries	14.72	20.24	0.00	0.00	0.00	0.00	0.07	218.61
24 paper & paper based industries	16.67	0.00	1.27	0.00	0.00	0.00	0.01	15.71
25 leather & leather products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26 rubber products	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27 plastics	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28 petroleum products	9.19	966.24	1.84	458.70	0.00	4.89	123.44	451.61
29 coal tar products	0.00	0.00	0.00	0.00	0.00	0.00	0.01	24.21
30 fertilizers	0.01	0.00	0.00	0.00	0.00	0.00	0.00	46.00
31 pesticides	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32 synthetic fibre resin	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33 other chemicals	0.03	22.03	15.96	13.98	0.00	2.71	37.61	40.21
34 cement	0.01	0.00	0.00	33.36	0.00	0.00	0.09	0.00
35 other non-metal mineral products	0.02	0.00	0.00	97.93	0.00	0.00	0.15	31.11
36 iron & steel	0.06	17.13	0.00	0.00	0.00	0.00	0.08	0.00
37 non-ferrous metal	0.00	1.67	0.00	0.00	0.00	0.00	0.00	0.00
38 non-electrical machinery	3.50	0.00	64.38	570.49	0.00	8.53	81.19	457.11
39 electrical machinery	10.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40 rail equipments	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41 motor vehicles	26.47	0.00	0.00	0.00	0.00	0.00	0.01	183.61
42 other transport equipment	1.28	2171.72	0.00	0.00	0.00	0.00	0.00	0.11
43 communication & electronic equipmen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44 other manufacturing	6.21	0.63	0.62	766.06	0.00	0.00	0.06	73.61
45 rail transport service	5.99	15.31	1.32	24.96	0.00	0.12	1.63	105.41
46 other transport service	42.84	49.83	2.57	34.49	0.00	0.27	3.13	279.61
47 electricity	5.44	0.00	63.58	65.61	0.00	16.13	71.50	229.21
48 construction	68.86	0.00	24.90	120.15	0.00	2.01	22.16	51.01
49 communication	11.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50 OTHER SERVICES +TOTAL OF TRADE MATR	58.43	353.90	64.06	696.67	0.00	2.52	28.66	5036.81
51 total 1 to 50	286.98	4770.89	288.64	3609.43	0.00	37.20	370.44	24198.61
52 indirected taxes	38.10	127.11	11.16	640.88	0.00	3.06	45.75	289.11
53 54-(51+52)	5975.92	13618.00	1108.20	37351.69	0.00	192.74	3096.80	3810.11
54 gross output	6301.00	18516.00	1408.00	41602.00	0.00	233.00	3513.00	28298.01

Appendix Table 4 (Contd.)
GUJARAT TRANSACTION MATRIX 1984-85 [MOM SURVEY]

sector code\item	17	18	19	20	21	22	23	24
1 paddy	32.81	952.32	88.43	0.33	0.02	0.16	1.00	0.40
2 wheat	17.54	1928.44	105.15	0.53	0.03	0.30	0.85	8.41
3 other cereals	2.86	313.93	1.85	0.06	0.02	0.29	0.11	0.00
4 pulses	5.90	481.10	116.42	0.47	0.01	0.08	0.17	0.00
5 fibre crops	0.94	133.08	66061.74	1365.76	57.76	927.18	52.29	0.77
6 tea, coffee	109.77	12051.06	36.69	0.00	0.06	0.17	4.35	0.01
7 other crops	53859.70	64171.43	404.18	17.20	5.02	81.35	358.39	150.23
8 animal husbandry	48.48	4539.22	119.08	112.87	561.83	492.34	22.89	0.52
9 forestry & logging	468.45	186.82	63.64	31.00	1.24	5.82	4139.43	151.49
10 fishing	10.93	1199.66	3.65	0.00	0.01	0.02	0.43	0.00
11 coal & lignite	91.47	122.75	455.84	129.24	3.79	6.41	28.88	61.08
12 crude petroleum & natural gas	0.00	0.27	0.01	0.00	0.00	0.00	0.00	0.00
13 iron ore	0.00	0.00	0.06	0.00	0.00	0.00	0.01	0.00
14 other metallic minerals	0.00	0.62	0.15	0.00	0.00	0.01	0.04	0.04
15 non-metallic minerals	268.94	30.50	7.82	24.23	0.01	0.37	2.36	0.27
16 sugar	861.90	773.11	2.59	0.63	0.00	0.04	0.32	0.02
17 khandsari & boora	2393.93	117.12	0.42	0.00	0.00	0.01	5.44	9.10
18 other food & beverage indu.	345.33	16574.83	1395.43	28.92	3.49	22.94	99.69	39.10
19 cotton textiles	30.44	1271.38	11077.88	3378.91	24.82	391.30	31.71	44.84
20 art silk & synthetic fibre textiles	0.00	0.80	1490.93	138.23	28.34	143.28	1.08	0.10
21 woollen textiles	0.00	0.11	54.94	78.57	351.51	265.53	2.77	0.19
22 other textiles	658.62	796.83	3705.17	2281.02	101.03	1596.32	315.33	130.52
23 wood based industries	443.47	2000.97	1367.83	508.34	25.13	83.25	13174.77	171.86
24 paper & paper based industries	57.78	633.11	570.27	712.40	4.61	23.37	242.14	1785.92
25 leather & leather products	0.00	1.84	32.56	0.30	0.61	0.69	3.48	4.00
26 rubber products	0.00	0.96	15.26	0.54	0.39	5.68	106.58	0.78
27 plastics	1.66	186.10	73.91	51.79	0.37	4.12	46.32	2.65
28 petroleum products	3597.67	1191.68	1291.13	612.63	7.35	46.75	126.79	169.46
29 coal tar products	53.07	36.09	34.41	5.73	0.13	1.14	6.81	1.47
30 fertilizers	85.48	15.51	12.36	15.38	0.00	0.02	0.02	0.01
31 pesticides	0.05	0.67	0.09	0.00	0.00	0.00	0.00	0.00
32 synthetic fibre resin	0.43	33.00	769.22	8408.17	20.78	43.38	266.73	31.34
33 other chemicals	1781.50	2471.09	9717.83	4150.05	93.49	135.46	774.25	973.76
34 cement	0.00	0.02	0.39	0.18	0.05	0.84	0.20	1.41
35 other non-metal mineral products	205.15	453.86	27.63	10.90	0.12	2.45	88.84	90.44
36 iron & steel	1.75	196.52	492.79	7.74	3.56	22.99	446.26	32.54
37 non-ferrous metal	0.78	92.13	31.00	14.52	3.46	62.44	25.07	37.61
38 non-electrical machinery	2272.03	772.64	5228.04	740.51	32.11	211.01	991.69	278.02
39 electrical machinery	0.00	0.06	0.02	0.15	0.00	1.67	15.05	0.34
40 rail equipments	0.00	0.00	1.68	0.01	0.00	0.00	0.25	0.02
41 motor vehicles	159.33	148.47	404.05	55.45	2.78	12.62	68.18	39.23
42 other transport equipment	0.00	0.02	0.07	0.01	0.00	0.09	25.37	0.35
43 communication & electronic equipmen	0.00	0.00	0.00	0.00	0.00	9.12	0.08	0.00
44 other manufacturing	122.58	1865.85	233.14	526.70	7.02	113.18	745.65	146.67
45 rail transport service	455.76	513.72	647.77	205.84	8.49	23.37	581.50	132.29
46 other transport service	2267.29	3421.46	5806.22	1378.77	58.22	178.37	728.65	270.02
47 electricity	1734.40	1721.18	11744.22	3171.96	80.70	273.20	1149.47	778.06
48 construction	47.41	258.37	994.89	193.60	5.92	4.00	29.52	95.23
49 communication	0.01	0.06	0.02	0.00	0.00	0.00	0.00	0.00
50 OTHER SERVICES +TOTAL OF TRADE MATR	15871.12	24963.22	27921.98	12251.82	471.55	1814.03	9502.84	2893.64
51 total 1 to 50	88366.73	146624.01	152610.83	40611.48	1965.83	7007.16	34214.08	8534.23
52 indirected taxes	2302.80	7402.86	5124.60	16254.01	82.87	212.76	1097.05	664.43
53 54-(51+52)	13960.47	11149.13	59500.58	20891.50	938.30	1262.07	7330.87	3271.30
54 gross output	104630.00	165176.00	217236.00	77757.00	2987.00	8482.00	42642.00	12470.00

Appendix Table 4 (Contd.)
GUJARAT TRANSACTION MATRIX 1984-85 [MOM SURVEY]

sector code/liten	25	26	27	28	29	30	31	32
1 paddy	0.00	0.59	0.14	3.49	0.00	3.21	6.83	10.96
2 wheat	0.08	1.22	0.00	0.02	0.00	0.01	0.03	0.03
3 other cereals	0.00	0.20	0.00	0.00	0.00	0.00	0.01	0.01
4 pulses	0.00	0.30	0.00	0.02	0.00	0.01	0.03	0.04
5 fibre crops	0.05	0.37	7.86	1.22	0.00	0.41	0.83	2.75
6 tea, coffee	0.00	7.60	0.00	0.09	0.00	0.00	0.12	0.00
7 other crops	0.65	209.55	7.74	48.29	0.00	44.12	94.37	152.73
8 animal husbandry	54.67	3.70	5.18	1.56	0.00	94.28	2.09	4.94
9 forestry & logging	0.85	0.59	1.16	5.82	0.00	4.72	6.23	92.93
10 fishing	0.00	0.76	0.00	0.13	0.00	6.59	10.98	0.07
11 coal & lignite	0.05	1.95	2.11	46.46	0.00	2152.89	2.90	71.85
12 crude petroleum & natural gas	0.00	0.00	0.00	125126.97	0.00	3747.90	1.05	401.48
13 iron ore	0.00	0.00	0.00	0.00	0.00	4.79	0.00	0.00
14 other metallic minerals	0.00	0.00	0.01	0.23	0.00	11.89	0.44	0.77
15 non-metallic minerals	0.02	3.31	1.34	8.59	0.00	3346.54	40.72	149.24
16 sugar	0.00	0.49	0.07	1.07	0.00	0.97	2.06	5.72
17 khandsari & boora	0.00	0.07	0.01	0.27	0.00	0.25	0.52	0.84
18 other food & beverage indu.	0.77	10.46	1.75	33.88	0.00	67.58	69.10	112.35
19 cotton textiles	0.89	6.41	35.10	8.88	0.00	7.41	15.70	54.27
20 art silk & synthetic fibre textiles	0.01	0.29	2.83	0.24	0.00	0.03	0.08	9.99
21 woollen textiles	0.02	0.07	2.37	0.24	0.00	0.01	0.00	0.28
22 other textiles	5.81	46.78	85.89	105.31	0.00	1686.72	53.99	124.00
23 wood based industries	1.52	14.41	66.11	304.25	0.00	235.12	147.57	195.69
24 paper & paper based industries	0.59	3.71	50.79	46.69	0.00	28.83	59.05	457.71
25 leather & leather products	23.41	0.26	1.05	0.01	0.00	3.15	0.00	0.25
26 rubber products	11.23	429.89	14.14	0.11	0.00	0.02	0.03	5.42
27 plastics	0.17	1.17	94.31	1.58	0.00	30.68	6.49	23.14
28 petroleum products	0.59	28.15	445.05	2899.50	0.00	18251.14	47.03	1510.53
29 coal tar products	0.01	0.09	0.46	2.37	0.00	173.15	4.67	9.21
30 fertilizers	0.00	0.02	0.52	0.92	0.00	12014.05	4.03	173.43
31 pesticides	0.00	0.00	0.00	8.11	0.00	0.00	705.02	0.00
32 synthetic fibre resin	2.78	23.89	1181.32	9.17	0.00	81.01	5.60	965.53
33 other chemicals	10.89	104.28	246.97	6271.79	0.00	2003.68	954.65	2445.47
34 cement	0.00	0.09	0.01	0.17	0.00	0.00	0.00	0.23
35 other non-metal mineral products	0.38	0.47	25.96	11.21	0.00	66.88	24.95	40.34
36 iron & steel	0.10	7.17	13.86	1156.38	0.00	212.28	2.93	20.65
37 non-ferrous metal	0.07	1.85	5.31	104.70	0.00	71.89	36.12	53.52
38 non-electrical machinery	1.50	5.76	42.23	150.45	0.00	767.51	55.32	212.37
39 electrical machinery	0.00	9.14	5.28	0.13	0.00	0.71	0.00	1.07
40 rail equipments	0.00	0.00	0.08	0.01	0.00	0.00	0.00	0.10
41 motor vehicles	0.07	4.03	12.84	60.24	0.00	178.16	9.59	24.99
42 other transport equipment	0.01	0.23	0.41	0.13	0.00	0.03	0.00	1.09
43 communication & electronic equipmen	0.00	0.12	0.01	0.00	0.00	0.00	0.00	0.78
44 other manufacturing	3.71	10.54	106.13	1928.54	0.00	415.49	132.14	137.09
45 rail transport service	0.60	6.57	16.81	136.91	0.00	600.92	52.54	106.01
46 other transport service	5.10	30.72	128.77	278.40	0.00	407.44	72.84	254.75
47 electricity	1.56	42.22	219.24	1093.59	0.00	5312.15	150.47	969.62
48 construction	0.15	13.55	4.47	24.32	0.00	294.64	16.69	84.88
49 communication	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50 OTHER SERVICES +TOTAL OF TRADE MATR	33.15	210.43	912.35	3746.68	0.00	6699.60	1904.25	2842.95
51 total 1 to 50	161.45	1243.43	3748.05	143629.12	0.00	59028.85	4700.06	11732.10
52 indirected taxes	11.43	226.89	1896.38	20656.73	0.00	1604.60	107.87	2247.25
53 54-(51+52)	77.12	400.67	1283.56	4543.15	0.00	17938.55	1606.07	4726.65
54 gross output	250.00	1871.00	6928.00	168829.00	0.00	78572.00	6414.00	18706.00

Appendix Table 4 (Contd.)
GUJARAT TRANSACTION MATRIX 1984-85 [NON SURVEY]

sector code\item	33	34	35	36	37	38	39	40
1 paddy	750.37	0.01	8.46	0.03	0.00	0.21	0.11	0.00
2 wheat	115.60	0.00	2.39	0.01	0.00	0.07	0.62	0.00
3 other cereals	18.65	0.00	0.02	0.00	0.00	0.00	0.00	0.00
4 pulses	30.66	0.00	0.03	0.00	0.00	0.00	0.01	0.00
5 fibre crops	128.25	0.00	0.86	1.02	0.13	0.50	0.28	0.00
6 tea, coffee	700.97	0.00	0.79	0.00	0.00	0.00	0.13	0.00
7 other crops	13265.23	0.01	25.85	0.58	0.01	1.83	6.13	0.00
8 animal husbandry	493.60	0.06	97.92	1.08	0.04	8.12	0.81	0.00
9 forestry & logging	648.51	1.02	130.64	13.54	0.46	41.83	7.54	0.50
10 fishing	76.39	0.00	0.09	0.00	0.00	0.00	0.01	0.00
11 coal & lignite	315.06	1380.26	183.50	481.33	2.11	59.66	8.85	0.10
12 crude petroleum & natural gas	1825.59	0.00	1.65	0.00	0.00	0.00	0.01	0.00
13 iron ore	0.01	0.67	0.01	203.47	0.18	13.22	0.14	0.00
14 other metallic minerals	59.20	1.01	14.51	305.29	36.00	19.62	3.61	0.00
15 non-metallic minerals	1577.93	1416.59	1470.28	913.25	9.12	66.60	9.71	0.00
16 sugar	253.27	0.00	0.29	0.22	0.00	0.18	0.11	0.00
17 khandsari & boora	59.77	0.00	0.35	0.00	0.00	0.01	0.01	0.00
18 other food & beverage indu.	7465.27	0.00	6.12	0.11	0.01	1.26	2.69	0.00
19 cotton textiles	1677.20	0.01	12.17	1.40	0.20	96.33	83.36	0.00
20 art silk & synthetic fibre textiles	10.79	0.00	0.00	0.01	0.00	0.02	0.09	0.00
21 woollen textiles	0.73	0.00	0.01	0.74	0.01	0.68	0.17	0.00
22 other textiles	1703.45	1986.37	120.88	209.89	1.94	80.31	58.39	0.00
23 wood based industries	3133.45	157.03	399.17	895.20	8.03	823.52	371.88	1.30
24 paper & paper based industries	1706.09	15.51	70.87	88.47	3.08	86.86	70.50	0.10
25 leather & leather products	6.87	0.00	0.02	0.19	0.00	1.89	0.16	0.00
26 rubber products	15.28	0.00	5.00	3.95	0.08	246.80	67.02	3.70
27 plastics	315.62	0.01	6.88	0.49	0.16	5.49	17.08	0.00
28 petroleum products	3673.95	409.05	343.33	140.09	24.78	91.67	47.16	4.30
29 coal tar products	476.57	10.30	56.44	932.94	21.02	166.29	15.74	0.40
30 fertilizers	683.42	25.85	0.08	0.01	0.00	0.02	0.02	0.00
31 pesticides	404.95	0.00	0.48	0.00	0.00	0.00	0.00	0.00
32 synthetic fibre resin	731.83	0.01	13.95	2.13	0.51	13.52	136.36	0.00
33 other chemicals	51309.84	5.45	535.14	203.60	34.61	360.23	525.18	4.70
34 cement	3.60	35.75	538.69	0.28	0.02	0.58	1.97	0.00
35 other non-metal mineral products	2201.60	1.61	836.85	330.10	0.60	61.60	213.68	0.40
36 iron & steel	351.17	171.71	434.62	9047.95	20.44	15240.14	3097.14	66.70
37 non-ferrous metal	2930.68	5.18	10.91	1601.41	189.78	735.11	962.53	4.40
38 non-electrical machinery	1949.41	246.75	281.66	1142.94	15.67	5673.00	289.46	4.80
39 electrical machinery	2.11	0.10	3.40	35.89	0.73	411.42	1090.18	2.00
40 rail equipments	0.07	0.00	0.01	0.98	0.01	8.32	0.14	13.70
41 motor vehicles	301.46	161.77	62.02	295.40	3.62	403.74	61.36	1.10
42 other transport equipment	1.16	0.00	0.11	12.52	0.26	84.67	4.06	0.20
43 communication & electronic equipmen	7.22	0.00	0.02	1.04	0.88	7.84	68.34	0.00
44 other manufacturing	4206.68	124.46	320.82	524.29	13.78	1798.59	2307.88	4.80
45 rail transport service	1026.00	616.55	362.18	1217.19	6.75	572.58	125.52	5.40
46 other transport service	3053.16	325.68	383.88	384.05	18.44	430.90	226.41	1.70
47 electricity	8475.81	1716.54	510.45	2304.46	128.90	1212.61	368.48	6.90
48 construction	836.76	24.61	100.41	90.77	10.43	141.60	48.76	0.70
49 communication	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50 OTHER SERVICES +TOTAL OF TRADE MATR	33199.48	2397.17	3163.75	7699.30	240.72	8023.35	3983.97	27.40
51 total 1 to 50	152180.75	11237.12	10517.98	29087.65	793.51	36992.77	14283.76	156.10
52 indirected taxes	15679.77	530.78	993.81	2217.07	90.70	4733.87	1957.07	37.90
53 54-(51+52)	49690.48	2854.11	6724.21	6869.28	181.78	14983.36	3910.17	316.80
54 gross output	217551.00	14622.00	18236.00	38174.00	1066.00	56710.00	20151.00	511.00

Appendix Table 4 (Contd.)

GUJARAT TRANSACTION MATRIX 1984-85 [NON SURVEY]

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sector code\item	41	42	43	44	45	46	47	48
1 paddy	0.00	0.18	0.00	15.78	0.00	75.59	0.73	0.00
2 wheat	0.00	0.00	0.00	0.97	0.00	0.00	0.58	0.00
3 other cereals	0.00	0.00	0.00	0.04	0.00	12.23	0.05	0.00
4 pulses	0.00	0.00	0.00	0.24	0.00	7.41	0.16	0.00
5 fibre crops	0.00	0.00	0.00	10.51	0.00	0.00	63.59	0.00
6 tea, coffee	0.00	0.00	0.00	1.29	0.00	0.00	1.62	0.00
7 other crops	3.23	0.11	0.02	248.99	0.00	680.81	232.66	8651.45
8 animal husbandry	0.01	0.02	0.02	102.40	0.00	0.00	6.65	0.00
9 forestry & logging	3.67	4.88	0.13	48.31	0.15	0.00	8.41	2199.04
10 fishing	0.00	0.00	0.00	0.14	0.00	0.00	0.18	0.00
11 coal & lignite	4.46	0.47	0.06	67.16	1219.64	0.00	10497.44	134.07
12 crude petroleum & natural gas	0.00	0.00	0.02	378.55	0.00	0.00	1176.42	0.00
13 iron ore	0.03	0.03	0.01	6.12	0.00	0.00	4.21	0.00
14 other metallic minerals	0.05	0.04	0.02	15.22	0.00	0.00	7.31	0.00
15 non-metallic minerals	0.22	0.14	0.07	101.85	0.00	0.00	43.65	3025.51
16 sugar	0.00	0.00	0.00	4.52	0.00	0.00	0.62	0.00
17 khandhari & boora	0.00	0.00	0.00	1.23	0.00	0.00	0.51	0.00
18 other food & beverage indu.	0.06	0.09	0.02	145.58	0.00	145.99	9.21	0.00
19 cotton textiles	6.11	0.29	0.40	77.22	0.00	34.46	17.82	0.00
20 art silk & synthetic fibre textiles	0.00	0.07	0.00	1.65	0.00	0.00	2.47	0.00
21 woollen textiles	0.07	0.00	0.01	30.88	0.00	0.00	2.11	0.00
22 other textiles	9.96	1.36	1.83	153.03	0.00	7.16	168.90	0.00
23 wood based industries	47.98	98.78	4.17	691.86	0.00	22.97	79.81	5833.48
24 paper & paper based industries	11.03	1.19	1.43	97.25	27.54	69.17	68.72	6.28
25 leather & leather products	0.19	0.02	0.00	19.09	0.00	0.00	0.91	0.00
26 rubber products	442.89	17.45	0.20	73.71	0.00	2267.22	11.46	0.00
27 plastics	0.31	0.04	1.96	11.54	0.00	0.37	0.63	26.27
28 petroleum products	184.91	17.78	2.67	286.64	1813.32	27795.10	3684.81	1658.58
29 coal tar products	4.47	0.46	0.12	73.76	0.00	0.00	21.21	1831.64
30 fertilizers	0.00	0.00	0.00	25.42	0.00	0.00	33.85	0.00
31 pesticides	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32 synthetic fibre resin	14.61	13.58	1.39	44.77	0.00	0.00	23.53	0.00
33 other chemicals	78.35	12.13	4.86	1513.54	0.00	9.39	116.18	1023.22
34 cement	0.00	0.00	0.00	1.43	0.00	0.00	0.81	7601.96
35 other non-metal mineral products	0.88	0.31	3.02	105.00	0.70	0.00	12.57	15533.45
36 iron & steel	1615.11	126.88	27.03	5024.91	17.93	0.00	419.49	20311.64
37 non-ferrous metal	43.01	6.80	11.34	866.67	0.00	0.00	45.44	0.00
38 non-electrical machinery	152.17	11.07	3.64	452.47	152.17	12.35	69.48	1.29
39 electrical machinery	32.58	1.67	16.75	45.72	734.67	50.02	801.84	4078.38
40 rail equipments	0.01	0.15	0.01	38.01	2213.12	0.00	1.34	0.00
41 motor vehicles	2132.81	7.29	1.05	263.79	0.00	2348.74	56.27	32.39
42 other transport equipment	39.13	137.23	0.11	467.57	8.00	2821.92	39.75	0.00
43 communication & electronic equipmen	0.17	0.30	93.21	23.62	26.35	0.00	0.91	0.00
44 other manufacturing	338.11	147.79	27.15	3552.42	85.23	27.54	74.56	270.87
45 rail transport service	103.72	5.74	4.20	206.42	563.42	144.39	528.30	1819.40
46 other transport service	56.85	9.45	6.22	309.34	1234.24	1393.24	504.57	1797.81
47 electricity	152.03	18.80	6.91	666.44	1066.03	78.31	7584.70	88.79
48 construction	2.71	1.88	0.92	69.30	4330.52	83.00	803.44	0.00
49 communication	0.00	0.00	0.00	0.00	0.35	420.19	101.18	39.80
50 OTHER SERVICES +TOTAL OF TRADE MATR	1253.90	152.79	98.02	4540.10	1086.13	2007.60	1591.18	18335.30
51 total 1 to 50	6735.79	797.26	319.01	20882.48	14579.52	40515.19	28922.21	94300.60
52 indirected taxes	1523.10	121.07	50.90	3616.71	813.18	9668.55	2428.91	8891.22
53 54-(51+52)	2631.11	315.67	300.10	28025.80	13815.30	73330.26	18985.87	57945.19
54 gross output	10890.00	1234.00	670.00	52525.00	29208.00	123514.00	50337.00	161137.00

Appendix Table 4 (Contd.)

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GUJARAT TRANSACTION MATRIX 1984-85 [NOM SURVEY]

sector code	49	50	51	52	53
total			total	f.d.	g. output
1 paddy	0.00	1480.64	8722.00	20501.00	29223.00
2 wheat	0.00	442.99	7650.26	20063.74	27714.00
3 other cereals	0.00	0.00	1529.10	36750.90	38280.00
4 pulses	0.00	260.65	7770.38	17124.62	24895.00
5 fibre crops	0.00	0.00	69338.08	-14240.08	55098.00
6 tea, coffee	0.00	0.00	13032.89	-13032.89	0.00
7 other crops	0.00	2594.96	200774.46	20859.54	221634.00
8 animal husbandry	0.00	15519.37	41406.76	58684.24	100091.00
9 forestry & logging	0.00	0.00	8311.04	-2010.04	6301.00
10 fishing	0.00	3319.40	4641.19	13874.81	18516.00
11 coal & lignite	0.00	548.12	18144.03	-16736.03	1408.00
12 crude petroleum & natural gas	0.00	137.99	133524.97	-91922.97	41602.00
13 iron ore	0.00	0.00	232.97	-232.97	0.00
14 other metallic minerals	0.00	0.00	476.09	-243.09	233.00
15 non-metallic minerals	0.00	0.00	12607.61	-9094.61	3513.00
16 sugar	0.00	539.36	2480.54	25817.46	28298.00
17 khandsari & boora	0.00	0.00	2607.14	102022.86	104630.00
18 other food & beverage indu.	0.00	1703.51	35264.77	129911.23	165176.00
19 cotton textiles	0.00	18.62	19906.15	197329.85	217236.00
20 art silk & synthetic fibre textiles	0.00	0.00	1831.61	75925.39	77757.00
21 woollen textiles	0.00	0.00	792.13	2194.87	2987.00
22 other textiles	0.30	2174.97	20265.69	-11783.69	8482.00
23 wood based industries	35.88	2184.28	33847.77	8794.23	42642.00
24 paper & paper based industries	81.39	6177.74	13305.85	-835.85	12470.00
25 leather & leather products	0.00	0.00	101.17	148.83	250.00
26 rubber products	0.00	19.71	3765.65	-1894.65	1871.00
27 plastics	0.01	64.61	977.76	5950.24	6928.00
28 petroleum products	159.62	596.31	79980.41	88848.59	168829.00
29 coal tar products	0.00	7.12	3972.20	-3972.20	0.00
30 fertilizers	0.00	0.00	28117.29	50454.71	78572.00
31 pesticides	0.00	10.95	4138.41	2275.59	6414.00
32 synthetic fibre resin	0.00	0.00	12838.90	5867.10	18706.00
33 other chemicals	0.00	24219.24	112732.44	104818.56	217551.00
34 cement	0.00	0.00	8222.14	6399.86	14622.00
35 other non-metal mineral products	0.00	231.08	20717.12	-2481.12	18236.00
36 iron & steel	0.00	6.02	58615.93	-20441.93	38174.00
37 non-ferrous metal	0.00	0.00	7956.38	-6890.38	1066.00
38 non-electrical machinery	2.77	392.06	24661.35	32048.65	56710.00
39 electrical machinery	13.82	428.20	7805.39	12345.61	20151.00
40 rail equipments	0.00	0.00	2278.02	-1767.02	511.00
41 motor vehicles	89.86	342.78	7973.09	2916.91	10890.00
42 other transport equipment	2.15	393.71	6213.67	-4979.67	1234.00
43 communication & electronic equipmen	32.14	16.97	289.15	380.85	670.00
44 other manufacturing	28.89	7821.01	29037.96	23487.04	52525.00
45 rail transport service	192.15	2246.15	14273.05	14934.95	29208.00
46 other transport service	128.27	16755.25	44304.83	79209.17	123514.00
47 electricity	94.84	2173.87	59759.54	-9422.54	50337.00
48 construction	273.67	18369.50	33968.40	127168.60	161137.00
49 communication	0.00	4721.19	5350.22	6051.78	11402.00
50 OTHER SERVICES +TOTAL OF TRADE MATR	163.27	44645.98	262506.49	285068.51	547575.00
51 total 1 to 50	1299.03	160564.32			
52 indirected taxes	104.44	7767.90			
53 54-(51+52)	9998.53	379242.78			
54 gross output	11402.00	547575.00			