# THE ECONOMIC STRUCTURE OF MISSISSIPPI'S COASTAL REGION



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## Introduction

Input-output methodology is becoming increasingly essential in economic analysis on the national, state and regional levels. The potential use of regional input-output hvae been demonstrated in numerous studies where measurements of changes in activity levels were desired. Examples of these are the closing of military bases, the opening or closing of a plant and the construction of a new highway. In such studies the consequences on employment and purchases of goods and services are of prime importance.

This paper concerns the construction of an input-output model for the Coastal Region of Mississippi using secondary data and national coefficients. Such approach requires the estimation of regional purchase coefficients which are the proportions of inputs used by the producing sectors. The "accuracy" of such coefficients will insure the "accuracy" of the results obtained in evaluating indirect and induced effects.

## The Study Area

The Mississippi Coastal Region consists of three counties: Hancock, Harrison, and Jackson. In 1975, these counties had a total population of 270,000. It is the fastest growing area of the State of Mississippi. The overall increase in population was almost 51,000 from 1960 to 1970 compared with 39,000 for the rest of Mississippi [2]. As a coastal unit the three counties comprise 1,803 miles.

## The Economic Model

The model presents economic activity of the region for the year 1972.

The data is arranged within an input-output framework with 29 endogenous sectors. Such framework shows the amounts of the commodities or services a sector produces which are actually absorbed by all other sectors in the region. The year 1972 was chosen as the base year due to the fact that secondary data on the county level were more practically available than for any other recent year.

An input-output model consists of three parts - a transaction or flow table, technical or direct coefficients and interdependence or direct and indirect coefficients [1]. A brief description of the model is given.

The transactions table can be represented as a set of linear equations:

$$(1) \qquad X_i = \sum_{j=1}^{n} x_{ij} + D_i \qquad i, j = 1,2,\ldots,n.$$

where:

$X_i$ = gross output of sector i in dollars.

$X_{ij}$ = total sales of sector i to sector j.

$\sum_{j=1}^{n} X_{ij}$ = total intermediate sales of sector i to processing sectors.

$D_i$ = total of final demand for sector i.

A second set of relationships which assumes fixed technical coefficients can be expressed as:

$$(2) \qquad X_{ij} = a_{ij} X_j,$$

where $X_j$ is the total input of sector j in dollars and $a_{ij}$ are technical coefficients. From (2),

$$a_{ij} = \frac{x_{ij}}{X_j}$$

The values $a_{ij}$ are usually displayed in tabular form called Technical Coefficients Matrix. This matrix describes the technological relationships among sectors, in essence, their production functions.

Substitute (2) in system of equations (1) and rearranging terms the result expressed in compact matrix form is:

$$X - AX = D \tag{3}$$

where:

X = Column vector of gross outputs with n elements.

A = nxn matrix of direct input coefficients.

D = Column vector of final demand with n elements.

Solving for X, the result is:

$$X = (I - A)^{-1}D.$$

Here, gross output is expressed as a function of final demand. The entries in the matrix $(I - A)^{-1}$ are called the interdependency coefficients. They are constant values.

The Regional Model

Among the most common methods to prepare regional input-output models are the survey and the non-survey approaches. The first which is extremely costly and time consuming relies on the collection of primary data which determine the interindustry relationships by directly obtaining the actual sales and purchases of the sectors within the region. The later, utilizes secondary data sources to adjust national direct requirements coefficients to reflect regional activities. The current study is based on such a procedure. The following steps summarize the techniques and approaches used.

(1) The 83 sectors of the national input-output Tables for 1971 [7] were aggregated into 25 sectors. Of these, 24 sectors represent producing sectors while the 25th represents the primary input sector, the value added. Some of the 24 sectors were further disaggregated to reflect the nature of specific economic activities in the coastal region. The result is an input-output model with 29 endogenous sectors. The aggregation scheme for grouping

common sectors is based on the Standard Industrial Classification (SIC) Code developed by the Department of Commerce.

(2) The aggregated national technical coefficients were scaled by the location quotient of each sector in the region. An assumption is made that the national technical coefficients hold as well for any region if the proper scaling is used. The location quotient measures the relative importance of a sector in relation to the comparable national sector [5].

It has the form:

$$LQ_j = \frac{N_j^R \mid N^R}{N_j \mid N}$$

where:

$LQ_j$ = Employment location quotient.

$N_j^R$ = Regional employment in sector j.

$N^R$ = Total regional employment.

$N_j$ = National employment in sector j.

$N$ = Total national employment.

$$LQ_j \begin{cases} = 1 & \text{Region is self-sufficient.} \\ < 1 & \text{Region is less than self-sufficient.} \\ > 1 & \text{Region is more than self-sufficient.} \end{cases}$$

A similar derivation of output location quotients can be made.

Applying the location quotients to the national technical coefficients yields an adjusted direct requirements table, the adjustments being the scaling of the national technical coefficients to reflect more accurately the regional industrial structure.

(3) Monetary gross outputs of the 29 regional sectors are then determined. These values are used as control totals throughout the study. Some of the data were available directly through state and federal publications, for others an indirect estimating procedure had to be used.

The Structure of the Regional Economy

The essential components of the model discussed for the Coastal Region of Mississippi are given in Tables 1 through 4 in the Appendix. These tables are briefly described.

Table 1 is the Transaction Matrix. It illustrates the structure of the economy in an accounting format in the sense that sales by a sector to other sectors and the final demand (households, federal government and exports) would equal the purchases of the particular sector from other sectors and value added (households as payment for labor, federal government as payment of taxes, and imports). The horizontal rows are sales and the vertical columns are the purchases. Imports comprise the residuals necessary to make sales (output) equal to purchases (input) and reflects purchases of labor, materials and import outside the study region. They also include items such as profit and depreciation.

Table 2 is the Technical Coefficient Matrix. Every entry in this table is a ratio obtained by dividing the values in a column of a particular sector by its total purchases. If these technical requirements remain invariant, it is possible to compute transactions matrices for succeeding years by knowing the total output of the sectors.

Table 3 is the Interdependence Coefficient Matrix. The coefficients express the effect on the total outputs of all sectors due to an increase of one dollar in a particular sector's final demand. Hence, every entry in this table is greater than its corresponding entry in Table 2. The reason is that in excess of the direct requirements for the sector's output, the increase in final demand will necessitate additional transactions within the other endogenous sectors. Summing down columns of the interdependence coefficient matrix, the totals are called output multipliers. They are measures of the effects of changes in the final demand for output of each sector and the impulse it generates

throughout the economy.

Another useful measure obtained from these tables is the income multiplier. A particular sector income multiplier can be computed by multiplying entries in the column of that sector in Table 3 by the corresponding row of households in Table 2, divided by that sector's households value. For example, the income multiplier of Sector 1 can be calculated as:

$$\frac{1}{.23487}\,[(1.01288)(\cdot 23487)+(.00030)(\cdot 23481)+\ldots+(.0078)(\cdot 38435)] = 1.49.$$

As can be seen from the above computation, the income multiplier of a particular sector expresses the total change in income due to change in sales of that sector to final demand. For the example cited, a one dollar increase in sales in sector 1 will generate $1.49 of income throughout the economy.

The output and income multipliers discussed thus far are called Type I. When Housholds sector is included among the endogenous sectors, the multipliers are called Type II. Calculations for Type II are performed in a similar manner as those of Type I.

Output and income multipliers for both Type I and Type II are shown in Table 4 of the Appendix. It can be shown that income multipliers of Type II are constant multiples of Type I. In this case the constant factor is 1.33.

Conclusions

There are two basic limitations to the use of input-output methodology discussed in this paper. The first involves the theoretical assumptions and the second concerns the construction of regional models using secondary data and national coefficients.

In theory, products produced by industries aggregated into sectors are assumed to be homogenous. Hence, errors of aggregation are considered to be minimal or nonexistant. It is also assumed that the technical coefficients

$a_{ij}$ are fixed which implies that the production function describing the physical nature of production is linearly homogeneous. That is a k-fold increase or decrease in input will result in a k-fold increase or decrease in output respectively. Long [4, p. 66] in his study of the assumption of linear homogenity of trade and production functions in county Leontief matrices, concludes that "....the linear homogenity assumptions are not realized in a majority of cases studied. Thus, some doubt is cast on various uses to which Leontief studies are put in regional planning: forecasting, impact analysis, etc."

When constructing input-output models using secondary data and national coefficients, a different set of problems arise. Stevens [6, p. 2] says:

> In apparent attempts to reduce costs, many analysts have expended substantial efforts on developing sophisticated methods of adapting and updating existing models, and have generally concentrated on trying to show that modest investments in non-survey models can provide usable results. When these results are compared with reality, however, they have often been found to be unsatisfactory.

The strongest objection to the non-survey methods are the sectoral aggregation, use of national coefficients and the unavailability of direct sources for refined output data. In the later case state data are used by employing some proper adjustments.

With all its difficulties and shortcomings, input-output approach remains to be one of the best tools available to planners. In its defense Loehman [3, p. 45] has this to say:

> ...even a study based on national data give insight into interrelations among sectors. Furthermore, while information from a model based on secondary data may be less exact than primary data, the results obtained still provide a basis for relative comparisons of alternatives. That is, while a predicted impact may not be an exact magnitude, comparisons of development alternatives give insight into the relative differences among alternatives. Such relative comparisons are often sufficient for planning purposes.

APPENDIX

Table 1
Transactions Matrix
Mississippi Coastal Region, 1972
(Thousands of Dollars)

| INPUT (PURCHASES) \ OUTPUT (SALES) | FISHERIES | FORESTRY | LIVESTOCK PRODUCTS | CROPS & AGRICULTURAL | AG FORESTRY, FISH SVC | MINING | CONSTRUCTION | FOOD PROCESSING | APPAREL & FINISHED | LUMBER & WOOD |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 FISHERIES | 150. | 0. | 0. | 0. | 0. | 0. | 0. | 7235. | 0. | 0. |
| 2 FORESTRY | 0. | 250. | 0. | 0. | 0. | 0. | 0. | 0. | 108. | 4094. |
| 3 LIVESTOCK PRODUCTS | 0. | 0. | 411. | 24. | 0. | 0. | 0. | 2235. | 0. | 0. |
| 4 CROPS & AGRICULTURAL | 0. | 0. | 204. | 0. | 0. | 0. | 0. | 1135. | 0. | 0. |
| 5 AG FORESTRY,FISH SVC | 219. | 145. | 157. | 119. | 0. | 0. | 352. | 0. | 0. | 0. |
| 6 MINING | 0. | 0. | 0. | 0. | 0. | 0. | 1245. | 0. | 1. | 1. |
| 7 CONSTRUCTION | 0. | 0. | 42. | 20. | 0. | 271. | 48. | 461. | 25. | 35. |
| 8 FOOD PROCESSING | 0. | 0. | 715. | 0. | 27. | 0. | 0. | 8335. | 0. | 0. |
| 9 APPAREL & FINISHED | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 262. | 0. |
| 10 LUMBER & WOOD | 0. | 0. | 0. | 0. | 4. | 11. | 5008. | 29. | 4. | 1261. |
| 11 PAPER & ALLIED | 0. | 0. | 0. | 0. | 0. | 0. | 111. | 483. | 49. | 13. |
| 12 PRINTING/PUBLISHING | 0. | 0. | 0. | 0. | 0. | 0. | 41. | 163. | 2. | 15. |
| 13 CHEMICAL/PETRO/OTHER | 11. | 7. | 4. | 11. | 1. | 12. | 111. | 73. | 14. | 9. |
| 14 STONE,CLAY &GLASS | 1. | 1. | 1. | 1. | 0. | 31. | 4296. | 512. | 0. | 17. |
| 15 PRIMARY/FAB METALS | 54. | 4. | 2. | 0. | 1. | 33. | 2858. | 172. | 6. | 31. |
| 16 TRANSPORTATION EQUIP | 3024. | 0. | 0. | 0. | 0. | 1. | 2. | 2. | 0. | 2. |
| 17 MISCELLANEOUS MFG | 36. | 24. | 2. | 4. | 4. | 45. | 917. | 140. | 506. | 12. |
| 18 WATER TRANSPORTATION | 161. | 107. | 19. | 24. | 0. | 121. | 0. | 882. | 0. | 174. |
| 19 OTHER TRANSP/WHSE | 212. | 141. | 155. | 31. | 20. | 159. | 414. | 645. | 117. | 228. |
| 20 COMMUNICATION/PU UTL | 2. | 1. | 42. | 21. | 2. | 242. | 599. | 1368. | 156. | 20. |
| 21 EATING & DRINKING | 19. | 13. | 23. | 8. | 2. | 14. | 1004. | 410. | 0. | 21. |
| 22 SERVICE STATIONS | 6. | 4. | 0. | 3. | 0. | 4. | 324. | 0. | 0. | 7. |
| 23 WHOLESALE/RETAIL | 146. | 97. | 181. | 53. | 14. | 106. | 7729. | 3156. | 382. | 165. |
| 24 FINANCE/INS/REAL EST | 100. | 66. | 112. | 108. | 38. | 926. | 1202. | 996. | 190. | 62. |
| 25 HOTEL/MOTEL,LODGING | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 129. | 5. | 0. |
| 26 MEDICAL SERVICES | 0. | 0. | 0. | 0. | 0. | 1. | 19. | 9. | 1. | 0. |
| 27 EDUCATIONAL SERVICES | 0. | 0. | 7. | 0. | 0. | 1. | 21. | 10. | 2. | 1. |
| 28 OTHER SERVICES | 23. | 15. | 46. | 34. | 0. | 246. | 7230. | 1645. | 272. | 121. |
| 29 STATE/LOCAL GOV'T | 3. | 1. | 2. | 0. | 0. | 8. | 139. | 175. | 48. | 7. |
| ENDOGENOUS TOTALS | 4167. | 876. | 2125. | 531. | 114. | 2202. | 34670. | 30400. | 2150. | 6350. |
| 30 HOUSEHOLDS | 2795. | 1855. | 977. | 372. | 391. | 1084. | 51352. | 26854. | 2667. | 4205. |
| 31 FEDERAL GOV'T | 336. | 223. | 117. | 45. | 139. | 446. | 4017. | 2176. | 524. | 532. |
| 32 IMPORTS | 4602. | 4946. | 941. | 634. | 1023. | 5726. | 25361. | 40408. | 4574. | 4572. |
| TOTAL PURCHASES | 11900. | 7900. | 4160. | 1582. | 1667. | 9458. | 115400. | 99838. | 9915. | 15655. |

Table 1
Transactions Matrix
Mississippi Coastal Region, 1972
(Thousands of Dollars)

| | [illegible] | [illegible] | CHEMICAL/PETROLEUM PROD | [illegible] | PRIMARY AND METALS | TRANSPORTATION EQUIP | MISCELLANEOUS MFG | OTHER TRANS-PORTATION | OTHER TRANS-[illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 1 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 800. | 0. | 32. |
| 2 | 2500. | 0. | 881. | 0. | 0. | 0. | 4. | 25. | 0. | 0. | 0. | 0. | 0. |
| 3 | 0. | 0. | 0. | 0. | 0. | 0. | 9. | 1. | 0. | 0. | 0. | 0. | 0. |
| 4 | 0. | 0. | 23. | 0. | 0. | 0. | 24. | 3. | 0. | 0. | 2. | 0. | 99. |
| 5 | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 0. | 26. | 0. | 155. |
| 6 | 0. | 0. | 301. | 362. | 0. | 0. | 5. | 3. | 5. | 321. | 0. | 0. | 51. |
| 7 | 615. | 28. | 3056. | 210. | 451. | 715. | 139. | 664. | 869. | 792. | 110. | 36. | 850. |
| 8 | 0. | 0. | 172. | 0. | 0. | 0. | 58. | 25. | 98. | 0. | 136. | 44. | 1049. |
| 9 | 0. | 0. | 0. | 0. | 0. | 864. | 42. | 0. | 24. | 0. | 0. | 0. | 1128. |
| 10 | 3043. | 1. | 156. | 61. | 167. | 1218. | 189. | 0. | 1. | 900. | 18. | 6. | 142. |
| 11 | 0. | 284. | 894. | 179. | 105. | 139. | 126. | 12. | 15. | 0. | 0. | 0. | 10. |
| 12 | 128. | 160. | 34. | 1. | 34. | 75. | 13. | 5. | 6. | 54. | 45. | 5. | 118. |
| 13 | 217. | 8. | 1528. | 35. | 62. | 138. | 96. | 53. | 69. | 12. | 18. | 6. | 50. |
| 14 | 34. | 0. | 447. | 107. | 88. | 597. | 92. | 7. | 0. | 0. | 16. | 5. | 121. |
| 15 | 150. | 12. | 151. | 62. | 2221. | 5948. | 509. | 31. | 41. | 45. | 14. | 4. | 106. |
| 16 | 0. | 0. | 0. | 0. | 15. | 5052. | 165. | 106. | 139. | 1. | 17. | 6. | 132. |
| 17 | 264. | 13. | 586. | 81. | 356. | 2764. | 848. | 35. | 20. | 41. | 41. | 14. | 319. |
| 18 | 2095. | 57. | 3573. | 744. | 3478. | 2566. | 318. | 0. | 4022. | 93. | 0. | 0. | 266. |
| 19 | 2745. | 75. | 6917. | 476. | 1937. | 362. | 417. | 5271. | 0. | 253. | 216. | 69. | 659. |
| 20 | 1675. | 114. | 6132. | 745. | 1483. | 1915. | 472. | 406. | 531. | 3093. | 753. | 243. | 5799. |
| 21 | 209. | 14. | 509. | 46. | 187. | 493. | 107. | 61. | 80. | 16. | 0. | 61. | 1478. |
| 22 | 67. | 4. | 164. | 15. | 60. | 159. | 34. | 20. | 26. | 5. | 62. | 0. | 476. |
| 23 | 1605. | 107. | 3915. | 357. | 1436. | 3797. | 821. | 472. | 618. | 120. | 1490. | 472. | 0. |
| 24 | 921. | 203. | 5727. | 328. | 603. | 1535. | 472. | 605. | 792. | 273. | 1218. | 392. | 5372. |
| 25 | 87. | 6. | 250. | 8. | 36. | 138. | 19. | 16. | 21. | 63. | 44. | 14. | 338. |
| 26 | 6. | 0. | 32. | 2. | 6. | 16. | 5. | 4. | 3. | 2. | 6. | 2. | 45. |
| 27 | 6. | 4. | 35. | 3. | 6. | 18. | 5. | 4. | 3. | 3. | 7. | 2. | 48. |
| 28 | 1733. | 275. | 3718. | 544. | 1491. | 2175. | 1013. | 734. | 962. | 789. | 1725. | 555. | 4722. |
| 29 | 112. | 107. | 500. | 40. | 79. | 342. | 65. | 907. | 1181. | 2604. | 555. | 179. | 4268. |
| TOT. | 18212. | 1472. | 39702. | 4507. | 14301. | 31026. | 6067. | 9465. | 9560. | 9459. | 7309. | 2115. | 31913. |
| 30 | 21797. | 1614. | 56807. | 4478. | 14865. | 140840. | 7699. | 10959. | 14361. | 9442. | 10096. | 3238. | 77705. |
| 31 | 1564. | 332. | 7170. | 493. | 960. | 37227. | 1234. | 378. | 1111. | 4520. | 1151. | 371. | 8863. |
| 32 | 39465. | 2585. | 107549. | 7314. | 25158. | 314529. | 13622. | 4268. | 7818. | 98446. | 7943. | 2818. | 88484. |
| TOT. | 81038. | 6003. | 211228. | 17292. | 55284. | 523622. | 28622. | 25070. | 32850. | 121867. | 26499. | 8542. | 203965. |

Table 1
Transactions Matrix
Mississippi Coastal Region, 1972
(Thousands of Dollars)

| SECTOR | FINANCE INSURANCE REAL EST. | HOTELS MOTELS LODGING | PERSONAL SERVICES | PROFESSIONAL SERVICES | OTHER SERVICES | STATE/LOCAL GOV'T | TOTAL VALUE ADDED | FINAL DEMAND HOUSEHOLDS | FED. GOV'T CIVILIAN | FEDERAL GOV'T MILITARY | EXPORTS | TOTAL OUTPUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 24 | 25 | 26 | 27 | 28 | 29 | | 30 | 31 | 32 | 33 | |
| 1 | 0. | 0. | 0. | 0. | 0. | 0. | 8217. | 1110. | 0. | 73. | 2500. | 11900. |
| 2 | 34. | 0. | 0. | 0. | 0. | 0. | 7896. | 4. | 0. | 0. | 0. | 7900. |
| 3 | 0. | 0. | 4. | 0. | 16. | 0. | 2700. | 1301. | 15. | 73. | 71. | 4160. |
| 4 | 0. | 1. | 0. | 0. | 16. | 45. | 1552. | 24. | 1. | 3. | 2. | 1582. |
| 5 | 0. | 0. | 0. | 0. | 23. | 16. | 1252. | 229. | 15. | 168. | 3. | 1667. |
| 6 | 0. | 0. | 0. | 0. | 0. | 373. | 2669. | 132. | 0. | 1453. | 5204. | 9458. |
| 7 | 6473. | 382. | 685. | 731. | 639. | 18334. | 35685. | 41394. | 9000. | 12003. | 20298. | 119400. |
| 8 | 13. | 3. | 389. | 414. | 0. | 55. | 11533. | 13594. | 1. | 1000. | 73780. | 99838. |
| 9 | 0. | 122. | 15. | 20. | 9. | 67. | 2557. | 550. | 524. | 899. | 5395. | 9915. |
| 10 | 23. | 10. | 0. | 0. | 0. | 50. | 12302. | 246. | 0. | 45. | 3046. | 15659. |
| 11 | 0. | 0. | 0. | 0. | 38. | 47. | 2505. | 10. | 0. | 0. | 78523. | 81038. |
| 12 | 98. | 5. | 5. | 217. | 893. | 95. | 2212. | 2404. | 287. | 380. | 720. | 6003. |
| 13 | 24. | 61. | 56. | 59. | 45. | 127. | 2957. | 10. | 2. | 3. | 208256. | 211228. |
| 14 | 16. | 34. | 5. | 5. | 128. | 17. | 6588. | 861. | 105. | 365. | 9473. | 17392. |
| 15 | 25. | 48. | 1. | 2. | 34. | 26. | 13581. | 180. | 10. | 50. | 41463. | 55284. |
| 16 | 63. | 8. | 0. | 1. | 491. | 42. | 9269. | 1764. | 0. | 508647. | 9922. | 523622. |
| 17 | 116. | 248. | 65. | 74. | 429. | 91. | 8103. | 3016. | 10. | 25. | 17468. | 28622. |
| 18 | 0. | 0. | 0. | 0. | 206. | 511. | 19417. | 367. | 0. | 25. | 5261. | 25070. |
| 19 | 963. | 227. | 155. | 169. | 663. | 3795. | 27395. | 1550. | 250. | 750. | 2905. | 32850. |
| 20 | 1601. | 896. | 1658. | 1811. | 3901. | 5773. | 41525. | 57566. | 4753. | 16013. | 2010. | 121867. |
| 21 | 144. | 87. | 63. | 67. | 303. | 102. | 5541. | 7423. | 43. | 242. | 13250. | 26499. |
| 22 | 46. | 28. | 20. | 22. | 98. | 33. | 1687. | 4100. | 46. | 224. | 2485. | 8542. |
| 23 | 1105. | 665. | 484. | 516. | 2335. | 782. | 33126. | 149982. | 425. | 2075. | 18357. | 203965. |
| 24 | 9072. | 1853. | 1500. | 1400. | 3165. | 3270. | 46702. | 57098. | 170. | 830. | 6100. | 110900. |
| 25 | 158. | 534. | 114. | 122. | 225. | 39. | 2366. | 1163. | 43. | 207. | 25288. | 29067. |
| 26 | 74. | 16. | 0. | 156. | 28. | 15. | 448. | 32644. | 258. | 810. | 1500. | 35660. |
| 27 | 78. | 18. | 166. | 0. | 30. | 31714. | 32192. | 619. | 5205. | 0. | 0. | 38016. |
| 28 | 1877. | 1434. | 1194. | 1272. | 2414. | 1755. | 40074. | 39986. | 425. | 2075. | 10939. | 93499. |
| 29 | 1947. | 156. | 419. | 446. | 1507. | 314. | 16106. | 63637. | 75. | 362. | 61237. | 141417. |
| TOT. | 23350. | 6836. | 7050. | 7704. | 17636. | 67488. | 399157. | | | | | |
| 30 | 23246. | 12767. | 15636. | 16456. | 40869. | 54354. | | 0. | 127800. | 187166. | 89765. | 1034842. |
| 31 | 5561. | 1353. | 1664. | 1774. | 4351. | 43. | | 149781. | 15. | 82. | 641107. | 879660. |
| 32 | 58743. | 8171. | 11220. | 11882. | 30643. | 19532. | | 195189. | 84. | 0. | 0. | 1149360. |
| T | 110900. | 29067. | 35660. | 38016. | 93499. | 141417. | | 827874. | 149582. | 730078. | 1356328. | 5135882. |

Table 2
Technical Coefficients Matrix

| | SECTOR | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | FISHERIES | .01264 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .07247 | .00000 | .00000 |
| 2 | FORESTRY | .00000 | .03165 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .01089 | .26145 |
| 3 | LIVESTOCK PRODUCTS | .00000 | .00000 | .09880 | .01517 | .00000 | .00000 | .00000 | .02239 | .00000 | .00000 |
| 4 | CROPS & AGRICULTURAL | .00000 | .00000 | .04904 | .00000 | .00000 | .00000 | .00000 | .01137 | .00000 | .00000 |
| 5 | AG FORESTRY,FISH SVC | .01840 | .01835 | .03774 | .07522 | .00000 | .00000 | .00295 | .00000 | .00000 | .00000 |
| 6 | MINING | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .01043 | .00000 | .00010 | .00006 |
| 7 | CONSTRUCTION | .00000 | .00000 | .01010 | .01264 | .00000 | .02865 | .00040 | .00462 | .00252 | .00249 |
| 8 | FOOD PROCESSING | .00000 | .00000 | .17188 | .00000 | .01820 | .00000 | .00000 | .08349 | .00000 | .00000 |
| 9 | APPAREL & FINISHED | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .02642 | .00000 |
| 10 | LUMBER & WOOD | .00000 | .00000 | .00000 | .00000 | .00240 | .00116 | .04194 | .00029 | .00040 | .08053 |
| 11 | PAPER & ALLIED | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00093 | .00484 | .00494 | .00083 |
| 12 | PRINTING/PUBLISHING | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00034 | .00163 | .00020 | .00056 |
| 13 | CHEMICAL/PETRO/OTHER | .00092 | .00089 | .00096 | .00635 | .00060 | .00427 | .00093 | .00073 | .00141 | .00057 |
| 14 | STONE,CLAY &GLASS | .00008 | .00013 | .00024 | .00063 | .00000 | .00328 | .03598 | .00513 | .00000 | .00109 |
| 15 | PRIMARY/FAB METALS | .00454 | .00051 | .00048 | .00000 | .00060 | .00349 | .00231 | .00172 | .00061 | .00134 |
| 16 | TRANSPORTATION EQUIP | .25412 | .00000 | .00000 | .00000 | .00000 | .00011 | .00002 | .00002 | .00000 | .00013 |
| 17 | MISCELLANEOUS MFG | .00303 | .00304 | .00048 | .00253 | .00240 | .00476 | .00768 | .00140 | .05103 | .00077 |
| 18 | WATER TRANSPORTATION | .01353 | .01354 | .00487 | .01517 | .00000 | .01379 | .00000 | .00883 | .00000 | .01111 |
| 19 | OTHER TRANSP/WHSE | .01782 | .01785 | .03726 | .01960 | .01200 | .01681 | .00347 | .00646 | .01180 | .01456 |
| 20 | COMMUNICATION/PU UTL | .00017 | .00013 | .01010 | .01327 | .00120 | .02541 | .00502 | .01370 | .01573 | .00511 |
| 21 | EATING & DRINKING | .00160 | .00165 | .00553 | .00506 | .00120 | .00148 | .00841 | .00411 | .00000 | .00134 |
| 22 | SERVICE STATIONS | .00050 | .00051 | .00000 | .00190 | .00000 | .00042 | .00271 | .00000 | .00000 | .00045 |
| 23 | WHOLESALE/RETAIL | .01227 | .01228 | .04351 | .03982 | .00840 | .01121 | .04473 | .03161 | .03853 | .01054 |
| 24 | FINANCE/INS/REAL EST | .00840 | .00835 | .02682 | .06827 | .02340 | .09791 | .01007 | .00958 | .01916 | .00356 |
| 25 | HOTEL,MOTEL,LODGING | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00129 | .00060 | .00000 |
| 26 | MEDICAL SERVICES | .00000 | .00000 | .00000 | .00000 | .00000 | .00011 | .00016 | .00009 | .00010 | .00000 |
| 27 | EDUCATIONAL SERVICES | .00000 | .00000 | .00168 | .00000 | .00000 | .00011 | .00018 | .00010 | .00020 | .00006 |
| 28 | OTHER SERVICES | .00193 | .00190 | .01106 | .05342 | .00000 | .02601 | .06055 | .01648 | .02743 | .00773 |
| 29 | STATE/LOCAL GOV'T | .00025 | .00013 | .00048 | .00000 | .00000 | .00085 | .00116 | .00175 | .00484 | .00045 |
| | ENDOGENOUS TOTALS | .35017 | .11089 | .51082 | .33565 | .06839 | .29282 | .29037 | .30449 | .21684 | .40552 |
| 30 | HOUSEHOLDS | .23487 | .23461 | .23486 | .23515 | .23455 | .11461 | .43008 | .26898 | .26899 | .26854 |
| 31 | FEDERAL GOV'T | .02824 | .02823 | .02812 | .02845 | .08338 | .04716 | .03364 | .02180 | .05285 | .03397 |
| 32 | IMPORTS | .38672 | .62608 | .22620 | .40076 | .61268 | .60541 | .24590 | .40474 | .46132 | .29197 |
| | TOTALS | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |

Table 2
Technical Coefficients Matrix

| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .03019 | .00000 | .00016 |
| 2 | .03085 | .00000 | .00417 | .00000 | .00000 | .00000 | .00014 | .00100 | .00000 | .00000 | .00000 | .00000 | .00000 |
| 3 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00031 | .00004 | .00000 | .00000 | .00000 | .00000 | .00000 |
| 4 | .00000 | .00000 | .00011 | .00000 | .00000 | .00000 | .00084 | .00012 | .00000 | .00000 | .00008 | .00000 | .00049 |
| 5 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 | .00098 | .00000 | .00096 |
| 6 | .00000 | .00000 | .00143 | .02087 | .00000 | .00000 | .00017 | .00012 | .00015 | .00269 | .00000 | .00000 | .00025 |
| 7 | .00759 | .00466 | .01447 | .01207 | .00816 | .00137 | .00486 | .02449 | .02449 | .00650 | .00415 | .00421 | .00417 |
| 8 | .00000 | .00000 | .00081 | .00000 | .00000 | .00000 | .00203 | .00100 | .00298 | .00000 | .00513 | .00515 | .00514 |
| 9 | .00000 | .00000 | .00000 | .00000 | .00000 | .00145 | .00147 | .00000 | .00075 | .00000 | .00000 | .00000 | .00553 |
| 10 | .03755 | .00017 | .00074 | .00351 | .00302 | .00233 | .00660 | .00000 | .00003 | .00739 | .00068 | .00070 | .00070 |
| 11 | .00000 | .04731 | .00423 | .01029 | .00190 | .00027 | .00440 | .00048 | .00046 | .00000 | .00000 | .00000 | .00005 |
| 12 | .00158 | .02665 | .00016 | .00006 | .00062 | .00014 | .00045 | .00020 | .00018 | .00044 | .00170 | .00059 | .00058 |
| 13 | .00268 | .00133 | .00723 | .00201 | .00112 | .00026 | .00335 | .00211 | .00210 | .00010 | .00068 | .00070 | .00044 |
| 14 | .00042 | .00000 | .00212 | .00615 | .00159 | .00114 | .00321 | .00028 | .00027 | .00000 | .00060 | .00059 | .00055 |
| 15 | .00185 | .00200 | .00071 | .00356 | .04017 | .01136 | .01778 | .00124 | .00125 | .00037 | .00053 | .00047 | .00052 |
| 16 | .00000 | .00000 | .00000 | .00000 | .00027 | .00965 | .00576 | .00423 | .00423 | .00001 | .00064 | .00070 | .00065 |
| 17 | .00326 | .00217 | .00277 | .00466 | .00644 | .00528 | .02963 | .00140 | .00137 | .00016 | .00155 | .00164 | .00156 |
| 18 | .02585 | .00950 | .01692 | .04278 | .06291 | .00490 | .01111 | .00000 | .12244 | .00074 | .00000 | .00000 | .00130 |
| 19 | .03387 | .01249 | .03275 | .05612 | .03504 | .00069 | .01457 | .21025 | .00000 | .00208 | .00815 | .00808 | .00323 |
| 20 | .02067 | .01899 | .02803 | .04284 | .02683 | .00366 | .01649 | .01419 | .01616 | .02638 | .02842 | .02845 | .02843 |
| 21 | .00258 | .00233 | .00241 | .00264 | .00338 | .00094 | .00374 | .00243 | .00244 | .00013 | .00000 | .00714 | .00725 |
| 22 | .00083 | .00067 | .00078 | .00086 | .00109 | .00032 | .00119 | .00080 | .00079 | .00004 | .00234 | .00000 | .00233 |
| 23 | .01981 | .01782 | .01853 | .02053 | .02597 | .00725 | .02868 | .01953 | .01281 | .00098 | .05585 | .05526 | .00000 |
| 24 | .01137 | .03382 | .02711 | .01886 | .01091 | .00293 | .01649 | .02413 | .02411 | .00224 | .04596 | .04589 | .04595 |
| 25 | .00107 | .00100 | .00118 | .00046 | .00065 | .00026 | .00066 | .00064 | .00064 | .00052 | .00166 | .00164 | .00166 |
| 26 | .00007 | .00000 | .00015 | .00011 | .00011 | .00003 | .00017 | .00016 | .00009 | .00002 | .00023 | .00023 | .00022 |
| 27 | .00007 | .00007 | .00017 | .00017 | .00011 | .00003 | .00017 | .00016 | .00009 | .00002 | .00026 | .00023 | .00024 |
| 28 | .02139 | .04581 | .01760 | .03128 | .02697 | .00415 | .03539 | .02928 | .02928 | .00447 | .06510 | .06497 | .02315 |
| 29 | .00138 | .01792 | .00237 | .00230 | .00143 | .00055 | .00227 | .03958 | .03595 | .02137 | .02094 | .02056 | .02093 |
| | .22473 | .24521 | .18756 | .28214 | .25868 | .05925 | .21197 | .37754 | .29102 | .07762 | .27582 | .24760 | .18646 |
| 30 | .26897 | .26887 | .26894 | .26897 | .26888 | .26897 | .26899 | .43714 | .43717 | .07748 | .38100 | .37907 | .38097 |
| 31 | .01330 | .05531 | .03394 | .02835 | .01736 | .07110 | .04311 | .01508 | .03382 | .03709 | .04344 | .04342 | .04345 |
| 32 | .48699 | .43062 | .50916 | .49054 | .45507 | .60068 | .47593 | .17024 | .23799 | .80782 | .29975 | .32590 | .41911 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |

Table 2
Technical Coefficients Matrix

| | 24 | 25 | 26 | 27 | 28 | 29 |
|---|---|---|---|---|---|---|
| 1 | .00000 | .00000 | .00000 | .00000 | .00000 | .00000 |
| 2 | .00031 | .00000 | .00000 | .00000 | .00000 | .00000 |
| 3 | .00000 | .00000 | .00011 | .00000 | .00017 | .00000 |
| 4 | .00000 | .00003 | .00000 | .00000 | .00017 | .00032 |
| 5 | .00000 | .00000 | .00000 | .00000 | .00025 | .00011 |
| 6 | .00000 | .00000 | .00000 | .00000 | .00000 | .00264 |
| 7 | .05837 | .01314 | .01921 | .01923 | .00683 | .12964 |
| 8 | .00012 | .00010 | .01051 | .01089 | .00000 | .00039 |
| 9 | .00000 | .00470 | .00053 | .00053 | .00010 | .00047 |
| 10 | .00021 | .00034 | .00000 | .00000 | .00000 | .00035 |
| 11 | .00000 | .00000 | .00000 | .00000 | .00041 | .00033 |
| 12 | .00088 | .00017 | .00014 | .00571 | .00955 | .00067 |
| 13 | .00022 | .00210 | .00157 | .00155 | .00048 | .00030 |
| 14 | .00014 | .00117 | .00014 | .00013 | .00137 | .00012 |
| 15 | .00023 | .00165 | .00003 | .00005 | .00036 | .00018 |
| 16 | .00057 | .00028 | .00000 | .00003 | .00525 | .00030 |
| 17 | .00105 | .00853 | .00193 | .00195 | .00459 | .00064 |
| 18 | .00000 | .00000 | .00000 | .00000 | .00220 | .00351 |
| 19 | .00327 | .00781 | .00446 | .00445 | .00709 | .02634 |
| 20 | .01444 | .03083 | .04762 | .04764 | .04172 | .04032 |
| 21 | .00130 | .00299 | .00177 | .00176 | .00324 | .00072 |
| 22 | .00041 | .00096 | .00056 | .00058 | .00105 | .00023 |
| 23 | .00996 | .02288 | .01357 | .01357 | .02497 | .00553 |
| 24 | .04180 | .06375 | .04206 | .04209 | .03385 | .02312 |
| 25 | .00142 | .01837 | .00320 | .00321 | .00241 | .00028 |
| 26 | .00067 | .00055 | .00000 | .00410 | .00030 | .00011 |
| 27 | .00070 | .00062 | .00466 | .00000 | .00032 | .22426 |
| 28 | .01693 | .04933 | .03848 | .03846 | .02582 | .01241 |
| 29 | .01756 | .00537 | .01175 | .01173 | .01612 | .00222 |
| | .21055 | .23518 | .19770 | .20265 | .18862 | .47723 |
| 30 | .20941 | .43716 | .43819 | .43813 | .43711 | .38435 |
| 31 | .05014 | .04655 | .04666 | .04666 | .04654 | .00030 |
| 32 | .52969 | .28111 | .31744 | .31255 | .32774 | .13812 |
| | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 | 1.00000 |

Table 3
Interdependence Coefficients Matrix

| | SECTOR | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | FISHERIES | 1.01288 | .00010 | .01573 | .00357 | .00136 | .00009 | .00035 | .08066 | .00007 | .00010 |
| 2 | FORESTRY | .00030 | 1.03277 | .00046 | .00048 | .00077 | .00097 | .01261 | .00056 | .01219 | .25381 |
| 3 | LIVESTOCK PRODUCTS | .00009 | .00002 | 1.11583 | .01699 | .00045 | .00002 | .00003 | .02748 | .00004 | .00001 |
| 4 | CROPS & AGRICULTURAL | .00003 | .00002 | .05716 | 1.00033 | .00023 | .00003 | .00007 | .01384 | .00008 | .00002 |
| 5 | EX FORESTRY,FISH SVC | .01868 | .01888 | .04684 | .07508 | 1.00005 | .00016 | .00330 | .00365 | .00030 | .00543 |
| 6 | MINING | .00007 | .00005 | .00035 | .00035 | .00005 | 1.00060 | .01133 | .00030 | .00029 | .00020 |
| 7 | CONSTRUCTION | .00257 | .00222 | .01910 | .02082 | .00237 | .03764 | 1.00504 | .00883 | .00672 | .00527 |
| 8 | FOOD PROCESSING | .00056 | .00054 | .21071 | .00500 | .01788 | .00026 | .00062 | 1.09666 | .00047 | .00034 |
| 9 | APPAREL & FINISHED | .00056 | .00011 | .00041 | .00031 | .00007 | .00013 | .00044 | .00029 | 1.02750 | .00012 |
| 10 | LUMBER & WOOD | .00034 | .00022 | .00139 | .00144 | .00079 | .00324 | .04645 | .00130 | .00160 | 1.08755 |
| 11 | PAPER & ALLIED | .00016 | .00005 | .00117 | .00020 | .00012 | .00019 | .00157 | .00554 | .00540 | .00103 |
| 12 | PRINTING/PUBLISHING | .00016 | .00008 | .00077 | .00084 | .00010 | .00050 | .00122 | .00217 | .00067 | .00124 |
| 13 | CHEMICAL/PETRO/OTHER | .00114 | .00105 | .00192 | .00730 | .00068 | .00150 | .00127 | .00118 | .00178 | .00104 |
| 14 | STONE,CLAY &GLASS | .00054 | .00026 | .00221 | .00161 | .00021 | .00478 | .03672 | .00612 | .00052 | .00148 |
| 15 | PRIMARY/FAB METALS | .00814 | .00077 | .00194 | .00101 | .00084 | .00515 | .02438 | .00309 | .00200 | .00155 |
| 16 | TRANSPORTATION EQUIP | .26014 | .00026 | .00454 | .00081 | .00046 | .00059 | .00069 | .02103 | .00064 | .00046 |
| 17 | MISCELLANEOUS MFG | .00487 | .00344 | .00181 | .00362 | .00262 | .00567 | .00906 | .00245 | .05449 | .00205 |
| 18 | WATER TRANSPORTATION | .01845 | .01692 | .01460 | .01921 | .00194 | .01631 | .00632 | .01379 | .00314 | .01558 |
| 19 | OTHER TRANSP/WHSE | .02304 | .02257 | .04927 | .02698 | .01293 | .02196 | .01056 | .01420 | .01497 | .02587 |
| 20 | COMMUNICATION/PU UTL | .00344 | .00195 | .02122 | .02139 | .00977 | .02539 | .01486 | .02012 | .02178 | .00822 |
| 21 | EATING & DRINKING | .00223 | .00200 | .00838 | .00630 | .00147 | .00235 | .00966 | .00549 | .00084 | .00232 |
| 22 | SERVICE STATIONS | .00070 | .00062 | .00045 | .00224 | .00007 | .00071 | .00313 | .00026 | .00027 | .00076 |
| 23 | WHOLESALE/RETAIL | .01634 | .01430 | .06255 | .04708 | .01003 | .01708 | .07095 | .04039 | .04364 | .01716 |
| 24 | FINANCE/INS/REAL EST | .01328 | .01217 | .04772 | .08437 | .02497 | .11105 | .02156 | .01948 | .02724 | .01057 |
| 25 | HOTEL,MOTEL,LODGING | .00018 | .00009 | .00061 | .00045 | .00010 | .00034 | .00042 | .00167 | .00081 | .00012 |
| 26 | MEDICAL SERVICES | .00007 | .00002 | .00010 | .00011 | .00003 | .00021 | .00023 | .00014 | .00017 | .00003 |
| 27 | EDUCATIONAL SERVICES | .00064 | .00053 | .00344 | .00148 | .00034 | .00153 | .00151 | .00137 | .00212 | .00081 |
| 28 | OTHER SERVICES | .00594 | .00433 | .02647 | .06788 | .00196 | .03368 | .06945 | .02401 | .03415 | .01212 |
| 29 | STATE/LOCAL GOV'T | .00278 | .00226 | .00654 | .00398 | .00140 | .00687 | .00560 | .00523 | .00827 | .00320 |
| | TOTALS | 1.39927 | 1.13869 | 1.72369 | 1.42182 | 1.09111 | 1.30110 | 1.37940 | 1.42130 | 1.27216 | 1.50334 |

Table 3

Interdependence Coefficients Matrix

| | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .00014 | .00013 | .00019 | .00015 | .00018 | .00004 | .00034 | .00069 | .00040 | .00002 | .03107 | .00071 | .00082 |
| 2 | .04318 | .00241 | .00512 | .00196 | .00140 | .00080 | .00261 | .00174 | .00077 | .00237 | .00051 | .00051 | .00053 |
| 3 | .00002 | .00002 | .00004 | .00003 | .00003 | .00001 | .00045 | .00011 | .00011 | .00000 | .00017 | .00017 | .00016 |
| 4 | .00003 | .00004 | .00015 | .00004 | .00005 | .00001 | .00095 | .00019 | .00010 | .00001 | .00021 | .00013 | .00058 |
| 5 | .00087 | .00013 | .00020 | .00014 | .00012 | .00003 | .00022 | .00023 | .00019 | .00008 | .00170 | .00016 | .00108 |
| 6 | .00026 | .00029 | .00183 | .02142 | .00035 | .00008 | .00045 | .00085 | .00089 | .00289 | .00034 | .00034 | .00055 |
| 7 | .01221 | .01242 | .01987 | .02009 | .01495 | .00233 | .00924 | .04251 | .03540 | .01331 | .01259 | .01259 | .01132 |
| 8 | .00039 | .00033 | .00125 | .00052 | .00053 | .00009 | .00271 | .00221 | .00384 | .00010 | .00617 | .00618 | .00585 |
| 9 | .00019 | .00018 | .00018 | .00023 | .00025 | .00177 | .00179 | .00038 | .00097 | .00003 | .00041 | .00039 | .00574 |
| 10 | .04169 | .00304 | .00225 | .00573 | .00458 | .00282 | .00835 | .00251 | .00717 | .00875 | .00175 | .00175 | .00162 |
| 11 | 1.00024 | .04874 | .00441 | .01055 | .00220 | .00036 | .00476 | .00077 | .00071 | .00007 | .00025 | .00019 | .00022 |
| 12 | .00202 | 1.02813 | .00051 | .00061 | .00114 | .00024 | .00102 | .00088 | .00080 | .00062 | .00264 | .00151 | .00102 |
| 13 | .00300 | .00170 | 1.00753 | .00247 | .00156 | .00034 | .00369 | .00283 | .00262 | .00017 | .00090 | .00089 | .00058 |
| 14 | .00102 | .00061 | .00297 | 1.00715 | .00236 | .00131 | .00384 | .00203 | .00185 | .00043 | .00128 | .00125 | .00112 |
| 15 | .00266 | .00283 | .00165 | .00487 | 1.04276 | .01218 | .01965 | .00325 | .00303 | .00080 | .00142 | .00112 | .00107 |
| 16 | .00057 | .00053 | .00050 | .00086 | .00114 | 1.00987 | .00652 | .00570 | .00533 | .00010 | .00916 | .00143 | .00111 |
| 17 | .00400 | .00304 | .00343 | .00568 | .00755 | .00577 | 1.03130 | .00261 | .00243 | .00038 | .00249 | .00244 | .00232 |
| 18 | .03266 | .01396 | .02248 | .05290 | .07266 | .00628 | .01597 | 1.02761 | .12678 | .00157 | .00253 | .00195 | .00241 |
| 19 | .04313 | .01914 | .03906 | .04980 | .05315 | .00287 | .02065 | .21869 | 1.02910 | .00351 | .01138 | .01063 | .00536 |
| 20 | .02576 | .02695 | .03431 | .05117 | .03473 | .00523 | .02292 | .02758 | .02540 | 1.02809 | .03714 | .03719 | .03346 |
| 21 | .05395 | .00319 | .00312 | .00365 | .00442 | .00116 | .00460 | .00392 | .00365 | .00034 | 1.00107 | .00812 | .00766 |
| 22 | .00108 | .00094 | .00101 | .00119 | .00143 | .00038 | .00147 | .00128 | .00118 | .00011 | .00267 | 1.00033 | .00247 |
| 23 | .02456 | .02329 | .02289 | .02695 | .03245 | .00860 | .03377 | .02853 | .02689 | .00248 | .06076 | .05992 | 1.00360 |
| 24 | .01827 | .04406 | .03477 | .03050 | .01997 | .00468 | .02431 | .03984 | .03602 | .00449 | .05836 | .05804 | .05364 |
| 25 | .00132 | .00141 | .00145 | .00081 | .00100 | .00033 | .00098 | .00111 | .00103 | .00060 | .00214 | .00212 | .00192 |
| 26 | .00012 | .00009 | .00021 | .00019 | .00018 | .00004 | .00024 | .00029 | .00021 | .00005 | .00034 | .00034 | .00030 |
| 27 | .00150 | .00581 | .00179 | .00245 | .00210 | .00040 | .00163 | .01098 | .01012 | .00510 | .00619 | .00616 | .00564 |
| 28 | .02740 | .05381 | .02367 | .04065 | .03611 | .00590 | .04228 | .04353 | .04042 | .00853 | .07221 | .07217 | .02777 |
| 29 | .00617 | .02254 | .00700 | .00982 | .00862 | .00155 | .00624 | .04786 | .04427 | .02259 | .02602 | .02603 | .02381 |
| | 1.29781 | 1.31975 | 1.24384 | 1.37260 | 1.34797 | 1.07554 | 1.27294 | 1.51933 | 1.41077 | 1.10458 | 1.35388 | 1.31477 | 1.20372 |

Table 3
Interdependence Coefficients Matrix

| | 24 | 25 | 26 | 27 | 28 | 29 |
|---|---|---|---|---|---|---|
| 1 | .00010 | .00015 | .00058 | .00097 | .00015 | .00034 |
| 2 | .00132 | .00057 | .00049 | .00050 | .00036 | .00205 |
| 3 | .00002 | .00003 | .00044 | .00032 | .00021 | .00015 |
| 4 | .00003 | .00008 | .00015 | .00018 | .00022 | .00038 |
| 5 | .00025 | .00013 | .00016 | .00016 | .00036 | .00053 |
| 6 | .00087 | .00040 | .00048 | .00048 | .00037 | .00440 |
| 7 | .06736 | .02045 | .02541 | .02549 | .01318 | .13992 |
| 8 | .00037 | .00042 | .01225 | .01220 | .00036 | .00343 |
| 9 | .00013 | .00459 | .00069 | .00068 | .00031 | .00077 |
| 10 | .00355 | .00177 | .00167 | .00169 | .00114 | .00737 |
| 11 | .00020 | .00020 | .00018 | .00045 | .00099 | .00073 |
| 12 | .00134 | .00089 | .00071 | .00641 | .01026 | .00251 |
| 13 | .00039 | .00233 | .00173 | .00172 | .00065 | .00158 |
| 14 | .00247 | .00210 | .00123 | .00122 | .00197 | .00536 |
| 15 | .00264 | .00274 | .00106 | .00110 | .00111 | .00515 |
| 16 | .00085 | .00080 | .00056 | .00059 | .00565 | .00051 |
| 17 | .00198 | .00985 | .00263 | .00266 | .00525 | .00271 |
| 18 | .00123 | .00194 | .00133 | .00140 | .00400 | .00856 |
| 19 | .00538 | .01014 | .00633 | .00641 | .00961 | .03190 |
| 20 | .01985 | .03818 | .05373 | .05387 | .04771 | .05836 |
| 21 | .00228 | .00383 | .00245 | .00246 | .00386 | .00253 |
| 22 | .00073 | .00124 | .00077 | .00079 | .00125 | .00091 |
| 23 | .01674 | .02816 | .01802 | .01813 | .02840 | .02078 |
| 24 | 1.09322 | .07608 | .05036 | .05060 | .04191 | .04214 |
| 25 | .00173 | 1.01908 | .00355 | .00357 | .00272 | .00129 |
| 26 | .00078 | .00066 | 1.00010 | .00418 | .00037 | .00111 |
| 27 | .00549 | .00293 | .00817 | 1.00356 | .00485 | .22652 |
| 28 | .02505 | .05683 | .03922 | .03947 | 1.03124 | .03339 |
| 29 | .02092 | .00983 | .01537 | .01547 | .01991 | 1.00967 |
| | 1.27747 | 1.29642 | 1.25024 | 1.25672 | 1.23836 | 1.61571 |

TABLE 4

TYPE I AND TYPE II MULTIPLIERS

| | Sector | Type I Output | Type I Income | Type II Output | Type II Income |
|---|---|---|---|---|---|
| 1 | Fisheries | 1.40 | 1.49 | 2.22 | 1.99 |
| 2 | Forestry | 1.14 | 1.19 | 1.79 | 1.58 |
| 3 | Livestock Products | 1.72 | 1.88 | 2.75 | 2.50 |
| 4 | Crops & Agricultural | 1.42 | 1.56 | 2.27 | 2.07 |
| 5 | Ag Forestry, Fish SVC | 1.09 | 1.12 | 1.70 | 1.48 |
| 6 | Mining | 1.30 | 1.79 | 1.78 | 2.38 |
| 7 | Construction | 1.38 | 1.28 | 2.66 | 1.70 |
| 8 | Food Processing | 1.42 | 1.45 | 2.33 | 1.92 |
| 9 | Apparel & Finished | 1.27 | 1.31 | 2.09 | 1.74 |
| 10 | Lumber & Weed | 1.50 | 1.51 | 2.45 | 2.00 |
| 11 | Paper & Allied | 1.30 | 1.36 | 2.15 | 1.80 |
| 12 | Printing/Publishing | 1.32 | 1.38 | 2.18 | 1.83 |
| 13 | Chemical/Petro/Other | 1.24 | 1.29 | 2.05 | 1.72 |
| 14 | Stone, Clay & Glass | 1.37 | 1.45 | 2.28 | 1.93 |
| 15 | Primary/Fab Metals | 1.35 | 1.45 | 2.26 | 1.93 |
| 16 | Transportation Equip | 1.08 | 1.09 | 1.76 | 1.44 |
| 17 | Miscellaneous MFG | 1.27 | 1.33 | 2.10 | 1.76 |
| 18 | Water Transporta ion | 1.52 | 1.46 | 3.00 | 1.93 |
| 19 | Other Transp/WHSE | 1.41 | 1.35 | 2.79 | 1.80 |
| 20 | Communication/Pu Utl | 1.10 | 1.38 | 1.35 | 1.84 |
| 21 | Eating & Drinking | 1.35 | 1.29 | 2.50 | 1.72 |
| 22 | Service Stations | 1.31 | 1.27 | 2.44 | 1.69 |
| 23 | Wholesale/Retail | 1.20 | 1.15 | 2.23 | 1.53 |
| 24 | Finance/Ins/Real Est | 1.28 | 1.42 | 1.97 | 1.88 |
| 25 | Hotel,Motel,Lodging | 1.30 | 1.21 | 2.53 | 1.61 |
| 26 | Medical Services | 1.25 | 1.16 | 2.44 | 1.55 |
| 27 | Educational Services | 1.26 | 1.17 | 2.45 | 1.55 |
| 28 | Other Services | 1.24 | 1.16 | 2.42 | 1.54 |
| 29 | State/Local Gov't | 1.62 | 1.59 | 3.04 | 2.12 |
| | TOTAL | 38.41 | 39.54 | 66.00 | 52.53 |
| | AVERAGE | 1.32 | 1.36 | 2.28 | 1.81 |

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