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An Input-Output Model of the Low Rolling Plains Region of Texas

James R. Vinson
Hardin-Simmons University

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AN INPUT-OUTPUT MODEL OF THE LOW
ROLLING PLAINS REGION OF TEXAS

James R. Vinson

Hardin-Simmons University

Prepared for:

Department of Housing and Urban Development
Texas State Division of Planning Coordination

March 1972

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LOW ROLLING PLAINS REGION OF TEXAS

Texas
Interindustry
Project

James R. Vinson
Hardin-Simmons University
Abilene, Texas

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OFFICE OF THE GOVERNOR
DIVISION OF PLANNING COORDINATION

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GOVERNOR OF TEXAS

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OFFICE OF THE GOVERNOR
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PREFACE

Professor Wassily Leontief of Harvard University published the first Input-Output analysis of the U. S. Economy in 1936. As opposed to other analytic tools used by economists which emphasize understanding of economic phenomena through economic variables, such as employment, income, the interest rate, the price level, gross product, value added, and investment, Leontief's Input-Output techniques dealt with the problem of understanding the structure of specialized functioning economies, and the ways in which the individual parts influence each other. The Input-Output technique permits the analyst to classify and organize transactions data about the economy into mathematical statements which represent the trading among the individual sectors of the economy. The models systematically display each sector's sales and purchases and quantitatively measure outputs and inputs of each sector for the time period chosen. A solution of the system of equations provides quantitative estimates of interindustry relationships.

Since Leontief's first Input-Output publication in 1936, Input-Output Models of the U. S. Economy have been published by the Bureau of Labor Statistics of the U. S. Department of Labor and by the Office of Business Economics of the U. S. Department of Commerce. The former was for the year 1947 and the latter were for the years 1958 and 1963. A number of other national Input-Output Models have been prepared, including models for Japan, The United Kingdom, France, Sweden, The Netherlands, Russia, and Israel. In recent years, Input-Output Models of economies of states within the United States have been published. Notable examples are those for West Virginia, Kansas, Washington, Arizona, Nebraska, North Carolina, New Mexico and Mississippi. Other recent studies of regions and parts of states include The Lower Colorado Region, parts of California, Pennsylvania, Oklahoma and Texas.

Governments and industries alike have found the information provided by Input-Output Models to be useful in planning future activities and assessing the economic impacts of selected investments and policies. Industries such as Western Electric, Celanese Corporation, and United States Steel Corporation have used Input-Output analyses to assist in the planning of procurement of input materials, intra-industry management of diverse but interrelated departments and the estimation of expected direct and indirect consumption of products produced both by direct customers as well as the customers of their respective customers. Notable uses of Input-Output Models by governmental agencies are the evaluations of economic impacts of public facility construction, defense spending, and water project construction.

In 1968, the Population and Economics Task Force of the Planning Agency Council for Texas initiated an extensive interindustry study of the Structure of the Texas Economy. Funding was obtained through

The major aim of the program was the estimation of Input-Output Models of regional economies within Texas and of the Texas statewide economy for 1967. The procedures emphasized estimation of Input-Output Models from a sample of primary data. Secondary data were required for the purpose of calculating a part of the Input-Output Model parameters, including the individual sector or industry output totals. The study year 1967 was chosen, since 1967 was the most recent year for which complete censuses of manufacturing, business, transportation, and mineral industries were available for Texas.

Nine Texas Universities were invited by the Governor to participate in the project. For study purposes, Texas was divided into nine regions and the Governor's Office initiated a series of contracts with each of the nine participating universities (later reduced to eight) for the collection of data from a sample of manufacturing and business establishments of a specific region and the estimation of the regional Input-Output Model. Each contract provided for a project staff and a project director at each participating university. The contractual arrangement further provided for uniform coordination of regional projects to the extent that definitions and standard questionnaires, data processing procedures, and data classification procedures, as determined through the leadership of the statewide project director's office, would be followed in the conduct of each respective regional study.

The state project director's office established the sampling procedure and drew the sample of establishments to be interviewed in each region. The state project director's office issued general guidelines, special reports prepared by individual consultants, and conducted a part of the secondary and primary data processing. Regional project directors participated in the formulation of research guidelines through periodic project directors' meetings and in "special reports" to the state director's office. The regional project staffs conducted the surveys, prepared the survey data for computer data processing, and transmitted copies of the survey data to the state director's office. The survey data from the nine individual regions were combined and used in the estimation of a state Input-Output Model. In addition, each regional project staff analyzed the data and estimated the Input-Output Model for its particular region.

The Low Rolling Plains regional project was conducted at Hardin-Simmons University by members of the staff of the Bureau of Economic and Business Research. This report presents the Input-Output Model and suggests some types of analyses that can be made of the regional economy. The Input-Output analyses and interpretations are those of the author, and do not necessarily represent the views of the State Project Director, the Office of the Governor, nor the U. S. Department of Housing and Urban Development.

The author of this Low Rolling Plains region of Texas report has used the same format, organization, and for the most part, the same phrasing as he used in an analogous report of the South Central Region of Texas.

Herbert W. Grubb, Ph.D.
Texas Input-Output Project Director

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CHAPTER 1

INTRODUCTION

National economic development, through the mass of its aggregate force, influences the directional economic growth trends of its regional components. However, each defined economic region has a somewhat unique combination of resources which contributes to its separate degree of growth and development. Thus, regional economies may vary significantly from national trends and, in doing so, experience isolated and individually unique problems.

It is a paradox that in the richest country in the world, even at prosperity peaks, there is everywhere deep concern about local economic situations. In the older sections of the United States one finds concern about outmigration of industries and depressed areas. In regions where agriculture is important, the tremendous structural changes that have been taking place, with the widespread decline of rural communities, provide cause for worry about the future. In some of the regions, as in the Far West and in the Southwest, concern about the future of major industries is interspersed with worries about the staggering problem of very rapid end-on-end urban growth.¹

Recognizing the reality, as well as the importance, of regional economic problems, the following study is intended as a contributory element for a more knowledgeable economic interpretation of the Lower Rolling Plains. It presents the final results of the Lower Rolling Plains Region study segment of the Texas State Input-Output Project, and is the culmination of more than two and one-half years of field research and study. The study report is not addressed to a specifically defined

¹Harvey S. Perloff with Vera Dobbs, How a Region Grows: Area Development in the U. S. Economy, Supplementary Paper No. 17 (Committee for Economic Development: New York, N. Y., 1963), p. 11.

economic problem that may exist within the study area. Moreover, through the provision of a readily available tool of economic analysis, the results of this study are intended for a wide range of potential applications.

The Texas State Input-Output Project

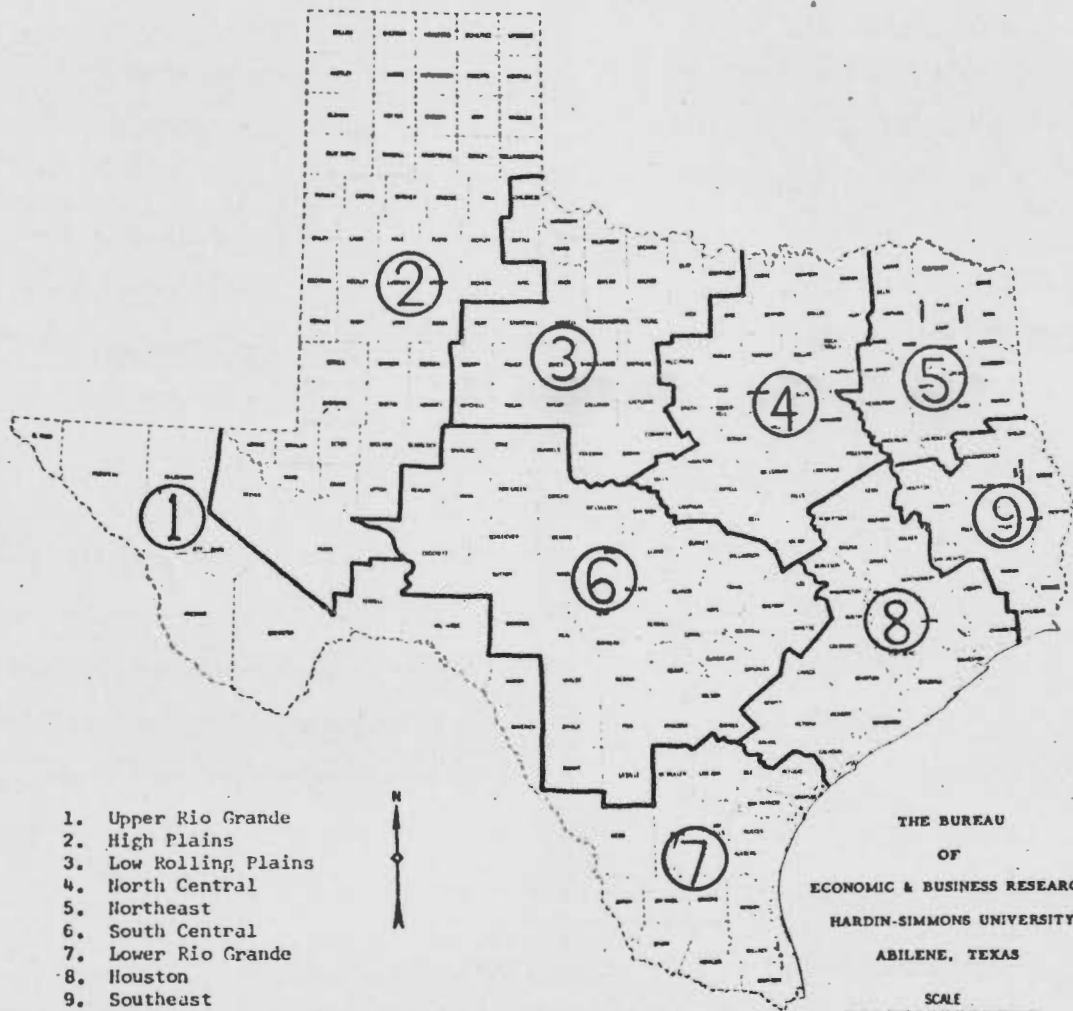
The Lower Rolling Plains Region Input-Output Study is an integral part of the Texas State Input-Output Project. The Texas State Input-Output Project consists of a state-wide interindustry study and nine regional studies. Each regional project is an autonomous study. However, all regional projects were accomplished under coordinated and common research procedures as provided by the state-wide project director. The results of this study process are nine individual regional studies and a state-wide study which are compatible in procedures and presentation.

The nine regional study boundaries are shown in Figure 1 and the following are geographic description of each region:

- Region 1 - Upper Rio Grande
- Region 2 - High Plains
- Region 3 - Low Rolling Plains
- Region 4 - North Central
- Region 5 - Northeast
- Region 6 - South Central²
- Region 7 - Lower Rio Grande
- Region 8 - Houston - Galveston
- Region 9 - Southeast

² Region VI study segment was under the direction of the Bureau of Business Research, University of Texas at Austin until the spring of 1970.

Figure 1
Texas Input-Output Regions



The composite of all regional input-output studies covers the entire state and respective regional boundaries do not overlap. The boundaries of the nine study regions also coincide closely with multiple "Texas Planning Regions"³ as determined by the Office of the Governor, State of Texas, in 1968. In this manner, the Texas Input-Output Study is capable of full state coverage and close coordination with overall state planning efforts.

Lower Rolling Plains Region Study Purposes

Within the stated objectives and the designed organization of the state-wide and regional system of analysis, specific objectives for the Lower Rolling Plains Region study include the following:

1. To provide a comprehensive and detailed economic analysis of the study area for the study period, 1967.
2. To provide an analytical tool to state, local, and regional governments and businessmen by which they may better achieve their common and separate objectives.

Systems of Regional Analysis

The concept of a regional economy is sometimes difficult to understand, because it consists of both a region and an economy. The region is usually geographically defined in such a manner as to coincide implicitly with singular or multiple political and/or legal organizational boundaries, i.e. states, counties, cities, etc. The regional grouping of such states, counties and cities is based upon a commonly shared set

³Office of the Governor, Division of Planning Coordination, Planning Regions for the State of Texas (Office of the governor: Austin, Texas, December 1968).

of criteria which unify the area and set it apart from its surrounding hinterland.

However, economic activity, i.e. the production and distribution of goods and services, is predominantly guided by a market exchange mechanism; and therefore, unless enforceably restricted, will not be exclusively limited by geographically defined boundaries. Thus, although identified by a defined geographic area, regional economic activity operates through both external trade relationships and internal relationships as well. For example, a manufacturing firm may import raw materials, utilize local power and labor resources to produce component parts, and ship (export) these component parts to another regional area for fabrication and market distribution. Finally, the finished goods may be imported for ultimate consumption by local households. In this manner, a regional economy is a separate entity; but, it is also intricately structured as an integrated part of the national economy.

The Input-Output Technique of Analysis

In order to cope with the complexities of regional economic activity, systems of regional economic analysis have been progressively implemented. Many of these systems of analyses have a rather recent origin; and their present-day uses and applications are almost totally dependent upon aggregate, i.e. national, economic concepts.

Input-output technique, the system of regional economic analysis used by this report, has been developed in approximately the same historical manner. As first used and developed by Wassily W. Leontief, the input-output technique was adapted to national economic analysis. However, due to its analytical structure, input-output was also well suited for regional applications. It was a well-defined system of data organi-

zation--a system which presented inter-industry transactions in a concise and uniform manner suitable for further analytical manipulation. As a result, beginning in 1952,⁴ the input-output technique has been increasingly utilized as a tool of regional economic analysis.

Organization of Report

The remainder of this report is organized into four additional chapters. Chapter 2 will present an overview of the study region, including geographic setting, demographic characteristics and economic factors of income, employment, and earnings. Chapter 3 will discuss the methodology and procedures of analyses used in the preparation of this report. Chapter 4 will present the findings of the study as they relate to the total regional economy and the regional flow of goods and services. Chapter 5 discusses some of the many ways in which the results of this study may be used.

⁴ Philip J. Bourque and Gerald Hausen, An Inventory of Regional Input-Output Studies in the United States (Graduate School of Business Administration, University of Washington: Seattle, Washington, 1967), p. 3.

CHAPTER 2
THE STUDY REGION

The Geographic Setting

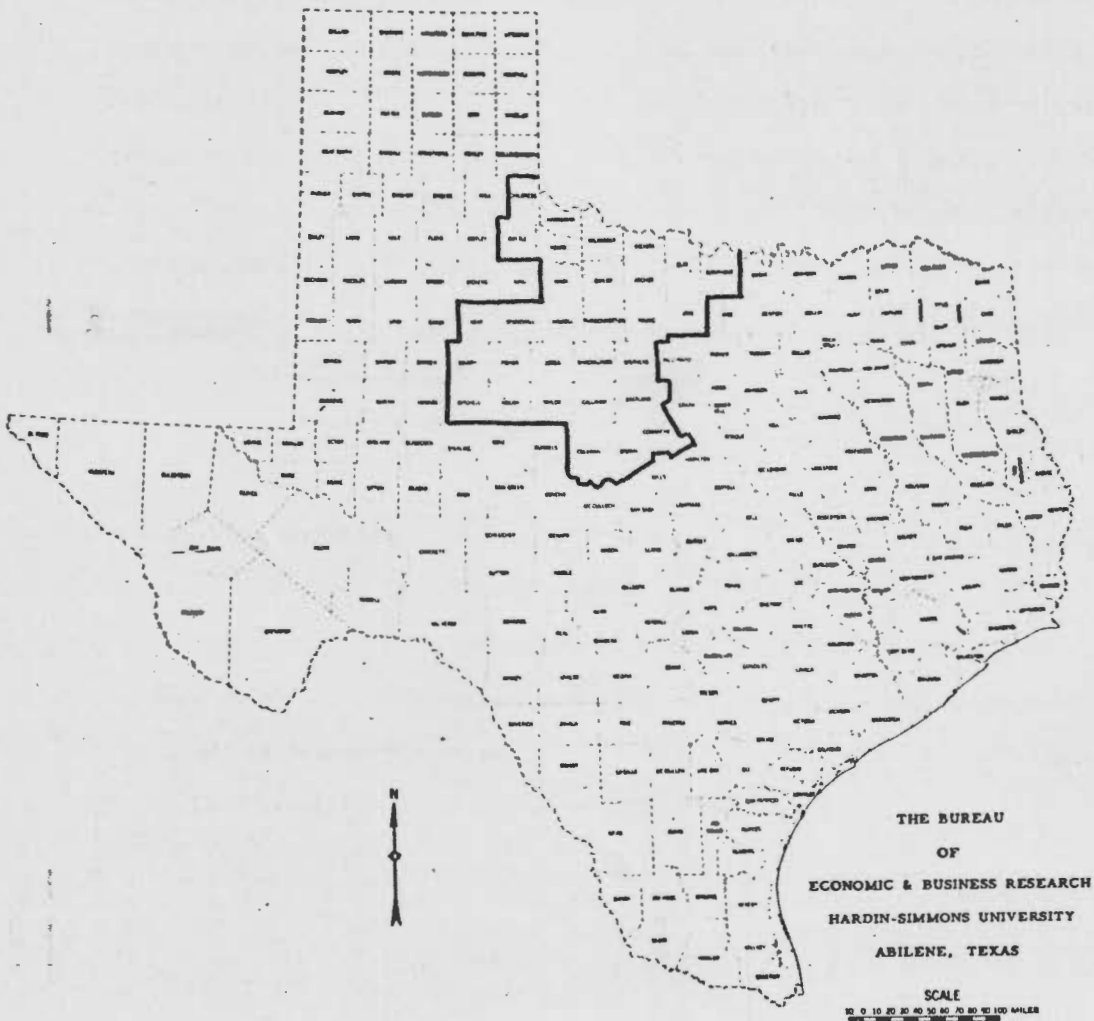
Lower Rolling Plains Region of the Texas State Input-Output Project consists of thirty, contiguous north and west-central Texas counties. Figure 2 illustrates the county composite of the study area with respect to the remainder of the State of Texas. As shown by Figure 2, Childress County in the upper northwest corner of the study region begins a jagged western boundary, which extends to the southwest corner at Mitchell County. The southernmost boundary counties include Coleman, Brown, and Comanche. The eastern boundary extends from Comanche County, in an easterly direction, to Montague County, bordering the Red River. The northern boundary runs the length of Red River counties extending again to the northwest boundary county of Childress.

Land Area: The Lower Rolling Plains Region contains a total land area of 17,219,771 acres.¹ This regional land area represents approximately 10.2 percent of the total land area (168,100,068 acres²) contained within the State of Texas. Table 1 lists the total land area by county and by major use category for the study region; and, as shown by this table, cropland, pasture and range land, and other land use categories represent 16,828,943 acres, or 97.73 percent of the total regional land area. Only 390,830 acres of the regional land

¹ Table 1.

² Texas Soil and Water Conservation Needs Committee, Conservation Needs Inventory: Texas, 1970. [Total acreage excludes land area of large rivers and streams but includes federal land, urban-use land, and small water areas of two to forty acres.]

Figure 2
Lower Rolling Plains Region:
Texas State Input-Output Project



Source: Herbert W. Grubb, "Introduction to the Texas Input-Output Project," presented at the Governor's Industrial Expansion Conference, Austin, Texas, May 7, 1969.

Table 1. Land Area and Land Use, Lower Rolling Plains Region, 1967, Acres.^a

County	Total Land Area	Urban	Cropland	Pasture and Range	Other Land
Archer	584,128	12,037	70,473	493,299	8,319
Baylor	560,192	6,651	155,092	394,701	3,748
Brown	607,680	20,404	138,209	208,264	240,803
Callahan	548,096	8,368	110,692	373,854	55,182
Childress	447,488	9,114	177,509	252,609	8,256
Clay	685,780	13,285	120,851	475,522	76,122
Coleman	815,814	14,494	234,908	526,500	39,912
Comanche	617,984	8,642	232,441	207,957	168,944
Cottle	576,064	5,059	172,187	397,489	1,329
Eastland	609,024	20,727	163,304	220,772	204,221
Fisher	578,496	20,482	270,788	282,506	4,720
Foard	432,320	2,812	137,773	288,074	3,661
Hardeman	439,936	9,918	236,186	188,260	5,572
Haskell	561,024	12,320	327,799	217,257	3,648
Jack	604,864	9,053	27,970	375,587	192,254
Jones	612,032	15,025	394,012	200,5f3	2,432
Kent	563,200	4,763	71,680	467,602	19,155
Knox	544,512	7,009	214,427	315,233	7,843
Mitchell	588,992	24,418	210,381	344,027	10,166
Montague	597,696	15,953	84,855	308,786	188,102
Nolan	589,153	19,035	105,937	458,331	5,850
Scurry	578,304	12,000	217,310	344,569	4,425

^aTexas Soil and Water Conservation Needs Committee, Conservation Needs Inventory: Texas, 1970.

Table 1. (continued)

County	Total Land Area	Urban	Cropland	Pasture and Range	Other Land
Shackleford	567,552	5,825	39,324	516,474	5,929
Stephens	574,784	11,540	53,124	440,819	69,301
Stonewall	592,768	5,479	124,520	460,102	2,667
Taylor	584,512	27,949	209,829	320,975	25,759
Throckmorton	588,928	4,168	79,004	502,025	3,731
Wichita	390,912	32,153	151,069	196,571	11,119
Wilbarger	609,024	12,425	245,054	339,765	11,780
Young	568,613	19,720	183,187	278,987	86,618
TOTAL	17,219,771	390,828	4,959,895	10,397,480	1,471,568

area are devoted to urban land use. Urban land use category, therefore, represents only 2.26 percent of the total regional area.

Topography: Lower Rolling Plains Region is a reasonably homogeneous geographic area. The western boundary counties border the Cap Rock Excarpment of the Great Plains while the eastern regional boundary extends to the beginnings of the West Cross Timbers area of Texas. The southern boundary of the study area extends along the changing patterns of the North Central Plains as they approach the more pronounced terrain of the Edwards Plateau.³ The soil compositions consist of sand, sandy loam, and clay. The area is dominated by mesquite trees, cacti, and plains' grasses. And, the sandy soil areas also contain scattered concentrations of post oak and shinnery oak.⁴

Rainfall within the study region averages between 20 and 28 inches per year,⁵ with an average annual temperature of approximately 64 degrees.⁶ This percipitation level indicates the activities illustrated in Table 1, above which shows large land areas devoted to pasture and range land. However, the region also has a significantly large amount of land area under dryland cultivation.

³ A. H. Belo Corporation, Texas Almanac and State Industrial Guide: 1970-1971 (Dallas, Texas: The Dallas Morning News, p. 117.)

⁴ Ibid., pp. 118-131.

⁵ Weather Bureau State Climatologist, Environmental Science Services Administration, "Climatography of Texas: Normal Annual Total Percipitation," October 1968, 577.21.1, Austin, Texas.

⁶ _____, "Climatography of Texas: Normal Annual Temperature," October 1968, 524.32.1, Austin, Texas.

Water systems that trace the study area are generally not continuous flow rivers. The Clear Fork, Salt Fork, and Double Mountain Fork of the Brazos River all rise in or near the regional boundary areas. However, these rivers generally have pronounced seasonal flows. The same is true for the upper Colorado River system which laces the southern boundary of the study region, as well as the Red River along the norther regional boundary.

Regional Population

Lower Rolling Plains Region contains 10.2 percent of the total land area of Texas; however, a much lower proportion of the Texas population resides in the same area. Table 2 shows the 1960 regional population as 519,975 or only 5.42 percent of the state population. This table also shows that the population of Lower Rolling Plains Region experienced an absolute decline for the period 1960 to 1970, reaching a new level of 480,501 in 1970. This population decline of approximately 7.6 percent occurred while the Texas population was increasing by 16.9 percent. Thus, the 1970 regional population represents only 4.29 percent of the state population. A straight line population trend for the period 1960-1970 would place the region-to-state percentage at 4.60 with an absolute value of approximately 492,344 for the study year, 1967.

Major Population Centers: There are two Standard Metropolitan Statistical Areas (SMSA) located within study area:⁷

⁷ Executive Office of the President, Bureau of the Budget, Office of Statistical Standards, Standard Metropolitan Statistical Areas: 1967, pp. 6 and 35.

SMSA	Central City	Counties
Abilene	Abilene	Jones Taylor
Wichita Falls	Wichita Falls	Archer Wichita

These SMSA's as shown in Figure 3 are located in the northern and southern extremes of the study region, and each SMSA contains a major, i.e. central city, as listed above. A significant portion of the regional population resides in the SMSA's. As listed in Table 3 regional SMSA's contained 48.08 percent of the population in 1960 and had increased their relative proportion to 50.27 percent by 1970. The SMSA's central cities contained 36.94 percent and 38.96 percent of the regional population in 1960 and 1970 respectively.

Population Trends: Aggregate population data for the study area indicate that the overall population declined by 7.6 percent for the period 1960-1970. However, other important shifts and balances among population composition of the study area include the following:

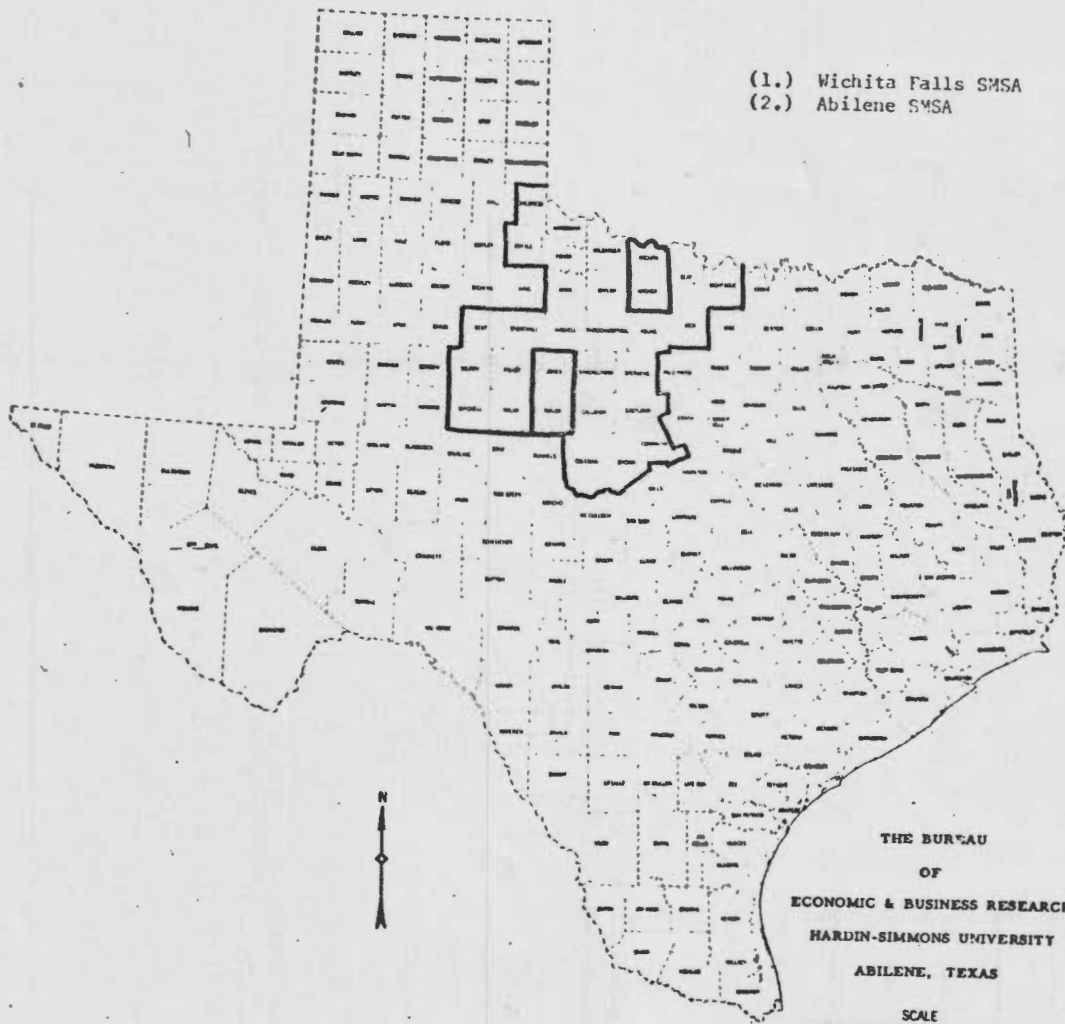
1. Population within the Lower Rolling Plains Region SMSA's declined at a much lower rate than did the residual non-SMSA county population. The Wichita Falls SMSA declined by 1.55 percent while the Abilene SMSA declined by 5.33 percent. These figures, both singly and combined, are significantly less than the 7.6 percent decline for the overall region. The residual non-SMSA regional population declined at the rate of 11.49 percent, or significantly higher than the overall regional rate.

Table 2. Lower Rolling Plains Region Population by County: 1960 and 1970, and Percentage Change 1960 to 1970.^a

County	1970	1960	% Change
Archer	5,759	6,110	- 5.7
Baylor	5,221	5,893	-11.4
Brown	25,877	24,728	4.6
Callahan	8,205	7,929	3.5
Childress	6,605	8,421	-21.6
Clay	8,079	8,351	- 3.3
Coleman	10,288	12,458	-17.4
Comanche	11,898	11,865	0.3
Cottle	3,204	4,207	-23.8
Eastland	18,092	19,526	- 7.3
Fisher	6,344	7,865	-19.3
Foard	2,211	3,125	-29.2
Hardeman	6,795	8,275	-17.9
Haskell	8,512	11,174	-23.8
Jack	6,711	7,418	- 9.5
Jones	16,106	19,299	-16.5
Kent	1,434	1,727	-17.0
Knox	5,972	7,857	-24.0
Mitchell	9,073	11,255	-19.4
Montague	15,326	14,893	2.9
Nolan	16,220	18,963	-14.5
Scurry	15,760	20,369	-22.6
Shackelford	3,323	3,990	-16.7
Stephens	8,414	8,885	- 5.3
Stonewall	2,397	3,017	-20.6
Taylor	97,853	101,078	- 3.2
Throckmorton	2,205	2,767	-20.3
Wichita	121,862	123,528	- 1.3
Wilbarger	15,355	17,748	-13.5
Young	15,400	17,254	-10.7
Totals	480,501	519,975	- 7.6

^aBureau of the Census, U. S. Department of Commerce, 1970 Census of Population, PC(V1)-45, "Final Population Counts," Washington, D.C., January 1971.

Figure 3
Standard Metropolitan Statistical Areas: 1967
Lower Rolling Plains Region



Source: Executive Office of the President, Bureau of the Budget, Office of Statistical Standards, Standard Metropolitan Statistical Areas: 1967.

Table 3. Lower Rolling Plains Region, Indigenous SMSA, and Major City Populations, 1960 and 1970.

Area	1960 Population ^a	1970 Population ^{ab}	Percent of Regional Population: 1960	Percent of Regional Population: 1970
Abilene SMSA ^c	120,377	113,959	23.15	23.71
Abilene (City)	90,368	89,653	17.37	18.65
Wichita Falls SMSA ^d	129,638	127,621	24.93	26.55
Wichita Falls (City)	101,724	97,564	19.56	20.30
Total: SMSA's	250,015	241,580	48.08	50.27
Total: SMSA Central Cities	192,092	187,217	36.94	38.96
Total: Region	519,975	480,501	100.00	100.00

^a Bureau of the Census, U. S. Department of Commerce, 1970 Census of Population: (Advance Report) Texas, PC(V1)-45, "Final Population Counts," Washington, D.C., January 1971.

^b _____, 1970 Census of Population: (Advance Report) Texas, PC(V2)-45, "General Population Characteristics," Washington, D.C., January 1971.

^c Abilene SMSA includes Taylor and Jones Counties.

^d Wichita Falls SMSA includes Wichita and Archer Counties.

2. As shown in Table 3, more than 50 percent of regional population was located in SMSA counties. Only 10 percent of the SMSA county population was rural. Within the non-SMSA counties, 47.52 percent was rural. This large rural composition of non-SMSA counties results in an overall regional rural population distribution of 28.65 percent. Lower Rolling Plains Region rural population is substantially larger than the 20.32 percent figure for the State of Texas.

Regional Employment, Income and Earnings

Regional Employment: Total non-agricultural covered employment within the study area was equal to 74,331 for the first quarter, 1967.⁸ This level of employment was equal to approximately 3.33 percent of total non-agricultural covered employment in the State of Texas. In a manner similar to population trends, 56.76 percent of regional employment was concentrated in SMSA counties. The two most populous counties, Taylor and Wichita, account for 53.12 percent of the regional employment. Table 4 lists covered employment by regional counties for all quarters of 1967. This table illustrates the concentration of employment in SMSA counties on the one hand, and on the other, the sparseness of employment in such counties as Throckmorton, Kent, and Foard.

Regional Employment Distribution: Excluding Agriculture and Government categories, Retail and Wholesale Trades constitute the largest single employer in the study area. This industry category, however, is

⁸"Covered" employment refers to workers of employers subject to the Texas Unemployment Compensation Act and the Federal Unemployment Compensation Act. See Table 6.

only slightly larger in relative terms, than Trades for the State of Texas. Comparative relative employment distribution, as shown in Table 6, indicates that Trades employment within the study region is less than 3 percent greater than the comparable industrial distribution for Texas employment. The second largest regional industry employer is Manufacturing at 20.61 percent. This relative industry employment level, however, is more than 8 percent less than the relative distribution of Manufacturing for Texas. The third largest industry employer is Services at 12.68 percent, followed by Mining at 10.69 percent. The latter industrial employer, Mining, is more than two times the relative employment level than that for Texas as a whole. In other industry categories, the study area has lesser relative employment in Construction and Finance, Insurance and Real Estate than the State and a greater relative employment in Transportation, Communications, and Public Utilities.

Regional Income: Under previous headings of this report, it has been shown that land area within the study area constitutes 10.7 percent of the Texas total; yet, only 4.59 percent of the state's population resides in the same geographic confines. Further analysis shows that an even lesser amount of the relative Texas state personal income is derived from within the study region. For the period 1967, only 4.40 percent of Texas state personal income may be designated to the study area. Thus, with respect to the population distribution, the study region also has a lower personal per capita income than that for the State of Texas.

As shown by Table 7, the Wichita Falls SMSA had a 1967 personal per capita income larger than that for the State of Texas. For the

Table 4. Lower Rolling Plains Region Covered Employment by County, First-Fourth Quarters, 1967.^a

County	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Archer	588	620	386	573
Baylor	599	566	639	582
Brown	4,876	4,893	5,184	5,276
Callahan	545	562	478	495
Childress	876	957	888	916
Clay	608	633	566	576
Coleman	1,179	1,171	1,082	1,063
Comanche	1,353	1,348	1,464	1,412
Cottle	255	262	221	190
Eastland	2,726	2,723	2,912	2,807
Fisher	620	557	672	993
Foard	72	96	95	81
Hardeman	905	908	874	807
Haskell	549	566	548	715
Jack	680	685	711	781
Jones	2,117	2,134	2,188	1,871
Kent	88	95	87	69
Knox	317	313	316	324
Mitchell	1,159	1,147	1,089	951
Montague	2,035	2,292	2,368	2,276
Nolan	3,165	3,399	3,199	3,179
Scurry	2,275	2,180	2,177	2,134
Shackelford	355	345	620	571
Stephens	1,500	1,486	1,510	1,465
Stonewall	452	541	231	207
Taylor	18,827	19,149	19,086	19,228
Throckmorton	128	140	126	118
Wichita	20,664	21,280	21,926	21,644
Wilbarger	2,348	2,356	2,462	2,665
Young	2,470	2,536	2,433	1,149
TOTAL	74,331	75,940	76,588	75,118

^a Texas Employment Commission, "A Report of Employment and Total Wages Paid by Employers Subject to the Texas Unemployment Commission Act...", First Quarter, Second Quarter, Third Quarter, and Fourth Quarter, 1967, Austin, Texas.

Table 5. Covered Employment for Texas and by Regional County, First Quarter, 1967.^a

County	Total Employment ^b	Mining	Construction	Mfg.	Transp. Comm. & Pub.Util.	Trade	Finance Ins. & Real Est.	Service	Other
Archer	588	386	0	--	27	83	13	77	1
Baylor	599	25	85	22	166	234	36	28	0
Brown	4,876	69	290	2,001	463	1,374	131	537	8
Callahan	545	53	48	78	46	179	38	103	0
Childress	876	--	22	173	109	280	53	134	102
Clay	608	217	37	33	79	144	--	69	26
Coleman	1,179	128	39	255	61	395	179	120	0
Comanche	1,353	0	118	155	74	753	39	211	0
Cottle	255	0	--	54	24	142	--	19	15
Eastland	2,726	213	117	763	393	805	94	338	0
Fisher	620	60	0	172	69	169	--	126	22
Foard	72	--	0	--	9	44	--	--	17
Hardeman	905	29	24	354	108	237	57	93	1
Haskell	549	68	--	14	96	258	26	67	17
Jack	680	279	22	78	56	166	31	48	0
Jones	2,117	246	58	492	266	683	119	237	13
Kent	88	--	--	0	--	19	--	--	68
Knox	317	25	--	23	26	174	--	39	29
Mitchell	1,159	87	101	135	214	381	41	199	0
Montague	2,035	267	61	732	187	445	96	246	0
Nolan	3,165	233	48	1,172	523	799	96	292	0
Scurry	2,275	683	209	131	225	670	73	280	0
Shackelford	335	191	--	9	22	85	--	26	20
Stephens	1,500	288	51	463	121	412	46	117	0

Table 5. (continued)

County	Total Employment ^b	Mining	Construction	Mfg.	Transp. Comm. & Pub.Util.	Trade	Finance Ins. & Real Est.	Service	Other
Stonewall	452	95	224	0	25	91	--	--	15
Taylor	18,827	1,301	1,056	3,737	1,862	7,350	994	2,515	10
Throckmorton	128	30	0	--	45	--	--	36	17
Wichita	20,664	2,088	1,427	3,298	2,199	7,389	1,337	2,885	31
Wilbarger	2,348	231	153	544	194	738	120	356	10
Young	2,470	659	218	430	245	593	94	229	0
Region	74,311	7,951	4,408	15,318	7,889	25,137	3,713	9,427	422
Texas ^d	2,231,229	102,088	188,924	643,756	201,462	683,334	137,510	268,431	--

^aTexas Employment Commission, "A Report of Employment and Total Wages Paid by Employers subject to the Texas Unemployment Compensation Act, and by the Federal Government under the Federal Unemployment Compensation Act, First Quarter 1967," Austin, Texas.

^b"Total Employment" may not equal the sum of industry employment due to the exclusion of covered agricultural employment.

^cWhen there was no employment reported in county in one of the industry groups a "0" is shown. If there was employment in a group but there were fewer than 3 employers, the employment was not shown under that category so as not to reveal information concerning individual establishments. In those cases, the employment was included in the "Other" industry group and double dashes(--)indicate where that situation occurs.

^dTexas State data is for March 1967, T.E.C., op. cit., First Quarter 1967.

Table 6. Employment Distribution for Texas, Lower Rolling Plains Region, and Major Regional Counties, First Quarter 1967.

Industry Category	Employment Distribution by Area (Percent) ^a			
	Texas	Study Region	Taylor County	Wichita County
Mining	4.57	10.69	6.91	10.10
Construction	8.46	5.93	5.60	6.90
Manufacturing	28.85	20.61	19.84	15.96
Transportation, Communications, and Public Utilities	9.02	10.61	9.89	10.64
Trades	30.62	33.82	39.03	35.75
Finance, Insurance and Real Estate	6.16	4.99	5.27	6.47
Services	12.03	12.68	13.35	13.96
Total ^b	100.00	100.00	100.00	100.00

^aComputed from data in Table 5, pp. 19-20.

^bMay not add to 100.00 due to rounding.

Wichita Falls SMSA, a higher per capita income is also recorded for all years 1965-1967. The Abilene SMSA, below the state level for the years 1965 and 1966, also exceeded the state level in 1967. Table 8 shows the non-SMSA representative per capita personal income by county seat.⁹ These data reflect a personal per capita income in all but two counties of the study area to be less than that for the State of Texas. Therefore, it can be concluded that personal per capita income for the study region is much lower in the non-SMSA areas, while the SMSA areas exceed the state average.

Regional Earnings and Earnings Distribution: Total earnings within the study region amounted to \$981,061,000 in 1967, or 4.32 percent of total Texas State earnings. As shown by Table 9, 547.6 million dollars or 55.81 percent of total regional earnings occurred in the region's two SMSA's. Thus, the twenty-six, residual non-SMSA counties accounted for approximately 433.5 million dollars, or 44.18 percent of total regional earnings.

Relative distribution of earnings, by industry category, add further detail to the economic base findings discussed earlier which were based on employment data only. As shown by Table 10, Government is the largest industry earnings category for the study area with 27.46 percent of total earnings. With respect to regional earnings distribution, Government category for Abilene SMSA is at the approximate same level; however, the Wichita Falls SMSA is almost 13 percent

⁹ Per capita income estimates in Table 7 differ from those in Table 8 due to source differences. Per capita income estimates in Table 8 are based on income tax returns rather than total earnings as in Table 7.

Table 7. Per Capita Personal Income for Texas and Regional SMSA's 1967.

Area	Per Capita Income (Dollars)		
	1965	1966	1967
Texas ^a	2,358	2,580	2,762
Abilene SMSA ^b	2,295	2,492	2,773
Wichita Falls SMSA ^b	2,562	3,056	3,221

^aU. S. Department of Commerce, Office of Business Economics, Survey of Current Business, "State and Regional Personal Income in 1969," Vol. 50, No. 8, August 1970, p. 35.

^b_____, "Metropolitan Area Personal Income," Vol. 51, No. 5, May 1971, p. 30.

Table 8. Lower Rolling Plains Region, Non-SMSA Representative Per Capita Personal Income by County Seat, State of Texas, and United States, 1966.^a

County	County Seat	Per Capita Income
Baylor	Seymour	1,685
Brown	Brownwood	1,771
Callahan	Baird	1,635
Childress	Childress	1,793
Clay	Henrietta	1,844
Coleman	Coleman	1,592
Comanche	Comanche	1,636
Cottle	Paducah	1,711
Eastland	Eastland	1,860
Fisher	Roby	1,806
Foard	Crowell	1,854
Hardeman	Quanah	1,833
Haskell	Haskell	1,725
Jack	Jacksboro	1,785
Kent	Jayton	1,463
Knox	Benjamin	1,377
Mitchell	Colorado City	1,948
Montague	Montague	1,620
Nolan	Sweetwater	1,822
Scurry	Snyder	1,997
Shackelford	Albany	1,682
Stephens	Breckenridge	2,376
Stonewall	Aspermont	1,580
Throckmorton	Throckmorton	1,697
Wilbarger	Vernon	1,848
Young	Graham	2,425
Texas		2,112
United States		2,405

^a Computer Systems Division, Larry Smith and Company, Inc., 5-Digit Zip Code Area Data: 1966, San Francisco, California.

higher than that relative distribution for the region as a whole. The second most important earnings industry within the study region, with 17.39 percent of total earnings, is the combination grouping of Wholesale and Retail Trades. Services is third largest with 14.08 percent of total earnings. The fourth largest earnings category is Agricultural earnings at 10.23 percent.

In relation to the State of Texas, the study region is relatively concentrated in the economic activities inclusive of Government, Agriculture, and Mining--in that order. All other regional industry categories have a lesser relative importance than similar industry categories for the State of Texas. The most deficient regional industry category, with respect to the overall Texas economy, is Manufacturing with relative earnings equaling less than 40 percent the distributional rate in the study area as compared to that for the State of Texas.

Summary

The Lower Rolling Plains study area constitutes a homogeneous geographic land area characteristic of the Texas Central Plains. Much of the regional population is scattered thinly throughout the study area. However, approximately 50 percent of the regional population is concentrated in two urban areas. Population trend data indicate a marked decline in rural populations with the regional urban populations showing a greater resistance to population declines. Although regional personal per capita income is below that of the State of Texas, data for the study year 1967 show that the personal per capita income in regional SMSA's is substantially higher than the state personal per capita income. Rural, personal per capita income throughout the

remainder of the study area is substantially below the state average.

Employment and earnings data show that the regional economy is strongly dependent upon Government activities, Agricultural activities, and Mining activities. These three economic categories represent more than 44 percent of regional earnings by industry category. All other regional industry categories show earnings at a lower relative rate than that for the State of Texas. Manufacturing is significantly deficient with less than 40 percent the relative importance as for the State of Texas as a whole.

Table 9. Personal Income and Earnings for Texas, Abilene SMSA, and Wichita Falls SMSA, 1967.

Income and Earnings Categories	Income-Earnings by Area (Millions \$)		
	^b Texas	Abilene SMSA ^a	Wichita Falls SMSA ^a
Total Personal Income	29,952	337.0	409.0
Total Wage and Salary Disbursements	19,606	194.0	252.0
Other Labor Income	943	8.0	8.0
Proprietors Income	3,443	44.0	42.0
Property Income	4,668	73.0	88.0
Transfer Payments	2,226	25.0	28.0
Less @ Personal Contrib. for Social Insurance	935	8.0	9.0
Total Earnings	22,669	245.7	301.9
Farm Earnings	1,133	10.6	5.2
Govt. Earnings	3,238	66.4	121.9
Private Nonfarm Earnings			
Manufacturing	4,827	25.0	19.6
Mining	1,063	13.7	20.3
Contract Construction	1,595	11.1	12.5
Trans., Communication, and Public Utilities	1,767	16.8	17.9
Wholesale and Retail Trade	4,392	48.3	51.7
Finance, Insurance and Real Estate	1,257	12.0	13.3
Services	3,326	41.4	39.2
Other	70		

^a U. S. Department of Commerce, Office of Business Economics, Survey of Current Business, "Metropolitan Income in 1967," Vol. 49, No. 5, Part I (Washington, D.C.: U. S. Government Printing Office, May 1969).

^b _____, "State and Regional Personal Income in 1969," Vol. 50, No. 8, August 1970.

Table 10. Earnings by Industry Category for Texas, Lower Rolling Plains Region, and Regional SMSA's, 1967 (Percent).

Earnings Categories	Earnings by Industry Category (Percent)			
	Texas ^a	Region ^b	Abilene SMSA ^a	Wichita Falls SMSA ^a
Total Earnings ^c	100.00	100.00	100.00	100.00
Farm Earnings	4.99	10.23	4.31	1.72
Govt. Earnings	14.28	27.46	27.02	40.37
Private Nonfarm Earnings				
Manufacturing	21.29	8.40	10.17	6.49
Mining	4.68	6.70	5.57	6.72
Contract Construction	7.03	4.38	4.51	4.14
Trans., Communication, and Public Utilities	7.79	6.89	6.83	5.92
Wholesale and Retail Trade	19.37	17.39	19.65	17.19
Finance, Insurance and Real Estate	5.54	3.87	4.88	4.40
Services	14.67	14.08	16.84	12.98
Other		.31		

^a Computed from data in Table 9.

^b Computed from: U. S. Department of Commerce, Office of Business Economics, "Detailed Data on Personal Income and Earnings by County," unpublished data.

^c May not add to 100.00 due to rounding.

CHAPTER 3

STUDY PROCEDURES AND METHODOLOGY

The time period covered by the Lower Rolling Plains Region report is the calendar year 1967.¹ The study year of 1967 allowed the collection of economic data covering a very recent time period (the regional study began in early 1969). It also permitted the study to be concurrent with available 1967 census data.²

The system of economic analysis used by this report is the open, regional input-output model.³ It is a highly efficient system of data organization which simultaneously records the individual transactions of each participating segment of the economic system. Regional industrial operations are presented in their total relationship to individuals (Households)--both as consumers and as suppliers of productive resources. The regional input-output technique also illustrates the study region's trade position with other regional areas as its economic segments import and export goods and services.

The Input-Output Technique

The input-output technique of economic analysis utilizes a

¹Basic time period is the calendar year 1967. However, in cases where fiscal accounting year for sample firms varied from the calendar year, data were collected for that fiscal year period nearest the base study year.

²The Lower Rolling Plains Region study began in early 1969. Thus, survey data were only one year old at that time. The 1967 industry census data were not yet available in 1969, but they were anticipated to be available prior to the completion of the study.

³For further reference see William H. Mierny, The Elements of Input-Output Analysis (Random House: New York, 1967), or Chiou-Shuang Yan, Introduction to Input-Output Economics (Holt, Rinehart and Winston: New York, 1969).

matrix or tabular presentation in which the economy of the study area is presented in equilibrium for the study period. Although there are many types, the results of the present study are organized and presented in three⁴ standard input-output tables:

1. The dollar transactions table
2. The direct requirements table
3. The direct and indirect requirements table

Dollar Transactions Table: The basic input-output table is the dollar transactions table. This table is organized in such a way as to illustrate all regional purchases and sales transactions in dollar amounts.

Beginning with individual establishments, regional business firms are classified by common products produced and grouped as industries (also called sectors). These industries, or sectors, are referred to by a name and a number. For example, the grouping of business firms that manufacture products of wood are referred to as "Sector 14," or "Wood Products." Non-industrial economic segments are also referred to as sectors, such as "households" and "Governments."

All segments of the economy are represented by sector identification numbers and names⁵ which appear as row and column headings to the transactions table. Each row records the sector's sales and

⁴ A fourth table, "Direct, Indirect and Induced Requirements," is included in this report as a convenience to the reader. However, this table is not a part of the formal project presentation.

⁵ See Chapter 3 below for sector, i.e. model definitions.

and each column records the sector's purchases. In this manner, the purchases of one economic segment are simultaneously shown as the sales of another.

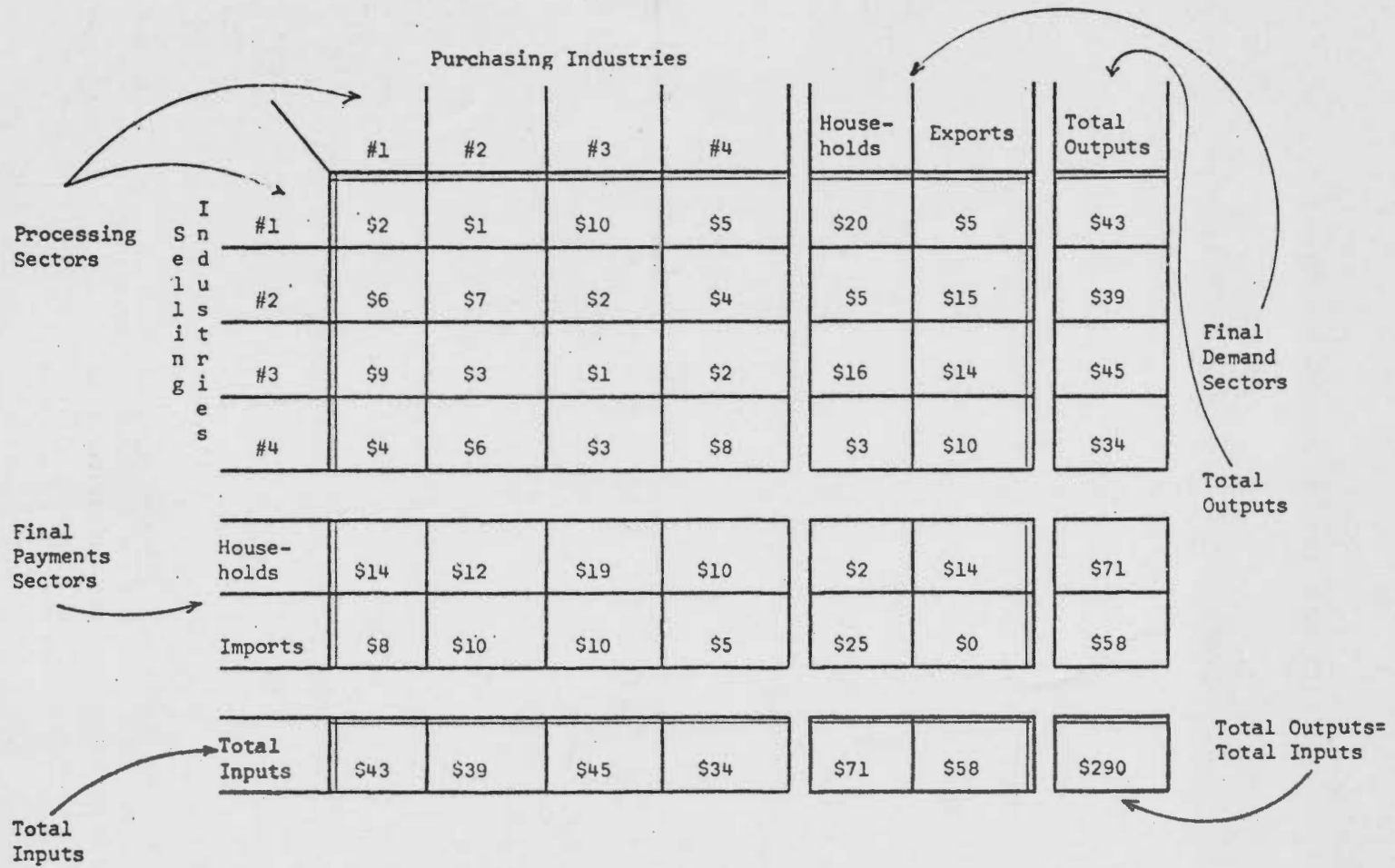
Figure 2 is an organizational diagram illustrating the typical layout of a dollar transactions input-output table and the following characteristics are descriptive of that organization:

a. The processing, or producing, sectors are represented by a "square" portion of the transactions table as illustrated in the upper left hand corner of Figure 4. Sectors 1, 2, 3, and 4 represent defined economic industries, e.g. "Food Processing," "Cement Production," "Banking," etc. Since each row represents sales and each column represents purchases by the designated industry sector, this portion of the transactions table has an equal number of rows and columns. For example, Industry Three (reading down the column) buys \$10.00 worth of goods and services from Industry One, \$2.00 from Industry Two, \$1.00 from its own industry, and \$3.00 from Industry Four. Simultaneously, (reading across the rows) the table shows that Industry One sells \$10.00 worth of goods and services to Industry Three, Industry Two sells \$2.00 to Industry Three, Three sells \$1.00, and Industry Four sells \$3.00 worth to Industry Three.

b. Final payments sectors are located in the lower left-hand corner of Figure 4, and represent production costs outside those payments made to other local industry sectors. These payments include such categories as wages and salaries, business profits, taxes and other government payments--as well as imports of goods and services from outside the study region.

c. The sum of the inputs of goods and services from the

FIGURE 4
TRANSACTIONS DOLLAR TABLE
ORGANIZATION DIAGRAM



processing sectors plus final payments sectors equals the total, that is, gross inputs for each economic sector. As shown in Figure 4, Industry Three expended \$45.00 total production costs, including profits or losses.

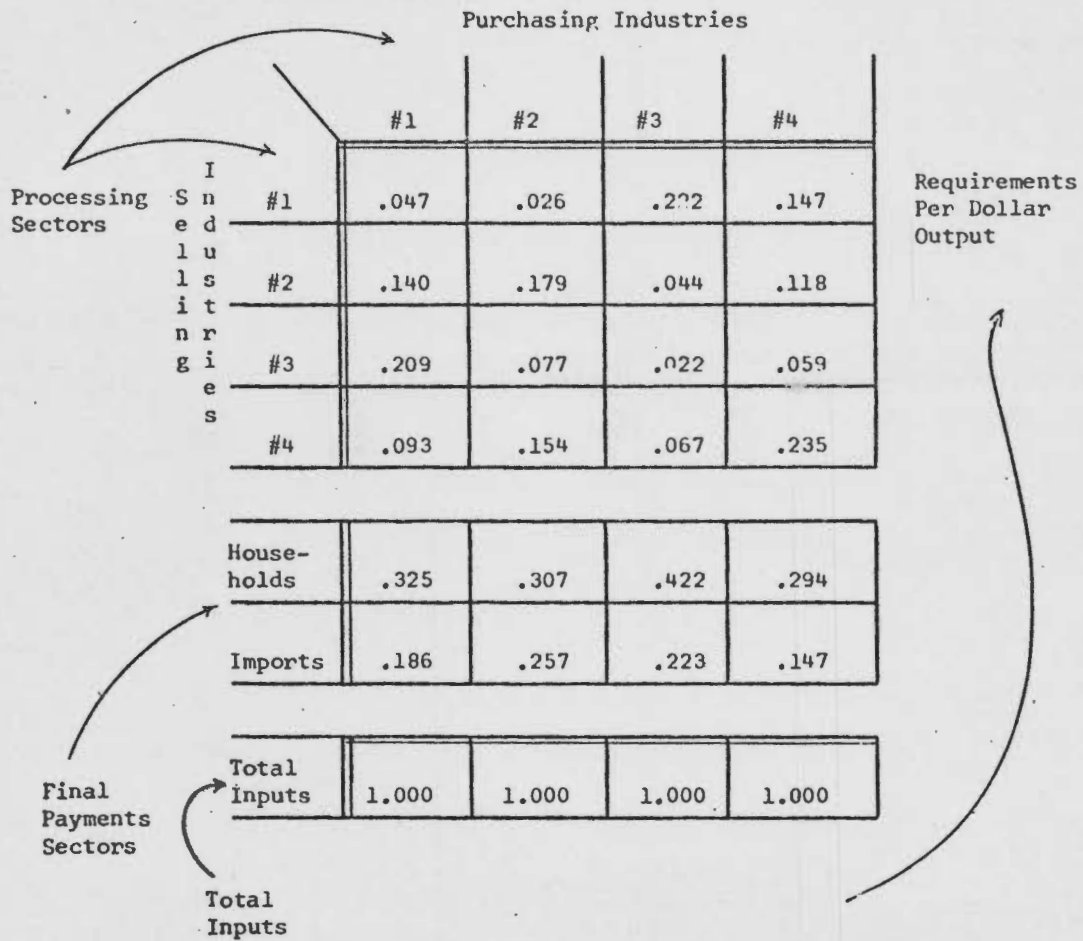
d. As shown in point (a.) above, row entries represent sales by each economic sector. Thus, final demand sectors, located in the upper right-hand corner of Figure 4, represent sales designations--again, outside the processing sectors. These sectors may include governments, households, and exports outside the region of study. In Figure 4, for example, it is shown that Industry Three sells \$9.00 worth of goods and services to Industry One, \$3.00 to Two, \$1.00 to Three, and \$2.00 to Industry Four. Industry Three also sells \$16.00 worth of goods and services to local households and exports \$14.00 worth.

e. The sum of all sales by an industry sector to other industry processing sectors plus sales to final demand equals total outputs.

The above illustrations of a hypothetical dollar transactions input-output table show that total inputs (plus profits or less losses) equal total outputs; and, that the table represents a detailed record of the sales and purchases of regional economic sectors.

Direct Requirements Table: The direct requirements table expresses the relative amount of inputs, by industry sector, needed for delivery of one dollar's worth of goods and services to final demand. Therefore, the direct requirements table is concerned with the column table values inclusive of processing sectors and final payments sectors only.

FIGURE 5
DIRECT REQUIREMENTS TABLE
ORGANIZATION DIAGRAM



As shown in Figure 5, each industry's inputs have been converted from absolute dollar values to relative or coefficient values. For example, Industry Three buys 22.2% of its input requirements from Industry One, 6.7% from Industry Four, pays households 42.2% and imports 22.3%. In other words, for every \$1.00 worth of goods and services sold to final demand, Industry Three buys 22.2¢ worth of goods and services from Industry One, 4.4¢ from Two, 2.2¢ from Three, and 6.7¢ worth from Industry Four. Industry Three also pays households 42.2¢ and imports 22.3¢ worth of goods and services from outside the study area.

Direct and Indirect Requirements Table: As shown by the direct requirements table, the output of one industry is directly related to the inputs necessary for production. However, within the processing sectors, the inputs of one industry are also the outputs of another. Therefore, one industry has indirect relationships with almost all other industries of the economic system. The direct and indirect requirements table expresses the relative, inter-related inputs of one industry needed from other processing industries--both directly and indirectly--to deliver one dollar's worth of goods and services to final demand.

As shown in Figure 5, Industry Three must increase its purchases from all other processing sectors in order to increase its sales to final demand. For example, Industry Three must spend an additional 22.2¢ with Industry One for each new dollar's worth of sales to final demand. Therefore, Industry One must also increase its output by an initial amount of 22.2¢. In order for Industry One to increase its output, it must also increase its purchases from all other processing sectors. For example, for an increased output of 22.2¢, Industry One

would have to increase its purchases from Industry Two by 3.1¢--and by 4.6¢ from Industry Three--and so on throughout all the multiple transactions among the processing sectors. Thus, increased output of one producing sector increases the total level of input requirements a multiple of the original increase. This "multiplied" input increase is due to the intricate interrelationships that exist between the purchases and sales among the processing sectors of the economy.⁶ Under existing input-output methodology, these multiple sales and purchases interrelationships are summarized and presented in the direct and indirect requirements table.

The Lower Rolling Plains Region Model

As explained earlier, input-output organizes the economy into separate industries or sectors. The particular grouping of firms into sectors, as well as the total list of sectors is called a model. The resulting model is a logical reproduction which symbolically represents the defined economic system.

The Lower Rolling Plains Region model consists of fifty-seven processing sectors plus final payment sectors and final demand sectors. Each model sector includes specific establishment operations as defined by the Standard Industrial Classification (SIC) organization system. The Standard Industrial Classification System⁷ is a method of organization for the total of all economic activity, in which the

⁶ Chapter 5 of this report is devoted to an extended discussion of the many uses for the direct and indirect requirements data.

⁷ Executive Office of the President, Bureau of the Budget, Office of Statistical Standards, Standard Industrial Classification Manual: 1967 (Washington, D. C. : U. S. Government Printing Office), pp. V-XII.

economy is first broken into major "divisions," for example:

Division A--Agriculture, Forestry, and Fisheries

Division B--Mining

Division C--Contract Construction

Division D--Manufacturing

Division E--Transportation, Communication, and Utility Services

Division F--Wholesale and Retail Trade

Division G--Finance Insurance and Real Estate

Division H--Services

Divisions are divided into "major groups":

Division A--Agriculture, Forestry, and Fisheries:

Major Group 01--Agricultural Production

Major Group 07--Agricultural Services

Major Group 08--Forestry

Major Group 09--Fisheries

Major groups are further broken down into "operating establishments,"⁸ in which firms are identified by common activities in the output of goods and services--"for example, a farm, a mine, a factory, a store. In most instances, the establishment is at a single physical location; and it is engaged in only one, or predominately one, type of economic activity for which an industry code is applicable."⁹ At this point, firms identification may be placed at the level of detail desired:

⁸ Ibid.

⁹ Ibid.

Division A--Agricultural Production

Major Group 01 --Agricultural Production

011 --Field Crops

0112--Cotton

0113--Cash Grains

0114--Tabacco

0119--Field Crops N.E.C.

Table 11, presents a listing of the Lower Rolling Plains Region Model sectors. This table contains a correlative listing of applicable SIC codes for each regional model sector. Each model sector classification is designed to include, as nearly as possible, homogeneous SIC defined activities as they existed in the study region.

Processing Sectors: The "processing sectors" generally refer to economic activities which "create" value, or "add to" the value of goods and services through the production process. Firms included within the processing sectors are not considered as final consumers of goods and services because the goods and services purchased by these firms are "used up" in the production of other goods and services.

For example, the output of Agriculture Sector 3, "Livestock Production," may be sold to Manufacturing Sector 9, "Meat and Dairy Products," where the livestock is butchered and prepared for market distribution. The meat products may then be distributed through Trades Sector 42, "Food Stores," to "Households" for final consumption. The organization of the processing sectors shows how the separate production processes work together in bringing finished goods and services to the final consumer.

Table 11. Lower Rolling Plains Region Model Sectors With
Appropriate Comparative Listings of SIC Firm
Classification Codes, 1967.

	Regional Model Sector Number	Sector Name	Standard Industrial Classification Number (s)
A G R I C U L T U R E	1	Irrigated Crops	0112, 0113, 0313, 0122, 0123, 0119
	2	Dryland Crops	0212, 0213, 0413, 0219, 0141
	3	Livestock	0235, 0135, 0136
	4	All Other Agriculture	0132, 0133, 0134, 0712, 0713, 0714, 0715, 0719, 0722, 0723, 0729, 0731, 0741, 0811, 0822, 0823, 0844, 0843, 0851, 0861, 0912, 0913, 0914, 0919, 0989
M I N I N G	5	Crude Petroleum and Natural Gas	1311
	6	Natural Gas Liquids	1321
	7	Oil and Gas Fields Ser- vices	1381, 1382, 1389
C O N S T R U C T I O N	8	Construction	1511, 1511, 1511, 1611, 1621, 1700

Table 11. (continued)

Regional Model Sector Number	Sector Name	Standard Industrial Classification Number(s)	
M A N U F A C T U R I N G	9	Meats - Dairies	2011, 2013, 2015, 2021, 2022, 2023, 2024, 2026
	10	Milling and Feeds	2041, 2043, 2044, 2045, 2046, 2042
	11	Food Processing	2051, 2052, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2061, 2062, 2063, 2071, 2072, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2121
	12	Beverages	2082, 2084, 2086, 2087
	13	Textile Products	2211, 2221, 2231, 2241, 2251, 2253, 2256, 2259, 2261, 2262, 2269, 2271, 2272, 2279, 2281, 2284, 2291, 2293, 2294, 2295, 2297, 2298, 2299, 2311, 2321, 2322, 2323, 2327, 2328, 2329, 2331, 2335, 2336, 2337, 2339, 2341, 2342, 2351, 2352, 2361, 2363, 2369, 2371, 2381, 2384, 2385, 2386, 2387, 2389, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2399
	14	Wood Products	2411, 2421, 2426, 2429, 2431, 2432, 2433, 2441, 2442, 2443, 2445, 2491, 2499, 2511, 2512, 2515, 2519, 2521, 2541, 2591, 2599, 2514, 2522, 2542, 2611, 2621, 2631, 2661, 2641, 2642, 2643, 2645, 2646, 2647, 2649, 2651, 2652, 2653, 2654, 2655
15	Printing and Publishing	2711, 2721, 2731, 2741, 2732, 2751, 2752, 2753, 2761, 2771, 2782, 2789, 2791, 2792, 2794, 2799	
16	Chemicals and Petroleum Products	28121, 28122, 28123, 28124, 28132, 28133, 28134, 28140, 28151, 28152, 28153, 28163, 28182, 28183, 28185, 28191,	

Table 11. (continued)

	Regional Model Sector Number	Sector Name	Standard Industrial Classification Number(s)
M A N	16	Chemicals and Petroleum Products	28192, 28193, 28194, 28195, 28196, 28197, 28198, 28199, 28211, 28212, 28213, 28214, 28215, 28216, 28217, 28219, 28220, 2822C, 2831, 2833, 2834, 2379, 2871, 2872, 2879, 2841, 2842, 2843, 2844, 2851, 2861, 2891, 2892, 2893, 2895, 2899, 2911, 2951, 2952, 2992, 2999
U F A	17	Plastic, Leather, and Glass Products	3011, 3069, 3079, 3111, 3121, 3131, 3141, 3142, 3151, 3161, 3171, 3172, 3199, 3221, 3229, 3231
C T U R	18	Clay, Stone, and Cement Products	3251, 3253, 3255, 3259, 3261, 3262, 3269, 3281, 3291, 3292, 3295, 3296, 3297, 3299, 3274, 3275, 3201, 3293, 3271, 3272, 3273, 3241
I N G	19	Metal Products	3312, 3313, 3315, 3316, 3317, 3321, 3322, 3323, 3331, 3332, 3333, 3339, 3341, 3334, 3352, 3356, 3357, 3362, 3369, 3391, 3392, 3399, 3441, 3443, 3444, 3446, 3449, 3442, 3411, 3421, 3423, 3425, 3429, 3431, 3432, 3433, 3451, 3452, 3461, 3471, 3479, 3494, 3498, 3481, 3491, 3492, 3493, 3499
	20	Machinery and Equipment	3522, 3531, 3537, 3534, 3535, 3536, 3532, 3533, 3511, 3519, 3541, 3542, 3544, 3545, 3548, 3551, 3552, 3553, 3559, 3554, 3555, 3561, 3562, 3564, 3565, 3566, 3567, 3569, 3571, 3572, 3576, 3579, 3585, 3581, 3582, 3586, 3589, 3599
	21	Electrical Products	3611, 3612, 3613, 3621, 3622, 3623, 3624, 3641, 3642, 3643, 3644, 3629, 3631, 3632, 3633, 3634, 3635, 3636, 3639, 3651,

Table 11. (continued)

	Regional Model Sector Number	Sector Name	Standard Industrial Classification Number(s)
M A N U F A C T U R I N G	21	Electrical Products	3661, 3662, 3671, 3672, 3673, 3674, 3679, 3691, 3693, 3694, 3652, 3699
	22	Transportation Equipment	3721, 3728, 3722, 3729, 3713, 3715, 3714, 3711, 3731, 3732, 3741, 3742, 3791, 3751, 3799
	23	Other Manufacturing	3811, 3821, 3822, 3841, 3842, 3843, 3851, 3861, 3871, 3831, 3941, 3942, 3949, 3911, 3913, 3914, 3931, 3951, 3952, 3953, 3955, 3961, 3962, 3963, 3964, 3991, 3982, 3983, 3984, 3987, 3993, 3994, 3995, 3999, 1911, 1925, 1929, 1931, 1941, 1951, 1961, 1999
T R A N S P O R T A T I O N	24	Railroad Transportation	4011, 4013, 4021, 4041
	25	Local and Intercity Passenger Transportation	4131, 4132, 4111, 4119, 4121, 4140, 4150
	26	Local and Long Distance Trucking Storage, and Arrangement	4213, 4231, 4212, 4214, 4224, 4221, 4222, 4223, 4225, 4226
	27	Other Transportation	4411, 4421, 4441, 4452, 4453, 4454, 4459, 4463, 4464, 4469, 4511, 4521, 4582, 4583, 4612, 4613, 4619, 4141, 4142, 4151, 4171, 4172, 4742, 4782, 4783, 4784, 4789, 4721
C C O A M M I U O N N I	28	Telephone and Telegraph	4811, 4821
	29	Radio and TV Broadcasting	4832, 4833
	30	Other Communication	4899

Table 11. (continued)

	Regional Model Sector Number	Sector Name	Standard Industrial Classification Number(s)
U T I L I T I E S	31	Gas Services	4922, 4923, 4932, 9149, 9249, 9349
	32	Electric Services	4911, 4931, 9151, 9251, 9351
	33	Water and Sanitary Services	9102, 9202, 9302, 4941, 4952, 4953, 4959, 4961
W H O T L R E A S D A E L E	34	Wholesale Auto, Parts and Supplies	5012, 5013, 5014
	35	Wholesale Groceries	5041, 5042, 5043, 5044, 5045, 5046, 5047, 5048, 5049
	36	Wholesale Farm Products	5052, 5053, 5059, 5054, 4731
	37	Wholesale Machinery, Equipment, and Supplies	5081, 5082, 5084, 5085, 5083, 5088, 5087
	38	Wholesale Petroleum Products	5092
	39	Wholesale: General	5022, 5028, 5029, 5033, 5034, 5036, 5037, 5039, 5063, 5064, 5065, 5072, 5074, 5077, 5091, 5093, 5094, 5095, 5096, 5097, 5098, 5099
R T E R T A D I E L	40	Lumber Yards--Hardware	5211, 5252, 5221, 5231, 5241, 5251, 5962, 5969

Table 11. (continued)

	Regional Model Sector Number	Sector Name	Standard Industrial Classification Number(s)
R E T A I L	41	Department and Clothing Stores	5311, 5331, 5399, 5321, 5611, 5621, 5631, 5641, 5651, 5661, 5671, 5681, 5699
	42	Food Stores	5411, 5421, 5431, 5441, 5451, 5462, 5499
	43	Auto Dealers, Repair Shops, and Gasoline Service Stations	5511, 7549, 5521, 5531, 7531, 7534, 7535, 7538, 7539, 7542, 554-
	44	Furniture and Home Equipment Stores	5712, 5713, 5714, 5715, 5719, 5722, 5732, 7733
	45	Eating and Drinking Places	5812, 5813
	46	All Other Retail	5912, 5921, 5932, 5933, 5942, 5943, 5952, 5953, 5591, 5592, 5599, 5971, 5982, 5983, 5984, 5992, 5993, 5994, 5996, 5997, 5999, 5995, 5341, 5351
F I R E	47	Banking and Credit Agencies	60--, 61--
	48	Insurance Carriers and Other F.I.R.E. n.e.c.	63--, 6411, 62--, 64--, 65--, 66--, 67--
S E R V I C E S	49	Legal Services	8111
	50	Lodging Services	7011, 7021, 7041, 7031, 7032,
	51	Personal Services	7211, 7212, 7213, 7214, 7215, 7216, 7217, 7218, 7231, 7241, 7251, 7261, 7271, 7299

Table 11. (continued)

	Regional Model Sector Number	Sector Name	Standard Industrial Classification Number(s)
S E			
R	52	All Other Business Services	7311, 7312, 7313, 7319, 7331, 7332, 7339, 7361, 7813, 7814, 7815, 7821, 7395, 7221, 7391, 8921, 7341, 7342, 7349, 7351, 7392, 7393, 7394, 7396, 7397, 73-- , 7398, 7399, 7512, 7513, 7519, 7523, 7525
V	53	Motion Picture, Amusement, and Recreation Services	7816, 7817, 7818, 7832, 7833, 7911, 7929, 7932, 7933, 7941, 7942, 7943, 7945, 7946, 7947, 7948, 7949
I	54	Miscellaneous Repair	7622, 7623, 7629, 7631, 7641, 7692, 7694, 7699
	55	Medical Services	8011, 8021, 8031, 8041, 8061, 8071, 8072, 8092, 8099
C	56	Education Services	8211, 8221, 8222
E	57	All Other Services	8231, 8241, 8242, 8299, 8911, 8931, 8999, 8411, 8421, 8611, 8621, 8631, 8641, 8651, 8661, 8671, 8699, 8811
S			

The Lower Rolling Plains Region model contains fifty-seven processing sectors. The identification of these regional sectors was based upon the specific grouping of economic activities found in the study area. Some regional model sectors include highly aggregated industrial activities, while others represent only one or two SIC defined industry activities.

Final Payments Sectors: The Lower Rolling Plains Region model includes six final payments sectors. These sectors represent production costs outside the processing sectors and include:

1. Households
2. Savings
3. Federal Government
4. State Government
5. Local Government
6. Imports

The "Households" sector includes payments in the form of wages and salaries as well as other miscellaneous payments made directly to households. In this study, "Savings" includes depreciation and retained profits of the firm. "Federal Government" refers to all forms of payment to federal government including taxes and postage expense. "State Government" and "Local Government" also include all forms of payment to those respective government entities. The "Imports" sectors designate the purchase of goods and services from outside the study region.

The regional model utilizes three separate imports classifications:

1. Imports from outside the study region but from other

areas inside the State of Texas.

2. Imports from outside the State of Texas but from other areas inside the United States.¹⁰
3. Imports from outside the United States, i.e. foreign imports.

The sum of the three import categories represents total imports by regional study sectors.

Final Demand Sectors: The regional model has eight separate final demand sectors. These include:

1. Federal Government: Defense
2. Federal Government: Non-defense
3. State Government
4. Local Government
5. Households
6. Exports
7. Net Inventory Change
8. Capital Formation

"Federal Government," in two categories, refers to purchases for both defense and non-defense purposes. "State Government" and "Local Government" sectors are purchases by these two respective government entities. The "Households" sector records final purchases by private individuals. And "Exports" includes sales of goods and services by regional firms to individuals, businesses, and governments located

¹⁰ United States imports category includes a small portion of imports which were not specifically identified by area of origin.

outside the study region. "Net Inventory Change" reflects the estimated net change in finished goods inventory in each of the respective processing sectors, while "Investment" refers to goods produced in the study area and sold to other regional firms for use as capital goods.

The exports classification system is the same as that used to identify imports, i.e. (1) exports outside the study area but inside Texas, (2) exports outside Texas but inside the United States, and (3) exports to foreign destinations. The sum of these three exports categories represents total exports of the study area.

Valuation of Study Data

Survey data were collected by all regional studies in terms of producer's prices.¹¹ Producer's prices exclude the costs of distribution. The dollar value of goods and services consumed is the cost of producing those goods and services. The ultimate consumer also pays the costs of distribution; but these transactions are recorded as sales and purchases between transportation sectors, trades sectors, and the ultimate consumer.

The use of producer's prices allows input-output tables to record a proper account of the separate industrial functions. It also permits an accurate representation of the interrelationships of industrial activities as they jointly contribute to the pro-

¹¹ Herbert W. Grubb, Texas Input-Output Project, Division of Planning Coordination, Office of the Governor, "Number 13 (Revised); Input-Output Procedures--Standard Report Form," unpublished project procedures paper, Austin, Texas, September 23, 1969. Also, see "Procedures Number 3," April 7, 1969.

duction, distribution and ultimate consumption of economic goods and services.

The Lower Rolling Plains Region control totals are included as Appendix F of this report. These control totals are the dollar value of total regional output, i.e. total sales, by model sector number. Most of the regional control total data were provided by the Texas State Input-Output Project office. A complete listing of control total data sources is included in Appendix F.

Two important adjustments were made to insure the adaptability of regional control total data. Adjustments concerned:

1. Inventory changes
2. Mark-up margins in Wholesale and Retail Trades sectors.

Inventory Changes: Inventory change in the study report is recorded in final demand sectors only. Thus, "Net Inventory Change" includes both increases and decreases in the stock of finished goods. Increases in inventory are identified as positive net changes in inventory, and decreases in inventory are identified as negative net changes in inventory.¹²

Well defined procedures were also followed for the purpose of adjusting control total data for changes in finished goods inventory.¹³ Generally, in accordance with study procedures and control total data sources, some regional control totals were adjusted to align the

¹²Herbert W. Grubb and Anthony Lusk, Texas Input-Output Project, Division of Planning Coordination, Office of the Governor, "Variation in Production Coefficients Due to Inventory Change," unpublished project procedures paper, Austin, Texas, June 24, 1971.

¹³Ibid.

volume of sales with production volumes for the study period.¹⁴

Trades Margins: The Lower Rolling Plains Region input-output tables do not show the physical transition of goods and services from the producer--through the trades sectors--to the final consumer. Since the function performed by trades is distributive, the final consumer of goods and services is linked directly to the last stage producer. The Trades sectors, however, also sell their distributive services to the final consumer. The transaction consists of gross margins, i.e. operating expenses and profits.

The use of producer's prices works in direct relation to gross margins for the Trades sectors. The cost of producing goods and services is charged directly to the final consumer while the distributive costs are charged to the final consumer through the Trades sectors.

Data Collection Techniques

Three general methods were used for the collection of data:

1. Direct field survey with standardized data collection procedures.
2. Direct field survey with construction of regional coefficients by special industry study groups.
3. Construction of regional input coefficients through the use of previously collected and published data.

Direct field survey techniques with standard data procedures, method (1) above, were used for the larger part of all study sectors. All sectors in Manufacturing and Trades were conducted in this manner,

¹⁴ See Appendix F for specific references with respect to inventory adjustment procedures.

as well as most sectors in the Services industry. Construction of technical coefficients for other industry sectors were completed by combinations of methods (2) and (3) listed above.¹⁵ In the case of methods (2) and (3) above, a selected sample was used in conjunction with a case study approach in which direct survey information from a small selected sample was combined with previously collected and published data.¹⁶

The sampling procedure, as well as the selection of sample interview firms, were determined by the state director of the Texas Input-Output Project. These sampling procedures were designed to accomplish a stratified random sample for most industries in which field surveys were conducted.¹⁷ Upon selection, lists of sample firms were provided to each regional project along with instructions for their use. A list of alternate sample establishments was also provided with each sample group. These sampling procedures are especially applicable to Manufacturing, Wholesale and Retail Trades, and Services industry sectors.

Interview Techniques and Data Processing

The Lower Rolling Plains Region, as well as all regional projects of the Texas Input-Output Study, followed standardized procedural in-

¹⁵Special study sectors include Agriculture, Mining, Construction, Transportation, Communications, Utilities, F.I.R.E., Legal Services, Education Services, and Government. See Appendix F for specific references.

¹⁶Herbert W. Grubb, Texas Input-Output Project, Division of Planning Coordination, Office of the Governor, "Number 10: Input-Output Procedures, The Manufacturing Sector Sample," unpublished project procedures paper, Austin, Texas, April 24, 1969.

¹⁷Ibid.

structions with respect to the collection and processing of interview data. A standardized questionnaire format was created in order to gain data detail in a uniform manner. Although separate questionnaires were used for different industry interview procedures, these questionnaires continued to follow a central organizational format.

All interviewing took place over a period beginning with the summer of 1969 and continuing through the fall of 1970. Field interviewing was accomplished by graduate research assistants who had reviewing was accomplished by graduate research assistants who had received prior instruction and training in the survey techniques of the regional project.

As each interview was completed, the final questionnaire forms were returned to the regional processing center and reviewed in cooperation with the field interviewer. Each completed questionnaire was then checked and edited.

Data analysis methods also followed uniform procedural instructions as provided by the State Input-Output at Project Director's Office.¹⁸ These data analysis procedures were designed to create a system of matrix tables in both coefficient values and dollar values.

¹⁸ Herbert W. Grubb, Texas Input-Output Project, Division of Planning Coordination, Office of the Governor, "Number 13: Input-Output Procedures, Standard Report Form," unpublished project procedures paper, Austin, Texas, plus revised copies, September 23 and October 6, 1969. Also, Dennis Cooper, et. al., "Number 22: Input-Output Procedures, Preliminary Data Processing Work Flow Design," unpublished project procedures paper, Austin, Texas, September 22, 1970.

CHAPTER 4

THE REGIONAL ECONOMY AND ITS IMPORT AND EXPORT OF GOODS AND SERVICES

The results of the 1967 Lower Rolling Plains Region Input-Output Study are included as Appendices A through C of this report. Results consist of the three basic input-output tables; The Dollar Transactions Table, The Direct Requirements Table, and The Direct and Indirect Requirements Table.

The Dollar Transactions Table (Appendix A) shows the dollar value of economic transactions among all regional industries. Each table column shows the dollar value of purchases (inputs) and each table row shows the dollar value of sales (outputs).

The Lower Rolling Plains Region Dollar Transactions Table has been summarized and included in this chapter as Table 12. Although this table has been constructed to facilitate the presentation of the regional economy, it may also be used to emphasize the presentation of regional sales distribution.¹

Row identifications in Table 12 show that regional study pro-

¹Table 12 is very useful for the observation and measurement of total sales and of sales distribution, as well as the effects of changing regional economic conditions. For example, those industry groups which sell proportionately greater amounts to final demand will be more immediately affected by changes in final consumption patterns. This is especially true for those industry groups with large sales to Households and Governments. As shown in Table 12, "Services" sold \$214,097,000 to final demand users (81.67% of total sales). Of the approximately \$214 million sold to final demand users, "Services" sold \$173 million to Households (80.84% of sales to final demand). Thus, it is readily seen that changes in Household income, i.e. changes in personal income, would have a dramatic effect upon the level of sales achieved by the "Services" industry.

Table 12. Lower Rolling Plains Sales Distribution and Regional Income
in Thousands of Dollars, 1967.^a

Industry and Sector Name	Processing Sectors	Federal Government (Defense)	Federal Government (Non-Defense)	State Government	Local Government
Agriculture	73,174	0	58,280	3	0
Mining	122,902	0	0	0	0
Construction	16,150	12,349	11,975	27,616	10,076
Manufacturing	78,269	582	21	551	775
Transportation	17,339	1,410	416	381	14
Communications	21,120	2,710	700	883	344
Utilities	56,305	3,599	236	280	3,428
Wholesale Trade	30,344	1,065	91	246	7,397
Retail Trade	39,972	10	0	3	702
F. I. R. E. ^b	43,071	350	7	276	5
Services	48,042	2,234	5,696	397	2,597
Households	913,362	123,443	135,498	23,077	11,328
Savings	227,903	-60,873	-91,309	-17,264	-17,015
Federal Gov.	53,871	0	0	10	0
State Gov.	34,148	0	22,366	0	0
Local Gov.	29,409	0	3,179	1,319	0
Texas Imports	160,515	0	0	0	0
U. S. Imports	477,948	25,407	12,754	29,459	23,455
Foreign Imports	3,029	0	0	0	0
Total Inputs	2,446,873	112,286	159,910	67,237	43,106

Table 12. (continued)

Industry and Sector Name	Households	Net Inventory Change	Investment	Texas Exports
Agriculture	8,654	-27,618	0	44,798
Mining	1,099	0	0	179,260
Construction	12,437	1,708	101,429	0
Manufacturing	50,178	2,586	9,831	104,379
Transportation	68,613	0	0	0
Communications	11,143	0	15	84
Utilities	26,587	-45	0	0
Wholesale Trade	31,084	0	0	82,934
Retail Trade	187,315	0	0	15,165
F. I. R. E. ^b	63,810	0	0	0
Services	173,352	47	0	11,560
Households	29,467	0	40,719	0
Savings	57,825	23,322	0	0
Federal Gov.	218,316	0	0	0
State Gov.	10,723	0	0	0
Local Gov.	9,199	0	0	0
Texas Imports	110,895	0	0	0
U. S. Imports	283,766	0	15,046	0
Foreign Imports	2,843	0	0	0
Total Inputs	1,357,306	0	167,040	438,180

Table 12. (continued)

Industry and Sector Name	U. S. Exports	Foreign Exports	Total Sales To Final Demand	Total Outputs
Agriculture	123,804	550	208,471	281,645
Mining	255,246	0	435,605	558,507
Construction	10,462	0	188,052	204,202
Manufacturing	108,040	2,569	279,512	357,781
Transportation	0	0	70,834	88,173
Communications	201	0	16,080	37,200
Utilities	13,421	0	47,506	103,811
Wholesale Trade	21,654	4,468	148,939	179,283
Retail Trade	23,446	0	226,641	266,613
F. I. R. E. ^b	0	0	64,448	107,519
Services	17,572	642	214,097	262,139
Households	80,412	0	443,944	1,357,306
Savings	44,451	0	-60,863	167,040
Federal Gov.	0	0	218,326	272,197
State Gov.	0	0	33,089	67,237
Local Gov.	0	0	13,697	43,106
Texas Imports	0	0	110,895	271,410
U. S. Imports	0	0	389,887	867,835
Foreign Imports	0	0	2,843	5,872
Total Inputs	698,709	8,229	3,052,003	5,498,876

^a Appendix A.

^b Finance, Insurance, and Real Estate.

cessing sectors have been combined into major industry groups, e.g. "Agriculture" includes regional sectors 1-4; "Mining" includes regional sectors 5-7. However, individual regional final payments sectors have been retained.

Column identifications for Table 12 show the sum of all processing sectors under one heading. Regional final demand sector names have been retained in all other column headings. Thus, to read the table, sales (each row) are shown as a total to all processing sectors and to each regional final demand sector. For example, "Agriculture" sold \$73,174,000 to processing sectors, \$52,280,000 to Federal Government (non-defense), \$3,000 to State Government, \$8,654,000 to Households, experienced a \$27,618,000 net decline in inventories, exported \$44,798,000 to other Texas areas outside the study region, \$123,804,000 to U. S. markets, and \$550,000 to foreign markets for a total output of \$280,645,000.

For the reader's convenience, another column entitled, "Total Sales to Final Demand," has also been added. This column presents the sum of all final demand sales by each row industry. For example, "Agriculture" sold \$73,174,000 to processing sectors and \$208,471,000 to final demand sectors for a total output of \$280,645,000.

The Regional Economy

Total value of the 1967 Lower Rolling Plains Region output was approximately \$5.5 billion (Table 12).² Mining sectors accounted for the largest dollar value industry segment of total regional

²See Appendix A.

output. The value of gross outputs for Mining sectors was approximately \$559 million. The second largest industry segment, by dollar value of outputs (approximately \$358 million), was Manufacturing. Agriculture was third in dollar volume at approximately \$282 million. The combination of Retail Trade with Wholesale Trade³ (combined total of approximately \$445 million) would result in an industry ranking second only to Mining and a new order of listing by dollar value of output in the following manner: (1) Mining, (2) Trades, (3) Manufacturing, and (4) Agriculture.

Mining sectors accounted for the largest dollar volume of sales to final demand sectors (\$435,605,000).⁴ Manufacturing sector's volume was second at \$279,512,000. Retail Trade (\$226,641,000) and Services (\$214,097,000) were third and fourth respectively. Relatively, Retail Trade sold 85.00% of its output to final demand; Services sold 81.67%; Manufacturing sold 78.12%; and Mining sold 77.98%.⁴

Total personal income for the study area was approximately \$1.4 billion. Approximately \$0.9 billion of personal income was earned from regional processing industries in the form of wages and salaries and property income. Governments provided another \$293 million in regional personal income. Of the total amount earned from Government, \$259 million was from Federal Government, \$23 million was from State Government, and \$11 million was from Local Government. Households

³Dollar value of Trades includes only gross mark-up on goods purchased for resale.

⁴See "Exports" below for the value of exports included in this figure.

earned approximately \$80 million outside the study region.

Exports

Regional firms exported approximately \$1.0 billion worth of goods and services to markets outside the study area. As shown in the accompanying table, the largest market area for Lower Rolling Plains

Market Areas	Value of Regional Exports to Market Areas
Texas	\$ 438,180,000
United States	\$ 573,846,000
Foreign	\$ 8,229,000
Total	\$1,020,255,000

goods and services was outside Texas but inside the United States. More than \$573 million (or 56.27%) worth of goods and services was exported to these U. S. markets. Approximately \$438 million worth of goods and services was exported to markets inside of Texas, but outside the defined study area. Only \$8.2 million of regional output was sold outside the United States.

Mining industry sectors were the largest regional exporters--selling approximately \$435 million to markets located outside the study area. These exports accounted for 78 percent of all regional Mining industry outputs and 43 percent of total regional exports (Table 13).

Manufacturing industry sectors were the second largest regional exporters. These study sectors exported approximately \$215 million to markets outside the study area, accounting for 60.08 percent of total

Table 13. Gross Value of Output and Percent of Output Exported, by Lower Kolling Plains Region Sector Numbers, 1967.

Industry Description	Regional Sector Numbers	Gross Value of Outputs ^a (Dollars)	Percent of Output Exported
Agriculture	1-4	281,645,000	60.05
Mining	5-7	558,507,000	77.79
Construction	8	204,202,000	5.12
Manufacturing	9-23	357,781,000	60.08
Transportation	24-27	88,173,000	0
Communications	28-30	37,200,000	.76
Utilities	31-33	193,811,000	12.92
Wholesale Trades	34-39	179,283,000	60.82
Retail Trades	40-46	266,613,000	14.48
F. I. R. E.	47-48	107,519,000	0
Services	49-57	262,139,000	11.35
Final Payments-to-Final Demand Transactions		2,446,873,000	
Gross Outputs		5,498,876,000	

^a Appendix A.

Table 14. Manufacturing Industry Exports as a Percent of Total Regional Exports and Total Manufacturing Industry Exports by Regional Sector Number, 1967.

Industry Description	Regional Sector Numbers	Percent of Total Regional Exports	Percent of Regional Manufacturing Exports
Meat Products and Dairies	9	3.72	19.82
Milling and Feeds	10	1.93	10.30
Food Processing	11	1.33	7.08
Textile Products	13	2.82	15.06
Chemical Products	16	2.41	12.84
Cement-Stone Products	18	.79	4.25
Metal Products	19	1.10	5.90
Machinery and Equipment	20	.95	5.11
Transportation Equipment	22	1.03	5.50
Other Manufacturing	23	1.76	9.40
Total Regional Exports = \$1,020,255,000			

^aAppendix A.

Manufacturing output and 21.06 percent of total regional exports. Table 14 lists the major Manufacturing industry exporters by regional model number. This table shows that sector 9, "Meat and Dairy Products" accounted for more than 19.8 percent of all Manufacturing industry exports. The second largest exporter was sector 13, "Textile Products," at 15.06 percent of total Manufacturing exports. Sector 16, "Chemicals and Petroleum Products" was third at 12.84 percent, and sector 10, "Milling and Feeds" was fourth at 10.30 percent. These identified Manufacturing sectors indicated a complementarity to the basic Agricultural and Mining industry activities of the regional economy.

Imports

The largest regional industry importers were Mining and Manufacturing. Regional Mining sectors imported approximately \$200 million worth of goods and services (Table 15). This amounts to 35.8 percent of the total value of inputs to Mining sectors, and 31.13 percent of total regional imports to processing sectors. Manufacturing was the second largest importer at \$154 million. This level represented 23.95 percent of all regional imports and more than 42 percent of the total value of inputs to Manufacturing sectors.

Market Areas	Value of Imports to Processing Sectors (\$1,000)
Texas	\$ 460,515
United States	\$ 477,948
Foreign	\$ 3,029
Total	\$ 641,492

Table 15 Dollar Value of Imports and Percent of Total Imports by Industry Description and Regional Sector Numbers, 1967.

Industry Description	Regional Sector Numbers	Value of Imports ^a (\$1,000)	Percent of Total Imports
Agriculture	1-4	49,250	7.67
Mining	5-7	199,721	31.13
Construction	8	86,292	13.46
Manufacturing	9-23	153,580	23.95
Transportation	24-27	14,738	2.29
Communication	28-30	9,304	1.45
Utilities	31-33	5,193	.83
Wholesale Trade	34-39	22,250	3.46
Retail Trade	40-46	39,930	6.23
F. I. R. E.	47-48	10,874	1.69
Services	49-57	50,353	7.84
Total ^b		641,492	

^aAppendix A.

^bMay not total correctly due to rounding.

As listed above, the largest source of imports to regional industry was suppliers located outside Texas but inside the United States. Almost 75 percent of all imports to the study region processing sectors came from this defined area source. From within Texas, Lower Rolling Plains Region industry purchased more than \$160 million. Foreign imports amounted to approximately \$3 million.

A comparison of Table 14, above with Table 15 shows that Lower Rolling Plains Region was a net exporter of total goods and services from the processing sectors. Total exports from processing sectors were approximately \$1.020 billion, while imports were substantially less at approximately \$0.641 billion. However, the study region was a large importer of goods and services to final demand. More than \$503 million of imported goods and services were consumed by regional final demand sector components. Thus, inclusive of final demand sectors, the study region was a net importer of goods and services.

Government sectors, which are included in final demand, were large importers of financial resources as well as goods and services. Federal and State Government sectors also expended approximately \$169 million more than they jointly collected in taxes from the study area (Table 12 or Appendix A).

The study area was a net exporter of goods and services from the total of its identified processing sectors. However, several industries dominated with respect to export volume (Table 16). Mining was the leading net export industry with a net balance of almost \$235 million. Agriculture was second largest net exporter at approximately \$120 million.

Table 16. Dollar Value of Total Imports and Total Exports by Industries, Lower Rolling Plains Region--1967.^a

Industry Description	Regional Sector Numbers	Value of Imports ^a (Millions \$)	Value of Exports (Millions \$)
Agriculture	1-4	49.3	169.2
Mining	5-7	199.7	434.5
Construction	8	86.3	10.5
Manufacturing	9-23	153.6	214.9
Transportation	24-27	14.7	-
Communication	28-30	9.3	.3
Utilities	31-33	5.2	13.4
Wholesale Trade	34-39	22.2	109.1
Retail Trade	40-46	39.9	38.6
F. I. R. E.	47-48	10.9	-
Services	49-57	50.4	29.8

^a Appendix A.

Wholesale Trade was the third largest net exporter followed by Manufacturing as fourth in relative importance.

The input-output model shows that the study area was a large importer of finished goods, with final demand sectors importing large volumes of goods and services. However, the study region expended government monies far in excess of regional revenue collections. Because of the large import expenditures by both Households and Governments, the study region was a net importer, i.e. total imports exceeded total exports.

CHAPTER 5

EXTENDED ANALYSES METHODS AND STUDY RECOMMENDATIONS

As illustrated in Chapter 3, above, the uses and applications of the Transactions Table and the Direct Requirements Table are straightforward and rather self-evident. Singly or individually, these two tables represent a comprehensive and detailed economic analysis of the study region. These tables also have some value for extended use in the interpretation and analysis of the study region.¹ However, the Direct and Indirect Requirements Table is perhaps one of the most valuable, continued-use results of this study.

The Direct and Indirect Requirements Table

The Transactions Table is the basic tabular result of all input-output studies. This table is a highly organized exposition of the regional economy in dollar values. This table, however, has extremely limited usefulness due to its static and cumbersome means of data communications, i.e. dollars. However limited The Transactions Table may be in extended use, it is the basis from which all other vehicles of analysis are computed. For example, the Direct Requirements Table is a direct result of simple analytical procedures as applied to the Transactions Table. The Direct and Indirect Requirements Table is another and still further extended derivation of economic tools of analysis based upon the Transactions Table data--via the Direct Requirements Table.

¹ See Chapter 3 above. Also see footnote (1) to Chapter 4.

As stated in Chapter 3 of this report, the simple definition of the Direct and Indirect Requirements Table is:

The Direct and Indirect Requirements Table expresses the relative, inter-related inputs of one industry sector needed from other industry processing sectors--both directly and indirectly--to deliver one dollar's worth of goods and services to final demand.

The Direct and Indirect Requirements Table is a highly efficient economic index which maintains a constant and consistent record of the multitudinous economic interrelationships of the defined study economy. This economic index may be used (under stated assumptions)² to continuously examine the effects of changing conditions, both real and anticipated, within the study economy. This system of analysis may continue to be used with two major benefits:

1. Economic analysis may continue for extended periods of time without the tremendous expense of recreating basic economic survey data.
2. This system of analysis has speed and simplicity difficult to match by other systems of regional economic analysis.

Uses of the Direct and Indirect Requirements Input-Output Table

Potential uses for the Direct and Indirect Requirements Table, with respect to regional economic analysis, are virtually unlimited. The true limitations include the technical abilities of the user, the accuracy requirements of analytical results, and the existing body of theoretical economic knowledge. However, the most commonly used applications for the Direct and Indirect Requirements Table may be summarized under three major categories:

²The stated assumptions include the economic conditions which prevailed at the time of the study period--unless adjusted. These assumptions include constant industry production coefficients and prices.

1. Direct applications--where values used for analytical applications may be directly abstracted from the Direct and Indirect Requirements Table.
2. Internal computations--where applications are derived from minor adjustments of previously computed values. This category includes such popular applications as "impact" and "multiplier" analyses.
3. Internal and external computations--where applications are derived from major internal reorganization of data as well as variations of external data values based either upon known data or projected occurrences. This category includes projection and forecasting techniques, as well as qualitative economic evaluation applications. Example applications include public policy evaluation and "balanced" regional economic development.

Directly Abstracted Applications: The total of all recorded values in the Direct and Indirect Requirements Table may be used for various applications in their originally computed value forms. For example, the sum of all direct and indirect requirements, by industry sector classification, are presented as column totals in Appendix C of this report. For the reader's convenience, these data have been independently listed in Table 17 of this report under the column heading entitled "Final Demand Multipliers."³ These "Final Demand Multi-

³ Theodore W. Roseler, et. al., The Economic Impact of Irrigated Agriculture on the Economy of Nebraska, Nebraska Economic and Business Reports, No. 4, Bureau of Business Research, University of Nebraska. [See the cited study for further explanations and illustrations for evaluative use. These above simple multipliers were also used to conduct extended "impact" analysis.]

pliers" represent the multiple value of output created from the increase of one dollar in the sales to final demand by each respective industry sector.

As an example, the final demand multiplier for the Lower Rolling Plains Texas Region model sector 1, "Irrigated Crops," is shown by Table 17 to be 1.469621. Thus, if sales by sector 1 to a final demand sector should increase by \$1,000, the total of all direct and indirect transactions required to achieve that increased output would amount to \$1,470. Furthermore, if the column of direct and indirect requirements for sector 1 is consulted in Appendix C, it can be determined to what extent each of the other fifty-seven processing sectors of the economy participate, or share, in the increased sales of sector 1 to final demand. For example, direct and indirect requirements from sector 4, "All Other Agriculture," would be \$64; while sector 16, "Chemical Products," would share in the increased sales of sector 1 by \$20.⁴

Column 2 of Table 17 also lists another commonly used value directly obtained from the Direct and Indirect Requirements Table. This value, usually referred to as an "Intra-Sector Final Demand Multiplier," is found in the table as the row-column intersect of each industry sector. For example, sector 1 of the regional model has a row-column intercept value of 1.024184. This value simply indicates that "Irrigated Crops" must produce an amount greater than the increase it expects, or may experience, in a final demand sector. The value results from intra-sector transactions, that is, sales and purchases which occur between sector 1 firms.

⁴ Each Value of the Direct and Indirect Requirements Table is an independent multiplier.

Table 17. Intra-Sector Final Demand, Final Demand and Output Multiplier:
Lower Rolling Plains, 1967.

Regional Model Sector Numbers ^a	Intra-Sector Final Demand Multipliers ^b	Final Demand Multipliers ^c	Output Multipliers
1	1.024184	1.469621	1.434918
2	1.024833	1.355689	1.322838
3	1.133538	1.561457	1.377507
4	1.048491	1.775551	1.693434
5	1.070802	1.235255	1.153519
6	1.000634	1.335238	1.334391
7	1.062427	1.20185	1.131230
8	1.009025	1.277990	1.266559
9	1.000025	1.780000	1.779955
10	1.111246	1.486813	1.337969
11	1.004418	1.235816	1.230380
12	1.000006	1.087370	1.035204
13	1.000002	1.035207	1.035274
14	1.052938	1.119360	1.063352
15	1.009449	1.084578	1.074423
16	1.096033	1.252320	1.142593
17	1.000024	1.237493	1.237453
18	1.055829	1.306177	1.237110
19	1.003410	1.049911	1.046342
20	1.000122	1.065086	1.064956
21	1.000117	1.106366	1.106236

Table 17. (continued)

Regional Model Sector Numbers ^a	Intra-Sector Final Demand Multipliers ^b	Final Demand Multipliers ^c	Output Multipliers
22	1.005233	1.081556	1.075925
23	1.000004	1.083451	1.083446
24	1.049655	1.342429	1.278924
25	1.000116	1.204031	1.203891
26	1.000407	1.202404	1.201914
27	1.000080	1.172041	1.171947
28	1.000271	1.041682	1.041399
29	1.000130	1.217602	1.217443
30	1.036807	1.532359	1.477959
31	1.013546	1.967807	1.941507
32	1.001254	1.337379	1.335704
33	1.000633	1.417085	1.416188
34	1.000659	1.200482	1.199691
35	1.000063	1.092214	1.092145
36	1.000009	1.204823	1.204812
37	1.0000492	1.482070	1.481341
38	1.000093	1.171746	1.171637
39	1.002280	1.227958	1.225164
40	1.000024	1.287122	1.287091
41	1.000003	1.343857	1.343852

Table 17. (continued)

Regional Model Sector Number ^a	Intra-Sector Final Demand Multipliers ^b	Final Demand Multipliers ^c	Output Multipliers
42	1.000004	1.716560	1.716553
43	1.028932	1.214773	1.180615
44	1.000000	1.431624	1.431624
45	1.006628	1.147056	1.139503
46	1.000469	1.198182	1.197620
47	1.018727	1.082817	1.062911
48	1.047942	1.302592	1.243343
49	1.000207	1.058865	1.058645
50	1.001383	1.318074	1.316253
51	1.001482	1.308561	1.307930
52	1.080586	1.337437	1.237696
53	1.042474	1.381198	1.324923
54	1.024527	1.225069	1.195741
55	1.021179	1.159549	1.135500
56	1.000034	1.208445	1.208403
57	1.060143	1.349326	1.272777

^aSector numbers refer to the regional model organization.

^bValue of row-column intercepts from Appendix C.

^cSum of industry sector columns. See Appendix C.

A combination of the use of both intra-sector final demand multipliers in conjunction with final demand multipliers consists of a simple ratio of the two values. This ratio is called an "Output Multiplier"⁵ and expresses the relationship between the requirements of one sector's increased sales (to final demand) to the total of all sector requirements per dollar of new sales by the initiating sector. In the previous example, the Final Demand Multiplier for "Irrigated Crops" was 1.469621. The Intra-Sector Final Demand Multiplier was 1.024184. Therefore, the Output Multiplier for regional model sector 1, "Irrigated Crops," would be the ratio of these two or 1.434918. Thus, the Output Multiplier relates the total requirements for increased sales by sector 1, to final demand, to the production needs of the sector itself.⁶

Final demand multipliers and output multipliers are useful in the evaluation of levels of interdependence among the various regional economic sectors. The level of interdependency refers to the level of purchases and sales transactions by one processing sector with other processing sectors within the study area. Therefore, the higher the interdependency of each sector, the higher the multiple, overall regional increase that will result from higher outputs and sales by that sector.

The preceding example illustrates that for each \$1.00 of increased sales to final demand by "Irrigated Crops" sector, overall output increased by \$1.47 among all regional processing sectors. As shown by Table 17, an increase of \$1.00 in sales to final demand by sector 4,

⁵ Roseler, et. al., loc. cit.

⁶ Ibid.

"Other Agriculture" would result in an overall increase of \$1.77; but a \$1.00 increase by sector 19, "Metal Products" would result in an overall increase of only \$1.05. Therefore, the relative regional economic importance of each sector is determined not only by the dollar value of its output, but also by the degree of its intra-regional trade transactions.

The degree of interdependency also implies the "self-sufficiency" of the study area. For example, if an economic sector imports large quantities of its production materials, increased sales to final demand would have a lesser overall regional impact than a sector which purchases production materials locally.⁷ On the other hand, intra-regional purchases increase the degree of interdependency and thereby increase the effects of increased sales to final demand. This latter point is illustrated by regional sector 9, "Meat Products and Dairies". As shown in Table 17, this sector has a relatively large final demand multiplier, at 1.780000. It is a manufacturing industry sector with large production purchases from within the study area. These major inter-sector output relationships are with regional sector 3, "Livestock," and with regional sector 4, "Other Agriculture."

As shown by the above examples, the Direct and Indirect Requirements Table can be used in its original value form as a

⁷If a sector has a high relative labor input cost, this would also tend to reduce the overall impact of increased sales to final demand. See "income multiplier" and "employment multiplier" analysis below for a further explanation of income increases for labor intensive sectors.

ready economic index to make immediate evaluations of actual or projected output and sales changes within defined, regional economic sectors. However, it should be remembered that these observations are made under the assumption of static regional economic relationships. In other words, the uses under this first category are limited to isolated changes, rather than to comprehensive or extensive changes.⁸

Applications by Use of Internal Computations: A second category of analytical uses for the Direct and Indirect Requirements Table involves internal computations. This category includes such tools of analysis as income multipliers, impact analysis, and employment multipliers.

The calculation of income multipliers involves a variation of the existing table organization for this report. "Households" as an economic sector is moved from the final payments table quadrant, as well as the final demand quadrant, into a balanced row and column which are included with the other economic processing sectors. In the case of the Lower Rolling Plains Region study, the processing sectors would be "closed" with respect to Households so that the processing sectors would then be presented as a fifty-eight by fifty-eight square matrix. After this modification has been accomplished, the new set of processing sectors (including Households) could be manipulated to the construction of a new and totally different set of coefficients which would represent the direct, indirect, and "induced" changes resulting

⁸ See forecasting and projection techniques below for more extensive evaluation applications.

from an increase of delivery to final demand of one dollar by each processing sector.⁹

By including Households within the matrix of processing sectors, it is now possible to determine the direct requirements to Household inputs (to a large part labor) required per dollar of output. This process is analogous to the Direct Requirements Table, or Appendix B of this report. Following the construction of a new Direct Requirements Table may also be computed. The results are again similar to the Direct and Indirect Requirements Table, or Appendix C, which show the total requirements from each sector, including Households, required for delivery of one dollar of goods and services to final demand. Finally, through a process of matrix multiplication, direct income changes, direct and indirect income changes, as well as the separate value of only indirect income changes, may be determined. And, from the combined information of both the original Direct Requirements Table, Direct and Indirect Requirements Table, the Closed Direct Requirements Table, and the Closed Direct and Indirect Requirements Table, income multipliers may be determined. These income multipliers not only indicate the total increase in income that results from increased final demand of each producing sector, but the varying distri-

⁹ William H. Miernyk, The Elements of Input-Output Analysis, (Random House: New York, New York, 1967). [See pp. 42-55 for further explanations concerning this process.]

bution of income-generating powers of all industry sectors.¹⁰

A similar type of multiplier analysis exists with respect to employment. By the computation of a simple ratio of the number of workers per total dollar of output,¹¹ the direct employment relationship to industry production may be determined. In economic terminology, this refers to the employment portion of the industry production function.

In a manner similar to that used for the construction of income multipliers, extended sets of employment multipliers may also be derived. These multipliers include the direct (as noted above) as well as the direct and indirect employment multiplier.¹² In other words, changes in the employment levels (number of workers) of all of the economy's sectors, as well as the major change that occurs in the initiating sector. In this manner, an increase in the final demand for output of one sector would result in a direct increase in the employment of that industry sector. It would also result in an overall larger total increase in employment as a result of the spreading, yet increasingly minor employment changes throughout other economic industry sectors.

¹⁰See the following studies for example applications: Nelson L. Bills and Alfred L. Barr, An Input-Output Analysis of the Upper South Branch Valley of West Virginia, West Virginia University Agricultural Experiment Station, Bulletin #568T, June 1968.

M. Jarvin Emerson, et. al., The Interindustry Structure of the Kansas Economy, Office of Economic Analysis and Kansas Department of Economic Development Planning Division, Report No. 21, State of Kansas, January 1969.

¹¹The labor-input ratios for all Lower Rolling Plains Region model industry sectors have been computed and are included as Appendix E to this report.

¹²Bills and Barr, op. cit.

As mentioned above, another type of analysis procedure is referred to as "impact analysis." Impact analysis is not a singular procedural methodology, but a term applied to a wide range of techniques for the measurement of total effects which result from changing economic conditions. Impact analysis may vary from the projection of increased output in one sector (as illustrated by use of final demand multipliers above), to the evaluation of new industrial technological procedures. Therefore, impact analysis may utilize the full range of multiplier analyses, as well as combinations of these multipliers.

For example, assume that an existing manufacturing industry, in order to meet increased sales to final demand, announces an expanded output for the next year. What will be the total impact of this change upon the regional economy?

- (1.) The output multiplier,¹³ as described above, will provide an estimate of the multiple output increase which will result from the proposed change.
- (2.) New final demand values may be estimated, the column of new final demand multiplied times the direct and indirect requirements matrix and thereby determine the new value of estimated total output.
- (3.) A closed regional model may be used in the same manner, as described in steps (1) and (2) above, to determine the changes in personal income as well as total effects inclu-

¹³ The output multiplier, rather than the final demand multiplier would be applicable here since the proposed change is an increase in output. Part of this increased output will be consumed within the initiating processing sector.

sive of induced changes.

- (4.) Employment multipliers may be used in conjunction with the combinations of methods (1) through (3) above to determine the number of new economy-wide jobs which will result from the announced change.

Therefore, the direct and indirect requirements table may be used in this example to determine the regional economic impact resulting from an output change by one industrial sector.

This second category of Indirect and Direct Requirements Table applications has many, many other useful possibilities. Other commonly used applications include capital multipliers, as well as profit evaluation procedures, and land or natural resource multipliers. Each of these extended applications allows the analyst to determine not only the immediate and direct relationships of changes in sector values, but also the total of all inter-related effects that would and do occur throughout the rest of the regional economy.

Applications Through Major Internal and External Computations:

Some of the more meaningful applications of the Direct and Indirect Requirements Table require major internal, and/or external variations in tabular data. These applications in their most commonly used form generally reflect upon projected, that is, anticipated or proposed, changes within the regional economic structure.¹⁴ However, these applications as a category, are not limited to projection and/or feasibility

¹⁴ For an extended and technical discussion on projection techniques, see Walter Isard, et. al., Methods of Regional Analysis: An Introduction to Regional Science (The M.I.T. Press: Cambridge, Massachusetts, 1967), pp. 363-371.

study.

One group of study applications within this category is gaining a stronger and more widespread use. This latter group of applications includes a series of economic and/or social qualitative evaluation techniques.¹⁵ It would be difficult, if not impossible, to present computational examples of these more intricately involved uses of the Direct and Indirect Requirements Table.¹⁶ However, the following material is presented as a direction-finder for those who might use the data content of this report as a basis for extended study at a future date.

One example of a topic of interest in many areas of Texas, as well as the United States, is a proper or orderly program for economic development. It has been found by past experience that not all economic increases are necessarily beneficial changes. The use of the direct and indirect requirements data of this input-output study may be used to evaluate anticipated or recently occurring industrial developments. By making such industrial development evaluations, it may be determined that anticipated industrial advances may weaken, impede, or jeopardize completely the orderly operation of other established industrial operations. On the other hand, it may be determined that proposed industrial development may more than fill a missing gap

¹⁵For a concise discussion of qualitative input-output applications, see Chiou-Shuang Yan, Introduction to Input-Output Economics (Holt, Rinehart, and Winston: New York, New York, 1968), pp. 86-102.

¹⁶For an example study illustration covering several levels of use for the direct and indirect requirement table data, see William H. Miernyk and Kenneth L. Shellhammer, et. al., Simulating Regional Economic Development With An Input-Output Model, Regional Research Institute, West Virginia University, Morgantown, West Virginia, July 1968.

in the regional industrial economic structure. This proposed new industrial advancement may contain economic interrelationships which have been historically missing within the defined region--as well as promote still other beneficial changes. In effect, all industrial development changes may be not only evaluated, but planned. As an end objective, regional economies may plan a balanced or desired route of economic development that will not only increase the productive output of an area, but maintain the solidity of existing industries as it develops in a more orderly manner.

The above example illustrates only one very narrow application within this third category. The full extent of applications is limited only by the imagination of planners with a foresight to anticipate and interpret the existing and future problems and assets of the economic region. This category should certainly consider the probable evaluation of employment and employment levels, including structural unemployment. It should also consider the impact of government action programs, as well as the welfare objectives, of the region. Economic quality, in other words, may be evaluated simultaneously with the quantitative results that occur in economic development.¹⁷

Summary

The final chapter of this report has presented several basic guidelines to users of the study results:

- (1.) It has organized existing categories of use

¹⁷For a comprehensive listing of available input-output studies covering a wide range of applications, see: Phillip J. Bourque and Gerald Hansen, An Inventory of Regional Input-Output Studies in the United States, Graduate School of Business Administration, University of Washington, Seattle, Washington, 1967.

techniques for the South Central Texas Region study results.

- (2.) It has noted previous studies and other sources of technical information to assist in the further use of study results.
- (3.) It has cited examples of applied study uses in order to clarify the meaning of regional tabular data.

The results of this study should find a wide range of potential uses among regional businessmen as well as all levels of government. By use of study data, the businessman has an available and readily usable tool by which he may evaluate the impact of changing economic conditions as they may affect his business operations. He may equally anticipate the effects of changing conditions as they affect both his suppliers and his customers. He may also examine the ramifications of proposed actions by his own business or industry group.

All levels of government¹⁸ should find these study results extremely useful in their respective areas of responsibility. Many governmental actions have direct and immediate effect upon segments of the economy. However the direct economic effects of government actions result in indirect and multiple effects throughout the total economic structure. By use of these study results, governmental bodies may evaluate the total economic impact of proposed actions.

¹⁸ This study may be adapted to smaller areas within the study region. Although the accuracy of estimated results may vary, general evaluation applications should produce results within the range of acceptable approximation.

Tax levels and methods of taxation, business regulation controls, all levels of government expenditures, public investment programs, industrial development, and agency planning criteria should receive the interpretive benefits of these study results.

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APPENDIX A

TRANSACTIONS TABLE : LOW ROLLING PLAINS, TEXAS, 1967 (THOUSAND DOLLARS)

	1	2	3	4	5	6	7	8
1 IRR COTTON	549.400	1107.300	922.799	302.888	0	0	0	0
2 DRYLAND CROPS	0	2336.700	9656.900	1798.129	0	0	0	0
3 LIVESTOCK	0	0	13003.900	0	0	0	0	0
4 OTHER AGRI.	1426.000	6215.000	610.900	1418.595	0	0	0	0
5 OIL AND GAS	0	0	0	0	31754.325	5011.544	7.325	0
6 LIQUIDS	0	0	0	0	0	0	0	1579.116
7 OILFLD. SERS.	0	0	0	0	48556.194	5.500	3022.806	0
8 CONSTRUCTION	195.000	767.000	591.000	2178.417	875.000	54.600	204.378	1250.688
9 MEATS-DAIRIES	0	0	0	0	0	0	0	0
10 MILL AND FEEDS	0	0	3720.700	4077.005	0	0	0	0
11 FOOD PROCESS	0	0	5327.900	213.162	0	0	0	0
12 BEVERAGES	0	0	0	0	0	0	0	0
13 TEXTILES	0	0	0.200	0	1.111	0	0.253	637.445
14 WOOD & PAPER PROD	14.300	60.499	0	0	0	0	0	510.513
15 PRINT AND PUB	0	0	3.300	0	10.811	0.010	0.253	1.150
16 CHEM PRODS	414.900	3765.899	638.000	260.792	29.487	524.141	3.495	173.358
17 GLASS PRODS	0	119.899	0	0	0	0	0	158.425
18 CEMENT-STONE	0	0	0	0	0	0	0.230	9341.090
19 METAL PRODS	0	0	53.000	0	0	0	0	10154.594
20 MACH AND EQUIP	0	0	0	40.921	0	0	0	2459.970
21 ELEC PRODS	0	0	0	0	0	0	0	3547.057
22 TRANS EQUIP	0	0	0	0	0	0	0	1173.520
23 OTHER MANF	0	0	2.700	0	0	0	0	330.071
24 RRROAD TRANS	0	0	0	0	0	0	0	2208.335
25 LOCAL TRANS	0	0	0	0	0	0	0	0
26 TRUCKING	0	0	330.000	1056.420	1084.000	119.101	25.276	695.008
27 OTHER TRANS	0	0	0	0	0	0	0	42.674
28 TELE AND TELE	54.000	209.000	171.000	165.196	1233.100	27.900	373.524	809.587
29 RADIO AND TV	0	0	0	0	0	0	0	0.223
30 OTHER COMM	0	0	0	0	0	0	0	161.828
31 GAS UTIL	700.000	0	22.600	181.968	77.400	0	39.565	137.004
32 ELEC UTIL	350.000	209.000	214.000	1179.521	716.200	66.400	62.417	511.424
33 WATER UTIL	0	0	0	5.366	19.400	7.339	21.044	122.110
34 AUTO SUPP W/S	53.300	344.500	57.999	17.777	0	0	24.007	0
35 GROCERIES W/S	0	0	1.300	0	13.337	0.126	3.046	5.252
36 FARM PRODS W/S	276.200	612.000	2816.400	1130.968	0	0	0	0
37 EQUIP SUPP W/S	0	0	1.400	0	244.757	198.395	790.774	0
38 OIL PRODS W/S	242.100	1460.400	365.000	406.870	0	0	246.781	0
39 GENERAL W/S	591.300	2176.800	1189.300	650.221	78.755	0.167	5.481	120.063
40 LUMB YDS-HRDWARE	1417.300	5069.400	1785.599	1148.327	15.750	0.147	9.564	13.039
41 DEPT STORES	0	0	0	0	0	0	45.907	0
42 FOOD STORES	0	0	0	0	4.445	0.042	1.015	1.701
43 AUTO DEALERS	588.400	3299.800	1149.700	602.423	763.804	4.551	639.903	1105.754
44 FURNITURE	0	0	0	0	0	0	0	3.665
45 RESTAURANTS	0	0	0	0	0	0	0	10.539
46 OTHER RETAIL	0	0	0.200	0	629.336	5.970	143.727	240.868
47 BANK	352.000	1033.999	1337.000	621.877	441.300	4.600	606.273	4161.514
48 DTME	407.000	567.000	670.000	1140.444	2506.002	0.900	550.820	2736.854
49 LEGAL	0	0	0	0	112.300	0	92.645	452.684
50 LODGING SER	0	0	0	0	0	0	0	0
51 PERSONAL SER	0	0	0	0	0	0	55.092	0
52 OTHER BUS SER	16.000	59.999	55.999	409.386	1648.901	5.900	783.518	527.590
53 AMUSEMENT	0	0	0	0	0	0	0	0
54 MISC REPAIR	261.000	72.000	53.000	75.470	135.500	0	262.204	1.785
55 MEDICAL SERS	0	0	0	0	0	2.700	42.866	0
56 EDUCATION SERS	0	0	0	0	0	0	0	0.557
57 ALL OTHER SER	0	0	0	290.310	2288.000	1.800	300.119	1683.438

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58 HOUSEHOLDS	6110.000	41754.000	22719.000	7211.660	132565.305	6183.228	19644.225	60834.682
59 SAVINGS	3676.000	18379.000	16859.000	3723.359	50821.074	5767.024	3473.362	3692.526
60 FEDERAL GOVT.	141.000	902.000	537.000	413.075	2888.201	1532.013	576.251	2068.289
61 STATE GOVT.	16.000	59.999	40.000	117.231	22357.809	14.000	589.818	1616.944
62 LOCAL GOVT.	958.000	3628.999	2529.000	1102.541	4396.101	110.000	223.412	1796.679
63 IMPORTS	5090.800	19189.800	22964.799	2004.667	178218.999	2788.892	18713.105	86292.171
TOTAL INPUTS	23900.000	113399.993	110399.995	33944.986	484485.704	22436.990	51584.483	204201.784

TRANSACTIONS TABLE - LOW ROLLING PLAINS, TEXAS, 1967 (THOUSAND DOLLARS)

	9	10	11	12	13	14	15	16
1 IRR COTTON	0	113.842	0	0	0	0	0	0
2 DRYLAND CROPS	0	2386.924	912.800	0	0	0	0	0
3 LIVESTOCK	10499.279	0	0	0	0	0	0	0
4 OTHER AGRI.	18766.733	11.365	1126.121	0	0	0	0	0
5 OIL AND GAS	0	0	0	0	0	0	0	66.514
6 LIQUIDS	0	0	16.300	0	0	0	0.751	828.695
7 DILFLD. SERS.	0	0	0	0	0	0	0	0
8 CONSTRUCTION	191.277	201.811	40.750	0	0	0	98.339	753.539
9 MEATS-DAIRIES	0	0	57.096	0	0	0	0	0
10 MILL AND FEEDS	0	3358.806	0	0	0	0	0	0
11 FOOD PROCESS	0	0	101.231	0	0	0	0	0
12 BEVERAGES	0	0	44.014	0	0	0	0	0
13 TEXTILES	0	0	0	3.571	0	0	0	0
14 WOOD PAPER PROD	522.633	0	146.700	0	0	127.406	8.859	0
15 -RINT AND PUB	0	109.610	0.004	0	0	0	146.472	18.605
16 CHEM PRODS	6.834	29.696	88.866	0.282	44.997	1.095	7.539	3729.363
17 GLASS PRODS	0	0	0	0	0	0	0	72.097
18 CEMENT-STONE	0.831	0	0	0.109	0	0	0	0
19 METAL PRODS	0	0	0	0	0	3.346	0	0
20 MACH AND EQUIP	92.283	143.478	0	26.125	0	8.844	30.042	0
21 ELEC PRODS	0	84.205	0	0	0	0	0	0
22 TRANS EQUIP	0	0	0	0	0	0	0	0
23 OTHER MANF	0	0	0	56.541	0	0	0	0
24 RRROAD TRANS	46.340	52.687	0	0	3.040	0	0	0
25 LOCAL TRANS	0	0	0	0	0	0	0	0
26 TRUCKING	150.169	43.749	93.562	21.056	17.921	0.717	160.728	793.077
27 OTHER TRANS	0	0	0	2.339	0	0	0	0
28 TELE AND TELE	175.338	60.684	49.226	25.736	65.711	18.883	80.364	186.059
29 RADIO AND TV	0	0	65.200	0	0	0	0	0
30 OTHER COMM	0	0	0	0	0	0.239	0	0
31 GAS UTIL	29.362	175.938	99.919	32.365	71.685	3.107	29.291	239.551
32 ELEC UTIL	169.465	373.986	268.950	62.390	161.291	12.907	78.862	311.649
33 WATER UTIL	28.523	174.056	54.605	44.843	16.427	1.434	21.029	18.605
34 AUTO SUPP W/S	86.573	0	0	11.349	0	0	0	0
35 GROCERIES W/S	0	0.487	0.299	0	0	0.022	0.228	0.078
36 FARM PRODS W/S	0	4098.197	0	0	0	0	0	0
37 EQUIP SUPP W/S	0	0	0.790	6.327	0	0	0	0
38 OIL PRODS W/S	81.385	0	0	36.553	0	0	0	35.997
39 GENERAL W/S	30.223	0.196	356.932	1.278	198.997	4.845	9.506	36.350
40 LUMB YOS-HRDWARE	0.092	0.061	3.620	0.003	0.608	1.249	0.229	0.116
41 DEPT STORES	0	0	0	5.555	0	0.100	0	0
42 FOOD STORES	0	0.007	0.016	0	0	0	0.056	0
43 AUTO DEALERS	90.856	102.446	254.764	25.009	0	11.133	33.900	221.209
44 FURNITURE	0	0	0	0	0	0	0	0
45 RESTAURANTS	0	33.331	17.834	0	0	1.613	4.344	5.605
46 OTHER RETAIL	0	1.027	2.373	0	0	0	7.929	0
47 BANKING	0	0	0	0	0	0	0	0
48 OTHER FIRE	115.773	48.453	70.090	0	13.440	28.684	113.411	297.694
49 LEGAL SER	13.423	0.940	11.410	0	0	1.912	6.759	6.977
50 LODGING SER	0	77.149	54.279	0	0	7.171	7.510	83.726
51 PERSONAL SER	46.141	0	0	2.729	0	0	0	0
52 OTHER BUS SER	408.562	564.036	44.173	480.016	10.454	4.302	68.347	337.232
53 AMUSEMENT	0	0	0	0	56.750	0	0	0
54 MISC REPAIR	0	30.577	93.888	77.988	149.344	8.844	62.338	372.118
55 MEDICAL SERS	1.677	0	6.194	0	0	0.239	0	0
56 EDUCATION SERS	0	0	0	0	0	0	0	0
57 ALL OTHER SER	156.881	7.997	3.749	3.119	74.672	8.844	111.157	37.211

58 HOUSEHOLDS	7014.164	4406.975	5842.066	5267.788	25187.112	688.096	7303.258	9034.918
59 SAVINGS	1139.471	-463.421	1116.083	1068.350	1815.837	151.875	1111.695	2584.472
60 FEDERAL GOVT.	487.910	90.791	387.777	862.937	1190.274	122.849	607.613	441.890
61 STATE GOVT.	116.568	206.045	69.601	62.390	82.139	13.022	116.415	204.665
62 LOCAL GOVT.	128.752	23.050	63.733	130.629	218.042	5.876	94.634	81.400
63 IMPORTS	27012.468	17196.106	13354.274	5524.710	3830.950	1295.834	5727.132	22075.575
TOTAL INPUTS	67609.986	33745.287	24919.289	13842.087	33209.691	2534.488	16048.787	42874.987

TRANSACTIONS TABLE : LOW ROLLING PLAINS, TEXAS, 1967 (THOUSAND DOLLARS)

	17	18	19	20	21	22	23	24
1 IRR COTTON	0	0	0	0	0	0	0	0
2 DRYLAND CROPS	0	0	0	0	0	0	0	0
3 LIVESTOCK	0	0	0	0	0	0	0	0
4 OTHER AGRI.	0	0	0	0	0	0	0	0
5 OIL AND GAS	0	0	0	0	0	0	0	0
6 LIQUIDS	0	0	0	0	0	0	0	0
7 OILFLD. SERS.	0	0	0	0	0	0	0	0
8 CONSTRUCTION	33.405	420.624	58.443	0.361	39.114	9.195	6.426	560.322
9 MEATS-DAIRIES	0	0	0	0	0	0	0	0
10 HILL AND FEEDS	0	0	0	0	0	0	0	0
11 FOOD PROCESS	0	0	0	0	0	0	0	10.458
12 BEVERAGES	0	0	0	0	0	0	0	0
13 TEXTILES	0.082	0	0.695	6.139	5.106	1.927	0	0
14 WOOD& PAPER PROD	0	0	81.635	0.902	59.323	0.427	42.129	0
15 PRINT AND PUB	0.082	11.878	19.713	19.501	11.734	0.431	1.428	8.694
16 CHEM PRODS	15.190	9.474	18.408	13.654	0.103	0.622	62.702	182.022
17 GLASS PRODS	0	27.948	97.405	158.898	151.243	0	46.414	0
18 CEMENT-STONE	0	1286.334	0	0	0	0	0	0
19 METAL PRODS	0	0	84.186	103.103	0	6.415	2.142	55.610
20 MACH AND EQUIP	0	0.698	2.783	1.083	109.086	27.371	203.507	34.209
21 ELEC PRODS	0	0	0	0	0	0	3.570	20.160
22 TRANS EQUIP	0	0	46.383	0	0	74.843	0	24.255
23 OTHER MANF	0	0	0	0	0	0	0	0
24 RR&D TRANS	0	0.623	0.936	0.898	0	0.241	0	291.627
25 LOCAL TRANS	0	0	0	0	0	0	1.428	0
26 TRUCKING	624.084	218.496	93.463	89.199	33.899	270.293	199.937	47.628
27 OTHER TRANS	0	0	6.493	3.611	0	10.691	0	67.284
28 TELE AND TELE	74.320	53.102	102.044	112.673	58.563	73.988	97.112	0
29 RADIO AND TV	0	0.698	6.957	0	0	0	0	65.646
30 OTHER COMM	0	38.429	0	0	0	0	0	0
31 GAS UTIL	29.779	2095.436	11.595	37.016	4.889	8.553	39.987	7.497
32 ELEC UTIL	109.020	41.223	144.485	81.796	20.426	46.189	282.768	15.813
33 WATER UTIL	14.760	24.454	9.044	7.944	6.519	6.201	37.845	20.286
34 AUTO SUPP W/S	0	0.616	0	0	0.702	0	0	2.667
35 GROCERIES W/S	0.991	0.051	0.021	0.082	0	0.052	0.009	0
36 FARM PRODS W/S	0	0	0	0	0	0	0	0
37 EQUIP SUPP W/S	0	7.362	14.613	15.411	43.963	3.650	0	0
38 OIL PRODS W/S	0	0	0.556	0	0	7.412	0	0
39 GENERAL W/S	63.824	38.804	60.936	57.262	0.456	2.192	56.245	19.291
40 LUMB YDS-HRDWARE	1.346	0.122	12.055	1.811	0.001	7.089	4.336	0.058
41 DEPT STORES	0	1.463	0	0	0	59.254	0	0
42 FOOD STORES	0.330	0	0	0	0	0.013	0	0
43 AUTO DEALERS	60.515	83.996	28.631	45.739	0.282	18.776	6.186	0
44 FURNITURE	0	0	0	0.186	0	0	0	0
45 RESTAURANTS	0	3.704	1.564	5.918	0	0.824	0.688	0
46 OTHER RETAIL	46.762	0	0	0	0	1.946	0	0
47 BANKING	0	0	0	0	0	0	0	26.649
48 OTHER FIRE	0.517	273.894	35.483	64.462	33.356	32.931	82.117	144.711
49 LEGAL SER	0	5.589	8.580	9.389	0	14.754	111.393	0
50 LODGING SER	0	10.480	12.059	18.237	1.738	0.213	2.142	0
51 PERSONAL SER	0	0	0.927	0	0	0	0	52.038
52 OTHER BUS SER	0	36.333	51.254	74.393	38.028	2.993	279.198	47.061
53 AMUSEMENT	0	0	0	0	0	0	0	0
54 MISC REPAIR	42.209	13.974	14.842	73.490	0	94.089	59.981	0
55 MEDICAL SERS	0	0	3.014	0	0	0	0	0
56 EDUCATION SERS	0	0	3.478	0	0	0	0	0
57 ALL OTHER SER	7.768	68.473	25.279	55.975	0	170.857	38.559	0

58 HOUSEHOLDS	1951.303	8941.861	8042.739	6628.249	1546.726	4644.013	9330.999	2904.044
59 S. VINGS	519.137	2753.876	1810.558	1144.396	225.926	622.216	1819.093	1011.406
60 FEDERAL GOVT.	242.123	308.830	775.350	758.196	73.072	563.467	404.996	378.000
61 STATE GOVT.	21.493	118.082	45.075	66.628	8.523	14.968	30.596	11.025
62 LOCAL GOVT.	26.672	208.914	115.133	97.144	11.953	28.440	274.186	119.385
63 IMPORTS	1963.575	7625.543	13967.565	10478.844	4560.458	7579.244	11387.667	172.151
TOTAL INPUTS	5849.287	24731.584	25814.380	20232.590	7045.189	14406.780	24915.786	6299.997

TRANSACTIONS TABLE : LOU ROLLING PLAINS, TEXAS, 1967 (THOUSAND DOLLARS)

	25	26	27	28	29	30	31	32
1 IRR COYTON	0	0	0	0	0	0	0	0
2 DRYLAND CROPS	0	0	0	0	0	0	0	0
3 LIVESTOCK	0	0	0	0	0	0	0	0
4 OTHER AGRI.	0	0	0	0	0	0	0	0
5 OIL AND GAS	0	0	324.811	0	0	0	30261.355	0
6 LIQUIDS	0	407.300	1060.080	0	0	0	0	0
7 OILFLD. SEPS.	0	0	0	0	0	0	0	0
8 CONSTRUCTION	2.782	565.543	592.722	0	55.404	0.632	27.779	86.046
9 MEATS-DAIRIES	0	0	0	0	0	0	0	0
10 MILL AND FEEDS	0	0	0	0	0	0	0	0
11 FOOD PROCESS	0	0	0	0	0	0	0	0
12 BEVERAGES	0	0	0	0	0	0	0	0
13 TEXTILES	0	0	0	0	0	0	1.417	5.669
14 WOOD& PAPER PROD	0	0	122.211	0	0	0	0	0.285
15 PRINT AND PUB	0	0	49.040	51.861	0	0	7.775	69.752
16 CHEM PRODS	7.197	9.734	323.639	0	88.644	14.551	12.391	84.569
17 GLASS PRODS	0	0	4.359	0	0	0	0	0.571
18 CEMENT-STONE	0.832	1.187	78.876	0	0	0	0	5.574
19 METAL PRODS	0	0	0	0	0	0	0	0.238
20 MACH AND EQUIP	0	0	834.246	0	0	0	0	0
21 ELEC PRODS	0	0	264.781	0	73.706	58.206	0	3.335
22 TRAS EQUIP	0	0	11.931	0	44.924	5.061	0	0
23 OTHER MANF	0	0	191.825	0	46.661	0	0	0.285
24 RRROAD TRANS	0	0	0	31.494	0	0	4.656	129.499
25 LOCAL TRANS	0	0	0	0	0	0	0	0
26 TRUCKING	0	0	0	34.183	0	0	15.03	77.470
27 OTHER TRANS	0	0	0	20.522	0	0	0	14.627
28 TELF AND TELE	25.831	408.644	305.412	0	154.405	53.777	38.997	147.461
29 RADIO AND TV	0	0	0	0	0	149.944	8.747	106.153
30 OTHER COMM	0	0	0	0	0	39.858	0	0
31 GAS UTIL	8.425	68.966	228.507	30.536	3.753	2.024	511.620	6612.220
32 ELEC UTIL	32.589	1274.286	410.322	248.739	76.060	7.592	15.347	0
33 WATER UTIL	5.406	24.503	0.622	29.639	14.078	40.997	3.928	123.924
34 AUTO SUPP W/S	86.652	123.623	524.919	0	0	0	0.161	14.150
35 GROCERIES W/S	0	0	0	0	0	0	0	0
36 FARM PRODS W/S	0	0	0	0	0	0	0	0
37 EQUIP SUPP W/S	0	0	0	0	0	0	0.283	42.451
38 OIL PRODS W/S	8.538	35.509	407.720	0	0	0	2.915	24.108
39 GENERAL W/S	31.829	43.049	25.171	0	0	10.754	38.430	122.971
40 LUMB YDS-HRDWARE	73.733	0.131	0.076	0	0	0	0.161	11.482
41 DEPT STORES	0	0	0	0	0	0	0	0
42 FOOD STORES	0	0	0	0	0	0	0	0
43 AUTO DEALERS	0	0	0	0	0	0	48.675	564.545
44 FURNITURE	0	0	0	0	0	0	0	0
45 RESTAURANTS	0	0	0	0	0	0	0	0
46 OTHER RETAIL	0	0	0	0	0	0	0	0
47 BANKING	0	0	0	0	0	0	58.596	200.823
48 OTHER FIRE	152.026	537.084	368.935	411.619	100.913	65.798	153.072	369.486
49 LEGAL SER	44.687	131.920	175.964	0	95.526	1.265	58.435	103.008
50 LODGING SER	0	0	0	0	0	0	0	0
51 PERSONAL SER	0	0	0	0	0	0	0	0
52 OTHER BUS SER	95.025	23.666	989.508	114.881	23.328	0	58.394	68.179
53 AMUSEMENT	0	0	0	0	0	0	0	0
54 MISC REPAIR	0	0	0	0	0	6.326	51.145	57.364
55 MEDICAL SERS	0	0	0	0	0	0	0	0
56 EDUCATION SERS	0	0	0	0	0	0	0	0
57 ALL OTHER SER	13.877	250.593	37.447	0	154.788	21.511	48.189	60.223

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58 HOUSEHOLDS	1928.242	10556.261	23853.935	9339.786	2668.160	480.976	3567.980	16882.354
59 SAVINGS	321.282	2463.209	8279.369	4880.184	209.105	97.281	2053.644	10297.307
60 FEDERAL GOVT.	158.697	1202.335	4141.557	5482.160	148.134	40.352	862.189	7024.397
61 STATE GOVT.	44.887	302.064	397.519	733.237	2.693	3.625	240.259	845.127
62 LOCAL GOVT.	24.849	656.345	1148.336	1349.801	57.266	19.297	597.916	2327.077
63 IMPORTS	596.605	5779.037	8190.151	8148.352	1152.741	3.164	1745.237	1162.252
TOTAL INPUTS	3663.991	24864.989	53343.991	30906.994	5170.289	1122.991	40495.486	47644.982

TRANSACTIONS TABLE : LOW ROLLING PLAINS, TEXAS, 1967 (THOUSAND DOLLARS)

	33	34	35	36	37	38	39	40
1. IRR COTTON	0	0	0	0	0	0	0	0
2 DRYLAND CROPS	0	0	0	0	0	0	0	0
3 LIVESTOCK	0	0	0	0	0	0	0	0
4 OTHER AGRY.	0	0	0	7.710	0	0	0	0
5 OIL AND GAS	0	0	0	0	0	0	0	0
6 LIQUIDS	0	0	0	0	0	0	0	0
7 OILFLD. SERS.	0	0	0	0	0	0	0	0
8 CONSTRUCTION	772.374	51.432	0	2867.375	657.498	0	0	0
9 MEATS-DAIRIES	0	0	0	0	0	0	0	0
10 MILL AND FEEDS	0	0	0	0.698	0	0	0	0
11 FOOD PROCESS	0	0	0	0	0	0	0	0
12 BEVERAGES	0	0	0	0	0	0	0	0
13 TEXTILES	10.185	0	0.050	0	0	0	0.214	0
14 WOOD PAPER PROD	16.766	0	0	0	0	0	0	0
15 PRINT AND PUB	10.969	2.857	0.050	0.001	78.483	136.345	114.927	0.008
16 CHEM PRODS	258.837	2.391	0.662	121.083	0.604	8.192	3.702	9.443
17 GLASS PRODS	16.453	0	0	0	0	0	0	0
18 CEMENT-STONE	521.027	0	0	0	0	0	0	0.325
19 METAL PRODS	47.166	0	0	0	0	0	0	0
20 MACH AND EQUIP	11.752	191.444	0	1.747	0	0	209.208	0
21 ELEC PRODS	21.624	0	0	0	0	0	0	0
22 TRANS EQUIP	0	0	0	0	0	0	0	0
23 OTHER MANF	10.498	0	0	0	0	0	0	0
24 RR/DAD TRANS	0	0	0	786.449	524.517	58.237	0	16.242
25 LOCAL TRANS	0	0	0	0	0	0	0	0
26 TRUCKING	0	0	158.459	409.209	14.054	0	583.247	1504.051
27 OTHER TRANS	0	2.357	0	0	44.568	34.610	18.305	8.040
28 TELE AND TELE	39.018	68.577	221.843	1038.048	247.275	125.857	1046.042	108.825
29 RADIO AND TV	0	0	0	0	251.659	0	65.586	449.702
30 OTHER COMM	0	0	0	0	0	0	0	0
31 GAS UTIL	1300.296	158.684	52.819	92.080	214.989	7.099	319.595	14.618
32 ELEC UTIL	984.076	441.186	538.763	878.232	604.424	314.644	1022.904	66.594
33 WATER UTIL	0	237.341	4.561	142.460	328.683	62.928	473.809	11.369
34 AUTO SUPP W/S	0	4.089	0	0	0	0	0	33.904
35 GROCERIES W/S	0	0	0.611	0.016	0.332	0	16.609	0.100
36 FARM PRODS W/S	0	0	0	0	0	0	0	0
37 EQUIP SUPP W/S	187.275	0	0	0	0.277	0	32.115	0
38 OIL PRODS W/S	22.511	0	0	0	0	0	0	0
39 GENERAL W/S	31.049	10.576	0.764	504.516	2.546	36.529	78.722	41.990
40 LUMB YDS-HRDWARE	0.094	0.032	0.713	1.560	0.390	0.110	2.695	0.243
41 DEPT STORES	0	0	0	0	0	0	0	0
42 FOOD STORES	0	0	0.203	0.005	0.110	0	7.351	0.033
43 AUTO DEALERS	0	102.044	0	357.452	1159.625	968.257	1171.120	581.244
44 FURNITURE	0	0	0	0	0	0	0	0
45 RESTAURANTS	0	88.714	0	0	77.276	82.523	88.706	52.374
46 OTHER RETAIL	0	0	28.845	0.763	15.670	0	107.326	4.750
47 BANKING	0	0	0	786.384	981.196	157.322	1803.630	100.292
48 OTHER FIRE	97.780	2.857	644.403	320.510	133.959	417.526	264.760	370.330
49 LEGAL SER	0	11.429	211.279	3.494	36.015	0	76.075	21.115
50 LODGING SER	0	11.645	0	0	220.170	170.977	90.430	39.717
51 PERSONAL SER	0	0	0	0	0	0	0	0
52 OTHER BUS SER	0	33.215	0	585.142	637.060	403.772	619.673	340.682
53 AMUSEMENT	0	0	0	0	0	0	0	0
54 MISC REPAIR	0	20.001	0	0	162.947	20.976	91.924	8.121
55 MEDICAL SERS	0	0	0	0	0	0	0	0
56 EDUCATION SERS	0	0	0	0	0	0	0	0
57 ALL OTHER SER	0	128.582	0	619.812	6.148	0	247.246	45.479

58 HOUSEHOLDS	4709.461	5794.498	20318.801	33088.239	5246.599	12328.057	27757.275	8920.620
59 SAVINGS	4308.936	863.204	1337.382	4803.372	1446.971	4004.494	2920.294	1866.063
60 FEDERAL GOVT.	0	566.881	1262.396	12.468	199.519	314.342	804.052	229.107
61 STATE GOVT.	0	161.284	0	438.842	113.387	149.477	306.447	100.449
62 LOCAL GOVT.	0	140.477	68.665	922.445	42.414	123.516	572.676	83.004
63 IMPORTS	2291.840	1407.929	676.600	9639.574	3366.681	1939.107	5219.925	517.897
TOTAL INPUTS	15669.987	10503.726	25527.869	58429.686	16816.046	21867.787	46136.790	15626.721

TRANSACTIONS TABLE : LOW ROLLING PLAINS, TEXAS, 1967 (THOUSAND DOLLARS)

	41	42	43	44	45	46	47	48
1 IRR COTTON	0	0	0	0	0	0	0	0
2 DRYLAND CROPS	0	0	0	0	0	0	0	0
3 LIVESTOCK	0	0	0	0	0	0	0	0
4 OTHER AGRI.	0	0	0	0	0	0	0	0
5 OIL AND GAS	0	0	0	0	0	0	0	0
6 LIQUIDS	0	0	0	0	0	0	0	0
7 OILFLD. SERS.	0	0	0	0	0	0	0	0
8 CONSTRUCTION	164.060	0	0	0	0	0	329.537	614.587
9 MEATS-DAIRIES	0	0	0	0	0	0	0	0
10 MILL AND FEEDS	0	0	0	0	0	0	0	0
11 FOOD PROCESS	0	0	0	0	0	0	0	0
12 BEVERAGES	0	0	0	0	0	0	0	0
13 TEXTILES	0.038	0	0	0	0.077	0.021	0	0
14 WOOD& PAPER PROD	0	0	0	0	0	0	20.442	0
15 PRINT AND PUB	763.111	1177.239	1935.106	490.788	24.679	200.131	308.898	275.789
16 CHEM PRODS	23.485	61.718	129.627	3.912	1.002	41.839	49.710	29.205
17 GLASS PRODS	0	0	0	0	0	0	0	0
18 CEMENT-STONE	0	0	0	0	0	0	0	0
19 METAL PRODS	0	0	0	0	0	0	0	0
20 MACH AND EQUIP	0	8.364	676.692	0	0	0	0	0
21 ELEC PRODS	0	0	0	0	0	0	0	0
22 TRANS EQUIP	0	0	0	0	0	0	0	0
23 OTHER MANF	0	0	0	0	0	0	0	0
24 RRCAD TRANS	0	0	0	0	0	0	0	0
25 LOCAL TRANS	0	0	0	0	0	0	0	0
26 TRUCKING	335.752	100.368	0	1826.433	215.271	88.937	0	0
27 OTHER TRANS	69.563	0	123.885	4.049	3.044	69.705	0	63.778
28 TELE AND TELE	137.353	150.552	2384.044	112.180	133.776	533.627	521.460	269.380
29 RADIO AND TV	117.759	10.445	2323.760	175.281	51.742	177.875	148.276	0
30 OTHER COMM	0	0	0	0	0	0	0	0
31 GAS UTIL	909.378	2362.105	170.280	17.528	10.711	66.703	59.141	154.625
32 ELEC UTIL	3008.552	6658.415	1238.464	70.112	312.144	522.509	354.812	608.471
33 WATER UTIL	1358.724	3630.101	162.548	17.528	16.914	66.703	29.916	131.763
34 AUTO SUPP W/S	0	0	2228.579	0	0	0	0	0
35 GROCERIES W/S	0.456	83.628	1457.102	0	200.925	0.257	0	2.560
36 FARM PRODS W/S	0	0	0	0	0	0	0	0
37 EQUIP SUPP W/S	0	0	0	0	0	0	0	0
38 OIL PRODS W/S	0	0	0	0	0	0	0	0
39 GENERAL W/S	102.448	272.945	574.401	17.344	1.261	184.432	219.839	128.485
40 LUMB YDS-HRDWARE	0.843	0.834	1.820	0.052	1.079	0.861	0.671	0.588
41 DEPT STORES	0	0	0	0	0	0	0	0
42 FOOD STORES	0.152	0	0.019	0	0.308	0.085	0	0
43 AUTO DEALERS	1319.671	2.264	2922.070	138.839	0.186	1468.343	0	66.041
44 FURNITURE	0	0	0	0	0	0	0	0
45 RESTAURANTS	97.914	0	52.212	152.377	114.576	123.232	58.956	183.237
46 OTHER RETAIL	21.530	0	2.818	0	43.665	12.142	0	0
47 BANKING	749.719	242.557	23.221	42.067	424.393	500.275	1341.009	2138.499
48 OTHER FIRE	281.216	426.566	859.184	171.775	350.585	112.548	217.206	1339.970
49 LEGAL SER	68.676	16.728	0	10.516	3.075	111.172	220.727	346.577
50 LODGING SER	343.644	0	611.992	20.002	15.040	344.342	0	233.886
51 PERSONAL SER	0	60.639	417.981	0	0	0	0	0
52 OTHER BUS SER	749.733	900.233	637.153	31.811	16.451	962.153	806.856	669.061
53 AMUSEMENT	0	0	0	0	0	0	0	0
54 MISC REPAIR	3.815	411.929	402.501	0	269.089	11.117	0	0
55 MEDICAL SERS	0	0	0	0	0	0	0	39.222
56 EDUCATION SERS	78.215	12.546	15.480	0	0	0	0	0
57 ALL OTHER SER	171.691	135.915	278.654	28.045	73.807	411.337	569.250	306.523

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58 HOUSEHOLDS	18879.731	10685.957	57288.464	4486.911	11608.459	22051.574	43504.154	19368.202
59 SAVINGS	2541.653	1922.844	6918.195	687.397	2851.667	2473.033	14272.618	4319.348
60 FEDERAL GOVT.	1165.608	446.909	2552.104	287.461	979.056	438.730	3181.962	610.504
61 STATE GOVT.	334.797	171.850	1103.162	171.775	459.682	198.053	135.543	753.128
62 LOCAL GOVT.	302.355	146.550	919.312	70.112	398.760	167.656	766.734	873.830
63 IMPORTS	7191.750	2106.536	20989.770	171.478	137.999	6196.361	9590.274	1283.730
TOTAL INPUTS	41293.392	32206.737	109410.610	9205.773	18719.422	37531.752	76707.991	30810.989

TRANSACTIONS TABLE : LOW ROLLING PLAINS, TEXAS, 1967 (THOUSAND DOLLARS)

	49	50	51	52	53	54	55	56
1 IRR COTTON	0	0	0	0	0	0	0	0
2 DRYLAND CROPS	0	0	0	0	0	0	0	0
3 LIVESTOCK	0	0	0	0	0	0	0	0
4 OTHER AGRI.	0	0	0	0	0	0	0	0
5 OIL AND GAS	0	0	0	0	0	0	0	0
6 LIQUIDS	0	0	0	0	0	0	0	0
7 OILFLD. SERS.	0	0	0	0	0	0	0	0
8 CONSTRUCTION	2.809	6.438	80.410	205.148	9.738	57.350	325.793	69.086
9 MEATS-DAIRIES	0	10.213	0	0	2.726	0	416.743	392.833
10 MILL AND FEEDS	0	0	0	0	0	0	0	65.516
11 FOOD PROCESS	0	0	0	0	0	0	207.923	356.292
12 BEVERAGES	0	2.318	0	0	151.817	0	0	0
13 TEXTILES	0	0	0	0.156	0	0	0	51.909
14 WOOD PAPER PROD	2.128	0	0	0	0	0	8.513	17.571
15 PRINT AND PUB	12.076	41.220	478.460	272.233	152.991	0.024	53.773	237.825
16 CHEM PRODS	5.121	1.801	0.031	24.234	2.272	37.518	460.952	438.856
17 GLASS PRODS	0	0	0	0	0	0	0	34.580
18 CEMENT-STONE	0	0	0	0.193	0	0	0	4.278
19 METAL PRODS	0	0	0	0	0	0	0	60.259
20 MACH AND EQUIP	0	0	0	0	0	0	0	483.009
21 ELEC PRODS	0	0	0	0	0	0	0	217.114
22 TRANS EQUIP	0	0	0	0	0	0	0	124.861
23 OTHER MANF	0	0	27.309	0	1.270	0	0	1433.411
24 RR/DAD TRANS	0	0	0	4.364	0	0	0	77.489
25 LOCAL TRANS	23.385	0	0	74.202	0	0	0	1.115
26 TRUCKING	0	12.876	86.479	18.914	0	19.116	3.636	186.882
27 OTHER TRANS	0.964	1.380	23.281	29.528	2.654	11.434	23.925	232.543
28 TELE AND TELE	99.421	256.233	84.951	270.621	27.944	148.154	771.151	1692.019
29 RADIO AND TV	0	0	392.398	6.363	25.604	52.571	0	192.431
30 OTHER COMM	0	0	0	0	0	0	0	0
31 GAS UTIL	3.069	159.019	115.345	69.276	31.332	2.389	54.688	413.774
32 ELEC UTIL	4.378	211.167	437.874	353.206	122.364	+0.623	390.784	1723.068
33 WATER UTIL	1.316	45.710	440.531	256.981	33.449	11.947	55.785	550.682
34 AUTO SUPP W/S	0	0	0	20.104	0	0	0	0
35 GROCERIES W/S	0.289	275.224	0.408	646.337	82.502	0.295	216.680	6.782
36 FARM PRODS W/S	0	0	0	0	0	0	0	0
37 EQUIP SUPP W/S	0	1.492	145.159	18.397	0.039	87.624	44.380	44.963
38 OIL PRODS W/S	0	0	0	86.273	0	0	0	0.032
39 GENERAL W/S	2.801	7.397	0.046	99.988	9.844	164.878	179.478	581.156
40 LUMB YDS-HRDWARE	0.187	0.258	0.031	2.688	0.155	0.846	0.647	1.797
41 DEPT STORES	0	0	0	0	0	2.002	0	0
42 FOOD STORES	0.048	0.067	0	0.624	5.226	0.098	0.944	0.006
43 AUTO DEALERS	1.024	82.140	419.453	804.501	45.216	235.306	10.989	0.483
44 FURNITURE	0	0	0	0	0	0	0	0
45 RESTAURANTS	36.742	51.970	905.395	300.598	99.907	80.307	36.011	0
46 OTHER RETAIL	6.828	9.610	0	88.461	4.316	13.919	2.784	0.893
47 BANKING	21.908	51.830	36.412	787.131	196.884	105.142	806.330	73.771
48 OTHER FIRE	81.295	65.667	559.838	669.280	106.275	107.531	658.512	1062.656
49 LEGAL SER	0	3.219	0	32.009	7.197	14.337	82.133	271.660
50 LODGING SER	0.803	6.821	115.008	145.870	13.114	56.484	4.205	0
51 PERSONAL SER	0	0	6.068	122.216	65.628	0	940.007	96.601
52 OTHER BUS SER	11.099	300.285	466.223	2100.304	88.299	150.597	53.020	2114.905
53 AMUSEMENT	3.682	0	0	0	202.812	0	0	114.672
54 MISC REPAIR	5.572	0	233.645	39.283	26.674	207.894	160.169	0
55 MEDICAL SERS	0	0	0	0	0	0	1205.138	0
56 EDUCATION SERS	0	0	54.618	11.639	1.270	0	38.527	1.338
57 ALL OTHER SER	48.486	68.886	206.336	298.266	20.746	9.558	241.668	106.641

58 HOUSEHOLDS	5269.325	3748.085	8287.119	9172.022	1955.875	3404.019	36147.019	49023.050
59 SAVINGS	1374.265	1130.658	1133.029	1796.896	465.167	560.314	4003.598	4038.019
60 FEDERAL GOVT.	498.326	204.085	473.359	627.903	122.788	84.610	1703.972	860.046
61 STATE GOVT.	12.362	188.634	22.757	375.685	61.394	96.013	95.524	0
62 LOCAL GOVT.	8.512	139.061	78.893	225.849	17.359	41.607	286.515	71.912
63 IMPORTS	116.667	1148.221	6506.112	8987.539	815.131	3058.476	8466.667	14283.795
TOTAL INPUTS	7654.888	8841.985	21816.998	29045.282	4977.979	8862.983	54158.584	81802.980

TRANSACTIONS TABLE 1 LOW ROLLING PLAINS, TEXAS, 1967 (THOUSAND DOLLARS)

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1	IRR COTTON	0
2	DRYLAND CROPS	0
3	LIVESTOCK	0
4	OTHER AGRI.	0
5	OIL AND GAS	0
6	LIQUIDS	0
7	OILFLD. SERS.	0
8	CONSTRUCTION	74.875
9	MEATS-DAIRIES	0
10	MILL AND FEEDS	0
11	FOOD PROCESS	0
12	BEVERAGES	315.282
13	TEXTILES	0
14	WOOD & PAPER PROD	0
15	PRINT AND PUB	67.159
16	CHEM PRODS	18.262
17	GLASS PRODS	0
18	CEMENT-STONE	0
19	METAL PRODS	0
20	MACH AND EQUIP	245.282
21	ELEC PRODS	0
22	TRANS EQUIP	0
23	OTHER MANF	0
24	ROAD TRANS	0
25	LOCAL TRANS	0
26	TRUCKING	18.073
27	OTHER TRANS	189.151
28	TELE AND TELE	144.587
29	RADIO AND TV	0
30	OTHER COMM	0
31	GAS UTIL	108.870
32	ELEC UTIL	293.683
33	WATER UTIL	160.305
34	AUTO SUPP W/S	0
35	GROCERIES W/S	0.497
36	FARM PRODS W/S	0
37	EQUIP SUPP W/S	0
38	OIL PRODS W/S	0
39	GENERAL W/S	79.459
40	LUMB YDS-HRDWARE	0.670
41	DEPT STORES	0
42	FOOD STORES	0.119
43	AUTO DEALERS	3259.166
44	FURNITURE	0
45	RESTAURANTS	1128.364
46	OTHER RETAIL	16.920
47	BANKING	69.711
48	OTHER FIRE	679.045
49	LEGAL SER	28.401
50	LODGING SER	955.064
51	PERSONAL SER	0
52	OTHER BUS SER	1133.091
53	AMUSEMENT	0
54	MISC REPAIR	49.056
55	MEDICAL SERS	0
56	EDUCATION SERS	25.819
57	ALL OTHER SER	2269.510

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58 HOUSEHOLDS	19284.075
59 SAVINGS	2440.225
60 FEDERAL GOVT.	430.670
61 STATE GOVT.	130.171
62 LOCAL GOVT.	391.887
63 IMPORTS	6970.235
TOTAL INPUTS	40977.684

TRANSACTIONS TABLE : LOW ROLLING PLAINS, TEXAS, 1967 (THOUSAND DOLLARS)

	HOUSEHOLDS	FED GOV DEF	FED GOV NON-DEF	STATE GOV	LOCAL GOV	EXPORT
1 IRR COTTON	1140.000	0	9710.000	2.600	0	15521.170
2 DRYLAND CROPS	2543.300	0	45040.000	0	0	72205.246
3 LIVESTOCK	2700.001	0	3530.000	0	0	79066.820
4 OTHER AGRI.	2271.498	0	0	0	0	2359.415
5 OIL AND GAS	0	0	0	0	0	417059.839
6 LIQUIDS	1098.506	0	0	0	0	17446.252
7 DILFLD. SERS.	0	0	0	0	0	0
8 CONSTRUCTION	12437.025	12348.682	11975.400	27615.698	10076.449	10451.651
9 MEATS-DAIRIES	23904.212	0	0	67.400	0	42631.285
10 MILL AND FEEDS	389.045	0	5.257	2.600	0	22160.371
11 FOOD PROCESS	2546.247	306.600	4.663	395.800	0	15239.723
12 BEVERAGES	12373.355	208.300	0	0	86.335	508.601
13 TEXTILES	30.835	0	0	80.600	0	32386.925
14 WOODC PAPER PROD	286.284	18.448	0	0	7.583	436.812
15 PRINT AND PUB	5897.193	1.550	9.152	0	116.496	1970.532
16 CHEM PRODS	1715.024	23.176	0	0	0	27616.901
17 GLASS PRODS	33.507	0	0	0	0	4955.421
18 CEMENT-STONE	1610.501	19.250	0	0	394.644	9156.502
19 METAL PRODS	4.703	0	0	0	123.228	12688.765
20 MACH AND EQUIP	6.127	0	0	0	4.794	10987.598
21 ELEC PRODS	9.005	5.300	1.300	4.500	39.000	2194.188
22 TRANS EQUIP	0.495	0	0	0	0.743	11842.527
23 OTHER MANF	1372.357	0.235	0.634	0	2.518	20212.406
24 RR/DAD TRANS	1740.623	241.000	80.000	0.700	0	0
25 LOCAL TRANS	3563.869	0	0	0	0	0
26 TRUCKING	11802.087	636.000	160.000	378.000	11.700	0
27 OTHER TRANS	51506.081	533.000	176.000	2.000	1.900	0
28 TELE AND TELE	10232.207	2709.750	688.592	883.420	343.552	0
29 RADIO AND TV	27.836	0	12.021	0	0	284.997
30 OTHER COMM	882.645	0	0	0	0	0
31 GAS UTIL	6491.428	1436.800	29.900	26.100	726.200	13421.315
32 ELEC UTIL	15324.941	823.400	170.800	229.900	2339.369	0
33 WATER UTIL	4770.991	1338.600	36.100	24.200	363.100	0
34 AUTO SUPP W/S	2381.583	0	0	0	0	4486.478
35 GROCERIES W/S	13438.991	0	0	0	0	9071.882
36 FARM PRODS W/S	228.208	0	0	0	0	49267.725
37 EQUIP SUPP W/S	1101.315	0	0	78.314	1659.583	12044.944
38 OIL PRODS W/S	8704.740	699.000	14.500	25.200	0	8953.692
39 GENERAL W/S	5229.286	366.200	75.900	142.500	5737.700	25230.674
40 LUMB YDS-HRDWARE	7088.583	0	0	0	0	0
41 DEPT STORES	26353.604	0	0	0	0	15651.871
42 FOOD STORES	32916.676	0	0	0	0	0
43 AUTO DEALERS	60876.487	9.887	0	0	699.000	22958.800
44 FURNITURE	9201.933	0	0	0	0	0
45 RESTAURANTS	14809.770	0	0	0	1.900	0
46 OTHER RETAIL	36067.496	0	0	2.900	0	0
47 BANKING	55733.672	0	0	0	0	0
48 OTHER FIRE	8076.236	350.300	.200	275.900	5.100	0
49 LEGAL SER	3356.588	1175.000	24.300	48.400	15.200	0
50 LODGING SER	5166.167	0	0	0	1.900	0
51 PERSONAL SER	19823.823	105.300	21.800	0	0	0
52 OTHER BUS SER	3996.729	680.400	138.800	275.800	112.600	2656.866
53 AMUSEMENT	4600.083	0	0	0	0	0
54 MISC REPAIR	4290.751	96.300	19.900	41.500	0	220.343
55 MEDICAL SERS	56369.063	137.300	7.700	15.000	0	328.184
56 EDUCATION SERS	61780.686	0	5475.200	0	0	14303.623
57 ALL OTHER SER	13968.025	40.100	8.200	1.500	2466.957	12264.476

58 HOUSEHOLDS	29466.576	123442.900	135497.700	23077.000	11328.300	80411.746
59 SAVINGS	57824.784	-60872.883	-91309.324	-17264.000	-17014.900	44451.250
60 FEDERAL GOVT.	218315.994	0	0	10.300	0	0
61 STATE GOVT.	10722.813	0	22365.500	0	0	0
62 LOCAL GOVT.	9198.510	0	3179.000	1318.800	0	0
63 IMPORTS	397504.904	25406.822	12754.071	29459.268	23455.049	0
TOTAL INPUTS	1357305.994	112286.717	159910.176	67237.200	43106.000	1145117.816

TRANSACTIONS TABLE - LOW ROLLING PLAINS, TEXAS, 1967 (THOUSAND DOLLARS)

	NET INV CHANGE	INVESTMENTS	TOTAL FINAL DEMAND	TOTAL OUTPUTS
1 IRR COTTON	-5470.000	0	20903.770	23900.000
2 DRYLAND CROPS	-23480.000	0	96308.546	113399.993
3 LIVESTOCK	1600.000	0	86896.821	110399.995
4 OTHER AGRI.	-268.339	0	4362.574	33944.986
5 OIL AND GAS	0	0	417059.839	484485.704
6 LIQUIDS	0	0	18544.758	22436.990
7 JILFLD. SERS.	0	0	0	51584.483
8 CONSTRUCTION	1708.800	101428.920	188052.625	204201.784
9 MEATS-DAIRIES	127.489	0	66730.386	67609.986
10 MILL AND FEEDS	-34.700	0	22522.573	33745.287
11 FOOD PROCESS	209.300	0	18772.333	24919.289
12 BEVERAGES	152.076	0	13328.667	13842.087
13 TEXTILES	-14.933	0	32483.427	33209.891
14 WOODC PAPER PROD	22.124	0	771.251	2534.488
15 PRINT AND PUB	676.613	0	8671.536	16048.787
16 CHEM PRODS	824.769	0	30179.870	42874.987
17 GLASS PRODS	-27.923	0	4961.005	5849.287
18 CEMENT-STONE	-4.355	2314.169	13490.711	24731.584
19 METAL PRODS	-52.357	2450.000	15214.339	25814.380
20 MACH AND EQUIP	-8.298	3000.224	13990.445	20232.590
21 ELEC PRODS	-42.754	540.900	2751.439	7045.189
22 TRANS EQUIP	-133.981	1191.235	12901.019	14406.780
23 OTHER MANF	892.696	334.379	22815.225	24915.786
24 RRAD TRANS	0	0	2062.323	6299.997
25 LOCAL TRANS	0	0	3563.869	3663.991
26 TRUCKING	0	0	12987.787	24864.989
27 OTHER TRANS	0	0	52218.981	53343.991
28 TELF AND TELE	0	14.872	14872.393	30906.994
29 RADIO AND TV	0	0	324.864	5170.289
30 OTHER COMM	0	0	882.645	1122.991
31 GAS UTIL	-44.545	0	22087.098	40495.486
32 ELEC UTIL	0	0	18889.410	47644.982
33 WATER UTIL	0	0	6532.991	15669.987
34 AUTO SUPP W/S	0	0	6868.061	10503.726
35 GROCERIES W/S	0	0	22510.873	25527.869
36 FARM PRODS W/S	0	0	49495.933	58429.686
37 EQUIP SUPP W/S	0	0	14884.156	16816.046
38 OIL PRODS W/S	0	0	18397.132	21867.787
39 GENERAL W/S	0	0	36782.260	46136.790
40 LUMB YDS-HRDWARE	0	0	7088.583	15626.721
41 DEPT STORES	0	0	42005.475	41293.392
42 FOOD STORES	0	0	32916.676	32206.737
43 AUTO DEALERS	0	0	84544.174	109420.610
44 FURNITURE	0	0	9201.933	9205.773
45 RESTAURANTS	0	0	14811.670	18719.422
46 OTHER RETAIL	0	0	36070.396	37531.752
47 BANKING	0	0	55733.672	76707.991
48 OTHER FIRE	0	0	8714.736	30810.989
49 LEGAL SER	0	0	4619.488	7654.888
50 LODGING SER	0	0	5168.067	8841.985
51 PERSONAL SER	0	0	19950.923	21816.988
52 OTHER BUS SER	46.611	0	7907.806	29045.282
53 AMUSEMENT	0	0	4600.083	4977.979
54 MISC REPAIR	0	0	4668.794	8862.983
55 MEDICAL SERS	0	0	56857.547	59158.584
56 EDUCATION SERS	0	0	81559.509	6102.980
57 ALL OTHER SER	0	0	28764.258	40977.684

58 HOUSEHOLDS	0	40719.180	443943.402	1357305.994
59 SAVINGS	23321.707	0	-60863.366	167039.962
60 FEDERAL GOVT.	0	0	218326.284	272196.867
61 STATE GOVT.	0	0	33088.313	67237.176
62 LOCAL GOVT.	0	0	13696.310	43105.973
63 IMPORTS	0	15046.100	503626.214	1142499.375
TOTAL INPUTS	0.000	167039.979	3052003.882	5496256.356

APPENDIX B

DIRECT INPUT REQUIREMENTS : LOW ROLLING PLAINS, TEXAS, 1967

	1	2	3	4	5	6	7	8
1 IRR COTTON	0.02298745	0.00976455	0.00835869	0.00892291	0	0	0	0
2 DRYLAND CROPS	0	0.02060582	0.08747192	0.05297186	0	0	0	0
3 LIVESTOCK	0	0	0.11778895	0	0	0	0	0
4 OTHER AGRI.	0.05966527	0.05480600	0.00553351	0.04179100	0	0	0	0
5 OIL AND GAS	0	0	0	0	0.06554234	0.22336080	0.00014200	0
6 LIQUIDS	0	0	0	0	0	0	0	0.00773312
7 OILFLD. SERS.	0	0	0	0	0.10022214	0.00024513	0.05859913	0
8 CONSTRUCTION	0.00815900	0.00676367	0.00535326	0.06417493	0.00180604	0.00243348	0.00396201	0.00612477
9 MEATS-DAIRIES	0	0	0	0	0	0	0	0
10 MILL AND FEEDS	0	0	0.03370199	0.12010625	0	0	0	0
11 FOOD PROCESS	0	0	0.04825997	0.00627963	0	0	0	0
12 BEVERAGES	0	0	0	0	0	0	0	0
13 TEXTILES	0	0	0.00000181	0	0.00000229	0	0.00000490	0.00312164
14 WOODC PAPER PROD	0.00059833	0.00053350	0	0	0	0	0	0.00250004
15 PRINT AND PUB	0	0	0.00002989	0	0.00002231	0.00000045	0.00000490	0.00000563
16 CHEM PRODS	0.01735983	0.03320899	0.00577899	0.00768278	0.00005880	0.02336058	0.00006775	0.00280780
17 GLASS PRODS	0	0.00105731	0	0	0	0	0	0.00077583
18 CEMENT-STONE	0	0	0	0	0	0	0.00000446	0.04574441
19 METAL PRODS	0	0	0.00048007	0	0	0	0	0.04987515
20 MACH AND EQUIP	0	0	0	0.00120551	0	0	0	0.01400561
21 ELEC PRODS	0	0	0	0	0	0	0	0.01737035
22 TRANS EQUIP	0	0	0	0	0	0	0	0.00574686
23 OTHER MANF	0	0	0.00002446	0	0	0	0	0.00161640
24 RRROAD TRANS	0	0	0	0	0	0	0	0.01081447
25 LOCAL TRANS	0	0	0	0	0	0	0	0
26 TRUCKING	0	0	0.00298913	0.03112153	0.00223742	0.00530824	0.00048999	0.00340354
27 OTHER TRANS	0	0	0	0	0	0	0	0.00020898
28 TELE AND TELE	0.00225941	0.00184303	0.00154891	0.00486658	0.00254517	0.00124348	0.00724101	0.00396464
29 RADIO AND TV	0	0	0	0	0	0	0	0.00000109
30 OTHER COMM	0	0	0	0	0	0	0	0.00079249
31 GAS UTIL	0.02928870	0	0.00019928	0.00536067	0.00015976	0	0.00076699	0.00067092
32 ELEC UTIL	0.01464435	0.00184303	0.00193841	0.03474802	0.00147827	0.00295940	0.00121000	0.00250450
33 WATER UTIL	0	0	0	0.00015808	0.00004004	0.00032709	0.00040799	0.00059799
34 AUTO SUPP W/S	0.00223013	0.00303792	0.00052535	0.00052370	0	0	0.00046539	0
35 GROCERIES W/S	0	0	0.00001178	0	0.00002753	0.00000562	0.00005905	0.00002572
36 FARM PRODS W/S	0.01155649	0.00539683	0.02551087	0.03331767	0	0	0	0
37 EQUIP SUPP W/S	0	0	0.00001268	0	0.000050519	0.00884232	0.01532969	0
38 DIL PRODS W/S	0.01012971	0.01287831	0.00330616	0.01198616	0	0	0.00478402	0
39 GENERAL W/S	0.02474059	0.01919577	0.01077265	0.01915514	0.00016255	0.00000744	0.00010625	0.00058796
40 LUMB YDS-HRDWARE	0.05930126	0.04470371	0.01617390	0.03382906	0.00003251	0.00000655	0.00018540	0.00006385
41 DFPT STORES	0	0	0	0	0	0	0.00088994	0
42 FOOD STORES	0	0	0	0	0.00000917	0.00000187	0.00001968	0.00000833
43 AUTO DEALERS	0.02461925	0.02909877	0.01041395	0.01774704	0.00157653	0.00020283	0.01240495	0.00541501
44 FURNITURE	0	0	0	0	0	0	0	0.00001795
45 RESTAURANTS	0	0	0	0	0	0	0	0.00005161
46 OTHER RETAIL	0	0	0.00000181	0	0.00129898	0.00026608	0.00278624	0.00117956
47 BANKING	0.01472803	0.00911816	0.01211051	0.01832014	0.00091086	0.00020502	0.01175301	0.02037942
48 OTHER FIRE	0.01702929	0.00500000	0.00606884	0.03359683	0.00517250	0.00004011	0.01067802	0.01340269
49 LEGAL SER	0	0	0	0	0.00023179	0	0.00179599	0.00221685
50 LODGING SER	0	0	0	0	0	0	0	0
51 PERSONAL SER	0	0	0	0	0	0	0.00106800	0
52 OTHER BUS SER	0.00066946	0.00052909	0.00050724	0.01206028	0.00340340	0.00026296	0.01518902	0.00258367
53 AMUSEMENT	0	0	0	0	0	0	0	0
54 MISC REPAIR	0.01092050	0.00063492	0.00048007	0.00222330	0.00027968	0	0.00508300	0.00000874
55 MEDICAL SERS	0	0	0	0	0	0.00012034	0.00083099	0
56 EDUCATION SERS	0	0	0	0	0	0	0	0.00000273
57 ALL OTHER SER	0	0	0	0.00855237	0.00472253	0.00008022	0.00581801	0.00824399

58 HOUSEHOLDS	0.25564854	0.36820108	0.20578805	0.21245141	0.27362067	0.27558189	0.38081655	0.29791455
59 SAVINGS	0.15380753	0.16207232	0.15270834	0.10968804	0.10489695	0.25703198	0.06733347	0.01808273
60 FEDERAL GOVT.	0.00589958	0.00795415	0.00486413	0.01216895	0.00596138	0.06828068	0.01117101	0.01012865
61 STATE GOVT.	0.00066946	0.00052909	0.00036232	0.00345356	0.04614751	0.00062397	0.01143402	0.00791836
62 LOCAL GOVT.	0.04008368	0.03205176	0.02290761	0.03248023	0.00907375	0.00490262	0.00433099	0.00879855
63 IMPORTS	0.21300418	0.16922223	0.20801449	0.05905635	0.36785193	0.12429885	0.36276616	0.42258285
TOTAL	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000

DIRECT INPUT REQUIREMENTS : LOW ROLLING PLAINS, TEXAS, 1967

	9	10	11	12	13	14	15	16
1 IRR COTTON	0	0.00337357	0	0	0	0	0	0
2 DRYLAND CROPS	0	0.07073355	0.03663026	0	0	0	0	0
3 LIVESTOCK	0.15529184	0	0	0	0	0	0	0
4 OTHER AGRI.	0.27757339	0.00033679	0.04519074	0	0	0	0	0
5 OIL AND GAS	0	0	0	0	0	0	0	0.00155135
6 LIQUIDS	0	0	0.00065411	0	0	0	0.00004679	0.01932817
7 DILFLD. SERS.	0	0	0	0	0	0	0	0
8 CONSTRUCTION	0.00282912	0.00598042	0.00163528	0	0	0	0.00613062	0.01757526
9 MEATS-DAIRIES	0	0	0.00229124	0	0	0	0	0
10 MILL AND FEEDS	0	0.09953408	0	0	0	0	0	0
11 FOOD PROCESS	0	0	0.00406236	0	0	0	0	0
12 BEVERAGES	0	0	0.00176626	0	0	0	0	0
13 TEXTILES	0	0	0	0.00025798	0	0	0	0
14 WOOD PAPER PROD	0.00773012	0	0.00588701	0	0	0.05026893	0.00055200	0
15 PRINT AND PUB	0	0.00324816	0.00000016	0	0	0	0.00912667	0.00043394
16 CHEM PRODS	0.00010108	0.00088000	0.00356615	0.00002037	0.00135494	0.00043204	0.00046976	0.08698225
17 GLASS PRODS	0	0	0	0	0	0	0	0.00168156
18 CEMENT-STONE	0.00001229	0	0	0.00000787	0	0	0	0
19 METAL PRODS	0	0	0	0	0	0.00132019	0	0
20 MACH AND EQUIP	0.00136493	0.00425179	0	0.00188736	0	0.00348946	0.00187192	0
21 ELEC PRODS	0	0.00249531	0	0	0	0	0	0
22 TRANS EQUIP	0	0	0	0	0	0	0	0
23 OTHER MANF	0	0	0	0.00408472	0	0	0	0
24 RRROAD TRANS	0.00068540	0.00156131	0	0	0.00009154	0	0	0
25 LOCAL TRANS	0	0	0	0	0	0	0	0
26 TRUCKING	0.00222111	0.00129645	0.00375460	0.00152116	0.00053963	0.00028290	0.01001496	0.01849743
27 OTHER TRANS	0	0	0	0.00016898	0	0	0	0
28 TELE AND TELE	0.00259337	0.00179830	0.00197542	0.00185926	0.00197867	0.00745042	0.00500748	0.00433957
29 RADIO AND TV	0	0	0.00261645	0	0	0	0	0
30 OTHER COMM	0	0	0	0	0	0.00009430	0	0
31 GAS UTIL	0.00043428	0.00521371	0.00400971	0.00233816	0.00215856	0.00122589	0.00182512	0.00558720
32 ELEC UTIL	0.00250651	0.01108261	0.01079284	0.00450727	0.00485674	0.00509255	0.00491389	0.00726878
33 WATER UTIL	0.00042188	0.00515794	0.00219127	0.00323961	0.00049464	0.00056579	0.00131032	0.00043394
34 AUTO SUPP W/S	0.00128048	0	0	0.00081989	0	0	0	0
35 GROCERIES W/S	0	0.00001443	0.00001200	0	0	0.00000868	0.00001421	0.00000182
36 FARM PRODS W/S	0	0.12144502	0	0	0	0	0	0
37 EQUIP SUPP W/S	0	0	0.00003170	0.00045708	0	0	0	0
38 OIL PRODS W/S	0.00120374	0	0	0.00264071	0	0	0	0.00083958
39 GENERAL W/S	0.00044702	0.00000581	0.01432352	0.00009233	0.00599214	0.00191163	0.00059232	0.00084781
40 LUMB YDS-HRDWARE	0.00000136	0.00000181	0.00014527	0.00000022	0.00001831	0.00049280	0.00001427	0.00000271
41 DEPT STORES	0	0	0	0.00040131	0	0.00003946	0	0
42 FOOD STORES	0	0.00000021	0.00000064	0	0	0	0.00000349	0
43 AUTO DEALERS	0.00134383	0.00303586	0.01022357	0.00180674	0	0.00439260	0.00211231	0.00515940
44 FURNITURE	0	0	0	0	0	0	0	0
45 RESTAURANTS	0	0.00098772	0.00071567	0	0	0.00063642	0.00027067	0.00013073
46 OTHER RETAIL	0	0.00003043	0.00009523	0	0	0	0.00049406	0
47 BANKING	0	0	0	0	0	0	0	0
48 OTHER FIRE	0.00171237	0.00143584	0.00281268	0	0.00040470	0.01131747	0.00706464	0.00694330
49 LEGAL SER	0.00019854	0.00002786	0.00045788	0	0	0.00075439	0.00042115	0.00016273
50 LOGGING SER	0	0.00228622	0.00217819	0	0	0.00232937	0.00046795	0.00195279
51 PERSONAL SER	0.00068246	0	0	0.00019715	0	0	0	0
52 OTHER BUS SER	0.00604292	0.01671451	0.00177244	0.03467801	0.00031479	0.00169728	0.00425870	0.00786547
53 AMUSEMENT	0	0	0	0	0.00170884	0	0	0
54 MISC REPAIR	0	0.00090611	0.00376768	0.00563412	0.00449700	0.00348946	0.00388428	0.00867914
55 MEDICAL SERS	0.00002480	0	0.00024856	0	0	0.00009430	0	0
56 EDUCATION SERS	0	0	0	0	0	0	0	0
57 ALL OTHER SER	0.00232038	0.00023698	0.00015045	0.00022533	0.00224850	0.00348946	0.00692619	0.00086790

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58 HOUSEHOLDS	0.10374450	0.13059527	0.23443951	0.38056313	0.75842657	0.27149310	0.45506604	0.21072701
59 SAVINGS	0.01685359	-0.01373291	0.04478792	0.07718128	0.05467793	0.05992335	0.06926972	0.06027925
60 FEDERAL GOVT.	0.00721654	0.00269048	0.01556132	0.06734154	0.03584116	0.04847093	0.03786037	0.01030648
61 STATE GOVT.	0.00172412	0.00610589	0.00279306	0.00450727	0.00247334	0.00513792	0.00725382	0.00477353
62 LOCAL GOVT.	0.00199433	0.00068206	0.00255758	0.00943709	0.00656561	0.00231842	0.00589665	0.00189854
63 IMPORTS	0.39953370	0.50958541	0.52590108	0.39912406	0.11535639	0.51128038	0.35685762	0.5146237
TOTAL	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000

DIRECT INPUT REQUIREMENTS : LOW ROLLING PLAINS, TEXAS, 1967

	17	18	19	20	21	22	23	24
1 IRR COTTON	0	0	0	0	0	0	0	0
2 DRYLAND CROPS	0	0	0	0	0	0	0	0
3 LIVESTOCK	0	0	0	0	0	0	0	0
4 OTHER AGRI.	0	0	0	0	0	0	0	0
5 OIL AND GAS	0	0	0	0	0	0	0	0
6 LIQUIDS	0	0	0	0	0	0	0	0
7 OILFLD. SERS.	0	0	0	0	0	0	0	0
8 CONSTRUCTION	0.00571095	0.01700756	0.00226397	0.00001784	0.00555187	0.00063824	0.00025791	0.08894004
9 MEATS-DAIRIES	0	0	0	0	0	0	0	0
10 MILL AND FEEDS	0	0	0	0	0	0	0	0
11 FOOD PROCESS	0	0	0	0	0	0	0	0.00166000
12 BEVERAGES	0	0	0	0	0	0	0	0
13 TEXTILES	0.00001402	0	0.00002692	0.00030342	0.00072475	0.00013376	0	0
14 WOOD& PAPER PROD	0	0	0.00316238	0.00004458	0.00842036	0.00002964	0.00169086	0
15 PRINT AND PUB	0.00001402	0.00048028	0.00076364	0.00096384	0.00166553	0.00002992	0.00005731	0.00138000
16 CHEM PRODS	0.00259690	0.00038307	0.00071309	0.00067485	0.00001462	0.00004317	0.00251656	0.02889239
17 GLASS PRODS	0	0.00113005	0.00377328	0.00785357	0.02146756	0	0.00186284	0
18 CEMENT-STONE	0	0.05201179	0	0	0	0	0	0
19 METAL PRODS	0	0	0.00326121	0.00509589	0	0.00044528	0.00008597	0.00882699
20 MACH AND EQUIP	0	0.00002822	0.00010781	0.00005353	0.01548376	0.00189987	0.00816779	0.00543000
21 ELEC PRODS	0	0	0	0	0	0	0.00014328	0.00320000
22 TRANS EQUIP	0	0	0.00179679	0	0	0.00519498	0	0.00385000
23 OTHER MANF	0	0	0	0	0	0	0	0
24 ROAD TRAN.	0	0.00002519	0.00003626	0.00004438	0	0.00001673	0	0.04629002
25 LOCAL TRANS	0	0	0	0	0	0	0.00005731	0
26 TRUCKING	0.10669403	0.00884278	0.00362058	0.00440888	0.00481165	0.01876151	0.00802451	0.00756000
27 OTHER TRANS	0	0	0.00025153	0.00017847	0	0.00074208	0	0.01068001
28 TELE AND TELE	0.01270582	0.00214713	0.00395299	0.00556889	0.00831248	0.00513564	0.00389761	0
29 RADIO AND TV	0	0.00002822	0.00026950	0	0	0	0	0.01042000
30 OTHER COMM	0	0.00155384	0	0	0	0	0	0
31 GAS UTIL	0.00509105	0.08472712	0.00044917	0.00182952	0.00069395	0.00059368	0.00169489	0.00119000
32 ELEC UTIL	0.01863817	0.00166682	0.00559707	0.00404278	0.00289928	0.00320606	0.01134895	0.00251000
33 WATER UTIL	0.00252338	0.00098978	0.00035035	0.00039263	0.00092531	0.00043042	0.00151892	0.00322000
34 AUTO SUPP W/S	0	0.00002491	0	0	0.00009964	0	0	0.00042333
35 GROCERIES W/S	0.00016942	0.00000206	0.00000081	0.00000405	0	0.00000361	0.00000036	0
36 FARM PRODS W/S	0	0	0	0	0	0	0	0
37 EQUIP SUPP W/S	0	0.00029768	0.00056608	0.00076169	0.00624014	0.00025335	0	0
38 OIL PRODS W/S	0	0	0.00002154	0	0	0.00051448	0	0
39 GENERAL W/S	0.01091142	0.00156901	0.00236054	0.00283019	0.00006473	0.00015215	0.00225740	0.00306206
40 LUMB YDS-HRDWARE	0.00023011	0.00000493	0.00046699	0.00008951	0.00000014	0.00049206	0.00017403	0.00000921
41 DEPT STORES	0	0.00005916	0	0	0	0.00411292	0	0
42 FOOD STORES	0.00005642	0	0	0	0	0.00000090	0	0
43 AUTO DEALERS	0.01034571	0.00339630	0.00110911	0.00226066	0.00004003	0.00130328	0.00024828	0
44 FURNITURE	0	0	0	0.00000919	0	0	0	0
45 RESTAURANTS	0	0.00014977	0.00006059	0.00029250	0	0.00005720	0.00002761	0
46 OTHER RETAIL	0.00799448	0	0	0	0	0.00013508	0	0
47 BANKING	0	0	0	0	0	0	0	0.00423000
48 OTHER FIRE	0.00008839	0.01107466	0.00137454	0.00318605	0.00473458	0.00228580	0.00329578	0.02297001
49 LEGAL SER	0	0.00022599	0.00033237	0.00046405	0	0.00102410	0.00447078	0
50 LODGING SER	0	0.00042375	0.00046714	0.00090137	0.00024669	0.00001478	0.00008597	0
51 PERSONAL SER	0	0	0.00003551	0	0	0	0	0.00826000
52 OTHER BUS SER	0	0.00146909	0.00198542	0.00367689	0.00539773	0.00020775	0.01120567	0.00747000
53 AMUSEMENT	0	0	0	0	0	0	0	0
54 MISC REPAIR	0.00721609	0.00056503	0.00057495	0.00363226	0	0.00653088	0.00240735	0
55 MEDICAL SERS	0	0	0.00011676	0	0	0	0	0
56 EDUCATION SERS	0	0	0.00013473	0	0	0	0	0
57 ALL OTHER SER	0.00132803	0.00276865	0.00097926	0.00276658	0	0.01185949	0.00154757	0

59 HOUSEHOLDS	0.33359673	0.36155634	0.31156042	0.32760260	0.21954358	0.32234913	0.37450149	0.46095958
59 SAVINGS	0.08875218	0.11135057	0.07013757	0.05656201	0.03206812	0.04318911	0.07300966	0.16054071
60 FEDERAL GOVT.	0.04139359	0.01248727	0.03003558	0.03747400	0.01037190	0.03911124	0.01625459	0.06000003
61 STATE GOVT.	0.00367446	0.00477454	0.00174612	0.00329310	0.00120976	0.00103896	0.00122798	0.00175000
62 LOCAL GOVT.	0.00455987	0.00844726	0.00446003	0.00480136	0.00169662	0.00197407	0.01100451	0.01895001
63 IMPORTS	0.33569476	0.30833217	0.54107691	0.51791906	0.64731521	0.52608869	0.45704627	0.02732557
TOTAL	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000

DIRECT INPUT REQUIREMENTS : LOW ROLLING PLAINS, TEXAS, 1967

	25	26	27	28	29	30	31	32
1 IRR COTTON	0	0	0	0	0	0	0	0
2 DRYLAND CROPS	0	0	0	0	0	0	0	0
3 LIVESTOCK	0	0	0	0	0	0	0	0
4 OTHER AGR1.	0	0	0	0	0	0	0	0
5 OIL AND GAS	0	0	0.00608899	0	0	0	0.74727724	0
6 LIQUIDS	0	0.01638046	0.01987253	0	0	0	0	0
7 OILFLD. SERS.	0	0	0	0	0	0	0	0
8 CONSTRUCTION	0.00075928	0.02274455	0.01111132	0	0.01071584	0.00056278	0.00068598	0.00180598
9 MEATS-DAIRIES	0	0	0	0	0	0	0	0
10 MILL AND FELDS	0	0	0	0	0	0	0	0
11 FOOD PROCESS	0	0	0	0	0	0	0	0
12 BEVERAGES	0	0	0	0	0	0	0	0
13 TEXTILES	0	0	0	0	0	0	0.00003499	0.00011898
14 WOOD PAPER PROD	0	0	0.00229100	0	0	0	0	0.00000598
15 PRINT AND PUB	0	0	0.00091932	0.00167797	0	0	0.00019200	0.00146399
16 CHEM PRODS	0.00196425	0.00039147	0.00606702	0	0.01714488	0.01295736	0.00030598	0.00177498
17 GLASS PRODS	0	0	0.00008171	0	0	0	0	0.00001198
18 CEMENT-STONE	0.00022707	0.00004774	0.00147863	0	0	0	0	0.00011699
19 METAL PRODS	0	0	0	0	0	0	0	0.00000500
20 MACH AND EQUIP	0	0	0.01563899	0	0	0	0	0
21 ELEC PRODS	0	0	0.00496365	0	0.01425568	0.05183123	0	0.00007000
22 TRANS EQUIP	0	0	0.00022366	0	0.00868888	0.00450671	0	0
23 OTHER MANF	0	0	0.00359600	0	0.00902483	0	0	0.00000598
24 RRROAD TRANS	0	0	0	0.00101899	0	0	0.00011498	0.00271800
25 LOCAL TRANS	0	0	0	0	0	0	0	0
26 TRUCKING	0	0	0	0.00110600	0	0	0.00038999	0.00162598
27 OTHER TRANS	0	0	0	0.00066399	0	0	0	0.00030700
28 TELE AND TELE	0.00704996	0.01643451	0.00572533	0	0.02986390	0.04788729	0.00096300	0.00309500
29 RADIO AND TV	0	0	0	0	0	0.13352200	0.00021000	0.00222800
30 OTHER COMM	0	0	0	0	0	0.03549272	0	0
31 GAS UTIL	0.00229941	0.00277362	0.00428365	0.00098800	0.00072588	0.00180233	0.01263400	0.13878104
32 ELEC UTIL	0.00889440	0.05124820	0.00769200	0.00804799	0.01471098	0.00676052	0.00037898	0
33 WATER UTIL	0.00147544	0.00098544	0.00001166	0.00095897	0.00272287	0.03650697	0.00009700	0.00260099
34 AUTO SUPP W/S	0.02364962	0.00497177	0.00984026	0	0	0	0.00000398	0.00029699
35 GROCERIES W/S	0	0	0	0	0	0	0	0
36 FARM PRODS W/S	0	0	0	0	0	0	0	0
37 EQUIP SUPP W/S	0	0	0	0	0	0	0.00000699	0.00089099
38 OIL PRODS W/S	0.00233025	0.00142807	0.00764322	0	0	0	0.00007198	0.00050599
39 GENERAL W/S	0.00868698	0.00173131	0.00047186	0	0	0.00957621	0.00094899	0.00258099
40 LUMB YDS-HRDWARE	0.02012368	0.00000527	0.00000142	0	0	0	0.00000398	0.00024099
41 DEPT STORES	0	0	0	0	0	0	0	0
42 FOOD STORES	0	0	0	0	0	0	0	0
43 AUTO DEALERS	0	0	0	0	0	0	0.00120199	0.01184899
44 FURNITURE	0	0	0	0	0	0	0	0
45 RESTAURANTS	0	0	0	0	0	0	0	0
46 OTHER RETAIL	0	0	0	0	0	0	0	0
47 BANKING	0	0	0	0	0	0	0.00144698	0.00421499
48 OTHER FIRE	0.04149191	0.02160001	0.00691615	0.01331799	0.01951786	0.05859174	0.00377998	0.00775498
49 LEGAL SER	0.01219626	0.00530545	0.00329867	0	0.01847595	0.00112646	0.00144300	0.00216199
50 LODGING SER	0	0	0	0	0	0	0	0
51 PERSONAL SER	0	0	0	0	0	0	0	0
52 OTHER BUS SER	0.02593483	0.00095178	0.01854957	0.00371699	0.00451193	0	0.00144199	0.00143098
53 AMUSEMENT	0	0	0	0	0	0	0	0
54 MISC REPAIR	0	0	0	0	0	0.00563317	0.00126298	0.00120399
55 MEDICAL SERS	0	0	0	0	0	0	0	0
56 EDUCATION SERS	0	0	0	0	0	0	0	0
57 ALL OTHER SER	0.00378740	0.01007815	0.00070199	0	0.02993798	0.01915510	0.00118998	0.00126399

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58 HOUSEHOLDS	0.52626821	0.42454316	0.44717192	0.30219005	0.51605626	0.42829907	0.08810909	0.35433645
59 SAVINGS	0.08768635	0.09906335	0.15520715	0.15789902	0.04044358	0.08662670	0.05071291	0.21612574
60 FEDERAL GOVT.	0.04331261	0.04835454	0.07763868	0.17737603	0.02865101	0.03593261	0.02129099	0.14743204
61 STATE GOVT.	0.01225085	0.01214817	0.00745199	0.02372398	0.00052086	0.00322799	0.00593298	0.01773801
62 LOCAL GOVT.	0.00678195	0.02639635	0.02152700	0.04367300	0.01107598	0.01718357	0.01476500	0.04884202
63 IMPORTS	0.16282928	0.23241663	0.15353465	0.26364104	0.22295485	0.00281748	0.04309708	0.02439401
TOTAL	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000

DIRECT INPUT REQUIREMENTS - LOW ROLLING PLAINS, TEXAS, 1967

	33	34	35	36	37	38	39	40
1 IRR COTTON	0	0	0	0	0	0	0	0
2 DRYLAND CROPS	0	0	0	0	0	0	0	0
3 LIVESTOCK	0	0	0	0	0	0	0	0
4 OTHER AGRI.	0	0	0	0.00013195	0	0	0	0
5 OIL AND GAS	0	0	0	0	0	0	0	0
6 LIQUIDS	0	0	0	0	0	0	0	0
7 OILFLD. SERS.	0	0	0	0	0	0	0	0
8 CONSTRUCTION	0.04929002	0.00489655	0	0.04907394	0.03909944	0	0	0
9 MEATS-DAIRIES	0	0	0	0	0	0	0	0
10 MILL AND FEEDS	0	0	0	0.00001195	0	0	0	0
11 FOOD PROCESS	0	0	0	0	0	0	0	0
12 BEVERAGES	0	0	0	0	0	0	0	0
13 TEXTILES	0.00064997	0	0.00000194	0	0	0	0.00000464	0
14 WOOD PAPER PROD	0.00106954	0	0	0	0	0	0	0
15 PRINT AND PUB	0.00070000	0.00027200	0.00000196	0.00000002	0.00466715	0.00623497	0.00249101	0.00000051
16 CHEM PRODS	0.01651801	0.00022763	0.00002593	0.00207229	0.00003592	0.00037461	0.00008024	0.00060429
17 GLASS PRODS	0.00104997	0	0	0	0	0	0	0
18 CEMENT-STONE	0.03325000	0	0	0	0	0	0	0.00002080
19 METAL PRODS	0.00300996	0	0	0	0	0	0	0
20 MACH AND EQUIP	0.00074997	0.01822629	0	0.00002990	0	0	0.00453452	0
21 ELEC PRODS	0.00137996	0	0	0	0	0	0	0
22 TRANS EQUIP	0	0	0	0	0	0	0	0
23 OTHER MANF	0.00066994	0	0	0	0	0	0	0
24 ROAD TRANS	0	0	0	0.01345975	0.03119146	0.00266314	0	0.00103937
25 LOCAL TRANS	0	0	0	0	0	0	0	0
26 TRUCKING	0	0	0.00620729	0.00700344	0.00083575	0	0.01264169	0.09624930
27 OTHER TRANS	0	0.00022440	0	0	0.00265033	0.00158269	0.00039675	0.00051450
28 TELE AND TELE	0.00248998	0.00652883	0.00869023	0.01776576	0.01470471	0.00575536	0.02267262	0.00696403
29 RADIO AND TV	0	0	0	0	0.01496541	0	0.00142156	0.02877776
30 OTHER COMM	0	0	0	0	0	0	0	0
31 GAS UTIL	0.08298003	0.01510740	0.00206907	0.00157591	0.01278475	0.00032463	0.00692712	0.00093545
32 ELEC UTIL	0.06280005	0.04200281	0.02110490	0.01503058	0.03594329	0.01438847	0.02217111	0.00426155
33 WATER UTIL	0	0.02259589	0.00017867	0.00243814	0.01954580	0.00287766	0.01026966	0.00072754
34 AUTO SUPP W/S	0	0.00038929	0	0	0	0	0	0.00216962
35 GROCERIES W/S	0	0	0.00002393	0.00000027	0.00001974	0	0.00035999	0.00000640
36 FARM PRODS W/S	0	0	0	0	0	0	0	0
37 EQUIP SUPP W/S	0.01195119	0	0	0	0.00001647	0	0.00069608	0
38 OIL PRODS W/S	0.00143657	0	0	0	0	0	0	0
39 GENERAL W/S	0.00198143	0.00100688	0.00002993	0.00863458	0.00015140	0.00167045	0.00170627	0.00268706
40 LUMB YDS-HROWARE	0.00000600	0.00000305	0.00002793	0.00002670	0.00002319	0.00000503	0.00005841	0.00001555
41 DEPT STORES	0	0	0	0	0	0	0	0
42 FOOD STORES	0	0	0.00000795	0.00000009	0.00000654	0	0.00015933	0.00000211
43 AUTO DEALERS	0	0.00971503	0	0.00611764	0.06895943	0.04427778	0.02538365	0.03719552
44 FURNITURE	0	0	0	0	0	0	0	0
45 RESTAURANTS	0	0.00844596	0	0	0.00459537	0.00377372	0.00192701	0.00335157
46 OTHER RETAIL	0	0	0.00112994	0.00001306	0.00093185	0	0.00232626	0.00030269
47 BANKING	0	0	0	0.01345864	0.05834879	0.00719424	0.03909310	0.01153742
48 OTHER FIRE	0.00623995	0.00027200	0.02524312	0.00548540	0.00796614	0.01918466	0.00573859	0.02365951
49 LEGAL SER	0	0.00108809	0.00827641	0.000005980	0.00214170	0	0.00164890	0.00135121
50 LODGING SER	0	0.00110865	0	0	0.01309285	0.00781867	0.00196004	0.00254161
51 PERSONAL SER	0	0	0	0	0	0	0	0
52 OTHER BUS SER	0	0.00316221	0	0.01001444	0.03788405	0.01846424	0.01343121	0.02180125
53 AMUSEMENT	0	0	0	0	0	0	0	0
54 MISC REPAIR	0	0.00190418	0	0	0.00968997	0.00095922	0.00199242	0.00051969
55 MEDICAL SERS	0	0	0	0	0	0	0	0
56 EDUCATION SERS	0	0	0	0	0	0	0	0
57 ALL OTHER SER	0	0.01224156	0	0.01060783	0.00036560	0	0.00535898	0.00291034

58 HOUSEHOLDS	0.30054020	0.55166119	0.79594583	0.56629158	0.31199956	0.56379537	0.60162996	0.57085680
59 SAVINGS	0.27498019	0.08218074	0.05238910	0.08220773	0.08604704	0.18312251	0.06329643	0.11941488
60 FEDERAL GOVT.	0	0.05396952	0.04945168	0.00021338	0.01186480	0.01437466	0.01742757	0.01466123
61 STATE GOVT.	0	0.01535493	0	0.00751060	0.00674279	0.00683549	0.00664214	0.00642803
62 LOCAL GOVT.	0	0.01337402	0.00268981	0.01578727	0.00252223	0.00564831	0.01241257	0.00531167
63 IMPORTS	0.14625666	0.13404091	0.02650437	0.16497734	0.20020646	0.08867413	0.11314019	0.03314176
TOTAL	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000

DIRECT INPUT REQUIREMENTS : LOW ROLLING PLAINS, TEXAS, 1967

	41	42	43	44	45	46	47	48
1 IRR COTTON	0	0	0	0	0	0	0	0
2 DRYLAND CROPS	0	0	0	0	0	0	0	0
3 LIVESTOCK	0	0	0	0	0	0	0	0
4 OTHER AGRI.	0	0	0	0	0	0	0	0
5 OIL AND GAS	0	0	0	0	0	0	0	0
6 LIQUIDS	0	0	0	0	0	0	0	0
7 OILFLD. SERS.	0	0	0	0	0	0	0	0
8 CONSTRUCTION	0.00397303	0	0	0	0	0	0.00429599	0.01994701
9 MEATS-DAIRIES	0	0	0	0	0	0	0	0
10 MILL AND FEEDS	0	0	0	0	0	0	0	0
11 FOOD PROCESS	0	0	0	0	0	0	0	0
12 BEVERAGES	0	0	0	0	0	0	0	0
13 TEXTILES	0.00000092	0	0	0	0.00000411	0.00000056	0	0
14 WOOD & PAPER PROD	0	0	0	0	0	0	0.00026649	0
15 PRINT AND PUB	0.01848022	0.03655257	0.01768664	0.05331307	0.00131836	0.00533231	0.00402693	0.00095099
16 CHEM PRODS	0.00056874	0.00191631	0.00118479	0.00042495	0.00005353	0.00111474	0.00011804	0.00094788
17 GLASS PRODS	0	0	0	0	0	0	0	0
18 CEMENT-STONE	0	0	0	0	0	0	0	0
19 METAL PRODS	0	0	0	0	0	0	0	0
20 MACH AND EQUIP	0	0.00025970	0.00618488	0	0	0	0	0
21 ELEC PRODS	0	0	0	0	0	0	0	0
22 TRANS EQUIP	0	0	0	0	0	0	0	0
23 OTHER MANF	0	0	0	0	0	0	0	0
24 ROAD TRANS	0	0	0	0	0	0	0	0
25 LOCAL TRANS	0	0	0	0	0	0	0	0
26 TRUCKING	0.00813089	0.00311637	0	0.19840083	0.01149987	0.00236965	0	0
27 OTHER TRANS	0.00169460	0	0.00113229	0.00043993	0.00016261	0.00185723	0	0.00206998
28 TELE AND TELE	0.00332627	0.00467455	0.02178988	0.01218583	0.00714637	0.01421801	0.00679799	0.00874298
29 RADIO AND TV	0.00289176	0.00032431	0.02123889	0.01904033	0.00276408	0.00473937	0.00193299	0
30 OTHER COMM	0	0	0	0	0	0	0	0
31 GAS UTIL	0.02202236	0.07334195	0.00155641	0.00190402	0.00057219	0.00177724	0.00077099	0.00501850
32 FLEC UTIL	0.07285795	0.20673982	0.01131941	0.00761609	0.01667487	0.01392179	0.00462549	0.01974851
33 WATER UTIL	0.03290415	0.11271247	0.00148567	0.00190402	0.00090355	0.00177724	0.00039000	0.00427649
34 AUTO SUPP W/S	0	0	0.02036895	0	0	0	0	0
35 GROCERIES W/S	0.00001104	0.00259560	0.01331774	0	0.01073350	0.00000685	0	0.00008309
36 FARM PRODS W/S	0	0	0	0	0	0	0	0
37 EQUIP SUPP W/S	0	0	0	0	0	0	0	0
38 OIL PRODS W/S	0	0	0	0	0	0	0	0
39 GENERAL W/S	0.00248098	0.00847478	0.00524996	0.00188404	0.00066736	0.00491403	0.00286592	0.00417010
40 LUMB YDS-HRDWARE	0.00002041	0.00002590	0.00001663	0.00000565	0.00005764	0.00002294	0.00000875	0.00001908
41 DEPT STORES	0	0	0	0	0	0	0	0
42 FOOD STORES	0.00000368	0	0.00000017	0	0.00001645	0.00000226	0	0
43 AUTO DEALERS	0.03195841	0.00007030	0.02670737	0.01508173	0.00000994	0.03912269	0	0.00214342
44 FURNITURE	0	0	0	0	0	0	0	0
45 RESTAURANTS	0.00237118	0	0.00051861	0.01655233	0.00612070	0.00328341	0.00076858	0.00594713
46 OTHER RETAIL	0.00052139	0	0.00002576	0	0.00233260	0.00032351	0	0
47 BANKING	0.01815591	0.00753125	0.00021224	0.00456963	0.02267127	0.01332938	0.01748200	0.06940702
48 OTHER FIRE	0.00681019	0.01324462	0.00785284	0.01865949	0.01872841	0.00299874	0.00283160	0.04349000
49 LEGAL SER	0.00166312	0.00051939	0	0.00114753	0.00016427	0.00296208	0.00287750	0.01124849
50 LODGINS SER	0.00932201	0	0.00559353	0.00217277	0.00080374	0.00917468	0	0.00759099
51 PERSONAL SER	0	0.00188280	0.00382030	0	0	0	0	0
52 OTHER BUS SER	0.01815625	0.02795170	0.00582350	0.00345555	0.00797432	0.02563511	0.01051854	0.02171501
53 AMUSEMENT	0	0	0	0	0	0	0	0
54 MISC REPAIR	0.0009239	0.01279015	0.00367491	0	0.0143745	0.00029620	0	0
55 MEDICAL SERS	0	0	0	0	0	0	0	0.00127299
56 EDUCATION SERS	0.00189413	0.00038955	0.00014149	0	0	0	0	0
57 ALL OTHER SER	0.00415783	0.00422008	0.00254686	0.00304646	0.00394780	0.01095971	0.00742100	0.00994850

58 HOUSEHOLDS	0.45720950	0.33179260	0.52360977	0.48740187	0.62012914	0.58754449	0.56713979	0.49878964
59 SAVINGS	0.06155107	0.05970316	0.06323148	0.07467021	0.15233734	0.06589175	0.18606429	0.14018855
60 FEDERAL GOVT.	0.02822747	0.01387626	0.02332193	0.03122617	0.05230161	0.01168957	0.04148149	0.01981449
61 STATE GOVT.	0.00510776	0.00533584	0.01008277	0.01865949	0.02455642	0.00527695	0.00176700	0.02444349
62 LOCAL GOVT.	0.00732212	0.00455029	0.00840240	0.00761609	0.02130194	0.00436047	0.00999549	0.02836099
63 IMPORTS	0.17316225	0.06540669	0.19184401	0.01862722	0.00737192	0.16509650	0.12502314	0.04166468
TOTAL	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000

DIRECT INPUT REQUIREMENTS : LOW ROLLING PLAINS, TEXAS, 1967

	49	50	51	52	53	54	55	56
1 IRR COTTON	0	0	0	0	0	0	0	0
2 DRYLAND CROPS	C	0	0	0	0	0	0	0
3 LIVESTOCK	0	0	0	0	0	0	0	0
4 OTHER AGRI.	0	0	0	0	0	0	0	0
5 OIL AND GAS	0	0	0	0	0	0	0	0
6 LIQUIDS	0	0	0	0	0	0	0	0
7 OILFLD. SERS.	0	0	0	0	0	0	0	0
8 CONSTRUCTION	0.00036696	0.00072812	0.00368566	0.00706304	0.00195622	0.00647073	0.00560180	0.00084454
9 MEATS-DAIRIES	0	0.00115506	0	0	0.00054761	0	0.00716563	0.00480218
10 MILL AND FEEDS	0	0	0	0	0	0	0	0.00080090
11 FOOD PROCESS	0	0	0	0	0	0	0.00357510	0.00435549
12 BEVERAGES	0	0.00026216	0	0	0.03049772	0	0	0
13 TEXTILES	0	0	0	0.00000537	0	0	0	0.00063456
14 WOOD & PAPER PRDD	0.00027799	0	0	0	0	0	0.00014638	0.00021480
15 PRINT AND PUB	0.00157755	0.00466185	0.02193062	0.00937271	0.03073356	0.00000271	0.00092459	0.00290729
16 CHEM PRDGS	0.00066898	0.00020369	0.00000142	0.00083435	0.00045641	0.00423311	0.00792578	0.00536479
17 GLASS PRDGS	0	0	0	0	0	0	0	0.00042272
18 CEMENT-STONE	0	0	0	0.00000664	0	0	0	0.00005230
19 METAL PRDGS	0	0	0	0	0	0	0	0.00073664
20 MACH AND EQUIP	0	0	0	0	0	0	0	0.00590454
21 ELEC PRDGS	0	0	0	0	0	0	0	0.00265411
22 TRANS EQUIP	0	0	0	0	0	0	0	0.00152636
23 OTHER MANF	0	0	0.00125173	0	0.00025512	0	0	0.01752272
24 RR/DAD TRANS	0	0	0	0.00015025	0	0	0	0.00094726
25 LOCAL TRANS	0.00305491	0	0	0.00255470	0	0	0	0.00001363
26 TRUCKING	0	0.00145623	0.00396384	0.00065119	0	0.00215684	0.00006252	0.00228454
27 OTHER TRANS	0.00012593	0.00015607	0.00106710	0.00101662	0.00053315	0.00129008	0.00041139	0.00284272
28 TELE AND TELE	0.01298791	0.02897913	0.00389426	0.00931721	0.00561352	0.01671604	0.01325945	0.02056182
29 RADIO AND TV	0	0	0.01798589	0.00021907	0.00514345	0.00593152	0	0.00235726
30 OTHER COMM	0	0	0	0	0	0	0	0
31 GAS UTIL	0.00040092	0.01798454	0.00528694	0.00239510	0.00629412	0.00026955	0.00094033	0.00505818
32 ELEC UTIL	0.00057192	0.0238231	0.02007032	0.01216053	0.02458106	0.00458345	0.00671928	0.02106363
33 WATER UTIL	0.00017192	0.00516965	0.02019211	0.000884760	0.00671939	0.00134797	0.00095919	0.00673181
34 AUTO SUPP W/S	0	0	0	0.00069216	0	0	0	0
35 GROCERIES W/S	0.00003775	0.03112695	0.00001870	0.02225274	0.01657339	0.00003328	0.00372568	0.00006291
36 FARM PRDGS W/S	0	0	0	0	0	0	0	0
37 EQUIP SUPP W/S	0	0.00016874	0.00665348	0.00063339	0.00000783	0.00988651	0.00076309	0.00054965
38 OIL PRDGS W/S	0	0	0	0.00297029	0	0	0	0.00000039
39 GENERAL W/S	0.00036591	0.00083658	0.00000211	0.00344249	0.00197751	0.01860299	0.00308601	0.00710434
40 LUMB YDS-HRWARE	0.00002443	0.00002918	0.00000142	0.00009255	0.00003114	0.00009545	0.00001112	0.00002197
41 DEPT STORES	0	0	0	0	0	0.00022588	0	0
42 FOOD STORES	0.00000627	0.00000758	0	0.00002148	0.00104982	0.00001106	0.00001623	0.00000007
43 AUTO DEALERS	0.00013377	0.00928977	0.01922598	0.02769816	0.00908320	0.02654930	0.00018895	0.00000590
44 FURNITURE	0	0	0	0	0	0	0	0
45 RESTAURANTS	0.00479981	0.00587764	0.04149954	0.01034929	0.02006979	0.00906094	0.00061919	0
46 OTHER RETAIL	0.00089198	0.00108686	0	0.00304562	0.00086702	0.00157046	0.00004787	0.00001092
47 BANKING	0.00286196	0.07485084	0.00166897	0.02710013	0.03955099	0.01186305	0.01386433	0.00090181
48 OTHER FIRE	0.01062001	0.00742673	0.02566065	0.02304264	0.02134903	0.01213260	0.01132270	0.01299043
49 LEGAL SER	0	0.00036406	0	0.00110204	0.00144577	0.00161763	0.00141222	0.00332091
50 LODGING SER	0.00010490	0.00077143	0.00527149	0.00502216	0.00263440	0.00637302	0.00007230	0
51 PERSONAL SER	0	0	0.00027813	0.00420777	0.01318366	0	0.01616282	0.00118090
52 OTHER BUS SER	0.00144992	0.03396127	0.02136972	0.07231137	0.01773792	0.01699168	0.00091165	0.02585364
53 AMUSEMENT	0.00048100	0	0	0	0.04074184	0	0	0.00140181
54 MISC REPAIR	0.00072790	0	0.01070932	0.00135247	0.00535840	0.02345644	0.00275400	0
55 MEDICAL SERS	0	0	0	0	0	0	0.02072158	0
56 EDUCATION SERS	0	0	0.00250346	0.00040072	0.00025512	0	0.00066245	0.00001636
57 ALL OTHER SER	0.00633399	0.00779078	0.00945758	0.01026900	0.00416755	0.00107842	0.00415533	0.00130363

58 HOUSEHOLDS	0.68836082	0.42389633	0.37984707	0.31578354	0.39290543	0.38407148	0.62152509	0.59928196
59 SAVINGS	0.17952777	0.12787377	0.05193334	0.06186533	0.09344495	0.06321957	0.06883933	0.04936274
60 FEDERAL GOVT.	0.06509906	0.02308136	0.02169681	0.02161807	0.02466624	0.00954645	0.02929872	0.01051363
61 STATE GOVT.	0.00161492	0.02133390	0.00104309	0.01293446	0.01233312	0.01083303	0.00164247	0
62 LOCAL GOVT.	0.00111197	0.01572735	0.00361613	0.00777576	0.00348716	0.00469447	0.00492644	0.00087909
63 IMPORTS	0.01524085	0.12986009	0.29821312	0.30943198	0.16374738	0.34508427	0.14557897	0.17461216
TOTAL	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000	1.00000000

DIRECT INPUT REQUIREMENTS : LOW ROLLING PLAINS, TEXAS, 1967

	57	HOUSEHOLDS
1 IRR COTTON	0	0.00083990
2 DRYLAND CROPS	0	0.00187379
3 LIVESTOCK	0	0.00198924
4 OTHER AGRI.	0	0.00167353
5 OIL AND GAS	0	0
6 LIQUIDS	0	0.00080933
7 OILFLD. SERS.	0	0
9 CONSTRUCTION	0.00182721	0.000916302
9 MEATS-DAIRIES	0	0.01761151
10 MILL AND FEEDS	0	0.00028663
11 FOOD PROCESS	0	0.00187596
12 BEVERAGES	0.00769399	0.00911611
13 TEXTILES	0	0.00002272
14 WOOD PAPER PROD	0	0.00321092
15 PRINT AND PUB	0.00163892	0.00434478
16 CHEM PRODS	0.00044566	0.00126355
17 GLASS PRODS	0	0.00002469
18 CEMENT-STONE	0	0.00118654
19 METAL PRODS	0	0.00000346
20 MACH AND EQUIP	0.00598575	0.00000451
21 ELEC PRODS	0	0.00000663
22 TRANS EQUIP	0	0.00000036
23 OTHER MANF	0	0.00101109
24 RR/DOD TRANS	0	0.00128241
25 LOCAL TRANS	0	0.00262569
26 TRUCKING	0.00044104	0.00869523
27 OTHER TRANS	0.00461595	0.03794729
28 TELE AND TELE	0.00352843	0.00753861
29 RADIO AND TV	0	0.00002051
30 OTHER COMM	0	0.00065029
31 GAS UTIL	0.00265681	0.00478258
32 ELEC UTIL	0.00716690	0.01129070
33 WATER UTIL	0.00391201	0.00351504
34 AUTO SUPP W/S	0	0.00175464
35 GROCERIES W/S	0.00001213	0.00990122
36 FARM PRODS W/S	0	0.00016813
37 EQUIP SUPP W/S	0	0.00081140
38 OIL PRODS W/S	0	0.00641325
39 GENERAL W/S	0.00193908	0.00385269
40 LUMB YDS-HRDWARE	0.00001635	0.00522254
41 DEPT STORES	0	0.01941611
42 FOOD STORES	0.00000290	0.02425148
43 AUTO DEALERS	0.07953514	0.04485097
44 FURNITURE	0	0.00677956
45 RESTAURANTS	0.02753606	0.01091115
46 OTHER RETAIL	0.00041291	0.02657286
47 BANKING	0.00170119	0.04106198
48 OTHER FIRE	0.01657109	0.00595020
49 LEGAL SER	0.00069308	0.00247298
50 LODGING SER	0.02330693	0.00380619
51 PERSONAL SER	0	0.01460527
52 OTHER BUS SER	0.02765142	0.00294460
53 AMUSEMENT	0	0.00338913
54 MISC REPAIR	0.00119714	0.00316123
55 MEDICAL SERS	0	0.04153011
56 EDUCATION SERS	0.00063007	0.04551714
57 ALL OTHER SER	0.05538405	0.01029099

58 HOUSEHOLDS	0.47059944	0.02170960
59 SAVINGS	0.05955010	0.04260261
60 FEDERAL GOVT.	0.01050987	0.16084507
61 STATE GOVT.	0.00317663	0.00790007
62 LOCAL GOVT.	0.00956342	0.00677703
63 EXPORTS	0.117009831	0.29286315
TOTAL	1.00000000	1.00000000

APPENDIX C

INTERDEPENDENCE COEFFICIENTS (EXCLUDING HOUSEHOLDS) : LOW ROLLING PLAINS, TEXAS, 1967

	1	2	3	4	5	6	7	8
1 IRR COTTON	1.02418353	0.01081149	0.01107131	0.01072882	0.00000001	0.00000001	0.00000004	0.00000002
2 DRYLAND CROPS	0.00409530	1.02483274	0.10738252	0.06705698	0.00000007	0.00000010	0.00000045	0.00000092
3 LIVESTOCK	0.00000040	0.00000033	1.13353788	0.00000307	0.00000021	0.00000024	0.00000134	0.00000017
4 OTHER AGRI.	0.06403240	0.05931201	0.01602996	1.04849054	0.00000039	0.00000046	0.00000246	0.00000123
5 OIL AND GAS	0.02785020	0.00229069	0.00221533	0.01194041	1.07080193	0.24009153	0.00149085	0.00661662
6 LIQUIDS	0.00066971	0.00096948	0.00047385	0.00145105	0.000006721	1.00063416	0.00006359	0.00796494
7 DTLFD. SERS.	0.00296512	0.00024412	0.00023597	0.00127369	0.11399828	0.02582085	1.06242676	0.00706648
8 CONSTRUCTION	0.01495333	0.01271071	0.01096521	0.07450739	0.00282447	0.00417051	0.00559445	1.00902479
9 MEATS-DAIRIES	0.00000227	0.00000145	0.00012705	0.00001746	0.00000118	0.00000138	0.00000762	0.00000094
10 MILL AND FEEDS	0.00854101	0.00791131	0.04456384	0.17985095	0.00000006	0.00000007	0.00000040	0.00000019
11 FOOD PROCESS	0.00040488	0.00037475	0.05503012	0.00661485	0.00000063	0.00000117	0.00000453	0.00001933
12 BEVERAGES	0.00001895	0.00001395	0.00010800	0.00011009	0.00004692	0.00001299	0.00005624	0.00007541
13 TEXTILES	0.00005169	0.00004166	0.00003832	0.00024246	0.00001248	0.00001462	0.00002472	0.00317066
14 WOOD PAPER PROD	0.00070352	0.00067879	0.00045197	0.00032252	0.00001026	0.00001380	0.00002433	0.00299469
15 PRINT AND PUB	0.00118943	0.00105890	0.00084101	0.00195303	0.00030057	0.00017358	0.00058846	0.00059415
16 CHEM PROD	0.02061276	0.03928623	0.01197634	0.01245079	0.00014072	0.02568683	0.00027540	0.00396926
17 GLASS PROD	0.00006842	0.00117334	0.02015985	0.00023357	0.00000552	0.00005052	0.00001202	0.00153302
18 CEMENT-STONE	0.00075747	0.00064035	0.00056121	0.00367827	0.00014783	0.00022165	0.00031754	0.04872634
19 METAL PROD	0.00076099	0.00064617	0.00110795	0.00377066	0.00014392	0.00021184	0.00029054	0.05047617
20 MACH AND EQUIP	0.00073906	0.00070249	0.00040544	0.00333982	0.00011204	0.00008804	0.00025372	0.01463021
21 ELEC PROD	0.00032624	0.00027676	0.00032603	0.00168930	0.00005285	0.00007741	0.00011274	0.01762201
22 TRANS EQUIP	0.00011395	0.00004593	0.00009016	0.00046295	0.00001849	0.00002750	0.00004178	0.00597342
23 OTHER MACH	0.00005059	0.00004234	0.00005922	0.00014234	0.00000705	0.00000937	0.00001933	0.00163850
24 ROAD TRANS	0.00057477	0.00039911	0.00078823	0.000704324	0.00012157	0.00037008	0.00063630	0.01147470
25 LOCAL TRANS	0.00001738	0.00001290	0.00001141	0.00005741	0.00001537	0.00000686	0.00005630	0.00001951
26 TRUCKING	0.00917556	0.00791047	0.00729616	0.03806232	0.00751297	0.00639535	0.00062977	0.00477484
27 OTHER TRANS	0.00020359	0.00014758	0.00010051	0.00031846	0.00007420	0.00005282	0.00018421	0.00045398
28 TELE AND TELE	0.00605741	0.00497605	0.00449946	0.01020617	0.00399945	0.00758527	0.00096886	0.00546760
29 RADIO AND TV	0.00272996	0.00225457	0.00134452	0.00199305	0.00016078	0.00021166	0.00073073	0.00048404
30 OTHER COMM	0.00001358	0.00001154	0.00000996	0.00006718	0.00000256	0.00000374	0.00000511	0.00009786
31 GAS UTIL	0.03458131	0.00249396	0.00269287	0.01449388	0.00078578	0.00108272	0.00189141	0.00588138
32 ELEC UTIL	0.02078161	0.00707133	0.00658477	0.04440405	0.00242722	0.00443498	0.00126004	0.00429047
33 WATER UTIL	0.00088740	0.00069595	0.00085459	0.00211135	0.00029675	0.00061648	0.00118901	0.00100172
34 AUTO SUPP W/S	0.00318757	0.00405318	0.00143823	0.00165475	0.00015906	0.00009010	0.00085406	0.00018625
35 GROCERIES W/S	0.00061368	0.00041810	0.00038880	0.00091812	0.00025205	0.00010435	0.00075305	0.00024493
36 FARM PROD W/S	0.01502875	0.00859272	0.03557115	0.05249343	0.00000003	0.00000003	0.00000017	0.00000007
37 EQUIP SUPP W/S	0.00024259	0.00006554	0.00007221	0.00018275	0.00231063	0.00933490	0.01638661	0.00027424
38 OIL PROD W/S	0.01127305	0.01408253	0.00547439	0.01370258	0.00057075	0.00016510	0.00514665	0.00003668
39 GENERAL W/S	0.02775119	0.02176952	0.01635396	0.02321474	0.00037041	0.00015501	0.00054867	0.00117395
40 LUMB VDS-HRDWARE	0.06309970	0.04846492	0.02434823	0.03913241	0.00005843	0.00002157	0.00020350	0.00009830
41 DEPT STORES	0.00000593	0.00000103	0.00000093	0.00000403	0.00010178	0.00002324	0.00094703	0.00002830
42 FOOD STORES	0.00000531	0.00000393	0.00000296	0.00000518	0.00001235	0.00000478	0.000002174	0.00000895
43 AUTO DEALERS	0.03236644	0.03592348	0.01200081	0.02794182	0.00426419	0.00207910	0.01657135	0.00710290
44 FURNITURE	0.00000028	0.00000023	0.00000020	0.00000137	0.00000005	0.00000007	0.00000010	0.000001824
45 RESTAURANTS	0.00078618	0.00052576	0.00042527	0.00131778	0.00033613	0.00014972	0.00074614	0.00053961
46 OTHER RETAIL	0.00019090	0.00011562	0.00009071	0.00026369	0.00174160	0.00067470	0.00306471	0.00124246
47 BANKING	0.02139325	0.01372705	0.01912340	0.02819869	0.00338599	0.00169053	0.01560830	0.02744825
48 OTHER FIRE	0.02453160	0.01071970	0.01075984	0.04327965	0.00764556	0.00233184	0.01340610	0.01611603
49 LEGAL SER	0.00075910	0.00042138	0.00038575	0.00125337	0.00040505	0.00022446	0.00023742	0.00761281
50 LODGING SER	0.000490716	0.00073596	0.00038333	0.00153660	0.00032316	0.00026633	0.00090181	0.00051252
51 PERSONAL SER	0.00015706	0.00016074	0.00009688	0.00021447	0.00016808	0.00005118	0.000130093	0.00014397
52 OTHER BUS SER	0.00590255	0.00454301	0.00400338	0.02097117	0.00646728	0.00241766	0.01936249	0.00447495
53 AMUSEMENT	0.00000049	0.00000030	0.00000027	0.00000109	0.00000004	0.00000014	0.000000119	0.000000699
54 MISC REPAIR	0.01215792	0.00155111	0.00131343	0.00319346	0.00097323	0.00055107	0.00584483	0.00032563
55 MEDICAL SERS	0.00003475	0.00001449	0.00002839	0.00005968	0.00010670	0.00014793	0.00091902	0.00007886
56 EDUCATION SERS	0.00000899	0.00000880	0.00000541	0.00002168	0.00000791	0.00000263	0.00002041	0.00001896
57 ALL OTHER SER	0.00233704	0.00168846	0.00138107	0.01273286	0.00634612	0.00167875	0.00727661	0.00975107

125

TOTAL 1.47084823 1.35663164 1.56193083 1.77631172 1.23825710 1.33523829 1.20166075 1.27799240

INTERDEPENDENCE COEFFICIENTS (EXCLUDING HOUSEHOLDS) : LOW ROLLING PLAINS, TEXAS, 1967

	9	10	11	12	13	14	15	16
1 IRR COTTON	0.00469732	0.00469057	0.00089529	0.00000000	0.00000001	0.00000002	0.00000001	0.00000001
2 DRYLAND CROPS	0.03528894	0.08054497	0.04081712	0.00000003	0.00000005	0.00000018	0.00000005	0.00000013
3 LIVESTOCK	0.17693013	0.00000062	0.00040594	0.00000008	0.00000020	0.00000082	0.00000018	0.00000052
4 OTHER AGRI.	0.29352260	0.00531111	0.05043350	0.00000015	0.00000034	0.00000139	0.00000032	0.00000090
5 OIL AND GAS	0.00450528	0.00763368	0.00584724	0.00294405	0.00246375	0.00195563	0.00250028	0.01340374
6 LIQUIDS	0.00054248	0.00027215	0.00092487	0.00004068	0.0004287	0.00002375	0.00028171	0.02168464
7 DILFLD. SERS.	0.00047978	0.00081276	0.00062274	0.00031344	0.00026230	0.00020820	0.00026625	0.00143262
8 CONSTRUCTION	0.02551401	0.01558047	0.00607651	0.00063512	0.0016829	0.00041713	0.00684270	0.02042733
9 MEATS-DAIRIES	1.00002502	0.00000351	0.00230616	0.00000047	0.00000114	0.00000464	0.00000105	0.00000296
10 MTL AND FEEDS	0.04573934	1.11124644	0.00674217	0.00000004	0.00000006	0.00000022	0.00000006	0.00000014
11 FOOD PROCESS	0.01038326	0.00004023	1.00441786	0.00000019	0.00000022	0.00000055	0.00000026	0.00000059
12 BEVERAGES	0.00006814	0.00002083	0.00178467	1.00000621	0.00007353	0.00003217	0.00000629	0.00001472
13 TEXTILES	0.00008436	0.00005912	0.00002348	0.00026402	1.00000174	0.00000387	0.00002397	0.00006628
14 WOOD PAPER PROD	0.00830956	0.00013142	0.00629160	0.00001491	0.00000159	1.05293791	0.00060958	0.00006282
15 PRINT AND PUB	0.00084136	0.00417320	0.00948392	0.00049847	0.00011771	0.00031103	1.00944918	0.00085539
16 CHEM PROD	0.00550216	0.00484706	0.00611665	0.00019691	0.00154110	0.00059575	0.00064404	1.09603262
17 GLASS PRODS	0.00010702	0.00022311	0.00006962	0.00002884	0.00000405	0.00003756	0.00002876	0.00187556
18 CEMENT-STONE	0.00129327	0.00098160	0.00038771	0.00032421	0.00003056	0.00004863	0.00038446	0.00101507
19 METAL PRODS	0.00140238	0.00086098	0.00032421	0.00005402	0.00001163	0.00143742	0.00035930	0.00102902
20 MACH AND EQUIP	0.00252053	0.00513089	0.00039003	0.00198316	0.00005132	0.00375494	0.00206614	0.00036268
21 ELEC PRODS	0.00057889	0.00307371	0.00017294	0.00002077	0.00000577	0.00001738	0.00012418	0.00036246
22 TRANS EQUIP	0.00016705	0.00011073	0.00006391	0.00000543	0.00000213	0.00000734	0.00004171	0.00012328
23 OTHER MANF	0.00005613	0.00003433	0.00004768	0.00000235	0.00000352	0.000001392	0.00001392	0.00003643
24 RR AND TRANS	0.00145790	0.00398083	0.00017930	0.00006002	0.00011806	0.00003490	0.00010506	0.00023317
25 LOCAL TRANS	0.00003592	0.00005836	0.00001217	0.000009727	0.00000200	0.00001003	0.00001559	0.00002766
26 TRUCKING	0.01398591	0.00339124	0.00618426	0.00166115	0.00068407	0.00047364	0.01022835	0.02080418
27 OTHER TRANS	0.00014629	0.00011944	0.00006695	0.00019691	0.00002877	0.00007176	0.00007852	0.00007799
28 TELE AND TELE	0.00645157	0.00565763	0.00376555	0.00258686	0.00230420	0.00845109	0.00567727	0.00598606
29 RADIO AND TV	0.00083831	0.00041959	0.00313440	0.00015367	0.00007632	0.00019518	0.00012205	0.00025323
30 OTHER COMM	0.00002386	0.00001440	0.00000623	0.00000080	0.00000019	0.00010337	0.00000630	0.00001843
31 GAS UTIL	0.00545893	0.00945326	0.00702207	0.00366692	0.00306458	0.00243654	0.00304033	0.00800335
32 ELEC UTIL	0.01638587	0.01631682	0.01437683	0.00566912	0.00523401	0.00611608	0.00608895	0.00993143
33 WATER UTIL	0.00130483	0.00547590	0.00262719	0.00369423	0.00061891	0.00078634	0.00150656	0.00076648
34 AJTO SUPP W/S	0.00202276	0.00048376	0.00049133	0.00009319	0.00001878	0.00012093	0.00012523	0.00025835
35 GROCERIES W/S	0.00050160	0.00073910	0.00038214	0.00009043	0.00006200	0.00025833	0.00021081	0.00040604
36 FARM PRODS W/S	0.02006972	0.13562121	0.00274012	0.00000001	0.00000002	0.00000010	0.00000002	0.00000006
37 EQUIP SUPP W/S	0.00008609	0.00016632	0.00015664	0.00059977	0.00006893	0.00006529	0.00007876	0.00034776
38 OIL PRODS W/S	0.00589428	0.00124754	0.00118663	0.00276759	0.00000993	0.00001542	0.00003857	0.00093456
39 GENERAL W/S	0.00952702	0.00327272	0.01652305	0.00041823	0.00613003	0.00223634	0.00092218	0.00135388
40 LUMB YOS-HRDWARE	0.01465103	0.00407488	0.00374667	0.00000094	0.00002082	0.00052318	0.0001892	0.00011177
41 DEPT STORES	0.00000179	0.00000156	0.00000277	0.00040296	0.00000133	0.0004265	0.00001040	0.00000408
42 FOOD STORES	0.00000218	0.00000158	0.00000360	0.00000101	0.00000296	0.00000055	0.00000395	0.00000106
43 AJTO DEALERS	0.01271245	0.00956958	0.01408560	0.00347401	0.00062346	0.00552672	0.00330838	0.00699437
44 FURNITURE	0.00000048	0.00000033	0.00000011	0.00000003	0.00000000	0.00000004	0.00000014	0.00000037
45 RESTAURANTS	0.00064989	0.00152087	0.00097478	0.00052324	0.00017548	0.00097115	0.00065283	0.00049600
46 OTHER RETAIL	0.00011701	0.00015889	0.00017670	0.00013529	0.00003133	0.00003279	0.00054246	0.00012239
47 BANKING	0.01114085	0.00465996	0.00313195	0.00138234	0.00050589	0.00147006	0.00110440	0.00187735
48 OTHER FIRE	0.01606873	0.00490990	0.00623038	0.00137260	0.00077687	0.01303340	0.00837022	0.00958511
49 LEGAL SER	0.00069467	0.00027556	0.00074516	0.00013636	0.00005649	0.00099339	0.00063945	0.00052913
50 LOGGING SER	0.00069451	0.00286126	0.00249551	0.00031737	0.00012237	0.00326156	0.00080397	0.00242992
51 PERSONAL SER	0.00080044	0.00016143	0.00007849	0.00037056	0.00003018	0.00003515	0.00003649	0.00007383
52 OTHER BUS SER	0.01324206	0.02251229	0.00387011	0.03781944	0.00071499	0.0273950	0.00533765	0.01019484
53 AMUSEMENT	0.00000051	0.00000026	0.00000042	0.00000056	0.00178145	0.00000051	0.00000037	0.00000039
54 MISC REPAIR	0.00117089	0.00137409	0.00427297	0.00599630	0.00466480	0.03384849	0.00408873	0.00985550
55 MEDICAL SERS	0.00005029	0.00000723	0.00002640	0.00000206	0.00000124	0.00011869	0.00001124	0.00001647
56 EDUCATION SER	0.00001347	0.00001244	0.00000480	0.00001785	0.00000248	0.00000497	0.00000770	0.00000663
57 ALL OTHER SER	0.00644749	0.00259949	0.00129165	0.00079389	0.00249167	0.00419749	0.00780693	0.00182862

INTERDEPENDENCE COEFFICIENTS (EXCLUDING HOUSEHOLDS) : LOW ROLLING PLAINS, TEXAS, 1967

	9	10	11	12	13	14	15	16
1 IRR COTTON	0.00469732	0.00469057	0.00089529	0.00000000	0.00000001	0.00000002	0.00000001	0.00000001
2 DRYLAND CROPS	0.03528894	0.08054497	0.04081712	0.00000003	0.00000005	0.00000018	0.00000005	0.00000013
3 LIVESTOCK	0.17603013	0.00000062	0.00040594	0.00000008	0.00000020	0.00000082	0.00000018	0.00000052
4 OTHER AGRI.	0.29352260	0.00531111	0.05043350	0.00000015	0.00000034	0.00000139	0.00000032	0.00000090
5 OIL AND GAS	0.00450528	0.00763368	0.00584724	0.00294405	0.00246375	0.00195563	0.00250028	0.01340374
6 LIQUIDS	0.00054248	0.00027215	0.00092487	0.00004068	0.00004287	0.00002375	0.00028171	0.02188464
7 OILFLD. SERS.	0.00047978	0.00081276	0.00062274	0.00031344	0.00026230	0.00020820	0.00026625	0.00143262
8 CONSTRUCTION	0.02551401	0.01588047	0.00607651	0.00063512	0.00016829	0.00041713	0.00684270	0.02042733
9 MEATS-DAIRIES	1.00002502	0.00000351	0.00230615	0.00000047	0.00000114	0.00000464	0.00000105	0.00000296
10 MILL AND FEEDS	0.04573934	1.11124644	0.00674217	0.00000004	0.00000006	0.00000022	0.00000006	0.00000014
11 FOOD PROCESS	0.01038326	0.00004023	1.00441786	0.00000019	0.00000022	0.00000055	0.00000026	0.00000059
12 BEVERAGES	0.00006814	0.00002083	0.00178467	1.00000621	0.00007353	0.00003317	0.00006029	0.00001472
13 TEXTILES	0.00008436	0.00005912	0.00002348	0.00026402	1.00000174	0.00000387	0.00002397	0.00006628
14 WOOD PAPER PROD	0.00830956	0.00013142	0.00629160	0.00001491	0.00000158	1.05293791	0.00060958	0.00006282
15 PRINT AND PUB	0.00084136	0.00417320	0.00048392	0.00049847	0.00011771	0.00031103	1.00944818	0.00085539
16 CHEM PRODS	0.00550216	0.00484706	0.00611665	0.00019691	0.00154110	0.00059575	0.00064404	1.09603262
17 GLASS PRODS	0.00010702	0.00022311	0.00006992	0.00002884	0.00000405	0.00003756	0.00002876	0.00187556
18 CEMENT-STONE	0.00129327	0.00098160	0.00038771	0.00016997	0.00003056	0.00004863	0.00038446	0.00101507
19 METAL PRODS	0.00140238	0.00086098	0.00032421	0.00005402	0.00001163	0.00143742	0.00035930	0.00102902
20 MACH AND EQUIP	0.00252053	0.00513089	0.00039003	0.00198316	0.00005132	0.00375494	0.00206614	0.00036268
21 ELEC PRODS	0.00057889	0.00307371	0.00017294	0.00002077	0.00000577	0.00001738	0.00012418	0.00036246
22 TRANS EQUIP	0.00016305	0.00011073	0.00006381	0.00000543	0.00000213	0.00000734	0.00004171	0.00012328
23 OTHER MANF	0.00005613	0.00003433	0.00004768	0.00409130	0.00000235	0.00000352	0.00001392	0.00003643
24 ROAD TRANS	0.00145790	0.00393083	0.00017930	0.00006002	0.00011806	0.00003490	0.00010506	0.00028317
25 LOCAL TRANS	0.00003592	0.00005936	0.00001217	0.00009727	0.00000200	0.00001003	0.00001559	0.00002766
26 TRUCKING	0.01398591	0.00339124	0.00618426	0.00166115	0.00068407	0.00047364	0.01022835	0.02040418
27 OTHER TRANS	0.00014629	0.00011944	0.00006695	0.00023795	0.00002877	0.00007175	0.00007852	0.00007798
28 TELE AND TELE	0.00645157	0.00565763	0.00376565	0.00258686	0.00230420	0.00845109	0.00567727	0.00598606
29 RADIO AND TV	0.00083831	0.00041859	0.00031340	0.00015367	0.00007632	0.00019518	0.00012205	0.00025323
30 OTHER COMM	0.00002386	0.00001440	0.00000623	0.00000080	0.00000019	0.00010337	0.00000630	0.00001843
31 GAS UTIL	0.00545893	0.00945326	0.00702207	0.00366692	0.00306458	0.00243654	0.00304033	0.00900335
32 ELEC UTIL	0.01638587	0.01631662	0.01437683	0.00566912	0.00523401	0.00611608	0.00608995	0.00993143
33 WATER UTIL	0.00130483	0.00647590	0.00262719	0.00369423	0.00061891	0.00078634	0.00150656	0.00076648
34 AUTO SUPP W/S	0.00202276	0.00048376	0.00049133	0.00093199	0.00001878	0.00012093	0.00012523	0.00025835
35 GROCERYS W/S	0.00050160	0.00073910	0.00038214	0.00090403	0.00006200	0.00025833	0.00021081	0.00040604
36 FARM PRODS W/S	0.02006972	0.13562121	0.00274012	0.00000001	0.00000002	0.00000010	0.00000002	0.00000006
37 EQUIP SUPP W/S	0.00008609	0.00016632	0.00015664	0.00059977	0.00006893	0.00006529	0.00007876	0.00034776
38 OIL PRODS W/S	0.00588428	0.00124754	0.00118863	0.00276759	0.00000993	0.00001542	0.00003857	0.00099456
39 GENERAL W/S	0.00952702	0.00327272	0.01652305	0.00041823	0.00613003	0.00223634	0.00052218	0.00135388
40 LUMB YDS-HRDWARE	0.01465103	0.00407488	0.00374667	0.00000904	0.00002082	0.00052318	0.00001392	0.00001177
41 DEPT STORES	0.00000179	0.00000156	0.00000277	0.00040296	0.00000133	0.00004765	0.00000140	0.00000408
42 FOOD STORES	0.00000218	0.00000158	0.00000360	0.00000101	0.00000296	0.00000055	0.00000395	0.00000106
43 AUTO DEALERS	0.01271245	0.00356958	0.01408560	0.00347401	0.00062346	0.00552672	0.00330838	0.00699437
44 FURNITURE	0.00000048	0.00000033	0.00000011	0.00000003	0.00000000	0.00000004	0.00000014	0.00000037
45 RESTAURANTS	0.00064989	0.00152087	0.00094778	0.00052324	0.00017543	0.00097115	0.00065283	0.00048600
46 OTHER RETAIL	0.00011701	0.00015889	0.00017870	0.00013529	0.00003133	0.00003279	0.00054246	0.00012239
47 BANKING	0.01114095	0.00465996	0.00313195	0.00138234	0.00050589	0.00147006	0.00110444	0.00187735
48 OTHER FIRE	0.01606873	0.00490990	0.00623838	0.00137260	0.00077687	0.01303340	0.00877022	0.00958511
49 LEGAL SER	0.00068467	0.00027556	0.00074516	0.00013636	0.00005649	0.00099339	0.00063845	0.00052913
50 LODGING SFR	0.00049451	0.00286126	0.00249551	0.00031737	0.00012237	0.00326156	0.00040397	0.00242992
51 PERSONAL SER	0.00000044	0.00016143	0.00007849	0.00037056	0.00003018	0.00003515	0.00003549	0.00007383
52 OTHER BUS SER	0.01324206	0.02251229	0.00387011	0.03781944	0.00071499	0.00273950	0.00533765	0.01019484
53 AMUSEMENT	0.00000051	0.00000026	0.00000002	0.00000056	0.00178145	0.00000051	0.00000037	0.00000039
54 MISC REPAIR	0.00117089	0.00137409	0.00427297	0.00599630	0.00466480	0.00384849	0.00408873	0.00985550
55 MEDICAL SERS	0.00005029	0.00000723	0.00026440	0.00000206	0.00000124	0.00011869	0.00001174	0.00001647
56 EDUCATION SRS	0.00001347	0.00001244	0.00000680	0.00001785	0.00000248	0.00000497	0.00000020	0.00000663
57 ALL OTHER SER	0.00644749	0.00259949	0.00129165	0.00079389	0.00249167	0.00419749	0.00780693	0.00182862

TOTAL 1.78028464 1.48669221 1.23588876 1.08737276 1.03520719 1.11996668 1.08457818 1.25232034

INTERDEPENDENCE COEFFICIENTS (EXCLUDING HOUSEHOLDS) : LOW POLLING PLAINS, TEXAS, 1967

	17	18	19	20	21	22	23	24
1 PR COTTON	0.00000000	0.00000001	0.00000001	0.00000001	0.00000000	0.00000000	0.00000000	0.00000156
2 DRYLAND CROPS	0.00000003	0.00000006	0.00000014	0.00000006	0.00000004	0.00000003	0.00000002	0.00007117
3 LIVESTOCK	0.00000009	0.00000018	0.00000039	0.00000023	0.00000011	0.00000011	0.00000007	0.00000088
4 OTHER AGRI.	0.00000015	0.00000033	0.00000071	0.00000040	0.00000021	0.00000020	0.00000013	0.00008818
5 OIL AND GAS	0.00000471	0.00000799	0.00000269	0.00000182	0.00000148	0.00000151	0.00000056	0.00000093
6 LIQUIDS	0.00000423	0.00000293	0.00000110	0.00000125	0.00000178	0.00000168	0.00000213	0.00000038
7 OILFLD. SEVS.	0.00000593	0.00000766	0.00000305	0.00000376	0.00000592	0.00000465	0.00000198	0.00000583
8 CONSTRUCTION	0.00000448	0.00000765	0.00000766	0.00000839	0.00000836	0.00000849	0.00000665	0.00000499
9 MEATS-DAIRIES	0.00000044	0.00000103	0.00000220	0.00000133	0.00000042	0.00000042	0.00000040	0.00000182
10 MILL AND FEEDS	0.00000003	0.00000006	0.00000023	0.00000007	0.00000003	0.00000005	0.00000003	0.00000118
11 FOOD PROCESS	0.00000037	0.00000060	0.00000125	0.00000023	0.00000056	0.00000021	0.00000015	0.00000501
12 BEVERAGES	0.00000235	0.00000324	0.00000092	0.00000248	0.00000357	0.00000357	0.00000163	0.00000195
13 TEXTILES	0.00000465	0.00000446	0.00000367	0.00000327	0.00000714	0.00000405	0.00000081	0.00000316
14 WOOD PAPER PROD	0.00000303	0.00000401	0.00000356	0.00000479	0.00000892	0.00000406	0.00000179	0.00000394
15 PRINT AND PUB	0.00000379	0.00000566	0.00000807	0.00000595	0.00000823	0.00000595	0.00000045	0.00000213
16 CHEM PRODS	0.00000592	0.00000897	0.00000839	0.00000930	0.00000950	0.00000950	0.00000874	0.00000907
17 GLASS PRODS	0.00000235	0.00000262	0.00000262	0.00000262	0.00000262	0.00000262	0.00000262	0.00000262
18 CEMENT-STONE	0.00000303	0.00000303	0.00000303	0.00000303	0.00000303	0.00000303	0.00000303	0.00000303
19 METAL PRODS	0.00000459	0.00000591	0.00000591	0.00000591	0.00000591	0.00000591	0.00000591	0.00000591
20 MACH AND EQUIP	0.00000901	0.00000901	0.00000901	0.00000901	0.00000901	0.00000901	0.00000901	0.00000901
21 ELEC PRODS	0.00000604	0.00000604	0.00000604	0.00000604	0.00000604	0.00000604	0.00000604	0.00000604
22 TRANS EQUIP	0.00000547	0.00000547	0.00000547	0.00000547	0.00000547	0.00000547	0.00000547	0.00000547
23 OTHER MANF	0.00000261	0.00000261	0.00000261	0.00000261	0.00000261	0.00000261	0.00000261	0.00000261
24 ROAD TRANS	0.00000947	0.00000947	0.00000947	0.00000947	0.00000947	0.00000947	0.00000947	0.00000947
25 LOCAL TRANS	0.00000535	0.00000535	0.00000535	0.00000535	0.00000535	0.00000535	0.00000535	0.00000535
26 TRUCKING	0.00000266	0.00000266	0.00000266	0.00000266	0.00000266	0.00000266	0.00000266	0.00000266
27 OTHER TRANS	0.00000924	0.00000924	0.00000924	0.00000924	0.00000924	0.00000924	0.00000924	0.00000924
28 TELE AND TELE	0.00000263	0.00000263	0.00000263	0.00000263	0.00000263	0.00000263	0.00000263	0.00000263
29 RADIO AND TV	0.00000432	0.00000432	0.00000432	0.00000432	0.00000432	0.00000432	0.00000432	0.00000432
30 OTHER COMM	0.00000798	0.00000798	0.00000798	0.00000798	0.00000798	0.00000798	0.00000798	0.00000798
31 GAS UTIL	0.00000177	0.00000177	0.00000177	0.00000177	0.00000177	0.00000177	0.00000177	0.00000177
32 ELEC UTIL	0.00000251	0.00000251	0.00000251	0.00000251	0.00000251	0.00000251	0.00000251	0.00000251
33 WATER UTIL	0.00000291	0.00000291	0.00000291	0.00000291	0.00000291	0.00000291	0.00000291	0.00000291
34 AUTO SUPP W/S	0.00000917	0.00000917	0.00000917	0.00000917	0.00000917	0.00000917	0.00000917	0.00000917
35 GROCERIES W/S	0.00000374	0.00000374	0.00000374	0.00000374	0.00000374	0.00000374	0.00000374	0.00000374
36 FARM PRODS W/S	0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	0.00000001	0.00000001
37 EQUIP SUPP W/S	0.00000173	0.00000173	0.00000173	0.00000173	0.00000173	0.00000173	0.00000173	0.00000173
38 OIL PRODS W/S	0.00000167	0.00000167	0.00000167	0.00000167	0.00000167	0.00000167	0.00000167	0.00000167
39 GENERAL W/S	0.00000112	0.00000112	0.00000112	0.00000112	0.00000112	0.00000112	0.00000112	0.00000112
40 LUMB YDS-HWWARE	0.00000203	0.00000203	0.00000203	0.00000203	0.00000203	0.00000203	0.00000203	0.00000203
41 DEPT STORES	0.00000027	0.00000027	0.00000027	0.00000027	0.00000027	0.00000027	0.00000027	0.00000027
42 FOOD STORES	0.00000057	0.00000057	0.00000057	0.00000057	0.00000057	0.00000057	0.00000057	0.00000057
43 AUTO DEALERS	0.00000200	0.00000200	0.00000200	0.00000200	0.00000200	0.00000200	0.00000200	0.00000200
44 FURNITURE	0.00000016	0.00000016	0.00000016	0.00000016	0.00000016	0.00000016	0.00000016	0.00000016
45 RESTAURANTS	0.00000214	0.00000214	0.00000214	0.00000214	0.00000214	0.00000214	0.00000214	0.00000214
46 OTHER RETAIL	0.00000512	0.00000512	0.00000512	0.00000512	0.00000512	0.00000512	0.00000512	0.00000512
47 BANKING	0.00000329	0.00000329	0.00000329	0.00000329	0.00000329	0.00000329	0.00000329	0.00000329
48 OTHER FIRE	0.00000282	0.00000282	0.00000282	0.00000282	0.00000282	0.00000282	0.00000282	0.00000282
49 LEGAL SER	0.00000768	0.00000768	0.00000768	0.00000768	0.00000768	0.00000768	0.00000768	0.00000768
50 LODGING SER	0.00000307	0.00000307	0.00000307	0.00000307	0.00000307	0.00000307	0.00000307	0.00000307
51 PERSONAL SER	0.00000549	0.00000549	0.00000549	0.00000549	0.00000549	0.00000549	0.00000549	0.00000549
52 OTHER BUS SER	0.00000139	0.00000139	0.00000139	0.00000139	0.00000139	0.00000139	0.00000139	0.00000139
53 AMUSEMENT	0.00000048	0.00000048	0.00000048	0.00000048	0.00000048	0.00000048	0.00000048	0.00000048
54 MISC REPAIR	0.00000588	0.00000588	0.00000588	0.00000588	0.00000588	0.00000588	0.00000588	0.00000588
55 MEDICAL SER	0.00000053	0.00000053	0.00000053	0.00000053	0.00000053	0.00000053	0.00000053	0.00000053
56 EDUCATION SER	0.00000043	0.00000043	0.00000043	0.00000043	0.00000043	0.00000043	0.00000043	0.00000043
57 ALL OTHER SER	0.00000225	0.00000225	0.00000225	0.00000225	0.00000225	0.00000225	0.00000225	0.00000225

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TOTAL 1.23750175 1.30617720 1.04991967 1.06508795 1.10636499 1.08159249 1.08345437 1.34242935

INTERDEPENDENCE COEFFICIENTS (EXCLUDING HOUSEHOLDS) : LOW ROLLING PLAINS, TEXAS, 1967

	25	26	27	28	29	30	31	32
1 IRR COTTON	0.00000001	0.00000000	0.00000000	0.00000000	0.00000001	0.00000001	0.00000001	0.00000001
2 DRYLAND CROPS	0.00000007	0.00000007	0.00000004	0.00000009	0.00000008	0.00000011	0.00000007	0.00000022
3 LIVESTOCK	0.00000025	0.00000016	0.00000010	0.00000005	0.00000027	0.00000040	0.00000018	0.00000009
4 OTHER AGRI.	0.00000043	0.00000030	0.00000018	0.00000019	0.00000048	0.00000070	0.00000034	0.00000040
5 OIL AND GAS	0.00412714	0.01257446	0.01633641	0.00193906	0.00320781	0.00672207	0.01055524	0.11296192
6 LIQUIDS	0.00010402	0.01659609	0.02011746	0.00003963	0.00048035	0.00042844	0.00007236	0.00011007
7 DILFLD. SERS.	0.00043940	0.00134301	0.00174442	0.00020634	0.00034163	0.00071575	0.00029974	0.01202603
8 CONSTRUCTION	0.00234465	0.02380832	0.01175553	0.00054959	0.01205897	0.00636921	0.00299974	0.00303400
9 MEATS-DAIRIES	0.00000140	0.00000098	0.00000055	0.00000031	0.00000153	0.00000227	0.00000105	0.00000052
10 MILL AND FEEDS	0.00000008	0.00000005	0.00000004	0.00000003	0.00000010	0.00000013	0.00000006	0.00000006
11 FOOD PROCESS	0.00000048	0.00000093	0.00000045	0.00000192	0.00000060	0.00000078	0.00000074	0.00000503
12 BEVERAGES	0.00004282	0.00008864	0.00001217	0.00000214	0.00025061	0.00020523	0.00004789	0.00002000
13 TEXTILES	0.00001114	0.00008254	0.00004790	0.00000359	0.00005384	0.00000810	0.00004780	0.00013595
14 WOOD PAPER PROD	0.00001642	0.00007569	0.00250234	0.00000630	0.00018940	0.00056482	0.00001178	0.00002433
15 PRINT AND PUB	0.00008923	0.00045480	0.00136446	0.00189435	0.00055109	0.00109336	0.00052628	0.00193829
16 CHEM PRODS	0.00237323	0.00112765	0.00730591	0.00010300	0.01902714	0.01823802	0.00048094	0.00226078
17 GLASS PRODS	0.00001550	0.00004192	0.00035362	0.00000284	0.00063817	0.00129222	0.00000660	0.00002770
18 CEMENT-STONE	0.00044931	0.00125831	0.00215856	0.00006723	0.00069538	0.00167743	0.00015930	0.00037026
19 METAL PRODS	0.00012938	0.00120299	0.00063911	0.00004080	0.00062366	0.00044826	0.00015396	0.00019260
20 MACH AND EQUIP	0.00056843	0.00053122	0.01613491	0.00003418	0.00071213	0.00124678	0.00012224	0.00019594
21 ELEC PRODS	0.00005688	0.00042535	0.00517620	0.00001938	0.01447641	0.05588326	0.00005967	0.00017581
22 TRANS EQUIP	0.00002048	0.00014326	0.00029671	0.00000805	0.00880718	0.00594632	0.00002194	0.00005238
23 OTHER MANF	0.00001340	0.00004260	0.00361712	0.00000471	0.00905012	0.00129005	0.00000944	0.00003827
24 ROAD TRANS	0.00010716	0.00045248	0.00020488	0.00110141	0.00022438	0.00020563	0.00022828	0.00295107
25 LOCAL TRANS	1.00011656	0.00002397	0.00006445	0.00001197	0.00007639	0.0002553	0.00002322	0.00001600
26 TRUCKING	0.00220869	1.00040743	0.00059629	0.00116601	0.00087555	0.00121217	0.00233503	0.00212583
27 OTHER TRANS	0.00019108	0.00015227	1.00009035	0.00071467	0.00024946	0.00034034	0.00008013	0.00040228
28 TELE AND TELE	0.00873016	0.01733753	0.00664283	1.00027089	0.03198108	0.65595570	0.00420386	0.00439701
29 RADIO AND TV	0.00071064	0.00018889	0.00007980	0.00004304	1.00012978	0.13862877	0.00039022	0.00262988
30 OTHER COMM	0.00000265	0.00002160	0.00001355	0.00003056	0.00001105	1.03680680	0.00000272	0.00000309
31 GAS UTIL	0.00512326	0.01075975	0.00625093	0.00240559	0.00382614	0.00823700	1.01354606	0.14121383
32 ELEC UTIL	0.01205709	0.05261124	0.00918442	0.00856496	0.01647942	0.01445952	0.00245226	1.00125413
33 WATER UTIL	0.00268162	0.00149132	0.00059207	0.00109603	0.00316301	0.03899356	0.00039623	0.00283610
34 AUTO SUPP W/S	0.02180397	0.00402416	0.00990056	0.00002567	0.00008906	0.00009226	0.00015939	0.00059395
35 GROCERIES W/S	0.00075611	0.00010490	0.00050458	0.00011033	0.00075214	0.00020911	0.00025630	0.00026116
36 FARM PRODS W/S	0.00000033	0.00000002	0.00000001	0.00000001	0.00000003	0.00000005	0.00000002	0.00000002
37 EQUIP SUPP W/S	0.00008240	0.00024755	0.00029092	0.00002891	0.00016647	0.00092265	0.00177416	0.00119173
38 OIL PRODS W/S	0.00243937	0.00147437	0.00772757	0.00002751	0.00006039	0.00010371	0.00051205	0.00059577
39 GENERAL W/S	0.00918366	0.00075988	0.00074641	0.00011629	0.00033442	0.01063559	0.00128356	0.00294921
40 LUMB YDS-HRDWARE	0.02013476	0.00007784	0.00001309	0.00000328	0.00001536	0.00001276	0.00004925	0.00024981
41 DEPT STORES	0.00000057	0.00001193	0.00000306	0.00000023	0.00003676	0.00002673	0.00007735	0.00001132
42 FOOD STORES	0.00000236	0.00000085	0.00000096	0.00000015	0.00000063	0.00000222	0.00000959	0.00000191
43 AUTO DEALERS	0.00299363	0.00210783	0.00159413	0.00031161	0.00336960	0.00337036	0.00474089	0.01331968
44 FURNITURE	0.00000005	0.00000043	0.00000026	0.00000001	0.00000022	0.00000013	0.00000005	0.00000006
45 RESTAURANTS	0.00111875	0.00056142	0.00045667	0.00014494	0.00122332	0.00132344	0.00036342	0.00023136
46 OTHER RETAIL	0.00014801	0.00007745	0.00012112	0.00001951	0.00008182	0.00009901	0.00143197	0.00021308
47 BANKING	0.00492547	0.00274654	0.00168974	0.00121191	0.00237317	0.00596906	0.00449901	0.00588793
48 OTHER FIRE	0.04547246	0.02419577	0.00872282	0.01423925	0.02254063	0.06902171	0.00998329	0.01011669
49 LEGAL SER	0.01290369	0.00580295	0.00353994	0.00020457	0.01490311	0.00466373	0.00199100	0.00263605
50 LODGING SER	0.00077002	0.00050771	0.00033701	0.00014134	0.00103769	0.00131713	0.00033776	0.00027393
51 PERSONAL SER	0.00014097	0.00002418	0.00000980	0.000002951	0.00004566	0.00003539	0.00014187	0.00010163
52 OTHER BUS SER	0.00019416	0.00024404	0.000091519	0.00444014	0.00709405	0.00031738	0.00670762	0.00310888
53 AMUSEMENT	0.00000651	0.00000107	0.00000187	0.00000011	0.00000961	0.00000253	0.00000109	0.00000157
54 MISC REPAIR	0.00021958	0.00000018	0.000026703	0.00003502	0.00038696	0.00634964	0.00206757	0.00162646
55 MEDICAL SERS	0.00005951	0.00000047	0.00001561	0.00001970	0.00002974	0.00000904	0.00000027	0.000002340
56 EDUCATIONAL SERS	0.0000442	0.00000885	0.00000998	0.00000209	0.00002412	0.00000429	0.00000086	0.000000508
57 ALL OTHER	0.00001267	0.0000149051	0.000156243	0.000027252	0.00249892	0.02661907	0.000620738	0.00258333

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TOTAL 1.20442117 1.20240438 1.17204121 1.04168144 1.21760118 1.53235415 1.96780901 1.33738347

INTERDEPENDENCE COEFFICIENTS (EXCLUDING HOUSEHOLDS) : LOW ROLLING PLAINS, TEXAS, 1967

	33	34	35	36	37	38	39	40
1 IPR COTTON	0.00000000	0.00000001	0.00000000	0.00000150	0.00000013	0.00000005	0.00000001	0.00000002
2 DRYLAND CROPS	0.00000011	0.00000009	0.00000003	0.00001084	0.00000285	0.00000056	0.00000012	0.00000024
3 LIVESTOCK	0.00000011	0.00000034	0.00000009	0.00000014	0.00000293	0.00000176	0.00000053	0.00000074
4 OTHER AG.	0.00000028	0.00000059	0.00000017	0.00013997	0.00000765	0.00000318	0.00000091	0.00000134
5 OIL AND GAS	0.07763955	0.01901725	0.00437417	0.00395493	0.01732285	0.00276809	0.00953720	0.00722341
6 LIQUIDS	0.00078549	0.00000024	0.00011335	0.00058859	0.00048515	0.00006405	0.00024415	0.00165314
7 OILFLD. SERS.	0.00826576	0.00202461	0.00046571	0.00042120	0.00154433	0.00029471	0.00101540	0.00034360
8 CONSTRUCTION	0.05185574	0.00642205	0.00079766	0.05154662	0.04487277	0.00122789	0.00151611	0.00367472
9 MEATS-DAIRIES	0.00000061	0.00000192	0.00000054	0.00000078	0.00001663	0.00001001	0.00000303	0.00000418
10 MILL AND FEEDS	0.00000004	0.00000010	0.00000003	0.00003194	0.00000116	0.00000051	0.00000015	0.00000022
11 FOOD PROCESS	0.00000028	0.00000046	0.00000028	0.00002562	0.00005604	0.00000506	0.00000037	0.00000025
12 BEVERAGES	0.00001156	0.00010421	0.00000428	0.00009478	0.00002812	0.00000948	0.00005303	0.00004778
13 TEXTILES	0.00082591	0.00004696	0.00000757	0.00016626	0.00016088	0.00000847	0.00002144	0.00001474
14 WOOD PAPER PROD	0.00130688	0.00004890	0.00000653	0.00016277	0.00019277	0.00001997	0.00003332	0.00002477
15 PRINT AND PUB	0.00112180	0.00027245	0.00034626	0.00054978	0.00711557	0.00767579	0.00356360	0.00137826
16 CHEM PRODS	0.01854875	0.00085696	0.00013348	0.00306996	0.00231826	0.00075926	0.00051721	0.00154045
17 GLASS PRODS	0.00124983	0.00018299	0.00000231	0.00009049	0.00011131	0.00001125	0.00005428	0.00002304
18 CEMENT-STONE	0.03760699	0.00111980	0.00005542	0.00259266	0.00289993	0.00018400	0.00045496	0.00026094
19 METAL PRODS	0.00563738	0.00048755	0.00004208	0.00272467	0.00261132	0.00009935	0.00013448	0.00020157
20 MACH AND EQUIP	0.00157597	0.01851952	0.00002734	0.00102874	0.00142366	0.00040104	0.00041687	0.00044604
21 ELEC PRODS	0.00230247	0.00015504	0.00001771	0.00095805	0.00118152	0.00006108	0.00007771	0.00049818
22 TRANS EQUIP	0.00031885	0.00004262	0.00000589	0.00036398	0.00054454	0.00002853	0.00002904	0.00028606
23 OTHER MANF	0.00075926	0.00003171	0.00000268	0.00009125	0.00025533	0.00002143	0.00003237	0.00027878
24 RRAD TRANS	0.00119341	0.00002749	0.00008422	0.01477194	0.03337741	0.00286976	0.00014919	0.00118502
25 LOCAL TRANS	0.00000715	0.00001543	0.00002873	0.00003263	0.00012747	0.00005597	0.00004757	0.00007378
26 TRUCKING	0.00143921	0.00043820	0.00629051	0.00762262	0.00174819	0.00028508	0.01292303	0.09650859
27 OTHER TRANS	0.00011765	0.00034203	0.00007765	0.00028834	0.00323691	0.00175376	0.00053228	0.00070572
28 TELE AND TELE	0.00401748	0.00756908	0.00931049	0.01900935	0.01913862	0.00778387	0.02456542	0.01132406
29 RADIO AND TV	0.00045597	0.00041637	0.00007469	0.00043619	0.01722599	0.00111433	0.000221059	0.02973042
30 OTHER COMM	0.00010332	0.00000709	0.00000075	0.00004655	0.00004156	0.00000121	0.00000198	0.00000344
31 GAS UTIL	0.09681114	0.02375193	0.00543495	0.00476091	0.02148538	0.00342638	0.01184753	0.00352768
32 ELEC UTIL	0.06436284	0.04430469	0.02215176	0.01682952	0.04073694	0.01645932	0.02504690	0.01176430
33 WATER UTIL	1.00063311	0.02291816	0.00039166	0.00291684	0.02064509	0.00341577	0.01075136	0.00154163
34 AUTO SUPP W/S	0.00009454	1.00065834	0.00005018	0.00023453	0.00156051	0.00092228	0.00065691	0.00349439
35 GROCERIES W/S	0.00010498	0.00040316	1.00006258	0.00041239	0.00248704	0.00140951	0.00119539	0.00125451
36 FARM PRODS W/S	0.00000002	0.00000004	0.00000001	1.00000862	0.00000949	0.00000022	0.00000006	0.00000009
37 EQUIP SUPP W/S	0.01222962	0.00039838	0.00003636	0.00008992	1.00049239	0.00009447	0.00001032	0.00009347
38 OIL PRODS W/S	0.00154149	0.00008431	0.00002671	0.00006946	0.00022185	1.00009323	0.00010490	0.00023056
39 GENERAL W/S	0.00250593	0.00142373	0.00024284	0.00901301	0.00148820	0.00722120	1.00029012	0.00341041
40 LUMB YDS-HRDWARE	0.00003473	0.00001952	0.00003514	0.00004452	0.00005034	0.00001489	0.00007015	1.00002592
41 DEPT STORES	0.00001109	0.00000262	0.00000046	0.00000211	0.00000645	0.00000070	0.00000160	0.00000171
42 FOOD STORES	0.00000193	0.00000095	0.00000814	0.00000233	0.00000871	0.00000106	0.00016032	0.00000344
43 AUTO DEALERS	0.00292110	0.01209343	0.00048554	0.00847160	0.07395511	0.04667609	0.02781941	0.03991282
44 FURNITURE	0.00000095	0.00000029	0.00000001	0.00000093	0.00000082	0.00000003	0.00000007	0.00000007
45 RESTAURANTS	0.00021916	0.00899530	0.00023711	0.00057517	0.00559969	0.00430344	0.00247100	0.00410809
46 OTHER RETAIL	0.00022267	0.00009999	0.00115064	0.00014804	0.00120953	0.00010514	0.00242040	0.00042113
47 BANKING	0.00330094	0.00113637	0.00214499	0.01628766	0.06435287	0.01043412	0.04146303	0.01519028
48 OTHER FIRE	0.00971180	0.00202774	0.02706928	0.00826337	0.01364592	0.02173014	0.00819413	0.02928589
49 LEGAL SER	0.00061790	0.00131529	0.00868911	0.00045417	0.00315700	0.00039844	0.00210622	0.00788857
50 LODGING SER	0.00038018	0.00158227	0.00023495	0.00049262	0.01402833	0.00840840	0.00248488	0.00329172
51 PERSONAL SER	0.00003901	0.00006916	0.00000732	0.000074635	0.00074635	0.00029308	0.00017693	0.00027037
52 OTHER BUS SER	0.00204167	0.00446438	0.00085929	0.01222793	0.04415946	0.02143091	0.01610154	0.02542030
53 AMUSEMENT	0.00000179	0.00000076	0.00000437	0.00000055	0.00000192	0.00000024	0.00000112	0.00000150
54 MISC REPAIR	0.00064103	0.00234510	0.00005818	0.00016799	0.01052835	0.00132995	0.00232606	0.00085207
55 MEDICAL SERS	0.00002053	0.00000443	0.00003560	0.00001152	0.00001971	0.00002852	0.00001156	0.00003860
56 EDUCATION SERS	0.00000320	0.00001226	0.00000080	0.00001488	0.00003251	0.00001656	0.00001521	0.00002042
57 ALL OTHER SER	0.00148218	0.01348791	0.00053058	0.01229323	0.00315695	0.00094300	0.00680264	0.00609140

TOTAL 1.41708504 1.20048191 1.09221497 1.20482354 1.48207069 1.17174567 1.2276213 1.30656970

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TOTAL 1.35073928 1.73286911 1.21477311 1.43162347 1.14705668 1.19818249 1.08281726 1.30259296

TOTAL 1.0588572 1.31807455 1.30856122 1.33746049 1.30121391 1.22507132 1.15955194 1.20844724

INTERDEPENDENCE COEFFICIENTS (EXCLUDING HOUSEHOLDS) : LOW ROLLING PLAINS, TEXAS, 1967

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1	IRR COTTON	0.00000016
2	DRYLAND CROPS	0.00000135
3	LIVESTOCK	0.00000584
4	OTHER AGRI.	0.00000990
5	OIL AND GAS	0.00478219
6	LIQUIDS	0.00016219
7	DILFLO. SERS.	0.00050916
8	CONSTRUCTION	0.00315407
9	MEATS-DAIRIES	0.00003315
10	MILL AND FEEDS	0.00000216
11	FOOD PROCESS	0.00000364
12	BEVERAGES	0.00816351
13	TEXTILES	0.00001982
14	WOOD PAPER PROD	0.00003383
15	PRINT AND PUB	0.00411549
16	CHEM PRODS	0.00092954
17	GLASS PRODS	0.00006979
18	CEMENT-STONE	0.00033797
19	METAL PRODS	0.00021070
20	MACH AND EQUIP	0.00709856
21	ELEC PRODS	0.00011930
22	TRANS EQUIP	0.00003903
23	OTHER MANF	0.00009147
24	RRDAD TRANS	0.00008916
25	LOCAL TRANS	0.00009163
26	TRUCKING	0.00111155
27	OTHER TRANS	0.00510388
28	TELE AND TELE	0.00764464
29	RADIO AND TV	0.00204380
30	OTHER COMM	0.00000314
31	GAS UTIL	0.00588795
32	ELEC UTIL	0.01147128
33	WATER UTIL	0.00501688
34	AUTO SUPP W/S	0.00189251
35	GROCERIES W/S	0.00308035
36	FARM PRODS W/S	0.00000075
37	EQUIP SUPP W/S	0.00014620
38	OIL PRODS W/S	0.00018150
39	GENERAL W/S	0.00290987
40	LUMB YDS-HRDWARE	0.00003199
41	DEPT STORES	0.00000442
42	FOOD STORES	0.00000515
43	AUTO DEALERS	0.08134467
44	FURNITURE	0.00000012
45	RESTAURANTS	0.03014215
46	OTHER RETAIL	0.00067228
47	BANKING	0.00726750
48	OTHER FIRE	0.02141206
49	LEGAL SER	0.00119922
50	LODGING SER	0.02562737
51	PERSONAL SER	0.00048673
52	OTHER BUS SER	0.03442812
53	AMUSEMENT	0.00000165
54	MISC REPAIR	0.00226721
55	MEDICAL SERS	0.00002832
56	EDUCATION SERS	0.00069556
57	ALL OTHER SER	1.06014343

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TOTAL

1-34932588

APPENDIX D

58 HOUSEHOLDS	0.61680897	0.72092972	0.55330404	0.68945583	0.50622909	0.52747076	0.65651627	0.56769746
TOTAL	2.45328713	2.50491187	2.44322075	2.87446107	2.04156712	2.17538155	2.24754471	2.18220783

58 MOUSEHOLOS	0.44723289	0.43531579	0.44695455	0.58217902	1.09167882	0.44326222	0.69072311	0.40416727
TOTAL	2.49762686	2.18025316	1.94778765	2.01465408	2.77400805	1.82598453	2.18474602	1.89608665

58 HOUSEHOLDS	0.60669729	0.62863846	0.46656310	0.49831112	0.36255228	0.50307977	0.57359280	0.82838383
TOTAL	2.20383521	2.30745805	1.79305062	1.85878661	1.06382989	1.88288634	1.99705975	2.66186000

58 HOUSEHOLDS	0.87786862	0.70477190	0.71703480	0.45101347	0.84783689	0.90996992	0.52247715	0.61518964
TOTAL	2.60267005	2.32494881	2.31411771	1.76004529	2.56801622	2.98173326	2.79999857	2.31724334

58 HOUSEHOLDS	0.58611057	0.87695446	1.18018048	0.91164139	0.72226258	0.90506710	0.98462130	1.00032877
TOTAL	2.35062843	2.59727475	2.97197922	2.65686492	2.63247387	2.61331567	2.79624423	2.89987022

58 HOUSEHOLDS	0.82913178	0.79450004	0.87955483	0.95458698	0.97458844	0.95300492	0.85325994	0.89796703
TOTAL	2.67136125	2.99833046	2.61570777	2.95206760	2.69935868	2.71610674	2.44187002	2.73285419

58 HOUSEHOLDS	1.0099163	0.79867104	0.7258953	0.66029504	0.79438356	0.69264896	0.97329261	0.95145927
TOTAL	2.6675710	2.59017935	2.46475565	2.39916320	2.64648772	2.31237883	2.70978996	2.7235963

INTERDEPENDENCE COEFFICIENTS (INCLUDING HOUSEHOLDS) : LOW ROLLING PLAINS, TEXAS, 1967

57 HOUSEHOLDS

1	IRR COTTON	0.00090080	0.00142703
2	DRYLAND CROPS	0.00268478	0.00425184
3	LIVESTOCK	0.00488915	0.00770581
4	OTHER AGRI.	0.00660590	0.01045177
5	OIL AND GAS	0.01450504	0.01540177
6	LIQUIDS	0.00188554	0.00273001
7	OILFLD. SERS.	0.00154471	0.00164080
8	CONSTRUCTION	0.01428511	0.01763696
9	MEATS-DAIRIES	0.01622974	0.02566310
10	MILL AND FEEDS	0.00138429	0.00218996
11	FOOD PROCESS	0.00227854	0.00360452
12	BEVERAGES	0.01649512	0.01320122
13	TEXTILES	0.00011179	0.00014573
14	WOOD & PAPER PROD	0.00054306	0.00080697
15	PRINT AND PUB	0.01157769	0.01132368
16	CHEM PRODS	0.00379019	0.00453264
17	GLASS PRODS	0.00016797	0.00015557
18	CEMENT-STONE	0.00231448	0.00313174
19	METAL PRODS	0.00084794	0.00100969
20	MACH AND EQUIP	0.00858202	0.00235050
21	ELEC PRODS	0.00067929	0.00089729
22	TRANS EQUIP	0.00020216	0.00025949
23	OTHER MANF	0.00192575	0.00290638
24	RRROAD TRANS	0.00161518	0.00241794
25	LOCAL TRANS	0.00247026	0.00376889
26	TRUCKING	0.01189005	0.01706242
27	OTHER TRANS	0.03939627	0.05433547
28	TELE AND TELE	0.01928070	0.01859549
29	RADIO AND TV	0.00415504	0.00334520
30	OTHER COMM	0.00061722	0.00097300
31	GAS UTIL	0.01724555	0.01799584
32	ELEC UTIL	0.03318654	0.03440729
33	WATER UTIL	0.01249774	0.01185325
34	AUTO SUPP W/S	0.00491316	0.00478613
35	GROCERIES W/S	0.01327216	0.01414868
36	FARM PRODS W/S	0.00068737	0.00108794
37	EQUIP SUPP W/S	0.00122031	0.00170190
38	OIL PRODS W/S	0.00642711	0.00989401
39	GENERAL W/S	0.00817672	0.00934519
40	LUMB YDS-HPOWARE	0.00523147	0.00823946
41	DEPT STORES	0.01733815	0.02746496
42	FOOD STORES	0.02165398	0.03430205
43	AUTO DEALERS	0.13433902	0.07287493
44	FURNITURE	0.00605069	0.00959697
45	RESTAURANTS	0.04156553	0.01810006
46	OTHER RETAIL	0.02454573	0.03782689
47	BANKING	0.04888292	0.06593862
48	OTHER FIRE	0.03270421	0.01789214
49	LEGAL SER	0.00444409	0.00514776
50	LODGING SER	0.03030965	0.00741737
51	PERSONAL SER	0.01451115	0.02222135
52	OTHER BUS SER	0.04412246	0.01536045
53	AMUSEMENT	0.00321604	0.00509312
54	MISC REPAIR	0.00634643	0.00646341
55	MEDICAL SERS	0.03789262	0.05999506
56	EDUCATION SERS	0.04143796	0.06455534
57	ALL OTHER SER	1.07219662	0.01909798

58 HOUSEHOLDS 0.89264074 1.41405062

TOTAL 2.77078491 2.25226721

APPENDIX E

Labor Input Coefficients^a--Lower Rolling Plains Region,
Texas Input-Output Project, 1967.

Regional Sector Number	Sector Name	Regional Sector Labor Input Coefficient ^f
1	Irrig Crops	.0000327
2	Drvld Crops	.0000396
3	Livestock	.0000600
4	Other Agri	.0000393
5 ^b	Oil and Gas	.0000074
6 ^b	Liquids	.0000056
7 ^b	Oilfld Sers	.0000766
8 ^c	Construction	.0000366
9	Meats-Dairies	.0000152
10	Mill and Feeds	.0000201
11	Food Process	.0000342
12	Beverages	.0000530
13	Textiles	.0001233
14	Wood Prods	.0002154
15	Print and Pub	.0000727
16	Chem Prods	.0000214
17	Glass Prods	.0000805
18	Cement-Stone	.0000606
19	Metal Prods	.0000542
20	Mach and Equip	.0000562
21	Elec Prods	.0000422

Labor Input Coefficients:^a (continued)

Regional Sector Number	Sector Name	Regional Sector Labor Input _f Coefficient
22	Trans Equip	.0000521
23	Other Manuf	.0000962
24	RRoad Trans	.0000969
25	Local Trans	.0000584
26	Trucking	.0000735
27	Other Trans	.0000209
28	Tele Tele	.0000544
29 ^d	Radio and TV	.0001373
30 ^d	Other Comm	.0000445
31 ^e	Gas Util	.0000175
32 ^e	Elec Util	.0000354
33	Water Util	.0000175
34	Auto W/S	.0000056
35	Groceries W/S	.0000398
36	Farm Prods W/S	.0000234
37	Equip Supp W/S	.0000011
38	Oil Prods W/S	.0000012
39	General W/S	.0000033
40	Lumb Yds - Hardware	.0000024
41	Dept Stores	.0000180
42	Food Stores	.0000026

Labor Input Coefficients:^a (continued)

Regional Sector Number	Sector Name	Regional Sector Labor Input Coefficient ^f
43	Auto Dealers	.0000193
44	Furniture	.0000097
45	Restaurants	.0000122
46	Other Retail	.0000128
47	Banking	.0000348
48	Other F. I. R. E.	.0004668
49	Legal Ser	.0005118
50	Lodging Ser	.0000842
51	Personal Ser	.0001019
52	Other Bus Ser	.0000811
53	Amusement	.0000745
54	Misc Repair	.0000480
55	Medical Sers	.0001791
56	Education Sers	.0000821
57	All Other Ser	.0001114

^a Labor Input Coefficient is defined as workers per dollar of output, i.e. the ratio of dollar output to quantity of employment.

^b Regional Sectors 5-7--James R. Vinson, "Special Industry Study: Mining," Hardin-Simmons University, Abilene, Texas.

^c Regional Sector 8--Edward Y. George, "Special Industry Study: Construction," University of Texas at El Paso, El Paso, Texas.

^d Regional Sectors 29-31--David Mooreman, "Special Industry Study: Communications," Texas Tech University, Lubbock, Texas.

^e Regional Sectors 32-33--Walter E. Mullendore and Arthur L. Ekholm, "Special Industry Study: Utilities," University of Texas at Arlington, Arlington, Texas.

^f Regional Labor Input Coefficients are primarily based on State Sector Labor Input Coefficients and are computed as:

$$LIC_{rs} = \frac{N_{rs}}{CT_{rs}}$$

where LIC_{rs} = Labor Input Coefficient by Regional sector number;
 N_{rs} = estimated employment by regional sector number computed as:

$$N_{rs} = \sum_{i=m}^n N_{ss}$$

where N_{ss} = estimated employment by preliminary state sector number computed as:

$$N_{ss} = CT_{ss} (LIC_{ss})$$

where CT_{ss} = control total by preliminary state sector number and LIC_{ss} = Labor Input Coefficient by preliminary state sector number, n = the number of preliminary state sectors in each regional sector, and m = the defined sub-set of preliminary state sectors in each corresponding regional sector; and CT_{rs} = control total by regional sector number.

ⁿ Herbert W. Grubb, Anthony Lusk, and John Adams, "Banking Sector Procedures and Analyses of Inputs by Region, Texas Input-Output Project," unpublished Texas Input-Output project report, Austin, Texas, January 12, 1971.

ⁿ _____, "Sector 257, Other Credit Agencies: Procedures and Analyses of Inputs by Region, Texas Input-Output Project," unpublished Texas Input-Output project report, Austin, Texas, February 2, 1971.

ⁿ Herbert W. Grubb, Jack W. Huffman, and John Adams, "Insurance Sectors: Definition, Procedures, and Analyses of Inputs by Region," unpublished Texas Input-Output project report, Austin, Texas.

ⁿ _____, "F.I.R.L. NEC: Definitions and Procedures, Regional Total," unpublished Texas Input-Output project report, Austin, Texas.

^o Herbert W. Grubb and Anthony Lusk, Texas Input-Output Project, Division of Planning Coordination, Office of the Governor, "Legal Sector: Sector 160," unpublished project report, Austin, Texas, April 27, 1971.

^p Anthony Lusk, Texas Input-Output Project, Division of Planning Coordination, Office of the Governor, "Gross Value of Salcs: Selected Services: 1967," unpublished project report, Austin, Texas, April 14, 1971.

^q Herbert W. Grubb, et. al., Texas Input-Output Project, Division of Planning Coordination, Office of the Governor, "Control Totals for Sector 179: All Other Educational Services," unpublished project report, Austin, Texas.

^r Herbert W. Grubb and Anthony Lusk, Texas Input-Output Project, Division of Planning Coordination, Office of the Governor, "Control Totals for Sectors: 176, 180, 181, and 182," unpublished project report, Austin, Texas.

^s Herbert W. Grubb, et. al., Texas Input-Output Project, Division of Planning Coordination, Office of the Governor, "Control Totals for Sectors: 174, 175, 177, and 178," unpublished project report, Austin, Texas.

^t Herbert W. Grubb and Anthony Lusk, Texas Input-Output Project, Division of Planning Coordination, Office of the Governor, "Control Totals for Sector 183: All Other Services," unpublished project report, Austin, Texas.

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APPENDIX F

Regional Control Totals by Sector, 1967.

Regional Sector Number ^a	Regional Sector Name	Estimated Inventory Change by Regional Sector Number	Adjusted Control Totals by Regional Sector Number ^c
1 ^d	Irrig Crops	-5,470,000	23,900,000
2 ^d	Dryld Crops	-23,480,000	113,400,000
3	Livestock	1,600,000	110,400,000
4 ^d	Other Agri	-268,339	33,945,000
5 ^e	Oil and Gas	0	484,485,715
6 ^e	Liquids	0	22,437,000
7 ^e	Oilfld Sers	0	51,584,500
8 ^f	Construction	1,708,800	204,201,800
9 ^f	Meats-Dairies	127,489	67,610,000
10 ^f	Mill and Feeds	-34,700	33,745,300
11 ^f	Food Process	209,300	24,919,300
12 ^f	Beverages	152,076	13,842,100
13 ^f	Textiles	-14,933	33,209,700
14 ^f	Wood Prods	22,124	2,534,500
15 ^f	Print and Pub	676,613	16,048,800
16 ^f	Chem Prods	824,769	42,875,000
17 ^f	Glass Prods	-27,923	5,819,300
18 ^f	Cement-Stone	-4,355	24,731,600
19 ^f	Metal Prods	-52,357	25,814,400
20 ^f	Mach and Equip	-8,289	20,232,600
21 ^f	Elec Prods	-42,754	7,045,200
22 ^f	Trans Equip	-133,981	14,406,800

Regional Control Totals. (continued)

Regional Sector Number ^a	Regional Sector Name	Estimated Inventory Change by Regional Sector Number	Adjusted Control Totals by Regional Sector Number ^c
23 ^r	Other Manf	892,696	24,915,800
24 ^h	RRoad Trans	0	6,300,000
25 ^h	Local Trans	0	3,664,000
26 ^h	Trucking	0	24,865,000
27 ⁿ	Other Trans	0	53,344,000
28 ⁱ	Tele and Tele	0	30,907,000
29 ^j	Radio and TV	0	5,170,300
30 ⁱ	Other Comm	0	1,123,000
31 ^k	Gas Util	-44,545	40,495,500
32 ^k	Elec Util	0	47,645,000
33 ^k	Water Util	0	15,670,000
34 ^c	Auto Supp W/S	0	10,503,738
35 ^m	Groceries W/S	0	25,527,880
36 ^r	Farm Prods W/S	0	38,429,699
37 ^m	Equip Supp W/S	0	16,816,062
38 ⁿ	Oil Prods W/S	0	21,867,798
39 ⁿ	General W/S	0	46,136,808
40 ⁿ	Lumb Yds-Hrdware	0	16,685,932
41 ^m	Dept Stores	0	42,119,759
42 ⁿ	Food Stores	0	32,939,712
43 ^m	Auto Dealers	0	109,410,626
44 ^m	Furniture	0	9,205,784

Regional Control Totals. (continued)

Regional Sector Number ^a	Regional Sector Name	Estimated Inventory Change by Regional Sector Number	Adjusted Control Totals by Regional Sector Number ^c
45 ^m	Restaurants	0	18,719,434
46 ^m	Other Retail	0	37,531,767
47 ⁿ	Banking	0	76,708,000
48 ⁿ	Other F. I. R. E.	0	30,811,000
49 ^o	Leval Ser	0	7,654,900
50 ^p	Lodging Ser	0	8,842,000
51 ^p	Personal Ser	0	21,817,000
52 ^p	Other Bus Ser	46,611	29,045,300
53 ^p	Amusement	0	4,978,000
54 ^r	Misc. Repair	0	8,863,000
55 ^{s,r}	Medical Ser	0	53,158,600
56 ^{s,q}	Education Ser	0	81,803,000
57 ^t	All Other Ser	0	40,977,700

^a See Table 11, Chapter 3.

^b Inventory adjustment based on project and sample survey data--net change.

^c Regional control totals equal aggregation of applicable preliminary model sector number listing adjusted for gross margins in trades and net inventory change.

^d Herbert W. Grubb, et. al., Texas Input-Output Project, Division of Planning Coordination, Office of the Governor, "Agricultural Value of Production, Government Payments and Inventory Changes; Region 6, Texas Input-Output Project--1967," unpublished project report, Austin, Texas.

^e James R. Vinson, "Special Industry Study: Mining," unpublished Texas Input-Output project report, Bureau of Economic and Business Research, Hardin-Simmons University, Abilene, Texas.

^f Edward Y. George, "Special Industry Study: Construction," unpublished Texas Input-Output project report, University of Texas at El Paso, El Paso, Texas.

^g Herbert Grubb and Anita Rau, Texas Input-Output Project, Division of Planning Coordination, Office of the Governor, "Value of Shipments by Region for Manufacturing Sectors: 1967," unpublished project report, Austin, Texas, April 13, 1971.

^h Jack W. Huffman, Texas Input-Output Project, Division of Planning Coordination, Office of the Governor, "Input-Output Project: Transportation: (other subsequently prepared tables), unpublished project report, Austin, Texas, August 13, 1970.

ⁱ Anthony Lusk, Texas Input-Output Project, Division of Planning Coordination, Office of the Governor, "Estimated Telephone Industry Sector Direct Input Requirements per Dollar of Output for Input-Output Region 6, Texas Input-Output Sector 129," unpublished project report, Austin, Texas.

^j David Moorman and Herbert W. Grubb, Division of Planning Coordination, Office of the Governor, "An Input-Output Analysis of Selected Communications Sectors in Texas," unpublished Input-Output project report, Austin, Texas, April 1, 1971.

^k Walter E. Mullendore and Arthur L. Ekholm, "Electric and Gas Utilities: Procedures and Analyses of Inputs by Region, Texas Input-Output Project," unpublished project report, University of Texas at Arlington, Arlington, Texas, March 30, 1971.

^l Herbert W. Grubb, et. al., Texas Input-Output Project, Division of Planning Coordination, Office of the Governor, "Estimated Water and Waste Water Sector Direct Input Requirements per Dollar of Output for Input-Output Region 6 Texas Input-Output Sector 136," Austin, Texas.

^m Anthony Lusk, Texas Input-Output Project, Division of Planning Coordination, Office of the Governor, "Gross Value of Sales: Wholesale Trade and Retail Trade; 1967," unpublished project report, Austin, Texas, April 14, 1971.