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ABSTRACT

Using the basic input-output model developed by the Texas Input-Output Project for a 19 county South Texas Region, income transfer effects from the extension of unemployment insurance to the agricultural sector were derived. Total income transferred would have ranged from $1.5 million to $2.3 million depending upon coverage provisions. About one-half of the transfer would have been from outside the region. The average income of the eligible agricultural employee would have been increased by $311. Employment effects from increasing agricultural output in the Lower Rio Grande Region were estimated. Although high direct total employment effects were obtained for the agricultural production industries, much of the increase was due to expanded seasonal employment. Only the vegetable, citrus, and irrigated crop industry ranked among the top 20 industries in employment generating ability, exclusive of seasonal workers. In addition to unemployment insurance, policy alternatives designed to minimize the adverse economic effects resulting from rapid expansion of seasonal employment were discussed. (Author/NQ)

AGRICULTURAL EMPLOYMENT AND ECONOMIC GROWTH IN THE LOWER RIO GRANDE REGION

by

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December 1972

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Using the basic input-output model developed by the Texas Input-Output Project for a 19 county South Texas Region, income transfer effects from the extension of unemployment insurance to the agricultural sector are derived. Total income transferred would have ranged from $1.4 million to $2.3 million depending upon coverage provisions selected. About one-half of the transfer would have been from outside the region. The average income of the eligible agricultural employee would have been increased by $311.

Employment effects from increasing agricultural output in the Region are estimated. Although high direct total employment effects are obtained for the agricultural production industries, much of the increase is due to expanded seasonal employment. Only the vegetable, citrus and irrigated crop industry ranks among the top 20 industries in employment generating ability, exclusive of seasonal workers. Policy alternatives, in addition to unemployment insurance, which are designed to minimize the adverse economic effects resulting from rapid expansion of seasonal employment are discussed.

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The results, explanations and interpretations drawn from the data are those of the author and should not be construed as representative of official positions or policies of the Texas Agricultural Experiment Station, the Office of the Governor of the state of Texas, or the Department of Housing and Urban Development.

PREFACE

The role of rural economies in the overall economic development of a region or of a nation has traditionally been one of providing surplus manpower and capital to assist in the development of the nonagricultural sector. The decline in the availability of people to work in the agricultural sector in the 19 county area of South Texas analyzed in this report is a part of this process. In addition, legislative changes regulating entry of Mexican Nationals as well as the inability of much of the agricultural sector to compete effectively for available manpower with the nonagricultural sector creates additional longer run diseconomies for the agricultural sector and ultimately for the total economy.

Due to the nature of agricultural production in this region, large numbers of seasonal workers are required. The agricultural employer must in many cases compete directly with the nonagricultural employer for the services of these workers. However, often the agricultural employer has been unable, and in some cases unwilling, to compete effectively with the nonagricultural employer in terms of wages, fringe benefits, and working conditions offered to employees.

In recent years renewed interest has been generated to extend the benefits of unemployment insurance to agricultural workers. This would have direct income transfer effects to seasonally unemployed agricultural workers since it would serve to equalize their weekly income stream throughout the year and assist in developing more loyalty to agricultural employment. The income transfer effects of extending unemployment insurance to agriculture in the above described region are analyzed in this report. In addition, the importance of agricultural employment vis-à-vis total employment in the region is analyzed via the use of the regional input-output model developed earlier.

The model for the Lower Rio Grande Region is described in a report by Joe C. Murrell, Ronald B. Geneens, and Robert N. McMichael, An Input-Output Model of the Lower Rio Grande Region of Texas. Technical coefficients developed in this study were utilized in the current report and augmented for the agricultural sector by the use of data collected for Texas by Texas A&M University as a part of a larger 15 state regional study to evaluate the impact of extending unemployment insurance to agriculture. The interested reader is referred to Karen J. Nergart and Conrad F. Fritsch, Extension of Unemployment Insurance to the Texas Agricultural Sector, a Technical Report, and Conrad F. Fritsch, Karen J. Nergart, and David C. Ruesink, Extension of Unemployment Insurance to the Texas Agricultural Sector, a Descriptive and Analytical Report, for additional background information.

This report also analyzes the importance of seasonal employment in agriculture and explores alternative policies designed to better integrate the economies of the agricultural and nonagricultural sectors of the region.

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AGRICULTURAL EMPLOYMENT AND ECONOMIC GROWTH IN THE LOWER RIO GRANDE REGION

Conrad F. Fritsch*

CHAPTER I

INTRODUCTION

The objectives of this report are 1) to evaluate the income and employment effects from the extension of unemployment insurance to agricultural workers [1/] and, 2) to evaluate the employment requirements of increasing production in the agricultural sector. These objectives will be analyzed with respect to a 19 county region in South Texas. The region is bounded on the north by Webb, McMullen, Live Oak, Bee and Refugio Counties (see map, Figure 1). The area included in the scope of this report will be designated as "the Lower Rio Grande Region" for definitional purposes. Included in this region are four counties defined as standard metropolitan statistical areas (SMSA's) and 15 non-SMSA counties. [2/]

Background of the Region

> The Rio Grande as the oldest vein of civilized life and communication in the area of the United States was unique in the settling of the West; for unlike other communities and areas of settlement, those of the Rio Grande were not

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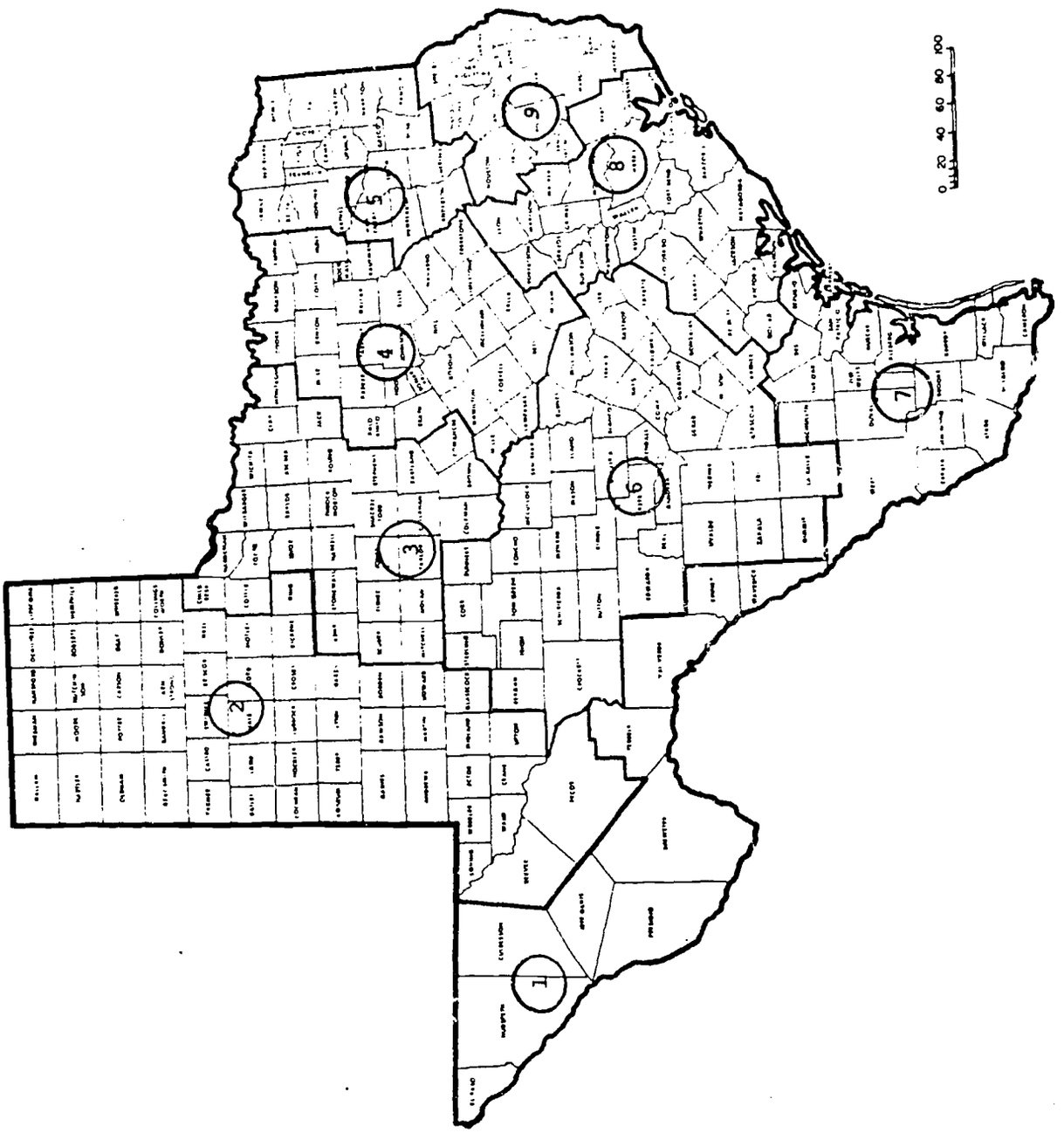
1. A brief description of the unemployment insurance program is found on page 23 of this report. A fuller discussion of the program as it applies to Texas agriculture is found in Fritsch, Nergart, and Ruesink, "Extension of Unemployment Insurance to Texas Agriculture, A Descriptive and Analytical Report," (forthcoming publication, Texas Agricultural Experiment Station).

2. A standard metropolitan statistical area is a county or a group of contiguous counties which contains at least one city of 50,000 inhabitants or more, or "twin cities" with a combined population of at least 50,000. In addition to the county or counties, containing such a city or cities, contiguous counties are included in a SMSA if according to certain criteria, they are socially or economically integrated with the central city.

Figure 1. Map of Lower Rio Grande Region.



> borne of the Westward movement, but were already long established, with their own various patterns of life, when the recurrent American frontier reached out and put over them a new complex of living ways. After three and one-half centuries of human life largely self-systained, the whole river line was drawn into the pattern of American national life and its material needs were increasingly met by distant sources.
>
> Paul Horgan, 1954

The Lower Rio Grande Region is culturally old, but economically young. Inhabitated by Indians when the first Spanish explorers mapped the area in 1519 it was yet some 240 years before the initial Spanish settlements were founded at Reynosa and Camargo on the southern side of the river. The Spanish culture was deeply infused in the region by the time of the Texas Revolution in 1846 with the lands north of the Rio Grande receiving the first major Anglo settlement shortly afterward. Most of these early settlers were Southerners arriving for the purpose of establishing trade or to homestead on inexpensive land.

For the most part, livestock provided the principle source of income during this early period. It was 1904 before the first railroad branch reached Brownsville, effectively linking the economy of the area with the settled regions to the north. Shortly after the arrival of the railroad most of the major towns and cities of the region bordering on the Rio Grande were settled. The area remained principally agricultural with initial attempts at irrigation beginning as early as 1895. Since the fate of agricultural production in the region is closely tied to the availability of water, much effort was expended to provide efficient irrigation systems for this purpose. By the mid-40's the southernmost area of the Lower Rio Grande Region had become well known for its citrus production, especially grapefruit. During these peak years the value of annual production was estimated as high as 40 million dollars. However, severe freezes in 1949 and 1951 severely curtailed citrus production. Additional freezes in 1962 once again retarded recovery with annual sales plunging to $400,000. Presently the region is once again increasing its citrus production with sales

of over $18 million in 1969. Estimated sales in 1971 were $32 million.

After the freeze of 1951 many farmers bulldozed the trees damaged by the freeze and planted large acreages into cotton. In 1960 somewhat over 525,000 bales of cotton were ginned in the Lower Rio Grande Region accounting for 14 percent of total ginnings in the state. By 1970, however, ginning had decreased to about 235,000 bales or slightly less than eight percent of total ginning in the state.

Since 1945 the economy of the area has become more diversified with increasing attention to expansion of tourism and increased employment in wholesale, service and retail industries. Textile and electronic component manufacturers have located in the region in recent years attracted primarily by the relatively low prevailing wage rates. However, the "Border Industrialization Program" which allows firms to locate component assembly plants in Mexico with import tariffs charged only on the value added (generally just the amount of the wages paid) provides the incentive for increasing employment on the Mexican side which could reduce the investment attractiveness of the U. S. side since wages, while generally lower than U. S. wage rates in other areas are still higher than those paid on the Mexican side of the border.

Population Base of the Region

The 19 county region analyzed as a regional economy in this study includes many persons with Spanish surnames or who call the Spanish language their major language. The distribution of this group, by county, is shown in Table I. Over the region, approximately 64 percent of the people identified by the Census of Population met the above criteria in 1970. In over half of the counties the actual proportion was over 75 percent.

The 1970 population of the region, estimated at 857,603, was somewhat less than eight percent of the total population of the state. Although registering a population increase from 1960 of little less than 10,000 persons, or about one percent (Table II), the rate of increase was lower than for the state as a whole which registered a population increase of 17 percent over the decade.

Table I. Total and Spanish-Surname Population by County and Region, 1970, Lower Rio Grande Region.

County	Total Population 1970	Spanish Surname* 1970	Spanish Surname as a Percent of Total
SMSA			
Cameron	140,368	107,000	76.2
Hidalgo	181,535	143,61[illegible]	79.1
Nueces	237,542	103,5[illegible]	43.6
Webb	72,859	62,38[illegible]	85.6
TOTAL SMSA	632,304	416,534	65.9
NON SMSA			
Aransas	8,902	2,372	26.6
Bee	22,737	8,892	39.1
Brooks	8,005	6,399	79.9
Duval	11,722	9,905	84.5
Jim Hogg	4,654	4,275	91.9
Jim Wells	33,032	21,125	64.0
Kenedy	699	532	76.1
Kleberg	33,173	14,560	43.9
Live Oak	6,697	2,703	40.4
McMullen	1,267	743	58.6
Refugio	9,49[illegible]	3,610	38.0
San Patricio	47,288	23,231	49.1
Starr	17,707	17,330	97.9
Willacy	15,570	11,961	76.8
Zapata	4,352	3,984	91.5
TOTAL NON SMSA	225,229	131,622	58.4
Total Region	857,603	548,156	63.9

Source: 1970 Census of Population, General Social and Economic Characteristics, Texas Table 119.

*The figures include both Spanish-surname and persons using Spanish as their major language.

Table II. Total Population Change, SMSA and Non SMSA Counties, 1960-1970, Lower Rio Grande Region.

County	Total Population 1960	Total Population 1970	Percent Change From 1960
SMSA			
Cameron	151,098	140,368	- 7.1
Hidalgo	180,904	181,535	+ .3
Nueces	221,573	237,542	+ 7.2
Webb	64,791	72,859	+12.5
TOTAL SMSA	618,366	632,304	+ 2.3
NON SMSA			
Aransas	7,006	8,902	+27.1
Bee	23,755	22,737	- 4.3
Brooks	8,609	8,005	- 7.0
Duval	13,398	11,722	-12.5
Jim Hogg	5,022	4,654	- 7.3
Jim Wells	34,548	33,032	- 4.4
Kenedy	844	699	-17.1
Kleberg	30,052	33,173	+10.4
Live Oak	7,846	6,697	-14.6
McMullen	1,116	1,267	+13.5
Refugio	10,975	9,494	-13.5
San Patricio	45,021	47,288	+ 5.0
Starr	17,137	17,707	+ 3.3
Willacy	20,084	15,570	-22.5
Zapata	4,393	4,352	- .9
TOTAL NON SMSA	229,806	225,299	-2.0
Total Region	348,172	857,603	+ 1.1

Source: Census of Population 1960, 1970.

From Table I it is also seen that almost 50 percent of the Spanish surname population live in the two SMSA counties of Cameron and Hidalgo. Almost 80 percent of the population in these two counties is Spanish surname as identified by the 1970 Census of Population. The largest SMSA county in the area, Nueces, in which the city of Corpus Christi is located, has a Spanish surname population of only 43.6 percent of total population. The concentration of the Spanish surname population is slightly greater in the SMSA counties than in the non-SMSA counties; approximately 66 percent in the former and 58 percent in the latter.

Although the 19 county region experienced a population increase of approximately one percent, the combined SMSA counties of Cameron and Hidalgo experienced a population decline of three percent between 1960 and 1970. Webb County, which includes the city of Laredo, experienced the greatest proportional increase in population of the four SMSA's in the region, with over 12 percent gain since 1960. The population in the non-SMSA counties declined by two percent with the greatest decline originating in Willacy County, where population dropped by more than 22 percent. Hence, from this brief profile, it is seen that the three southernmost counties of the region, Cameron, Hidalgo, and Willacy, experienced by 1969 a combined decline in population of nine percent from 1960. In 1960 these three counties comprised over 41 percent of the total population of the region. By 1969 their proportionate share had dropped to 39 percent.

Although the population in Cameron County declined between 1960 and 1970, the population of Brownsville increased by slightly more than nine percent during the same period. McAllen, in Hidalgo County, also gained population with a net increase of 15 percent over the decade. Mission, Edinburg and Pharr in Hidalgo County, and Harlingen in Cameron County, all lost population during the decade (Table III). Corpus Christi experienced the greatest population increase in the region, both in absolute and percentage increase terms, with Laredo and McAllen showing approximately the

Table III. Comparison of Selected Areas of Population Concentration, Lower Rio Grande Region, 1960, 1970.

Place name (population of 10,000 or more in 1970)	Population		Percent Change in Population from 1960
	1960	1970	
Alice	20,861	20,121	- 3.5
Brownsville	48,040	52,522	+ 9.3
Corpus Christi	167,690	204,552	+22.0
Edinburg	18,706	17,163	- 8.2
Harlingen	41,207	33,499	-18.7
Kingsville	25,297	28,447	+12.5
Laredo	60,678	68,930	+13.6
McAllen	32,726	37,636	+15.0
Mission	14,081	13,043	- 7.4
Pharr	14,106	15,991	-13.4
Robstown	10,266	11,217	+ 9.3
Weslaco	15,649	15,341	- 2.0

Source: Census of Population 1960, 1970

same percentage increases. Only Corpus Christi experienced population growth in excess of the state average.

Comparison of population trends of the SMSA counties with the various cities within the counties indicates that some intracounty population shifts from rural to urban areas may have occurred during the 1960's. However, the fact that Brownsville registered a net population increase over the decade, combined with a net decrease in the population of Cameron County, indicates that much of the out-migration from the rural areas was not to the cities in the county, but rather to other SMSA's. The same pattern occurs with respect to population shifts in Hidalgo County. The population increase in Nueces and Webb Counties combined with the relatively large population increases in Corpus Christi and Laredo suggest that some of the out-migration from the southernmost counties may have been to these cities.

These figures concur with Curley's analysis which indicated migration from Cameron to Hidalgo County and also from Cameron and Hidalgo Counties to Webb County, rather than a primary movement from persons in the rural areas to the urban areas within these SMSA counties. 2/ Using regression analysis Curley confirmed that, indeed, out-migrants were more strongly attracted to urban areas with a large population. A distance variable was also analyzed. As expected, areas closest to the point of out-migration were more attractive than places farther removed, but the results indicated that distance is only of secondary importance, with the size of the receiving community providing the major stimulus for settling. Using data from the one percent Social Security sample, the study reported that 3,100 out-migrants from Cameron and Hidalgo County settled in Houston, 1,400 in Dallas, 1,300 in Corpus Christi, and 800 in San Antonio during the period 1960-1965.

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2. Michael D. Curley, Growth Center Strategy for South Texas, Program on the Role of Growth Centers in Regional Economic Development, Discussion paper number 18, University of Kentucky, Lexington, Kentucky, 1969.

Apart from Corpus Christi and Laredo, in which both county and city population increased over the decade, the other major population centers in the region showed mixed results. Some urban areas experienced sharp population declines with others showing quite substantial net population increases. As a whole, the non-SMSA counties registered a net population decline. Population in these counties represented about one-quarter of total regional population. Only three of the 12 areas of the region having 1970 populations in excess of 10,000 persons were located in these counties (Alice, Kingsville and Robstown).

The Income Base of the Region

Family income is a better measure of total household purchasing power than is per capita income. However, both of these measures, when compared with statewide totals, indicate that income received in the 19 county region are, on the average, lower than those received across the state (Table IV). Family income includes all earnings by individuals who reside in the same household. Almost 58 percent of the counties included in the region had median family incomes less than 75 percent of the state median income in 1969. Nueces County, with a median income of 96 percent of the state median, most nearly approximated the state figure of $8,490 per family. Starr County at 42 percent of the state median or $3,593 per family, was the lowest in the region. Suggestive of a larger number of employed family members per household is the relationship between per capita county income as compared to the state norm. While only 58 percent of the counties had median family incomes less than 75 percent of the state median, almost three-fourths of the counties had per capita incomes of less than 75 percent of the state median. Both measures indicate household incomes below those of the prevailing state figures, but the family figures are the most useful since the family is, for the most part, a more viable economic unit than is the individual.

A further breakdown of family income is presented in Table V. Again, comparing family income in the Lower Rio Grande Region with family income in

Table IV. Median Family and Per Capita Incomes in the Lower Rio Grande Region, by Counties, 1969.

County	Family Median		Per Capita Income	
	Income	County Median Income as a Percent of State Median	Income	County Per Capita Income as a Percent of State Per Capita
SMSA				
Cameron	$5,068	59.7%	$1,580	56.2%
Hidalgo	4,776	56.3	1,523	54.2
Nueces	8,168	96.2	2,531	90.1
Webb	4,978	58.6	1,573	56.0
NON SMSA				
Aransas	6,661	78.5	2,622	93.3
Bee	6,358	74.9	2,015	71.7
Brooks	4,201	49.5	1,518	54.0
Duval	4,506	53.1	1,458	51.9
Jim Hogg	4,046	47.7	1,366	48.6
Jim Wells	6,737	79.4	1,948	69.3
Kenedy	4,586	54.0	1,775	63.2
Kleberg	6,968	82.1	2,149	76.5
Live Oak	5,832	68.7	2,038	72.5
McMullen	7,120	83.9	2,113	75.2
Refugio	6,994	82.4	2,285	81.3
San Patricio	7,266	85.6	2,039	72.6
Starr	3,593	42.3	1,123	40.0
Willacy	4,156	49.0	1,404	50.0
Zapata	3,788	44.6	1,276	45.4

Source: 1970 Census of Population, General Social & Economic Characteristics, Texas, Table 124.

Table V. Income Distribution for Family Units in the Lower Rio Grande Region Compared with State, 1969.

Family Units with Incomes	Percent of Total	
	Lower Rio Grande Region	Texas
Less than $1,000	5.6%	3.0%
$ 1,000-1,999	8.0	4.4
2,000-2,999	9.3	5.6
3,000-3,999	9.9	6.1
4,000-4,999	8.5	6.3
5,000-5,999	7.7	6.8
6,000-6,999	7.2	7.1
7,000-9,999	17.1	20.7
10,000 or more	26.7	40.0
Total	100	100

Texas, it is seen that while slightly more than one-fourth of the family units earned a total income of $10,000 or more in the region, 40 percent of the family units in the state earned this amount.

A Lorenz curve which indicates the relative distribution of family income between the Lower Rio Grande Region and the remaining area of the state was plotted (Figure 2). The line originating from the origin of the graph at a 45 degree angle is indicative of a perfectly equal income distribution; that is, 10 percent of the families receive 10 percent of the income, 20 percent of the families receive 20 percent of the income, etc. The greater the curvature of the line toward the lower right hand corner of the graph, the more disproportionate is the income distribution. It can be seen from this figure that although the income distributions for the state and the Lower Rio Grande Region are somewhat similar, the income distribution for the Lower Rio Grande Region is more disproportionate than for the state as a whole. Approximately the same proportion of the family units in both the state and the Lower Rio Grande Region received between $6,000 and $7,000 total family earnings. However, approximately one-third of the family units in the Lower Rio Grande Region had total family earnings of less than $4,000 per year, compared with only 19 percent for the state as a whole. Conversely, at the upper extreme, over 60 percent of the family units in the state had earnings of $7,000 or more compared with only 44 percent for the Lower Rio Grande Region.

CHAPTER II

THE AGRICULTURAL LABOR FORCE IN THE REGION

Of more direct bearing on the major purpose of the study is the distribution and the importance of agricultural employment in the economy of the Lower Rio Grande Region. Agricultural employers hired a total of 37,833 individuals during 1969 (Table VI). Most of these workers were seasonal workers, that is, workers employed by a single employer for less than 150 days during the year. Less than one-fourth of the agricultural

Figure 2. Comparative Income Distribution Between the Lower Rio Grande Region and the Remainder of the State, 1969.

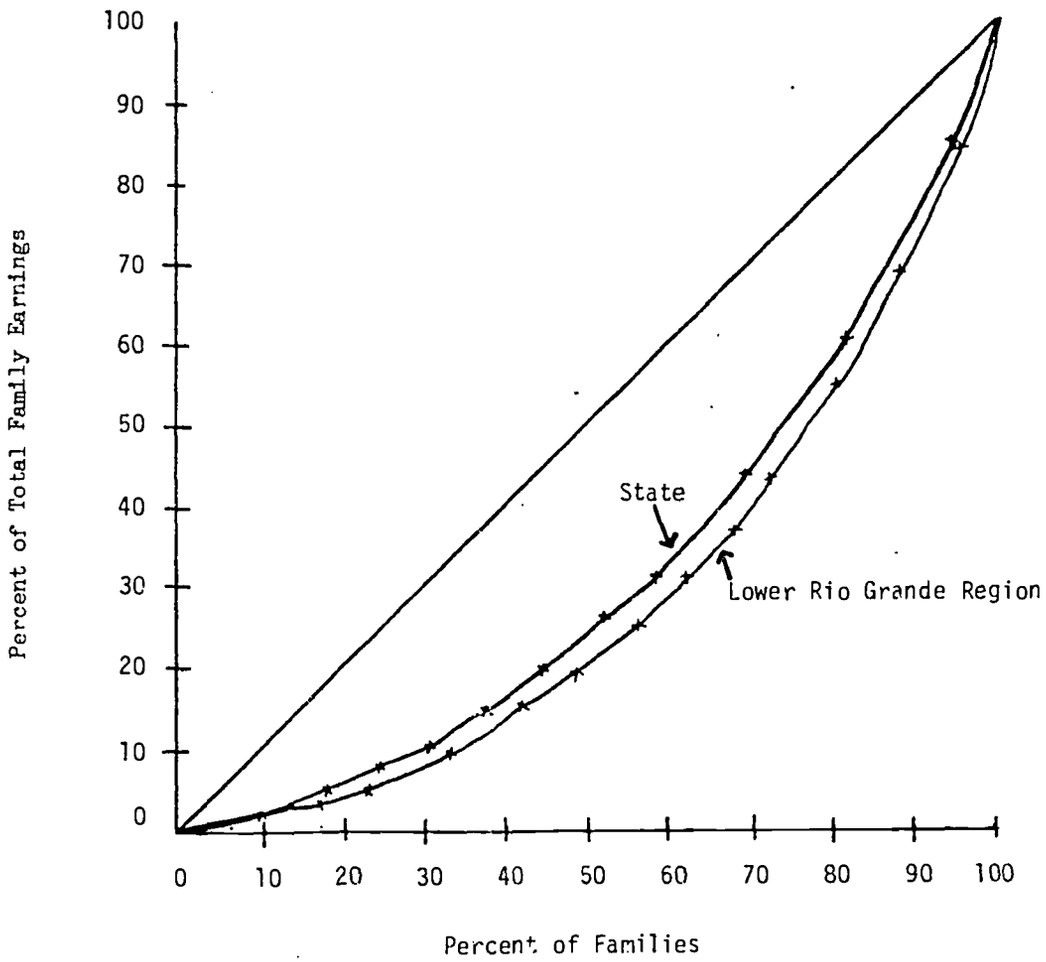

Table VI. Distribution of Farms, Farm Employees and Wages Paid, Economic Classes 1-5, Lower Rio Grande Region, 1969.

County	Number of Farms		Wages* (dollars)	Number Regular Workers**	Number Seasonal Hirings**	Total Hirings
	All	Hiring Labor				
Aransas	25	16	45,619	16	16	32
Bee	449	321	784,292	253	999	1,252
Brooks	97	76	445,133	128	440	568
Cameron	999	788	4,567,886	1,181	4,634	5,815
Duval	392	271	788,344	220	975	1,195
Hidalgo	2,033	1,323	8,752,476	2,345	8,098	10,443
Jim Hogg	108	71	526,010	129	391	520
Jim Wells	476	332	1,750,201	492	1,056	1,548
Kenedy	14	12	365,993	115	165	280
Kleberg	135	99	1,408,081	779	578	1,357
Live Oak	492	333	546,595	149	969	1,118
McMullen	146	108	293,229	77	485	562
Nueces	819	621	2,534,006	724	1,638	2,362
Refugio	196	146	613,772	166	328	494
San Patricio	567	444	2,133,877	565	1,462	2,027
Starr	284	195	1,772,964	502	2,189	2,691
Webb	216	169	1,729,296	577	2,577	3,154
Willacy	418	331	1,772,463	435	1,177	1,612
Zapata	144	116	429,965	145	658	803
Totals	8,010	5,772	31,260,202	8,998	28,835	37,833[t]

* Does not include Contract Labor, Machine Hire or Custom Work.

**Regular workers are those workers employed 150 days or more for the same employer, Seasonal workers are those who were employed less than 150 days.

[t]This figure overstates the total number of persons employed in agriculture due to double counting of workers employed by more than one employer.

Source: 1969 Census of Agriculture, Texas.

labor force was hired for 150 days or more by a given employer (regular employees). The greatest amount of farm employment, both seasonal and regular, was in Hidalgo County with somewhat over 10,000 workers employed during 1969. Cameron County with slightly under 6,000 workers was second. Twelve counties hired over 1,000 agricultural workers during the year. However, only two counties, Hidalgo and Cameron, hired over 1,000 regular agricultural workers during the year.

Incomes of People In Agriculture

Slightly over 8,000 commercial farms were reported by the Census of Agriculture in 1969, of which 5,772 reported some labor hirings. [3] Total wages paid by these farms amounted to $31.3 million. Because of the heavy utilization of seasonal workers and the implicit double counting of seasonal workers employed by more than one employer, the average earnings per person as derived from Census of Agriculture data will be understated and, therefore, provide a misleading indication of earnings received by agricultural employees.

Data presented by Nergart and Fritsch indicate that for seasonally labor intensive agricultural production such as fruit and vegetables, individuals hired by an employer for less than 150 days account for three-fourths to four-fifths of total employer hirings, but earn only one quarter to one-third of total wages paid. These figures suggest that seasonal employment, while extremely important at harvest time, provides only a small portion of income earned by hired workers in agriculture. [4] However, a worker classified as seasonal by an employer may actually be a full-time farm worker by virtue of working for several employers during the season. For this reason, the personal income figures obtained from the Census of Population for employees working in agriculture at the time of interview (the week prior

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3. A commercial farm is one with sales of agriculture products of $2,500 or more per year.

4. Karen J. Nergart and Conrad F. Fritsch, Extension of Unemployment Insurance to Texas Agriculture, A Technical Report, submitted to the U. S. Department of Labor, January 1973.

to April 1, 1970 or the most recent week of employment, if unemployed) provides a clearer indication of the earnings of people in the agricultural wage and salary sectors.

Table VII suggests that the earnings of farmers and farm managers compares favorably with earnings of the labor force as a whole in the Lower Rio Grande Region. While Census data on median earnings for farmers and farm managers are available in only 11 of the 19 counties, the median per capita returns for farmers and farm managers in over half of these counties was greater than the median per capita earnings for the county as a whole. In only two counties, Bee and Duval, were median returns for farmers and farm managers less than three-fourths of the median county per capita earnings. At the upper extreme, median returns for farmers and farm managers in Willacy County was $7,667, or 225 percent of the median per capita earnings of thecounty as a whole.

A different picture is presented when comparing median per capita earnings of farm foremen and other farm workers with overall county per capita median earnings. Of the 16 counties for which data are available, in only two counties were median earnings of farm foremen and other farm workers at least 75 percent of the county figures. Whereas median income of farmers and farm managers ranged from $1,971 to $9,200, median earnings of farm foremen and other farm workers were in a much narrower band, ranging from $1,708 to $2,914.

Sales of agricultural products in the 19 county region amounted to $221 million in 1969, or just slightly less than seven percent of the total value of agricultural sales in the State of Texas. Persons in the Lower Rio Grande Region reporting agricultural employment as their primary source of income in 1969 were 13 percent of the total for the state. This suggests that the agriculture of the Lower Rio Grande Region, when measured against total value of sales, is more labor intensive in the Lower Grande Region than it is for the state as a whole. This result is not unexpected since citrus and vegetable operations, which predominate in the region, are both highly labor intensive and seasonal.

Table VII. Median Earnings of the Male Agricultural Labor Force Over 16 Years Old in the Lower Rio Grande Region, 1969.

County	Median Per Capita Earnings				
	Median Earnings All Employment	Median Earnings Farmers and Farm Managers	Median Earnings of Farmers and Farm Managers as a Percent of all Employment	Median Earnings Farm Foremen and Other Farm Workers	Median Earnings Farm Foremen and Other Farm Workers as a Percent of all Employment
Aransas	5,893	a		a	
Bee	4,946	3,338	67.5%	2,005	40.5%
Brooks	3,577	a		2,037	57.0
Cameron	4,117	4,224	102.6	2,038	49.6
Duval	3,947	1,971	49.9	1,844	46.7
Hidalgo	3,681	4,452	120.9	1,848	50.2
Jim Hogg	3,547	a		2,673	75.4
Jim Wells	5,731	7,458	130.1	2,914	50.8
Kenedy	1,966	a		1,708	86.9
Kleberg	5,615	5,500	98.0	2,087	37.7
Live Oak	5,221	9,200	176.2	2,820	54.0
McMullen	4,324	a		a	
Nueces	6,771	6,037	89.6	2,454	36.2
Refugio	5,671	a		2,870	50.6
San Patricio	6,116	6,914	113.0	2,008	32.8
Starr	3,076	2,667	86.7	1,840	59.8
Webb	3,832	a		1,735	45.3
Willacy	3,394	7,667	225.9	2,308	68.0
Zapata	3,842	a		a	

Source: 1970 Census of Population, General Social and Economic Characteristics, Texas, Table 122.

a. Median not applicable or that tne base for the derived figure is too small for it to be shown or the data are being withheld to avoid disclosure of information for individuals.

Although agriculture is an important producer of income in the region, only about 8.5 percent of the employees over 16 years of age were employed in agriculture at the time of interview (Table VIII). Apart from Kenedy and McMullen Counties, which have very small employment bases, only five counties, Willacy, Starr, Hidalgo, Live Oak and Zapata, recorded more than 15 percent of the over 16 year old labor force engaged primarily in agriculture. If the employment figures for Nueces County, which has a very low proportion of agricultural to total employment, is removed from the calculations, the overall importance of agricultural employment in the regional economy is better represented. On this basis over 11 percent of the labor force over 16 years of age was engaged in agriculture.

Some Labor Market Considerations

Economic analysis of market phenomenon usually involves an appeal to the intersection of supply and demand schedules. Determined simultaneously at the point of intersection are the price and the quantity of the commodity supplied. For this analysis to adequately portray the market situation, the commodity or product must be both homogeneous and devisible. When considering the human resources as a commodity responding to market forces, it is very difficult to assume either of these two properties. Although more easily met under conditions of industrial employment characterized by union organization, well defined labor market standards and specifications, and relatively stable year-round supply and demand situations, they are rarely satisfied within the general context of the agricultural labor force. Agriculture is not a homogeneous industry; it is composed of many commodity groups - each with special labor requirements; each making varied demands upon the labor force. Dairy, poultry and livestock farms, for example, provide regular employment throughout the year with some regularly recurring seasonal employment needs depending on the type of operation. At the other extreme are the fruit and vegetable operations which require very large amounts of seasonal labor, the specific needs being highly dependent upon

Table VIII. Persons Over 16 Employed in Agriculture Compared with Total Employment in Lower Rio Grande Region, 1970.

County	Farm Employment		
	All Employment	All Farm Employment*	Farm Employment as Percent of All Employment
Aransas	2,845	49	1.72%
Bee	6,345	550	8.67
Brooks	2,233	324	14.51
Cameron	40,178	3,596	8.95
Duval	3,462	404	11.67
Hidalgo	52,073	8,505	16.33
Jim Hogg	1,510	101	6.69
Jim Wells	10,453	523	5.00
Kenedy	298	143	47.99
Kleberg	9,656	475	4.92
Live Oak	2,070	407	19.66
McMullen	403	159	39.45
Nueces	81,305	1,690	2.08
Refugio	3,471	294	8.47
San Patricio	14,947	1,316	8.80
Starr	4,016	955	23.78
Webb	18,974	1,047	5.52
Willacy	4,168	1,327	31.84
Zapata	983	155	15.77
Region	259,390	22,020	8.49

Source: 1970 Census of Population, General Social & Economic Characteristics, Texas Table 122.

*The data for total farm employment does not correspond with that given in Table IV derived from the Census of Agriculture due to differences in timing of interviews and conceptual differences in the respective Census objectives. The Census of Population uses households as the sampling unit while the Census of Agriculture bases its sample on farm establishments.

prevailing weather conditions. Overall the peak seasonal employment in agriculture was reported to be 33 percent higher than average monthly employment in 1964. By comparison, seasonal fluctuations of only 10 percent above average yearly employment were recorded in the construction industry, which also faces highly seasonal demand fluctuations. 5/

The treatment of agricultural labor market equilibrium in the context of traditional economic analysis, while providing an intuitive guideline toward wage and quantity determination in agriculture, does not enable us to adequately treat the varied institutions and cultural determinants which interact to determine the existing uneasy labor market performance in the Region. Accordingly, the approach used in this section will be to emphasize the heterogeneity of the farm labor force and the potential conflicts arising from the differing perspective of the worker on the one hand and the employer on the other. Similar to traditional economic analysis, we assume that both workers and employers are rational and attempt to maximize their utility which will be stated predominantly in economic terms.

It is useful to separate the farm labor demand schedule into a regular and seasonal component. The demand for regular year-round labor is quite amenable to traditional economic market analysis and will not be developed further here. The major concern here is with the seasonal component, especially as it relates to labor in the highly labor intensive vegetable and citrus industries predominant in the agriculture of the Lower Rio Grande Region. As noted earlier, large yearly fluctuations occur in value of citrus shipped out of the Valley. The demand for seasonal labor is directly related to the climatic conditions during peak employment periods. Given this biological restriction, it is very

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5. Bauder, et al. page 1.6, as reported in Seasonal Work Patterns of the Hired Farm Working Force of 1964, Economic Research Service, U. S. Department of Agriculture, Agricultural Report 102.

difficult to accurately predict from one year to the next the quantity of labor required at harvest time.

The region has a resident supply of agricultural labor which migrates annually to northern states. The existence of this resident pool of seasonal labor poses yet additional burdens on the ability of traditional economic analysis to adequately deal with the equilibrium solution to the labor supply and demand equation. The workers or family groups which comprise this labor force move north during the summer months to 1) increase their income over what they could earn by staying in the Lower Rio Grande Region, or 2) because alternative employment is not available in the Lower Rio Grande Region.

The vast majority of these workers are Mexican Americans. In a multi-disciplinary study Padfield and Martin reported that Mexican Americans ranked highest in all evaluative categories in which a hierarchy could be postulated. The comparison was with Anglos, Indians and Negroes. Almost all Mexican Americans reported 100 percent church affiliation, the highest frequency in value orientation comparable with Anglo middle class culture, the highest frequency of persons in optimum work age and almost all were members of a family social structure. They also showed the highest job stability and the greatest percentage of active union membership. These attributes suggest that indeed, Mexican American farm workers residing in the Lower Rio Grande Region may respond positively to the economic incentives of the dominant Anglo culture. 6/

More recent studies substantiate the conclusions in the above study by noting that Mexican American high school students from poverty areas in the Lower Rio Grande Region consistently aspired to high status jobs - professional and managerial - and maintained relatively high expectations of achievement. 7/

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6. Harland, Padfield and William Martin, Farmers, Workers and Machines, Technological and Social Change in Farm Industries of Arizona, University of Arizona Press, 1965, p. 165.

7. David E. Wright, Esteban Salinas and William P. Kuvlesky, "Ambitions and Opportunities for Social Mobility and Their Consequences for Mexican Americans as Compared With Other Youth," The Territorial Minorities: Chicanos and Native Americans, Englewood Cliffs, New Jersey, Prentice-Hall (forthcoming).

The agricultural employer is beset by severe problems when planning for seasonal labor requirements. He quite rightly would prefer to have a readily available, low cost resident labor supply which could be called into action the minute the crop is ready. Additionally, he has come to view, as a matter of right, that the seasonal labor supply be readily available and noncompetitive in nature. The history of governmental programs and policies which were designed to maintain the availability of a relatively non-competitive labor supply is cited by Padfield and Martin as evidence of this right. 8/ The use of prisoners of war to supply needed farm labor, the continuation of Public Law 78, the "Bracero Program" beyond the emergency period caused by the Korean War and the relatively loose enforcement by the State Department of Public Law 414, "The Green Card Program" and the use of student labor crews during peak harvest periods illustrate this dependence upon a "captive" labor supply. Viewed from an historical employer perspective, the elimination of the Bracero Program in 1964 and the tightening of restrictions surrounding the entry of Mexican Nationals with work permits under P.L. 414 has caused them undue hardship in meeting seasonally fluctuating labor demands. 9/

At this point a consideration related to the unemployment insurance program is raised that generally is not included in an evaluation of agricultural labor market institutions. The primary purpose of the unemployment insurance program is to provide the workers, as a matter of right, protection against involuntary, industry induced unemployment. 10/ This implies that the employer has primary responsibility for providing competitive employment opportunities.

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8. Ibid., pp. 253-256.

9. However, a 1965 Amendment to P.L. 414 permits entry of "Aliens seeking to enter the United States, for thepurpose of performing skilled or unskilled labor...(whenever)....there are not sufficient workers in the United States who are able, willing, qualified and available at the time of application... and the employment of such aliens will not adversely affect the wages and working conditions of the workers in the United States similarly employed." However, administrative interpretation of this amendment has been strict.

10. See following chapter.

It is recognized that comparisons of this kind bring into focus very specific and real differences in value orientations between employers and workers. However, when dealing with the human resource factor, it is folly to assume that value perspectives are unimportant. [11] The full implications of the last statement will not be developed at this time, but will be developed in the concluding chapter as integral to the role of unemployment insurance as it relates to economic development in the Lower Rio Grande Region.

11. See for example, David E. Wright, A Modest Interdisciplinary Overview of the Farm Labor Problem With Some Suggestions for Future Research Efforts, paper presented at the Association of Southern Agricultural Workers, February 5-7, 1973.

CHAPTER III

THE ECONOMIC IMPACT FROM THE EXTENSION OF UNEMPLOYMENT INSURANCE TO AGRICULTURE IN THE LOWER RIO GRANDE REGION

The results presented in this section relating to the extension of unemployment insurance to agriculture draw from data gathered as a part of "Regional Research Project NE-58 of the Northeast Agricultural Experiment Stations."[12] The data relate to the 1969-1970 season. The input-output model for the Lower Rio Grande Region used to analyze the data was developed as a part of the Texas Interindustry Study. This model was based upon conditions prevailing in 1967.[13]

The Unemployment Insurance Program

The objective of the unemployment insurance program has been defined by the U. S. Department of Labor as:

> Unemployment insurance is a program--established under Federal and State law--for income maintenance during period(s) of involuntary unemployment due to lack of work, which provides partial compensation for wage loss as a matter of right, with dignity and dispatch, to eligible individuals. It helps to maintain purchasing power and to stabilize the economy. It helps to prevent the dispersal of the employers' trained work force, the sacrifice of skills, and the breakdown of labor standards during temporary unemployment.[14]

Within the context of the above policy statement it is seen that income maintenance during periods of industry induced unemployment is a primary purpose of the program. Secondary objectives include economic stabilization and maintenance of a permanent work force for the employer. Initiated

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12. See W. W. Bauder, et al. Impact of Extension of Unemployment Insurance to Agriculture, submitted to the U. S. Department of Labor October 31, 1972, also see Nergart and Fritsch, op. cit. and Fritsch, Nergart and Ruesink, op. cit.

13. See Joe C. Murrell, Jr., Ronald B. Geneens, Robert N. McMichael, Lower Rio Grande Region.

14. Reprinted from U. S. Department of Labor, Bureau of Employment Security, Major Objectives of Federal Policy with Respect to the Federal-State Employment Security Program, General Administration Letter No. 305, April 25, 1955. The quotation previously appeared in Robert D. Emerson, Migration and the Cost of Unemployment Insurance Protection for Agricultural Workers, University of Florida, 1973, p. 2.

under provisions of the Social Security Act of 1935, the program currently provides protection against income loss for workers in most major sectors of the economy. Agricultural workers, to date, have not been included under Federal-State legislation. They comprise the last major sector of the economy excluded from Federal legislation.

Unemployed workers filing in Texas are qualified to draw benefits if they have received a legislated minimum amount of wages from employers subject to the Federal Unemployment Tax Act. Employers so subject are required to pay a tax on the first $4,200 of wages paid to each employee. The amount of tax normally varies from .6 percent to a maximum of 4.5 percent in Texas, depending on the amount of unemployment insurance claims charged against an employer's account during a recent one year period. The original purpose of such a sliding scale of taxation was to encourage employers to level out their employment requirements as much as possible, and, thereby, reduce the amount of tax. In practice it has provided the employers with an incentive to police the system.

Employment Multipliers in Agriculture

In the previous chapter, data derived from the Census of Agriculture and the Census of Population, indicated the highly seasonal nature of agricultural labor requirements. Within the context of the input-output model developed earlier for the Rio Grande Region, no distinction was made between regular and seasonal workers. However, since a property of the model is the implicit existence of linear interdependence relationships among sectors, it is possible to arrive at a distribution of seasonal and regular workers from the employment estimates which are developed from the model (Table IX). These estimates were developed from the special agricultural employer survey taken in the region as a part of the study to determine the impact from the extension of unemployment insurance to agriculture. [15]

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15. Agricultural labor was defined in 1939 as "services performed on a farm in connection with cultivating the soil; harvesting crops; or raising, feeding or managing livestock, bees and poultry." The definition also includes "processing services incidental to ordinary farming operations performed for the farm operator who raised the produce." The current definition of agricultural employment as it is used to define the agricultural sector in Texas is very similar. It is reproduced in Appendix I.

Industry requirements in the input-output model including labor requirements, are stated in terms of dollar value of output by the production or processing sectors. In the case of agricultural production, these figures are in terms of the value of total receipts by farmers from the sale of farm products. All of the sales from the sectors included on Table IX, with the exception of ginning, are stated in these terms. The dollar value associated with the labor coefficient for the ginning sector is in terms of the value of servcies provided by the sector.

The figures in Table IX can be interpreted in the following manner: irrigated cotton required 80 workers per million dollars of output, of which 13 were regular workers, that is, workers employed by an employer for 150 days or more, while 67 were seasonal workers. As a planning aid, these figures indicate that for each additional million dollars of output from the irrigated cotton sector, an additional labor force of 13 regular workers and 67 seasonal workers will be required or employed. While in the previous chapter the discussion was in terms of total workers employed in agriculture, discussion in this section is related to the individual industry requirements. Of the agricultural production sectors the vegetable and citrus sector is the most labor intensive requiring 220 workers per million dollars of output; 66 regular workers, 154 seasonal workers. 16/

The Lower Rio Grande Region is a home base for interstate migrant agricultural workers. Many of these workers may do agricultural work in the Lower Rio Grande Region during the winter months and move northward during the spring and summer to other parts of Texas. Some of them also move out of Texas and do agricultural work in states as geographically diverse as Washington, Wisconsin, Michigan, Ohio, and New York. As a

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16. It is generally conceded that the projections derived from input-output models are valid for approximately five years. Rapid adoption of new capital intensive technology is often inhibited by overall production considerations and its effects tend to be gradual. The changes in production relationships between 1967 and 1969 are not considered to greatly influence the results.

Table IX. Summary of the Estimated Individual Agricultural Industry Employment and Multiplier Effect of the Input-Output Model for the Lower Rio Grande Region, 1969.

Industry	Employment per Million Dollars of Output* Direct Effect		
	Total Workers	Regular Workers	Seasonal Workers
1. Irrigated Cotton	80	13	67
2. Irrigated Grains	125	54	71
3. Vegetables & Citrus	220	66	154
4. Dryland Cotton	47	8	39
5. Dryland Feed Grains	125	54	71
6. Other Dryland Crops	125	27	98
7. Range, Feedlot Livestock	103	27	76
8. Dairy, Poultry	85	38	47
9. Ginning	385	46	339

*With the exception of ginning, employment is defined in terms of total dollars received by the farmer from sale of the product. The employment effect for cotton gins is in terms of value of services performed.

**Regular workers are those workers employed at least 150 days by an employer. Seasonal workers are employed less than 150 days by the employer.

result, the total earnings of these interstate seasonal workers is greater than the wages received by them from agricultural employers in the Lower Rio Grande Region. Data obtained from the worker phase of the special unemployment insurance related survey indicated that Texas agricultural workers who also received earnings from outside the Texas agricultural sector, mostly from agricultural employment in other states, received about 51 percent of total earnings from these sources. An average of $1,645 was earned from Texas agricultural employment, while an average of $3,253 was earned as a result of all employment.

All wages up to $4,200 earned from employers who are subject to the provisions of the Federal Unemployment Tax Act are used as credits to determine the level of benefits and the duration of benefits which a worker may receive when unemployed and meeting the eligibility requirements of the state. For workers eligible to receive benefits during periods of unemployment, the level and duration of benefits will be related to their total earnings rather than to only their earnings from Texas agricultural employment. This means that there will be a transfer of income into the regional economy as a result of this feature of the unemployment insurance program.

As calculated in this study, the level of total benefits and the amount apportioned to earnings from outside the Lower Rio Grande Region are subject to two assumptions. The first assumption is that the distribution of earnings between Texas agricultural sources and earnings received outside Texas' agricultural sector was the same for the agricultural worker population in the Lower Rio Grande Region as it was for the state as a whole. This assumption is quite realistic since a large number of persons from this region meet this condition. The Good Neighbor Commission has estimated that about 40 percent of the interstate seasonal labor force originating from the State of Texas resides in the Lower Rio Grande Region. [17]

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17. The Texas Good Neighbor Commission, Texas Migrant Labor, The 1968 Migration, Austin, Texas, 1968.

The second assumption of the analysis brought about by data considerations is that all of the workers residing in the Region and who received benefits will have had some agricultural employment in the Lower Rio Grande Region during 1969. This assumption is necessary to make an effective linkage between the employer and the employee aspects of the unemployment insurance program. While workers are the major recipients of the benefits, they must be directly associated to an employer for accounting purposes. The taxes paid on agricultural wages earned by workers in the Rio Grande Region are developed from employer related data, while the total benefits received by workers are developed from worker related data which provides a measure of total income. 18/

Table X presents the estimated changes in household income from the extension of unemployment insurance to agriculture in 1969 under alternative coverage criteria. As stated earlier, a worker qualifies for these benefits based on earnings received from employers subject to the Federal Unemployment Tax Act. The worker actually becomes eligible to receive these benefits when he is unemployed and meets the minimum earnings and labor force attachment tests. In Texas a worker must have earned at least $500 over the first four of the five calendar quarters immediately preceding his initial claim. Furthermore, these wages must have been earned in at least two quarters and must have been one and one-half times the high quarter earnings. Weekly benefits paid are one-twentyfifth of the high quarter earnings with a maximum of $63 per week. Under normal conditions, benefits may not be received for a period longer than 26 weeks and cannot be more than 27 percent of the total wages earned during the base year from which the benefit levels and duration were calculated.

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18. See Appendix II for a further treatment of this assumption.

Table X. Estimated Increased Household Income from Extension of Unemployment Insurance to Agriculture, Lower Rio Grande Region, 1969.

Coverage Criteria	Total Increase in Household Income	Increase in Household Income Resulting From Transfers From Outside The Texas Agricultural Sector
Universal	$2,272,180	$1,027,021
1 x 20 or $1500 High Quarter	2,258,962	1,021,047
4 x 20 or $5000 High Quarter	2,137,889	968,459
4 x 20	1,805,593	807,101
8 x 26	1,407,923	636,381

Benefits received by workers are charged to subject employers for whom he worked during the base period in proportion to the wages paid him by these employers. Benefits are charged to out-of-state employees in proportion to wages earned out of state. These benefits are apportioned among the several employers, if more than one, according to the formulas existing under legislation of the respective states.

To qualify for benefits, the unemployed worker of a subject employer must establish his ability and willingness to work and, in Texas, must regularly maintain contact with the local Texas Employment Commission office. He must accept jobs within his skill and occupation range when they become available.

The income transfer resulting from extension of unemployment insurance to agriculture varies with the exclusiveness of coverage enacted. The five alternative coverage criteria which will be used in this report are: 1) universal coverage of employers, 2) coverage of employers who hire at least one worker for 20 or more weeks or meeting a high quarter payroll of $1,500 (1 x 20 or $1,500 high quarter), 3) employers with at least four workers for 20 or more weeks or meeting a high quarter payroll of $5,000 (4 x 20 or $5,000), 4) employers hiring four workers for 20 or more weeks (4 x 20) and 5) employers hiring eight workers for 26 or more weeks (8 x 26). Provision two corresponds to current coverage for most subject Texas employers.

Under universal coverage, total benefits received by employees in the region is estimated at $2,272,180 with $1,027,021 charged back to employers outside the Texas agricultural sector. As can be seen from Table X, total benefits vary only slightly between the universal and the 1 x 20 or $1,500 high quarter coverage. Over all, total income transferred under the most exclusive coverage provision (8 x 26) is still about 60 percent of the benefits received under universal coverage. This indicates that beneficiaries interviewed in the survey were employed largely for employing units hiring larger amounts of labor. Even under this most exclusive coverage criteria, an estimated transfer of $636,381

from outside the sector would have occurred to the Lower Rio Grande economy from the extension of unemployment insurance to agriculture.

Distributive Effects of the Income Transfers Resulting from Extension of Unemployment Insurance to Agriculture

Table XI presents the estimated direct and indirect output and employment effects resulting from extension of unemployment insurance to agriculture under alternative coverage criteria. Under universal coverage the estimated increase in consumption in the region was $1,244,012. This figure does not equal the total amount of benefits transferred to households, but only that amount which would have been spent in the production and processing sectors of the regional economy.

Of the $2,272,180 transferred to the household sector, $1,244,012 or about 55 percent would have been spent in the processing sector of the region. About 17 percent would have been allocated to savings, and Federal, State, and local taxes, with most of the remaining allocated for items produced outside of the region (see Appendix III, Table I). Only that portion of the increased income spent in the processing sector is subject to the interdependence effects of the processing sectors. While perhaps true that much of the income spent by households in the form of local, State and Federal taxes are spent in the local economy, the decision making process for government expenditures is often influenced by considerations outside of the production sector of the economy. Therefore, while perhaps 65 to 70 percent of the added household income would have remained in the regional economy, the model indicates that only 55 percent would have been spent to purchase locally produced goods and services.

It should also be noted on Table XI that the additional change in output in the region resulting from the increased consumption and savings due to the extension of unemployment insurance to agriculture would have been about 21 percent of the total income transferred.

Table XI. Estimated Total Effects from the Extension of Unemployment Insurance to Agriculture Under Alternative Coverage Criteria, Lower Rio Grande Region, 1969.

Coverage Criteria	Increased Consumption in Region	Additional Required Change in Output in Region	Additional Required Change in Employment in Region	
			Direct	Direct and Indirect
Universal	$1,244,012	$263,053	72	85
1 x 20 or $1500 High Quarter Earnings	1,235,803	258,370	72	85
4 x 20 or $5000 High Quarter Earnings	1,170,975	245,193	67	80
4 x 20	988,373	206,541	47	68
8 x 26	770,174	161,024	44	53

The additional income available for spending by households would have directly increased employment in the region from 44 persons under the most exclusive coverage of 8 x 26 to 72 persons under universal coverage. This direct effect is interpreted as the additional employment required by the sectors in which the households directly spend their added income. Most of the direct employment effects would have been in the service sectors, such as food retailing, automobile servicing, banking, medical, educational, and professional services. As a result of the increased sales from the direct purchases by the households, the respective sectors must also increase their purchases from other sectors in the economy as well as increase purchases from outside the region. The resulting direct and indirect employment effects are read in column 4 of Table XI. For example, as a result of the increased income from extension of unemployment insurance to employers meeting the 1 x 20 or $1,500 high quarter cirterion, employment would increase directly by 72 with the total employment increasing in the region by 85. Likewise, with passage of legislation which would cover employers meeting criterion three, 4 x 20 or $1,500 high quarter earnings, total employment would increase by 80 with direct employment increasing by 67.

Table XII presents data relating to the changes in consumption, total output and employment in the Region that would have resulted from the additional household income transferred from outside the Region. Table XII is interpreted in the same manner as Table XI. Overall, the effects of the income transferred into the Region represent about 45 percent of the total effects.

Table XII. Estimated Effects from Transfers Outside the Region from the Extension of Unemployment Insurance to Agriculture Under Alternative Coverage Criteria, Open Model, Lower Rio Grande Region.

Coverage Criteria	Increased Consumption	Additional Required Change in Region	Additional Required Change in Employment in Region	
			Direct	Direct and Indirect
Universal	$561,843	$118,964	32	38
1 x 20 or $1500 High Quarter Earnings	558,578	118,273	32	38
4 x 20 or $5000 High Quarter Earnings	529,813	112,183	31	36
4 x 20	441,542	93,494	25	30
8 x 26	348,147	73,720	20	24

CHAPTER IV

OVERALL AGRICULTURAL AND NONAGRICULTURAL EMPLOYMENT

An input-output model can be used to estimate those industries which are most labor intensive relative to a common unit of measurement, usually dollars. While employment levels are an important measure of economic activity in all regions, two specific reasons can be cited for their importance in the Lower Rio Grande Region. First, the region is a home base for seasonal agricultural labor demanded by employers outside the State of Texas as well as filling some seasonal demand of Texas agricultural employers. Secondly, the area serves as an entry point for many Mexican Nationals seeking permanent residency and employment in the United States. As a result, relatively high levels of unemployment exist in parts of the region, with the SMSA of Laredo experiencing a 12.9 percent unemployment rate in January 1973, McAllen-Pharr-Edinburg 8.1 percent unemployment, and Brownsville-Harlingen-San Benito 7.8 percent unemployment, during that period. Only in Corpus Christi, which experienced a 3.6 percent unemployment rate, was unemployment below the normally defined full employment level of four percent.

The input/output data will be analyzed in this chapter with a view toward emphasizing the important labor using industries under three alternative criteria. There criterea are: 1) the relative ranking of industries with respect to their total employment in the region, 2) by importance of employment multipliers, and, 3) by importance in terms of employment per million dollars of output. The latter figures will be compared under conditions of employment generating capacity considering both seasonal and regular agricultural employment, and employment generating capacity of agricultural industries when only regular employment (150 days or more for a single employer) is considered.

From worker perspective, seasonal agricultural work is among the least desirable types of employment due partially to its sporadic nature. Therefore, it appears logical that developmental efforts aimed at maximizing

employment opportunities in the region should be primarily concentrated in industries which provide greater amounts of full-time employment. In lieu of economic growth which provides full-time employment for primary family workers, provisions must be made to insure adequate income levels for unemployed workers through income transfer programs such as unemployment insurance or elimination of barriers to outmigration, ie., educational, cultural, institutional - which would permit out-migration of workers into areas providing more stable employment.

Table XIII develops a ranking of the 20 most highly labor intensive industries as developed by the model in terms of employment per million dollars of output. It is seen that the ginning industry, with a direct employment effect of 385 persons per million dollars of output and a total effect of 401 persons per million dollars, constitutes the most labor intensive industry. However, when analyzing only the effect of regular employment, it is seen that the impact is very much smaller. In fact, the potential employment generating effects from the agricultural industry are quite low for all of the agricultural industries listed in Table XIII (see figures in parentheses). This conclusion is not surprising given the knowledge of the very heavy seasonal labor demands of the agricultural industries located in the Lower Rio Grande Region. Apart from the agricultural industries, the gasoline and service station industry and the wholesale livestock industry both have high direct employment effects of over 200 persons per million dollars of output.

Of the 20 most highly labor intensive industries listed in Table XIII, only nine appear in Table XIV which lists the industries having the largest relative employment in the region. Table XIV is the distribution of employment including both regular and seasonal farm workers. It is noted that of the 10 industries that appear in Tables XIII and XIV four are agricultural industries. These industries are the vegetable and citrus industry, irrigated cotton, dryland feedgrains, and range and feedlot industries. Even so, no one single industry shows 10 percent

Table XIII. Distribution of Highly Labor Intensive Industries, Lower Rio Grande Region, 1967.

Industry Number and Name	Rank	Direct Employment Effect	Total Employment Effect
		(per million dollars of output)	
10. Ginning	1	385 (46)*	401 (62)*
56. Gasoline Serv. Sta.	2	370	377
3. Veg., Citrus & Other Irr. Crop Pro.	3	220 (66)*	244 (70)*
46. Wholesale Livestock	4	203	218
71. Prof. Services	5	177	182
27. Clay, Cut Stone & Shell Products	6	172	193
35. Highway Motor Freight, Passenger Serv. & Warehousing	7	161	176
63. Lodging Services	8	154	170
2. Irr. Grains	9	125 (54)*	154 (83)*
5. Dryland Feed Grains	10	125 (54)*	162 (91)*
6. Other Dryland Crop Production	11	125 (54)*	152 (54)*
22. Textile Mill Prod., Furnishings and Apparel	12	124	131
64. Personal Services	13	123	130
32. Electrical and Electronic Equip.	14	111	117
7. Range & Feedlot Livestock Pro.	15	103 (27)*	150 (74)*
66. Motion Pic. Amuse.	16	96	108
69. Medical and Dental Serv.	17	93	107
8. Dairy, Poultry & Eggs	18	85 (38)*	145 (98)*
1. Irr. Cotton	19	79 (13)*	124 (58)*
21. Beverages	20	79	83

*Regular employment only

of total employment in the region. Discounting the agricultural industries, the industries having the greatest proportion of employment are the professional services, education, construction, and petroleum and natural gas. Although the employment multiplier which is obtained by dividing the total employment effect by the direct employment effect per million dollars of output (Table XIV) is quite high for the petroleum refining industry, the actual direct and indirect employment effects per million dollars is low, thus negating what apparently is a high employment growth industry. Range and feedlot livestock industry, with an employment multiplier of 1.45 does exhibit a relatively high direct employment effect when including the seasonal labor force. The dairy and poultry industry also exhibits a high multiplier with a reasonably high direct and indirect employment effect. The canning and preserving industry shows a very high multiplier associated with a relatively high direct employment effect.

The importance of the vegetable and citrus industries in the economy of the Lower Rio Grande Region is indicated in Table XV by noting that it is the only agricultural industry that is among the top 20 industries in the region when ranked according to number of employees after exclusion of the seasonal labor force. It should be noted that the industries with the high direct employment effects such as professional services, personal services, lodging services, highway motor freight passenger services do not have exceptionally high employment multipliers. That is, the secondary and tertiary employment effects are quite minimal from these labor intensive industries. On the other hand, those industries which have more moderate direct employment effects, such as gasoline and service stations, canning and preserving industry, construction and automotive industries, have considerably higher employment multipliers.

Table XVI ranks the top twenty industries in terms of employment multipliers. Following the earlier discussion, it is seen that of all agricultural industries only the dairy and poultry industry, the irrigated cotton industry, and the range and feed lot livestock industry rank among

Table XIV. Distribution of Employment in the Lower Rio Grande Region, Including Regular and Seasonal Farm Workers, 1967.

Industry Number and Name	Rank	Percent of Total Employment in Region	Direct Employment Effect	Total Employment Effect	Employment Multiplier
			(per million dollars)		
3. Veg., Citrus & Other Irr. Crop Pro.	1	8.3	220 (66)*	244 (70)*	1.111
71. Prof. Services	2	8.2	177	182	1.032
70. Edu. (public & private)	3	7.5	88	98	1.112
16. Facility & Other Construction	4	5.0	44	58	1.322
13. Crude Pet., Nat. Gas, & Services	5	4.8	10	15	1.483
7. Range & Feed Lot Livestock Pro.	6	3.6	103 (27)*	150 (74)*	1.454
69. Medical & Dental Serv.	7	3.4	93	107	1.154
56. Gasoline Serv. Sta.	8	3.4	85	145	1.698
25. Chemicals, Drugs, and Related Products	9	3.2	34	47	1.370
19. Canned, Preserved, Pickled, Dried and Frozen Foods	10	2.8	60	107	1.800
1. Irr. Cotton	11	2.5	79 (13)*	124 (58)*	1.554
5. Dryland Feed Grains	12	2.4	125 (54)*	162 (91)*	1.292
64. Personal Services	13	2.2	123	130	1.060
54. Food Stores	14	2.1	29	31	1.085
63. Lodging Services	15	2.0	154	170	1.104
35. Highway Motor Freight, Passenger Ser. and Warehousing	16	1.9	161	176	1.094
61. Banking & Credit Agencies	17	1.9	34	43	1.256
53. Dept. & Variety Stores	18	1.7	54	63	1.171
55. Automotive Dealers	19	1.6	22	30	1.375
39. Communications	20	1.6	50	53	1.058

* Regular employment only

Table XV. Distribution of Employment in the Lower Rio Grande Region, Exclusive of Seasonal Farm Workers, 1967.

Industry Number and Name	Rank	Percent of Total Employment in Region	Direct Employment Effect	Total Employment Effect	Employment Multiplier
			(Per Million Dollars)		
71. Prof. Services	1	9.6	177	182	1.032
70. Educ. (public & private)	2	8.8	88	98	1.112
16. Facility & Other Construction	3	5.8	44	58	1.322
13. Crude Pet., Nat. Gas, & Services	4	5.7	10	15	1.483
69. Medical & Dental Serv.	5	4.0	93	107	1.154
56. Gasoline Serv. Sta.	6	3.9	85	145	1.698
25. Chemicals, Drugs, & Related Products	7	3.7	49	51	1.040
19. Canned, Preserved, Pickled, Dried & Frozen Foods	8	3.2	60	107	1.800
3. Veg., Citrus & Other Irr. Crop Pro.	9	2.9	66*	84*	1.273*
64. Personal Services	10	2.6	123	130	1.060
54. Food Stores	11	2.4	29	31	1.085
63. Lodging Services	12	2.4	154	170	1.104
35. Highway Motor Freight, Passenger Ser. & Warehousing	13	2.2	161	176	1.094
61. Banking & Credit Agencies	14	2.2	34	43	1.256
53. Dept. & Variety Stores	15	2.0	54	63	1.171
55. Automotive Dealers	16	1.9	22	30	1.375
39. Communications	17	1.8	50	53	1.058
59. Eating & Drinking Places	18	1.8	69	76	1.037
14. Residential Const. Alteration and Repair	19	1.5	38	52	1.366
49. General Wholesale	20	1.5	24	30	1.247

* Employment effects from regular agricultural employment only.

Table XVI. Distribution of Employment Multipliers, Lower Rio Grande Region, 1967.

Industry Number and Name	Rank	Direct Employment Effect*	Indirect Employment Effect*	Employment Multiplier
		(Per Million Dollars)		
45. Wholesale Farm Prod.	1	1	30	29.9
17. Meat Products	2	15	91	6.09
62. Ins. Carriers, Real Estate & Finance n. e. c.	3	5	24	4.71
40. Gas Serv. (public & private)	4	3	14	4.61
26. Pet., Refining & Products	5	3	12	4.04
11. Ag. Services	6	21	47	2.23
18. Dairy Manufacturing	7	42	93	2.23
4. Dryland Cotton	8	47 (8)	90 (51)	1.87
19. Canned, Preserved, Picled, Dried & Frozen Foods	9	60	108	1.80
20. Other Food & Kindred Products	10	21	37	1.77
8. Dairy, Poultry & Effs	11	85 (38)	145 (98)	1.70
47. Wholesale Mach., Equip. and Supplier	12	19	31	1.62
1. Irr. Cotton	13	80 (13)	124 (57)	1.55
13. Crude Pet., Nat. Gas, and Services	14	10	15	1.48
29. Primary Metals, Foundries & Forgings	15	15	22	1.46
7. Range & Feed Lot Livestock Pro.	16	103 (27)	150 (74)	1.45
36. Water Trans.	17	50	73	1.45
38. Other Trans. Services	18	31	44	1.42
48. Wholesale Pet. & Pet. Products	19	11	15	1.38
55. Automotive Dealers	20	22	30	1.37

* Regular employment for agricultural industries is stated in parentheses.

the top twenty direct labor using industries when evaluating only those industries with high employment multipliers. However, when excluding the seasonal labor requirements it is seen that the direct regular labor requirements of these industries are also quite low. Viewing the combination of industries with high employment multipliers which also rank in the top 20 total labor using industries (Table XV) it is seen that only the crude petroleum and natural gas industries at 5.7 percent of total employment, canned and prepared foods at 3.2 percent, and automotive dealers at 1.9 percent of total employment, are cross referenced on these two lists. With the exception of the meat products industry, those industries with employment multipliers greater than four (that is, four persons are employed in the regional economy for each additional person hired in the industry) hire five or fewer persons per million dollars of output in that industry.

By comparing employment effects of industries under the above alternative methods of ranking it is seen that more than one criteria must be used to adequately evaluate industry employment potential. The ideal employment growth industry, that is, one with high employment multipliers associated with high direct employment effects while concurrently representing a relatively large portion of the labor force does not exist in the Lower Rio Grande Region.

Although some of the agricultural industries rank favorably on these three criteria inclusive of the seasonal component, evaluation on the basis of only regular labor force participation suggests that growth in the agricultural sector should also be evaluated in terms other than employment potential.

CHAPTER V

SUMMARY AND CONCLUSIONS

Limitations of the Study

Applied economic analysis, much like real world decision making, requires conceptual compromises from the abstract remoteness of the underlying theoretical premises. When interpreting results from an input-output analysis three assumptions of the methodology must be kept in mind: 1) the existence of fixed proportional technological relationships between processing sectors, 2) the technological coefficients describe the existing relationships at a given point in time and 3) the assumption of the divisibility of input requirements.

The first assumption states that as production levels change, input and output will also change in the same proportion as developed for the original level of output. This restriction is not serious when considering only minor changes in output, such as was being considered in the present study. The net addition to household income was less than .2 percent of the original level of household income in the region. The second assumption should not seriously affect the correctness of results since the 1969 agricultural data used in the model is only two years removed from the original data representing 1967. The third assumption may perhaps cause the most difficulty, especially when used to estimate increased employment in the region. The total multiplier is the sum of fractional increase in labor requirements over the interacting sectors and implies that the additional manyears of employment may include a substantial amount of part-time employment (see Appendix Tables II, IV, VII, and VIII).

A potential hazard when estimating the income that would be transferred into the Lower Rio Grande regional economy is related to the program requirements of the unemployment insurance system. Since the transfer benefits received by workers are financed from employer taxes,

employee qualification is determined by employment for employers subject to provisions of the Act. Sampled employees were interviewed at their place of employment during 1970. A detailed week by week work history was obtained for the period July 1969 through June 1970. From these interviews obtained from workers employed in Texas agriculture during the period, a work history including instate and out of state agricultural work was obtained. Benefits allocated to workers employed in the Texas agricultural sector who also had earnings from employers outside the Texas agricultural sector were used to derive the proportional distribution between benefits charged to Texas agricultural employment and benefits charged to employment outside of the sector.

The nature of the sample did not permit direct calculation of wages received by workers residing in the Lower Rio Grande Region. Instead, the wages paid in the Region by agricultural employers in 1969 were used as the wage base for instate agricultural employment. Therefore, a necessary assumption underlying the benefit computations for the Region is that all agricultural workers residing in the Region were employed by agricultural employers in the Region sometime during the record year.

To provide conceptual consistency, wage data were obtained from the employer portion of the survey and the statewide relationship between the amount of benefits charged against employers' accounts in an industry as a proportion of taxable wages paid by the industry were calculated. This implies that there is little movement of workers between the various agricultural industries. This is not a very limiting assumption in the case of the present study, since in fact, a high proportion of the benefits attributable to agricultural workers were charged to employees in the vegetable and citrus industries. This is also the most common form of seasonal employment by workers employed in agriculture outside of the state. The fruit and vegetable sector accounted for almost one-third of the total wages paid by agricultural employers in the Lower Rio Grande Region in 1969.

Finally, the figures presented assume that all persons eligible to receive benefits would actually claim them. The validity of this assumption was not empirically tested.

Summary

Family median income in the Lower Rio Grande Region is below the state median in all counties. Nueces County, with a family median of 96 percent of the state median, most closely approximated a parity position. Zapata County, with a median family income of 45 percent of the state median, registered the lowest in the region. Median incomes of farmers and farm managers were above county median incomes in over half of the counties in the Region. The range of these incomes, however, was quite wide from a low of $1,971 in Duval County to a high of $9,200 in Live Oak County. The earnings of agricultural wage employees and agricultural foremen was, on the average, lower than earnings for farm managers and farmers in the region. The range of median incomes, however, was not as wide as for farm managers and farmers. Earnings of agricultural wage employees and foremen were less than 75 percent of the county median income in over 85 percent of the counties. Median earnings ranged from a low of $1,708 to a high of $2,914.

Agricultural sales in the 19 county Lower Rio Grande Region were estimated at $221,189,000 in 1969 or slightly less than 7 percent of the state total. Of the total labor force, over 16 years of age in the region, persons reporting agricultural earnings as their major source of income accounted for 8.5 percent of the total. However, when excluding Nueces County, with its large urban population, the proportion of agricultural employment to total employment increases to 11 percent. (This figure compares with about four percent for the State.)

Agricultural employers hired almost 40.000 individuals during 1969. Three-fourths of these were hired for less than 150 days per year. These

data suggest that agricultural employers in the region hire about 10,000 regular employees. Many of the remaining agricultural employees may list agricultural employment as their major source of income, but agricultural earnings are obtained from more than one employer. The continuing need for large amounts of seasonal agricultural labor continues to place the agricultural employer in a relatively poor competitive position with nonagricultural employers who can offer steadier employment opportunities. Also complicating the agricultural labor market in the Lower Rio Grande Region is the potential availability of Mexican workers. Since these workers are willing to accept employment at wage levels lower than workers residing in the Region, their presence serves to keep the general wage level of the Region lower than that for other parts of the state.

The extension of unemployment insurance to the agricultural sector in the Lower Rio Grande Region would provide an estimated increase to household income of $2,258,962 under coverage criteria currently in effect for most other employers in Texas. (One worker for 20 or more weeks or meeting a minimum high quarter payroll of $1,500.) Of this amount, $1,021,047 would be the result of direct income transfers charged to employers outside the Texas agricultural sector. The remaining amount would be charged to Texas agricultural employers both within and outside the Region. Under a less exclusive coverage criteria which would cover employment performed for employers with at least four workers for 20 or more weeks or meeting a $5,000 high quarter payroll, total income transfers of $2,137,889 were estimated. Of this total, $968,459 were as a result of employment outside of the Texas agricultural sector.

EPILOGUE

SOME POLICY IMPLICATIONS

Drawing from the data presented in this report and the arguments developed therefrom, some policy suggestions with respect to agricultural employment, unemployment insurance, and general economic well-being in the Lower Rio Grande Region will be presented. The suggestions presented in this final section should be viewed as exploratory and as an attempt to bring into focus some of the income and labor market problems associated with seasonal agricultural employment combined simultaneously with the need for more highly skilled regular employees in an increasingly mechanized agricultural sector.

Unemployment insurance, as presently constituted, provides seasonally unemployed workers with a deferred income during periods of industry induced unemployment. Under legislation currently in effect in Texas, the level of weekly benefits and the duration for which benefits are received are closely related to the labor force participation and the level of earnings of the recipient in the preceeding year. Therefore, unlike welfare related income, receipt of which is based on a monetary needs test, unemployment insurance benefits are viewed as payments received by workers as a matter of right during periods of unemployment due to industry or employer related causes. With legislation extended to agriculture, the agricultural employer hiring seasonal workers would retain a portion of the worker's wages in the unemployment insurance trust fund to paid out in the event of off-season unemployment. This is not dissimilar to the practice of compensating teachers hired on a nine month contract over a period of 12 months. Only the mechanism by which the transfer occurs is altered. In the one case it is a straight contractual arrangement with the employer; in the case of the unemployed seasonal agricultural worker, the Federal-State unemployment insurance system acts as the

intermediate agent. From the employer perspective, payment of unemployment insurance to workers during the off-season aids in stabilization of the labor force and insures the return of skilled workers the following season.

A complicating factor, however, is brought into the above analysis when considering the impact from extension of unemployment insurance to a labor surplus region such as the Lower Rio Grande Region of Texas. Although oriented toward the higher wage markets in the northern states, the workers choose to reside in the Valley for a variety of reasons which may include maintenance of cultural and family ties, relatively mild winter weather, or perhaps because of the general lower cost of living in the Region. Viewed from this perspective, these workers are not dissimilar to tourists who have been coming to the Region in increasing numbers during recent years. Oriented to labor markets outside the Region, they are temporary residents during the winter months.

Due to the destabilizing effects of seasonal agricultural employment, economic development strategies designed to increase this type of employment should not be encouraged. Rather, additional emphasis should be placed on agricultural research designed to develop harvesting machinery which will decrease peak seasonal labor demand. Increased attention should also be directed toward upgrading skills, working conditions, and wage levels of regular agricultural employees in order to bring their living standards up to a level consistent with those of their nonagricultural neighbors. Additionally, competitive agricultural wages for regular employees could also assist in recruitment of higher skilled workers.

Due to the relatively low direct regular employment effects from expansion of agricultural production in the Region, it appears more suitable to base expansion of the agricultural sector on production

efficiency and market criteria rather than solely on employment generating criteria. Combined with policies designed to enhance mechanization of seasonally labor intensive agricultural enterprises and increased emphasis on the use of secondary family workers and legally entering Mexican Nationals in the seasonal agricultural labor force would minimize the destabilizing employment effects from expansion of the agricultural sector.

Since the region serves as an entry point for many Mexican Nationals, some of whom migrate to cities outside the Region, a case can be made for continued emphasis on improving educational facilities which will provide these people with marketable skills and thus raise their expected income stream as well as providing them with means to become more productive citizens. Simultaneously, however, emphasis on growth of stable, employment intensive industries in the Region should be encouraged, perhaps with a view toward providing initial employment opportunities for workers who eventually will be migrating out of the area. By encouraging a flow of out migration from the Region, combined with the development of stable, labor intensive employment opportunities, including those which provide initial employment for new immigrants, the Region may slowly move toward a relatively table aggregate employment position.

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APPENDIX I

THE TEXAS AGRICULTURAL SECTOR AS DEFINED FOR PURPOSES OF THE FEDERAL UNEMPLOYMENT TAX ACT

Agricultural labor is defined as all services performed:[1]

1. on a farm, in the employ of any person, in connection with cultivating the soil, or in connection with raising or harvesting any agricultural or horticultural commodity, including the raising, shearing, feeding, caring for, training, and management of livestock, bees, poultry, and fur-bearing animals and wildlife;

2. in the employ of the owner or tenant or other operator of a farm, in connection with the operation, management, conservation, improvement, or maintenance of such farm and its tools and equipment, or in salvaging timber or clearing land of brush and other debris left by a hurricane, if the major part of such service is performed on a farm;

3. in connection with the production or harvesting of any commodity defined as an agricultural commodity in Section 15(g) of the Agricultural Marketing Act, as amended (46 Stat. 1550, 3; 12 U.S.C. 1141j), or in connection with the ginning of cotton, or in connection with the operation or maintenance of ditches, canals, reservoirs, or waterways not owned or operated for profit, used exclusively for supplying and storing water for farming purposes;

4. a. in the employ of the operator of a farm in handling, planting, drying, packing, packaging, processing, freezing, grading, storing, or delivering to storage or to market or to a carrier for transportation to market, in its unmanufactured state, any agricultural or horticultural commodity; but only if such operator produced more than one-half (1/2) of the commodity with respect to which such service is performed;

   b. in the employ of a group of operators of farms (or a cooperative organization of which such operators are members) in the performance of service described in subparagraph (a) above, but only if such operators produced more than one-half (1/2) of the commodity with respect to which such service is performed;

   c. the provisions of subparagraphs (a) and (b) shall not be deemed to be applicable with respect to service performed in connection with commercial canning or commercial freezing or in connection with any agricultural or horticultural commodity after its delivery to a terminal market for distribution for consumption.

5. on a farm operated for profit if such service is not in the course of the employer's trade or business or is domestic service in a private home of the employer.

As used in this subsection, the term "farm" includes stock, dairy, poultry, fruit, fur-bearing animals, truck farms, plantations, ranches, nurseries, ranges, greenhouses or other similar structures used primarily for the raising of agricultural or horticultural commodities, and orchards.

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1. Texas Employment Commission, Texas Unemployment Compensation Act (Art. 5221b, V.A.C.S.), Austin, Texas, 1972, pp. 69-71.

APPENDIX II

METHODOLOGY

The input-output analysis used in this study follows the conventional procedures associated with analysis of the "open" model. In the open model, household income is treated as exogenous to the processing system. That is, it is assumed that the allocation of incomes received by households is independent of the technological relationships existing within the production and processing sectors of the economy. The proportional distribution of household income among the 78 sectors of the Lower Rio Grande regional model is considered representative of the existing household consumption patterns. It is further assumed that additional income received by households would be allocated in precisely the same manner as existing household income. Since the additional income resulting from extension of unemployment insurance to agriculture would increase household income by less than .2 percent of the 1967 levels estimated in the model, the assumption appears realistic.

A large proportion of the agricultural worker population residing in the Lower Rio Grande Region is highly mobile throughout the year. This makes reconstruction of the allocation of benefits received by the workers a more difficult task. Employer and worker data were recorded on separate interview schedules as a part of the unemployment insurance study. An estimate of $37,719,695 in agricultural wages was obtained. This includes wages paid by cotton gins and some crew leader wages.

Since benefits received by workers are charged back to employer accounts, it was necessary to estimate the amount of benefits charged against these wages. This was done by using the ratio estimator in equation 1.

$$\text{agr. benefits}_{LRG,\,i} = \left\{\text{total agr. wage}_{LRG,\,i} \times \frac{\text{agr. benefits}_{s,i}}{\text{total agr. wages}_{s,i}}\right\} \quad 1.$$

The subscripts LRG, s, and i relate respectively to 1) the Lower Rio Grande Region, 2) the state, and 3) the individual agricultural industries under consideration. The benefits were than summed over each industry to arrive at the total benefits attributable to agricultural earnings within the region. To obtain the total taxable wages earned by workers in the region, it was necessary to use estimates obtained from the worker phase of the survey. Workers were interviewed throughout the state of Texas during the fall and winter months of 1970. Detailed week by week work histories were obtained for these workers. The data included the number of employers and the amount of earnings associated with each of these employers. The employers were identified by type of occupation, either agricultural or nonagricultural, the state in which the employer operated. From these data, an average relationship between taxable wages earned from Texas agricultural employment and taxable wages earned from all other employment was obtained for workers who had employment in the Texas agricultural sector as well as employment outside of the Texas agricultural sector. Using this information in the ratio estimator identified in equation 2, the total taxable wages earned by workers residing in the Lower Rio Grande, Valley was obtained.

$$\text{total tax wage}_{LRG} = \left\{\text{total regional agr. wages}_{LRG} \times \frac{\text{total taxable wage}_{s}}{\text{total instate agr. wage}_{s}}\right\} \quad 2.$$

It was not possible to develop estimates of benefits received by workers in the Region directly from the worker survey since the distribution of the agricultural industries in the Lower Rio Grande Valley is not identical with the distribution throughout the state. A much greater proportion of fruit and vegetable operations are found in the 19 county region of the current study than are found throughout the state. Therefore, the approach used to estimate total benefits attributable to workers performing some agricultural work in the Lower Rio Grande Region was calculated as shown in equation 3.

$$\text{total benefits}_{LRG} = \left\{ \text{total taxable wages}_{LRG} \times \frac{\text{agricultural benefits}_{LRG}}{\text{total agricultural wages}_{LRG}} \right\} \quad 3.$$

The assumptions implicit in the above derivation of benefits attributable to agricultural workers residing in the Lower Rio Grande Region are: 1) that all workers in the region have had both employers within the agricultural sector of the region as well as agricultural employment outside of the region. This assumption is not entirely correct for we know from Census of agriculture data that as many as 10,000 employees were employed as full-time agricultural workers for one employer in the Lower Rio Grande Region in 1969. However, the total value of income transferred into the region appears quite reasonable, if distributed in the same manner as benefits were distributed over the state. Average benefits received by workers eligible under the coverage criteria for employers hiring four workers for at least 20 weeks or meeting a $5,000 high quarter payroll was about $311 per person. Using this an an average figure for benefits received by eligible workers in the Lower Rio Grande Region indicates that about 6,900 additional workers would have been eligible to receive benefits

in 1969 had unemployment insurance been available to agriculture under this provision. This suggests that somewhere between one-fifth and one-third of the agricultural worker population in the valley would have actually received benefits.

APPENDIX III

Table I. Direct Additional Expenditures in Region From Extension of Unemployment Insurance to Agriculture Under Alternative Coverage Criteria, Lower Rio Grande Region, Total Benefits, 1969.

Industry	Consumption Function	Coverage Criteria				
		Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
3. Veg., Citrus & Other Irr. Crop. Pro.	.0038610	$ 8,773	$ 8,722	$ 8,254	$ 6,971	$ 5,436
6. Other Dryland Crop Production	.0017735	4,030	4,006	3,792	3,202	2,497
7. Range & Feed Lot Livestock Pro.	.0021092	4,792	4,765	4,509	3,808	2,970
8. Dairy, Poultry & Eggs	.0035939	8,166	8,118	7,683	6,489	5,060
10. Ginning	.0000185	42	42	40	33	26
12. Fisheries	.0012508	2,842	2,826	2,674	2,258	1,761
17. Meat Products	.0092815	21,089	20,967	19,843	16,759	13,068
18. Dairy Manufacturing	.0085759	19,486	19,373	18,334	15,485	12,074
19. Canned, Preserved, Pickled, Dried & Frozen Foods	.0005063	1,150	1,144	1,082	914	713
20. Other Food & Kindred Products	.0048032	10,914	10,846	10,269	8,673	6,763
21. Beverages	.0078019	17,727	17,624	16,680	14,087	10,984
22. Textile Mill Prod., Furnishings, & Apparel	.0002335	531	527	499	422	329
23. Wood Furniture & Other Wood & Paper Products	.0011375	2,585	2,570	2,432	2,054	1,602
24. Newspapers, Pub. & Printing	.0026601	6,044	6,009	5,687	4,803	3,745
25. Chemicals, Drugs & Related Products	.0016700	3,795	3,772	3,570	3,015	2,351
26. Pet, Refining & Products	.0172962	39,300	39,071	38,401	31,230	24,352
27. Clay, Cut Stone & Shell Products	.0000016	4	4	3	3	2
28. Cement & Concrete Products	.0000343	78	77	73	62	48

Table I. (Continued)

	Industry	Consumption Function	Coverage Criteria: Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
29.	Primary Metals, Foundries & Forgings	.0010865	$ 2,469	$ 2,454	$ 2,323	$ 1,962	$ 1,530
30.	Fabricated Steel & Other Metal Prod.	.0001411	321	319	302	255	199
31.	Machinery & Proc. Equipment	.0000244	55	55	52	44	34
32.	Electrical & Electronic Equip.	.0000218	50	50	47	39	31
33.	Trans. Equipment	.0001795	408	405	384	324	253
34.	Other Manu.	.0004880	1,109	1,102	1,043	881	687
35.	Highway Motor Freight, Passenger Ser & Warehousing	.0044599	10,134	10,075	9,535	8,053	6,279
37.	Air Trans.	.0032721	7,435	7,392	6,995	5,908	4,607
38.	Other Trans. Services	.0095000	21,586	21,460	20,310	17,153	13,375
39.	Communications	.0125037	28,411	28,245	26,732	22,577	17,604
40.	Gas Serv. (public & private)	.0032682	7,426	7,383	6,987	5,901	4,601
41.	Electric Serv. (public & private)	.0134360	30,529	30,351	28,725	24,260	18,917
42.	Water & Sanitary Serv. Systems (pub. & pri.)	.0037324	8,481	8,431	7,979	6,739	5,255
43.	Wholesale Auto. Parts & Supplies	.0046036	10,460	10,399	9,842	8,312	6,482
44.	Wholesale Groceries & Related Products	.0080266	18,238	18,132	17,160	14,925	11,301
45.	Wholesale Farm Prod.	.0000042	10	9	9	8	6
46.	Wholesale Livestock	.0000536	122	121	115	97	75
47.	Wholesale Mach., Equip. & Supplies	.0070907	16,111	16,018	15,159	12,803	9,983

Table I. Continued

	Industry	Consumption Function	Coverage Criteria: Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
48.	Wholesale Pet. & Pet. Products	.0043025	$ 9,776	$ 9,719	$ 9,198	$ 7,769	$ 6,058
49.	General Wholesale	.0328329	74,502	74,168	70,193	59,283	46,226
50.	Retail Lumberyards	.0097765	22,214	22,085	20,901	17,652	13,765
52.	Hardware, Heating, Elec., Paint, & Wallpaper	.0017826	4,050	4,027	3,811	3,219	2,510
53.	Dept. & Variety Stores	.0329977	74,977	74,541	70,545	59,580	46,458
54.	Food Stores	.0511531	116,229	115,553	109,360	92,362	72,020
55.	Automotive Dealers & Repair Shops	.0478920	108,819	108,186	102,388	86,473	67,428
56.	Gasoline Serv. Sta.	.0052007	11,817	11,748	11,119	9,390	7,322
57.	Apparel Accessory Stores	.0086397	19,631	19,517	18,471	15,600	12,164
58.	Furniture, Home Furn., Equip. Stores	.0043683	9,926	9,868	9,339	7,887	6,150
59.	Eating & Drinking Places	.0195321	44,380	44,122	41,757	35,267	27,500
60.	All Other Retail	.0212125	48,199	47,918	45,350	38,301	29,886
61.	Banking & Credit Agencies	.0323169	73,430	73,003	69,090	58,351	45,500
62.	Ins. Carriers, Real Estate & Finance n.e.c.	.0070168	15,943	15,851	15,001	12,669	9,879
63.	Lodging Services	.0000030	7	7	6	5	4
64.	Personal Services	.0182270	41,415	41,174	38,967	32,911	25,622
65.	Adv., Dup., Addressing & Photo. Services	.0051472	11,695	11,627	11,004	9,294	7,247
66.	Motion Pic. Amuse.	.0027809	6,319	6,282	5,945	5,021	3,915
67.	Auto Rent. & Parking	.0002884	655	651	617	521	406
68.	Misc. Repair Serv.	.0035938	8,166	8,118	7,683	6,489	5,060
69.	Medical & Dental Serv.	.0363430	82,578	82,097	77,697	65,778	51,168
70.	Edu. (public & private)	.0430444	97,805	97,236	92,024	77,721	60,603
71.	Prof. Services	.0201157	45,706	45,441	43,005	36,321	28,321

Table I. Continued

Industry	Consumption Function	Coverage Criteria: Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
Total Direct Consumption in Region by Households	.5470786	$1,244,012	$1,235,803	$1,170,975	$ 988,373	$ 770,174
72. Savings	.0092656	21,053	20,931	19,809	16,730	13,045
Taxes	.1662815					
Imports & other	.2773743					
Total transferred to households	1.0000000	2,272,180	2,258,962	2,137,889	1,805,593	1,407,923

Table II. Direct and Indirect Changes in Output in Region From Extension of Unemployment Insurance to Agriculture Under Alternative Coverage Criteria, Lower Rio Grande Region, Total Benefits, 1969.

	Industry	Direct & Indirect Output Multiplier	Coverage Criteria: Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
1.	Irr. Cotton	1.6308	-	-	-	-	-
2.	Irr. Grains	1.6657	-	-	-	-	-
3.	Veg., Citrus & Other Irr Crop. Pro.	1.4765	$12,953	$12,878	$12,187	$10,293	$ 8,026
4.	Dryland Cotton	1.5292	-	-	-	-	-
5.	Dryland Feed Grains	1.7476	-	-	-	-	-
6.	Other Dryland Crop Production	1.4951	6,025	5,989	5,669	4,787	3,733
7.	Range & Feed Lot Livestock Pro.	1.6885	8,091	7,124	6,741	5,693	4,440
8.	Dairy, Poultry & Eggs	2.0384	16,646	16,548	15,661	13,227	10,314
9.	Ag. Supply, except Farm Machinery	1.3258	-	-	-	-	-
10.	Ginning	1.3796	58	58	55	46	36
11.	Ag. Services	1.6143	-	-	-	-	-
12.	Fisheries	1.3340	3,791	3,770	3,567	3,013	2,349
13.	Crude Pet., Nat. Gas, & Services	1.1672	-	-	-	-	-
14.	Residential Cons. Alteration and Repair	1.2526	-	-	-	-	-
15.	Commercial, Edu. & Inst. Construction	1.1738	-	-	-	-	-
16.	Facility & Other Construction	1.2967	-	-	-	-	-
17.	Meat Products	1.9074	40,225	39,992	37,849	31,966	24,926
18.	Dairy Manufacturing	1.7396	33,898	33,701	31,894	26,938	21,004
19.	Canned, Preserved, Pickled, Dried & Frozen Foods	1.5032	1,729	1,720	1,626	1,374	1,072
20.	Other Food & Kindred Products	1.2773	13,940	13,854	13,117	11,078	8,638

Table II. Continued

Industry	Direct & Indirect Output Multiplier	Coverage Criteria: Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
21. Beverages	1.0656	$18,890	$18,780	$17,774	$15,011	$11,705
22. Textile Mill Prod., Furnishings, & Apparel	1.1365	686	599	567	480	374
23. Wood Furniture & Other Wood & Paper Products	1.0857	2,807	2,790	2,640	2,230	1,739
24. Newspapers, Pub. & Printing	1.1040	7,367	6,634	6,278	5,303	4,134
25. Chemicals, Drugs & Related Products	1.4523	5,511	5,478	5,185	4,379	3,414
26. Pet, Refining & Products	1.6060	63,116	62,748	61,672	50,155	39,109
27. Clay, Cut Stone & Shell Products	1.5945	6	6	5	5	3
28. Cement & Concrete Products	1.2190	95	94	89	76	59
29. Primary Metals, Foundries & Forgings	1.1854	2,927	2,909	2,754	2,326	1,814
30. Fabricated Steel & Other Metal Prod.	1.0478	336	334	316	267	209
31. Machinery & Proc. Equipment	1.0892	60	60	57	48	37
32. Electrical & Electronic Equip.	1.0993	55	55	52	43	34
33. Trans. Equipment	1.1152	455	452	428	361	282
34. Other Manu.	1.2359	1,371	1,362	1,289	1,089	849
35. Highway Motor Freight, Passenger Ser. & Warehousing	1.3429	13,609	13,530	12,805	10,814	8,432
36. Water Trans.	1.5424	-	-	-	-	-
37. Air Trans.	1.3340	19,918	9,861	9,331	7,881	6,146

Table II. Continued

Industry	Direct & Indirect Output Multiplier	Coverage Criteria: Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
38. Other Trans. Services	1.8385	$ 39,628	$ 39,396	$ 37,285	$31,489	$24,554
39. Communications	1.0560	30,002	29,827	28,229	23,841	18,590
40. Gas Serv. (public & private)	1.7673	13,124	13,048	12,348	10,429	8,131
41. Electric Serv. (public & private)	1.2888	39,346	39,116	37,021	31,266	24,380
42. Water & Sanitary Serv. Systems (pub. & pri.)	1.3284	11,266	11,200	10,599	8,952	6,981
43. Wholesale Auto, Parts & Supplies	1.0798	11,295	11,229	10,627	8,975	6,999
44. Wholesale Groceries & Related Products	1.0962	19,992	19,876	18,811	16,361	12,388
45. Wholesale Farm Prod.	1.5099	15	14	14	12	9
46. Wholesale Livestock	1.2858	157	156	125	125	96
47. Wholesale Mach., Equip. & Supplies	1.1813	19,032	18,922	17,907	15,124	11,793
48. Wholesale Pet. & Pet. Products	1.1484	11,227	11,161	10,563	8,922	6,957
49. General Wholesale	1.1003	82,025	81,607	77,233	65,229	50,862
50. Retail Lumberyards	1.0132	22,609	22,377	21,177	17,885	13,947
51. Farm Equip. Dealers	1.0558	-	-	-	-	-
52. Hardware, Heating, Elec., Paint, & Wallpaper	1.1275	4,566	4,540	4,297	3,629	2,830
53. Dept. & Variety Stores	1.1619	87,116	86,609	81,861	69,226	53,980
54. Food Stores	1.0533	122,424	121,712	115,189	97,285	75,859
55. Automotive Dealers & Repair Shops	1.1251	122,432	121,720	115,197	97,291	75,863
56. Gasoline Serv. Sta.	1.0937	12,924	12,849	12,161	10,270	8,008
57. Apparel Accessory Stores	1.2160	23,871	21,346	20,202	17,062	13,304

Table II. Continued

Industry	Direct & Indirect Output Multiplier	Coverage Criteria: Universal	1x20 or $1500 High Quarter	4x20 $5000 High Quarter	4x20	8x26
58. Furniture, Home Furn., Equip. Stores	1.2250	$12,160	$12,088	$11,440	$ 9,662	$ 7,534
59. Eating & Drinking Places	1.1756	52,173	51,870	49,090	41,460	32,329
60. All Other Retail	1.1327	54,595	54,277	51,368	43,383	33,852
61. Banking & Credit Agencies	1.1326	83,167	82,683	78,251	66,088	51,533
62. Ins. Carriers, Real Estate & Finance n.e.c.	1.2936	20,624	20,505	19,405	16,389	12,779
63. Lodging Services	1.3055	9	9	8	7	5
64. Personal Services	1.1476	47,528	47,251	44,719	37,769	29,404
65. Adv., Dup., Addressing & Photo. Services	1.2042	14,083	14,001	13,251	11,192	8,727
66. Motion Pic. Amuse.	1.2154	7,680	7,635	7,226	6,103	4,758
67. Auto Rent. & Parking Services	1.0820	709	704	668	564	439
68. Misc. Repair Serv.	1.1361	9,277	9,223	8,729	7,372	5,749
69. Medical & Dental Serv.	1.2141	100,258	99,674	94,310	79,861	62,123
70. Edu. (public & private)	1.1936	116,740	116,060	109,840	92,768	72,336
71. Prof. Services	1.1024	50,386	50,094	47,409	40,040	31,221
Total direct and indirect effects		1,507,065	1,494,173	1,416,168	1,194,914	931,198

Table III. Direct Employment Changes From the Extension of Unemployment Insurance to Agriculture Under Alternative Coverage Criteria, Lower Rio Grande Region, Total Benefits, 1969.

	Industry	Direct Employment Multiplier	Coverage Criteria				
			Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x20
1.	Irr. Cotton	.07949	-	-	-	-	-
2.	Irr. Grains	.12532	-	-	-	-	-
3.	Veg., Citrus & Other Irr. Crop. Pro.	.21960	1.93	1.92	1.82	1.53	1.19
4.	Dryland Cotton	.04700	-	-	-	-	-
5.	Dryland Feed Grains	.12535	-	-	-	-	-
6.	Other Dryland Crop Production	.12549	.51	.50	.48	.40	.31
7.	Range & Feed Lot Livestock Pro.	.10297	.49	.49	.46	.39	.31
8.	Dairy, Poultry & Eggs	.08520	.70	.69	.65	.55	.43
9.	Ag. Supply, except Farm Machinery	.49000	-	-	-	-	-
10.	Ginning	.38467	.02	.02	.00	.00	.00
11.	Ag. Services	.02101	-	-	-	-	-
12.	Fisheries	.07800	.22	.22	.21	.18	.14
13.	Crude Pet., Nat. Gas, & Services	.01000	-	-	-	-	-
14.	Residential Cons. Alteration and Repair	.03800	-	-	-	-	-
15.	Commercial, Edu. & Inst. Construction	.04000	-	-	-	-	-
16.	Facility & Other Construction	.04400	-	-	-	-	-
17.	Meat Products	.01500	.32	.31	.30	.25	.20
18.	Dairy Manufacturing	.04200	.82	.81	.71	.65	.51
19.	Canned, Preserved, Pickled, Dried & Frozen Foods	.06000	.07	.07	.06	.05	.04
20.	Other Food & Kindred Products	.02100	.23	.23	.22	.18	.14

Table III. Continued

Industry	Direct Employment Multiplier	Coverage Criteria: Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x20
21. Beverages	.07900	1.40	1.39	1.32	1.11	.87
22. Textile Mill Prod., Furnishing, & Apparel	.12400	.07	.07	.06	.05	.04
23. Wood Furniture & Other Wood & Paper Products	.04500	.12	.12	.11	.09	.07
24. Newspapers, Pub. & Printing	.07100	.43	.43	.40	.34	.27
25. Chemicals, Drugs & Related Products	.03400	.13	.13	.12	.10	.08
26. Pet., Refining & Products	.00300	.12	.12	.12	.09	.07
27. Clay, Cut Stone & Shell Products	.17200	.00	.00	.00	.00	.00
28. Cement & Concrete Products	.03700	.00	.00	.00	.00	.00
29. Primary Metals, Foundries & Forgings	.01500	.04	.04	.03	.03	.02
30. Fabricated Steel & Other Metal Prod.	.04800	.02	.02	.01	.01	.01
31. Machinery & Proc. Equipment	.03500	.00	.00	.00	.00	.00
32. Electrical & Electronic Equip.	.11100	.01	.01	.01	.00	.00
33. Trans. Equipment	.06900	.03	.03	.03	.02	.02
34. Other Manu.	.05800	.06	.06	.06	.05	.04
35. Highway Motor Frieght, Passenger Ser. & Warehousing	.16100	1.63	1.62	1.54	1.30	1.01
36. Water Trans.	.05000	-	-	-	-	-
37. Air Trans.	.06600	.49	.49	.46	.39	.30

Table III. Continued

	Industry	Direct Employment Multiplier	Coverage Criteria: Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x20
38.	Other Trans. Services	.03100	.67	.67	.63	.53	.41
39.	Communications	.05000	1.42	1.41	1.34	1.13	.88
40.	Gas Serv. (public & private)	.00300	.02	.02	.02	.02	.01
41.	Electric Serv. (public & private)	.02700	.82	.82	.78	.66	.51
42.	Water & Sanitary Serv. Systems (pub. & pri.)	.06800	.58	.57	.54	.46	.36
43.	Wholesale Auto, Parts & Supplies	.03000	.31	.31	.29	.25	.19
44.	Wholesale Groceries & Related Products	.02500	.46	.45	.43	.37	.28
45.	Wholesale Farm Prod.	.00100	.00	.00	.00	.00	.00
46.	Wholesale Livestock	.20300	.02	.02	.02	.02	.02
47.	Wholesale Mach., Equip. & Supplies	.01900	.31	.30	.29	.24	.19
48.	Wholesale Pet. & Pet. Products	.01100	.11	.11	.10	.08	.07
49.	General Wholesale	.02400	1.79	1.78	1.68	1.42	1.11
50.	Retail Lumberyards	.02900	.64	.64	.61	.51	.40
51.	Farm Equip. Dealers	.02900	-	-	-	-	-
52.	Hardware, Heating, Elec., Paint, & Wallpaper	.06800	.28	.27	.26	.22	.17
53.	Dept. & Variety Stores	.05400	4.05	4.03	3.81	3.22	2.51
54.	Food Stores	.02900	3.37	3.35	3.17	2.68	2.09
55.	Automotive Dealers & Repair Shops	.02200	2.39	2.38	2.25	1.90	1.48
56.	Gasoline Serv. Sta.	.37000	4.37	4.35	4.11	3.47	2.70
57.	Apparel Accessory Stores	.03600	.71	.70	.66	.56	.44

Table III. Continued

Industry	Direct Employment Multiplier	Coverage Criteria				
		Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x20
58. Furniture, Home Furn., Equip. Stores	.03600	.36	.36	.34	.28	.22
59. Eating & Drinking Places	.06900	3.06	3.04	2.88	2.43	1.90
60. All Other Retail	.04500	2.17	2.16	2.04	1.72	1.34
61. Banking & Credit Agencies	.03400	2.50	2.48	2.35	1.98	1.55
62. Ins. Carriers, Real Estate & Finance n.e.c.	.00500	.08	.08	.08	.06	.05
63. Lodging Services	.15400	.00	.00	.00	.00	.00
64. Personal Services	.12300	5.09	5.06	4.79	4.05	3.16
65. Adv., Dup., Addressing & Photo. Services	.06700	.78	.78	.74	.62	.49
66. Motion Pic. Amuse.	.09600	.61	.60	.57	.48	.38
67. Auto Rent. & Parking Services	.07000	.05	.05	.04	.04	.03
68. Misc. Repair Serv.	.04200	.34	.34	.32	.27	.21
69. Medical & Dental Serv.	.09300	7.68	7.64	7.23	6.12	4.76
70. Edu. (public & private)	.08800	8.61	8.56	8.10	7.23	5.33
71. Prof. Services	.17700	8.09	8.04	7.61	6.43	5.01
Total	.05760	71.60	71.16	67.20	57.21	44.42

Table IV. Direct and Indirect Employment Changes in Region From Extension of Unemployment Insurance to Agriculture Under Alternative Coverage Criteria, Lower Rio Grande Region, Total Benefits, 1969.

	Industry	Total Employment Multiplier	Coverage Criteria				
			Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
1.	Irr. Cotton	.12353	-	-	-	-	-
2.	Irr. Grains	.15448	-	-	-	-	-
3.	Veg., Citrus & Other Irr. Crop. Pr.	.24397	2.14	2.13	2.01	1.70	1.33
4.	Dryland Cotton	.08797	-	-	-	-	-
5.	Dryland Feed Grains	.16197	-	-	-	-	-
6.	Other Dryland Crop Production	.15219	.61	.61	.58	.49	.38
7.	Range & Feed Lot Livestock Pro.	.14976	.72	.71	.68	.57	.44
8.	Dairy, Poultry & Eggs	.14471	1.18	1.17	1.11	.94	.73
9.	Ag. Supply, excent Farm Machinery	.50833	-	-	-	-	-
10.	Ginning	.40149	.02	.02	.02	.00	.00
11.	Ag. Services	.04691	-	-	-	-	-
12.	Fisheries	.09519	.27	.27	.25	.21	.17
13.	Crude Pet., Nat. Gas, & Services	.01483	-	-	-	-	-
14.	Residential Cons. Alteration and Repair	.05191	-	-	-	-	-
15.	Commercial, Edu. & Inst. Construction	.04785	-	-	-	-	-
16.	Facility & Other Construction	.05815	-	-	-	-	-
17.	Meat Products	.09133	1.93	1.91	1.81	1.53	1.19
18.	Dairy Manufacturing	.09346	1.82	1.81	1.71	1.45	1.13
19.	Canned, Preserved, Pickled, Dried & Frozen Foods	.10798	.12	.12	.12	.10	.08
20.	Other Food & Kindred Products	.03724	.41	.40	.38	.32	.25

Table IV. Continued

Industry	Total Employment Multiplier	Coverage Criteria				
		Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
21. Beverages	.08381	1.49	1.48	1.40	1.18	.92
22. Textile Mill Prod., Furnishings, & Apparel	.13101	.07	.07	.07	.06	.04
23. Wood Furniture & Other Wood & Paper Products	.04954	.12	.12	.11	.09	.07
24. Newspapers, Pub. & Printing	.07847	.47	.47	.45	.38	.29
25. Chemicals, Drugs & Related Products	.04663	.18	.18	.17	.14	.11
26. Pet., Refining & Products	.01213	.48	.47	.47	.38	.30
27. Clay, Cut Stone & Shell Products	.19313	.00	.00	.00	.00	.00
28. Cement & Concrete Products	.05118	.00	.00	.00	.00	.00
29. Primary Metals, Foundries & Forgings	.02192	.05	.05	.05	.04	.03
30. Fabricated Steel & Other Metal Prod.	.05032	.02	.02	.02	.01	.01
31. Machinery & Proc. Equipment	.03949	.00	.00	.00	.00	.00
32. Electrical & Electronic Equip.	.11661	.01	.01	.01	.00	.00
33. Trans. Equipment	.07574	.03	.03	.03	.02	.02
34. Other Manu.	.06690	.07	.07	.07	.06	.05
35. Highway Motor Freight, Passenger Ser. & Warehousing	.17606	1.78	1.77	1.68	1.42	1.11
36. Water Trans.	.07255	-	-	-	-	-
37. Air Trans.	.07659	.57	.57	.54	.45	.35

Table IV. Continued

Industry	Total Employment Multiplier	Coverage Criteria				
		Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
38. Other Trans. Services	.04403	.95	.94	.89	.75	.59
39. Communications	.05288	1.50	1.50	1.41	1.19	.93
40. Gas Serv. (public & private)	.01384	.10	.10	.10	.08	.06
41. Electric Serv. (public & private)	.03154	.96	.96	.89	.77	.60
42. Water & Sanitary Serv. Systems (pub. & pri.)	.08241	.70	.69	.66	.56	.43
43. Wholesale Auto, Parts & Supplies	.03417	.36	.36	.34	.28	.22
44. Wholesale Groceries & Related Products	.03114	.57	.56	.53	.46	.35
45. Wholesale Farm Prod.	.02990	.00	.00	.00	.00	.00
46. Wholesale Livestock	.21834	.03	.03	.03	.02	.02
47. Wholesale Mach., Equip. & Supplies	.03081	.50	.49	.47	.39	.31
48. Wholesale Pet. & Pet. Products	.01522	.15	.15	.14	.12	.09
49. General Wholesale	.02992	2.23	2.22	2.10	1.77	1.38
50. Retail Lumberyards	.02996	.67	.66	.63	.53	.41
51. Farm Equip. Dealers	.03314	-	-	-	-	-
52. Hardware, Heating, Elec., Paint, & Wallpaper	.08191	.33	.33	.31	.26	.21
53. Dept. & Variety Stores	.06321	4.74	4.71	4.46	3.77	2.94
54. Food Stores	.03145	3.66	3.63	3.44	2.90	2.27
55. Automotive Dealers & Repair Shops	.03024	3.29	3.27	3.10	2.61	2.04
56. Gasoline Serv. Sta.	.37742	4.46	4.43	4.20	3.54	2.76
57. Apparel Accessory Stores	.04627	1.10	1.10	1.04	.88	.68

Table IV. Continued

Industry	Total Employment Multiplier	Coverage Criteria				
		Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
58. Furniture, Home Furn., Equip. Stores	.04612	.46	.46	.43	.36	.28
59. Eating & Drinking Places	.07570	3.36	3.34	3.16	2.67	2.08
60. All Other Retail	.05259	2.53	2.52	2.38	2.01	1.57
61. Banking & Credit Agencies	.04270	3.13	3.12	2.95	2.49	1.94
62. Ins. Carriers, Real Estate & Finance n.e.c.	.02356	.38	.37	.35	.30	.23
63. Lodging Services	.17000	.00	.00	.00	.00	.00
64. Personal Services	.13035	5.40	5.36	5.08	4.29	3.34
65. Adv., Dup., Addressing & Photo. Services	.08928	1.04	1.04	.98	.83	.65
66. Motion Pic. Amuse.	.10756	.68	.68	.64	.54	.41
67. Auto Rent. & Parking Services	.07308	.05	.05	.05	.04	.03
68. Misc. Repair Serv.	.04809	.39	.39	.37	.31	.24
69. Medical & Dental Serv.	.10730	8.86	8.81	8.34	7.06	5.49
70. Edu. (public & private)	.09785	9.57	9.51	9.00	7.60	5.93
71. Prof. Services	.18273	8.35	8.30	7.86	6.64	5.18
Total	.06830	84.98	84.52	80.07	67.56	52.66

Table V. Direct Additional Expenditures in Region From Extension of Unemployment Insurance to Agriculture Under Alternative Coverage Criteria, Lower Rio Grande Region, Transfer Benefits Only, 1969.

Industry	Consumption Factor HH	Coverage Criteria				
		Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
1. Irr. Cotton	0	-	-	-	-	-
2. Irr. Grains	0	-	-	-	-	-
3. Veg., Citrus & Other Irr. Crop. Pro.	.00386097	$3,965	$3,942	$3,739	$3,116	$2,457
4. Dryland Cotton	0	-	-	-	-	-
5. Dryland Feed Grains	0	-	-	-	-	-
6. Other Dryland Crop Production	.00177352	1,821	1,811	1,718	1,431	1,129
7. Range & Feed Lot Livestock Pro.	.00210916	2,167	2,154	2,043	1,702	1,342
8. Dairy, Poultry & Eggs	.00359385	3,691	3,669	3,480	2,901	2,287
9. Ag. Supply, except Farm Machinery	0	-	-	-	-	-
10. Ginning	.00001852	19	19	18	15	12
11. Ag. Services	0	-	-	-	-	-
12. Fisheries	.00125075	1,285	1,277	1,211	1,009	796
13. Crude Pet., Nat. Gas, & Services	0	-	-	-	-	-
14. Residential Cons. Alteration and Repair	0	-	-	-	-	-
15. Commercial, Edu. & Inst. Construction	0	-	-	-	-	-
16. Facility & Other Construction	0	-	-	-	-	-
17. Meat Products	.00928146	9,532	9,477	8,989	7,491	5,90.
18. Dairy Manufacturing	.00857589	8,808	8,756	8,305	6,922	5,458
19. Canned, Preserved, Pickled, Dried & Frozen Foods	.00050633	520	517	490	409	322
20. Other Food & Kindred Products	.00480323	4,933	4,904	4,652	3,877	3,057

Table V. Continued

Industry	Consumption Factor HH	Coverage Criteria: Universal	1x20 or $1500 High Quarter	4x20 or $500C High Quarter	4x20	8x26
21. Beverages	.00780192	$ 8,011	$ 7,966	$ 7,556	$ 6,297	$ 4,965
22. Textile Mill Prod., Furnishings, & Apparel	.00023345	240	238	226	188	149
23. Wood Furniture & Other Wood & Paper Products	.00113747	1,168	1,161	1,102	918	724
24. Newspapers, Pub. &.Printing	.00266014	2,732	2,716	2,576	2,147	1,693
25. Chemicals, Drugs & Related Products	.00167004	1,715	1,705	1,617	1,348	1,063
26. Pet., Refining & Products	.01729622	17,764	17,660	16,751	13,960	11,007
27. Clay, Cut Stone & Shell Products	.00000115	1	1	1	1	1
28. Cement & Concrete Products	.00003426	35	35	33	28	22
29. Primary Metals, Foundries & Forgings	.00108648	1,116	1,109	1,052	877	691
30. Fabricated Steel & Other Metal Prod.	.00014112	145	144	137	114	90
31. Machinery & Proc. Equipment	.00002435	25	25	24	20	15
32. Electrical & Electronic Equip.	.00002179	22	22	21	18	14
33. Trans. Equipment	.00017954	184	183	174	145	114
34. Other Manu.	.00048797	501	498	473	394	311
35. Highway Motor Freight, Passenger Ser. & Warehousing	.00445994	4,580	4,554	4,319	3,600	2,838
36. Water Trans.	0	-	-	-	-	-
37. Air Trans.	.00327208	3,360	3,341	3,169	2,641	2,082

Table V. Continued

	Industry	Consumption Factor HH	Coverage Criteria: Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
38.	Other Trans. Services	.00949998	$ 9,757	$ 9,700	$ 9,200	$ 7,667	$ 6,046
39.	Communications	.01250372	12,842	12,767	12,109	10,092	7,957
40.	Gas Serv. (public & private)	.00326822	3,357	3,337	3,165	2,638	2,080
41.	Electric Serv. (public & private)	.01343594	13,799	13,719	13,012	10,844	8,550
42.	Water & Sanitary Serv. Systems (pub. & pri.)	.00373240	3,833	3,811	3,615	3,012	2,375
43.	Wholesale Auto, Parts & Supplies	.00460356	4,728	4,700	4,458	3,716	2,930
44.	Wholesale Groceries & Related Products	.00802659	8,243	8,193	7,773	6,478	5,108
45.	Wholesale Farm Prod.	.00000423	4	4	4	3	3
46.	Wholesale Livestock	.00005361	55	55	52	43	34
47.	Wholesale Mach., Equip. & Supplies	.00709071	7,282	7,240	6,867	5,723	4,512
48.	Wholesale Pet. & Pet. Products	.00430251	4,419	4,393	4,167	3,473	2,738
49.	General Wholesale	.00383286	33,720	33,524	31,797	26,500	20,894
50.	Retail Lumberyards	.00977645	10,041	9,982	9,468	7,891	6,222
51.	Farm Equip. Dealers	0	-	-	-	-	-
52.	Hardware, Heating, Elec., Paint, & Wallpaper	.00178255	1,831	1,820	1,726	1,439	1,134
53.	Dept. & Variety Stores	.03299768	33,889	33,692	31,957	26,632	20,999
54.	Food Stores	.05115311	52,535	52,230	49,540	41,286	32,553
55.	Automotive Dealers & Repair Shops	.04789204	49,186	48,900	46,381	38,654	30,478
56.	Gasoline Serv. Sta.	.00520074	5,341	5,310	5,037	4,198	3,310
57.	Apparel Accessory Stores	.00863966	8,873	8,821	8,367	6,973	5,498

Table V. Continued

Industry	Consumption Factor HH	Coverage Criteria: Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
58. Furniture, Home Furn., Equip. Stores	.00436834	$ 4,486	$ 4,460	$ 4,231	$ 3,527	$ 2,780
59. Eating & Drinking Places	.01953209	20,060	19,943	18,916	15,764	12,430
60. All Other Retail	.02121254	21,783	21,659	20,543	17,121	13,499
61. Banking & Credit Agencies	.03231689	33,190	32,997	31,298	26,083	20,566
62. Ins. Carriers, Real Estate & Finance n.e.c.	.00701683	7,206	7,165	6,796	5,663	4,465
63. Lodging Services	.00000304	3	3	3	2	2
64. Personal Services	.01822700	18,720	18,511	17,652	14,711	11,599
65. Adv., Dup., Addressing & Photo. Services	.00514715	5,286	5,255	4,985	4,154	3,276
66. Motion Pic. Amuse.	.00278086	2,856	2,839	2,693	2,244	1,770
67. Auto Rent. & Parking Services	.00028843	296	295	279	233	184
68. Misc. Repair Serv.	.00359376	3,691	3,669	3,480	2,901	2,287
69. Medical & Dental Serv.	.03634297	37,325	37,108	35,197	29,332	23,128
70. Edu. (public & private)	.04304437	44,207	43,950	41,687	34,741	27,393
71. Prof. Services	.02011571	20,659	20,539	19,481	16,235	12,801
Total direct consumption in region by households		561,843	558,578	529,813	441,542	348,147
72. Savings	.00926561	9,516	9,461	8,973	7,478	5,896
Total transferred to households	1.00000000	1,027,021	1,021,047	968,459	807,101	636,381

Table VI. Direct and Indirect Changes in Output in Region From Extension of Unemployment Insurance to Agriculture Under Alternative Coverage Criteria, Lower Rio Grande Region, Transfer Benefits Only, 1969.

	Industry	Direct & Indirect Output Multiplier	Coverage Criteria				
			Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
1.	Irr. Cotton	1.6308	-	-	-	-	-
2.	Irr. Grains	1.6657	-	-	-	-	-
3.	Veg., Citrus & Other Irr. Crop. Pro.	1.4765	5,854	5,820	5,521	4,601	3,628
4.	Dryland Cotton	1.5292	-	-	-	-	-
5.	Dryland Feed Grains	1.7476	-	-	-	-	-
6.	Other Dryland Crop Production	1.4951	2,723	2,708	2,569	2,139	1,688
7.	Range & Feed Lot Livestock Pro.	1.6885	3,659	3,637	3,450	2,874	2,266
8.	Dairy, Poultry & Eggs	2.0384	7,524	7,479	7,094	5,913	4,662
9.	Ag. Supply, except Farm Machinery	1.3258	-	-	-	-	-
10.	Ginning	1.3796	26	26	25	21	17
11.	Ag. Services	1.6143	-	-	-	-	-
12.	Fisheries	1.3340	1,714	1,704	1,615	1,346	1,062
13.	Crude Pet., Nat. Gas, & Services	1.1672	-	-	-	-	-
14.	Residential Cons. Alteration and Repair	1.2526	-	-	-	-	-
15.	Commercial, Edu. & Inst. Construction	1.1738	-	-	-	-	-
16.	Facility & Other Construction	1.2967	-	-	-	-	-
17.	Meat Products	1.9074	18,181	18,076	17,146	14,288	11,267
18.	Dairy Manufacturing	1.7396	15,322	15,232	14,447	12,042	9,495
19.	Canned, Preserved, Pickled, Dried & Frozen Foods	1.5032	782	777	737	615	484
20.	Other Food & Kindred Products	1.2773	6,301	6,264	5,942	4,952	3,905

Table VI. Continued

Industry	Direct & Indirect Output Multiplier	Coverage Criteria				
		Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
21. Beverages	1.0656	8,537	8,489	8,052	6,710	5,291
22. Textile Mill Prod., Furnishings, & Apparel	1.1365	273	270	257	214	169
23. Wood Furniture & Other Wood & Paper Products	1.0857	1,268	1,260	1,196	997	786
24. Newspapers, Pub. & Printing	1.1040	3,016	2,998	2,844	2,370	1,869
25. Chemicals, Drugs & Related Products	1.4523	2,491	2,476	2,348	1,958	1,544
26. Pet, Refining & Products	1.6060	28,529	28,362	26,902	22,420	17,677
27. Clay, Cut Stone & Shell Products	1.5945	2	2	2	2	2
28. Cement & Concrete Products	1.2190	43	43	40	34	27
29. Primary Metals, Foundries & Forgings	1.1854	1,323	1,315	1,247	1,040	819
30. Fabricated Steel & Other Metal Prod.	1.0478	152	151	144	119	94
31. Machinery & Proc. Equipment	1.0892	27	27	26	22	16
32. Electrical & Electronic Equip.	1.0993	24	24	23	20	15
33. Trans. Equipment	1.1152	205	204	194	162	127
34. Othe. Manu.	1.2359	619	615	585	487	384
35. Highway Motor Freight, Passenger Ser. & Warehousing	1.3429	6,150	6,116	5,800	4,834	3,811
36. Water Trans.	1.5424	-	-	-	-	-
37. Air Trans.	1.3340	4,482	4,457	4,227	3,523	2,777

Table VI. Continued

Industry	Direct & Indirect Output Multiplier	Coverage Criteria: Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
38. Other Trans. Services	1.8385	17,938	17,833	16,914	14,096	11,116
39. Communications	1.0560	13,561	13,482	12,787	10,657	8,403
40. Gas Serv. (public & private)	1.7673	5,933	5,897	5,594	4,662	3,676
41. Electric Serv. (public & private)	1.2888	17,784	17,681	16,770	13,976	11,019
42. Water & Sanitary Serv. Systems (pub. & pri.)	1.3284	5,092	5,063	4,802	4,001	3,155
43. Wholesale Auto, Parts & Supplies	1.0798	5,105	5,075	4,814	4,013	3,164
44. Wholesale Groceries & Related Products	1.0962	9,036	8,984	8,521	7,101	5,599
45. Wholesale Farm Prod.	1.5099	6	6	6	5	5
46. Wholesale Livestock	1.2858	71	71	67	55	44
47. Wholesale Mach., Equip. & Supplies	1.1813	8,602	8,553	8,112	6,761	5,330
48. Wholesale Pet. & Pet. Products	1.1484	5,075	5,045	4,785	3,988	3,144
49. General Wholesale	1.1003	37,102	36,886	34,986	29,158	22,990
50. Retail Lumberyards	1.0132	10,174	10,114	9,593	7,995	6,304
51. Farm Equip. Dealers	1.0558	-	-	-	-	-
52. Hardware, Heating, Elec., Paint, & Wallpaper	1.1275	2,064	2,052	1,946	1,622	1,279
53. Dept. & Variety Stores	1.1619	39,376	39,147	37,131	30,944	24,399
54. Food Stores	1.0533	55,335	55,015	52,180	43,487	34,288
55. Automotive Dealers & Repair Shops	1.1251	55,339	55,017	52,183	43,490	34,291
56 Gasoline Serv. Sta.	1.0937	5,841	5,807	5,509	4,591	3,620
57. Apparel Accessory Stores	1.2160	10,790	10,726	10,174	8,479	6,686

Table VI. Continued.

Industry	Direct & Indirect Output Multiplier	Coverage Criteria: Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
58. Furniture, Home Furn., Equip. Stores	1.2250	5,495	5,464	5,183	4,321	3,406
59. Eating & Drinking Places	1.1756	23,583	23,445	22,238	18,532	14,613
60. All Other Retail	1.1327	24,674	24,533	23,269	19,393	15,290
61. Banking & Credit Agencies	1.1326	37,591	37,372	35,448	29,542	23,293
62. Ins. Carriers, Real Estate & Finance n.e.c.	1.2936	9,322	9,269	8,791	7,326	5,776
63. Lodging Services	1.3055	4	4	4	3	[illegible]
64. Personal Services	1.1476	21,483	21,358	20,257	16,882	13,311
65. Adv., Dup., Addressing & Photo. Services	1.2042	6,365	6,328	6,003	5,002	3,945
66. Motion Pic. Amuse.	1.2154	3,471	3,451	3,273	2,727	2,151
67. Auto Rent. & Parking Services	1.0820	320	319	302	252	199
68. Misc. Repair Serv.	1.1361	4,193	4,168	3,954	3,296	2,598
69. Medical & Dental Serv.	1.2141	45,316	45,053	42,733	35,612	28,080
70. Edu. (public & private)	1.1936	52,765	52,459	49,758	41,467	32,696
71. Prof. Services	1.1024	22,774	22,642	21,476	17,897	14,112
Total direct & indirect effects		680,807	676,851	641,996	535,036	421,867

Table VII. Direct Employment Changes From the Extension of Unemployment Insurance to Agriculture Under Alternative Coverage Criteria, Lower Rio Grande Region, Transfer Benefits Only, 1969.

Industry	Direct Employment Multiplier	Coverage Criteria				
		Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x20
1. Irr. Cotton	.07949	-	-	-	-	-
2. Irr. Grains	.12532	-	-	-	-	-
3. Veg., Citrus & Other Irr. Crop. Pro.	.21960	$.87	$.87	$.82	$.64	$.54
4. Dryland Cotton	.04700	-	-	-	-	-
5. Dryland Feed Grains	.12535	-	-	-	-	-
6. Other Dryland Crop Production	.12549	.23	.23	.22	.18	.14
7. Range & Feed Lot Livestock Pro.	.10297	.22	.22	.21	.18	.14
8. Dairy, Poultry & Eggs	.08520	.31	.31	.30	.25	.20
9. Ag. Supply, except Farm Machinery	.49000	-	-	-	-	-
10. Ginning	.38467	.01	.01	.01	.01	.01
11. Ag. Services	.02101	-	-	-	-	-
12. Fisheries	.07800	.10	.10	.09	.08	.06
13. Crude Pet., Nat. Gas, & Services	01000	-	-	-	-	-
14. Residential Cons. Alteration and Repair	.03800	-	-	-	-	-
15. Commercial, Edu. & Inst. Construction	04000	-	-	-	-	-
16. Facility & Other Construction	.04400	-	-	-	-	-
17. Meat Products	.01500	.14	.14	.14	.11	.09
18. Dairy Manufacturing	.04200	.37	.37	.35	.29	.23
19. Canned, Preserved, Pickled, Dried & Frozen Foods	.06000	.03	.03	.03	.03	.02
20. Other Food & Kindred Products	.02100	.10	.10	.10	.08	.06

Table VII. Continued

Industry	Direct Employment Multiplier	Coverage Criteria: Universal	4x20 or $1500 High Quarter	4x20 $500 High Quarter	4x20	8x26
21. Beverages	.07900	$.63	$.63	$.60	$.50	$.39
22. Textile Mill Prod., Furnishings, & Apparel	.12400	.03	.03	.03	.02	.02
23. Wood Furniture & Other Wood & Paper Products	.04500	.05	.05	.05	.04	.03
24. Newspapers, Pub. & Printing	.07100	.19	.19	.18	.15	.12
25. Chemicals, Drugs & Related Products	.03400	.06	.06	.06	.05	.04
26. Pet., Refining & Products	.00300	.05	.05	.05	.04	.03
27. Clay, Cut Stone & Shell Products	.17200	0	0	0	0	0
28. Cement & Concrete Products	.03700	0	0	0	0	0
29. Primary Metals, Foundries	.01500	.02	.02	.02	.01	.01
30. Fabricated Steel & Other Metal Prod.	.04800	.01	.01	.01	.01	0
31. Machinery & Proc. Equipment	.03500	0	0	0	0	0
32. Electrical & Electronic Equip.	.11100	0	0	0	0	0
33. Trans. Equipment	.06900	.01	.01	.01	.01	.01
34. Other Manu.	.05800	.03	.03	.03	.02	.02
35. Highway Motor Freight, Passenger Ser. & Warehousing	.16100	.74	.73	.70	.58	.46
36. Water Trans.	.05000	-	-	-	-	-
37. Air Trans.	.06600	.22	.22	.21	.17	.14

Table VII. Continued

Industry	Direct Employment Multiplier	Coverage Criteria: Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
38. Other Trans. Services	.03100	$ .30	$ .30	$ .29	$ .24	$ .19
39. Communications	.05000	.64	.64	.61	.51	.40
40. Gas Serv. (public & private)	.00300	.01	.01	.01	.01	.01
41. Electric Serv. (public & private)	.02700	.37	.37	.35	.29	.23
42. Water & Sanitary Serv. Systems (pub. & pri.)	.06800	.26	.26	.25	2.05	1.62
43. Wholesale Auto, Parts & Supplies	.03000	.14	.14	.13	.11	.09
44. Wholesale Groceries & Related Products	.02500	.21	.21	.19	.16	.13
45. Wholesale Farm Prod.	.00100	0	0	0	0	0
46. Wholesale Livestock	.20300	.01	.01	.01	.01	.01
47. Wholesale Mach., Equip. & Supplies	.01900	.14	.14	.13	.11	.09
48. Wholesale Pet. & Pet. Products	.01100	.05	.05	.05	.04	.03
49. General Wholesale	.02400	.81	.81	.76	.64	.50
50. Retail Lumberyards	.02900	.29	.29	.28	.23	.18
51. Farm Equip. Dealers	.02900	-	-	-	-	-
52. Hardware, Heating, Elec., Paint, & Wallpaper	.06800	.13	.12	.12	10	.08
53. Dept. & Variety Stores	.05400	1.83	1.82	1.73	1.44	1.13
54. Food Stores	.02900	1.52	1.52	1.44	1.20	.94
55. Automotive Dealers & Repair Shops	.02200	1.08	1.08	1.02	.85	.67
56. Gasoline Serv. Sta.	.37000	1.98	1.97	1.86	1.55	1.23
57. Apparel Accessory Stores	.03600	.32	.32	.30	.25	.20

Table VII. Continued

Industry	Direct Employment Multiplier	Coverage Criteria				
		Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
58. Furniture, Home Furn. Equip. Stores	.03600	$ .16	$ .16	$ .15	$ .13	$ .10
59. Eating & Drinking Places	.06900	1.38	1.38	1.31	1.09	.86
60. All Other Retail	.04500	.98	.98	.92	.77	.61
61. Banking & Credit Agencies	.03400	1.13	1.12	1.06	.89	.70
62. Ins. Carriers. Real Estate & Finance n.e.c.	.00500	.04	.04	.03	.03	.02
63. Lodging Services	.05400	0	0	0	0	0
64. Personal Services	.12300	2.30	2.29	2.17	1.81	1.43
65. Adv., Dup., Addressing & Photo. Services	.06700	.35	.35	.33	.28	.22
66. Motion Pic. Amuse.	.09600	.27	.27	.26	.22	.17
67. Auto Rent. & Parking Services	.07000	.02	.02	.02	.02	.01
68. Misc. Repair Serv.	.04200	.16	.15	.15	.12	.10
69. Medical & Dental Serv.	.09300	3.47	3.45	3.27	2.73	2.15
70. Edu. (public & private)	.08800	3.89	3.87	3.67	3.06	2.41
71. Prof. Services	.17700	3.66	3.64	3.45	2.87	2.27
Totals		32.35	32.16	30.50	25.18	20.04

Table VIII. Direct and Indirect Employment Changes in Region From Extension of Unemployment Insurance to Agriculture Under Alternative Coverage Criteria, Lower Rio Grande Region, Total Benefits, 1969.

Industry	Total Effect	Coverage Criteria				
		Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
1. Irr. Cotton	.12353	-	-	-	-	-
2. Irr. Grains	.15448	-	-	-	-	-
3. Veg., Citrus & Other Irr. Crop. Pro.	.24397	.97	.96	.91	.76	.60
4. Dryland Cotton	.08797	-	-	-	-	-
5. Dryland Feed Grains	.16197	-	-	-	-	-
6. Other Dryland Crop Production	.15219	.28	.28	.26	.22	.17
7. Range & Feed Lot Livestock Pro.	.14976	.33	.32	.31	.26	.20
8. Dairy, Poultry & Eggs	.14471	.53	.53	.50	.42	.33
9. Ag. Supply, except Farm Machinery	.50833	-	-	-	-	-
10. Ginning	.40149	.01	.01	.01	.01	.01
11. Ag. Services	.04691	-	-	-	-	-
12. Fisheries	.09519	.12	.12	.12	.10	.08
13. Crude Pet., Nat. Gas, & Services	.01483	-	-	-	-	-
14. Residential Cons. Alteration and Repair	.05191	-	-	-	-	-
15. Commercial, Edu. & Inst. Construction	.04785	-	-	-	-	-
16. Facility & Other Construction	.05815	-	-	-	-	-
17. Meat Products	.09133	.87	.87	.82	.68	.54
18. Dairy Manufacturing	.09346	.82	.82	.78	.65	.51
19. Canned, Preserved, Pickled, Dried & Frozen Foods	.10798	.06	.06	.05	.04	.04
20. Other Food & Kindred Products	.03724	.18	.18	.17	.14	.11

Table VIII. Continued

Industry	Total Effect	Coverage Criteria				
		Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
21. Beverages	.08381	.67	.67	.63	.53	.42
22. Textile Mill Prod., Furnishings, & Apparel	.13101	.03	.03	.03	.03	.02
23. Wood Furniture & Other Wood & Paper Products	.04954	.06	.06	.06	.05	.04
24. Newspapers, Pub. & Printing	.07847	.21	.21	.20	.17	.13
25. Chemicals, Drugs & Related Products	,04663	.08	.08	.08	.06	.05
26. Pet., Refining & Products	.01213	.22	.21	.20	.17	.13
27. Clay, Cut Stone & Shell Products	.19313	0	0	0	0	0
28. Cement & Concrete Products	.05118	0	0	0	0	0
29. Primary Metals, Foundries & Forgings	.02912	.03	.03	.03	.03	.02
30. Fabricated Steel & Other Metal Prod.	.05032	.01	.01	.01	.01	.01
31. Machinery & Proc. Equipment	.03949	0	0	0	0	0
32. Electrical & Electronic Equip.	.11661	0	0	0	0	0
33. Trans. Equipment	.07574	.01	.01	.01	.01	.01
34. Other Manu.	.06690	.03	.03	.03	.03	.02
35. Highway Motor Freight, Passenger Ser. & Warehousing	.17607	.86	.80	.80	.63	.50
36. Water Trans.	.07255	-	-	-	-	-
37. Air Trans.	.07659	.26	.26	.24	.20	.16

Table VIII. Continued

Industry	Total Effect	Coverage Criteria: Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
38. Other Trans. Services	.04403	.43	.43	.41	.34	.27
39. Communications	.05288	.68	.68	.64	.53	.42
40. Gas Serv. (public & private)	.01384	.05	.05	.04	.04	.03
41. Electric Serv. (public & private)	.03154	.43	.43	.41	.34	.27
42. Water & Sanitary Serv. Systems (pub. & pri.)	.08241	.32	.31	.30	.25	.20
43. Wholesale Auto, Parts & Supplies	.03417	.16	.16	.15	.13	.10
44. Wholesale Groceries & Related Products	.03114	.26	.26	.24	.20	.16
45. Wholesale Farm Prod.	.02990	0	0	0	0	0
46. Wholesale Livestock	.21834	.01	.01	.01	.01	.01
47. Wholesale Mach., Equip. & Supplies	.03081	.22	.22	.21	.18	.14
48. Wholesale Pet. & Pet. Products	.01522	.07	.07	.06	.05	.04
49. General Wholesale	.02992	1.01	1.00	.95	.79	.62
50. Retail Lumberyards	.02996	.30	.30	.28	.24	.19
51. Farm Equip. Dealers	.03314	-	-	-	-	-
52. Hardware, Heating, Elec., Paint, & Wallpaper	.08191	.15	.15	.14	.11	.10
53. Dept. & Variety Stores	.06321	2.14	2.13	2.02	1.68	1.33
54. Food Stores	.03145	1.65	1.64	1.56	1.30	1.02
55. Automotive Dealers & Repair Shops	.03024	1.49	1.48	1.40	1.17	.92
56. Gasoline Serv. Sta.	.37742	2.02	2.00	1.90	1.58	1.25
57. Apparel Accessory Stores	.04627	.41	.41	.39	.32	.25

Table VIII. Continued

Industry	Total Effect	Coverage Criteria: Universal	1x20 or $1500 High Quarter	4x20 or $5000 High Quarter	4x20	8x26
58. Furniture, Home Furn., Equip. Stores	.04612	.21	.21	.20	.16	.13
59. Eating & Drinking Places	.07570	1.52	1.51	1.43	1.19	.94
60. All Other Retail	.05259	1.15	1.14	1.08	.90	.71
61. Banking & Credit Agencies	.04270	1.42	1.41	1.34	1.11	.88
62. Ins. Carriers, Real Estate & Finance n.e.c.	.02356	.17	.17	.16	.13	.11
63. Lodging Services	.17000	0	0	0	0	0
64. Personal Services	.13035	2.44	2.43	2.30	1.92	1.51
65. Adv., Dup., Addressing & Photo. Services	.08928	.47	.47	.45	.37	.29
66. Motion Pic. Amuse.	.10756	.31	.31	.29	.24	.19
67. Auto Rent. & Parking Services	.07308	.02	.02	.02	.02	.01
68. Misc. Repair Serv.	.04809	.18	.18	.17	.14	.11
69. Medical & Dental Serv.	.10730	4.01	3.98	3.78	3.15	2.48
70. Edu. (public & private)	.09785	4.33	4.30	4.08	3.40	2.68
71. Prof. Services	.18273	3.78	3.75	3.56	2.97	2.64
Total		38.43	38.16	36.18	30.16	23.78