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MINNESOTA STATE UNIVERSITY, MANKATO



**ESTIMATING THE
ECONOMIC IMPACT
OF THE LATINO
WORKFORCE IN SOUTH
CENTRAL MINNESOTA**

James J. Kielkopf

Seeking Solutions for Greater Minnesota's Future

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Estimating the Economic Impact of the Latino Workforce in South Central Minnesota.

Executive Summary

The nine counties comprising the Region Nine Planning District in southern Minnesota were studied to determine the economic impact of the area's growing Latino population. Using input-output analysis, a method that measures both the direct economic impacts and the indirect effects of links to other firms and households in an area, it was determined that the economic participation of the Latino population is both *significant* and *critical* to continued growth and prosperity in the region.

Key Findings

- The total estimated value added to the Region Nine economy due to the Latino workforce is \$484 million per year. This amounts to slightly less than 10% of the total value added in the local economy each year, and it does not include agricultural workers due to lack of documentation on the ethnic makeup of the agricultural labor force.
- More than 7,800 additional jobs for non-Latinos have been generated in the local economy due to the presence of the Latino workforce.
- The largest employers of Latino workers, according to Equal Employment Opportunity Commission data are the food processing and packaging firms. In these manufacturing firms, about 33% of the employees are Latino. Food Processing, like Agriculture, is called a *basic* industry because its output is mostly exported outside of the Region Nine area, thus bringing wealth into the region. Its effect on the local economy is multiplied because many other local industries serve it and depend upon it for survival.
- The presence of Latino workers and their families results in an estimated increase in government expenditures of \$48.3 million, \$24.5 of which is estimated to come from the state and local levels.
- The presence of the Latino workforce causes an estimated \$121 million in additional tax revenue to be generated in the region, \$45 million of which is state and local tax revenue. This means that the best estimate of the Latino workforce's effect on taxes is to cause *lower* effective tax rates for the non-Latino residents of the region.

Estimating the Economic Impact of the Latino Workforce in South Central Minnesota

I. Introduction

Migration from south western states, along with international immigration have brought increasing numbers of new residents into South Central Minnesota including the counties of Blue Earth, Brown, Faribault, LeSueur, Martin, Nicollet, Sibley, Waseca and Watonwan. Latino populations in particular have settled in communities throughout the region. While much has been written about the added costs associated with providing services to immigrant/migrant residents to a community, very little has been done to quantify the overall economic impacts of such populations on a region. This study attempts to begin to fill that gap.

Many of the Latino residents throughout south central Minnesota are of Mexican or Mexican-American descent. The Latino population began arriving in Minnesota as early as the late 19th century. Historically, Mexican men immigrated to work in meatpacking plants and to build railroads, as they began to settle their families. In the 1930s and 1940s there was an influx of Mexican farm workers that came to Minnesota. By 1975, the Latino population was the largest minority group in Minnesota. And with continued high birth and immigration rates, the United States Census Bureau projects that by 2050 the Latino population will be the largest minority group in the nation, representing 23 percent of the total population. In South Central Minnesota, the influx of workers became more apparent in the 1980s. The Census Bureau reported a 55 percent increase in the number of persons of Hispanic origin, from 1,466 in 1980 to 2,265 in 1990. The Bureau's 1998 population estimates document an additional 54 percent increase since 1990 in the region's Latino population totaling 3,491 persons. Latino residents tend to locate near employment opportunities and family members. The greatest number of Latino residents in the region is in Watonwan and Blue Earth Counties. However, despite these gains the Census Bureau data are thought to be significantly conservative by many local officials and service providers and this thought is supported by the region's school enrollment data.

Increases in the Latino population are prominent in South Central Minnesota's school enrollment data. In 1985, 278 Latino students were enrolled in the region and comprised approximately one percent of the total enrollment. In 1999 the number of Latino students grew to 1,703 and comprised nearly five percent of the total enrollment. While all counties in the region have seen increases in the enrollment of Latino students since the 1985–1986 academic year, nearly 47 percent of the Latino students reside in Watonwan and LeSueur Counties. In the Madelia school district (Watonwan County), Latino students now comprise 23 percent of the total student enrollment and 44 percent of the kindergarten class.

Minnesota's strong economy and low unemployment trends have sustained a high demand for additional workers. Currently, the primary employment sources for Latinos in the region are meatpacking, food service, and agricultural industries. Traditionally meat and egg processing

plants have actively recruited Latinos to rural Minnesota. The jobs available in these industries typically have lower wages, long hours and are physically demanding. In addition, each summer an additional 15,000 to 20,000 Mexican migrant farm workers come to Minnesota for seasonal work.

Contrary to popular beliefs, most Latino residents are United States citizens that have relocated from other parts of the country, or are in Minnesota legally on work permits. While many of these immigrants know little or no English, they believe in their opportunity to work in the United States because the wages are higher than those available in Mexico (The Minneapolis Foundation, 1999).

This study attempts to use an economic model to provide estimates reflective of the overall economic impact of the Latino population residing in South Central Minnesota. As local and state policy makers face decisions about allocating resources to assist Latinos and other immigrant populations in the region, it is important to compare the costs of providing these enhanced services (e.g., ESL programs; bilingual staff; and language specific materials) with the economic benefits such populations provide.

Data

The model of the Region Nine economy was constructed using tables, databases and software provided by Minnesota Implan Group (MIG) Inc. The tables and databases are built with data on every industry in the region and are provided by federal agencies such as the Bureau of Labor Statistics, the Bureau of Economic Analysis, and the Census Bureau. The economic model data is for 1997, but the results of this analysis have been adjusted to 2000 dollars.

The Latino employment data comes from the U.S. Equal Opportunity Employment Commission. This agency surveys firms with over 100 employees regarding the racial and sexual makeup of their workforce. The data used in this study comes from the 1998 EEO-1 survey of private sector employers. The EEO-1 survey only represents about 21% of the total workforce of the Region Nine Area, meaning that the results of this analysis are probably a conservative *underestimate* of the true economic impact. Notably missing from this analysis are farm workers. No agricultural firms were included in the EEO-1 survey for the Region Nine area due to either small firm size or privacy reasons.

Methodology

Input-output analysis employs tables of every industry in the economy and all of the input and output commodities that are used and created by each industry. Data on household and government expenditures are also used as well as information about the amount of goods consumed locally and exported outside of the study area. Labor is one such input to each industry. Knowing the proportion of each industry's labor inputs that are Latino allows the calculation of the value of that labor.

The analysis goes even further by also calculating the value of inputs purchased by the industries that employ Latinos. These inputs provide indirect economic impacts by employing people and

making profits for other linked industries. Finally, a portion of the wages paid to Latino and other workers in all of the affected industries is spent in the local area, providing further economic activity, jobs, and value added to the local economy. The direct and indirect economic impacts are added together to estimate the total impact on the local economy due to the presence of the Latino workforce.

IMPLAN, the software provided by Minnesota Implan Group, Inc. was used to create the model of the economy and perform the analysis. The section titled Impact Analysis details the assumptions behind input-output analysis.

II. Area of Study and Description of Local Economy

The Region

The study area includes the City of Mankato and the nine counties that include and surround it: Blue Earth, Brown, Faribault, Le Seuer, Martin, Nicollet, Sibley, Waseca, and Watonwan. There are 5,134 square miles of land in the study area, and it includes 82,946 households and a population of 218,935.

Total personal income in 1997 was \$4.744 billion. Total employment in the region was 139,148 full time equivalent jobs. Total value added to the economy for the region (equivalent to the region's Gross Domestic Product (GDP) was \$4.919 billion. (See Appendices A and B.)

The Latino Workforce

This study used data supplied by the Equal Employment Opportunity Commission's EEO-1 survey to determine the number and proportion of Latino workers in specific industries in the nine county Region Nine area. Table 1, below, gives the number of Latino workers reported in the survey, the industries that employ them, and the total number of workers reported by the U.S. Bureau of Labor Statistics for those same industries.

Table 1.1 Employment by Industry

SIC	Description	EEOC Latino Workers	EEOC Total Workers	BLS Total Workers	% Latino of EEOC Total	% EEOC of BLS Total	Adjusted Latino Worker Count
20	Food Processing and Packaging	1668	5053	5456	33.0%	92.6%	1668
26	Paper Product Manufacturing	6	756	301	0.8%	251.2%	6
27	Printing & Publishing	82	5251	6637	1.6%	79.1%	82
30	Rubber and Plastics	37	852	1270	4.3%	67.1%	37
34	Metal Products	56	996	771	5.6%	129.2%	56
35	Industrial Machines and Computers	56	2147	2262	2.6%	94.9%	56
36	Electrical Equipment	72	3491	4623	2.1%	75.5%	72
37	Transportation Equipment	56	1073	1074	5.2%	99.9%	56
38	Medical and Measurement Equipment	2	166	68	1.2%	244.1%	2
49	Public Utilities	1	304	389	0.3%	78.1%	1
50	<i>Wholesale Trade</i>	1	523	6094	0.2%	8.6%	12
53	<i>Gen. Merchandise Stores</i>	13	1928	2627	0.7%	73.4%	13
54	<i>Food Stores</i>	15	1805	3582	0.8%	50.4%	30
58	<i>Eating and Drinking</i>	19	653	7474	2.9%	8.7%	217
73	<i>Business and Building Services</i>	58	1066	3988	5.4%	26.7%	217
80	<i>Medical Services</i>	40	3610	9596	1.1%	37.6%	106
87	<i>Professional Services</i>	1	214	3760	0.5%	5.7%	18
	Totals:	2183	29888	59972	7.3%	49.8%	2649

Sources: EEO-1 Survey of private employers, 1998; U.S. Equal Employment Opportunity Commission. Implan Data, 1997; Minnesota Implan Group Inc.

The above table shows that there was a 49.8% response rate to the EEO-1 survey for the industries indicated. It also shows that 7.3% of the reported employment in those industries were Latino. Low response rates are due to either privacy reasons or because firms that employ less than 100 people are not required to respond to the survey. Retail and restaurants are two industries that are likely to both employ Latinos and have less than 100 employees, so the numbers of Latinos employed in the service industries were adjusted upwards according to the response rates of each industry.

Notably missing from the EEO-1 data are agricultural workers. There simply was not the same documentation about the ethnic makeup of the farm labor force in the study area to be able to use it with the data provided by the EEOC.

The final column shows the adjusted number of Latino workers that were used in the model to estimate economic impact. Because of low response rates in some industries, reported employment figures were multiplied by the inverse of the response rate to provide a more realistic employment estimate. The adjusted numbers were determined as follows:

1. All manufacturing industries were left as reported on the EEO-1 survey. Those industries had high rates of response, and the most critical industry in terms of Latino employment had a 93% response rate. Adjusting the manufacturing industries would not have resulted in significant increases in the numbers of Latino workers.
2. All service industries (*italicized*) were adjusted by multiplying the EEO-1 reported numbers by the inverse of the response rate. Doing this projects the EEO-1 figures to the level of a 100% response survey.

Regional Economic Base

Industries that export a large proportion of their products are called *basic* industries. These industries form the economic base of a region because their exports bring wealth from the outside into the region. Other industries in the region serve and are dependent upon the wealth brought by the basic industries.

The Region Nine area is a *net importer* of commodities. The region imported \$5.76 billion worth of goods and services in 1997 and it exported \$4.79 billion, leaving a net import amount of \$927 million. In the Region Nine area, *Food Product Manufacturing is the largest basic (exporting) industry for the region*. Food product manufacturing firms exported \$1.96 billion worth of goods from the region in 1997, and \$443 million worth of food products were imported from other areas, leaving the study area a net exporter of food products in the order of \$1.52 billion.

Intermediate Input Use

Changes that affect basic industries have large effects on those industries that provide supplies to the basic ones. Those industries that provide intermediate inputs to exporting industries are dependent upon the existence and health of the exporting industries for their livelihood as well.

Food product manufacturing firms purchased \$875.7 million worth of products from other local industries in 1997. This industry is the largest buyer of local goods and services. The amounts of local goods and services produced by each of the industries that employ Latino workers are given in the Industry Balance Sheets (*not provided*). The total amount of locally produced goods and services purchased by Latino-employing industries is \$1.82 billion. This means that firms that employ Latino workers generated \$1.82 billion worth of demand for local goods and services, and the largest amount of that sum was purchased by the food product manufacturing industry – a third of whose workers are Latino according to the EEOC.

III. Impact Analysis

Regional input-output analysis estimates the total economic impact on a given region due to changes (often called shocks) in one or more parts of the local economy. It measures effects at

three levels in order to capture parts of the economy that are linked to each other. These three levels follow:

1. *Direct* Effects: These are the effects of the changes to the industries that employ Latino workers.
2. *Indirect* Effects: These are the effects caused in industries that sell products to the directly effected industries. For example, the farms that sell produce to be canned by food processing firms that employ Latinos are indirectly effected by the employment of Latinos at the food processing firms.
3. *Induced* Effects: These effects are mostly the changes in the economy caused by changes in spending by the workers in the both the directly and indirectly effected industries. For example, an increase in employment in food processing, causes an increase in income to farmers, and both the new food processing workers and the wealthier farmers spend more money in the local economy, causing further increases in employment and production in the local economy.

Behind Input-output analysis rests the following basic assumptions (MIG, *Implan Pro Analysis Guide*, 103; 1999):

- **Constant Returns to Scale:** There are no increasing or decreasing returns to changes in industry size within the model.
- **No Supply Constraints:** It is assumed that all inputs that are demanded will be supplied regardless of the magnitude of the supposed economic change.
- **Fixed Commodity Input Structure:** Firms will not substitute inputs if prices of those inputs change.
- **Homogeneous Sector Output:** Industries are assumed to change proportions of all of their outputs equally. For example, if an industry produces primarily canned vegetables, but also sells tin cans as a byproduct, a reduction in vegetables produced means that it will also reduce the tin cans it produces. This might not reflect reality.
- **Industries are assumed to use the same technology to produce all of its products, both primary products and byproducts.** (Technology means the amount of various inputs, including labor, which produces a given quantity of output commodities.)

A discussion on the validity of these assumptions within this analysis of the Mankato area economy exists in Part E of the Technical Report section of this paper.

Impact on Value Added to the Local Economy

Table 2 shows the value-added impact on the local economy of the Latino workers listed in the last column of Table 1. The model predicts that the annual amount of value that is added to the local economy and is due to the presence of the Latino labor force employed in the industries in Table 1 is \$484.5 million. That is approximately 10% of the total economic growth experienced in the region annually.

Table 1.2 Value-Added Impact

Industry	Direct Effects	Indirect Effects	Induced Effects	Total Effects
Agriculture	0	23,825,624	921,739	24,747,364

Mining	0	29,445	24,488	53,933
Construction	0	6,703,975	12,329,971	19,033,946
Manufacturing	130,991,176	29,889,320	9,962,227	170,842,720
TCPU	210,356	22,209,086	8,510,811	30,930,252
Trade	4,507,530	42,356,724	29,781,802	76,646,056
FIRE	0	18,588,578	27,526,932	46,115,512
Services	11,425,046	28,301,514	35,796,772	75,523,328
Government	0	3,052,668	37,117,460	40,170,128
Other	0	0	498,441	498,441
Totals:	\$147,134,108	\$174,956,934	\$162,470,643	\$484,561,680

Source: Implan Value Added Impact Report, Minnesota Implan Group, Inc., 1997 data, adjusted to 2000 dollars.

Note:TCPU means Transport Communications, and Public Utilities. FIRE means Finance, Insurance and Real Estate.

The direct effect of the Latino workforce is to add \$147.1 million of value to the firms that employ Latino workers. In other words, with the Latino workforce in the area, those businesses would be creating \$147.1 million less value than they do now. The demand created for input materials by those industries adds another \$175 million of value indirectly to other industries that do not directly employ Latino labor. Furthermore, the total spending of wages and profits earned by both the Latino labor force and other workers in the indirectly affected industries adds another \$162.5 million to the local economy. The total of all three effects is \$484.6 million in total value added annually to the local economy. This is slightly less than 10% of the total value added, which was \$4.9 billion in 1997.

One technical problem that had to be addressed was that of double counting the impact of the Latino workforce. Double counting would occur when the work of a Latino in a particular industry provides a job for another Latino in another industry. Since the question being studied is the economic impact that the Latino population has on everybody else in the region, one needs to be careful that the affected parties are non-Latino.

Fortunately, in this study area and with the data reported on the EEOC survey, there was very little occurrence of double counting. It occurred mostly in the firms linked to the food processing industry, such as restaurants and building services. In all, the total number of Latino employees used to calculate the direct economic effects was reduced by only 31. Details on how this number was calculated are in the Technical Report, part C.

Impact on Job Creation and Current Employment

Table 3 gives the economic impact of the Latino workforce in terms of jobs created in the local economy.

Table 1.3: Employment Impact

Industry	Direct Effects	Indirect Effects	Induced Effects	Total Effects
Agriculture	0	795	31.2	826.2
Mining	0	0	0	1
Construction	0	143	257	400
Manufacturing	2,027	522	181	2,730

TCPU	1	398	121	520
Trade	259	762	1,173	2,194
FIRE	0	195	183	378
Services	322	874	1,203	2,400
Government	0	80	925	1,005
Other	0	0	34	34
Total:	2,609.00	3,769.30	4,108.40	10,486.80

Source: Implan Employment Impact Report, Minnesota Implan Group, Inc. See Appendix E.

Note: TCPU means Transport Communications, and Public Utilities. FIRE means Finance, Insurance and Real Estate.

Based on the EEO-1 survey and the response rates with each industry, 2,609 Latino workers were used to calculate the direct impact of the Latino labor force on job creation in the Region Nine study area. In addition to the 2,609 Latino workers, jobs were created or supported for an additional 3,769 non-Latinos in industries that provide supplies to the ones that employ Latino workers. Furthermore, income from the Latino workers in the directly affected industries, plus the non-Latino workers in the indirectly affected industries provided enough demand for goods and services in the local economy to create or support an additional 4,108 jobs. *The total additional non-Latino jobs created or supported by the Latino workforce is an estimated 7,878 jobs.*

Impact on Taxes and Government Spending

While Tables 2 and 3 provide a strong case for believing that the working Latino population is both valuable and critical for economic growth in the region, the question still remains as to whether it costs society more through higher tax rates to support the Latino population. Fortunately, the IMPLAN model of the Region Nine Economy also allows us to estimate how taxes and government spending are affected by the participation of the Latino workforce in the economy.

Appendix C provides a Tax Impact Estimate based on the direct, indirect, and induced effects of employing 2,609 people in the industries listed in Table 1. The tax impact estimated for the Region Nine area is \$121 million. \$45 million of that sum is estimated to be state and local tax revenues.

Also included in Appendix C is an Output Impact Estimate that gives the estimated total output in each industry. The total output for Government (Federal, State, and Local) is estimated by the IMPLAN model to be \$48.3 million. Further analysis of the Government spending components leads to an estimate of \$24.5 million in state and local government tax expenditures. These can be attributed to serving the direct needs of the Latino workers and their families, as well as the needs of businesses, communities, and other workers whose jobs are in some way linked to those of the Latino workforce.

At the Federal as well as the State and Local government levels, the amount of tax revenue that is generated is almost double the amount of additional government services that are required. This provides evidence that the Latino workforce more than pays its way in government services. More net tax revenues, of course, mean lower effective tax rates for the non-Latino population of the Region Nine study area.

IV. Technical Report

A. Study Area

The nine Minnesota counties included in the study area are:

Blue Earth
Brown
Faribault
LeSueur
Martin
Nicollet
Sibley
Waseca
Watonwan

These nine contiguous counties make up the area surrounding the city of Mankato, Minnesota. The 5,134 square mile area includes 82,946 households with a total 1997 population of 218,935. The population and the income levels of each county's residents are given in Appendix A: General Model Information.

B. Aggregation

The analysis was done with a partially aggregated database. The EEO-1 survey information was most reliable at the 2-digit SIC code level, due to the exclusion of respondents at lower levels for privacy reasons. The following industries were aggregated to include the listed IMPLAN industry designations:

Table 2.1 SIC to IMPLAN code translation and aggregation

Industry	SIC	IMPLAN Industry Codes
Food Processing and Packaging	20	469-476
Paper Product Manufacturing	26	161-173
Printing & Publishing	27	174-185
Rubber and Plastics	30	215-220
Metal Products	34	273-306
Industrial Machines and Computers	35	307-354
Electrical Equipment	36	355-383
Transportation Equipment	37	384-399
Medical and Measurement Equipment	38	400-414
Public Utilities	49	443-446
Wholesale Trade	50,51	447
Gen. Merchandise Stores	53	449
Food Stores Industry	54	450
	SIC	IMPLAN Industry Codes
Business and Building Services	73	469-476
Medical Services	80	490-493
Professional Services	87	506-509

Source: IMPLAN pro version 2.0 Data Guide.

These industries were aggregated in order to match them with the employment categories reported in the EEO-1 survey. Appendix G gives the complete aggregation template used to model the impacts on the study area economy. Also included is an unaggregated template of all industries tracked by IMPLAN and their numeric codes. This can be used to identify the names of the industries aggregated according to Table 2.1 above. For reporting the results of the analysis, the reports were aggregated to the standard one-digit SIC format.

C. The Direct Impact

The direct impacts evaluated in this study occur in the aggregated industries listed in Table 2.1 above. The purpose of the study is to estimate the impact that the Latino workforce in the study has had on the local economy. That can be achieved by hypothesizing what would happen if that workforce were removed from the local economy. The resulting negative shock to final demand for goods and services in the area, assuming that markets tend to clear and that supply equals demand, would be the estimated direct impact of the Latino workforce.

The employment multipliers determined by the IMPLAN model of the Mankato area economy were used to determine the shock to final demand in the industries listed in Table 2.1. The shocks that are evaluated in this study are the result of changes in employment in the listed industries. It was therefore not necessary to input dollar value changes in to final demand or to adjust the deflator value to adjust for inflation.

Offsetting Impacts: Adjusting for Double Counting

Before inputting the Adjusted Latino Worker Count from Table 1.1 (page 3, above) for each industry as separate events, the possibility of double counting had to be taken into account. Double counting would occur, for example, when the result of reducing the Latino food processing workforce leads to layoffs of Latino workers employed in cleaning the offices of food processing firms. The purpose of the study is to estimate the value of Latinos to the local economy, meaning the non-Latino part of the economy. The numbers given in Table 1.1, therefore, was reduced slightly to account for the cases of double counting that were expected to occur. Table 2.2 below gives the number of workers that were reduced in each industry due to double counting.

The only industry large enough to cause a double counting effect in other industries, according to the employment data provided by the EEOC, was the Food Processing and Packaging industry. To determine these effects, the impact analysis was run for every industry and the results to employment were multiplied by the chance that an employee is Latino. These chances are given in Table 1.1, in the Percent Latino of EEOC Total column. Results were rounded to the nearest whole number for each event and summed for all events. There was relatively little double counting that occurred – 31 of the jobs reported to the EEOC were attributed to the presence of other Latinos in the economy. These jobs were removed from consideration before the direct impacts were calculated.

Table 2.2 Employment Count Reduction due to Double Counting

Industry	Offset Jobs
Food Processing and Packaging	1
Paper Product Manufacturing	0
Printing & Publishing	3
Rubber and Plastics	0
Metal Products	0
Industrial Machines and Computers	1
Electrical Equipment	1
Transportation Equipment	0
Medical and Measurement Equipment	0
Public Utilities	0
Wholesale Trade	1
Gen. Merchandise Stores	1
Food Stores	1
Eating and Drinking	6
Business and Building Services	13
Medical Services	2
Professional Services	1

The Group Impact Description gives the employment shocks for each industry that were used to determine the economic impact of the Latino workforce. All of the direct effects due to employment were, of course, assumed to occur in the study area, so a local purchase coefficient

for each of the directly affected industries was set to 1.0. For all other purchases of commodities and services in the region, the model determined regional purchase coefficient (RPC) was used.

D. Input Constraints

The basis for assuming that one can estimate the value of workers by measuring the impact if those workers were removed from the economy is predicated upon the assumption that those workers are not replaceable. Given the low unemployment rate in Minnesota during the period studied, this assumption is realistic.

Other than employment, the model assumes no other input constraints. This assumption is also realistic within the parameters of the model.

E. Input-Output Assumptions

An input-output model such as the one used in this analysis makes the following assumptions about the real world (Hastings and Brucker, 1993):

- Output is produced with unique set of input commodities. There is no substitution between inputs.
- The amount of inputs purchased by an industry is determined only by the amount of output. This means there are no economies of scale, changes in technology, or price effects.
- There are no constraints on resources. The model assumes that everything demanded can be supplied with no change in prices.
- There is no under-employment of resources.
- The distribution of local and external purchases and sales is fixed. This means that the changes measured in the model do not affect an industry's decision about whether to buy or sell locally and to somewhere outside of the study area.

All of the above assumptions are in some ways over-simplifications of the real world, and individual business people would be correct in questioning them for their particular businesses. However, for analysis of employment level changes across several industries that amount to a small fraction of the total employment in the economy, the conditions of the study area do not violate these assumptions in most cases.

The assumption that might be questioned within this particular study is that of the fixed set of input commodities. This study assumes that businesses would not be able to replace Latino workers with others. As discussed above, that is realistic given the very low unemployment levels at the time. However, it remains possible that other means of producing the same goods and services would have evolved had that population not been available for work. For example, some industries could try to attract non-Latino workers to the area by significantly increasing wages and accepting the consequential decline in profits. For industries where this is possible, the results of this study may have overstated the impact of Latino population. However, the more likely scenario for most of the affected industries remains that the work would simply go undone and the demand would be filled by industries outside of the Region Nine area counties.

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Appendix A: General Model Information



General Model Information

March 26, 2000

Mankato Study 1.iap

Structure Matrix 97nat528.ims

Name.....

Year of 1997

Data.....

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State Name	County Name									
Minnesota	Blue Earth County									
	<u>State Code</u>		<u>County Code</u>		<u>Population</u>			<u>Area</u>		
	27		013		53,853			752		
<u>Household Income^*</u>	<u>< 5K</u>	<u>5-10K</u>	<u>10-15K</u>	<u>15-20K</u>	<u>20-30K</u>	<u>30-40K</u>	<u>40-50K</u>	<u>50-70K</u>	<u>70K+</u>	<u>Total</u>
Households^^	4,067	1,130	14,591	2,412	23,854	2,382	33,183	2,306	47,070	3,836
	66,200	3,131	85,485	2,236	112,240	2,089	202,793	880	1,204,184,960	20,403
Minnesota	Brown County									
	<u>State Code</u>		<u>County Code</u>		<u>Population</u>			<u>Area</u>		
	27		015		27,198			611		
<u>Household Income^*</u>	<u>< 5K</u>	<u>5-10K</u>	<u>10-15K</u>	<u>15-20K</u>	<u>20-30K</u>	<u>30-40K</u>	<u>40-50K</u>	<u>50-70K</u>	<u>70K+</u>	<u>Total</u>
Households^^	4,216	542	15,125	1,215	24,728	1,082	34,398	1,194	48,793	2,272
	68,623	1,629	88,614	1,126	116,349	936	210,217	308	603,996,032	10,304
Minnesota	Faribault County									
	<u>State Code</u>		<u>County Code</u>		<u>Population</u>			<u>Area</u>		
	27		043		16,405			714		
<u>Household Income^*</u>	<u>< 5K</u>	<u>5-10K</u>	<u>10-15K</u>	<u>15-20K</u>	<u>20-30K</u>	<u>30-40K</u>	<u>40-50K</u>	<u>50-70K</u>	<u>70K+</u>	<u>Total</u>
Households^^	4,260	404	15,282	815	24,985	752	34,755	803	49,300	1,284
	69,336	1,028	89,535	487	117,558	464	212,400	178	342,564,000	6,215
Minnesota	Le Sueur County									
	<u>State Code</u>		<u>County Code</u>		<u>Population</u>			<u>Area</u>		
	27		079		24,982			449		
<u>Household Income^*</u>	<u>< 5K</u>	<u>5-10K</u>	<u>10-15K</u>	<u>15-20K</u>	<u>20-30K</u>	<u>30-40K</u>	<u>40-50K</u>	<u>50-70K</u>	<u>70K+</u>	<u>Total</u>
Households^^	3,631	663	13,026	816	21,295	931	29,624	890	42,021	1,884
	59,098	1,615	76,314	1,188	100,200	1,084	181,039	393	520,908,000	9,465
Minnesota	Martin County									
	<u>State Code</u>		<u>County Code</u>		<u>Population</u>			<u>Area</u>		
	27		091		22,165			709		
<u>Household Income^*</u>	<u>< 5K</u>	<u>5-10K</u>	<u>10-15K</u>	<u>15-20K</u>	<u>20-30K</u>	<u>30-40K</u>	<u>40-50K</u>	<u>50-70K</u>	<u>70K+</u>	<u>Total</u>
Households^^	4,555	511	16,340	1,033	26,714	930	37,162	977	52,714	1,778
	74,137	1,544	95,734	825	125,698	540	227,107	260	510,775,008	8,397

* Dollars^Average Household Income per Category: note income range was used for PCE purchasing patterns, average income may exceed range, when controlled to REIS total
 personal income - accounts for apparent underreporting of income to CES (30% upward revision)

Version:



General Model Information

March 26, 2000

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Mankato Study 1.iap

Structure Matrix 97nat528.ims

Name.....

Year of 1997

Data.....

.....

State Name

County Name

Minnesota

Nicollet County

State CodeCounty Code
27 103

Population
29,917

Area
452

	<u>< 5K</u>	<u>5-10K</u>	<u>10-15K</u>	<u>15-20K</u>	<u>20-30K</u>	<u>30-40K</u>	<u>40-50K</u>	<u>50-70K</u>	<u>70K+</u>	<u>Total</u>
Household <u>Income</u> ^{^*}										
Households ^{^^}	3,463	436	12,424	972	20,312	965	28,256	1,037	40,080	2,236
	56,369	1,880	72,790	1,537	95,573	1,587	172,679	685	660,201,984	11,334

Minnesota

Sibley County

State CodeCounty Code
27 143

Population
14,610

Area
589

	<u>< 5K</u>	<u>5-10K</u>	<u>10-15K</u>	<u>15-20K</u>	<u>20-30K</u>	<u>30-40K</u>	<u>40-50K</u>	<u>50-70K</u>	<u>70K+</u>	<u>Total</u>
Household <u>Income</u> ^{^*}										
Households ^{^^}	3,505	294	12,574	692	20,557	603	28,597	632	40,565	1,179
	57,050	940	73,670	516	96,727	473	174,765	207	270,278,016	5,535

Minnesota

Waseca County

State CodeCounty Code
27 161

Population
18,188

Area
423

	<u>< 5K</u>	<u>5-10K</u>	<u>10-15K</u>	<u>15-20K</u>	<u>20-30K</u>	<u>30-40K</u>	<u>40-50K</u>	<u>50-70K</u>	<u>70K+</u>	<u>Total</u>
Household <u>Income</u> ^{^*}										
Households ^{^^}	3,861	278	13,851	809	22,645	703	31,501	744	44,684	1,347
	62,844	1,164	81,152	811	106,551	801	192,514	235	393,926,016	6,891

Minnesota

Watonwan County

State CodeCounty Code
27 165

Population
11,617

Area
435

	<u>< 5K</u>	<u>5-10K</u>	<u>10-15K</u>	<u>15-20K</u>	<u>20-30K</u>	<u>30-40K</u>	<u>40-50K</u>	<u>50-70K</u>	<u>70K+</u>	<u>Total</u>
Household <u>Income</u> ^{^*}										
Households ^{^^}	4,127	254	14,806	519	24,207	627	33,674	494	47,766	956
	67,179	739	86,749	376	113,900	312	205,792	125	237,380,992	4,401

Total	<u>Area</u>	<u>Population</u>	<u>PI Total</u> [*]	<u>HH Total</u>
	5,134	218,935	4,744,215,008	82,946

* Dollars[^]Average Household Income per Category: note income range was used for PCE purchasing patterns, average income may exceed range, when controlled to REIS total personal income - accounts for apparent underreporting of income to CES (30% upward revision)

Version:



Output, Value Added and Employment

March 26, 2000

Copyright MIG 2000 Base Year: 1997 Mankato Study 1.iap

<u>Industry</u>	<u>Industry Output*</u>	<u>Employment</u>	<u>Employee Compensation*</u>	<u>Proprietor Income*</u>	<u>Other Property Income*</u>	<u>Indirect Business Tax*</u>	<u>Total Value Added*</u>
1 Agriculture	1,374.224	12,772.356	54.691	89.082	134.192	27.949	305.914
28 Mining	42.129	310.769	14.824	1.063	11.216	1.323	28.426
48 Construction	668.374	7,726.288	194.120	66.849	14.375	4.577	279.921
58 Manufacturing	5,148.115	25,759.649	843.582	27.971	372.567	42.521	1,286.640
433 TCPU	592.271	5,188.787	128.703	28.702	101.282	25.931	284.618
447 Trade	1,139.789	28,538.198	438.734	41.528	142.466	157.701	780.429
456 FIRE	817.926	6,787.096	133.640	17.824	386.540	65.282	603.286
463 Services	1,427.427	33,915.568	578.440	109.163	70.628	17.130	775.360
510 Government	668.799	17,512.788	512.142	0.000	51.419	0.000	563.561
516 Other	11.134	636.976	4.668	0.000	6.472	0.000	11.140
Totals	11,890.188	139,148.475	2,903.542	382.181	1,291.157	342.415	4,919.295

*Millions of dollars

Appendix C: Impact Estimates

- 1. Tax Impact**
- 2. Employee Compensation Impact**
- 3. Employment Impact**
- 4. Group Impact Description**
- 5. Indirect Business Taxes impact**
- 6. Labor Income Impact**
- 7. Total Value Added Impact**



TAX IMPACT

April 15, 2000

IMPACT NAME: Projected Total Latino Impact MULTIPLIER: Type SAM
Mankato Study 1.iap

Copyright MIG 2000

							Total
Enterprises (Corporations)	Transfers	188,926					188,926
	Total	188,926	0	0	0	0	188,926
	Corporate Profits Tax				9,631,841		9,631,841
	Indirect Bus Tax: Custom Duty					733,079	733,079
	Indirect Bus Tax: Excise Taxes					2,225,418	2,225,418
	Indirect Bus Tax: Fed NonTaxes					546,069	546,069
	Personal Tax: Estate and Gift Tax			520,858			520,858
	Personal Tax: Income Tax			27,488,184			27,488,184
	Personal Tax: NonTaxes (Fines- Fees)			90,952			90,952
	Social Ins Tax- Employee Contribution	14,584,479	1,605,104				16,189,582
	Social Ins Tax- Employer Contribution	18,355,958					18,355,958
Federal Government NonDefense	Total	32,940,437	1,605,104	28,099,995	9,631,841	3,504,565	75,781,942
	Corporate Profits Tax				2,139,642		2,139,642
	Dividends				893,289		893,289
	Indirect Bus Tax: Motor Vehicle Lic					410,607	410,607
	Indirect Bus Tax: Other Taxes					1,169,116	1,169,116
	Indirect Bus Tax: Property Tax					10,857,182	10,857,182
	Indirect Bus Tax: S/L NonTaxes					2,668,066	2,668,066
	Indirect Bus Tax: Sales Tax					11,955,074	11,955,074
	Indirect Bus Tax: Severance Tax					9,239	9,239
	Personal Tax: Estate and Gift Tax			94,549			94,549
	Personal Tax: Income Tax			8,664,258			8,664,258
	Personal Tax: Motor Vehicle License			685,430			685,430
	Personal Tax: NonTaxes (Fines- Fees)			629,150			629,150
	Personal Tax: Other Tax (Fish/Hunt)			173,236			173,236
	Personal Tax: Property Taxes			132,686			132,686
	Social Ins Tax- Employee Contribution	1,318,451					1,318,451
	Social Ins Tax- Employer Contribution	3,208,420					3,208,420
State/Local Govt NonEducation	Total	4,526,871	0	10,379,309	3,032,931	27,069,283	45,008,394
	Total	37,656,234	1,605,104	38,479,304	12,664,772	30,573,848	120,979,262



Employee Compensation Impact

April 15, 2000

Mankato Study 1.iap

Copyright MIG 2000

IMPACT NAME: Projected Total Latino Impact MULTIPLIER: Type SAM Aggregated Report

<u>Industry</u>	<u>Direct*</u>	<u>Indirect*</u>	<u>Induced*</u>	<u>Total*</u>	<u>Deflator</u>
1 Agriculture (AGG)	0	5,386,316	300,555	5,686,871	1.00
28 Mining (AGG)	0	6,169	9,220	15,389	1.00
48 Construction (AGG)	0	4,689,125	8,536,025	13,225,150	1.00
58 Manufacturing (AGG)	78,146,112	19,184,434	6,481,840	103,812,384	1.00
433 TCPU (AGG)	53,936	11,233,152	3,582,923	14,870,012	1.00
447 Trade (AGG)	2,852,193	22,889,290	17,065,940	42,807,424	1.00
456 FIRE (AGG)	0	5,266,258	4,969,060	10,235,317	1.00
463 Services (AGG)	8,459,965	17,813,116	27,218,826	53,491,908	1.00
510 Government (AGG)	0	2,315,465	33,791,620	36,107,084	1.00
516 Other (AGG)	0	0	321,137	321,137	1.00
Total	89,512,206	88,783,324	102,277,146	280,572,676	

*2000 Dollars - if results are deflated and aggregated, then deflators displayed are set to 1.0 (results have been deflated)