

# **Economic Base Study**

Mitchell, SD MSA

# Dr. Ralph Brown, Ph.D.

**Dr. Ralph J. Brown** is Professor Emeritus of Economics at the University of South Dakota.

He is a longtime student of the South Dakota economy and is a member of the Governor's Council of Economic Advisors and prepares a quarterly review of the economy for the Council. Dr. Brown has written many articles and performed many studies on the state's economy.

One of Dr. Brown's articles is A Tale of Two Cities: Sioux Falls and Sioux City, published in the *South Dakota Business Review* in 2004:  
<http://people.usd.edu/~rbrown/sfscpdf.pdf>

Dr. Brown is retired from active teaching, but has an active consulting business.

Provide a better understanding of what drives the Mitchell economy

# **PURPOSE**

# We answer...

- What forces drive the Mitchell economy?
- Which industries comprise the Mitchell economy?
- What is the basic/non-basic breakdown of Mitchell's economy?
- How do we grow Mitchell's economy?

# Study Based on Income

This study is looking at personal income in the Mitchell Micropolitan Statistical Area.

We are not looking at sales tax, property tax, etc., as these figures are byproducts of personal income.

All numbers from U.S. Bureau of Economic Analysis, based on Mitchell MSA. ([www.bea.gov](http://www.bea.gov))

# **Mitchell MSA**

## **(Micropolitan Statistical Area)**

Mitchell MSA includes Davison and Hanson counties.

Office of Management and Budget defines as:

- Urban core of 10,000 – 50,000 persons
- High degree of social and economic integration
- Urban core measured by commuting ties

# Economic Profile 2010

Personal Income	\$974,976,000
Population	22,869
Per capita personal income	\$42,633
Total employment (Wage & Salary jobs + Proprietors)	16,762
Wage & Salary Jobs	12,856
Number of proprietors	3,906
Non-farm proprietors	3,291
Farm proprietors	615
Average Earnings per Job	\$38,787
Average Wage & Salary job Income	\$31,065
Average Non-farm Proprietor Income	\$21,208
Average Farm Proprietor Income	\$132,777

What forces drive the local economy?

# **INCOME & INDUSTRY**



# Where does Income come from?

## Industry

- Farm earnings
- Manufacturing
- Federal, State, and Local government
- Retail Trade
- Etc.

## Social Security

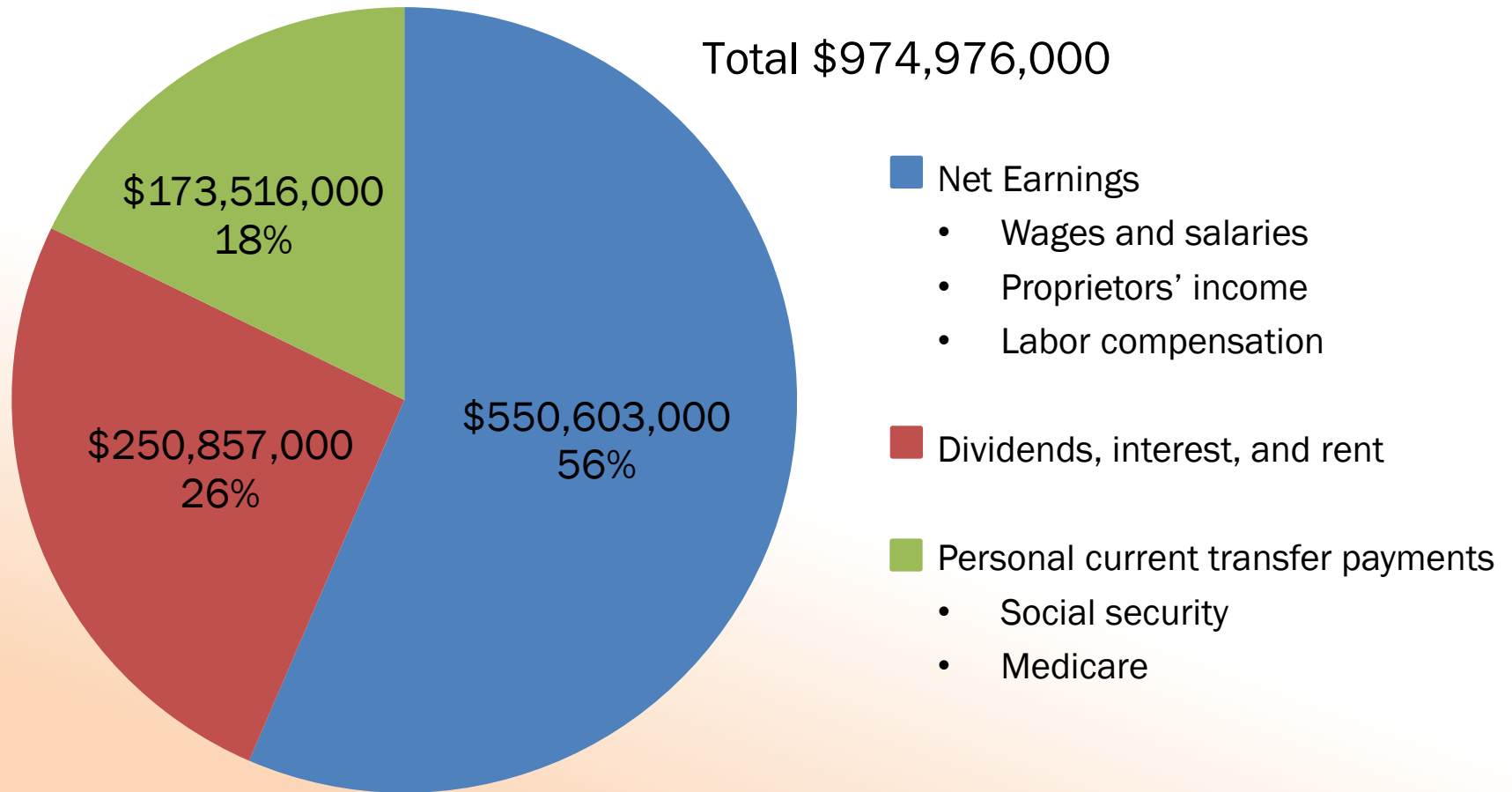
## Transfer Payments

## Dividends

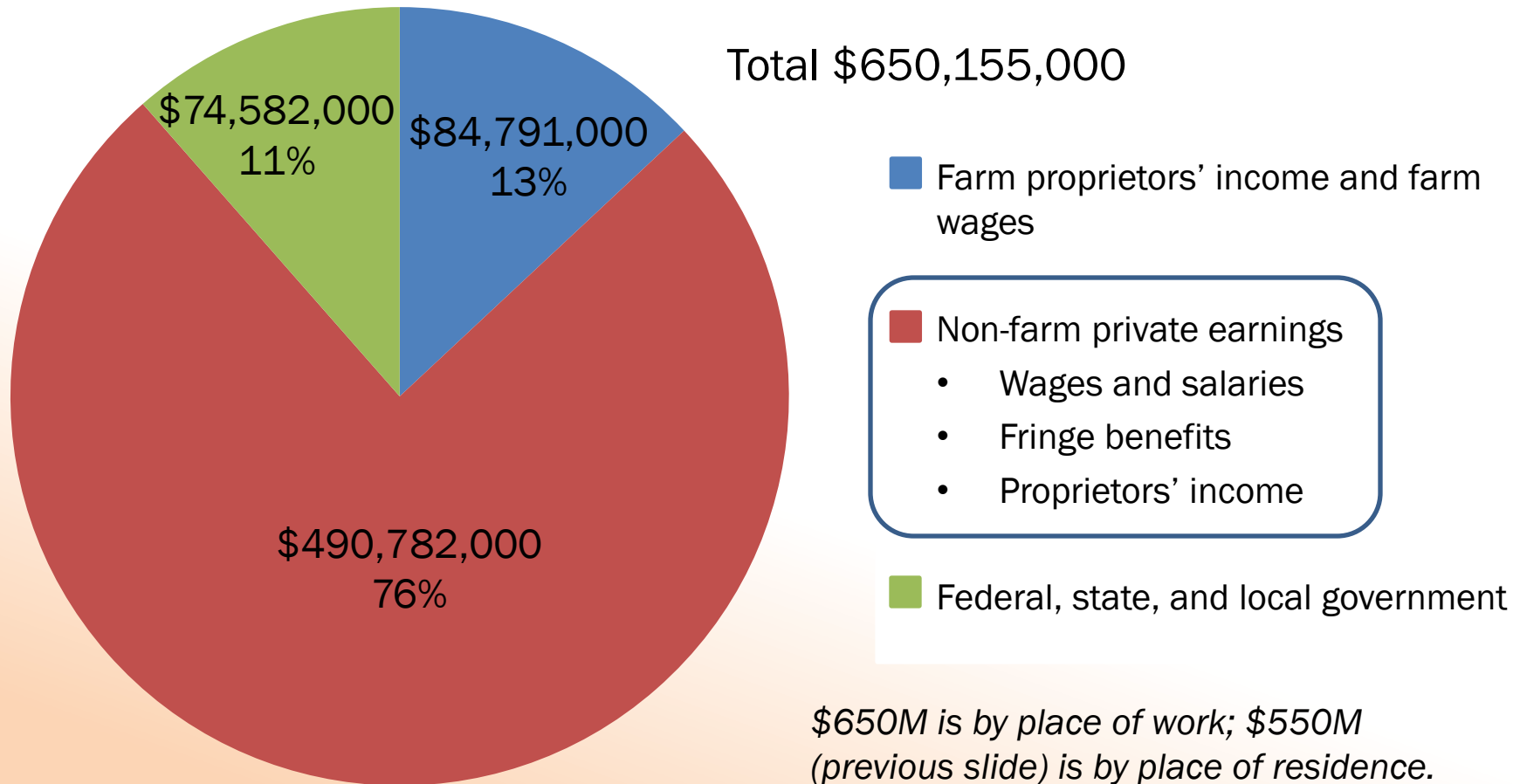
## Interest earnings

## Etc.

# Source of Income

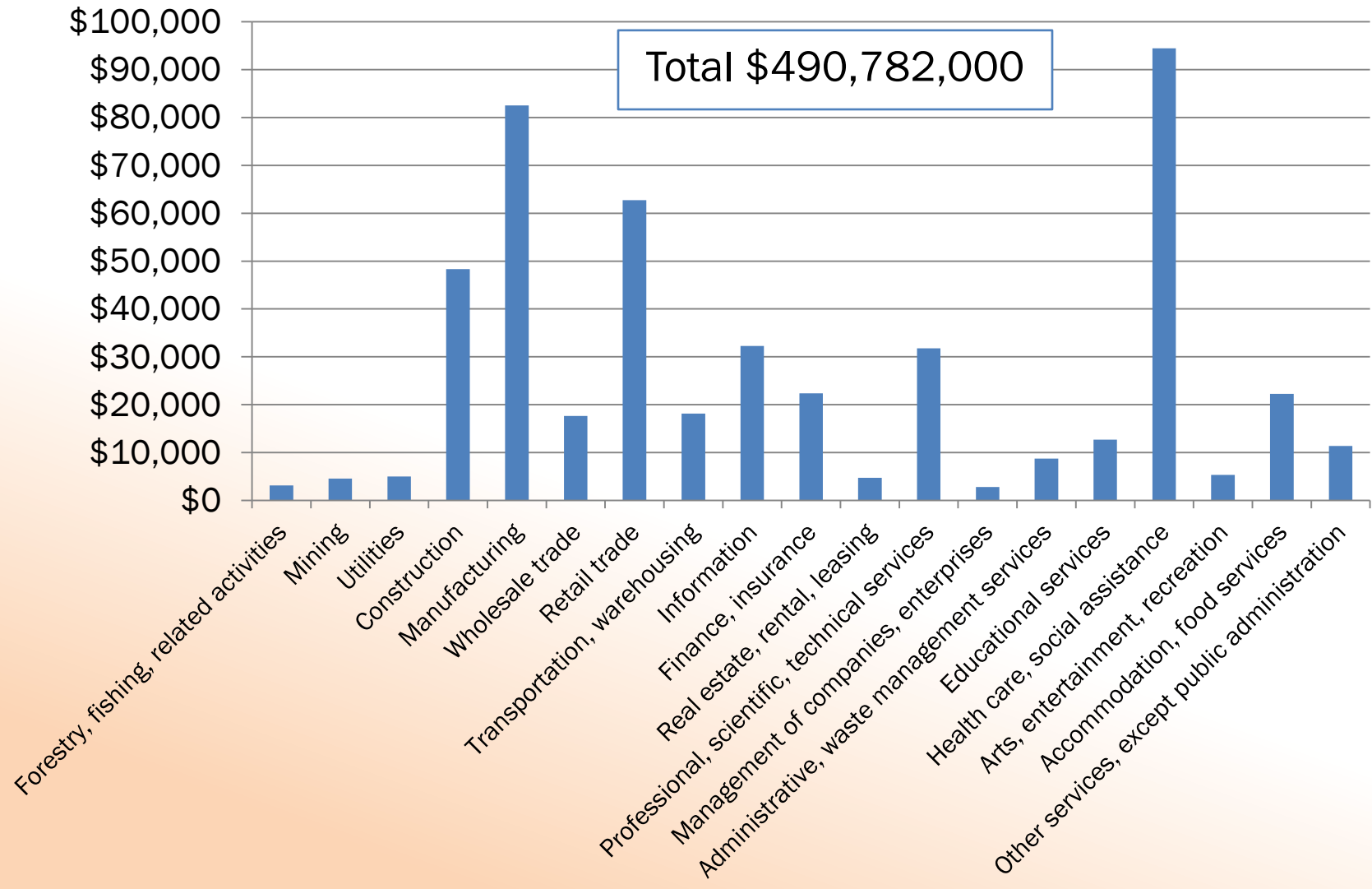


# Earnings by Industry



*\$650M is by place of work; \$550M (previous slide) is by place of residence. See appendix, page 2 for details.*

# Non-farm private earnings



# Income by Industry

Industry	Income	Total Employment	Earnings per Worker
Farming	\$84,791,000	710	\$119,424
Forestry, fishing, related activities	\$3,106,000	80	\$38,825
Mining	\$4,546,000	90	\$50,511
Utilities	\$4,987,000	58	\$85,983
Construction	\$48,328,000	1,059	\$45,636
Manufacturing	\$82,533,000	1,634	\$50,510
Wholesale trade	\$17,647,000	468	\$37,707
Retail Trade	\$62,756,000	2,450	\$25,615
Transportation, warehousing	\$18,111,000	369	\$49,081
Information	\$32,265,000	534	\$60,421
...continued on next slide			

# Income by Industry, continued

Industry	Income	Total Employment	Earnings per Worker
Finance, insurance	\$22,354,000	600	\$37,253
Real estate, rental, leasing	\$4,732,000	562	\$8,420
Prof., sci., tech. services	\$31,779,000	570	\$55,753
Mgmt. of companies, enterprises	\$2,779,000	40	\$69,475
Admin., waste mgmt. services	\$8,756,000	494	\$17,725
Educational services	\$12,679,000	466	\$27,208
Healthcare, social assistance	\$94,486,000	2,071	\$45,623
Arts, entertainment, recreation	\$5,313,000	234	\$22,705
Accommodation, food services	\$22,240,000	1,469	\$15,140
Other services, except pub. admin.	\$11,385,000	626	\$18,187

# Types of Industry

- Basic/Export-based Industry
  - Business that primarily serves outside of Davison and Hanson counties
  - Exports goods and services
  - Imports dollars (generates salaries and profits)
- Non-basic/Population-based Industry
  - Business that primarily serves Davison and Hanson counties
  - Imports goods and services
  - Exports dollars in form of Cost of Goods Sold
  - Re-circulates local dollars in form of salaries and profits
- Basic & Non-basic/Mixed Industry
  - Business that serves inside and outside of Davison and Hanson counties

# Examples of Industry by Type

**Export:** Manufacturing – Almost nothing that is manufactured in Mitchell is used in Mitchell

*Other examples: National call center, Credit card processing*

**Population-based:** Barbers – The number of barbers is determined by the population of the community

*Other examples: Handymen, Daycare*

Many sectors are a mix of Export and Population-based activities.

**Mixed:** Construction – Construction may be used by both local residents and exported to other communities

*Other examples: Legal services, Accounting services, retail trade*



# Characteristics of Export Industry

- Export industry drives the local economy of the Population-based sector
- Export sector performance is determined by comparative advantage as well as regional, national, and international economic, social, and political forces
- Tourism and regional visitors contribute to the Export sector; both import money to the local economy

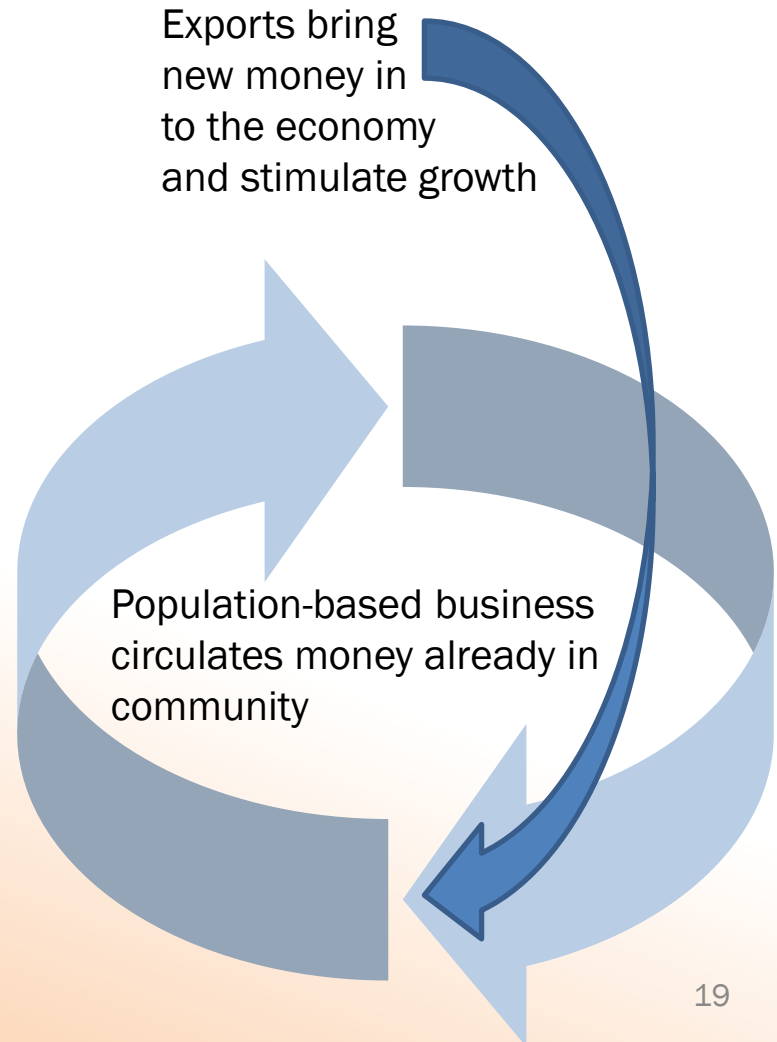
# Export Industry drives Population-based Industry



# Industry Outcomes

- Export industries bring new money in to the economy.
- Population-based industries re-circulate money already in the economy but also send dollars out of the local area.
- New money increases the size of the economy
- Without an influx of new money, the economy will not grow

**To grow the economy, grow the export industry.**



Some industries export and sell to the local population. How do we determine the export-local breakdown of these mixed industries?

## **EXPORT VS. POPULATION-BASED: LOCATION QUOTIENTS**

# Location Quotient (LQ)

LQ: An analytical statistic that measures a community's industrial specialization relative to a larger geographic unit.

It's a comparison tool.

$$LQ = \frac{\% \text{ community income in an industry}}{\% \text{ regional income in same industry}}$$

If  $LQ > 1$ , then some income is Export

If  $LQ < 1$ , then all income is Population-based

# LQ Based on Income

This study determines Export vs. Population-based income using Location Quotients based on income by industry.

Location Quotients are based on South Dakota– a comparison of the Mitchell MSA to South Dakota

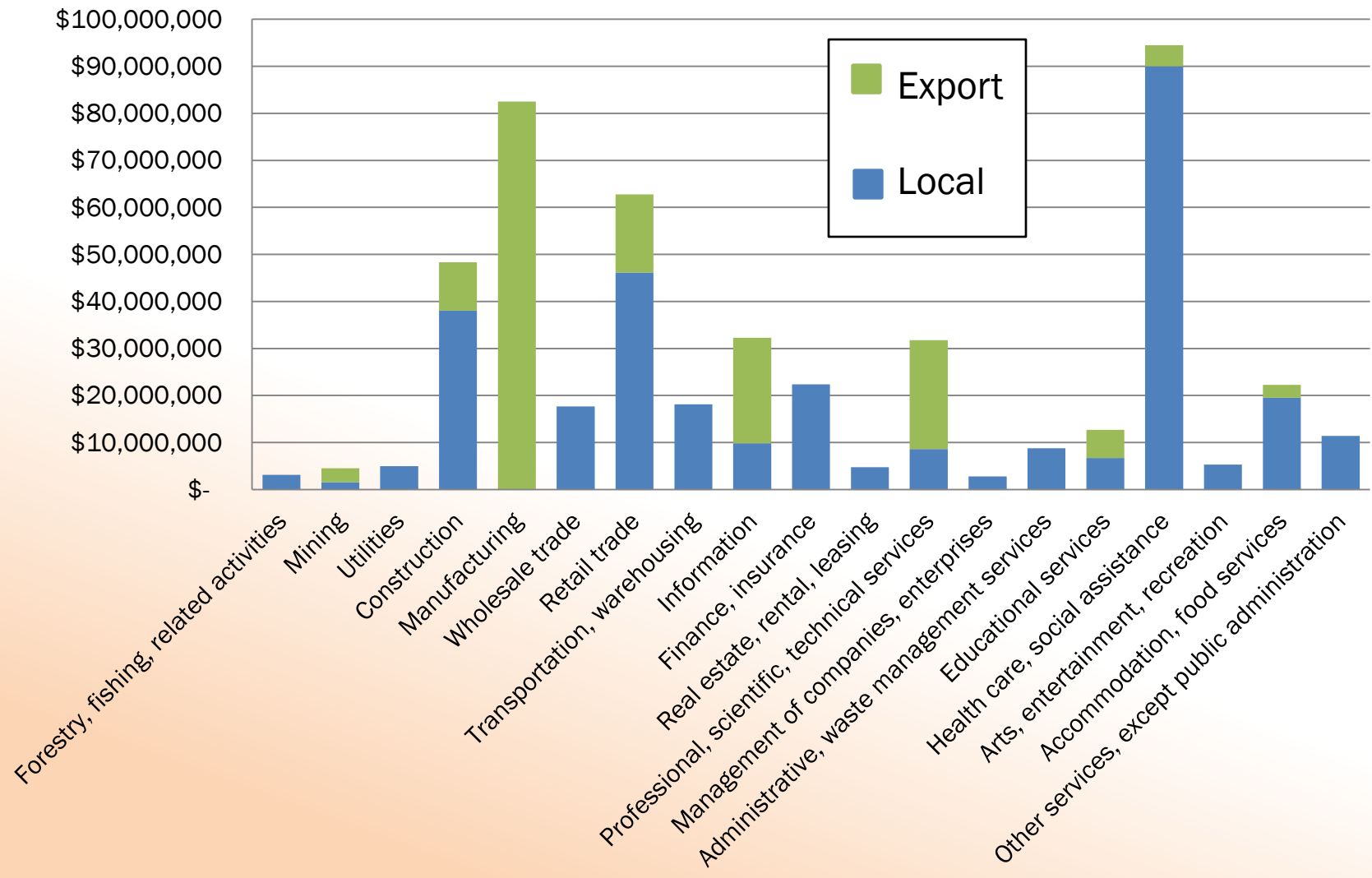
# Example: If...

- Construction comprises 5% of Mitchell's total income, *and*
- Construction comprises 3.9% of South Dakota income, *then*

$$LQ = \frac{5\%}{3.9\%} = 1.28$$

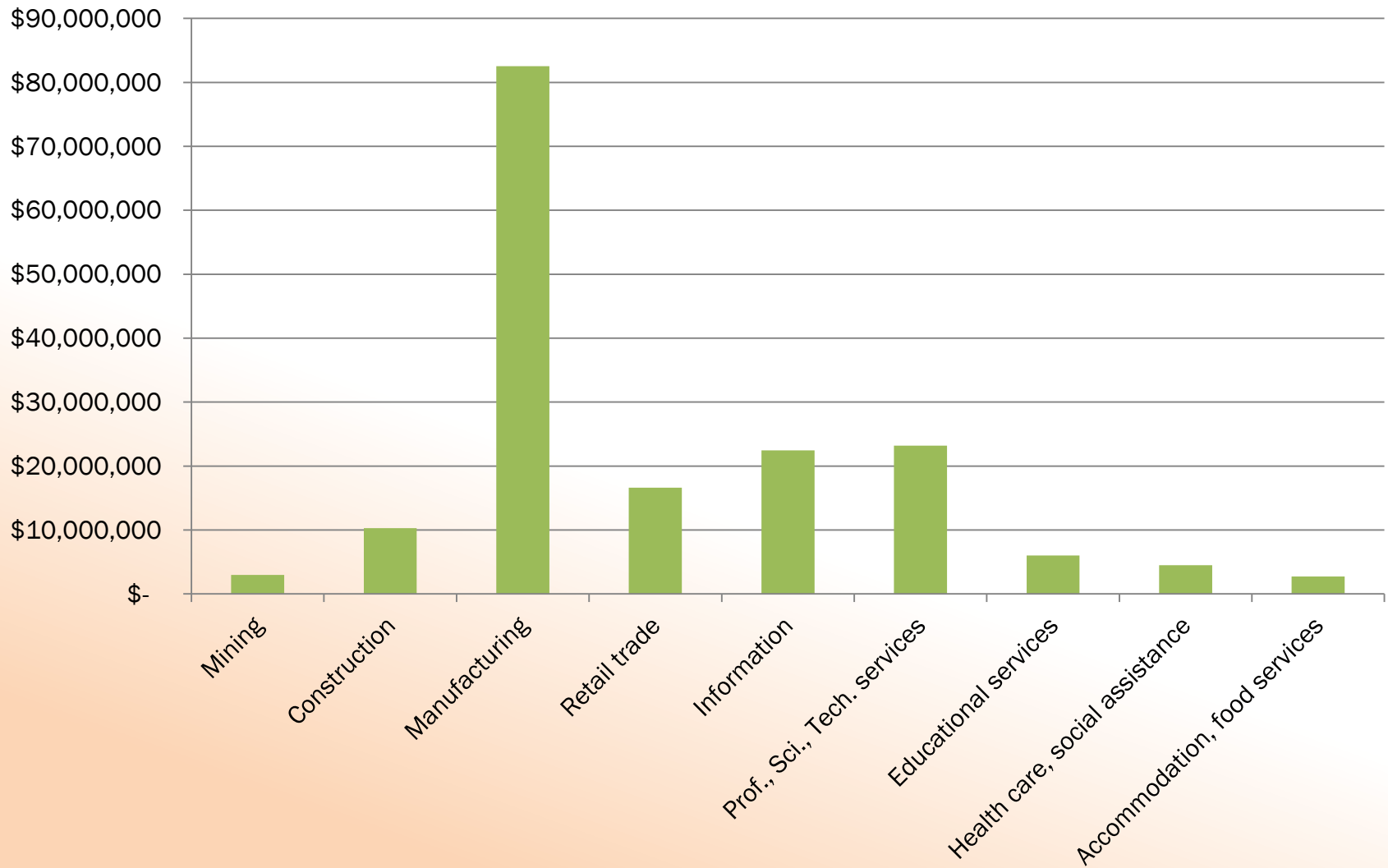
- Construction's LQ for Mitchell is 1.28, meaning that 22% of construction in Mitchell is export.

# Non-farm private earnings





# Income from Exports



# Export Income by Industry

Industry	Export Income	Total Employment	Earnings/Worker
Farming	\$84,791,000	710	\$119,424
Mining	\$2,990,000	90	\$50,511
Construction	\$10,274,000	1,059	\$45,636
Manufacturing	\$82,533,000	1,634	\$50,510
Retail Trade	\$16,612,000	2,450	\$16,612
Information	\$22,458,000	534	\$60,421
Prof., Sci., & Tech.	\$23,190,000	570	\$55,753
Education	\$6,006,000	466	\$27,208
Healthcare, Social Assistance	\$4,499,000	2,071	\$45,623
Accommodations & Food Services	\$2,731,000	1,469	\$15,140

Focus efforts on growing export industries that create good-paying jobs, rather than growing population-based industries.

# Retail Pull Factors 2011

City	Sales per Capita	Comp. State Avg.	Comp. 11 Largest
Aberdeen	\$19,581	1.74	1.01
Brookings	\$15,348	1.37	0.79
Huron	\$14,028	1.25	0.72
<b>Mitchell</b>	<b>\$24,010</b>	<b>2.14</b>	<b>1.24</b>
Pierre	\$16,760	1.49	0.87
Rapid City	\$23,344	2.08	1.21
Sioux Falls	\$18,707	1.67	0.97
Spearfish	\$22,464	2.00	1.16
Vermillion	\$11,395	1.02	0.59
Watertown	\$19,776	1.76	1.02
Yankton	\$18,567	1.65	0.96
11 City Average	\$19,367	1.73	1.00
South Dakota	\$11,222	1.00	0.58

# Tourists vs. Regional Visitors

- Tourist: An out of state, infrequent visitor
- Regional visitor: A frequent customer who resides outside of Davison and Hanson counties; a trade-area customer

Both groups are important and both groups contribute export dollars; but they are reached through different means and messages.

# Mitchell Export Companies

Industry	Examples of Mitchell's Export companies
Mining	Spencer Quarry
Construction	Muth, Tessier's
Manufacturing	Trail King, AKG, Dakota Pump
Retail Trade	Cabela's, Woelfel Jewelry,% of other retail
Information	CHR, Innovative Systems
Professional, Scientific, & Technical	Vantage Point, CHR, SPN
Education	Dakota Wesleyan University <i>MTI and public schools are classified as government</i>

How do we grow the Mitchell economy?

# **IMPLICATIONS**

# To grow the economy...

Focus efforts on growing export industries, rather than growing population-based industries

Every \$1 growth in Export sector leads to \$0.69 growth in Population-based sector.

Don't recruit more barbers.

Recruit more export-based jobs to give barbers more heads.

# Mitchell's Multiplier

Total Personal Income	\$974,976,000	100%
Population-based income	\$398,421,000	41%
Export-based income	\$576,555,000	59%
Industry	\$281,837,000	29%
Residence adjustment (+/-)	(\$31,103,000)	-3%
Gov't, social insurance	(\$68,449,000)	-7%
Dividends and interest	\$220,754,000	23%
Transfer payments	\$173,516,000	18%
Total Personal Income		
Total Personal Income	\$974,976,000	
Export-based income	divide by \$576,555,000	
Multiplier	equals 1.69	

Mitchell's export base multiplier is 1.69, meaning that every \$1 growth in the export sector leads to \$0.69 growth in the population-based sector.



# What will grow Export Industries?

- Educated and trained workforce
- Positive business environment
  - Lower tax burden
  - Less regulation
  - Reasonable cost of doing business
- Infrastructure
  - Roads
  - Utilities
  - Communications
- Good quality of life for employees
  - Great education systems
  - Activities for children
  - Low crime
  - Cultural opportunities
  - Housing
  - Shopping
  - Recreation: parks, athletics, outdoor activities
  - Reasonable cost of living
  - Attractive community

Thank you!

**QUESTIONS?**

# Appendix

Additional information for further  
understanding

# Urban Core - Definition

- A CBSA is a geographic entity associated with at least one core of 10,000 or more population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties. The standards designate and delineate two categories of CBSAs: Metropolitan Statistical Areas and Micropolitan Statistical Areas.
- The purpose of the Metropolitan and Micropolitan Statistical Area standards is to provide nationally consistent delineations for collecting, tabulating, and publishing Federal statistics for a set of geographic areas. The Office of Management and Budget establishes and maintains these areas solely for statistical purposes.
- Metropolitan and Micropolitan Statistical Areas are not designed as a general-purpose geographic framework for nonstatistical activities or for use in program funding formulas. The CBSA classification is not an urban-rural classification; Metropolitan and Micropolitan Statistical Areas and many counties outside CBSAs contain both urban and rural populations.

Federal Register, Part IV, Office of Management and Budget, 2010 Standards for Delineating Metropolitan and Micropolitan Statistical Areas; Notice, June 28, 2010

[http://www.whitehouse.gov/sites/default/files/omb/assets/fedreg\\_2010/06282010\\_metro\\_standards-Complete.pdf](http://www.whitehouse.gov/sites/default/files/omb/assets/fedreg_2010/06282010_metro_standards-Complete.pdf)

# \$650M vs. \$550M

## Calculating the difference between slides 10 and 11:

Earnings by place of work	\$650,155,000
Less: Contributions for gov't social assistance	\$(68,449,000)
Employee and self-employed contributions for gov't social insurance	\$36,151,000
Employer contributions for government social insurance	\$32,298,000
Less: Adjustment for residence	\$(31,103,000)
Equals: Net earnings by place of residence	\$550,603,000

**Adjustment for Residence:** The adjustment for residence is the net inflow of the net labor earnings of interarea commuters. The state and county estimates of personal income are presented by the state and county of residence of the income recipients. However, the source data for most of the components of wage and salary disbursements, supplements to wages and salaries, and contributions for government social insurance are on a place-of-work basis. Consequently, a residence adjustment is made to convert the estimates based on these source data to a place-of-residence basis.

Bureau of Economic Analysis. [http://bea.gov/regional/definitions/nextpage.cfm?key=Adjustment for residence](http://bea.gov/regional/definitions/nextpage.cfm?key=Adjustment%20for%20residence)

Dakota Wesleyan University and Mitchell Technical Institute have a broad impact on the Mitchell economy

# **IMPACT OF EDUCATIONAL INSTITUTIONS**

# Economic Impact

- DWU and MTI contribute over \$30.3 million to the local economy
  - Payroll \$10.8 million
  - Institutional spending \$7.4 million
  - Student spending \$12.1 million
- Provide over 800 part-time workers
- Provide an educated workforce of over 2,500
  - Over 100 graduates stay in Mitchell each year
  - 50% of Avera Queen of Peace nurses
  - 33% of Mitchell area educators
  - 70% of Muth employees

# Community Impact

- Continuing education opportunities
- Entertainment of Mitchell residents
  - Sports
  - Plays
  - Musicals
  - Worship opportunities
  - Speakers
- Attractive campuses



# Industry Definitions

- **Mining**

- The Mining sector under NAICS comprises establishments that extract naturally occurring mineral solids, such as coal and ores; liquid minerals, such as crude petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and flotation), and other preparation customarily performed at the mine site, or as a part of mining activity.

- **Construction**

- The Construction (NAICS) sector comprises establishments primarily engaged in the construction of buildings and other structures, heavy construction (except buildings), additions, alterations, reconstruction, installation, and maintenance and repairs. Establishments engaged in demolition or wrecking of buildings and other structures, clearing of building sites, and sale of materials from demolished structures are also included. This sector also includes those establishments engaged in blasting, test drilling, landfill, leveling, earthmoving, excavating, land drainage, and other land preparation.

- **Manufacturing**

- The Manufacturing NAICS sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. The assembling of component parts of manufactured products is considered manufacturing, except in cases where the activity is appropriately classified in Sector 23, Construction.

# Industry Definitions

- **Retail Trade**

- The Retail Trade NAICS sector comprises establishments engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. The retailing process is the final step in the distribution of merchandise; retailers are, therefore, organized to sell merchandise in small quantities to the general public. This sector comprises two main types of retailers: store and non-store retailers.

- **Information**

- The Information NAICS sector comprises establishments engaged in the following processes: (a) producing and distributing information and cultural products, (b) providing the means to transmit or distribute these products as well as data or communications, and (c) processing data. The main components of this sector are the publishing industries, including software publishing, and both traditional publishing and publishing exclusively on the Internet; the motion picture and sound recording industries; the broadcasting industries, including traditional broadcasting and those broadcasting exclusively over the Internet; the telecommunications industries; the industries known as Internet service providers and Web search portals; data processing industries; and the information services entries.

- **Professional, Scientific, & Technical**

- The Professional, Scientific, and Technical Services NAICS sector comprises establishments that specialize in performing professional, scientific, and technical activities for others. These activities require a high degree of expertise and training. The establishments in this sector specialize according to expertise and provide these services to clients in a variety of industries and, in some cases, to households. Activities performed include: legal advice and representation; accounting, bookkeeping, and payroll services; architectural, engineering, and specialized design services; computer services; consulting services; research services; advertising services; photographic services; translation and interpretation services; veterinary services; and other professional, scientific, and technical services.

# Industry Definitions

- **Education**

- The Educational Services (NAICS) sector comprises establishments that provide instruction and training in a wide variety of subjects. This instruction and training is provided by specialized establishments, such as schools, colleges, universities, and training centers. These establishments may be privately owned and operated for profit or not for profit, or they may be publicly owned and operated. They may also offer food and accommodation services to their students.

- **Healthcare & Social Assistance**

- The Health Care and Social Assistance NAICS sector comprises establishments providing health care and social assistance for individuals. The sector includes both health care and social assistance because it is sometimes difficult to distinguish between the boundaries of these two activities. The industries in this sector are arranged on a continuum starting with those establishments providing medical care exclusively, continuing with those providing health care and social assistance, and finally finishing with those providing only social assistance. The services provided by establishments in this sector are delivered by trained professionals. All industries in the sector share this commonality of process, namely, labor inputs of health practitioners or social workers with the requisite expertise. Many of the industries in the sector are defined based on the educational degree held by the practitioners included in the industry.

- **Accommodations & Food Services**

- The Accommodation and Food Services NAICS sector comprises establishments providing customers with lodging and/or preparing meals, snacks, and beverages for immediate consumption. The sector includes both accommodation and food services establishments because the two activities are often combined at the same establishment.

# Export Industry Location Quotients

Industry	Mitchell LQ compared to South Dakota
Construction	1.27
Retail Trade	1.36
Manufacturing	100% export
Mining	2.92
Information	3.29
Professional, Scientific, & Technical	3.70
Education	1.90
Healthcare & Social Assistance	1.05
Accommodations & Food Services	1.14
<b>Other Industry</b>	<b>Mitchell LQ compared to South Dakota</b>
Farming	100% export
Federal government	100% export
State government	100% export

# Manufacturing comparison

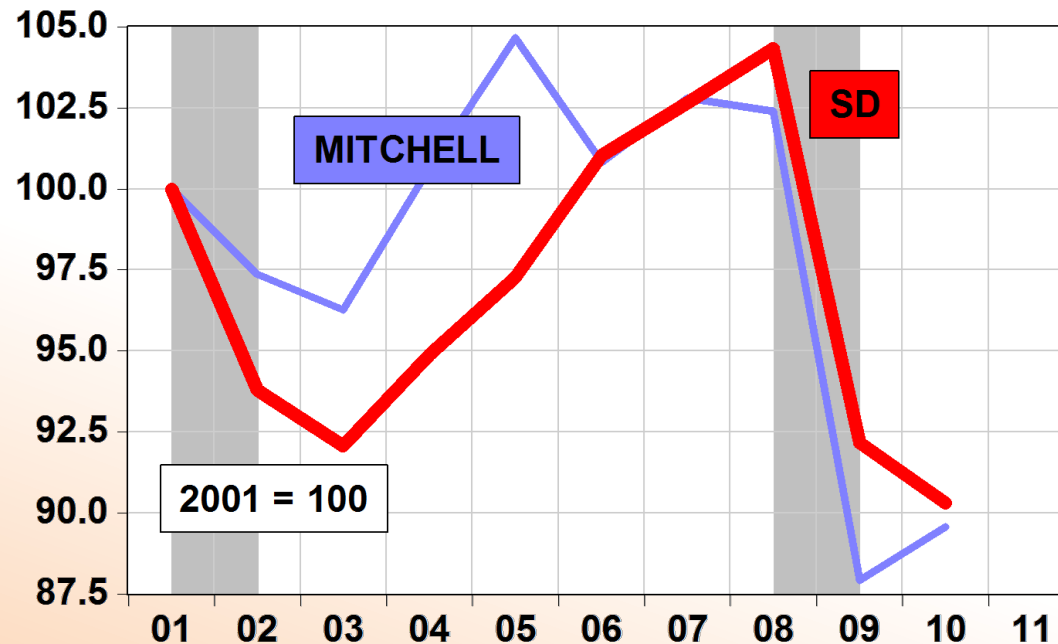
MSA	Mfg. Income	# Mfg. jobs	Average income	% City jobs in Mfg.	% City's income
Aberdeen	\$168 M	2,609	\$64,568	8.6%	13.1%
Brookings	\$257 M	4,028	\$63,805	17.5%	27.5%
Huron	\$98M	1,628	\$60,305	14.1%	19.8%
<b>Mitchell</b>	<b>\$83 M</b>	<b>1,634</b>	<b>\$50,510</b>	<b>9.7%</b>	<b>12.7%</b>
Rapid City	\$129 M	2,812	\$46,025	3.4%	3.9%
Sioux Falls	\$480 M	12,453	\$38,519	7.2%	6.3%
Spearfish	\$33 M	643	\$51,012	3.9%	6.2%
Vermillion	\$27 M	221	\$121,367	1.8%	6.5%
Watertown	\$155 M	2,543	\$61,001	11.0%	18.2%
Yankton	\$130 M	2,543	\$51,053	18.2%	21.8%
State	\$2,144 M	39,151	\$54,768	7.0%	8.7%

Mitchell MSA

# **HISTORICAL TRENDS & WHERE WE ARE NOW**

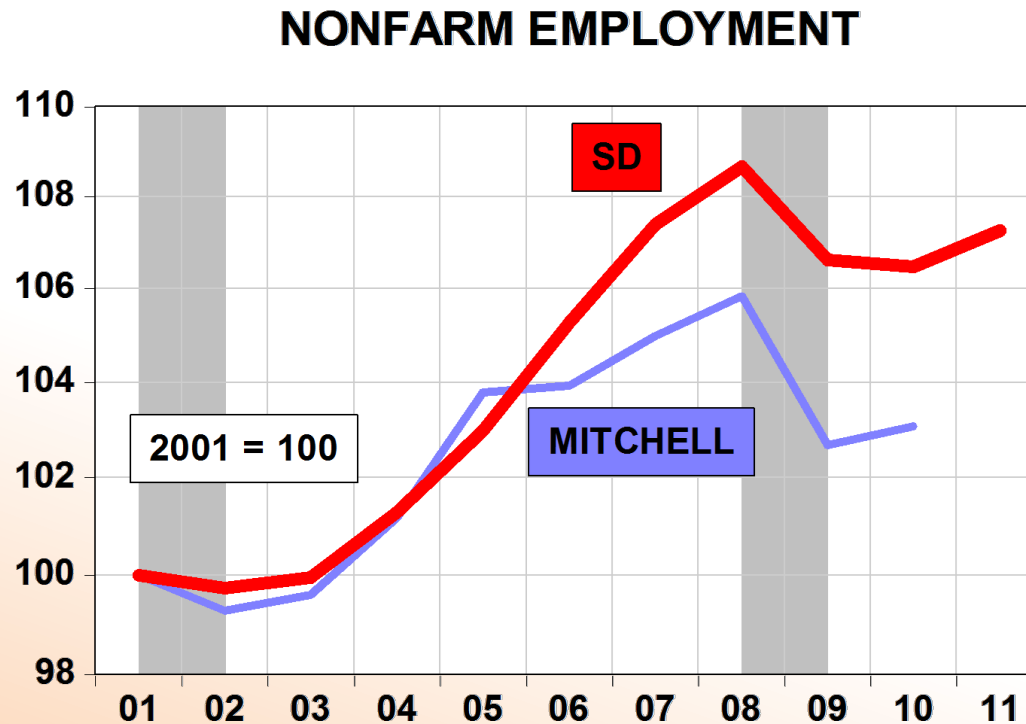
# A Long Way to Go

## MANUFACTURING EMPLOYMENT



Source: BEA

# Not Yet Back to Peak

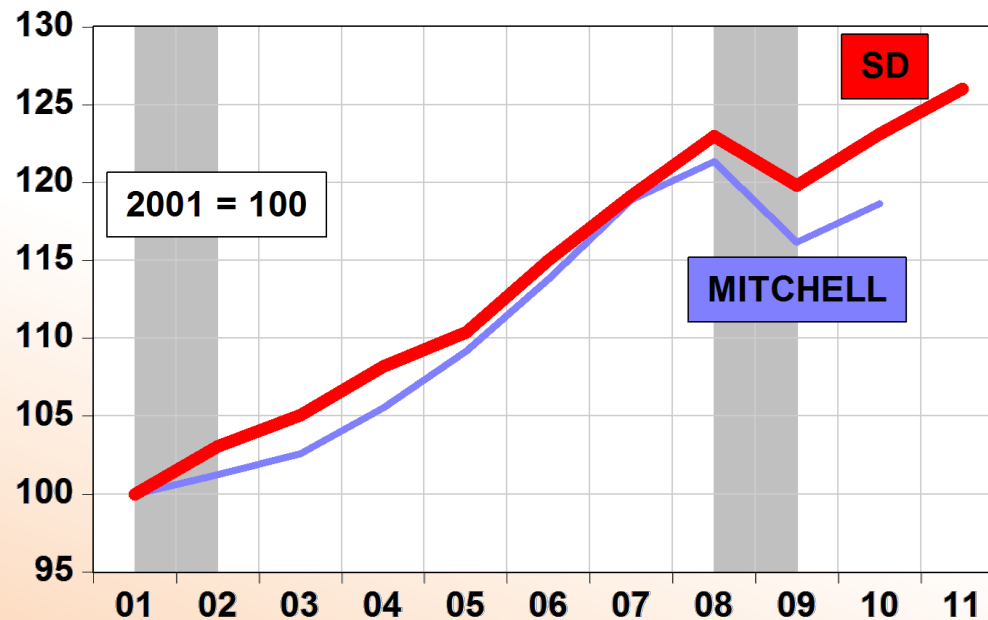


Source: BEA



# Beginning of Recovery

NONFARM PERSONAL INCOME (2005 \$s)



Source: BEA