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## WAGE AND SALARY EARNINGS: NEBRASKA AND THE U.S.

### INTRODUCTION

How do employee wage and salary earnings in Nebraska compare with the rest of the United States? Conventional wisdom indicates that they are lower. If employee earnings in Nebraska are lower, is the difference due to Nebraska's industry mix? That is, is it because Nebraska's employment is concentrated in low wage industries, or is it because Nebraska's earnings are uniformly lower across all industries when compared to the U.S.? This article addresses these issues. We will see that Nebraska earnings are lower than in the U.S., but that Nebraska's employment distribution is not the reason. We see that although earnings are lower for most industries, they are not uniformly lower.

Besides showing how Nebraska earners compare with their U.S. counterparts, the results have direct implications for the promotion of Nebraska as a state with low wages for economic development purposes. Earnings are not low in all industries.

### COMPARISON OF U.S. AND NEBRASKA EARNINGS

Table 1 shows annual average earnings in Nebraska and the U.S. during the period 1978 to 1983. The averages are based on wage and salary earnings for 65 industries comprising 96 percent of the total wage and salary employment in both Nebraska and the U.S.. The farm sector, consisting of proprietors, as well as several minor industries with little or no Nebraska wage and salary employment were excluded from the calculations due to data availability. The average earnings were calculated by dividing total wage and salary earnings by the number of persons with

Table 1  
Average Annual Earnings (in dollars)  
United States and Nebraska  
(excluding Farm)

	Nebraska as		% of U.S.	Nebraska with	
	United States	Nebraska		U.S.	Nebraska Employment Distribution
1978	11,899	10,348	87.0		10,386
1979	12,906	11,249	87.2		11,261
1980	14,126	12,298	87.1		12,308
1981	15,415	13,361	86.7		13,409
1982	16,427	14,199	86.4		14,211
1983	17,237	14,851	86.2		14,879

Table 1 and the following tables are derived from unpublished Bureau of Economic Analysis tabulations of employment and earnings by two digit SIC codes, August 1984.

wage and salary earnings (hereafter the 'wage and salary' descriptor will be dropped). Both earnings and employment totals include amounts for full time as well as part time and part year workers.

Average annual earnings in Nebraska were about 86 percent of U.S. average annual earnings in 1983. The one percentage point decline in the ratio between 1979 and 1983 suggests a very slight downward trend in the ratio of Nebraska to U.S. average earnings, but cannot be considered significant due to the short length of the period examined.

Graph 1 shows the relationship for the seventeen year period for which data are available. Increases in Nebraska average earnings have closely paralleled the U.S. increases. The ratio of Nebraska to U.S. earnings was between 85.3 percent (1971) and 87.3 percent (1979) for each year during the entire interval, with no indication of a long term trend upward or downward. The 1967 ratio (86.2 percent) is almost identical to the 1983 ratio (86.3 percent).

### IMPACT OF INDUSTRY MIX

Nebraska's industrial composition is one possible source of its lower average earnings. Table 2 compares U.S. and Nebraska employment distributions across eleven major industries (the 65 industries examined in this study have been aggregated to 11 in Table 2).<sup>1</sup> Of particular significance is the relative size of the state's manufacturing sector. Manufacturing--particularly durable goods manufacturing--has traditionally been a high wage industry. In Nebraska 12.7 percent of employment was in manufacturing, compared to 17.7 percent for the United States. This difference is entirely due to Nebraska's smaller durable goods manufacturing sector which accounted for only 6.4 percent of the state's employment compared to 11.7 percent for the U.S.. The size of the transportation, communication, and utilities sector is also worth noting. We will see that Nebraska's larger share of employment in this sector offsets the negative impact of the smaller durable goods manufacturing sector.

To examine the impact of Nebraska's employment distribution among industries on earnings, average Nebraska earnings were calculated for each of the 65 industries included in the study. An 'all industry' weighted average earnings was calculated by summing over the 65 average industry earnings using U.S. employment by industry as weights.<sup>2</sup> The result is what Nebraska's average earnings would have been if employment

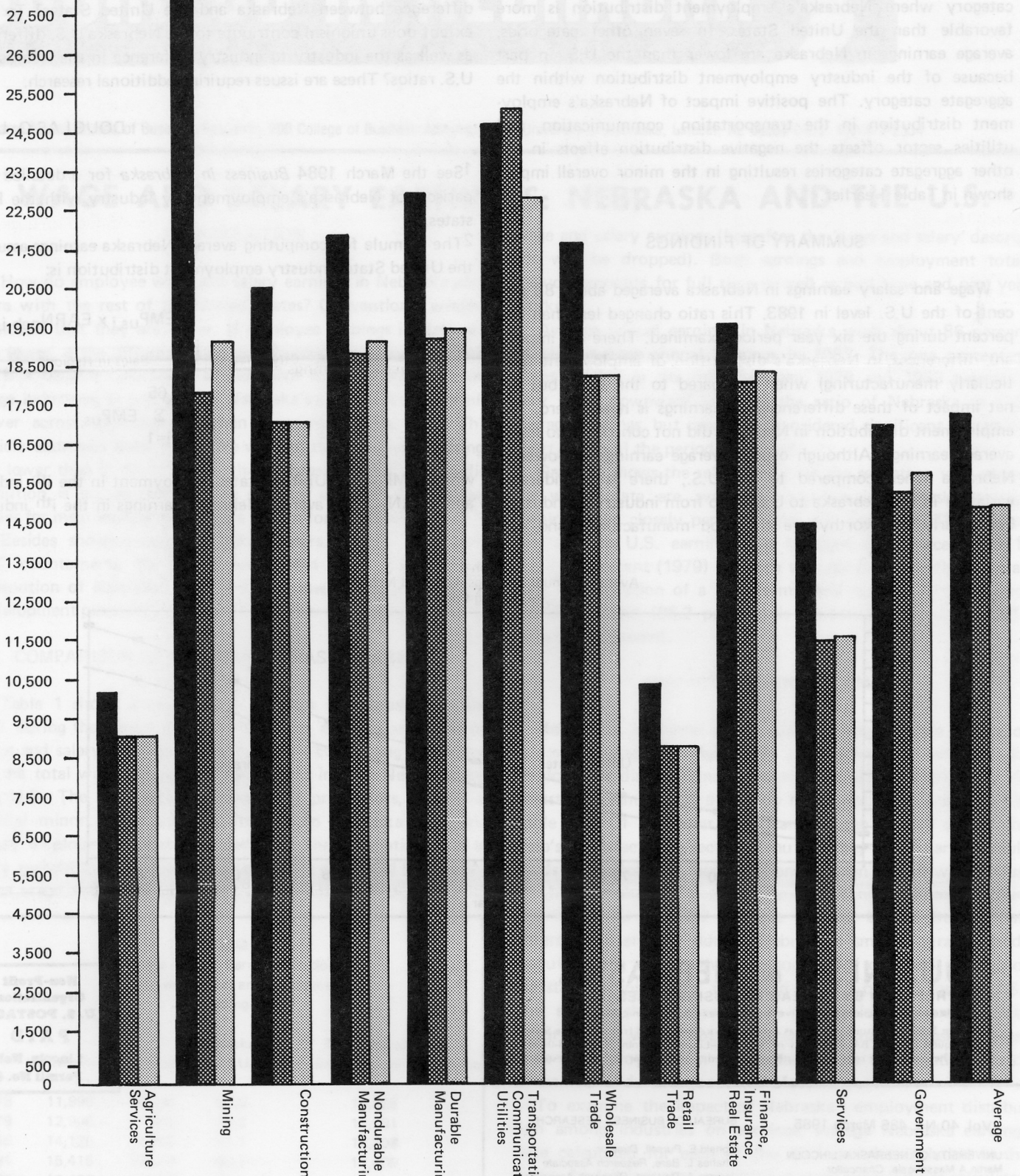
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Table 3  
Average Earnings by Industry, 1983  
(\$)

Table 2 Distribution of Employment, 1983 (percentages) (excluding Farm)				Table 3 Average Earnings by Industry, 1983 (\$)			
Industry	U.S.	Nebraska	Industry	Share of State Employment (%)		U.S.	Nebr. / U.S.
				Nebr.	U.S.		
Agriculture Services	0.6	0.5	Agricultural Services	0.54	8,978	10,086	89
Mining	0.8	0.3	Mining	0.14	19,573	29,604	66
Construction	4.3	3.7	Oil & Gas Extraction	0.15	16,231	22,236	73
Nondurable Manufacturing	6.0	6.3	Nonmetallic Materials				
Durable Manufacturing	11.7	6.4	Construction				
Transportation, Communication, Utilities	5.2	6.9	General & Building Contractors	1.04	16,526	19,661	84
Wholesale Trade	5.8	7.2	Heavy Construction Contractors	0.69	19,310	24,384	79
Retail Trade	17.0	17.5	Special Trade Contractors	1.94	16,318	19,485	84
Finance, Insurance, Real Estate	6.1	6.6	Manufacturing-Nondurable Goods				
Services	23.0	21.9	Food & Kindred Products	3.84	19,263	19,199	100
Government	20.4	22.8	Paper & Allied Products	0.22	18,415	24,148	76
TOTAL	100.0	100.0	Printing & Publishing	1.22	15,719	19,119	82
May not sum to 100 due to rounding.			Chemicals & Allied Products	0.39	22,678	27,381	83
			Petroleum & Coal Products	0.03	20,095	34,047	59
			Rubber & Misc. Plastics	0.61	19,900	19,224	104
			Durable Goods				
			Lumber & Wood Products	0.28	16,264	16,491	99
			Furniture & Fixtures	0.24	18,559	15,297	121
			Primary Metal Industries	0.19	23,384	25,940	90
			Fabricated Metal Products	0.94	20,085	21,190	95
			Machinery, except Electrical	1.62	20,854	23,924	87
			Electric & Electronic Equipment	1.21	19,947	22,575	88
			Transportation Equip.	0.33	19,261	27,733	69
			Motor Vehicles & Equip.	0.35	18,671	29,172	64
			Stone, Clay & Glass Products	0.40	18,031	21,322	85
			Instruments & Related Products	0.57	15,585	23,155	67
			Misc. Manufacturing Industries	0.22	13,392	16,775	80
			Transportation, Communication, Utilities				
			Rail Transportation	2.12	31,966	31,934	100
			Trucking & Warehousing	1.77	19,518	20,469	95
			Local & Interurban Transit	0.18	12,821	13,908	92
			Air Transportation	0.14	19,522	29,338	67
			Transportation Services	0.23	17,401	17,394	100
			Communication	1.84	24,933	26,344	95
			Electric, Gas & Sanitary Services	0.64	26,017	27,472	95
			Wholesale Trade	7.21	18,217	21,591	84
			Retail Trade				
			Building Materials & Farm Equip.	0.80	11,958	13,818	87
			General Merchandise Stores	2.21	9,234	10,133	91
			Food Stores	2.56	9,892	11,596	85
			Auto Dealers & Service Stations	2.25	13,129	15,251	86
			Apparel & Accessory Stores	1.00	7,728	9,171	84
			Furniture & Home Furn. Stores	0.60	12,494	13,347	94
			Eating & Drinking Places	6.11	5,667	7,240	78
			Misc. Retail Stores	1.92	8,873	10,913	81
			Finance, Insurance & Real Estate				
			Banking	1.70	16,795	17,384	97
			Credit Agencies, except Banks	0.76	16,822	17,382	97
			Security & Commodity Brokers	0.21	53,307	45,734	117
			Insurance Carriers	2.50	18,124	20,269	89
			Ins. Agents, Brokers & Serv.	0.58	15,773	19,162	82
			Real Estate	0.69	11,904	14,771	81
			Combined R.E., Insurance, etc.	0.07	17,871	15,875	113
			Holding & Other Investment Co. Services	0.07	26,219	28,823	91
			Hotels & Other Lodging Places	1.08	7,337	11,152	66
			Personal Services	1.04	9,371	10,305	91
			Private Households	1.80	3,309	4,575	72
			Business Services	3.18	11,976	15,915	75
			Auto Repair, Service & Garages	0.63	13,090	14,095	93
			Misc. Repair Services	0.29	13,432	16,561	81
			Amusement & Recreation Services	0.79	6,592	11,171	59
			Motion Pictures	0.15	5,889	18,078	33
			Health Services	7.28	14,250	17,134	83
			Legal Services	0.49	17,770	24,463	73
			Educational Services	1.45	9,865	12,601	78
			Social Services	1.07	9,915	9,310	106
			Museums, Botanical/Zoological Gardens	0.04	8,870	12,216	73
			Membership Organizations	1.85	9,061	11,235	81
			Misc. Services	0.75	20,684	24,308	85
			Government & Government Enterprises				
			Federal, Civilian	2.56	22,625	24,130	94
			Military	2.87	16,711	13,033	128
			State & Local	17.39	13,884	16,087	86

(continued on page 6)



 Average annual earnings, U.S.  
 Average annual earnings, Nebraska  
 Average annual earnings, Nebraska assuming U.S. employment distribution

# Review and Outlook

Output from the Nebraska economy increased sharply in November 1984. The Bureau of Business Research's net physical volume index jumped 4.3 percent on a month to month basis. All components of the economy, with the exception of construction, recorded gains.

Data revision in the agriculture component accounts for part of the change in the index. Revised data from the United States Department of Agriculture boosted the agriculture component 35.5 percent in Nebraska over the interval October-November 1984. A similar increase was recorded in the United States, although the magnitude was considerably smaller.

Recent information released on grain stocks indicates that plains farmers and ranchers have liquidated grain. One can only speculate that such liquidation is an indication of financial stress.

Prices received by Nebraska producers are 2.0 percent above year ago levels, while United States agriculture producers received prices 2.4 percent higher than one year ago.

The nonagriculture components of the Nebraska economy recorded a solid month to month gain of 1.3 percent. The construction component declined 0.8 percent October-November 1984.

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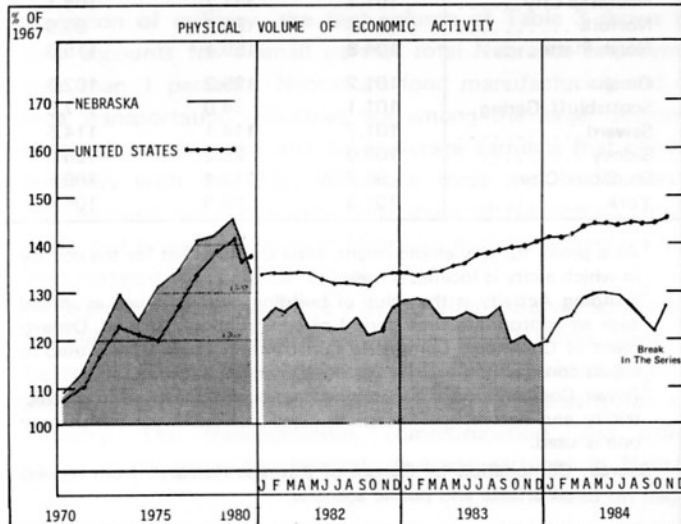
Notes for Tables 1 and 2: (1) The "distributive" indicator represents a composite of wholesale and retail trade; transportation, communication and utilities; finance, insurance, and real estate; and selected services. (2) The "physical volume" indicator and its components represent the dollar volume indicator and its components adjusted for price changes using appropriate price indexes—see Table 5, page 5.

ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES				
1. CHANGE FROM PREVIOUS YEAR				
November 1984	Current Month as Percent of Same Month Previous Year		1984 to date as percent of 1983 to date	
	Nebraska	U.S.	Nebraska	U.S.
<b>Indicator</b>	<b>Nebraska</b>	<b>U.S.</b>	<b>Nebraska</b>	<b>U.S.</b>
Dollar Volume	111.6	108.3	105.5	109.8
Agricultural	120.9	108.7	89.0	96.2
Nonagricultural	110.6	108.3	107.9	110.1
Construction	104.2	118.4	121.5	118.5
Manufacturing	108.5	107.2	112.8	112.4
Distributive	107.7	108.4	104.1	109.5
Government	129.1	106.4	114.3	106.6
Physical Volume	105.9	104.5	100.9	105.4
Agricultural	118.5	106.2	85.9	90.4
Nonagricultural	104.5	104.5	103.3	105.9
Construction	100.3	113.9	117.3	114.4
Manufacturing	106.3	105.3	109.8	109.6
Distributive	103.6	104.2	99.8	105.0
Government	106.1	101.3	104.6	100.7

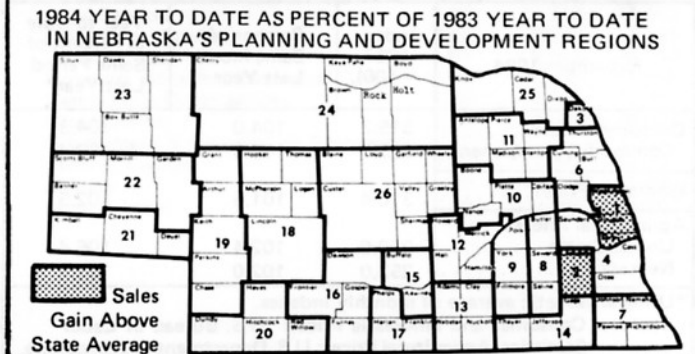
  

2. CHANGE FROM 1967		
Indicator	Percent of 1967 Average	
	Nebraska	U.S.
Dollar Volume	371.0	432.8
Agricultural	276.1	332.6
Nonagricultural	385.2	436.0
Construction	286.6	420.8
Manufacturing	379.4	330.3
Distributive	385.3	496.2
Government	452.8	437.1
Physical Volume	127.3	145.9
Agricultural	109.1	128.4
Nonagricultural	130.0	146.4
Construction	82.3	120.9
Manufacturing	151.7	129.7
Distributive	122.2	157.4
Government	159.4	149.5

3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES			
Region Number <sup>1</sup> and City	City Sales <sup>2</sup>	Sales in Region <sup>2</sup>	
	Nov. 1984 as percent of Nov. 1983	Nov. 1984 as percent of Nov. 1983	1984 to date as percent of 1983 to date
<i>The State</i>	106.4	106.8	108.7
1 Omaha	112.5	112.9	115.3
Bellevue	115.3		
Blair	105.7		
2 Lincoln	105.4	108.7	112.2
3 So. Sioux City	105.9	107.4	105.9
4 Nebraska City	109.7	106.2	100.0
6 Fremont	104.1	102.2	99.8
West Point	99.0		
7 Falls City	103.8	107.3	96.9
8 Seward	98.6	103.0	100.9
9 York	102.6	104.2	101.6
10 Columbus	107.8	104.1	102.4
11 Norfolk	105.0	102.8	99.5
Wayne	96.4		
12 Grand Island	100.9	103.0	103.7
13 Hastings	111.6	103.7	102.7
14 Beatrice	98.7	97.1	95.4
Fairbury	98.0		
15 Kearney	109.5	107.6	104.2
16 Lexington	100.1	96.6	96.6
17 Holdrege	102.5	96.6	97.4
18 North Platte	97.1	95.9	100.0
19 Ogallala	102.2	107.4	101.3
20 McCook	111.8	109.8	100.5
21 Sidney	107.5	105.5	103.6
Kimball	101.3		
22 Scottsbluff/Gering	105.5	103.0	100.4
23 Alliance	103.6	106.4	99.5
Chadron	106.6		
24 O'Neill	105.3	101.0	95.1
25 Hartington	109.7	105.0	91.7
26 Broken Bow	99.9	101.0	93.6



<sup>1</sup> See region map below.  
<sup>2</sup> Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales; city totals exclude motor vehicle sales.  
 Compiled from data provided by Nebraska Department of Revenue.





(continued from page 4)

Manufacturing registered a 2.3 percent gain, while distributive trade recorded a 1.2 percent gain, and government a 0.8 percent jump. The increase in manufacturing represents a solid monthly gain after months of little change.

November 1984 retail sales were 6.8 percent above year ago levels. When adjustments are made for price changes, total retail sales were up 3.4 percent. Inflation, as measured by the commodity component of the consumer price index, continues to record very little change--it advanced only 2.8 percent over the past 12 months ending November 1984.

Nonmotor vehicle sales in November were 6.4 percent above year ago levels, or 3.5 percent higher when adjustments are made for price changes. November marks the second month for which comparisons can be made on nonmotor vehicle sales without the distortion of the removal of the sales tax on food. Total dollar sales were \$661 million in November 1984, compared with \$621 million one year ago.

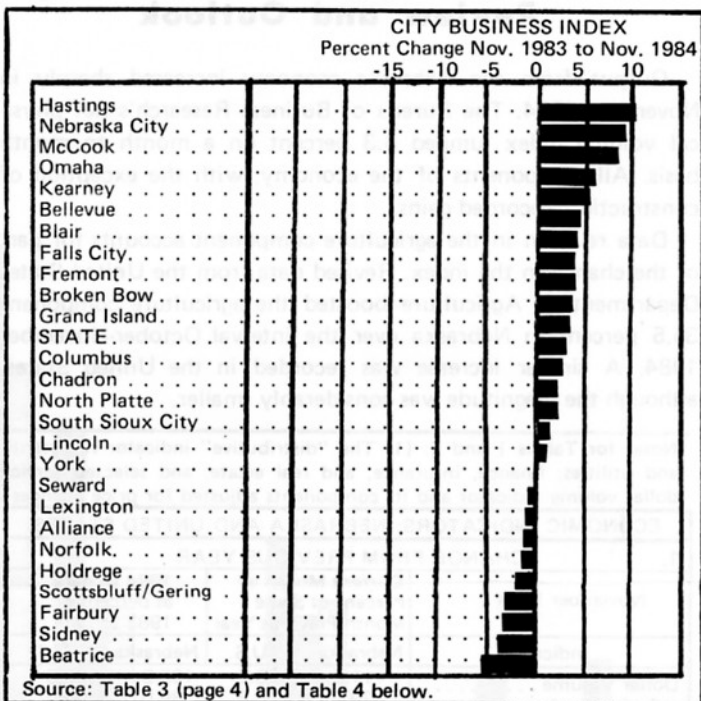
Motor vehicle sales rose 10.4 percent on a dollar volume basis in November 1984 compared with one year ago. When adjustments are made for price changes, motor vehicle sales were up 2.8 percent in real terms. The motor vehicle price index used in adjusting for price changes was 7.4 percent higher in November 1984 than in November 1983.

Cities recording substantial month to month gains included Hastings, Nebraska City, McCook, Omaha, and Kearney. All these communities experienced gains of 5.0 percent or more in their city business indexes. Bellevue, Blair, Falls City, Fremont, Broken Bow, and Grand Island recorded gains larger than the state average. The increase in Hastings resulted from improved retail sales and construction activity, while the increase in Nebraska City was associated with gains in retail sales.

Nebraska's economy continues to expand slowly. Third quarter 1984 personal income increased 9.3 percent over the third quarter of 1983. It is anticipated that output from the Nebraska economy will increase 2.0 to 3.0 percent in 1985. Remember that output is a physical measure of the volume of goods and services produced by the Nebraska economy.

Nebraska income should also continue to grow in 1985. Personal income should increase around 6.0 percent before adjustment for price changes. Employment will expand slowly, increasing 1.0 to 1.5 percent over the coming 12 months.

DONALD E. PURSELL



**4. November 1984 CITY BUSINESS INDICATORS**

The State and Its Trading Centers	Percent of Same Month a Year Ago		
	Employment <sup>1</sup>	Building Activity <sup>2</sup>	Power Consumption <sup>3</sup>
<i>The State</i> .....	101.8	107.2	105.1
Alliance .....	101.2	73.5	125.0
Beatrice .....	100.4	44.3	78.0
Bellevue .....	101.2	72.2	77.4
Blair .....	101.2	154.6	102.2*
Broken Bow .....	101.9	221.3	119.4
Chadron .....	114.0	29.5	135.6
Columbus .....	100.1	100.4	103.7
Fairbury .....	101.6	62.2	99.8
Falls City .....	100.8	187.9	105.9
Fremont .....	101.8	165.7	83.6*
Grand Island .....	101.6	196.4	120.0
Hastings .....	101.8	332.6	NA
Holdrege .....	101.2	62.6	116.9
Kearney .....	104.6	104.6	130.3
Lexington .....	100.7	108.5	119.0
Lincoln .....	102.1	83.0	109.3
McCook .....	99.7	243.0	97.7
Nebraska City .....	101.1	311.7	108.1
Norfolk .....	101.4	59.7	99.9
North Platte .....	104.8	159.1	115.9
Omaha .....	101.2	125.2	102.3
Scottsbluff/Gering ..	101.1	34.0	117.5
Seward .....	101.7	114.1	114.5
Sidney .....	100.0	28.2	126.6
So. Sioux City .....	98.7	112.4	109.8
York .....	101.3	89.9	105.4

<sup>1</sup>As a proxy for city employment, total employment for the county in which a city is located is used.  
<sup>2</sup>Building Activity is the value of building permits issued as spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Construction Cost Index is used to adjust construction activity for price changes.  
<sup>3</sup>Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked \* for which only one is used.

Source: Compilation by Bureau of Business Research from reports of private and public agencies.

**5. PRICE INDEXES**

November 1984	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices .....	315.3	104.0	104.3
Commodity component .....	283.0	102.8	103.4
Wholesale Prices .....	310.4	101.6	102.5
Agricultural Prices			
United States .....	259.0	102.4	106.4
Nebraska .....	253.0	102.0	103.4

\*Using arithmetic average of monthly indexes.  
 Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture.

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exceed the U.S. in this sector. This is because Nebraska has a larger share of employment in the higher earnings railroad and trucking industries within this category. This is the only aggregate category where Nebraska's employment distribution is more favorable than the United States. In seven other categories, average earnings in Nebraska are lower than the U.S. in part because of the industry employment distribution within the aggregate category. The positive impact of Nebraska's employment distribution in the transportation, communication, and utilities sector offsets the negative distribution effects in the other aggregate categories resulting in the minor overall impact shown in Table 1 earlier.

### SUMMARY OF FINDINGS

Wage and salary earnings in Nebraska averaged about 86 percent of the U.S. level in 1983. This ratio changed less than one percent during the six year period examined. There are important differences in Nebraska's distribution of employment (particularly manufacturing) when compared to the U.S., but the net impact of these differences on earnings is nearly zero. The employment distribution in Nebraska did not contribute to lower average earnings. Although overall average earnings are lower in Nebraska when compared to the U.S., there is considerable variation in the Nebraska to U.S. ratio from industry to industry. Particularly noteworthy are the food manufacturing and rail-

road transportation industries where average earnings in Nebraska equal those in the U.S..

These findings raise additional questions. Do living cost or 'quality of life' differences account for the observed earnings difference between Nebraska and the United States? To what extent does unionism contribute to the Nebraska U.S. differential, as well as the industry to industry difference in the Nebraska to U.S. ratios? These are issues requiring additional research.

DOUGLAS O. LOVE

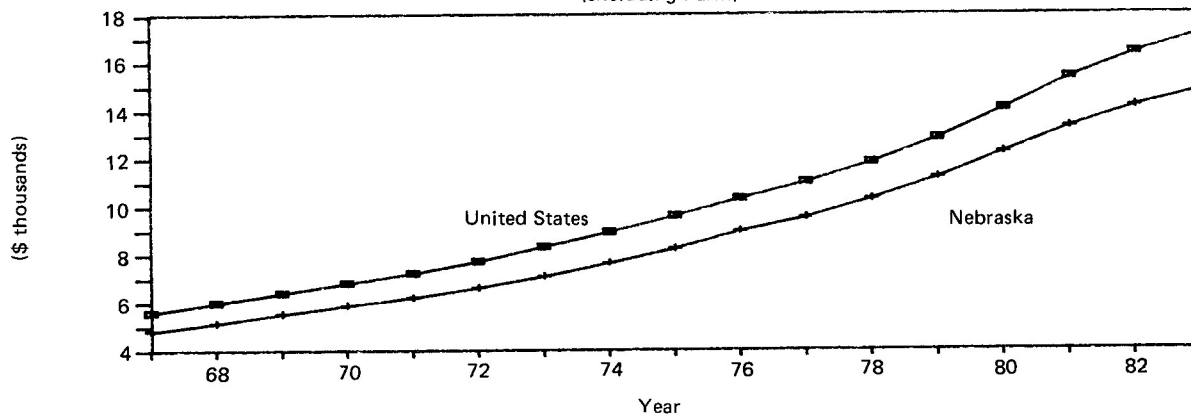
<sup>1</sup>See the March 1984 *Business in Nebraska* for a detailed comparison of Nebraska's employment by industry with the Plains states.

<sup>2</sup>The formula for computing average Nebraska earnings assuming the United States industry employment distribution is:

$$\text{Average Earnings} = \frac{\sum_{i=1}^{65} \text{EMP}_{US,i} \times \text{EARN}_{\text{neb},i}}{\sum_{i=1}^{65} \text{EMP}_{US,i}}$$

where  $\text{EMP}_{US,i}$  is United States employment in the  $i^{\text{th}}$  industry and  $\text{EARN}_{\text{neb},i}$  is average Nebraska earnings in the  $i^{\text{th}}$  industry.

Graph 1  
Average Annual Earnings—U.S. and Nebraska  
(excluding Farm)



## BUSINESS IN NEBRASKA

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