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Prepared by the Bureau of Business Research College of Business Administration

THE LONG-RANGE ECONOMIC OUTLOOK FOR NEBRASKA

Barring any future cataclysmic events, such as war or severe economic depression, the long-range outlook for Nebraska's economy is optimistic. This is the conclusion to be drawn from revised economic projections recently published by the Bureau of Business Research. Economic projections are long-range forecasts of variables, such as labor force, employment, and personal income. Economic projections were originally published by the Bureau in 1973 and were based, in part, on population projections prepared prior to that time. Subsequent events have occurred which have weakened the assumptions on which the original projections were based. These events include increased female participation in the labor market during the present decade, a major recession during 1974 and 1975, and a revision of the original Nebraska population projections. Additionally, new national projections have become available to be used as guides in revising the Nebraska economic projections.

The new economic projections cover the time interval from 1980 to 2000 in five-year increments, with 1970 Census data included for comparison. Projected variables are labor force, labor-force participation rates, employment, earnings, and personal income. Labor-force participation rates were broken down by age and sex and applied to the corresponding population projections to obtain projections of the labor force. For the projection interval, the unemployment rate was assumed to remain at 3.5 percent, higher than the 1970 Census unemployment rate of 2.7 percent, while the number of armed-forces personnel was assumed to remain constant at 12,000.

Total civilian employment was obtained by subtracting the number of unemployed and the number of armed-forces personnel from the labor force. Personal income and earnings projections were based on employment levels. County-level and regional projections were generated by allocating state totals to counties and regions using ratio equations. Due to a lack of data, the detail of county-level and regional projections is not as complete as that of the state-level projections.

Personal income was the most difficult economic variable to project. Historical data used to generate these projections were obtained from the Bureau of Economic Analysis of the U.S. Department of Commerce. These data are subject to continual

revisions which are frequently sizable in magnitude. Also, unpredictable factors, such as weather and farm prices, make agricultural income difficult to project. This, in turn, makes it difficult to project income for the nonagricultural sectors of the state economy.

Individuals and agencies using the revised economic projections should keep in mind that they are dealing with estimates of future economic conditions for Nebraska. As such, the statistics presented are subject to uncertainties inherent in all projections. As time goes by, the basic assumptions for the projections could and will, in all probability, become weakened. If this occurs, a new set of assumptions should be formulated, tested, and, if necessary, another revision of the economic projections initiated.

STATE-LEVEL PROJECTIONS

The total labor force includes those individuals, 16 years of age and over, who are employed or unemployed but looking for work. For a certain age group, the labor-force participation rate is defined as the percentage of that age group in the labor force. Using national projections prepared by the Bureau of Labor Statistics of the U.S. Department of Labor, labor-force participation rates for Nebraska were projected by age and sex. Historically, Nebraska's labor-force participation rates have been somewhat higher than the national rates. However, in the revised state projections, participation rates for Nebraska were assumed to converge to the projected national rates by the end of the century.

The participation rate for females, 16 years of age and over, is projected to increase from 47.8 percent in 1980 to 50.7 percent in 1990, and then decrease slightly to 50.0 percent by the year 2000. Participation rates for females in the age groups 20 to 24 and 25 to 34 are projected to increase more than for other female age groups. Historically, women in these primary childbearing age groups have been less active in the labor market than younger women and somewhat older women. Increased participation among women in the most active years of childbearing is due partly to the fact that many have either postponed the start of a family or have decided not to have children at all.

Increased participation in the labor market by women of all ages can be attributed to several key factors, two of which are described below. Laws prohibiting job discrimination by sex have given women an increased sense of confidence in seeking employment. High inflation has caused women to look for work in order to provide supplemental income for their families. This trend of increased participation is expected to continue as long as women gain more independence and (Continued on page 2)

¹Earnings consist of wage and salary disbursements, proprietors' income, and other labor income.

²Assuming a constant unemployment rate over a relatively long time interval is not uncommon, since unemployment is often dependent upon factors which are highly unpredictable.

(Continued from page 1) confidence in job seeking and the purchasing power of the family budget is reduced by inflation.

The male participation rate is projected to decline from 78.1 percent in 1980 to 76.6 percent by the end of the century. While this does not represent a great decline, it does indicate a significant deviation from what has occurred in the past. One possible explanation for the decline in male participation rates is that with more females entering the labor force, competition for jobs will increase significantly. Also, the restrictive role of primary family breadwinner that the male has been forced to assume in the past is being relaxed somewhat. Although labor-force participation rates for females are projected to increase and participation rates for males are projected to decline, the number of males in the labor force will continue to remain significantly greater than the number of females. The gap will narrow, however, due to the increasing participation of females in the labor market.

Employment projections were generated for occupational and industrial categories. The increase in female labor-force participation is reflected in the projected employment statistics for occupational categories. Leading the way in projected growth, whitecollar employment is expected to increase by 17.5 percent and service employment is projected to grow by 16.6 percent. This is indicative of the fact that the increasing numbers of females entering the labor force are more likely to seek employment as sales workers, or enter into a service-related occupation. Bluecollar employment is projected to increase by 13.9 percent by the end of the century, while agricultural employment is expected to decline by 2.0 percent. Blue-collar employment will continue to maintain a relatively high growth rate because of the steady influx of manufacturing into Nebraska. The decline of agricultural employment will result from the continued consolidation of smaller farms into larger agricultural units and from increased mechanization of farming operations.

From 1980 to 2000, employment by industrial category is projected to increase for all categories except agriculture and mining. The greatest increase in employment is projected for professional services, finance-insurance-real estate, and construction. Employment increases for manufacturing and other services are projected to be slightly smaller than for the previously mentioned industrial categories. Agriculture, mining, and transportation-

communications-public utilities are expected to grow the least in employment. Agriculture and mining are assumed to maintain constant employment levels throughout the projection interval, while transportation-communications-public utilities is projected to grow only slightly in employment. The remaining industrial categories are projected to increase in employment, although the growth rates are anticipated to be comparatively moderate. Employment projections for occupational and industrial categories are given in Table 1 below and Table 2 (page 3).

Projected income variables are earnings, personal income, and per capita personal income. Initially, annual wage rates per worker were projected for eight industrial categories. The wage rates were multiplied by employment projections to obtain earnings for each industrial category. These figures are summed to obtain a total earnings figure.

Personal income consists of private and government wage and salary payments in cash and in kind, other labor income, farm and nonfarm proprietors' income, interest, rent, dividends, and transfer payments less personal contributions for social insurance. It is measured before the deduction of income taxes and other personal taxes. Earnings are a lesser proportion of personal income, since they exclude several components of personal income. For the projection time interval, the ratio of personal income to earnings is assumed to remain at the 1975 level. This ratio is multiplied by the earnings projections to obtain personal income projections. Per capita personal income is obtained by dividing personal income by population. All personal income and earnings projections are residence adjusted and expressed in millions of 1967 dollars. Per capita personal income is expressed in 1967 dollars.

Adjusted for inflation, personal income in Nebraska is projected to increase from \$6,865 million in 1980 to \$11,484 million by the end of the century. This represents a 67 percent increase in personal income for the projection interval. Per capita personal income, expressed in 1967 dollars, is projected to increase from \$4,338 in 1980 to \$6,569 by the year 2000, a 51 percent increase. Earnings, which are assumed to maintain the same constant of proportionality with personal income, are projected to increase the same as personal income. Personal income and earnings projections for industrial categories are presented in

Table 1 NEBRASKA OCCUPATIONAL PROJECTIONS						
Occupations 1970 1980 1985 1990 1995						
Total Employment	578,436	706,977	741,565	768,783	786,940	807,939
White-collar						
Professional	74,421	101,805	108,268	113,780	117,254	121,191
Managerial	52,411	62,214	65,999	68,422	70,038	72,715
Clerical	90,395	117,358	123,841	129,924	133,780	138,158
Sales	39,625	48,074	50,426	52,277	53,512	54,940
Blue-collar						
Craftsmen	66,077	82,009	86,763	89,948	92,072	94,529
Operatives	73.805	89,079	93,437	96,867	99,154	101,800
Laborers	24,234	26,158	26,696	26,907	27,543	28,278
Service	82,056	106,047	111,976	116,855	120,402	123,615
Farm	75,412	74,233	74,159	73,803	73,185	72,713

PROJECTIONS BY GEOGRAPHIC REGIONS

Further analysis of the revised economic projections for Nebraska follows on a substate basis. The state was subdivided into six geographic regions: Omaha, Southeast, Northeast, South Central, Western, and North Central (see map, page 5). Changes in population, employment, personal income, and per capita personal income were projected for each region. In the following summary, growth or decline in a projected economic variable is expressed as a percentage change for the 1980-2000 projection interval. Each region is ranked in terms of its projected economic

performance. The ranking is based on the composite performance of the four economic variables mentioned above.

OMAHA

Although the Omaha region has the second greatest projected increase in population for the twenty-year time interval, employment and personal income are expected to grow more than in any of the other five geographic regions defined in this article. Employment is expected to increase by 19.9 percent, personal income by 76.4 percent, and per capita personal income by 56.1 percent.

Most of the projected economic growth in the Omaha region will be concentrated in Douglas and (Continued on page 6)

		•	Table 2				
NEBRASKA EMPLOYMENT PROJECTIONS							
	1970	1980	1985	1990	1995	2000	
Labor Force	606,676	745,054	780,896	809,102	827,917	849,678	
Armed forces	12,100	12,000	12,000	12,000	12,000	12,000	
Unemployment	16,140	26,077	27,331	28,319	28,977	29,739	
Civilian employment	578,436	706,977	741,565	768,783	786,940	807,939	
Agriculture	79,392	80,000	80,000	80,000	80,000	80,000	
Mining	2,190	2,000	2,000	2,000	2,000	2,000	
Construction	34,210	42,419	45,977	47,665	48,790	50,092	
Manufacturing	79,453	91,371	95,940	98,818	102,277	106,368	
Durable goods	41,165	51,880	55,434	57,680	60,379	63,569	
Nondurable goods	38,288	39,491	40,506	41,138	41,898	42,799	
Transportation, communi-							
cations, and utilities	44,568	51,609	52,651	53,815	54,299	54,940	
Wholesale and retail trade	129,349	161,191	168,335	173,745	177,848	182,594	
Finance, insurance, and							
real estate	29,964	38,177	40,786	43,052	44,069	45,245	
Professional services	108,619	150,424	160,956	170,515	176,142	182,476	
Other services	45,418	57,265	60,808	63,809	65,316	67,059	
Public administration	25,273	32,521	34,112	35,364	36,199	37,165	

	NE		AL INCOME PROJE of 1967 dollars)	CTIONS		
	1970	1980	1985	1990	1995	2000
Total Labor and Proprietors'						
Income	3,676	5,176	5,971	6,809	7,666	8,659
Agriculture	523	692	783	865	950	1,050
Mining	12	17	18	20	21	23
Contract construction	234	328	390	445	499	564
Manufacturing	584	777	888	1,004	1,147	1,314
Wholesale and retail trade	674	978	1,124	1,276	1,434	1,620
Finance, insurance, and						
real estate	202	286	331	384	432	487
Transportation, communi-						
cations, and public utilities	300	401	444	499	559	617
Other	1,147	1,697	1,993	2,316	2,624	2,984
Total Personal Income	4,848	6,865	7,919	9,030	10,167	11,484
Per Capita Personal Income*	3,264	4,338	4,852	5,379	5,923	6,569

Review and Outlook

Real output in Nebraska fell during July, with the state physical volume index recording a level which was 38.5 percent above its 1967 base-period level (see Table 2). The 3.3 percent June-to-July decline in the index was due primarily to the sharp reduction in activity in the agricultural sector, where output fell 19.6 percent. While nonagricultural output decreased slightly (-0.7 percent), one of the four sectors registered an increase in activity. Manufacturing output was up 1.3 percent. The month-to-month percentage changes in the remaining nonagricultural sectors were: distributive, -0.5 percent; government, -2.6 percent; and construction, -5.1 percent.

The July decline in Nebraska economic activity followed a

sizable increase in June. Caution should be exercised when interpreting this movement, however, since much of it reflects the volatility of the agricultural component of the physical volume index. This is partially due to fluctuations associated with agricultural production, but is also affected by problems inherent to the measurement of agricultural output on a month-to-month basis. The dollar volume of seasonally adjusted cash farm marketing receipts fell \$180 million in July compared to June. Prices received by farmers in the state fell 1.9 percent during the month, after increasing every month since September, 1977.

The manufacturing sector continued to be a source of strength for the Nebraska economy. The index for this sector has increased during eight of the last (Continued on page 5)

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 INDICA				TATES
1. CHAI	Current M Percent of	Current Month as Percent of Same Month Previous Year		ar to Date it of ar to Date
Indicator	Nebraska	U.S.	Nebraska	U.S.
Dollar Volume	99.7 109.7 112.5 117.0 107.5 106.8 99.4 83.5 102.0	111.4 97.6 111.9 117.3 112.7 112.0 107.7 103.5 81.6 104.3 108.0	109.2 114.8 108.3 108.4 112.1 107.4 106.3 101.2 100.4 101.4 99.1	111.0 107.9 111.1 114.8 111.3 111.5 108.1 104.0 98.5 104.2 105.0
Manufacturing Distributive Government 2.	99.8	105.0 103.9 102.9 M 1967	104.8 100.5 101.2	104.3 104.3 103.3
			967 Average	e
Indicator	Neb	Percent of 1967 Average Nebraska U.S.		
Dollar Volume	223 286 331 320 27	3.9 8.0 5.2 0.3 7.7 8.4	264 213 266 257 255 274 259	.7 .1 .9 .6 .6
Physical Volume Agricultural Nonagricultural Construction Manufacturing Distributive Government	138 110 143 145 154	0.3 3.3 7.0 4.8 1.2	133 100 134 113 124 139 141	.0 .3 .2 .1 .8 .6

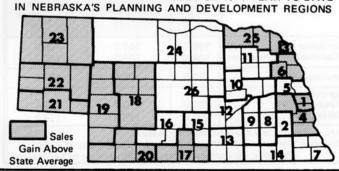
0F 1967	103	PHYSICAL V	OLUME OF ECONO	MIC ACTIVITY	North Plater
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3.	MEII	AXABLE RETAIL SALES OF NEBRASKA REGIONS
		AND CITIES (Adjusted for Price Changes)
_		

	City Sales ²	Sales in	Region ²
Region Number ¹ and City	July, 1978 as percent of July, 1977	July, 1978 as percent of July, 1977	Year to date'7 as percent of Year to date'7
The State	110.6	112.2	102.1
1 Omaha Bellevue	111.9 101.5	112.0	106.0
2 Lincoln	107.1	108.0	98.5
3 So. Sioux City	104.9	111.7	105.4
4 Nebraska City	107.0	119.9	107.9
5 Fremont	104.9	109.8	101.2
Blair	105.0		
6 West Point	117.1	106.6	104.3
7 Falls City	103.8	118.2	101.9
8 Seward	112.0	99.7	95.5
9 York	114.6	109.1	91.0
10 Columbus	122.0	113.9	99.8
11 Norfolk	108.0	115.4	99.0
12 Grand Island	115.7	115.8	101.2
13 Hastings	109.2	113.9	98.2
14 Beatrice	106.0	106.1	98.8
Fairbury	113.7		00.0
15 Kearney	109.4	110.9	97.6
16 Lexington	96.9	105.3	94.0
17 Holdrege	130.7	125.4	103.8
18 North Platte	108.1	111.3	103.4
19 Ogallala	117.1	113.2	104.3
20 McCook	99.8	105.0	103.1
21 Sidney	115.9	116.9	109.6
Kimball	116.8		
22 Scottsbluff / Gering	125.8	124.2	105.6
23 Alliance	150.1	131.7	114.7
Chadron	150.6		
24 O'Neill	93.1	104.6	90.3
25 Hartington	118.7	109.7	104.3
26 Broken Bow	102.6		
		109.0	96.7

See region map below.

1978 YEAR TO DATE AS PERCENT OF 1977 YEAR TO DATE



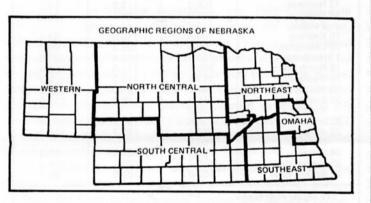
²Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales; city totals exclude motor vehicle sales.
Compiled from data provided by Nebraska Department of Revenue.

(Continued from page 4) nine months. Since the beginning of 1978, output for this sector has risen 6.2 percent on a price-adjusted basis.

Seasonally adjusted construction activity, which had been strong during the first six months of 1978, fell for only the second time in the last eight months and was 8.5 percent above the level recorded at the beginning of the year. This month's downward movement was unevenly spread throughout the state. Even though many cities experienced sizable losses in building activity, Alliance, Sidney, Chadron, Fremont, and Broken Bow all reported levels of construction in July which were more than 50 percent above the levels of the previous July (see Table 4).

The remaining two sectors of the Nebraska economy both experienced decreases in activity for the month. The movement in the indexes for the distributive and government sectors have been erratic so far during 1978, with no periods of increases or decreases in activity lasting more than two months.

The city business indexes for July present a sharp contrast to that for state economic activity. Twenty-three of the twenty-five reporting cities posted gains in economic activity relative to July, 1977. Alliance again reported the largest gain in activity with an increase of 31.4 percent. Throughout all of 1978, Alliance has ranked first in the indexes. Growth in retail sales, employment, building activity, and power consumption attest to the strength of the Alliance economy. Other cities with substantial July-to-July growth were: Chadron (+15.5 percent), Scottsbluff/Gering (+11.1 percent), Broken Bow (+9.4 percent), Columbus (+9.2 percent), and Sidney (+8.9 percent). The western portion of the state exhibited a strong economy, as four of the six leading cities were in this area.

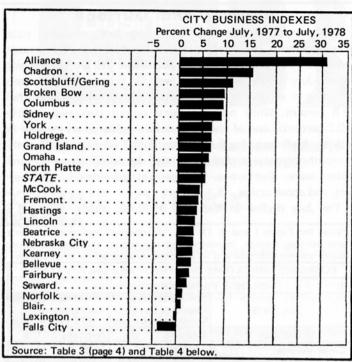


July, 1978	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices Commodity component	196.7	107.7	106.9
	188.6	107.3	106.3
Wholesale Prices	210.6	108.1	106.8
Agricultural Prices United States	213.0	119.7	109.5
	203.0	119.4	114.8

^{*}Using arithmetic average of monthly indexes.

Sources: Consumer and Wholesale Prices: U.S. Bureau

Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture



4.	JULY CITY E	SUSINESS IN	DICATORS
	Percent of	Same Month	a Year Ago
The State and Its Trading Centers	Employment ¹	Building Activity ²	Power Consumption ³
The State	102.7	94.2	102.9
	115.2	279.7	108.6
	99.5	123.4	103.2
	106.1	107.0	96.4*
	103.6	51.2	104.4
	104.0	153.6	149.3
Chadron	90.4	162.9	69.9
	104.6	63.8	105.6
	99.9	61.9	91.3*
	98.2	37.5	96.1
	99.2	160.5	107.9*
Grand Island Hastings Holdrege Kearney Lexington	100.2	105.3	102.8
	98.4	131.2	100.0
	103.2	31.8	84.6
	97.8	100.7	102.4
	111.1	60.5	87.7
Lincoln	103.3	77.2	105.6
	93.1	66.1	193.1
	108.9	48.0	101.9
	101.1	74.0	87.7
	106.8	81.4	103.7
Omaha	106.1	76.6	104.6
	100.6	108.8	101.6
	103.9	37.8	101.0
	102.7	181.7	89.1
	NA	NA	NA
	101.1	114.5	102.2

¹As a proxy for city employment, total employment for the county in which a city is located is used.

²Building 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.

³Power 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.

(Continued from page 3)

Sarpy counties. The growth in the labor force in these two counties will be significant during the remainder of the century. Male and female labor-force participation rates are projected to be particularly high in Sarpy County, reflecting a young and mobile population, which is atypical of most Nebraska counties. The projected increase in the personal income variables reflects the sizable expected growth in population and employment.

SOUTHEAST

In terms of projected economic growth, the Southeast region is a close second behind the Omaha region. Leading the way in projected population growth (+14.5 percent), employment is expected to increase by 17.3 percent, personal income is projected to rise by 70.4 percent, while the anticipated growth in percapita personal income is 48.9 percent.

Most of the projected economic growth in the Southeast region will be in Lancaster County. The projected increases for Lancaster County are 24.9 percent for population, 29.0 percent for employment, 89.7 percent for personal income, and 51.9 percent for per capita personal income. Lancaster County, like the Omaha region, is projected to have high labor-force participation rates for both males and females. All of these factors will contribute to the positive economic growth of the Southeast region.

NORTHEAST

The Northeast region of the state ranks third in projected economic growth during the projection time interval. Population is expected to increase by 6.7 percent and employment is projected to grow by 8.4 percent. Personal income and per capita personal income are expected to rise by 59.8 percent and 49.7 percent, respectively.

The Northeast region appears to be attractive to manufacturing firms, as witnessed by the recent influx of such firms into this region. If this trend continues or becomes more pronounced, the potential economic growth of this region could exceed the scope of these projections.

SOUTH CENTRAL

Ranking fourth in projected economic growth, population and employment in the South Central region are expected to show respective increases of 6.8 percent and 7.8 percent. Growth in

personal income is projected to be 57.4 percent, while per capita personal income is projected to rise by 47.3 percent.

Most of the anticipated economic growth for this region will be concentrated in Adams, Hall, and Lincoln counties, which contain the population centers of Hastings, Grand Island, and North Platte.

WESTERN

The population of the Western region is projected to increase by 6.2 percent, the second smallest increase for the six geographic regions. Employment for this region is expected to increase by 7.1 percent during the projection interval, while personal income is projected to increase by 57.0 percent. The anticipated growth in per capita personal income is 47.8 percent. Compared to the other regions of the state, the Western region ranks fifth in terms of projected economic growth.

NORTH CENTRAL

The smallest projected growth in population is in the North Central region. This is reflected in the employment projection, which shows a decline in the level of employment of 0.7 percent by the end of the century. Personal income and per capita personal income are both expected to increase by 47.1 percent. The North Central region ranks last in projected economic growth.

SUMMARY

For the state, the projected increase in population is 10.5 percent for the projection interval. Employment is expected to increase by 14.8 percent. Personal income and per capita personal income are anticipated to show increases of 67.3 percent and 51.4 percent, respectively. Of the six geographic regions considered in this article, the only regions that exceed the state increases in the projected economic variables are the Omaha region and the Southeast region. The remaining four regions exhibit approximately the same projected economic growth.

In conclusion, the economic outlook for Nebraska is positive. However, one cannot effectively predict random events that might occur along the time frame of the projections. As an example, the agricultural sector of the state economy is affected by weather conditions, both locally and worldwide. Hence, when reviewing economic projections, one should keep in mind the individual scenarios that might prevail due to the occurrence of random events.

C. L. B.

UNL NEWS

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