



UNIVERSITY OF NEBRASKA - LINCOLN NEWS

BUSINESS IN NEBRASKA EDITION

No. 20 Vol. 51

Number 330, March 1972

PREPARED BY THE BUREAU OF BUSINESS RESEARCH, COLLEGE OF BUSINESS ADMINISTRATION

THE NEW NEBRASKA BUSINESS INDEX

For more than three decades, with a brief interruption during World War II, the Bureau of Business Research has published an Index of Nebraska Business Activity. In 1949 the index was substantially revised and expanded by Dr. Edgar Z. Palmer, then Director of the Bureau. There have been minor revisions since that time, but the index has remained in essentially the same form and was made up of the same indicators until about a year ago, when five of the original ten components were deleted.

When the old index was devised the choice of components had to be made largely on the basis of using whatever data were available on a monthly basis. Since that time many new series have been developed both nationally and locally so that it is now possible to devise an index based much more nearly on logical content rather than expediency.

In this issue we introduce the new index. The accompanying article briefly describes its basic content and philosophy in nontechnical language. A bulletin is being prepared for publication describing the technical aspects of devising and compiling the index and including the monthly data on which it is based. Announcement of the availability of this bulletin will be made when it is completed. Regular monthly publication of the new index will begin next month with figures for January, 1972, included in an extensive revision of Tables 1 and 2, page 4.

This new index is the culmination of some five years of thorough study, experimentation, and refinement. It had its genesis in the research done by Dr. Keith Turner, now a faculty member of the Department of Economics of the University of Nebraska at Omaha, when he was a member of the Bureau staff. Over the years it has had the benefit of close scrutiny and suggestions

by three Bureau Statisticians—Dr. Alfredo Roldan, Dr. Edgar Palmer, and Dr. Vernon Renshaw, who will be responsible for its compilation and publication in the future—with coordination and continuity provided by Dr. Edward Hauswald, Associate Director.

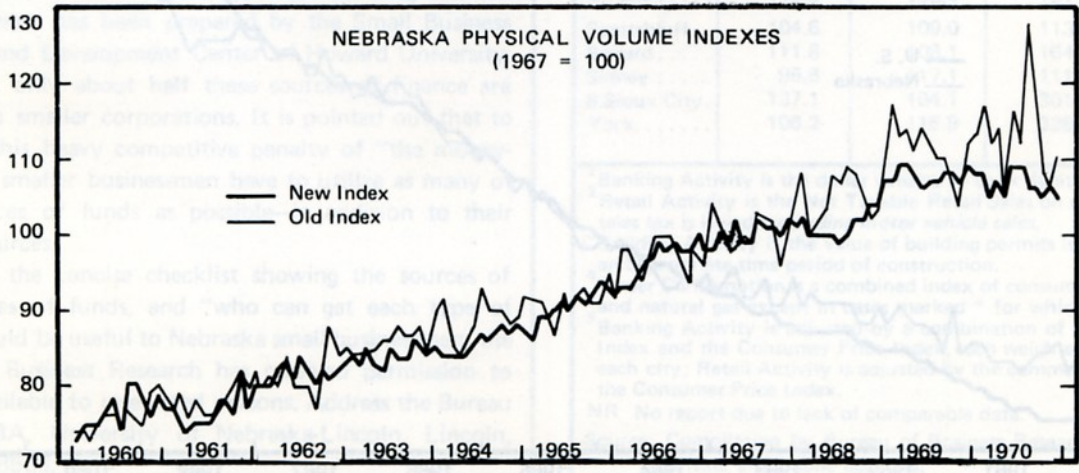
A comparison of the performance of the new index and the old is shown in the graph below. In conformity with the current practice of all Federal statistical agencies, the new index is based on the calendar year 1967 as 100, and for this comparison the base of the old index has been shifted from 1948 to 1967. Comments on the differences between the two indexes shown on this chart are contained in the accompanying article.

The new index retains the concept introduced by Dr. Palmer of comparing the Nebraska index with an index for the United States constructed locally by the Bureau and made up of components identical to those included in the state index. These two indexes are shown in the graph on page 2, and comments on their differences are also included in the accompanying article.

We do not regard this new index as fixed or immutable. As pointed out in the accompanying article, data limitations and lack of omniscience still cause it to fall short of the perfection that is always sought. We shall continue to seek improvements and expect to modify the index from time to time. In the process of its development, however, we have carefully studied the indexes available for other states and feel that shortcomings present in many of these have been overcome.

We present this new index in full confidence that it provides the state with one of the best tools of its kind in the nation for measuring business activity and growth of the economy as a whole and of its separate sectors.

E. S. W.



Measuring Business Activity In Nebraska

The new business activity index is designed to measure changes in income generated (or "value added") by economic activity carried on within Nebraska. At the national level the most commonly used indicator of total income generated is Gross National Product (GNP). The concept corresponding to GNP at the state level is referred to as Gross State Product (GSP). Unfortunately, because of data limitations and difficulties in methodology, there are no regularly published measurements of GSP in any state.

The closest thing to GSP available at the state level is personal income data published by the Office of Business Economics of the U.S. Department of Commerce. These data represent more nearly an income-received (by persons) than an income-generated concept. Income received differs from income generated primarily because of government taxes and transfer payments and undistributed corporate profits. Generally speaking, government programs of taxation and transfer payments (for example, unemployment compensation) have the effect of making income received more stable than income generated. Thus, while income received may be a good indicator of economic well-being, it is not as good an indicator of the cyclical fluctuations of business activity for a state as GSP would be. Insofar as the available data permit, therefore, the new index is designed to reflect the changes occurring in GSP.

CHOOSING INDICATORS

Income generated or value added can be divided into two general categories: (1) the return to labor (wages and salaries) and (2) the return to property or capital (profits, rent, and interest). Wages and salaries can be measured at the state level with a great deal of reliability; but, since corporations which operate interstate are not required to report profits earned in each state on a uniform basis, there is no good way to measure profit-type income at the state level. Thus we have good indicators for labor income but must rely on indirect and less reliable indicators to represent other income.

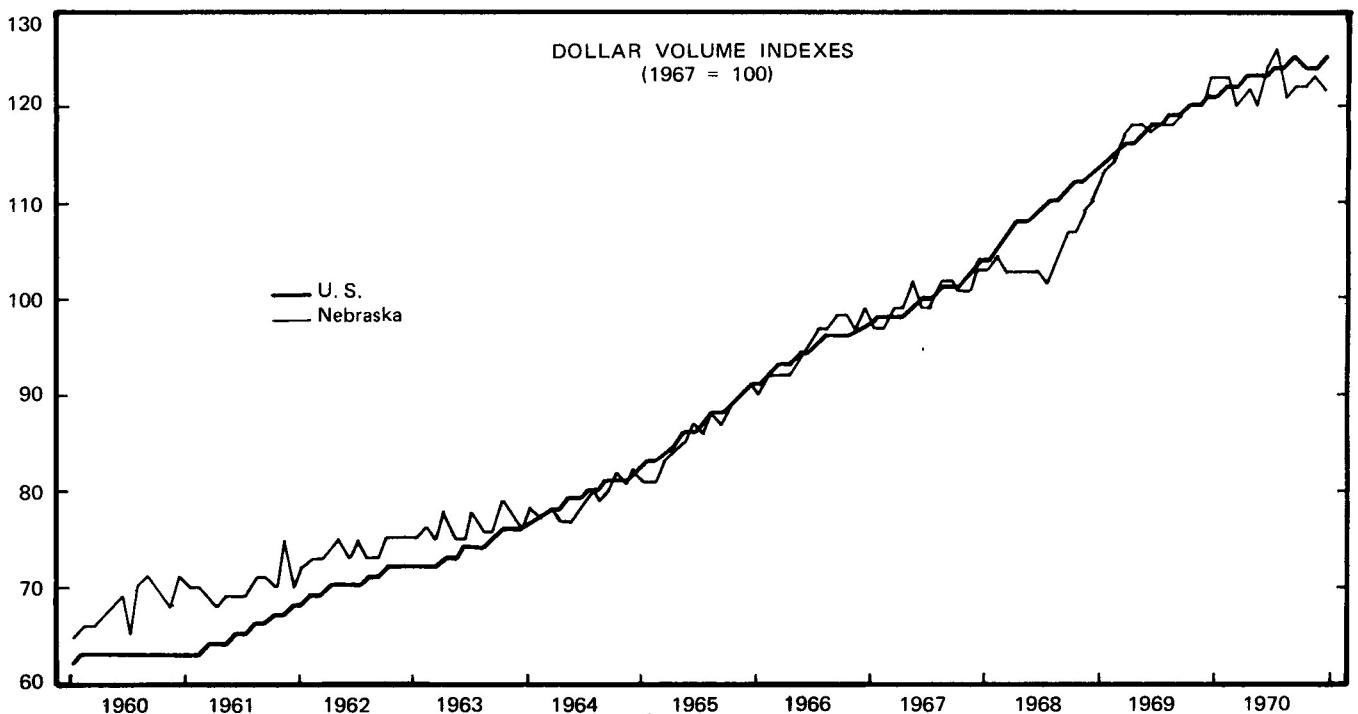
Employment data are available monthly from State Labor De-

partment reports. Wages and salaries are estimated quarterly in connection with the personal income estimates of the U.S. Office of Business Economics. Combining these two sources of data, it is possible to obtain reasonably reliable indications of the month-to-month fluctuations in labor income. There are no reliable direct indicators of profits on a monthly basis, but for some sectors there are indicators of gross revenue or dollar sales volume. Sales often are more volatile than are production and business activity (because producers can sell out of inventory to meet peak sales and can produce for inventory when sales are low), and therefore sales are not always good indicators when used alone. When used along with employment indicators, however, sales data help to capture the fluctuations in productive activity and profits not reflected in employment statistics. Usually businesses do not adjust their employment with every change in the level of production, so employment tends to be more stable than overall business activity. As noted above, however, sales usually tend to be more volatile than overall business activity, so an index combining employment and sales indicators can be made to reflect more closely the "true" ups and downs in business activity than would either indicator alone.

THE INDICATORS USED

Quantitatively the greatest weight in the new index is attached to employment and wage and salary indicators (because labor income is the largest part of total income generated). Also included in the overall index are three indicators of revenues and sales: (1) retail sales; (2) receipts from cash farm marketings; and (3) the value of construction contracts spread over the expected life of the projects involved. The choice of sales data is dictated primarily by the availability of such data on a monthly basis. For the manufacturing sector there are no adequate revenue data available on a monthly basis for the state, so consumption of electric power by industry is used as an indicator of the contribution of capital to manufacturing output.

Since most of the available indicators are specific to particular



sectors of the economy, the overall index has been arrived at by combining five separate sector indexes—Agriculture, Construction, Manufacturing, Distributive and Service Industries¹, and Government. In arriving at the total these sector indexes are weighted according to their relative contributions to GSP (as estimated using annual personal income and other data). An additional advantage to the sector approach to constructing an overall business activity index is that the individual sector indexes provide some indication of the parts of the economy which contribute most to growth and fluctuations in the overall economy.

RELIABILITY OF THE INDEX

The data available for a monthly state business activity index are not adequate to insure complete reliability. Because of their greater volatility, the goods producing industries (agriculture, construction, and manufacturing) are more difficult to reflect accurately than are the distributive and service sectors. Of the goods producing sectors, agricultural activity is probably the most difficult to measure reliably. The indicator used in the new index (as in the old) for the agricultural sector is cash receipts from farm marketings. As with other sales and revenue measures, cash farm marketings tend to be more erratic than real productive activity would be expected to be. At this point, however, we have no alternative monthly indicators which provide a better measurement.

The indexes for construction and manufacturing are more representative of current activity than is the agricultural index. It is not possible to measure reliability of the indexes for these sectors, however, because there are no dependable quarterly or annual measures of the GSP concept for which we are trying to derive monthly indicators. The same problem of assessing the reliability of indexes also carries over from the goods producing sectors to the distributive and service sectors; but for the latter sectors growth has been more stable and is therefore easier to estimate than is growth in the goods producing sectors.

An index using essentially the same indicators as the Nebraska index has been constructed for the United States as a whole. Using quarterly national income data, we were able to test this U.S. index against actual movements in income generated. The tests worked out quite well for most sectors, and the success of the tests underlies a confidence that the state index also follows income generated reasonably well.

Based on quarterly data for 1963-1970, the average deviation of our U.S. dollar volume index from national income was less than 1%. The correlation between our index and actual national income over the period was .999. The agriculture sector had the largest deviation (with a correlation of .947) and about twice the deviation of any other sector. The least deviation was recorded in the government and distributive and service sectors, which performed about as well as the overall index. The manufacturing and construction sectors had deviations about half way between those of the overall index and the agricultural sector.²

Although we cannot test the Nebraska index on the same basis as the U.S. index, it is almost certain that errors in the Nebraska

¹This sector includes (a) wholesale and retail trade; (b) finance, insurance, and real estate; (c) transportation, communications, and public utilities; and (d) selected service industries. Extensive tests have shown that the best use of the limited supply of good indicators can be made by combining these four categories rather than estimating each separately.

²The overall index error was low partly because the individual sector errors were often in opposite direction.

UNIVERSITY OF NEBRASKA

Regents

J. G. Elliott Robert J. Prokop
 Kermit R. Hansen Robert Raun
 Robert R. Koefoot Edward Schwartzkopf
 James H. Moylan Kermit Wagner

D. B. Varner, *President*

James H. Zumberge, *Chancellor*
 University of
 Nebraska-Lincoln

C. S. Miller, *Dean*
 College of Business Administration
 University of Nebraska-Lincoln

BUREAU OF BUSINESS RESEARCH

Member, Association for University
 Business and Economic Research
 CBA 200, City Campus
 Lincoln 68508; Phone (402) 472-2334

E. S. Wallace, *Director*
 E. L. Hauswald, *Associate Director*
 Vernon Renshaw, *Statistician*
 Mrs. Dorothy Switzer, *Editorial Assistant*
 Walt Oxford, *Data Supervisor*

Graduate Research Assistants
 Arnold Miller
 John Perry
 Douglas Harman

As an issue of the University of Nebraska-Lincoln News, *Business in Nebraska* is published monthly as a public service and mailed free within the state upon request. Material published herein may be reproduced with proper credit.

index will be greater than for the United States. One reason for this is the fact that agriculture, which is difficult to indicate, is more important for Nebraska than for the United States as a whole. Nebraska agriculture also is more specialized and more volatile than is national agriculture, thus making it even harder to indicate reliably. For the other sectors Nebraska is likewise more volatile and harder to indicate than is the overall economy. Moreover, national data for some of the indicators used are more reliable than the corresponding state data. For these reasons it would be unrealistic to expect quite as high a degree of reliability for the state as for the national index. We believe, however, that the new Nebraska index provides the best measure of changes in the state's economy that can be developed from the monthly data presently available.

COMPARISON WITH THE OLD INDEX

From 1960 to 1967 the average growth of the new Nebraska physical volume index is much the same as for the old one. Since 1967 the new Nebraska index tends to fall below the old, while for the U.S. index the reverse is true. The chief contrast between the new and the old indexes, however, lies in the lesser month-to-month fluctuations of the new indexes (for both the U.S. and Nebraska). The greater stability of the new index can be attributed largely to greater weights for relatively stable indicators (such as employment and wages) and smaller weights for volatile indicators (such as cash farm marketings) than were used in the old index.

NEBRASKA vs. U.S.

The overall dollar volume index for Nebraska has grown less rapidly over the decade of the 1960s than U.S. GNP (80.0% compared with 95.3%, 1960-70). Part of this growth differential can be attributed to the slow growth of agriculture nationally and the relatively high importance of agriculture in Nebraska. The growth of the nonagricultural sectors, taken as a group, has been nearly as fast for Nebraska as for the nation as a whole over the 1960-70 decade (93.1% compared with 97.8%).

Among the individual sectors all but manufacturing grew more slowly during the 1960s in Nebraska than in the United States. (See Table 1.) Agriculture was the sector with least growth and shows a much slower growth for Nebraska than for the United States (26.2% vs. 41.9%) for this particular period primarily because 1960 was a good year for Nebraska agriculture, while 1970 was a mediocre year. (If, for example, the period 1961-69 is tak-

(Continued on page 6)

Review and Outlook

Nebraska's economy continued to expand in December. Both dollar and physical volumes were markedly higher than for the same month last year. In December, the 14.0 percent margin over last year in the dollar volume index was slightly less than that reported in November. The physical volume index, however, was 8.6 percent above that of the same month of last year, whereas the margin had been 6.9 percent in November.

It should be noted that even with its considerable year-to-year growth, the state's gain has not been as great as that of the nation as a whole. In December U.S. indexes of dollar and physical volumes were 21.7 and 15.6, respectively, above those recorded for the previous December. Both increases exceeded the state's by

about 6.5 percent.

The continued upward movement of the state's economy reflected especially strong pushes in December from construction activity, up 41 percent from last year, and cash farm marketings, up 36.6 percent—even after both are adjusted for price changes. Year-to-year gains in retail sales, although nearly 7 percent after deflation for price changes, however, had decelerated slightly. November's level had been 7.3 percent higher than that of the same month of the previous year. After an unseasonably high November surge in spending had been reflected in an unseasonably high level of banking activity, December's banking activity fell back slightly to a level only 10 percent above last year's. Life

(Continued on page 5)

All figures on Table 1 and 2 are adjusted for seasonal changes, which means that the month-to-month ratios are relative to the normal or expected changes. Figures in Table 1 (except the first line) are adjusted where appropriate for price changes. Gasoline sales for Nebraska are for road use only; for the United States they are production in the previous month.

NEBRASKA'S ECONOMIC INDICATORS				
1. CHANGES FROM PREVIOUS YEAR AND PREVIOUS MONTH				
December, 1971	Percent of Same Month a Year Ago		Percent of Preceding Month	
	Nebraska	U.S.	Nebraska	U.S.
Indicators				
Dollar Volume Index	114.0	121.7	106.7	106.8
Physical Volume Index	108.6	115.6	108.1	106.2
Bank debits (checks, etc.) . .	110.0	111.0	98.3	98.5
Construction activity	141.2	137.2	115.4	100.8
Retail sales	106.9	104.2	95.8	91.6
Life insurance sales	85.5	106.6	110.3	115.8
Cash farm marketings	136.6	107.6	137.6	107.5
Electricity produced	89.5	107.9	92.2	99.4
Newspaper advertising	NA	NA	NA	NA
Manufacturing employment . .	99.6	98.1	99.5	99.9
Other employment	101.9	102.2	100.4	99.8
Gasoline sales	109.8	109.1	121.2	97.4

2. CHANGES FROM THE 1948 AVERAGE		
December, 1971	Percent of 1948 Average	
Indicators	Nebraska	U.S.
Dollar Volume Index	401.7	542.4
Physical Volume Index	223.1	282.2
Bank debits (checks, etc.) . .	267.6	503.2
Construction activity	256.9	218.0
Retail sales	151.8	189.0
Life insurance sales	442.3	567.1
Cash farm marketings	303.6	176.2
Electricity produced	382.0	581.8
Newspaper advertising	NA	NA
Manufacturing employment . .	166.9	121.2
Other employment	158.6	181.0
Gasoline sales	266.8	253.6

3. NET TAXABLE RETAIL SALES ¹ OF NEBRASKA REGIONS (Unadjusted for Price Changes)		
Region ² and Principal Retail Trade Center	December, 1971 as Percent of December, 1970	1971 Year to Date as Percent of 1970 Year to Date
<i>The State</i>	111.0	109.0
1 (Omaha)	108.3	109.1
2 (Lincoln)	111.4	111.3
3 (So. Sioux City)	111.5	105.4
4 (Nebraska City)	107.4	104.5
5 (Fremont)	109.4	108.0
6 (West Point)	117.1	106.7
7 (Falls City)	109.7	105.8
8 (Seward)	106.5	107.2
9 (York)	115.8	111.0
10 (Columbus)	106.1	106.1
11 (Norfolk)	111.7	106.8
12 (Grand Island)	117.0	110.1
13 (Hastings)	111.3	109.1
14 (Beatrice)	107.3	107.3
15 (Kearney)	115.7	111.4
16 (Lexington)	111.9	108.3
17 (Holdrege)	115.1	109.1
18 (North Platte)	114.1	114.2
19 (Ogallala)	143.4*	115.2
20 (McCook)	106.6	105.9
21 (Sidney, Kimball)	113.0	103.2
22 (Scottsbluff)	116.9	108.1
23 (Alliance, Chadron)	122.0	108.9
24 (O'Neill)	114.5	112.1
25 (Hartington)	106.4	102.3
26 (Broken Bow)	113.5	107.1

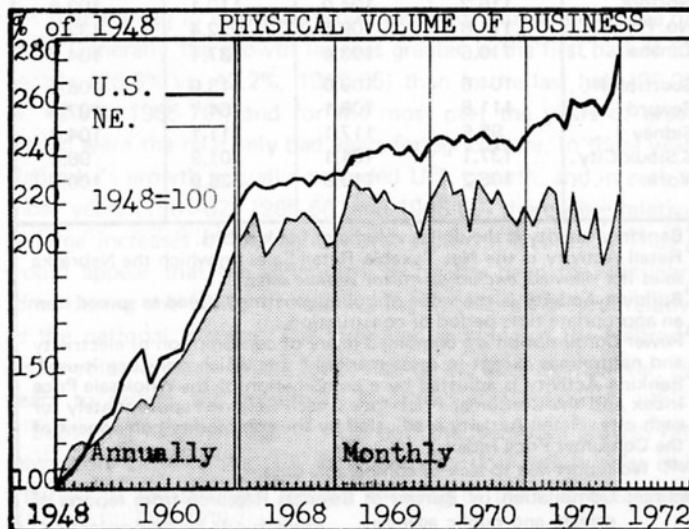
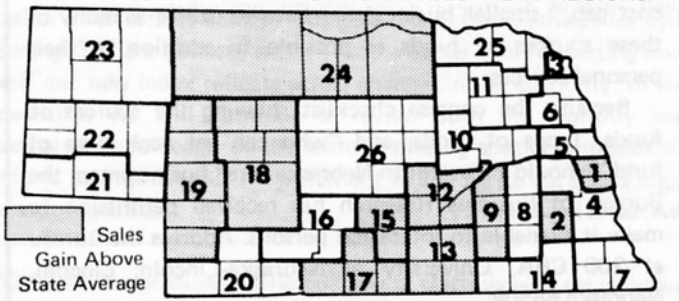
* Unexplainably low in 1970.

¹Sales on which sales taxes are collected by retailers located in the state, including motor vehicle sales.

²"Planning and development" regions as established by the Nebraska Office of Planning and Programming and shown in the map below.

Source: Compilations by Bureau of Business Research from data provided by the Nebraska Tax Commissioner.

1971 YEAR TO DATE AS PERCENT OF 1970 YEAR TO DATE IN NEBRASKA'S PLANNING AND DEVELOPMENT REGIONS



(Continued from page 4)

insurance sales continued weak, being 15 percent below last year's December level. Thus, the levels of activity in most sectors of the state's economy are notably above those of last year—even if not in all sectors more so than in November.

Analysis of the December and November year-to-date net taxable retail sales situations reveals that although the year-to-year, December-to-December change was smaller than the November-to-November one, the twelve month dollar volume was 9.0 percent ahead of that of the same period in 1970. After November, the margin had been one of 8.7 percent. Thus, commencing with September, there has now been a four-month acceleration in the year-to-date expansionary pattern.

Regionally, the twelve-month gains (as shown in Table 3 and the Map on page 4) have been concentrated in ten of the state's twenty-six planning and development regions. Each of these ten has had an increase in its annual volume in excess of the 9 percent gain of the state as a whole. Regions 19, 18, 24, 15, 2, and 9, recorded increase of 15.2, 14.2, 12.1, 11.4, 11.3, and 11.0 percent, respectively—all marked gains. Changes in the retail activity in the principal trading centers of these and other regions are set forth in Table 4.

(Future articles, which will present comprehensive analyses of changes in retail sales for the regions, counties, and localities, will relate the retail sales to other factors. A number of the local developments that are relevant to the local economies will also be noted.)

E. L. H.

OCCUPATIONAL SAFETY AND HEALTH ACT

Nebraska businessmen should know that the March issue of the *National Safety News* is devoted to the Occupational Safety and Health Act of 1970. The magazine provides information on how to achieve compliance with OSHA standards in the areas of plant design and maintenance, industrial hygiene, machine operations, materials handling, personal protection, and medical facilities. Single copies are available at \$1.35 from the National Safety Council, 425 N. Michigan Ave., Chicago, Illinois, 60611.

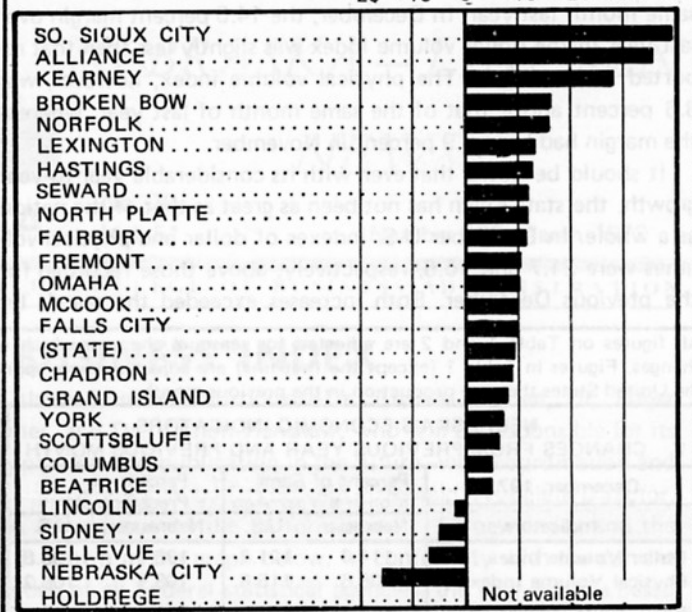
FINANCING SMALL BUSINESS

The problem of where to get money to operate and expand is a matter of critical concern to businessmen, particularly to owners of small businesses. Inflation, tight money, high interest rates, and customer demands for long-term credit have complicated the problem in recent years.

A checklist of 39 common types of financing from 23 sources, which has been prepared by the Small Business Guidance and Development Center of Howard University, shows that only about half these sources of finance are available to smaller corporations. It is pointed out that to minimize this heavy competitive penalty of "the money-cost gap," smaller businessmen have to utilize as many of these sources of funds as possible—in addition to their personal sources.

Because the concise checklist showing the sources of funds, types of funds, and "who can get each type of fund," should be useful to Nebraska small businessmen, the Bureau of Business Research has received permission to make it available to interested persons. Address the Bureau at 200 CBA, University of Nebraska-Lincoln, Lincoln, Nebraska 68508.

CITY BANKING ACTIVITY
Percent Change, Dec. 1970 to Dec. 1971
-20 -10 0 +10 +20 +30 +40



4. DECEMBER, 1971, CITY BUSINESS INDICATORS

The State and Its Trading Centers	Percent of Same Month a Year Ago			
	Banking Activity ¹	Retail Activity ²	Building Activity ³	Power Consumption ⁴
	(Adjusted for Price Change) ⁵			
<i>The State</i>	108.8	106.6	150.9	104.8
Alliance	134.2	125.8	165.4	106.4
Beatrice	103.7	101.8	349.1	111.3
Bellevue	92.8	119.7	165.9	85.9*
Broken Bow . . .	116.4	112.1	45.6	104.2
Chadron	108.5	113.6	127.2	116.4
Columbus	103.9	102.6	116.9	108.3
Fairbury	111.3	108.1	125.0	111.2*
Falls City	109.8	107.5	227.0	104.6
Fremont	110.9	102.7	74.3	105.1
Grand Island . .	107.5	114.6	124.1	102.1
Hastings	112.9	108.6	282.1	101.8
Holdrege	NR	112.4	62.6	105.0
Kearney	127.8	111.0	246.6	101.8
Lexington	113.3	101.9	404.4	120.6*
Lincoln	98.7	107.2	151.6	102.8
McCook	110.1	100.4	300.0	103.0
Nebr. City	84.0	97.0	136.0	105.3
Norfolk	116.2	104.0	110.1	103.6
No. Platte	111.6	109.5	222.4	132.2
Omaha	110.6	103.4	137.1	104.2
Scottsbluff . . .	104.6	109.0	113.0	106.4
Seward	111.8	108.1	164.7	107.8
Sidney	95.6	117.1	111.1	104.9
S.Sioux City . . .	137.1	104.1	301.9	96.4
York	106.2	115.9	326.9	100.6

¹ Banking Activity is the dollar volume of bank debits.
² Retail Activity is the Net Taxable Retail Sales on which the Nebraska sales tax is levied, *excluding motor vehicle sales*.
³ Building Activity is the value of building permits issued as spread over an appropriate time period of construction.
⁴ Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked * for which only one is used.
⁵ Banking Activity is adjusted by a combination of the Wholesale Price Index and the Consumer Price Index, each weighted appropriately for each city; Retail Activity is adjusted by the commodity component of the Consumer Price Index.
 NR No report due to lack of comparable data.
 Source: Compilation by Bureau of Business Research from reports of private and public agencies.

TABLE 1
ANNUAL PERCENTAGE CHANGES IN SECTOR INDEXES 1960-70
NEBRASKA UNITED STATES

Period	Total Dollar Volume	Agricultural Sector	Non-Agricultural Sectors				
			Total	Construction	Manufacturing	Distributive and Services	Government
1960-61	0.9	-16.7	5.2	+ 3.8	6.2	4.8	6.2
1961-62	8.0	+14.5	6.7	+ 2.2	6.7	7.1	7.0
1962-63	3.4	- 3.1	4.7	+ 0.0	3.5	5.0	7.0
1963-64	3.3	-15.4	6.8	- 2.7	12.6	5.9	7.5
1964-65	8.8	+37.4	4.5	+ 8.8	2.4	5.2	3.0
1965-66	10.6	+24.7	7.8	+ 6.1	12.7	7.8	2.1
1966-67	5.2	- 7.1	8.0	+ 5.3	11.4	6.3	12.1
1967-68	4.8	-13.3	8.4	+ 8.6	10.1	7.2	11.0
1968-69	12.6	+35.2	9.0	+17.4	8.8	8.0	10.3
1969-70	3.7	-13.6	7.1	+ 3.2	2.1	7.4	14.3
1960-70	80.0	+26.2	93.1	+64.9	107.5	86.8	115.4

Period	Total Dollar Volume	Agricultural Sector	Non-Agricultural Sectors				
			Total	Construction	Manufacturing	Distributive and Services	Government
1960-61	3.1	+ 1.8	3.2	3.1	- 0.1	4.5	6.1
1961-62	7.6	+ 2.3	7.9	6.4	+10.1	6.7	7.9
1962-63	5.6	+ 1.8	5.8	6.0	+ 5.2	5.8	7.3
1963-64	7.2	- 4.3	7.7	8.7	+ 7.7	7.6	8.0
1964-65	8.9	+15.5	8.6	10.1	+10.4	7.6	7.7
1965-66	9.3	+ 5.9	9.5	9.8	+ 9.8	8.6	12.0
1966-67	5.9	- 1.1	6.2	4.0	+ 2.6	7.2	11.4
1967-68	9.2	+ 2.6	9.4	9.4	+ 9.2	8.8	12.5
1968-69	7.8	+11.3	7.7	11.9	+ 4.6	8.7	8.9
1969-70	4.8	+ 1.0	4.9	3.6	- 0.9	7.0	9.7
1960-70	95.4	+41.9	97.8	101.8	+75.4	101.5	139.9

(Continued from page 3)

en, Nebraska shows a 75.3% agricultural increase compared with 38.0% for the United States. Thus the volatility of Nebraska agriculture makes rate of growth quite sensitive to the choice of beginning and ending years.) A comparison of Nebraska growth to U.S. growth for the government sector (115.4% vs. 139.9%) and for the distributive and service sectors (86.8% vs. 101.8%) reveals much the same relative lag in Nebraska growth as was seen in the overall index. Since these latter sectors for the most part provide services to Nebraska citizens and businesses, it is not surprising that their growth relative to U.S. growth for the same sectors should be closely related to overall Nebraska growth compared with overall U.S. growth.

Of the other two sectors, one (construction) grew less rapidly in Nebraska than in the United States (64.9% vs. 101.8%), showing a greater disparity between state and nation than did the overall index, while the other (manufacturing) grew more rapidly in Nebraska than in the nation (107.5% vs. 75.4%). Because manufacturing represents a "basic" industry for Nebraska (i. e., it sells much of its output outside the state), its relatively rapid growth has served as a partial offset to the slow growth in the other basic Nebraska industries (primarily agriculture). The growth of manufacturing was on a relatively small base, however, so its absolute growth was not sufficient to prevent a lag in the overall index for Nebraska.

If year-to-year growth of the overall dollar volume indexes for Nebraska and the United States are compared, it becomes apparent that the lag in Nebraska growth was not uniform over the decade. Generally the growth lag was greater in the first half of the decade (26.6% vs. 42.2%, 1960-65) than in the last half (36.9% vs. 42.8%, 1965-70), and for the most part the years of greatest lag were the relatively bad years for agriculture. In three years Nebraska's growth actually exceeded U.S. growth, and in each of those years (1961-62, 1965-66, and 1968-69) there were relatively large increases in the agricultural sector in Nebraska. Thus it would appear that the agriculture sector has been the dominant force during the 1960s in determining Nebraska's growth relative to the national average. The improved showing of the Nebraska dollar volume index in the latter half of the decade, however, appears to reflect the growth of Nebraska manufacturing, which is becoming large enough to help pull the Nebraska growth rate reasonably close to the U.S. rate. Construction activity also contributed to the stronger relative showing of the Nebraska index in the latter half of the decade.

MONTH-TO-MONTH MOVEMENTS

Month to month the Nebraska dollar volume index is more volatile than the U.S. index. Particularly in the early 1960s, much of the high volatility of the Nebraska index can be attributed to large monthly fluctuations in cash receipts from farm marketings. These receipts have been much more erratic for Nebraska than for the United States as a whole (although Nebraska cash farm marketings have become relatively more stable as the proportion of livestock marketings has risen). While the other Nebraska sector indexes are more stable than cash farm marketings, each sector index tends to be more volatile than the corresponding national index.³ It is not unusual for state indicators to be more erratic than national indicators, since fluctuations in different states may often tend to be offsetting in the national index. In addition there is often a tendency for fluctuations in the different sector indexes to be offsetting, so that an aggregate index is more stable than most of the individual sector indexes. Since the United States has a more diversified economy than Nebraska, there will be a greater tendency for sector fluctuations to cancel out in the U.S. index than in the Nebraska index.

FUTURE PLANS

As stated at the beginning of this article, no satisfactory method presently exists for annual computations of GSP. Our new state index, however, does use tentative GSP estimates in two ways. First, such estimates by sector serve as a basis for determining the relative importance or weight to be assigned each sector in computing the overall dollar volume index. Second, GSP estimates are used to adjust annually the change in those sector indexes which use indicators that seem to change at faster or slower rates than GSP for those sectors.

Thus further improvement and refinement of the Nebraska index are dependent in large part on development of better methodologies for making annual dollar estimates of GSP. The Bureau is cooperating with other bureaus and with their national organization in efforts to achieve this goal. As better methods for estimating GSP are devised, we will have a better tool for testing how well our new index reflects actual changes in the economy. In the meantime we will continue to review both the monthly and annual data for each of the sectors, placing special emphasis on efforts to improve our measurement in the agricultural and manufacturing areas.

VERNON RENSHAW

³Lack of space precludes publication here of charts showing the individual sector indexes. They will be included in the forthcoming bulletin.