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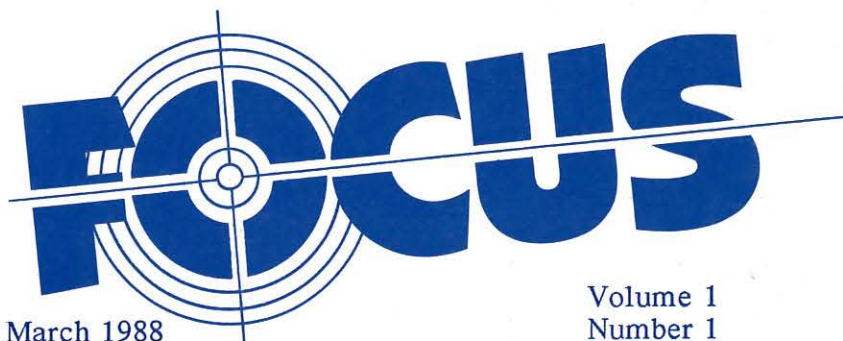
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ECONOMIC DEVELOPMENT TARGETING DATA BASE

by Jerome A. Deichert

Introduction

Local and state economic development practitioners recently have begun to realize that programs and activities must be targeted. A major problem facing communities and other organizations working on economic development is determining how to use limited resources to ensure the highest return in reaching local economic development goals. A targeted program focuses on the economic activities that are most likely to be successful for an area. Targeting can help stretch limited staff, time, and money.

How should economic development efforts be targeted? Ideally, targeting should be driven by information on industry and business performance trends, local and state competitive advantages, and local and regional economic development goals. A set of high-performance industries (high-performance could be defined in many ways) should be screened for compatibility with local competitive advantages, available resources, and goals. These industries and business areas that make it through the screening process become candidates for various economic development programs, including recruitment of new businesses, retention and expansion of existing businesses, or start-up of new businesses.

The Targeting Data Base

The Center for Applied Urban Research at the University of Nebraska at Omaha has developed an Economic Development Targeting Data Base to assist Nebraska's local and regional development groups in targeting their

economic development efforts. The data base is founded upon one indicator of industry performance--employment growth. An examination of local growth trends is insufficient to assess industry performance. The long-term prospects of any local industry are influenced by the economic well-being of that industry nationally. Therefore, this study also considers national and regional trends to better assess industry performance.

Data are provided for the United States, the West North Central Region (comprised of Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota), and Nebraska individually. The data base draws from two sources. The source for data about national and regional employment is *County Business Patterns*. Although *County Business Patterns* provides comparable data that are easy to obtain, data about many industries in Nebraska are suppressed because of the small number of firms. Therefore, Nebraska's employment data were obtained from the Nebraska Department of Labor.

Employment totals generally were reported for all four-digit Standard Industrial Classification (SIC) codes, although

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sometimes it was necessary to report data at the three-digit level to retain consistency between the two sources.

County Business Patterns does not include all employment; it excludes government employees, railroad employees, and self-employed persons. In addition, agricultural services, forestry, and fisheries; mining; contract construction; and certain areas of transportation and public utilities were excluded selectively from the data base. It should be emphasized that the data in the tables represent private employment. Therefore, data on employment in industries that contain both public and private components (predominantly service industries) consist only of private employment. This especially is true for schools and educational services, social services, hospitals, and some other health services.

Contents of the Data Base

The data base consists of six main files (tables), each containing the same information but sorted differently. Only industries that added employees at the national level between 1977 and 1984 are included in the files. The files are available on diskette or in printed form. This article describes the targeting data base by examining portions of two tables.

The first column of each table contains the SIC code, followed by a brief description of the industry. The third column consists of a three letter abbreviation of the broad industrial category. The next three columns present the percentage changes in employment between 1977 and 1984 for the United States, West North Central Region, and Nebraska. If an industry had no employees in 1977 but reported employees in 1984, the industry arbitrarily was assigned an increase of 100.0 percent.

The seventh column indicates the size of the industry in Nebraska in 1984. Nebraska's employment is represented by letters corresponding to a range of employees, to prevent disclosure of any confidential information.

The last two columns contain location quotients for Nebraska. Location quotients can be used to identify communities' possible competitive advantages. Industry targeting involves more than performance assessment; it should identify the industries that will take advantage of a community's competitive advantages.

A location quotient compares an industry's share of total employment in Nebraska with that industry's share of either national or

regional employment. Location quotients can be used to identify industries that bring dollars and jobs into an area. When an industry's local share exceeds the national average, a portion of that industry's employment may be considered export employment and may indicate a comparative advantage that should be exploited. When an industry's local share falls below the national average, that industry may rely on imports into the state, and is a potential candidate for import substitution.

Location quotients are calculated by dividing the percentage of individuals employed locally in a particular industry by the percentage of individuals employed nationally in the same industry. For example, if an industry represents 1 percent of Nebraska's employment and 2 percent of U.S. employment, the location quotient is .50 (1/2). On the other hand, if an industry represents 2 percent of Nebraska's employment and 1 percent of national employment, the location quotient becomes 2.0 (2/1).

If the location quotient is larger than 1, the industry may be considered one with export potential; but, if the location quotient is smaller than one, the industry most likely is underrepresented in Nebraska and is not meeting local needs. Obviously, the location quotient lacks sufficient precision to say that a value of 1 is a clear dividing line. Other authors have suggested that a location quotient should exceed 1.25 to indicate export activity. They also suggest a value of .75 to indicate that an industry is not meeting local needs.

Table 1 lists 25 industries with the fastest rates of employment growth nationally. The following example will show how to use the data base. Look at SIC code 7392, management and public relations services. Table 1 shows that this is a service industry that has increased 93.0 percent nationally, 82.4 percent regionally, and 147.5 percent in Nebraska. The size category (H) means that the industry employs 2,500 to 4,999 persons in Nebraska. The location quotients of 1.28 and 1.49 suggest that Nebraska exports management and public relations services to the United States and the region.

Table 1 shows that the number of industries in which Nebraska's growth exceeds the nation is about the same as the number in which Nebraska's growth lags the nation. The same relationship holds true for comparisons between Nebraska and the region. Table 1 also shows that Nebraska generally is underrepresented by the nation's fastest growing

Table 1
Top 25 Nationally Growing Industries, 1977-84

SIC Code	Industry	Broad Industrial Category	Percentage Change in Employees 1977-84			Industry Size for Nebraska 1984	Location Quotient 1984 ¹	
			U.S.	Region	Nebraska		Nebraska to U.S.	Nebraska to Region
3671	Electron tubes, receiving type	Man	1120.3	100.0	n.a.	0	n.a.	n.a.
8990	Services, n.e.c.	Ser	424.2	373.6	50.0	(B)	0.15	0.27
7379	Computer related services, n.e.c.	Ser	262.9	235.8	1472.7	(F)	1.36	1.60
7372	Computer programming and software	Ser	222.7	373.2	1019.6	(F)	0.46	0.97
4890	Communication services, n.e.c.	TCU	217.8	211.9	298.6	(G)	1.29	1.96
3693	X-ray apparatus and tubes	Man	189.0	60.2	100.0	(A)	0.01	0.01
8041	Offices of chiropractors	Ser	173.7	101.3	130.9	(E)	0.99	0.65
8090	Health and allied services, n.e.c.	Ser	160.3	33.2	73.8	(E)	0.27	0.52
8049	Offices of health practitioners, n.e.c.	Ser	138.5	174.5	543.5	(E)	1.20	1.21
7394	Equipment rental and leasing	Ser	130.8	157.3	237.7	(F)	0.74	1.03
4421	Noncontiguous area transportation	TCU	130.8	-100.0	n.a.	0	n.a.	n.a.
6220	Commodity contracts brokers, dealers	FIR	127.1	138.4	122.2	(C)	1.81	1.30
7331	Direct mail advertising services	Ser	113.0	42.9	157.1	(G)	3.54	3.33
5065	Electronic parts and equipment	Whl	110.1	111.1	11.9	(E)	0.29	0.42
6280	Security and commodity services	FIR	109.7	300.8	197.0	(B)	0.34	0.54
4224	Household goods warehousing	TCU	104.9	134.7	11.8	(B)	3.12	4.60
4722	Passenger transportation arrangements	TCU	104.1	111.9	120.6	(F)	0.60	0.73
3573	Electronic computing equipment	Man	102.7	70.3	215.8	(G)	0.85	0.55
5719	Miscellaneous home furnishings stores	Rtl	102.4	95.9	10.2	(C)	0.37	0.57
7819	Services allied to motion pictures	Ser	98.3	-75.3	100.0	(A)	0.06	0.98
2795	Lithographic platemaking services	Man	95.5	52.5	(R)	(C)	(R)	(R)
3830	Optical instruments and lenses	Man	94.6	230.5	(R)	(E)	(R)	(R)
7392	Management and public relations	Ser	93.0	82.4	147.5	(H)	1.28	1.49
7362	Temporary help supply services	Ser	88.9	92.4	55.7	(G)	0.43	0.60
8030	Offices of osteopathic physicians	Ser	88.5	73.3	-75.0	(A)	0.01	0.01

A: 0-19 employees; B: 20-99 employees; C: 100-249 employees; E: 250-499 employees; F: 500-999 employees; G: 1,000-2,499 employees; H: 2,500-4,999 employees; I: 5,000-9,999 employees; J: 10,000-24,499 employees; K: 25,000-49,999 employees. R: employment data were estimated using *County Business Patterns*, with no percentage changes or location quotients calculated. n.a.--not applicable n.e.c.--not elsewhere classified.

Man: Manufacturing; TCU: Transportation, Communication, and Utilities; Whl: Wholesale Trade; Rtl: Retail Trade; FIR: Finance, Insurance, and Real Estate; Ser: Services.

¹Location quotients were calculated based on a subset of an area's total employment.

Sources: U.S. Bureau of the Census, *County Business Patterns*, and Nebraska Department of Labor, unpublished data. Calculations by Center for Applied Urban Research.

industries. Location quotients of less than 1 outnumber those greater than 1 by a margin of 2 to 1. When compared to the region, a similar 2 to 1 margin emerges.

Several of the 25 fastest growing industries nationally also stand out in Nebraska. Nebraska outperformed the nation for three of the top five industries: Computer related services, not elsewhere classified (n.e.c.); computer programming and software services; and communication services, not elsewhere classified. In all three industries, Nebraska significantly outpaced the United States, and, in two of the industries, Nebraska appears to be a net exporter to the nation and the region. Nebraska appears to be importing computer programming and software services, with a location quotient of 0.46.

The largest location quotient can be found for direct mail advertising services (SIC code 7331), among the 25 fastest growing industries. It seems that this industry is one of Nebraska's most important exporters, with a location quotient of 3.54 when compared to the nation and 3.33 when compared to the region. Moreover, its rate of growth exceeds both the national and regional rates. Using criteria described below, direct mail

advertising would be a candidate for additional screening.

Table 2, which was also extracted from the data base, contains information similar to that presented in table 1 but it is arranged differently. Data in table 2 are ranked by industry size for Nebraska, and, within size class, they are sorted by percentage change in Nebraska employment. Table 2 contains information for industries with 2,500 to 49,999 employees.

In general, the state's largest industries are not among the fastest growing industries nationally, regionally, or at the state level. Furthermore, table 2 illustrates that rates of change in Nebraska's largest sectors typically are below the national rates. Three major exceptions are data processing services (306.8 percent); management and public relations services (147.5 percent); and business services, not elsewhere classified (73.0 percent). All of these industries are probable exporters with location quotients exceeding 1.25.

Nebraska's largest industries are either adequately represented in the state, or they represent export industries, as measured by the location quotient. Only one industry,

Table 2
Fastest Growing Industries in Nebraska, 1977-84

SIC Code	Industry by Nebraska Employment	Broad Industrial Category	Percentage Change in Employees 1977-84			Industry Size for Nebraska 1984	Location Quotient 1984 ¹	
			U.S.	Region	Nebraska		Nebraska to U.S.	Nebraska to Region
5810	Eating and drinking places	Rtl	39.9	-5.0	10.6	(K)	1.19	1.46
8050	Nursing and personal care facilities	Ser	45.0	51.4	23.0	(J)	1.59	0.90
8060	Hospitals	Ser	31.0	17.1	17.7	(J)	1.06	0.96
6020	Commercial and stock savings banks	FIR	20.2	23.5	12.8	(J)	1.15	0.99
5410	Grocery stores	Rtl	26.8	19.2	11.8	(J)	1.04	1.03
4210	Trucking, local and long distance	TCU	9.8	5.2	8.5	(J)	1.45	1.08
5310	Department stores	Rtl	7.6	5.8	-15.3	(J)	1.15	1.09
8220	Colleges and universities	Ser	67.9	77.6	46.8	(I)	0.83	0.79
8300	Social services	Ser	56.8	46.8	42.2	(I)	0.88	0.73
8010	Offices of physicians	Ser	49.2	48.0	31.2	(I)	1.03	1.00
6321	Accident and health insurance	FIR	17.0	10.1	9.8	(I)	39.49	20.89
3661	Telephone and telegraph apparatus	Man	16.6	15.8	3.9	(I)	5.61	16.71
7010	Hotels, motels, and tourist courts	Ser	34.2	18.0	-0.9	(I)	0.94	1.08
5510	New and used car dealers	Rtl	1.3	-7.0	-15.7	(I)	1.15	1.03
8660	Religious organizations	Ser	70.8	59.6	(R)	(I)	(R)	(R)
7374	Data processing services	Ser	79.1	56.0	306.8	(H)	2.18	1.87
7392	Management and public relations	Ser	93.0	82.4	147.5	(H)	1.28	1.49
7399	Business services, n.e.c.	Ser	45.9	22.1	73.0	(H)	1.50	2.01
2752	Commercial printing, lithographic	Man	61.0	69.9	52.5	(H)	1.23	0.83
7349	Building maintenance services, n.e.c.	Ser	42.6	63.5	49.4	(H)	1.13	1.08
6120	Savings and loan associations	FIR	60.9	34.7	39.2	(H)	1.26	1.38
6310	Life insurance	FIR	9.1	26.9	39.1	(H)	1.01	0.79
8100	Legal services	Ser	64.4	55.9	36.9	(H)	0.76	0.91
8020	Offices of dentists	Ser	56.9	55.7	35.4	(H)	0.97	0.95
6400	Insurance agents, brokers and service	FIR	36.4	28.9	34.8	(H)	1.18	1.08
8640	Civic and social associations	Ser	13.5	11.5	21.0	(H)	1.92	1.24
7230	Beauty shops	Ser	10.9	12.0	14.7	(H)	1.24	1.04
5153	Grain	Whl	11.5	15.3	12.2	(H)	10.47	1.73
6330	Fire, marine, and casualty insurance	FIR	14.3	22.9	9.3	(H)	1.28	1.15
2710	Newspapers	Man	14.2	8.9	1.2	(H)	1.25	1.07
5910	Drug and proprietary stores	Rtl	15.0	3.1	0.0	(H)	1.03	1.02
5210	Lumber and other building materials	Rtl	26.2	-2.6	-15.1	(H)	1.40	1.12
8910	Engineering and architectural services	Ser	63.1	16.3	-27.9	(H)	0.65	0.93

H: 2,500-4,999 employees; I: 5,000-9,999 employees; J: 10,000-24,499 employees; K: 25,000-49,999 employees. R: employment data were estimated using County Business Patterns, with no percentage changes or location quotients calculated. n.e.c.--not elsewhere classified.

Man: Manufacturing; TCU: Transportation, Communication, and Utilities; Whl: Wholesale Trade; Rtl: Retail Trade; FIR: Finance, Insurance, and Real Estate; Ser: Services.

¹Location quotients were calculated based on a subset of an area's total employment.

Sources: U.S. Bureau of the Census, County Business Patterns, and Nebraska Department of Labor, unpublished data. Calculations by Center for Applied Urban Research.

engineering and architectural services, falls below a location quotient of 0.75. The major exporting industries and their location quotients are accident and health insurance carriers (39.49), grain wholesalers (10.47), and telephone and telegraph apparatus manufacturing (5.61). These industries are not among the growth leaders; all three fall below the region's rate and two of the three fall below the national rate.

Description of the Complete Data Base

The economic development targeting data base can be used in a variety of ways. The six

files provide different ways of arranging the data for analysis. The first file lists all of the industries with national employment gains between 1977 and 1984 by SIC code and provides a starting point from which the remaining tables originate. File 2 ranks the industries by their rates of growth at the national level, allowing for quick identification of the most rapidly expanding industries. File 3 ranks the industries by their rates of change in Nebraska between 1977 and 1984, to facilitate comparisons with national data. Because percentage rates of change are influenced by the employment size of the industry (small changes in small industries

will have large percentage changes), file 4 categorizes industries by number of employees in Nebraska during 1984. Then, the industries are ranked by percentage change within the employment size class. File 5 arranges the data by location quotient, and file 6 lists the actual U. S. employment for each industry.

Organizations with a statewide mission or an organization operating in an area where most of the state's employment for a specific industry is located could use this data base to identify industries that are growing rapidly nationally or regionally, but are stagnating or declining in Nebraska. Once identified, these high-performance industries (at the national and regional levels) could be studied for possible action.

The data base will probably be used to identify industries that are growing nationally and growing even faster in the West North Central Region. These might be called high-performance regional industries. Once identified, these industries could be divided into two groups, depending on Nebraska's rate of growth. One group could include the high-performance industries that are growing at a rate in Nebraska that is less than the regional rate. The second group could contain industries that are growing faster in Nebraska than throughout the region.

Location quotients can be used two ways. First, industries with location quotients greater than 1 may indicate basic industries for which Nebraska has a comparative advantage. Industries with regional and national location quotients of less than 1 indicate that Nebraska is underrepresented. If both the region and the nation are gaining employment faster than Nebraska, these industries may be candidates for import substitution.

Summary

The previous examples and tables are suggested ways of using the data base. The files (tables) in the data base are a few of many possible ways the data base could be arranged. Users who obtain the data base on diskette will be able to manipulate the files easily.

It should be emphasized that the Economic Development Targeting Data Base, by itself, will not provide all of the information needed for targeting local or regional economic development efforts. Employment trend data and location quotients will aid in the identification of high-performance industries--industries that might be best bets for development efforts.

No attempt was made to screen industries for compatibility with the competitive advantages and goals of the state. Furthermore, the industries must be screened for compatibility with the local area or region.

Because two sources of data were used, as stated earlier, there may be inconsistencies in reporting dates and procedures. In addition, data for the states comprising the West North Central Region were suppressed frequently, resulting in estimation of some employment counts. Consequently, caution should be used when comparing national, regional, and state data. The data base is not intended to provide the final solution, but is intended to help narrow the field of feasible industries.

Because an industry has grown in the past, does not guarantee that it will grow in the future. Therefore, the targeting data base should be augmented with employment projections. A report prepared by the U. S. Department of Labor contains projections for three-digit SIC codes for the years 1984 through 1995 and would be an excellent supplement to the economic development data base.

For more information about this data base call the author at 554-8311.

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