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Nebraska Department of Labor ES-202 Estimates Quality Study

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Nebraska Department of Labor
ES-202
Estimates Quality Study

February 1988

Center for Applied Urban Research
College of Public Affairs and Community Service
University of Nebraska at Omaha

Nebraska Department of Labor ES-202 Estimates Quality Study

Introduction

The Employment and Wages (ES-202) Report is the only source of employment and total wages data available in complete industry detail, and forms the basis for several important federal, state, and local economic indicators. The quality of the data, therefore, is of major importance.

The federal government uses ES-202 data in the following: Gross National Product, Annual Manpower Planning, Current Employment Statistics (CES), Occupational Safety and Health Statistical Programs (OSHA), Unemployment Insurance (UI), and other reports. Nebraskans use the data to study employment trends, make comparisons with other states, monitor employment levels, and feed into CES files and other reports. Locally, the ES-202 data serve as the labor market information base for county and labor market levels, and are the only economic indicators available monthly and on a consistent and timely basis. In addition, the data are used in special studies of labor disputes, wage rates, hiring practices, impact studies, foreign trade imports, job development referrals, and others.

Because of their many important uses, ES-202 data must be as accurate as possible. The ES-202 file consists of two types of data: Actual data collected by survey and estimates made by the state or Bureau of Labor Statistics (BLS) when data are not available because of incomplete or missing surveys. Improving the estimates will improve the accuracy of the data file.

It should be noted that the major portion of this report pertains to the Labor Market Information (LMI) Division of the Nebraska Department of Labor. LMI is responsible for gathering information from employers with multiple firms, while the Unemployment Insurance (UI) Division collects information about individual employers. Because UI collects a larger share of the data, changes and improvements in LMI procedures will have a more limited impact on the overall accuracy of the employment data.

As part of an effort to upgrade the ES-202 file's usability as a major indicator of economic activity, BLS has initiated research into several areas. This report addresses the following questions:

- How accurate are estimates when compared with actual late data?

- How long should missing reports be estimated before being dropped from the ES-202 report?
- Should larger firms be estimated for a longer period of time than smaller firms?
- What information is available on business births during the period between date of liability and date of first report.

Accuracy of the Estimates

The employment security manual states, "The ultimate goal is to minimize the number of accounts for which estimates have to be made." However, when estimates are unavoidable, they should be as accurate as possible, and their quality should be evaluated. To determine if the data collection process can be improved to lessen the need for estimates, in this section the sequence of procedures and steps that LMI follows when preparing the ES-202 files are reviewed.

In this section, two methods for evaluating the quality of the estimates are used. First, the Center for Applied Urban Research (CAUR), University of Nebraska at Omaha, evaluated the estimates relative to the portion of the total records that they represent. Second, CAUR assumed a representative sample of reporting firms had missing data. CAUR generated estimates from this sample at the two-digit SIC code level, and compared them to the actual reported numbers.

Process Review

Overall accuracy of the ES-202 file depends partly upon the performance of certain duties by state personnel. Although the BLS manual lists functions and procedures to be followed in collecting and processing data, adherence to these policies must be reviewed. Improvements in the personnel/work flow areas could decrease the need for estimates, resulting in improved accuracy.

LMI staff should do as much as possible to ensure that estimates are unnecessary. It appears that the data collection process could be improved, and any improvement in data collection, obviously, would improve the quality of the reported data. Follow-up of employers who do not return forms or who return incomplete forms is of utmost importance.

First and second delinquency notices should be mailed to employers within 30 days. A copy of the survey and a cover letter urging completion should be sent to those submitting incomplete forms. Employers also should be contacted

by telephone to verify data which seem unsatisfactory during initial editing. Priority should be given to larger employers who account for a major proportion of employment in an industry.

After LMI enters data into the file, several procedures could be followed to improve accuracy. As late data are received, they should replace estimates entered previously. LMI should check into the feasibility of using the Computer-Assisted Telephone Interview (CATI) system for survey follow-up.

In addition, LMI staff should take the lead in coordinating activities with other divisions within the Department of Labor (that is, UI and CES) who collect, enter, process, or use data in the ES-202 files. Explanation codes for major changes in the data should be entered, especially for the benefit of other departments or agencies using the ES-202 file. Final editing should be completed far enough in advance of the due date so that errors can be identified and corrected.

Empirical Review

Table 1 summarizes the average monthly covered employment in Nebraska for total and estimated employment in 1986. Total employment is the sum of estimated employment and reported employment. Tables 2 through 6 contain detailed data for two-digit SIC codes and present data for all four quarters and the annual average for 1986. Totals come from standard reports generated from the ES-202 program, while estimates come from special computer runs.

The major purpose of these tables is to evaluate the estimated portion of total employment. Secondly, they provide background information that can be used to determine the potential impact of estimation on total employment and on employment in specific industries. CAUR also used this information to determine the sample proportion for the detailed evaluation of the estimating procedures.

In 1986, a quarterly average of 2,063 firms required estimates, accounting for employment of 18,678 persons (table 1). The size of the estimates varied from quarter to quarter. The estimated number of firms ranged from a high of 2,610 in the fourth quarter to a low of 1,762 in the third quarter. Estimated employment ranged from a high of 23,977 in the fourth quarter to a low of 15,151 in the second quarter.

Table 1 shows that in 1986, estimates of total employment accounted for an average of 4.75 percent of the state's firms, representing 2.97 percent of the state's total employment. The percentage of firms requiring estimation ranged from a high of 6.01 percent in the fourth quarter of 1986 to a low of 4.05 percent in the third quarter. The percentage of total estimated

employment ranged from a high of 3.76 percent in the fourth quarter to a low of 2.39 percent in the second quarter.

The reason for differences between the percentages of firms and employment is that firms with delinquent accounts or missing data generally are smaller than reporting firms. Table 1 indicates that all firms (those reporting and those estimating) averaged 14.5 employees per establishment. In contrast, firms with estimates averaged 9.1 employees per establishment. Although smaller firms are more likely to require estimation, industries with smaller firms do not have a significantly higher percentage of employment estimated. The correlation coefficient between total employment per firm and percentage of employment estimated is $-.048$.

Tables 2 through 6 review total and estimated employment by two-digit SIC code. Table 2 presents information for the average of 1986, while the remaining tables present information for each quarter in 1986. The tables illustrate that the relative amount of estimation varies considerably among industries during a particular period, and that variation occurs from quarter to quarter for specific industries. In addition, the tables show that as the level of aggregation decreases, the variability increases.

Table 2 shows that wholesale trade was the major sector with the largest percentage of firms requiring estimation (6.29 percent). Government had the lowest percentage of estimated firms with 1.12 percent. Incidentally, wholesale trade recorded the smallest ratio of employees per firm and government recorded the largest ratio. Among individual firms, construction had 3.94 percent of its employment estimated, while government only had 1.47 percent of its employment estimated.

At the two-digit level, estimation was required of more than 10 percent of the firms in two sectors: Leather and leather products (15.38 percent) and pipelines, except natural gas, (14.46 percent). Estimated employment levels exceeded 10 percent in four industries. The firms were led by instruments and related products (13.90 percent), furniture and fixtures (12.57 percent), fabricated metal products (10.74 percent), and pipelines, except natural gas, (10.07 percent).

Tables 3 through 6 review similar information for individual quarters. They show that, at the two-digit level, it was common for the percentage of firms or employment requiring estimation to surpass 10 percent, and, in some instances, the percentage of estimated employment was about 40 percent. In the second quarter, 41.23 percent of the employment in furniture and fixtures was estimated, and 41.10 percent of the employment in instruments and related products was estimated. Another relatively high level occurred in the fourth quarter as electric, gas, and sanitary services estimated 38.99 percent of its employment.

CAUR set the sample size of firms to be estimated at five percent of reporting firms. We used five percent because previously it was determined that five percent of firms required estimates during 1986. The sample was drawn, using a systematic sample of reporting firms (every twentieth firm), from the ES-202 files for the first quarter of 1986. The estimation procedure for the sampled firms assumed two types of missing data: Employment numbers were unreported but wages were reported (method 1), and the entire report was missing (method 2). The standard procedures used by LMI generated estimates for sampled firms, and summaries were prepared at the two-digit SIC code level for comparison.

Table 7 summarizes the results of the procedures. The 1,725 firms in the sample accounted for 29,225 employees. These firms were assumed to have missing data, and employment estimates were made using each of the methods. Because the report preparation procedure aggregated data about individual firms, the average number of errors per firm cannot be measured adequately. As the degree of aggregation increases, the absolute and relative levels of error decrease, because firms with high estimates offset firms with low estimates.

Using method 1, estimated employment was 29,456 and exceeded actual employment by 231 persons. Because the first estimation method assumes a constant wage per employee ratio from quarter to quarter, it could be assumed that this method overestimates the number of industries in which average wage rates are increasing and underestimates those in which average wage rates are decreasing. The difference for method 1 averages much less than 1 person per firm (0.134) and amounts to 0.8 percent of actual employment.

Using method 2, estimated employment was 27,333 and fell below actual employment by 1,892 persons. Method 2 assumes that all data were missing, and requires a different estimation procedure than method 1. Because most firms in Nebraska have less than 50 employees, it is likely that most of the employment was estimated by holding constant the most recently reported monthly employment total for the subsequent quarter. As a result, it appears that this method underestimates employment in growing industries and overestimates employment in declining industries. The difference for method 2 averages just over 1 person per firm (1.097) and comes to 6.5 percent of actual employment.

To understand the importance of this difference, refer to the percentage of total employment estimated in the first quarter (table 3). Assuming that actual employment was underestimated by 6.5 percent and 2.97 percent of the reported employment was estimated, the actual employment value could be underestimated by as much as 0.2 percent ($-.065 \times .0297$). This level of

error may be tolerable for total employment, but for specific industries the error may be large enough to mask actual changes in employment. For example, the sample resulted in a difference between actual and estimated employment for heavy construction contractors of 59.2 percent. Applied with its estimation percentage of 3.55 percent, employment in this industry may have been overestimated by as much as 2.1 percent.

LMI should continue to conduct the procedures described above to assist in quality control. By identifying industries with more than a specified percentage of their employment estimated (for example, 10 percent), LMI could identify firms that require extended follow-up.

Carrying Estimates

In general, field auditors follow-up and identify out-of-business accounts within two quarters. Therefore, a reasonable ES-202 procedure for dealing with delinquent accounts would be to calculate estimates for the first missing quarter, zero-fill the second missing quarter, and delete the establishment from subsequent quarters.

Ideally, employers who go out of business notify the Nebraska Department of Labor so that their accounts can be canceled. If a newly out-of-business employer simply fails to return the contribution report, the delinquency shows up on the field auditor's report 10 weeks after the end of the quarter. If the employer has a history of reporting problems, the auditor will contact the employer within 1-2 weeks, determine if the establishment is out of business, and provide information for the tax file.

Delinquency Follow-up

If all contribution reports and statistical supplements were received on time, the need for calculating estimates would be eliminated. Consequently, an accurate ES-202 report depends not only on quality estimation but also on delinquency follow-up to minimize the number of accounts that must be estimated.

Minimum delinquency follow-up in Nebraska for an average size employer with no previous reporting problems typically includes the following activities:

WEEK 0 Quarter 1 ends, contribution report mailed to employer.

WEEK 4 Contribution report due for quarter 1.

WEEK 6 First delinquent notice is mailed to employer.

- WEEK 10 Second delinquent notice is mailed to employer.
- WEEK 13 Quarter 2 ends, contribution report mailed to employer.
- WEEK 17 Contribution report due for quarter 2.
- WEEK 19 Third delinquent notice is mailed to employer. Field unit contacts employer either by telephone or by personal visit.
- WEEK 21 Field unit contacts employer by personal visit.
- WEEK 23 Forth delinquent notice is mailed to employer. Notice to produce records mailed to employer.
- WEEK 26 Quarter 3 ends, contributions report mailed to employer.
- WEEK 27 Commissioner of Labor's subpoena sent to county sheriff to be served on employer.
- WEEK 30 Sheriff serves commissioner's subpoena on employer. Contribution report due for quarter 3.
- WEEK 32 Fifth delinquent notice is mailed to employer. Field supervisor requests Legal Division obtain a court order for employer to produce records.
- WEEK 36 If employer fails to respond to court order, employer is found in contempt of court. Sixth delinquent notice is mailed to employer.
- WEEK 40 If employer fails to appear on contempt charge, a bench warrant is issued for employer's arrest.

Most employers report delinquent data early in the follow-up process. Approximately 85 percent of employers report by the week 4 due date. Another 7 percent report by week 10, and still another 3 percent report by week 17.

If a delinquent employer has previous reporting problems, field auditors will make personal contact during week 10, rather than during week 17 as stated earlier.

Incentives for Timely Reporting

Most employers have several incentives for returning their contribution reports on time, including the following:

- Interest charges accrue to delinquent contributions at the rate of 18 percent per year.
- Employers can receive a credit on their Federal 940 (FUTA tax) if all state payments for the previous year are in by January 31.
- Employers with 3 or more years experience are eligible for a lower tax rate based on their reserve balance, provided that all reports are filed.
- Delinquent reporting often results in additional accounting and legal costs.

Some employers have no monetary incentives for submitting a quarterly contributions report. These employers include:

- Employers with no employment during the quarter.
- Employers whose wages fail to exceed the \$7,000 annual taxable wage base.

In both circumstances, employers owe no tax and, therefore, are not required to file contribution reports. For purposes of the ES-202 report, it would be desirable to have these employers file contribution reports, although no contribution would be due.

Nebraska's recent conversion to wage reporting is expected to reduce the number of delinquent reports and, therefore, help improve the accuracy of the ES-202 report. Because wage reporting links unemployment benefits to reported wage records, an employer's reporting must be kept current for claims to be processed. As a result, field auditors will be giving a high priority to quickly securing delinquent reports.

If the employer is small and has no history of reporting problems, the field auditor will probably not attempt to contact the employer until shortly after the second quarterly contribution report becomes delinquent. At that time, the out-of-business status would be discovered and entered into the tax file.

A potential improvement might be to develop a mechanism for quarterly communication between the field auditors and the ES-202 staff. The field auditors could provide a list of accounts that are more than two quarters delinquent and that, through their investigations, they know or suspect continue to operate. The ES-202 staff could then carry estimates for these accounts beyond the normal two-quarter limit.

Size of Firm and Length of Estimation Period

Nebraska's experience is that larger firms need not be estimated for longer period of time than smaller firms. But, because of their greater impact on the ES-202, larger delinquent accounts should be (and are) investigated more quickly. If investigation by the field auditors or ES-202 staff determines that the firm remains in business, the firm's data should be estimated until the reporting problem is resolved. Here again, periodic contact between the field auditors and the ES-202 staff would be helpful in identifying firms to be estimated beyond two quarters.

The problem firms are more likely to be smaller firms. These firms are more likely to be delinquent, and they may experience quarters when they do not have any covered employment. Priority, therefore, should be placed in investigating larger firms, especially if they are in industries for which a sizable portion of the employment has to be estimated.

Business Births

In Nebraska, the UI Division detects new individual employers through unemployment insurance information. The UI Division discovers new employers in the following ways:

- Voluntary compliance.
- Quarterly Internal Revenue Service tapes are used to match federal identification numbers with employers' tax numbers to detect new start-ups. Each quarter 1,200 cases are investigated.
- Investigation of individual files in the claim area. New branches of a multiple employer are most likely detected through the balance edit of multiple and single employers.

It is possible for a new employer not to meet the UI requirement for a year and, therefore, not be entered into the system. However, in most cases

these are small firms which will have only minor impact upon ES-202 report accuracy.

The UI file lists information by the following dates to help identify the actual date that a business began:

- Liable date—Date the employer first had covered employment in the state.
- Qualifying year quarter—Quarter in which the liability requirements were met (30 days after the qualifying quarter).
- Establishment date—Date the employee was entered into the computer system (for internal purposes only).

The LMI staff should investigate the possibility of coordinating activities with the Nebraska Department of Revenue. The Department of Revenue also tracks firms through income taxes and sales taxes. By coordinating efforts it may be possible to identify new firms more readily. UI also could be given incentives to track firms, even if they are not responsible for taxes.

Recommendations

In addition to the specific recommendations presented at the end of each section, the following general recommendations will make the ES-202 data more usable for analytical purposes. Accuracy and quality of data are important, but a change in focus also is required.

Currently, the ES-202 report essentially is an administrative report, developed secondarily from the regulatory function associated with unemployment insurance. In addition, the preparation of the report is production oriented, that is, meeting deadlines is the sole goal and the end product is a tape that is sent to BLS. If the ES-202 report is to be used for analytical purposes, greater attention should be placed on making the data more accessible and usable. Moreover, BLS could give states incentives to develop or improve their analytical capabilities.

One of the easiest changes that could be made is a name change. The name ES-202 implies an administrative report, and gives no indication as to its content. If the report were given a more descriptive title, it might be used more.

A major problem is the administrative structure of the data collection procedure. LMI does not have much control over collection of the data. It maintains the multi-establishment files, but the primary responsibility for data

collection lies with the UI Division. UI's activities are centered around collecting taxes and not in ensuring the integrity of data for analytical purposes. UI should be given incentives to expand the amount of data collected.

Because report preparation primarily is production oriented, the process stops when the tape is mailed. However, the need for accurate data does not end when the production deadlines are met, and the tape is mailed to BLS. In fact, for analytical purposes the need for accurate data just begins. State and local data users are concerned with the ongoing accuracy of the data, and are not concerned with the timing. (A recent article in the *Lincoln Journal* questioned the accuracy of the employment data.) Therefore, even if firms report after LMI mails the tape to BLS, the estimates should be replaced and the file updated. Annually, the quarterly reports could be revised.

BLS and LMI should examine some of the current technologies that could improve the accessibility of the data. Tapes are cumbersome and force an artificial closure on the ES-202 file. In addition, the process encourages production rather than analysis. Given current technology, the data in the ES-202 file could easily be transmitted electronically. This may shift the focus from report production to file maintenance. At the same time, it would allow for the development of an electronic bulletin board. Users could call in and obtain data for their areas. Data would be available more quickly and in a more usable format.

As LMI expands its analytical and statistical capabilities, it must also expand its outreach functions. Education and training programs could be developed to explain the value of ES-202 data for things such as strategic planning and marketing. Firms that provide the data could be shown how the ES-202 data can be used to compare employment trends within industries in their market areas or among industries at the state level.

Table 1

Summary of Average Monthly Employment in Nebraska
by Quarter, 1986

Quarter	Total Employment		Estimated Employment		Estimated as a percentage of total employment		Employment per Firm	
	Firms	Persons	Firms	Persons	Firms	Persons	Total	Estimated
	Number		Number		Percent		Number	
First quarter 1986	43,088	613,110	1,769	18,311	4.11	2.99	14.2	10.4
Second quarter 1986	43,588	634,873	2,111	15,151	4.84	2.39	14.6	7.2
Third quarter 1986	43,525	633,163	1,762	17,273	4.05	2.73	14.5	9.8
Fourth quarter 1986	43,449	637,421	2,610	23,977	6.01	3.76	14.7	9.2
Annual average 1986	43,413	629,642	2,063	18,678	4.75	2.97	14.5	9.1

Table 2
Average Monthly Employment in Nebraska,
by Industry, Annual 1986

Industry description	Total Employment		Estimated Employment		Estimated as a percentage of total employment		Employment per Firm	
	Firms	Persons	Firms	Persons	Firms	Persons	Total	Estimated
	Number		Number		Percent		Number	
Total employment all industries	43,413	629,642	2,063	18,678	4.75	2.97	14.5	9.1
Private	39,761	501,132	2,022	16,784	5.09	3.35	12.6	8.3
Agricultural services, forestry, fisheries, and other	1,101	7,107	57	241	5.18	3.39	6.5	4.2
Agricultural production crop	170	1,506	8	45	4.71	2.99	8.9	5.6
Agricultural production livestock	250	2,581	9	96	3.60	3.72	10.3	10.7
Agricultural services	681	3,020	40	99	5.88	3.28	4.4	2.5
Forestry	0	0	0	0	0.00	0.00	0.0	0.0
Fishing, hunting, and trapping	0	0	0	0	0.00	0.00	0.0	0.0
Mining	199	1,725	10	50	5.02	2.90	8.7	5.0
Metal mining	1	3	0	0	0.00	0.00	0.0	0.0
Bituminous coal and lignite mining	0	0	0	0	0.00	0.00	0.0	0.0
Oil and gas extraction	112	684	7	29	6.25	4.24	6.1	4.1
Nonmetallic minerals, except fuels	87	1,037	3	21	3.47	2.03	12.0	7.0
Construction	4,454	24,594	273	970	6.13	3.94	5.5	3.6
General building contractors	1,253	6,294	77	258	6.14	4.10	5.0	3.4
Heavy construction contractors	526	3,934	29	81	5.51	2.06	7.5	2.8
Special trade contractors	2,675	14,365	168	631	6.28	4.39	5.4	3.8
Manufacturing	1,776	87,192	82	3,179	4.62	3.65	49.1	38.8
Food and kindred products	352	27,007	17	1,196	4.83	4.43	76.7	70.4
Tobacco manufactures	0	0	0	0	0.00	0.00	0.0	0.0
Textile mill products	11	136	1	4	8.89	2.94	12.1	4.0
Apparel and other textile products	39	1,850	1	4	2.60	0.22	48.1	4.0
Lumber and wood products	96	1,566	4	25	4.18	1.60	16.4	6.3
Furniture and fixtures	34	1,527	3	192	8.96	12.57	45.6	64.0
Paper and allied products	23	1,654	1	78	4.35	4.72	71.9	78.0
Printing and publishing	402	8,492	18	155	4.48	1.83	21.2	8.6

Table 2 (continued)

Industry description	Total Employment		Estimated Employment		Estimated as a percentage of total employment		Employment per Firm	
	Firms	Persons	Firms	Persons	Firms	Persons	Total	Estimated
	Number		Number		Percent		Number	
Chemicals and allied products	65	2,647	3	14	4.65	0.53	41.0	4.7
Petroleum and coal products	5	129	0	0	0.00	0.00	25.8	0.0
Rubber and misc. plastics products	54	4,664	1	4	1.84	0.09	86.0	4.0
Leather and leather products	7	301	1	8	15.38	2.66	46.2	8.0
Stone, clay, and glass products	125	2,581	5	89	4.02	3.45	20.7	17.8
Primary metal industries	23	1,451	1	43	4.35	2.96	63.1	43.0
Fabricated metal products	128	6,316	8	678	6.25	10.74	49.3	84.8
Machinery, except electrical	224	10,468	9	131	4.02	1.25	46.7	14.6
Electric and electronic equipment	52	8,308	3	115	5.83	1.38	161.3	38.3
Transportation equipment	46	4,350	2	17	4.37	0.39	95.1	8.5
Instruments and related products	38	2,900	2	403	5.33	13.90	77.3	201.5
Miscellaneous manufacturing industries	56	847	2	26	3.60	3.07	15.3	13.0
Transportation and public utilities	2,260	31,296	126	1,043	5.58	3.33	13.9	8.3
Local and interurban passenger transit	62	1,332	5	36	8.06	2.70	21.5	7.2
Trucking and warehousing	1,401	13,400	90	454	6.42	3.39	9.6	5.0
Water transportation	8	56	0	0	0.00	0.00	7.0	0.0
Transportation by air	94	1,059	5	40	5.35	3.78	11.3	8.0
Pipelines, except natural gas	21	109	3	11	14.48	10.07	5.3	3.7
Transportation services	116	1,133	6	39	5.18	3.44	9.8	6.5
Communication	332	10,678	11	129	3.32	1.21	32.2	11.7
Electric, gas, and sanitary services	227	3,530	7	334	3.08	9.46	15.5	47.7
Wholesale trade	4,798	46,353	302	1,797	6.29	3.88	9.7	6.0
Durable goods	2,415	21,634	153	731	6.33	3.38	9.0	4.8
Nondurable goods	2,383	24,719	148	1,067	6.21	4.32	10.4	7.2
Retail trade	10,172	122,605	478	4,290	4.70	3.50	12.1	9.0
Building materials and garden equipment	752	5,035	25	142	3.32	2.82	6.7	5.7
General merchandise stores	278	16,351	12	879	4.31	5.38	58.8	73.3
Food stores	1,039	18,292	33	393	3.18	2.15	17.6	11.9
Automotive dealers and service stations	1,729	15,163	67	328	3.88	2.16	8.8	4.9
Apparel and accessory stores	781	6,172	31	201	3.97	3.26	7.9	6.5
Furniture and home furnishings stores	669	4,546	33	140	4.93	3.08	6.8	4.2
Eating and drinking places	2,936	43,417	195	1,790	6.64	4.12	14.8	9.2
Miscellaneous retail stores	1,989	13,630	81	417	4.07	3.06	6.9	5.1

Table 2 (continued)

Industry description	Total Employment		Estimated Employment		Estimated as a percentage of total employment		Employment per Firm	
	Firms	Persons	Firms	Persons	Firms	Persons	Total	Estimated
	Number		Number		Percent		Number	
Finance, insurance, and real estate	3,596	45,639	145	1,252	4.03	2.74	12.7	6.6
Banking	453	11,103	6	294	1.33	2.65	24.5	49.0
Credit agencies other than banks	451	5,700	24	330	5.33	5.79	12.7	13.8
Security and commodity brokers and services	152	1,446	12	114	7.91	7.89	9.5	9.5
Insurance carriers	290	16,001	8	231	2.76	1.44	55.2	28.9
Insurance agents, brokers, and services	1,120	5,406	46	110	4.11	2.03	4.8	2.4
Real estate	973	5,060	44	165	4.52	3.26	5.2	3.8
Combined real estate, insurance, etc.	57	333	2	4	3.49	1.20	5.8	2.0
Holding and other investment companies	101	591	4	6	3.95	1.02	5.8	1.5
Services	11,407	134,622	550	3,962	4.82	2.94	11.8	7.2
Hotels and other lodging places	364	7,132	16	109	4.40	1.53	19.6	6.8
Personal services	1,335	7,426	60	259	4.49	3.49	5.6	4.3
Business services	1,887	31,003	127	1,213	6.73	3.91	16.4	9.6
Auto repair, services, and garages	1,030	4,544	65	165	6.31	3.63	4.4	2.5
Miscellaneous repair services	560	2,102	29	81	5.18	3.85	3.8	2.8
Motion pictures	88	814	4	29	4.53	3.56	9.2	7.3
Amusement and recreation services	507	5,178	22	153	4.34	2.95	10.2	7.0
Health services	2,263	47,113	88	1,283	3.89	2.72	20.8	14.6
Legal services	769	3,620	39	132	5.07	3.65	4.7	3.4
Educational services	102	6,131	4	56	3.94	0.91	60.4	14.0
Social services	454	7,411	20	148	4.41	2.00	16.3	7.4
Museums, botanical, zoological gardens	15	340	1	3	6.56	0.88	22.3	3.0
Membership organizations	756	5,887	23	187	3.04	3.18	7.8	8.1
Private households	623	1,035	26	30	4.18	2.90	1.7	1.2
Miscellaneous services	656	4,887	28	116	4.27	2.37	7.5	4.1
Government and government enterprises	3,651	128,510	41	1,894	1.12	1.47	35.2	46.2
State	869	28,477	0	0	0.00	0.00	32.8	0.0
Local	2,203	82,489	18	1,530	0.82	1.85	37.4	85.0
Federal	579	17,545	23	364	3.97	2.07	30.3	15.8

Table 3

Average Monthly Employment in Nebraska.
by Industry, 1st Quarter 1986

Industry description	Total Employment		Estimated Employment		Estimated as a percentage of total employment		Employment per Firm	
	Firms	Persons	Firms	Persons	Firms	Persons	Total	Estimated
	Number		Number		Percent		Number	
Total employment all industries	43,088	616,964	1,769	18,311	4.11	2.97	14.3	10.4
Private	39,431	487,760	1,749	14,773	4.44	3.03	12.4	8.4
Agricultural services, forestry, fisheries, and other	1,074	5,945	56	209	5.21	3.52	5.5	3.7
Agricultural production crop	166	1,193	6	60	3.61	5.03	7.2	10.0
Agricultural production livestock	250	2,535	10	58	4.00	2.29	10.1	5.8
Agricultural services	658	2,217	40	89	6.08	4.01	3.4	2.2
Forestry	0	0	0	0	0.00	0.00	0.0	0.0
Fishing, hunting, and trapping	0	0	0	0	0.00	0.00	0.0	0.0
Mining	206	1,688	10	31	4.85	1.84	8.2	3.1
Metal mining	0	0	0	0	0.00	0.00	0.0	0.0
Bituminous coal and lignite mining	0	0	0	0	0.00	0.00	0.0	0.0
Oil and gas extraction	117	844	5	14	4.27	1.66	7.2	2.8
Nonmetallic minerals, except fuels	89	844	5	17	5.62	2.01	9.5	3.4
Construction	4,369	20,729	241	1,041	5.52	5.02	4.7	4.3
General building contractors	1,224	5,415	69	241	5.64	4.45	4.4	3.5
Heavy construction contractors	499	2,648	22	94	4.41	3.55	5.3	4.3
Special trade contractors	2,646	12,666	150	706	5.67	5.57	4.8	4.7
Manufacturing	1,788	86,788	63	1,674	3.52	1.93	48.5	26.6
Food and kindred products	354	26,515	12	955	3.39	3.60	74.9	79.6
Tobacco manufactures	0	0	0	0	0.00	0.00	0.0	0.0
Textile mill products	13	135	2	5	15.38	3.70	10.4	2.5
Apparel and other textile products	38	1,797	0	0	0.00	0.00	47.3	0.0
Lumber and wood products	96	1,553	2	30	2.08	1.93	16.2	15.0
Furniture and fixtures	35	1,549	4	34	11.43	2.19	44.3	8.5
Paper and allied products	23	1,659	1	136	4.35	8.20	72.1	136.0
Printing and publishing	398	8,403	12	50	3.02	0.60	21.1	4.2

Table 3 (continued)

Industry description	Total Employment		Estimated Employment		Estimated as a percentage of total employment		Employment per Firm	
	Firms	Persons	Firms	Persons	Firms	Persons	Total	Estimated
	Number				Percent		Number	
Chemicals and allied products	66	2,650	1	4	1.52	0.15	40.2	4.0
Petroleum and coal products	5	120	0	0	0.00	0.00	24.0	0.0
Rubber and misc. plastics products	54	4,537	2	8	3.70	0.18	84.0	4.0
Leather and leather products	6	302	1	30	16.67	9.93	50.3	30.0
Stone, clay, and glass products	130	2,367	5	23	3.85	0.97	18.2	4.6
Primary metal industries	23	1,459	0	0	0.00	0.00	63.4	0.0
Fabricated metal products	131	5,910	7	262	5.34	4.43	45.1	37.4
Machinery, except electrical	226	10,424	8	105	3.54	1.01	46.1	13.1
Electric and electronic equipment	51	8,311	4	10	7.84	0.12	163.0	2.5
Transportation equipment	47	4,336	0	0	0.00	0.00	92.3	0.0
Instruments and related products	37	3,858	0	0	0.00	0.00	104.3	0.0
Miscellaneous manufacturing industries	55	903	2	22	3.64	2.44	16.4	11.0
Transportation and public utilities	2,220	30,859	117	503	5.27	1.63	13.9	4.3
Local and interurban passenger transit	64	1,303	7	47	10.94	3.61	20.4	6.7
Trucking and warehousing	1,388	12,662	90	319	6.48	2.52	9.1	3.5
Water transportation	8	45	1	0	12.50	0.00	5.6	0.0
Transportation by air	92	1,042	4	44	4.35	4.22	11.3	11.0
Pipelines, except natural gas	21	112	2	9	9.52	8.04	5.3	4.5
Transportation services	110	1,111	4	9	3.64	0.81	10.1	2.3
Communication	332	10,803	5	65	1.51	0.60	32.5	13.0
Electric, gas, and sanitary services	205	3,781	4	10	1.95	0.26	18.4	2.5
Wholesale trade	4,772	45,513	145	1,444	3.04	3.17	9.5	10.0
Durable goods	2,390	21,449	75	652	3.14	3.04	9.0	8.7
Nondurable goods	2,382	24,064	70	792	2.94	3.29	10.1	11.3
Retail trade	10,162	119,540	481	4,760	4.73	3.98	11.8	9.9
Building materials and garden equipment	756	4,772	30	145	3.97	3.04	6.3	4.8
General merchandise stores	278	16,041	11	1,717	3.96	10.70	57.7	156.1
Food stores	1,052	17,712	30	238	2.85	1.34	16.8	7.9
Automotive dealers and service stations	1,719	14,999	59	325	3.43	2.17	8.7	5.5
Apparel and accessory stores	782	6,159	33	142	4.22	2.31	7.9	4.3
Furniture and home furnishings stores	655	4,508	30	115	4.58	2.55	6.9	3.8
Eating and drinking places	2,947	41,895	209	1,786	7.09	4.26	14.2	8.5
Miscellaneous retail stores	1,973	13,454	79	292	4.00	2.17	6.8	3.7

Table 3 (continued)

Industry description	Total Employment		Estimated Employment		Estimated as a percentage of total employment		Employment per Firm	
	Firms	Persons	Firms	Persons	Firms	Persons	Total	Estimated
	Number		Number		Percent		Number	
Finance, insurance, and real estate	3,541	45,236	149	1,797	4.21	3.97	12.8	12.1
Banking	457	11,119	7	80	1.53	0.72	24.3	11.4
Credit agencies other than banks	394	5,848	42	871	10.66	14.89	14.8	20.7
Security and commodity brokers and services	148	1,359	10	103	6.76	7.58	9.2	10.3
Insurance carriers	293	15,809	7	444	2.39	2.81	54.0	63.4
Insurance agents, brokers, and services	1,105	5,342	35	147	3.17	2.75	4.8	4.2
Real estate	982	4,809	45	142	4.58	2.95	4.9	3.2
Combined real estate, insurance, etc.	59	335	2	5	3.39	1.49	5.7	2.5
Holding and other investment companies	103	615	1	5	0.97	0.81	6.0	5.0
Services	11,299	131,462	487	3,314	4.31	2.52	11.6	6.8
Hotels and other lodging places	361	6,748	16	92	4.43	1.36	18.7	5.8
Personal services	1,331	7,650	67	283	5.03	3.70	5.7	4.2
Business services	1,856	29,161	111	989	5.98	3.39	15.7	8.9
Auto repair, services, and garages	1,027	4,560	63	156	6.13	3.42	4.4	2.5
Miscellaneous repair services	562	2,124	21	78	3.74	3.67	3.8	3.7
Motion pictures	84	774	4	25	4.76	3.23	9.2	6.3
Amusement and recreation services	509	4,515	25	139	4.91	3.08	8.9	5.6
Health services	2,256	46,892	53	787	2.35	1.68	20.8	14.8
Legal services	765	3,626	31	255	4.05	7.03	4.7	8.2
Educational services	103	6,334	6	151	5.83	2.38	61.5	25.2
Social services	447	7,336	25	155	5.59	2.11	16.4	6.2
Museums, botanical, zoological gardens	15	269	1	2	6.67	0.74	17.9	2.0
Membership organizations	752	5,493	15	84	1.99	1.53	7.3	5.6
Private households	575	971	27	41	4.70	4.22	1.7	1.5
Miscellaneous services	656	5,009	22	77	3.35	1.54	7.6	3.5
Government and government enterprises	3,657	129,204	20	3,538	0.55	2.74	35.3	176.9
State	878	27,899	0	0	0.00	0.00	31.8	0.0
Local	2,208	84,013	17	3,459	0.77	4.12	38.0	203.5
Federal	571	17,292	3	79	0.53	0.46	30.3	26.3

Table 4

Average Monthly Employment in Nebraska.
by Industry, 2nd Quarter 1986

Industry description	Total Employment		Estimated Employment		Estimated as a percentage of total employment		Employment per Firm	
	Firms	Persons	Firms	Persons	Firms	Persons	Total	Estimated
	Number		Number		Percent		Number	
Total employment all industries	43,588	634,873	2,111	15,151	4.84	2.39	14.6	7.2
Private	39,925	503,277	2,075	14,811	5.20	2.94	12.6	7.1
Agricultural services, forestry, fisheries, and other	1,097	7,262	67	253	6.11	3.48	6.6	3.8
Agricultural production crop	169	1,408	11	77	6.51	5.47	8.3	7.0
Agricultural production livestock	246	2,608	6	53	2.44	2.03	10.6	8.8
Agricultural services	682	3,246	50	123	7.33	3.79	4.8	2.5
Forestry	0	0	0	0	0.00	0.00	0.0	0.0
Fishing, hunting, and trapping	0	0	0	0	0.00	0.00	0.0	0.0
Mining	203	1,793	12	61	5.91	3.40	8.8	5.1
Metal mining	3	13	0	0	0.00	0.00	0.0	0.0
Bituminous coal and lignite mining	0	0	0	0	0.00	0.00	0.0	0.0
Oil and gas extraction	113	660	8	21	7.08	3.18	5.8	2.6
Nonmetallic minerals, except fuels	87	1,120	4	40	4.60	3.57	12.9	10.0
Construction	4,511	25,441	320	1,010	7.09	3.97	5.6	3.2
General building contractors	1,257	6,136	95	251	7.56	4.09	4.9	2.6
Heavy construction contractors	563	4,597	53	108	9.41	2.35	8.2	2.0
Special trade contractors	2,691	14,708	172	651	6.39	4.43	5.5	3.8
Manufacturing	1,782	87,857	84	3,803	4.71	4.33	49.3	45.3
Food and kindred products	354	26,845	13	512	3.67	1.91	75.8	39.4
Tobacco manufactures	0	0	0	0	0.00	0.00	0.0	0.0
Textile mill products	12	136	1	3	8.33	2.21	11.3	3.0
Apparel and other textile products	38	1,951	1	2	2.63	0.11	48.7	2.0
Lumber and wood products	95	1,510	6	31	6.32	2.05	15.9	5.2
Furniture and fixtures	33	1,477	2	609	6.06	41.23	44.8	304.5
Paper and allied products	23	1,640	1	9	4.35	0.55	71.3	9.0
Printing and publishing	401	8,449	17	105	4.24	1.24	21.1	6.2

Table 4 (continued)

Industry description	Total Employment		Estimated Employment		Estimated as a percentage of total employment		Employment per Firm	
	Firms	Persons	Firms	Persons	Firms	Persons	Total	Estimated
	Number		Number		Percent		Number	
Chemicals and allied products	65	2,703	3	4	4.62	0.15	41.6	1.3
Petroleum and coal products	5	130	0	0	0.00	0.00	26.0	0.0
Rubber and misc. plastics products	54	4,686	2	8	3.70	0.17	86.8	4.0
Leather and leather products	6	312	0	0	0.00	0.00	52.0	0.0
Stone, clay, and glass products	128	2,638	8	18	6.25	0.68	20.6	2.3
Primary metal industries	23	1,454	1	15	4.35	1.03	63.2	15.0
Fabricated metal products	130	6,252	9	708	6.92	11.32	48.1	78.7
Machinery, except electrical	225	10,488	10	161	4.44	1.54	46.6	16.1
Electric and electronic equipment	51	8,304	1	10	1.96	0.12	162.8	10.0
Transportation equipment	45	4,286	2	2	4.44	0.05	95.2	1.0
Instruments and related products	38	3,859	6	1,586	15.79	41.10	101.6	264.3
Miscellaneous manufacturing industries	56	837	1	20	1.79	2.39	14.9	20.0
Transportation and public utilities	2,271	30,910	129	730	5.68	2.36	13.6	5.7
Local and interurban passenger transit	61	1,267	7	75	11.48	5.92	20.8	10.7
Trucking and warehousing	1,411	13,181	93	483	6.59	3.66	9.3	5.2
Water transportation	8	59	0	0	0.00	0.00	7.4	0.0
Transportation by air	92	1,074	3	6	3.26	0.56	11.7	2.0
Pipelines, except natural gas	22	106	3	8	13.64	7.55	4.8	2.7
Transportation services	113	1,116	5	68	4.42	6.09	9.9	13.6
Communication	329	10,622	12	69	3.65	0.65	32.3	5.8
Electric, gas, and sanitary services	235	3,485	6	21	2.55	0.60	14.8	3.5
Wholesale trade	4,823	46,543	325	1,719	6.74	3.69	9.7	5.3
Durable goods	2,414	21,841	178	970	7.37	4.44	9.0	5.4
Nondurable goods	2,409	24,702	147	749	6.10	3.03	10.3	5.1
Retail trade	10,230	122,942	519	3,841	5.07	3.12	12.0	7.4
Building materials and garden equipment	756	5,163	23	91	3.04	1.76	6.8	4.0
General merchandise stores	282	16,132	14	130	4.96	0.81	57.2	9.3
Food stores	1,046	17,977	48	580	4.59	3.23	17.2	12.1
Automotive dealers and service stations	1,733	15,188	59	223	3.40	1.47	8.8	3.8
Apparel and accessory stores	784	6,040	30	197	3.83	3.26	7.7	6.6
Furniture and home furnishings stores	675	4,540	37	167	5.48	3.68	6.7	4.5
Eating and drinking places	2,955	44,414	206	2,045	6.97	4.60	15.0	9.9
Miscellaneous retail stores	1,999	13,488	102	408	5.10	3.02	6.7	4.0

Table 4 (continued)

Industry description	Total Employment		Estimated Employment		Estimated as a percentage of total employment		Employment per Firm	
	Firms	Persons	Firms	Persons	Firms	Persons	Total	Estimated
	Number		Number		Percent		Number	
Finance, insurance, and real estate	3,632	45,563	111	390	3.06	0.86	12.5	3.5
Banking	453	11,112	2	22	0.44	0.20	24.5	11.0
Credit agencies other than banks	477	5,612	3	16	0.63	0.29	11.8	5.3
Security and commodity brokers and services	149	1,436	12	112	8.05	7.80	9.6	9.3
Insurance carriers	292	15,972	5	8	1.71	0.05	54.7	1.6
Insurance agents, brokers, and services	1,127	5,448	36	68	3.19	1.25	4.8	1.9
Real estate	974	5,048	47	156	4.83	3.09	5.2	3.3
Combined real estate, insurance, etc.	58	339	1	3	1.72	0.88	5.8	3.0
Holding and other investment companies	102	596	5	5	4.90	0.84	5.8	1.0
Services	11,376	134,966	508	3,004	4.47	2.23	11.9	5.9
Hotels and other lodging places	360	7,348	14	41	3.89	0.56	20.4	2.9
Personal services	1,329	7,529	63	280	4.74	3.72	5.7	4.4
Business services	1,880	30,943	118	901	6.28	2.91	16.5	7.6
Auto repair, services, and garages	1,032	4,466	61	174	5.91	3.90	4.3	2.9
Miscellaneous repair services	562	2,075	23	67	4.09	3.23	3.7	2.9
Motion pictures	92	874	3	16	3.26	1.83	9.5	5.3
Amusement and recreation services	505	5,690	20	246	3.96	4.32	11.3	12.3
Health services	2,253	46,665	88	777	3.91	1.67	20.7	8.8
Legal services	768	3,614	35	82	4.56	2.27	4.7	2.3
Educational services	99	5,861	4	36	4.04	0.61	59.2	9.0
Social services	451	7,308	16	180	3.55	2.46	16.2	11.3
Museums, botanical, zoological gardens	15	398	0	0	0.00	0.00	26.5	0.0
Membership organizations	757	6,297	18	56	2.38	0.89	8.3	3.1
Private households	616	1,030	30	34	4.87	3.30	1.7	1.1
Miscellaneous services	657	4,868	15	114	2.28	2.34	7.4	7.6
Government and government enterprises	3,663	131,596	36	340	0.98	0.26	35.9	9.4
State	869	28,404	1	0	0.12	0.00	32.7	0.0
Local	2,213	85,699	9	15	0.41	0.02	38.7	1.7
Federal	581	17,493	26	325	4.48	1.86	30.1	12.5

Table 5

Average Monthly Employment in Nebraska,
by Industry, 3rd Quarter 1986

Industry description	Total Employment		Estimated Employment		Estimated as a percentage of total employment		Employment per Firm	
	Firms	Persons	Firms	Persons	Firms	Persons	Total	Estimated
	Number		Number		Percent		Number	
Total employment all industries	43,525	633,163	1,762	17,273	4.05	2.73	14.5	9.8
Private	39,870	509,928	1,716	14,169	4.30	2.78	12.8	8.3
Agricultural services, forestry, fisheries, and other	1,111	8,495	41	230	3.69	2.71	7.6	5.6
Agricultural production crop	169	1,936	4	12	2.37	0.62	11.5	3.0
Agricultural production livestock	250	2,635	5	119	2.00	4.52	10.5	23.8
Agricultural services	692	3,924	32	99	4.62	2.52	5.7	3.1
Forestry	0	0	0	0	0.00	0.00	0.0	0.0
Fishing, hunting, and trapping	0	0	0	0	0.00	0.00	0.0	0.0
Mining	194	1,751	8	35	4.12	2.00	9.0	4.4
Metal mining	0	0	0	0	0.00	0.00	0.0	0.0
Bituminous coal and lignite mining	0	0	0	0	0.00	0.00	0.0	0.0
Oil and gas extraction	109	600	6	33	5.50	5.50	5.5	5.5
Nonmetallic minerals, except fuels	85	1,151	2	2	2.35	0.17	13.5	1.0
Construction	4,496	27,457	233	770	5.18	2.80	6.1	3.3
General building contractors	1,277	7,080	63	236	4.93	3.33	5.5	3.7
Heavy construction contractors	525	4,824	17	57	3.24	1.18	9.2	3.4
Special trade contractors	2,694	15,553	153	477	5.68	3.07	5.8	3.1
Manufacturing	1,762	88,762	76	2,234	4.31	2.52	50.4	29.4
Food and kindred products	350	27,122	15	615	4.29	2.27	77.5	41.0
Tobacco manufactures	0	0	0	0	0.00	0.00	0.0	0.0
Textile mill products	10	129	1	2	10.00	1.55	12.9	2.0
Apparel and other textile products	38	1,838	0	0	0.00	0.00	48.4	0.0
Lumber and wood products	93	1,601	2	1	2.15	0.06	17.2	0.5
Furniture and fixtures	33	1,563	3	15	9.09	0.96	47.4	5.0
Paper and allied products	23	1,645	2	41	8.70	2.49	71.5	20.5
Printing and publishing	404	8,500	21	114	5.20	1.34	21.0	5.4

Table 5 (continued)

Industry description	Total Employment		Estimated Employment		Estimated as a percentage of total employment		Employment per Firm	
	Firms	Persons	Firms	Persons	Firms	Persons	Total	Estimated
	Number				Percent		Number	
Chemicals and allied products	64	2,660	3	12	4.69	0.45	41.6	4.0
Petroleum and coal products	5	138	0	0	0.00	0.00	27.6	0.0
Rubber and misc. plastics products	53	4,666	0	0	0.00	0.00	88.0	0.0
Leather and leather products	7	276	1	0	14.29	0.00	39.4	0.0
Stone, clay, and glass products	119	2,672	2	11	1.68	0.41	22.5	5.5
Primary metal industries	23	1,405	2	19	8.70	1.35	61.1	9.5
Fabricated metal products	128	6,607	9	842	7.03	12.74	51.6	93.6
Machinery, except electrical	222	10,603	6	198	2.70	1.87	47.8	33.0
Electric and electronic equipment	51	8,229	6	357	11.76	4.34	161.4	59.5
Transportation equipment	45	4,393	1	2	2.22	0.05	97.6	2.0
Instruments and related products	38	3,880	0	0	0.00	0.00	102.1	0.0
Miscellaneous manufacturing industries	56	835	2	5	3.57	0.60	14.9	2.5
Transportation and public utilities	2,280	31,545	103	618	4.52	1.96	13.8	6.0
Local and interurban passenger transit	63	1,205	5	15	7.94	1.24	19.1	3.0
Trucking and warehousing	1,409	13,748	71	377	5.04	2.74	9.8	5.3
Water transportation	8	83	0	0	0.00	0.00	10.4	0.0
Transportation by air	95	1,075	7	49	7.37	4.56	11.3	7.0
Pipelines, except natural gas	21	109	3	6	14.29	5.50	5.2	2.0
Transportation services	119	1,135	2	0	1.68	0.00	9.5	0.0
Communication	332	10,629	12	150	3.61	1.41	32.0	12.5
Electric, gas, and sanitary services	233	3,561	3	21	1.29	0.59	15.3	7.0
Wholesale trade	4,793	47,295	238	818	4.97	1.73	9.9	3.4
Durable goods	2,417	21,714	123	344	5.09	1.58	9.0	2.8
Nondurable goods	2,376	25,581	115	474	4.84	1.85	10.8	4.1
Retail trade	10,169	123,231	430	3,851	4.23	3.13	12.1	9.0
Building materials and garden equipment	755	5,280	19	58	2.52	1.10	7.0	3.1
General merchandise stores	276	15,980	19	1,613	6.88	10.09	57.9	84.9
Food stores	1,032	18,550	25	121	2.42	0.65	18.0	4.8
Automotive dealers and service stations	1,737	15,264	62	303	3.57	1.99	8.8	4.9
Apparel and accessory stores	789	6,071	34	138	4.31	2.27	7.7	4.1
Furniture and home furnishings stores	672	4,456	25	107	3.72	2.40	6.6	4.3
Eating and drinking places	2,924	44,241	178	1,201	6.09	2.71	15.1	6.7
Miscellaneous retail stores	1,984	13,389	68	310	3.43	2.32	6.7	4.6

Table 5 (continued)

Industry description	Total Employment		Estimated Employment		Estimated as a percentage of total employment		Employment per Firm	
	Firms	Persons	Firms	Persons	Firms	Persons	Total	Estimated
	Number		Number		Percent		Number	
Finance, insurance, and real estate	3,612	46,008	97	872	2.69	1.90	12.7	9.0
Banking	452	11,096	4	93	0.88	0.84	24.5	23.3
Credit agencies other than banks	468	5,678	9	6	1.92	0.11	12.1	0.7
Security and commodity brokers and services	152	1,467	9	103	5.92	7.02	9.7	11.4
Insurance carriers	287	16,177	5	431	1.74	2.66	56.4	86.2
Insurance agents, brokers, and services	1,124	5,452	35	58	3.11	1.06	4.9	1.7
Real estate	971	5,240	29	174	2.99	3.32	5.4	6.0
Combined real estate, insurance, etc.	56	333	1	2	1.79	0.60	5.9	2.0
Holding and other investment companies	102	565	5	5	4.90	0.88	5.5	1.0
Services	11,453	135,384	490	4,741	4.28	3.50	11.8	9.7
Hotels and other lodging places	367	7,487	16	148	4.36	1.98	20.4	9.3
Personal services	1,340	7,239	48	236	3.58	3.26	5.4	4.9
Business services	1,887	31,413	114	921	6.04	2.93	16.6	8.1
Auto repair, services, and garages	1,026	4,561	53	129	5.17	2.83	4.4	2.4
Miscellaneous repair services	562	2,078	29	81	5.16	3.90	3.7	2.8
Motion pictures	90	858	2	16	2.22	1.86	9.5	8.0
Amusement and recreation services	504	5,881	24	164	4.76	2.79	11.7	6.8
Health services	2,277	47,252	78	2,658	3.43	5.63	20.8	34.1
Legal services	773	3,590	33	41	4.27	1.14	4.6	1.2
Educational services	102	5,353	2	8	1.96	0.15	52.5	4.0
Social services	457	7,293	21	120	4.60	1.65	16.0	5.7
Museums, botanical, zoological gardens	16	401	2	8	12.50	2.00	25.1	4.0
Membership organizations	762	6,118	19	140	2.49	2.29	8.0	7.4
Private households	635	1,043	25	30	3.94	2.88	1.6	1.2
Miscellaneous services	655	4,817	24	41	3.66	0.85	7.4	1.7
Government and government enterprises	3,655	123,235	46	3,104	1.26	2.52	33.7	67.5
State	869	28,821	0	0	0.00	0.00	33.2	0.0
Local	2,204	76,706	14	2,579	0.64	3.36	34.8	184.2
Federal	582	17,708	32	525	5.50	2.96	30.4	16.4

Table 6

Average Monthly Employment in Nebraska,
by Industry, 4th Quarter 1986

Industry description	Total Employment		Estimated Employment		Estimated as a percentage of total employment		Employment per Firm	
	Firms	Persons	Firms	Persons	Firms	Persons	Total	Estimated
	Number		Number		Percent		Number	
Total employment all industries	43,449	637,421	2,610	23,977	6.01	3.76	14.7	9.2
Private	39,819	507,415	2,547	23,383	6.40	4.61	12.7	9.2
Agricultural services, forestry, fisheries, and other	1,122	6,727	63	272	5.61	4.04	6.0	4.3
Agricultural production crop	176	1,487	12	32	6.82	2.15	8.4	2.7
Agricultural production livestock	255	2,546	13	154	5.10	6.05	10.0	11.8
Agricultural services	691	2,694	38	86	5.50	3.19	3.9	2.3
Forestry	0	0	0	0	0.00	0.00	0.0	0.0
Fishing, hunting, and trapping	0	0	0	0	0.00	0.00	0.0	0.0
Mining	194	1,666	11	74	5.67	4.44	8.6	6.7
Metal mining	0	0	0	0	0.00	0.00	0.0	0.0
Bituminous coal and lignite mining	0	0	0	0	0.00	0.00	0.0	0.0
Oil and gas extraction	109	633	10	48	9.17	7.58	5.8	4.8
Nonmetallic minerals, except fuels	85	1,033	1	26	1.18	2.52	12.2	26.0
Construction	4,440	24,748	297	1,058	6.69	4.28	5.6	3.6
General building contractors	1,255	6,546	79	303	6.29	4.63	5.2	3.8
Heavy construction contractors	518	3,668	23	64	4.44	1.74	7.1	2.8
Special trade contractors	2,667	14,534	195	691	7.31	4.75	5.4	3.5
Manufacturing	1,770	89,213	105	5,006	5.93	5.61	50.4	47.7
Food and kindred products	350	27,544	28	2,701	8.00	9.81	78.7	96.5
Tobacco manufactures	0	0	0	0	0.00	0.00	0.0	0.0
Textile mill products	10	144	1	5	10.00	3.47	14.4	5.0
Apparel and other textile products	40	1,915	3	13	7.50	0.68	47.9	4.3
Lumber and wood products	99	1,601	6	36	6.06	2.25	16.2	6.0
Furniture and fixtures	33	1,519	3	109	9.09	7.18	46.0	36.3
Paper and allied products	23	1,671	1	127	4.35	7.60	72.7	127.0
Printing and publishing	403	8,616	23	352	5.71	4.09	21.4	15.3

Table 6 (continued)

Industry description	Total Employment		Estimated Employment		Estimated as a percentage of total employment		Employment per Firm	
	Firms	Persons	Firms	Persons	Firms	Persons	Total	Estimated
	Number		Number		Percent		Number	
Chemicals and allied products	63	2,575	5	37	7.94	1.44	40.9	7.4
Petroleum and coal products	5	128	0	0	0.00	0.00	25.6	0.0
Rubber and misc. plastics products	56	4,766	1	1	1.79	0.02	85.1	1.0
Leather and leather products	7	312	0	0	0.00	0.00	44.6	0.0
Stone, clay, and glass products	121	2,645	4	302	3.31	11.42	21.9	75.5
Primary metal industries	23	1,486	2	136	8.70	9.15	64.6	68.0
Fabricated metal products	123	6,494	6	901	4.88	13.87	52.8	150.2
Machinery, except electrical	223	10,355	11	60	4.93	0.58	46.4	5.5
Electric and electronic equipment	53	8,389	2	81	3.77	0.97	158.3	40.5
Transportation equipment	46	4,384	6	63	13.04	1.44	95.3	10.5
Instruments and related products	37	3,855	2	27	5.41	0.70	104.2	13.5
Miscellaneous manufacturing industries	55	814	1	55	1.82	6.76	14.8	55.0
Transportation and public utilities	2,267	31,870	156	2,320	6.88	7.28	14.1	14.9
Local and interurban passenger transit	60	1,553	2	6	3.33	0.39	25.9	3.0
Trucking and warehousing	1,396	14,007	107	638	7.66	4.55	10.0	6.0
Water transportation	8	36	0	0	0.00	0.00	4.5	0.0
Transportation by air	95	1,045	6	61	6.32	5.84	11.0	10.2
Pipelines, except natural gas	19	110	2	21	10.53	19.09	5.8	10.5
Transportation services	121	1,169	12	78	9.92	6.67	9.7	6.5
Communication	333	10,659	14	233	4.20	2.19	32.0	16.6
Electric, gas, and sanitary services	235	3,291	13	1,283	5.53	38.99	14.0	98.7
Wholesale trade	4,803	46,061	498	3,208	10.37	6.96	9.6	6.4
Durable goods	2,440	21,531	237	957	9.71	4.44	8.8	4.0
Nondurable goods	2,363	24,530	261	2,251	11.05	9.18	10.4	8.6
Retail trade	10,125	124,708	480	4,709	4.74	3.78	12.3	9.8
Building materials and garden equipment	741	4,923	29	274	3.91	5.57	6.6	9.4
General merchandise stores	277	17,252	3	57	1.08	0.33	62.3	19.0
Food stores	1,025	18,929	29	632	2.83	3.34	18.5	21.8
Automotive dealers and service stations	1,725	15,200	89	462	5.16	3.04	8.8	5.2
Apparel and accessory stores	768	6,419	27	327	3.52	5.09	8.4	12.1
Furniture and home furnishings stores	673	4,680	39	171	5.79	3.65	7.0	4.4
Eating and drinking places	2,917	43,117	188	2,129	6.44	4.94	14.8	11.3
Miscellaneous retail stores	1,999	14,188	76	657	3.80	4.63	7.1	8.6

Table 5 (continued)

Industry description	Total Employment		Estimated Employment		Estimated as a percentage of total employment		Employment per Firm	
	Firms	Persons	Firms	Persons	Firms	Persons	Total	Estimated
	Number		Number		Percent		Number	
Finance, insurance, and real estate	3,599	45,747	222	1,949	6.17	4.26	12.7	8.8
Banking	449	11,084	12	982	2.67	8.86	24.7	81.8
Credit agencies other than banks	463	5,660	41	427	8.86	7.54	12.2	10.4
Security and commodity brokers and services	158	1,521	18	137	11.39	9.01	9.6	7.6
Insurance carriers	288	16,045	13	39	4.51	0.24	55.7	3.0
Insurance agents, brokers, and services	1,122	5,382	78	165	6.95	3.07	4.8	2.1
Real estate	965	5,142	55	187	5.70	3.64	5.3	3.4
Combined real estate, insurance, etc.	56	325	2	5	3.57	1.54	5.8	2.5
Holding and other investment companies	98	588	3	7	3.06	1.19	6.0	2.3
Services	11,499	136,675	715	4,787	6.22	3.50	11.9	6.7
Hotels and other lodging places	367	6,943	16	156	4.36	2.25	18.9	9.8
Personal services	1,340	7,284	62	235	4.63	3.23	5.4	3.8
Business services	1,926	32,495	165	2,041	8.57	6.28	16.9	12.4
Auto repair, services, and garages	1,033	4,589	83	201	8.03	4.38	4.4	2.4
Miscellaneous repair services	554	2,129	43	98	7.76	4.60	3.8	2.3
Motion pictures	87	749	7	60	8.05	8.01	8.6	8.6
Amusement and recreation services	508	4,626	18	61	3.54	1.32	9.1	3.4
Health services	2,267	47,643	132	908	5.82	1.91	21.0	6.9
Legal services	770	3,649	55	148	7.14	4.06	4.7	2.7
Educational services	102	6,977	3	28	2.94	0.40	68.4	9.3
Social services	460	7,706	19	135	4.13	1.75	16.8	7.1
Museums, botanical, zoological gardens	15	293	0	0	0.00	0.00	19.5	0.0
Membership organizations	751	5,640	40	468	5.33	8.30	7.5	11.7
Private households	665	1,097	23	16	3.46	1.46	1.6	0.7
Miscellaneous services	654	4,855	49	232	7.49	4.78	7.4	4.7
Government and government enterprises	3,630	130,006	63	594	1.74	0.46	35.8	9.4
State	860	28,783	0	0	0.00	0.00	33.5	0.0
Local	2,188	83,537	31	68	1.42	0.08	38.2	2.2
Federal	582	17,686	32	526	5.50	2.97	30.4	16.4

Table 7

Comparison of Actual and Estimated Employment
Using a Sample from 1st Quarter 1986

Industry description	Firms	Actual Employment	Estimated employment		Difference between actual and estimated employment		Employment difference per firm		Percentage difference per firm		Actual employment per firm
			Method 1	Method 2	Method 1	Method 2	Method 1	Method 2	Method 1	Method 2	
			Number						Percent		Number
Total employment all industries	1,724	29,225	29,456	27,333	231	(1,892)	0.134	-1.097	0.8	-6.5	17.0
Private	1,627	26,315	26,488	24,444	173	(1,871)	0.106	-1.150	0.7	-7.1	16.2
Agricultural services, forestry, fisheries,	52	307	322	326	15	19	0.288	0.365	4.9	6.2	5.9
Agricultural production crop	9	33	35	37	2	4	0.222	0.444	6.1	12.1	3.7
Agricultural production livestock	15	158	186	155	28	(3)	1.867	-0.200	17.7	-1.9	10.5
Agricultural services	28	116	101	134	(15)	18	-0.536	0.643	-12.9	15.5	4.1
Forestry	0	0	0	0	0	0	0.000	0.000	0.0	0.0	0.0
Fishing, hunting, and trapping	0	0	0	0	0	0	0.000	0.000	0.0	0.0	0.0
Mining	9	31	54	48	23	17	2.556	1.889	74.2	54.8	3.4
Metal mining	0	0	0	0	0	0	0.000	0.000	0.0	0.0	0.0
Bituminous coal and lignite mining	0	0	0	0	0	0	0.000	0.000	0.0	0.0	0.0
Oil and gas extraction	6	16	25	15	9	(1)	1.500	-0.167	56.3	-6.3	2.7
Nonmetallic minerals, except fuels	3	15	29	33	14	18	4.667	6.000	93.3	120.0	5.0
Construction	163	1,115	1,118	1,220	3	105	0.018	0.644	0.3	9.4	6.8
General building contractors	41	230	242	285	12	55	0.293	1.341	5.2	23.9	5.6
Heavy construction contractors	10	71	69	113	(2)	42	-0.200	4.200	-2.8	59.2	7.1
Special trade contractors	112	814	807	822	(7)	8	-0.063	0.071	-0.9	1.0	7.3
Manufacturing	70	7,830	7,999	7,560	169	(270)	2.414	-3.857	2.2	-3.4	111.9
Food and kindred products	8	547	445	463	(102)	(84)	-12.750	-10.500	-18.6	-15.4	68.4
Tobacco manufactures	0	0	0	0	0	0	0.000	0.000	0.0	0.0	0.0
Textile mill products	0	0	0	0	0	0	0.000	0.000	0.0	0.0	0.0
Apparel and other textile products	2	88	81	4	(7)	(84)	-3.500	-42.000	-8.0	-95.5	44.0
Lumber and wood products	3	18	29	19	11	1	3.667	0.333	61.1	5.6	6.0
Furniture and fixtures	1	3	3	3	0	0	0.000	0.000	0.0	0.0	3.0
Paper and allied products	0	0	0	0	0	0	0.000	0.000	0.0	0.0	0.0
Printing and publishing	21	945	860	926	(85)	(19)	-4.048	-0.905	-9.0	-2.0	45.0
Chemicals and allied products	2	108	100	100	(8)	(8)	-4.000	-4.000	-7.4	-7.4	54.0
Petroleum and coal products	0	0	0	0	0	0	0.000	0.000	0.0	0.0	0.0
Rubber and misc. plastics products	3	89	110	98	21	9	7.000	3.000	23.6	10.1	29.7

Table 7 (continued)

Industry description	Firms	Actual Employment	Estimated employment		Difference between actual and estimated employment		Employment difference per firm		Percentage difference per firm		Actual employment per firm
			Method 1	Method 2	Method 1	Method 2	Method 1	Method 2	Method 1	Method 2	
			Number						Percent		Number
Leather and leather products	0	0	0	0	0	0	0.000	0.000	0.0	0.0	0.0
Stone, clay, and glass products	5	28	35	36	7	8	1.400	1.600	25.0	28.6	5.6
Primary metal industries	0	0	0	0	0	0	0.000	0.000	0.0	0.0	0.0
Fabricated metal products	4	149	151	143	2	(6)	0.500	-1.500	1.3	-4.0	37.3
Machinery, except electrical	10	986	1,048	985	62	(41)	6.200	-4.100	6.3	-4.2	98.6
Electric and electronic equipment	1	4,190	4,422	4,042	232	(148)	232.000	-148.000	5.5	-3.5	4190.0
Transportation equipment	6	611	653	705	42	94	7.000	15.667	6.9	15.4	101.8
Instruments and related products	1	40	35	45	(5)	5	-5.000	5.000	-12.5	12.5	40.0
Miscellaneous manufacturing industries	3	28	27	31	(1)	3	-0.333	1.000	-3.6	10.7	9.3
Transportation and public utilities	79	583	612	583	29	0	0.367	0.000	5.0	0.0	7.4
Local and interurban passenger transit	3	17	27	17	10	0	3.333	0.000	58.8	0.0	5.7
Trucking and warehousing	51	294	303	301	9	7	0.176	0.137	3.1	2.4	5.8
Water transportation	1	10	7	14	(3)	4	-3.000	4.000	-30.0	40.0	10.0
Transportation by air	6	97	114	81	15	(18)	2.500	-3.000	15.2	-18.2	16.5
Pipelines, except natural gas	0	0	0	0	0	0	0.000	0.000	0.0	0.0	0.0
Transportation services	4	14	15	14	1	0	0.250	0.000	7.1	0.0	3.5
Communication	8	120	119	125	(1)	5	-0.125	0.625	-0.8	4.2	15.0
Electric, gas, and sanitary services	6	29	27	31	(2)	2	-0.333	0.333	-6.9	6.9	4.8
Wholesale trade	194	1,898	2,022	1,843	124	(55)	0.639	-0.284	6.5	-2.9	9.8
Durable goods	90	842	960	768	118	(74)	1.311	-0.822	14.0	-8.8	9.4
Nondurable goods	104	1,056	1,062	1,075	6	19	0.058	0.183	0.6	1.8	10.2
Retail trade	414	6,016	5,606	5,089	(410)	(927)	-0.990	-2.239	-6.8	-15.4	14.5
Building materials and garden equipment	29	120	111	117	(9)	(3)	-0.310	-0.103	-7.5	-2.5	4.1
General merchandise stores	7	1,570	1,486	1,878	(84)	308	-12.000	44.000	-5.4	19.6	224.3
Food stores	41	488	429	346	(59)	(142)	-1.439	-3.463	-12.1	-29.1	11.9
Automotive dealers and service stations	76	554	556	541	2	(13)	0.026	-0.171	0.4	-2.3	7.3
Apparel and accessory stores	32	269	222	196	(47)	(73)	-1.469	-2.281	-17.5	-27.1	8.4
Furniture and home furnishings stores	32	234	250	234	16	0	0.500	0.000	6.8	0.0	7.3
Eating and drinking places	100	1,729	1,783	1,106	54	(623)	0.540	-6.230	3.1	-36.0	17.3
Miscellaneous retail stores	97	1,052	769	671	(283)	(381)	-2.918	-3.928	-26.9	-36.2	10.8
Finance, insurance, and real estate	162	2,795	2,735	2,793	(60)	(2)	-0.370	-0.012	-2.1	-0.1	17.3
Banking	23	372	342	324	(30)	(48)	-1.304	-2.087	-8.1	-12.9	16.2

Table 7 (continued)

Industry description	Actual Firms	Actual Employment	Estimated employment		Difference between actual and estimated employment		Employment difference per firm		Percentage difference per firm		Actual employment per firm
			Method 1	Method 2	Method 1	Method 2	Method 1	Method 2	Method 1	Method 2	
			Number						Percent		Number
Credit agencies other than banks	12	1,066	1,046	1,072	(20)	6	-1.667	0.500	-1.9	0.6	88.8
Security and commodity brokers and service	8	28	25	30	(3)	2	-0.375	0.250	-10.7	7.1	3.5
Insurance carriers	15	925	902	943	(23)	18	-1.533	1.200	-2.5	1.9	61.7
Insurance agents, brokers, and services	62	211	202	212	(9)	1	-0.145	0.016	-4.3	0.5	3.4
Real estate	38	173	199	194	26	21	0.684	0.553	15.0	12.1	4.6
Combined real estate, insurance, etc.	1	2	2	2	0	0	0.000	0.000	0.0	0.0	2.0
Holding and other investment companies	3	18	17	16	(1)	(2)	-0.333	-0.667	-5.6	-11.1	6.0
Services	484	5,740	6,020	4,982	280	(758)	0.579	-1.566	4.9	-13.2	11.9
Hotels and other lodging places	15	627	416	352	(211)	(275)	-14.067	-18.333	-33.7	-43.9	41.8
Personal services	64	303	328	311	25	8	0.391	0.125	8.3	2.6	4.7
Business services	63	964	1,075	996	111	32	1.762	0.508	11.5	3.3	15.3
Auto repair, services, and garages	37	242	242	191	0	(51)	0.000	-1.378	0.0	-21.1	6.5
Miscellaneous repair services	21	69	80	69	11	0	0.524	0.000	15.9	0.0	3.3
Motion pictures	3	46	44	49	(2)	3	-0.667	1.000	-4.3	6.5	15.3
Amusement and recreation services	12	93	93	74	0	(19)	0.000	-1.583	0.0	-20.4	7.8
Health services	107	1,493	1,629	1,266	136	(227)	1.271	-2.121	9.1	-15.2	14.0
Legal services	39	194	197	188	3	(6)	0.077	-0.154	1.5	-3.1	5.0
Educational services	11	772	835	698	63	(74)	5.727	-6.727	8.2	-9.6	70.2
Social services	19	231	244	237	13	6	0.684	0.316	5.6	2.6	12.2
Museums, botanical, zoological gardens	1	13	17	15	4	2	4.000	2.000	30.8	15.4	13.0
Membership organizations	35	254	311	265	57	11	1.629	0.314	22.4	4.3	7.3
Private households	32	50	57	43	7	(7)	0.219	-0.219	14.0	-14.0	1.6
Miscellaneous services	25	389	452	228	63	(161)	2.520	-6.440	16.2	-41.4	15.6
Government and government enterprises	97	2,910	2,968	2,889	58	(21)	0.598	-0.216	2.0	-0.7	30.0
State	4	175	148	166	(27)	(9)	-6.750	-2.250	-15.4	-5.1	43.8
Local	92	2,710	2,801	2,696	91	(14)	0.989	-0.152	3.4	-0.5	29.5
Federal	1	25	19	27	(6)	2	-6.000	2.000	-24.0	8.0	25.0

Note: Method 1 estimates employment assuming employment data are missing but current wage information is available.

Method 2 estimates employment assuming both employment and wage data are missing.