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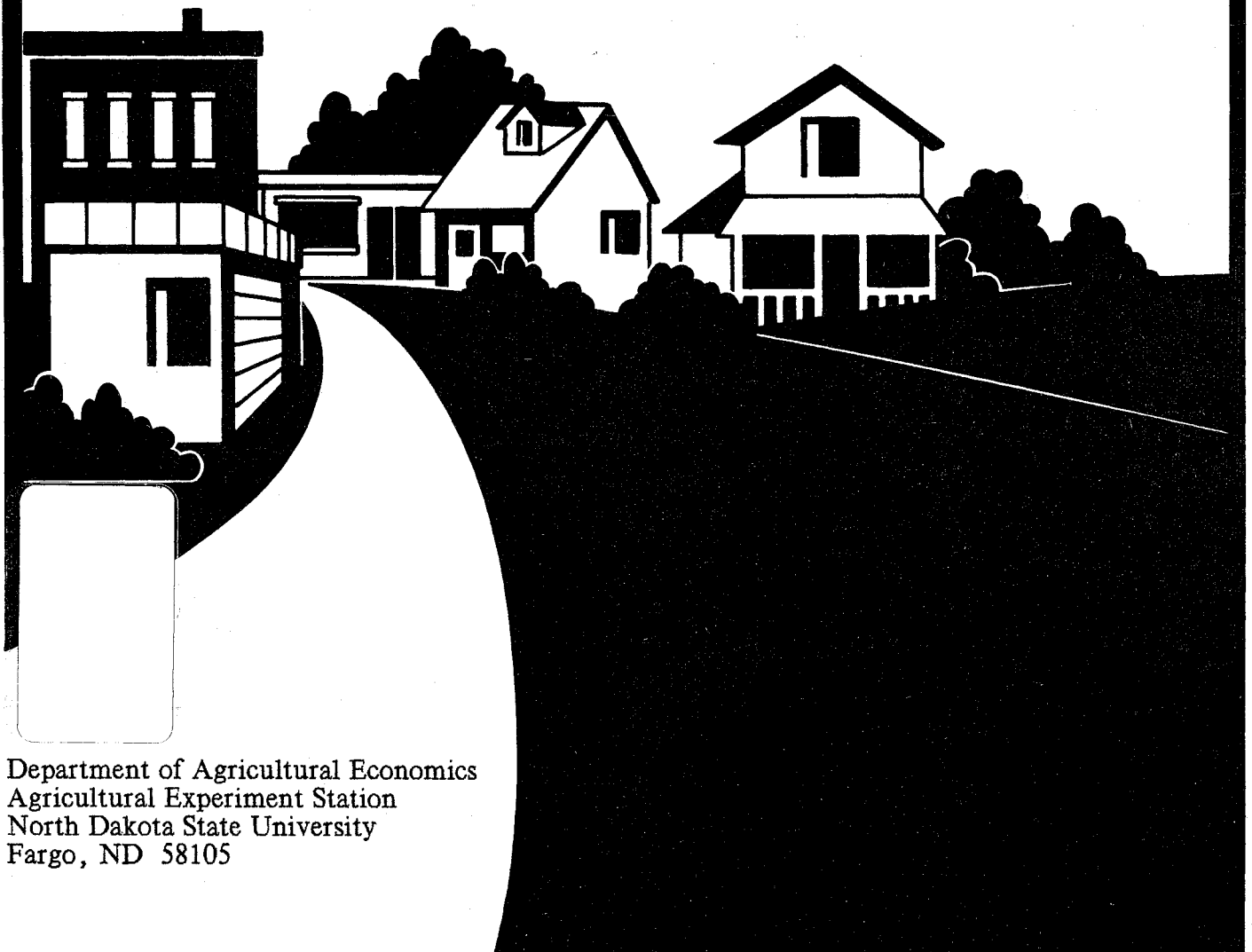
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Selected Characteristics of Business Operators in North Dakota Agricultural Trade Centers

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Highlights

The research reported here is part of a major research effort aimed at (1) better understanding the adjustment problems encountered by farm families and rural communities and (2) developing strategies for alleviating these impacts. This report examines selected characteristics of business operators and former business operators in six North Dakota communities: Carrington, Casselton, Grafton, Hettinger, Jamestown, and Stanley.

Specific characteristics examined include (1) business characteristics, such as type of business organization, number of employees, and distribution of sales; (2) business financial characteristics, such as sources of credit and levels of assets, debt, and income; (3) business management characteristics, including various business adjustments undertaken to cope with economic stress; (4) demographic characteristics, such as age, marital status, education, and previous migration patterns; (5) personal financial characteristics, such as total family income and levels of personal assets and debt; (6) trade patterns; (7) participation in community organizations and activities; and (8) attitudes and perceptions concerning local business conditions. Business financial characteristics reported for current business operators are for 1985, and those reported for former business operators are for their last year of operation. Following are highlights of the results.

Financial resources of the businesses surveyed were quite variable. About one-third of the current business operators reported no debt while about 19 percent had debt-to-asset ratios greater than 70 percent. High debt-to-asset ratios tended to be associated with operators less than 45 years old and those who had been in business less than 10 years. About 21 percent of the respondents reported negative net profit in 1985, and half had a net profit of less than \$13,000. On the other hand, about 22 percent had net profit exceeding \$40,000. The level of net profit was inversely associated with the businesses' debt-to-asset ratio.

Farmers are important customers for many businesses. Overall, businesses surveyed reported that farmers accounted for more than 40 percent of their business volume. Residents of the town together with farmers accounted for about 75 percent of the total business volume of local establishments.

Overall, about 12 percent of the businesses surveyed were not current on their debt payments, and 21 percent of the businesses with debt-to-asset ratios exceeding 70 percent were in this situation.

More than two-thirds of the business operators reported they had stepped up collection efforts on overdue accounts while almost half had attempted to reduce inventories. Almost 40 percent had reduced their labor force in the last three years while about 38 percent had started charging interest on overdue accounts.

The economic outlook of the current businesspersons surveyed can best be summarized as cautious. While more than three-fourths felt they could continue to operate for at least three more years, only about one-fourth felt they were likely to expand their businesses during that period. Retail proprietors were the least optimistic concerning business continuation.

Comparison of salient characteristics of current and former businesses provides several insights. Fewer former businesses than current establishments were found in the finance, insurance, and real estate and professional services categories. Former business operators had been involved in their business for a substantially shorter period than their counterparts who were currently operating, and their businesses had been established for a much shorter period. There was little difference in the types of customers they served, but the former businesses had fewer employees. They also had substantially lower levels of financial resources.

The majority of businesses that have failed were started in the 1970s suggesting that the impact of economic stress in agriculture on business operators may be similar to its effects on farmers and ranchers. These business operators appear to have also been severely affected by declining revenue and falling equity. Given that those operators undergoing financial difficulty are not substantially different than those experiencing less difficulty, it appears that programs aimed at addressing the economic and social environment of the community, as well as improving the skills of individual business managers, may be necessary.

SELECTED CHARACTERISTICS OF BUSINESS OPERATORS IN NORTH DAKOTA AGRICULTURAL TRADE CENTERS

F. Larry Leistritz, Brenda L. Ekstrom, and
Harvey G. Vreugdenhil*

Agriculture in North Dakota, as in many other parts of the country, is undergoing a period of extreme economic stress. A combination of depressed commodity prices and high interest rates has created severe cash flow problems for many farm and ranch operators (Leistritz et al. 1986; Leistritz et al. 1985; Leholm et al. 1985), and it appears likely that a substantial percentage of these farm families may be forced to leave agriculture within the next few years. The impact of economic stress in agriculture is felt not only by farm and ranch families but also by businesses, public service entities, and residents of rural communities. These secondary impacts of the depressed farm economy, however, have received relatively little attention to date (however, see Heady and Sonka 1974; Marousek 1979; Leistritz and Ekstrom 1986; Beck and Herr 1986; Braschler and Seiberling 1986; Ginder, Stone, and Otto 1985).

The effects of the declining farm economy on rural communities would be expected to be most severe in areas where agriculture accounts for a high percentage of the economic base. In North Dakota dependence on agriculture is quite high. Statewide, sales of crops and livestock accounted for about 42 percent of total exports (sales to final demand or basic income) in 1984, and in several state planning regions agriculture constituted more than half of the total economic base (Coon et al. 1986). Another indication of the extent to which North Dakota communities are economically dependent on agriculture is provided by a recent study that classified 39 of the state's 53 counties as "farming dependent" (Figure 1) (based on the fact that farming contributed a weighted annual average of 20 percent or more of total labor and proprietor income over the five years from 1975 to 1979) (Bender et al. 1985).

While few analyses have directly addressed the effects of the current farm financial situation on rural communities, examination of recent trends in retail sales reveals that North Dakota's rural communities have been experiencing a substantial recession. Taxable retail sales, adjusted for inflation, declined 12.5 percent on a statewide basis from 1980 to 1985 (Appendix Table 1) and have receded to levels experienced in the early 1970s (Figure 2). The 1980 to 1985 decrease was 23.9 percent for towns under 10,000 compared to 6.4 percent for towns over 10,000. When sales are aggregated to the county level, it can be noted that the state's 39 agriculturally dependent counties experienced a decline of 20.3 percent from 1970 to 1985 while the remaining counties actually increased 13.9

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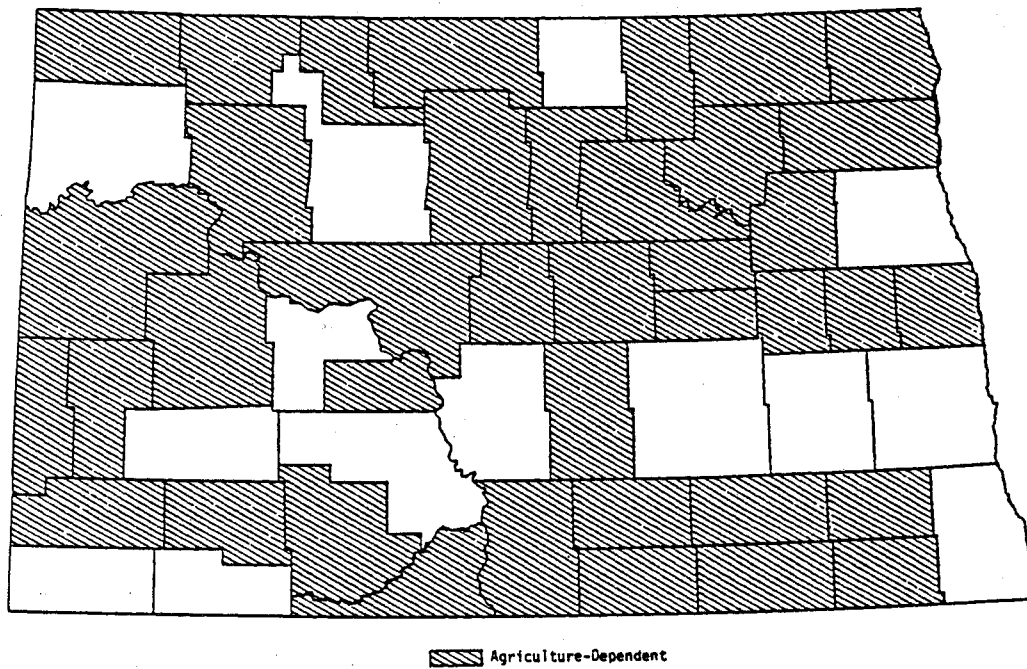


Figure 1. Agriculture-Dependent Counties, North Dakota

SOURCE: Bender et al. 1985.

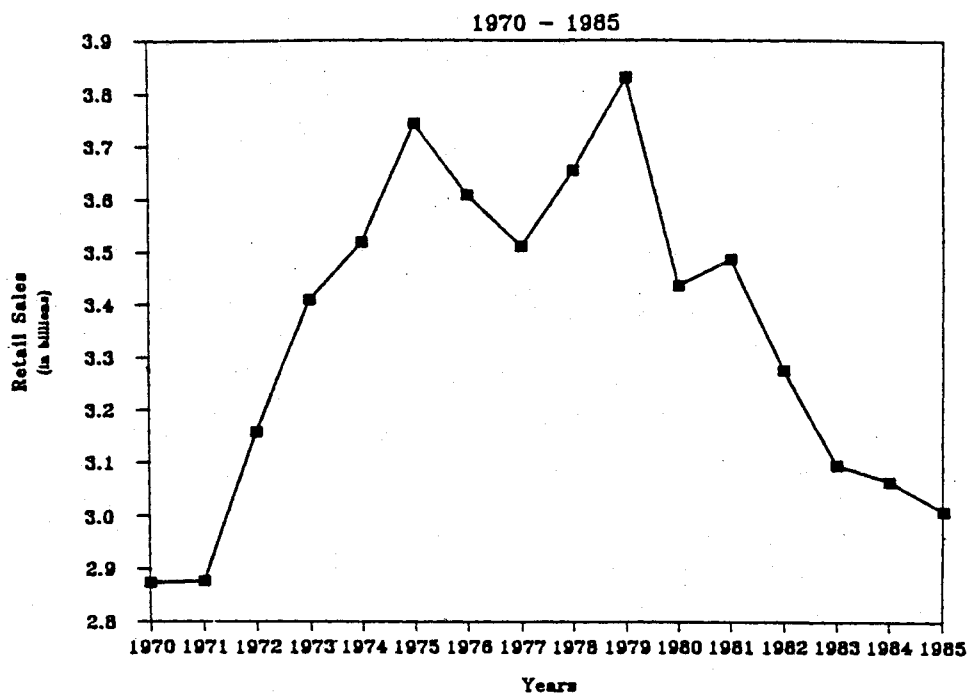


Figure 2. Retail Sales for North Dakota in Constant 1985 Dollars

SOURCE: Appendix Table 1.

from 1970 to 1985 while the remaining counties actually increased 13.9 percent. In other words, agriculturally dependent counties have been losing their share of the retail sales pie since 1970 and have been losing their share of a shrinking pie since 1980 (Figure 3).

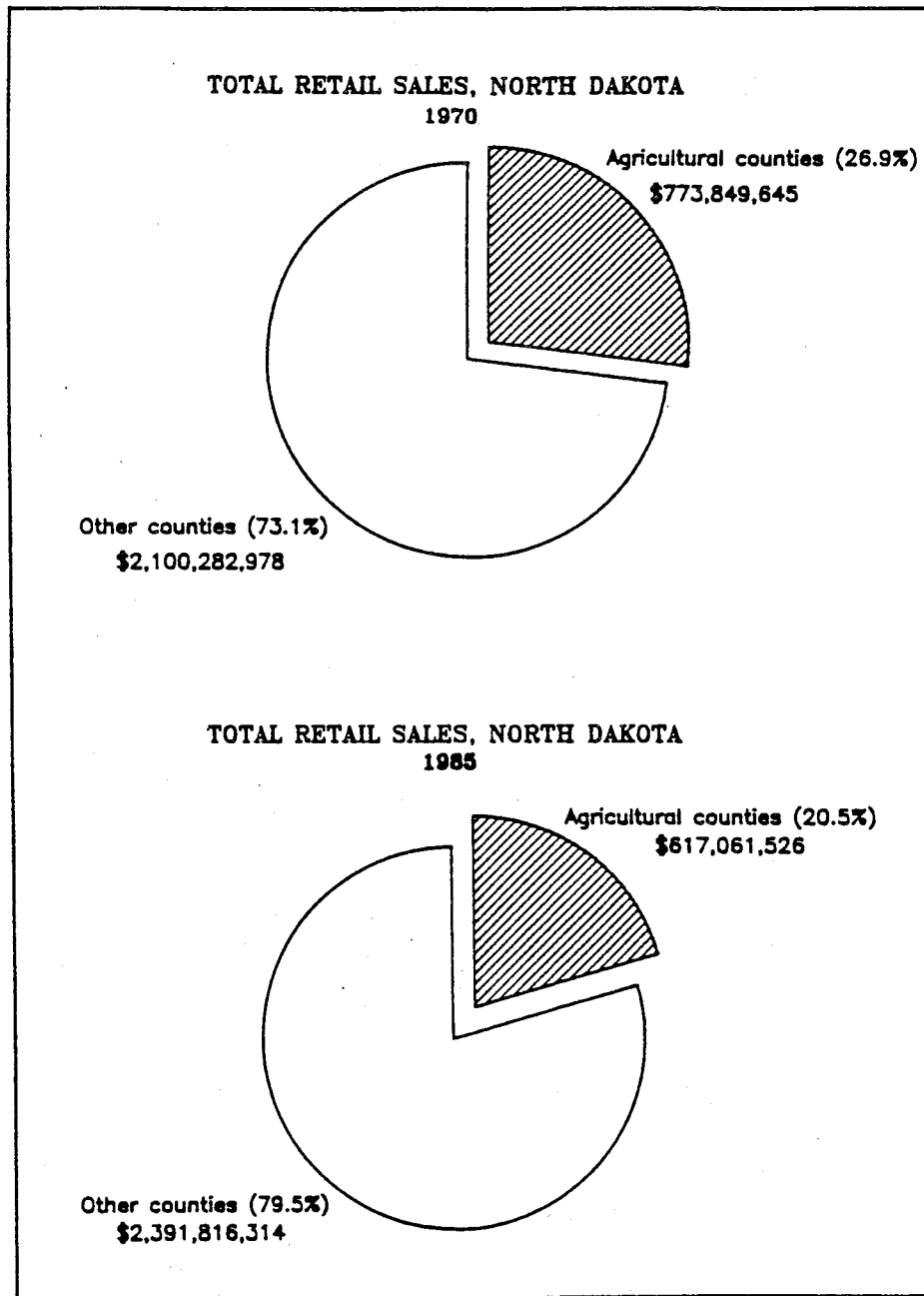


Figure 3. Agricultural Counties' Share of Total Retail Sales in North Dakota, 1970 and 1985, in Constant 1985 Dollars

SOURCE: Appendix Table 1.

Recent trends in employment are similar to those in taxable sales except that the percentage changes in employment are somewhat less. From 1980 to 1985, total employment increased about 1 percent on a statewide basis but decreased 10.6 percent in the agriculturally dependent counties (Appendix Table 2). Similarly, employment declined by 8.8 percent in counties with towns under 10,000 people but increased 8.8 percent in counties with towns of 10,000 or more.

Thus, recent trends in sales and employment point to a stable or even decreasing level of economic activity in the state, especially in the smaller trade centers and in the more agriculturally dependent areas. As a result, many business proprietors, residents, and public officials in such areas are experiencing substantial adjustment problems.

Agriculturally dependent rural communities may experience additional problems if a significant proportion of the farm families in their area are forced to leave. Financial institutions and other businesses they patronize are likely to have reduced business volume, and some businesses may be forced to close. This, in turn, may result in the relocation of a substantial proportion of rural nonfarm residents from rural communities to other locations. In like manner, a decline in service area population of a sufficient magnitude may threaten the continued economic viability of many rural services. For many of the rural and agriculturally dependent communities in the state, then, the present rate of farm failures may be sufficient to threaten their viability as trade and service centers. If policies are to be designed to address this situation and to assist farm operators and communities in adjusting to such problems, information on such impacts and adjustments is essential.

The research reported here is part of a major research effort aimed at (1) promoting a better understanding of the adjustment problems encountered by farm families and rural communities and (2) developing strategies for alleviating these impacts. One objective of the overall study is to analyze the impacts of recent economic stress in agriculture on businesses, public services, and residents of selected North Dakota communities. This report examines one aspect of the larger study. Specifically, the following selected characteristics of business operators and former business operators in six North Dakota communities are examined:

1. Business characteristics, such as type of business organization, number of employees, and distribution of sales
2. Business financial characteristics, such as sources of credit and levels of assets, debt, and income
3. Business management characteristics, including various business adjustments undertaken to cope with economic stress
4. Demographic characteristics, such as age, marital status, education, and previous migration patterns
5. Personal financial characteristics, such as total family income and levels of personal assets and debt

6. Trade patterns
7. Participation in community organizations and activities
8. Attitudes and perceptions concerning local business conditions

The report first briefly describes study procedures then examines specific characteristics of business operators and former business operators before drawing conclusions and discussing future implications. Companion documents examine demographic, employment, and income characteristics of community residents (Agricultural Economics Report No. 218) and compare and contrast the evaluations of the causes and effects of the farm crisis expressed by the three groups (Agricultural Economics Report No. 219).

Study Procedures

Information concerning characteristics of businesses and their proprietors was obtained from a survey conducted during the period March through July 1986. Six communities were selected for intensive analysis: Carrington, Casselton, Grafton, Hettinger, Jamestown, and Stanley (Figure 4). An attempt was made to select trade centers of various sizes and in different regions of the state. The six towns range in population from about 1,700 to about 16,000 (Appendix Table 3). The smaller towns should be representative of many of the state's smaller agricultural trade centers while the larger communities (Grafton and Jamestown) should be reflective of the situation in the state's larger, nonmetropolitan shopping centers (Voelker et al. 1978). Five of the six towns experienced modest growth during the 1970s, although four of the counties had population declines during that period.

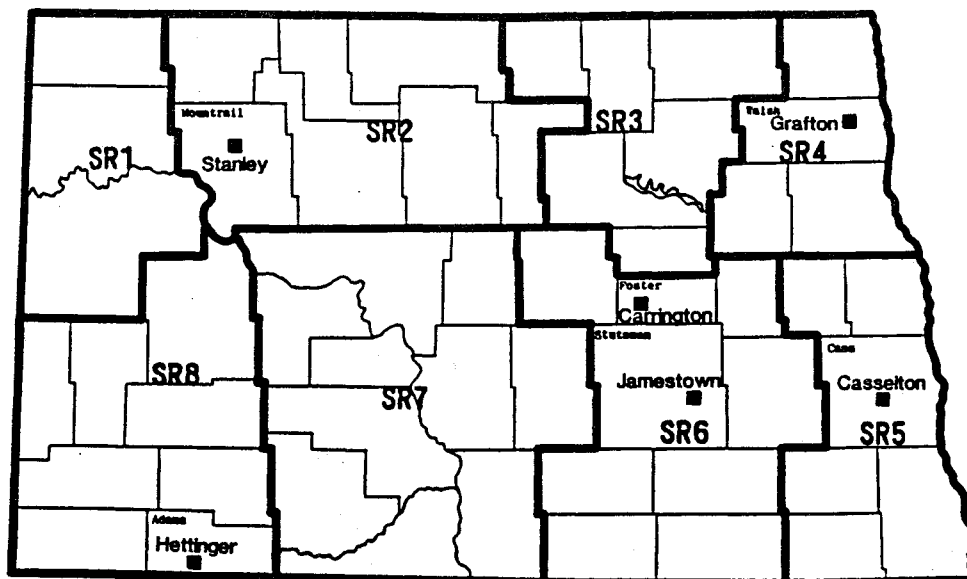


Figure 4. Communities Selected for Analysis

The study communities are all located in heavily agricultural areas (Appendix Table 4). Of the six counties, four had one-fourth or more of their labor force directly employed in agriculture in 1980. Several indicators suggest that the communities' economies have been experiencing negative effects associated with economic stress in agriculture. Retail sales, measured in constant 1985 prices, declined in all of the six communities between 1980 and 1985 (Appendix Table 5), and four of the six counties experienced a decrease in total employment between 1980 and 1985 (Appendix Table 2). During the same period, the statewide values of cash receipts from farm marketings fell 34 percent, measured in constant 1985 prices, while net farm income fluctuated considerably but at levels that were only a fraction of the values prevailing in the period 1972 to 1975 (see Figure 5).

In order to study the effects of the farm crisis on these communities, informal interviews were conducted with community leaders to identify the various forms of impacts that had been experienced. Then three formal research instruments (questionnaires) were developed and administered to three separate groups: current business operators, former business operators, and other community residents. These groups were

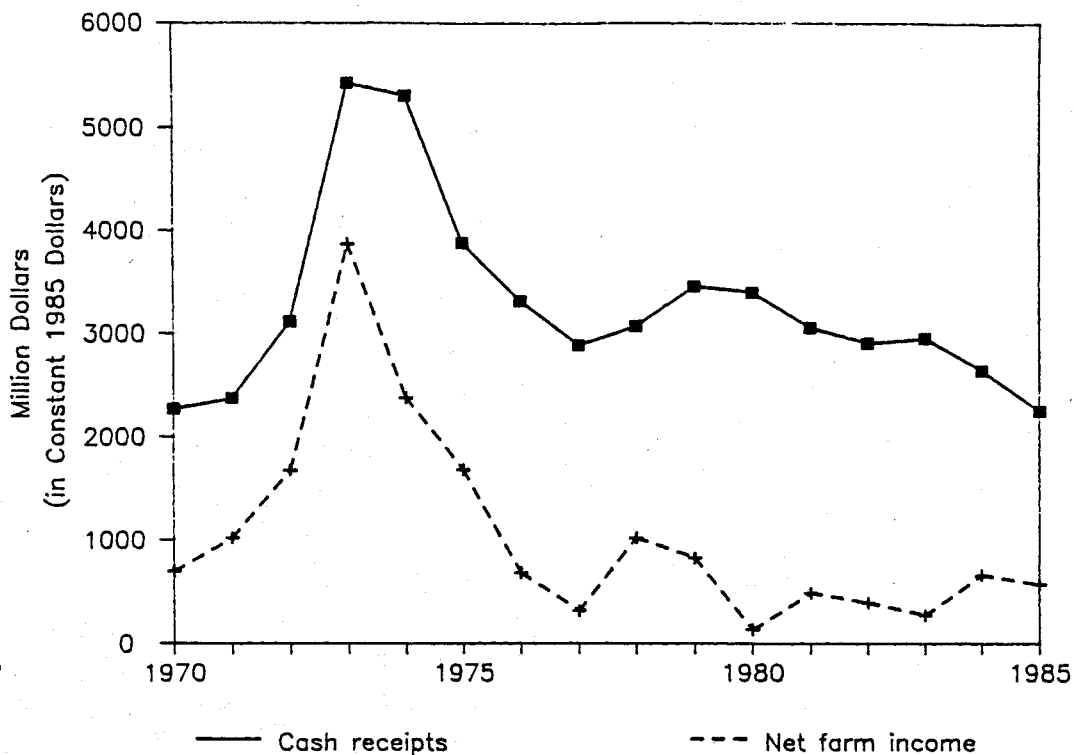


Figure 5. Total Cash Receipts from Farm Marketings and Net Farm Income, North Dakota, in 1985 Constant Dollars

SOURCE: USDA 1985.

believed to be experiencing (and perceiving) the crisis differently, and the agreement or lack of agreement among the three groups' evaluations of the crisis was seen as a means of evaluating the extent to which the crisis was having selective versus pervasive impacts in the communities. For all three groups, only persons 18 to 64 years of age, who were not presently operating farms and who were thus likely to be dependent on the community for income and employment, were interviewed.

The survey administered to current operators of businesses in the communities was intended to gather data from all local businesses in the five smaller communities. In Jamestown, the large number of businesses led the research team to adopt a sampling approach; about one-half of the Jamestown businesses were contacted. Business surveys were personally dropped off and picked up by the research team; some operators were later interviewed to obtain missing or incomplete information. Overall, about 48 percent of the businesses contacted completed questionnaires (Table 1).

TABLE 1. SURVEY SUMMARY, ALL SURVEYS, ALL TOWNS

Category	Carrington	Casselton	Grafton	Hettinger	Jamestown	Stanley	All
Residents							
No. of households 1980 ^a	981	616	1,687	691	5,980	644	10,599
No. of households contacted	198	185	268	177	303	235	1,366
No. disqualified	90	80	99	89	88	132	578
No. refused	28	32	68	17	84	32	261
No. of surveys completed	80	73	101	71	131	71	527
Businesses							
No. contacted ^b	175	96	247	153	300	161	1,132
No. completed	106	38	103	81	154	65	547
Former businesses							
No. contacted	38	6	8	19	39	18	128
No. completed	29	1	2	8	19	9	68

^aSOURCE: U.S. Bureau of the Census 1982.

^bAn attempt was made to contact all known businesses in all towns except Jamestown where a sample was drawn.

The survey of former business operators was administered to persons who had ceased to operate businesses in the communities after 1981. From the preliminary informal interviews with community leaders, 128 such businesses were identified, and telephone interviews were completed with 68 of the operators for a response rate of 53 percent (Table 1).

The current and former business operators' questionnaires asked the operators to provide information on the financial and other characteristics of the business they operate or formerly operated. Questions covered the number and types of employees, customers' areas of residence, inventory acquisition, and similar items. In addition, the respondents were asked about their perceptions of the major reasons for the farm financial crisis

and the impacts of the crisis on their personal lives and on their own and other businesses in the community. Current business operators were also asked to evaluate services in their community, the effects of the crisis on community services, and to describe what, if any, management actions they had taken in their businesses in response to the crisis. Both surveys obtained detailed information on the demographic and economic characteristics of the respondent and the respondent's household.

Characteristics of Current Business Operators

The characteristics of the current business operators who responded to the survey are summarized in this section, which is organized into eight parts: business organization, business financial characteristics, business management, demographic characteristics, personal financial characteristics, trade patterns, community participation, and economic outlook.

Business Organization

Selected business organization characteristics of the survey respondents in each community are summarized in Appendix Table 6. Almost half of the respondents were sole proprietors, and 23 percent were a part-owner or partner in the enterprise. Thus, about 70 percent had an ownership interest in the business. Other than sole proprietorship, the most common forms of business organization were nonfamily-held and family-held corporations. The average respondent had been involved in the business for 12.7 years, and the business had been established in the community for about 25 years. Only 36 percent of the businesses had more than three full-time workers, and only 19 percent had more than three part-time workers.

The respondents reported that slightly more than 40 percent of their sales were made directly to farm families (Figure 6). The percentage of sales accounted for by farmers was smallest in Jamestown, the largest of the communities studied. It is interesting to note, however, that the sum of sales to farmers and to residents of the town accounted for a relatively constant percentage of total sales in each town (i.e., about three-fourths of total sales), and just over half the sales were made to customers either residing in town or within ten miles of town. The firms reported purchasing an average of 18 percent of their inventory within the town and about 58 percent within the state. The most common business types in the sample were retail; finance, insurance, and real estate; and professional services (Appendix Table 6).

Business Financial Characteristics

Selected financial characteristics in 1985 of the businesses surveyed are summarized in Table 2 and Appendix Table 7. On average, businesses responding to the survey had assets valued at about \$1.4 million, debt of about \$391,000, and net worth of about \$882,000 as of

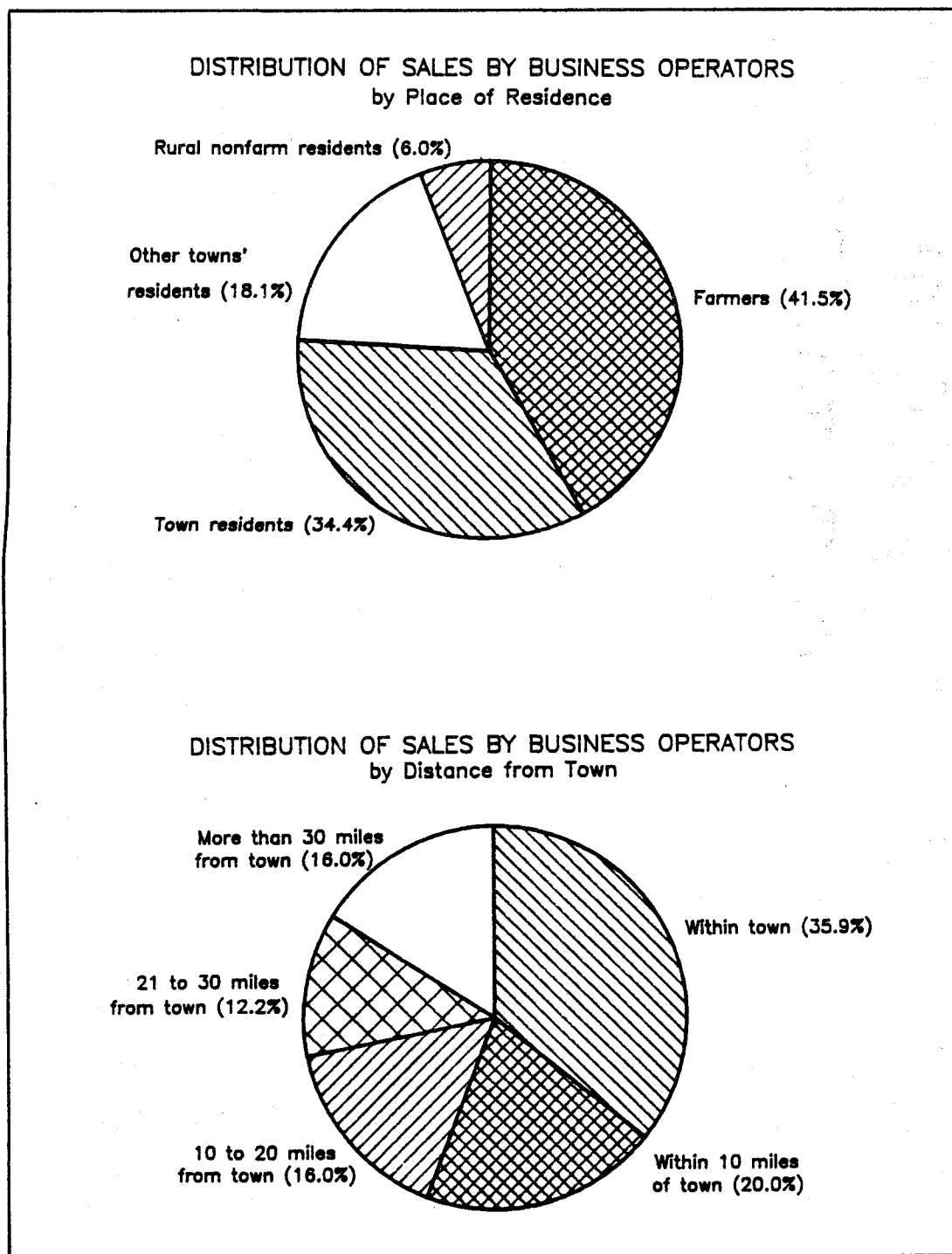


Figure 6. Distribution of Sales to Customers by Place of Residence and Distance from Town, 1985

TABLE 2. FINANCIAL CHARACTERISTICS OF NORTH DAKOTA
BUSINESSES, ALL TOWNS, 1985

Item	All Towns
Total assets:	
Mean	\$1,389,378
Median	\$ 126,483
Total debt:	
Mean	\$ 390,514
Median	\$ 21,000
Net worth:	
Mean	\$ 882,300
Median	\$ 75,000
Business debt-to-asset ratio:	
Mean	39.0
Gross income:	
Mean	\$ 489,254
Median	\$ 116,831
Gross profit:	
Mean	\$ 167,507
Median	\$ 66,302
Net profit:	
Mean	\$ 34,009
Median	\$ 13,000

December 31, 1985. It should be noted that the net worth figure represents an average computed for all respondents who reported both assets and debt. The average net worth in the two tables is not equal to the average assets minus the average debt because some respondents reported their assets but not their debt or vice versa and were thus excluded from the net worth calculation.

It also should be noted that a few large businesses have a substantial influence on the averages reported in these tables. For example, average net worth is \$882,300, but only 21 percent of the businesses reported net worth of \$250,000 or more and about 41 percent felt that their net worth was \$50,000 or less. The median or midpoint of the responses falls considerably lower than the average. In this instance, the median net worth is \$75,000. The median may be a much more realistic figure when describing the financial attributes of a typical business.

The debt-to-asset ratios of the businesses are also summarized in Table 2 and Appendix Table 7. Substantial diversity in the leverage position of these businesses is apparent; about one-third have no debt, yet about 19 percent have debt-to-asset ratios exceeding 70 percent (Figure 7). The average debt-to-asset ratio is 39 percent, and about 37 percent of the businesses had debt-to-asset ratios of 40 percent or higher. It should be noted that the typical business surveyed did not appear to have an

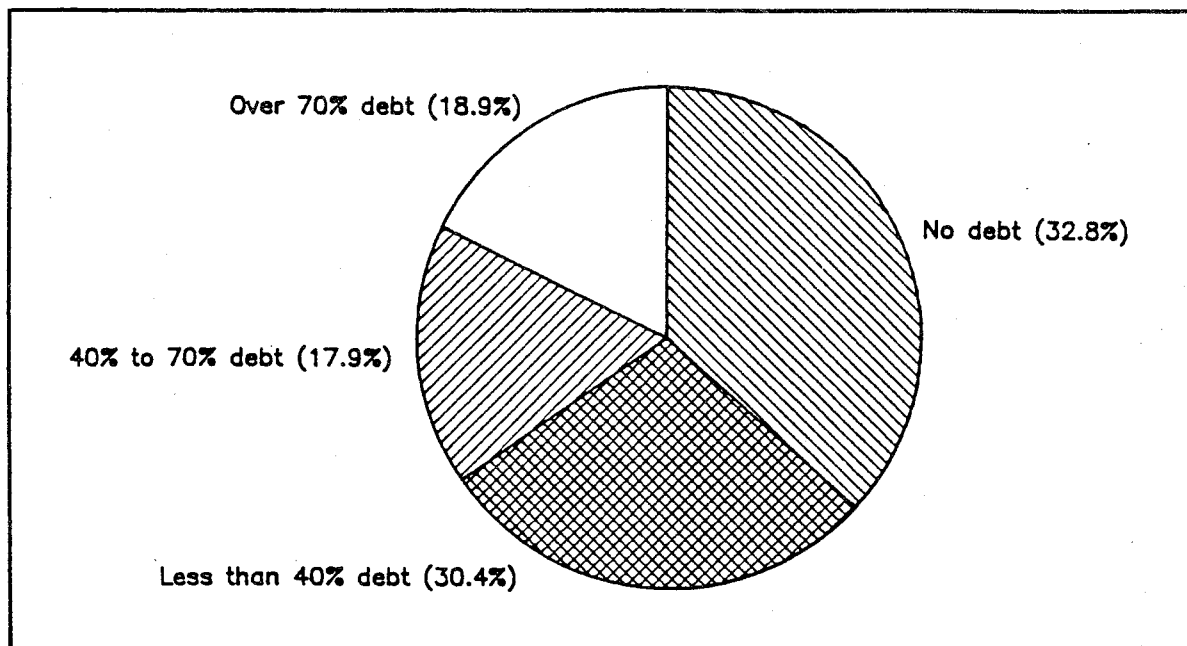


Figure 7. Distribution of Business Operators' Debt-to-Asset Ratios, 1985

excessive debt load when compared to similar businesses nationwide. Average debt-to-asset ratios for a number of types of retail and service firms are summarized in Appendix Table 8. The retail firms' average debt-to-asset ratios ranged from about 51 percent (for dry goods and general merchandise retailers) to nearly 75 percent (for restaurants). Among service businesses, the average debt-to-asset ratio ranged from 50 percent (for accounting firms) to 81 percent (for insurance agents).

Three measures of business income are also summarized in the two financial tables. Gross profit, which is the business's total receipts less returns and allowances and the cost of goods sold, averaged \$167,500. Gross income, which is gross profit plus other income, averaged about \$489,000, while net profit averaged about \$34,000 in 1985. About 21 percent of the respondents reported a negative net profit, and another 22 percent had a net profit of less than \$10,000. Only 37 percent reported a net profit of \$20,000 or more.

Selected characteristics of business operators are summarized by debt-to-asset ratio in Table 3. Operators with relatively high debt-to-asset ratios (i.e., over 40 percent) tend to be those who have entered into business within the last ten years, whereas those with no debt have more frequently been in business 20 years or more. Oddly enough, however, almost one-third of the group with no debt had been in business less than six years.

TABLE 3. BUSINESS OPERATORS' DEBT-TO-ASSET RATIO BY YEARS IN BUSINESS, TYPE OF OWNERSHIP, AND AGE

Category	Business Debt-to-Asset Ratio				Total
	No Debt	<.40	.40 - .70	>.70	
	-----percent-----				
Years in business					
Less than 6	31.5	24.0	51.4	50.7	36.4
6 - 10	18.1	31.4	20.0	25.3	23.9
11 - 15	18.1	14.9	12.9	13.3	15.3
16 - 20	6.3	9.1	2.9	5.3	6.4
Over 20	26.0	20.7	12.9	5.3	18.0
Type of ownership					
Sole proprietor	50.8	54.9	52.8	52.0	52.6
Partnership	9.4	9.0	9.7	12.0	9.8
Family-held corporation	12.5	13.9	16.7	18.7	14.9
Nonfamily-held corporation	18.8	15.6	16.7	13.3	16.4
Owned by relative	8.6	5.7	1.4a	2.7a	5.3
Other	0.0	0.8a	1.8a	1.3a	1.0
Age					
Less than 35	23.9	18.0	30.6	32.0	24.8
35 - 44	26.2	34.4	31.9	42.7	32.8
45 - 54	22.3	28.7	22.2	17.3	23.3
55 and over	27.7	18.9	15.3	8.0	19.1

a) < 5.

The relationship between age and debt-to-asset ratio indicates that younger businesspersons are more likely to be highly leveraged. Of the group with ratios over 70 percent, about one-third were less than 35 years old, and an additional 43 percent were between the ages of 35 and 44.

A similar summary of business characteristics by debt-to-asset ratio is shown in Table 4. Of those businesspersons who have been in business less than six years, 52 percent have debt-to-asset ratios exceeding 40 percent, compared to only 18 percent of those who have been in business 20 years or more. Similarly, the percentage of operators under age 35 reporting over 40 percent debt was nearly double that of operators over age 54. Partnerships and family-held corporations reported ratios of 70 percent or more somewhat more frequently than other business types (Figure 8). Likewise, businesses in Stanley, Hettinger, and Carrington reported these high debt ratios more frequently than their counterparts in the other towns (values ranged from a low of 10.3 percent in Casselton to a high of 30.2 percent in Stanley [Appendix Table 7]).

Business operators also were queried concerning their sources of credit. Commercial banks were the primary source of both operating and longer-term credit for most businesses (Table 5).

TABLE 4. BUSINESS OPERATORS' DEBT-TO-ASSET RATIO BY YEARS IN BUSINESS, TYPE OF OWNERSHIP, AGE, AND COMMUNITY

Category	Business Debt-to-Asset Ratio			
	No Debt	<.40	.40 - .70	>.70
-----percent-----				
Years in business				
Less than 6	28.0	20.3	25.2	26.6
6 - 10	24.5	40.4	14.9	20.2
11 - 15	38.3	30.0	15.0	16.7
16 - 20	32.0	44.0	8.0	16.0
Over 20	46.5	35.2	12.7	5.6
Type of ownership				
Sole proprietor	31.1	32.1	18.2	18.7
Partnership	30.7	28.2	18.0	23.1
Family-held corporation	27.1	28.8	20.3	23.7
Nonfamily-held corporation	36.9	29.2	18.5	15.4
Owned by relative	52.4	33.3	4.8	9.5
Other	0.0	25.0 ^a	50.0	25.0 ^a
Age				
Less than 35	31.3	22.2	22.2	24.2
35 - 44	26.0	32.1	17.6	24.4
45 - 54	31.2	37.6	17.2	14.0
55 and over	47.4	30.3	14.5	8.0
Community				
Carrington	23.5	34.6	18.5	23.5
Casselton	38.5	19.2	34.6	7.7
Grafton	28.6	41.4	20.0	10.0
Hettinger	28.8	23.7	20.3	27.1
Jamestown	39.6	34.4	14.6	11.5
Stanley	37.3	25.5	7.8	29.4
Total	32.3	30.8	17.8	19.1

^aN < 5.

A few key business characteristics are summarized by 1985 net profit level in Table 6. Generally, net profit levels appear to be negatively associated with debt-to-asset levels. That is, firms with high debt levels appear more likely to have negative net profit. The relationship between net profit and type of ownership was not statistically significant. Likewise, there appears to be no significant relationship between years in business and net profit level.

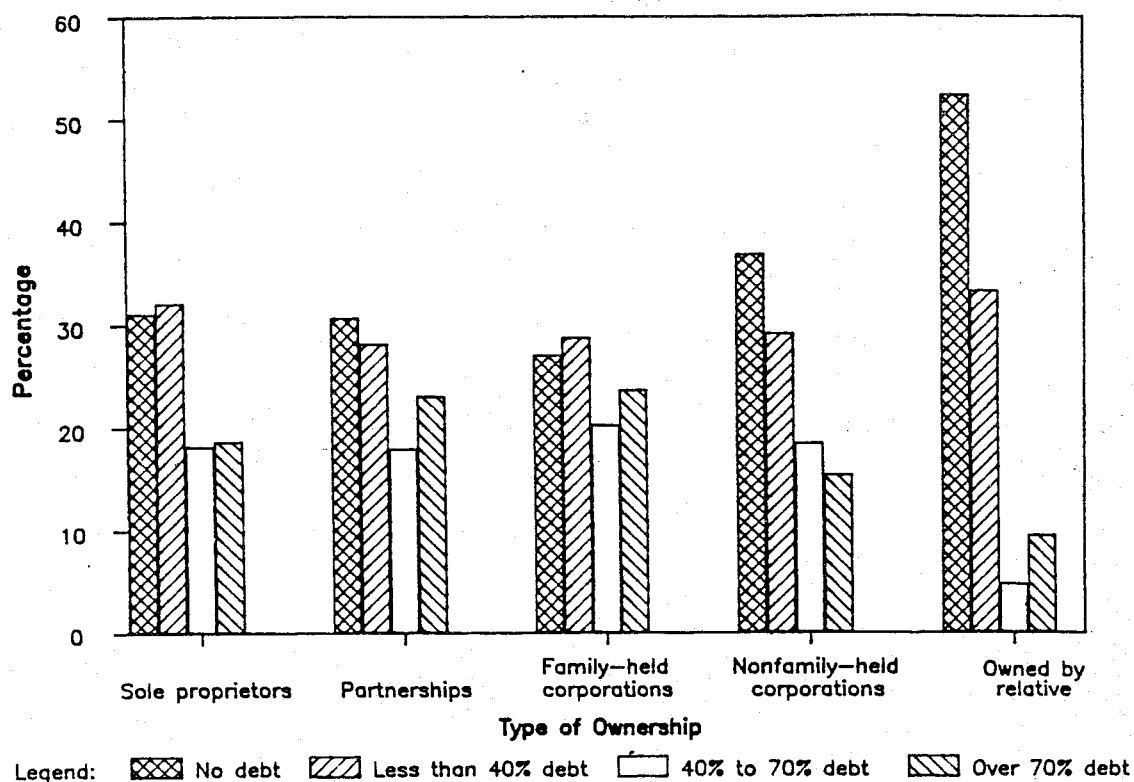


Figure 8. Business Operators' Debt-to-Asset Ratio by Type of Ownership

TABLE 5. SOURCE OF OPERATING, INTERMEDIATE-, AND LONG-TERM LOANS BY BUSINESS OPERATORS

Source of Funds	Mean Percentage	Percentage Who Received Some Funds From Source	Percentage Who Received All Funds From Source
Operating:			
Commercials banks	71.7	76.9	61.0
Private individuals	9.3	12.1	4.9
Credit union	7.8	6.8	5.7
Other	11.2	7.6	6.8
Intermediate- and long-term:			
Commercial banks	70.9	80.3	60.2
Private individuals	9.2	14.6	3.4
Credit union	7.0	10.2	4.8
Small Business Admin.	1.8	3.1	0.7
Other	11.2	11.9	7.8

TABLE 6. BUSINESS OPERATORS' NET PROFIT BY DEBT-TO-ASSET RATIO, TYPE OF OWNERSHIP, AND NUMBER OF YEARS IN BUSINESS

Category	1985 Net Profit				
	Negative	\$0-\$19,999	\$20,000-\$49,999	\$50,000-\$99,999	\$100,000 and Over
-----percent-----					
Business debt-to-asset ratio*					
No debt	10.0	44.3	21.4	15.7	8.6
Less than 40%	17.5	42.3	18.6	21.7	8.3
40% to 70%	26.4	34.0	9.4	5.7 ^a	24.5
Greater than 70%	34.4	47.5	11.5	3.3 ^a	3.3 ^a
Total	21.0	42.3	16.0	10.3	10.3
Type of ownership					
Sole proprietor	19.2	50.3	18.5	9.9	2.0
Partnership	25.0	50.0	7.1 ^a	0.0	17.9
Family-held corporation	22.7	36.4	11.4	9.1 ^a	20.5
Nonfamily-held corporation	22.2	27.8	20.4	13.0	16.7
Owned by relative	38.5	15.4 ^a	0.0	23.1 ^a	23.1 ^a
Other	0.0	0.0	50.0 ^a	25.0 ^a	25.0 ^a
Total	21.4	41.8	16.3	10.2	10.2
Years in business					
Less than 6	22.1	48.1	14.4	5.8	9.6
6 - 10	22.1	45.6	14.7	10.3	7.4
11 - 15	22.9	43.8	16.7	8.3 ^a	8.3 ^a
16 - 20	11.1 ^a	33.3	33.3	16.7	5.6
Over 20	20.4	29.6	16.7	18.5	14.8
Total	21.2	42.5	16.4	10.3	9.6

*Significant at the 1 percent (.01) level.

^aN < 5.

Business operators were asked whether they were current with respect to debt payments. Overall, 87.7 percent of businesses with debt were current (Table 7), but this percentage ranged from 93 percent for those with debt-to-asset ratios less than 40 percent to only 79 percent for those with ratios exceeding 70 percent. The businesses' status with respect to debt payments did not differ significantly among the six towns or among types of business organization (i.e., partnership, corporation, etc.).

TABLE 7. STATUS REGARDING BUSINESS DEBT PAYMENTS BY
BUSINESS DEBT-TO-ASSET RATIO

Business Debt-To-Asset Ratio	Percentage of Respondents Current on Debt Payments
Less than 40%	93.4
40% - 70%	87.5
Greater than 70%	78.7
Total	87.7

Note: Debt-to-asset ratio was significant at the 1 percent (.01) level. Other variables examined, but not found significant, were type of ownership (e.g., partnership, corporation) and city where established.

Business Management Adjustments

Respondents were also queried concerning changes in business operation that they had undertaken within the last three years. Adjustments reported most frequently were increasing collection efforts on past due accounts, reducing excessive inventories, reducing their labor force, and initiating interest charges on overdue accounts (Figure 9). Adjustments made by operators in the six towns are summarized in Appendix Table 9.

Some of these adjustments were reported much more frequently by some types of businesses than by others. For example, reducing excessive inventories was reported by almost 79 percent of retail firms and 67 percent of wholesale durable goods firms. Reductions in labor force were reported most often by construction and nondurable manufacturing firms, yet more than 45 percent of finance, insurance, and real estate firms and more than one-third of those offering professional services reported increases in labor force. Charging interest on overdue accounts was a practice most frequently initiated by firms engaged in manufacturing nondurable goods and those involved in wholesaling.

The frequency with which selected adjustments were reported is summarized by debt-to-asset ratio in Table 8. Adjustments that were significantly related to debt level (based on the Chi Square test) included restructuring of debt, reducing excessive inventories, and reducing labor force.

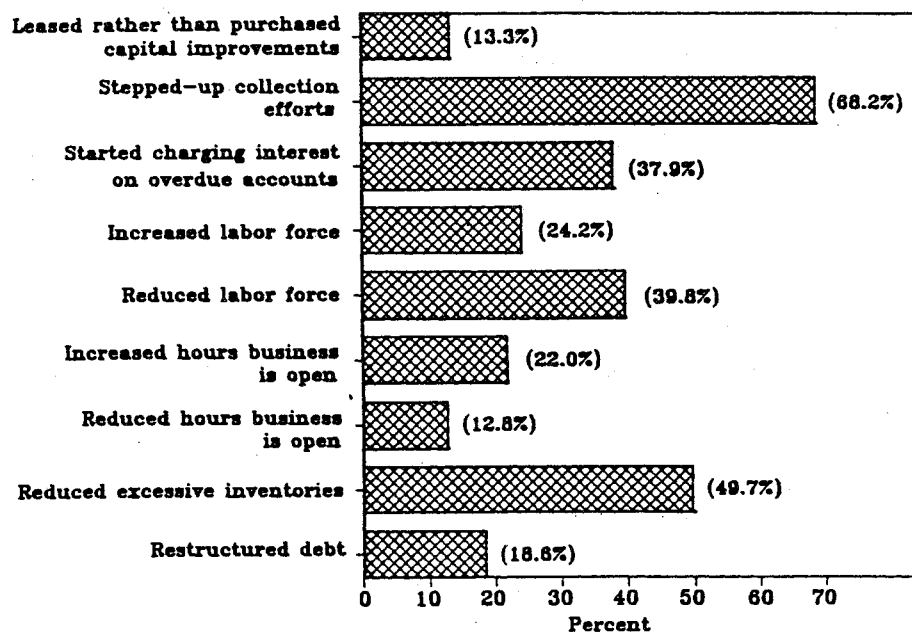


Figure 9. Management Adjustments Made by Business Operators in Last Three Years

TABLE 8. ADJUSTMENTS MADE BY BUSINESS OPERATORS DURING THE LAST THREE YEARS BY BUSINESS DEBT-TO-ASSET RATIO

Adjustment	Business Debt-to-Asset Ratio				Total
	No debt	<.40	.40 - .70	>.70	
	-----percent-----				
Restructured debt*	5.8	18.0	32.9	38.0	20.6
Reduced excessive inventories*	38.7	48.2	54.4	62.9	49.1
Reduced hours business is open	12.3	10.7	8.6	14.1	11.5
Increased hours business is open	24.0	15.2	26.1	25.4	22.0
Reduced labor force*	26.2	42.1	44.3	54.2	39.7
Increased labor force	26.7	19.8	33.8	18.6	24.4
Started charging interest on overdue accounts	35.0	40.7	40.0	40.9	38.8
Increased collection efforts on overdue accounts	63.1	68.2	77.1	71.2	68.9

*Significant at the 1 percent (.01) level.

The frequency of these adjustments is compared to the age of the business operator in Table 9. Two adjustments were significantly associated with age: reducing excessive inventories and increasing the hours the business is open. Inventory reduction was reported most frequently by the youngest and oldest age groups, whereas younger operators were most likely to report an increase in business hours.

TABLE 9. ADJUSTMENTS MADE BY BUSINESS OPERATORS DURING THE LAST THREE YEARS BY AGE

Adjustment	Age				Total
	< 35	35-44	45-54	> 54	
	-----percent-----				
Restructured debt	16.2	25.6	13.3	15.7	18.6
Reduced excessive inventories*	52.6	49.0	38.9	60.5	49.7
Reduced hours business is open	11.8	12.4	14.6	13.3	12.8
Increased hours business is open*	33.6	20.3	20.7	7.4	22.0
Reduced labor force	38.4	39.3	41.8	40.5	39.8
Increased labor force	27.4	25.5	23.2	17.5	24.2
Started charging interest on overdue accounts	37.6	39.9	38.3	33.8	37.9
Increased collection efforts on overdue accounts	73.0	67.1	69.4	61.0	68.3

*Significant at the 1 percent (.01) level.

Demographic Characteristics

Numerous demographic attributes of businesspersons and their families are summarized in Table 10. Average age of respondents was about 43 years, and about four out of five were male. Almost 90 percent were currently married, and the typical household had 1.3 children under age 19. The average respondent had lived in the city for almost 20 years, and more than two-thirds had attended college or other postsecondary schools. Most demographic characteristics were quite similar among the six towns. Jamestown respondents also had more frequently lived outside the county or state.

TABLE 10. SELECTED DEMOGRAPHIC CHARACTERISTICS OF BUSINESS OPERATORS AND SPOUSES, BY TOWN

Item	Units	Carrington	Casselton	Grafton	Hettinger	Jamestown	Stanley	All
Respondent age:								
Average age	Years	44.3	41.8	41.5	43.6	43.1	42.2	42.9
Distribution:								
Less than 25	Percent	2.8	2.7	1.0	2.6	3.3	0.0	2.0
25 to 34	Percent	20.8	29.7	26.7	22.1	26.1	18.5	24.2
35 to 44	Percent	30.2	32.5	37.6	36.3	24.8	46.1	33.0
45 to 54	Percent	24.5	18.9	20.8	16.9	26.2	23.1	22.6
55 to 64	Percent	21.7	16.2	13.9	22.1	19.6	12.3	18.2
Respondent sex:								
Male	Percent	82.7	88.2	78.6	80.2	77.0	83.1	80.4
Female	Percent	17.3	11.8	21.4	19.8	23.0	16.9	19.6
Respondent race:								
White	Percent	97.2	100.0	97.1	97.5	98.0	98.5	97.8
Other	Percent	2.8	0.0	2.9	2.5	2.0	1.5	2.2
Ethnic background:								
German	Percent	47.8	47.1	15.3	31.1	26.0	15.3	28.9
German Russian	Percent	5.4	2.9	3.1	9.5	13.7	8.5	8.0
Norwegian	Percent	17.4	29.4	27.6	24.3	19.1	44.1	25.0
Other Scandinavian	Percent	7.6	5.9	7.1	5.4	4.6	3.4	5.7
British Isles	Percent	5.4	5.9	17.3	17.6	16.8	8.5	13.1
Other	Percent	16.3	8.8	29.6	12.1	19.8	20.2	19.3
Marital status:								
Single	Percent	2.8	2.6	4.9	2.5	8.5	6.2	5.1
Married	Percent	94.3	92.1	91.2	90.1	86.3	86.2	89.7
Separated or divorced	Percent	2.8	2.6	3.9	6.2	4.6	7.7	4.6
Widowed	Percent	0.0	2.6	0.0	1.2	0.7	0.0	0.6
Spouse age:								
Average age	Years	42.7	40.5	40.6	42.6	42.7	40.7	41.9
Household size:								
Average	Number	3.5	3.2	3.7	3.3	2.9	3.4	3.3
Distribution:								
One	Percent	0.9	2.6	5.9	7.4	9.2	7.7	6.1
Two	Percent	31.1	34.2	20.6	33.3	36.6	23.1	30.3
Three	Percent	17.0	18.4	16.7	13.6	19.6	21.5	17.8
Four	Percent	28.3	26.3	25.5	21.0	22.2	23.1	24.2
Five	Percent	15.1	18.4	18.6	17.3	9.8	18.5	15.2
Six or more	Percent	7.5	0.0	12.7	7.4	2.6	6.2	6.4
Children under age 19:								
Average	Number	1.4	1.2	1.5	1.7	1.0	1.4	1.3
Distribution:								
None	Percent	34.0	37.8	30.0	21.1	48.7	36.1	36.6
One	Percent	16.0	21.6	25.0	26.3	19.3	14.8	20.2
Two	Percent	30.2	24.3	22.0	21.1	21.3	27.9	24.3
Three	Percent	14.2	16.2	14.0	24.6	9.3	16.4	14.3
Four or more	Percent	5.7	0.0	9.0	7.1	1.4	4.9	4.7
Years respondent has lived in city:								
Average	Number	19.1	18.5	22.3	20.4	19.3	17.3	19.7
Distribution:								
5 years or less	Percent	21.4	21.6	17.8	19.0	23.8	20.6	21.1
6 to 10 years	Percent	14.5	21.6	12.9	20.2	15.7	23.8	16.8
11 to 15 years	Percent	9.7	10.9	12.9	11.4	10.8	22.3	12.5
16 to 20 years	Percent	9.7	10.8	6.9	8.9	9.6	0.0	7.9
21 to 30 years	Percent	29.2	13.5	17.8	19.0	17.0	12.7	19.1
31 to 40 years	Percent	8.7	13.5	16.8	11.4	14.3	12.7	13.0
41 years or more	Percent	6.8	8.1	14.9	10.1	8.8	7.9	9.6
Number of areas outside county where respondent has lived one year or longer:								
None	Percent	18.1	29.4	28.6	12.7	11.6	14.5	17.7
One	Percent	27.7	20.6	17.9	29.6	27.1	16.1	24.1
Two	Percent	19.1	8.8	22.6	18.3	23.3	25.8	20.9
Three	Percent	17.0	20.6	11.9	19.7	17.1	16.1	16.7
Four	Percent	7.4	5.9	7.1	4.2	6.2	12.9	7.2
More than four	Percent	10.7	14.5	11.9	15.5	14.7	14.5	13.5

- CONTINUED -

TABLE 10. SELECTED DEMOGRAPHIC CHARACTERISTICS OF BUSINESS OPERATORS AND SPOUSES, BY TOWN (CONTINUED)

Item	Units	Carrington	Casselton	Grafton	Hettinger	Jamestown	Stanley	All
Number of years respondent has lived outside county:								
Average	Years	21.2	13.7	18.8	16.8	21.6	16.5	19.0
Distribution:								
None	Percent	9.4	32.3	7.4	14.9	7.2	12.9	11.5
Less than 5 years	Percent	10.6	6.5	14.7	17.5	5.6	14.5	11.2
5 to 9 years	Percent	11.8	9.6	14.7	8.1	10.4	14.5	11.5
10 years or more	Percent	68.2	51.6	63.2	59.5	76.8	58.1	65.8
Has respondent ever lived outside state:								
No	Percent	44.2	54.3	52.0	41.0	34.4	48.4	43.6
Yes	Percent	55.8	45.7	48.0	59.0	65.6	51.6	56.4
Number of years lived outside state:								
Average	Number	8.2	14.2	9.5	8.4	15.7	5.6	10.4
Distribution:								
Less than 1 year	Percent	11.3	5.6	2.1	37.3	1.0	33.3	15.7
1 to 4 years	Percent	40.3	22.2	47.9	28.0	33.0	33.4	34.7
5 to 9 years	Percent	24.2	16.7	16.7	4.0	13.4	9.8	13.4
10 years or more	Percent	24.2	55.5	33.3	30.7	52.6	23.5	36.2
Highest level of education completed by respondent:								
Eighth grade or less	Percent	3.8	5.3	2.0	4.9	0.0	3.1	2.6
Some high school	Percent	6.6	2.6	5.9	2.5	1.3	3.1	3.7
Completed high school	Percent	31.1	13.2	22.8	32.1	27.0	13.8	25.2
Attended college or other postsecondary school	Percent	30.2	47.4	37.6	30.9	27.6	33.8	32.6
Completed college	Percent	28.3	31.6	31.7	29.6	44.1	46.2	35.9
Highest level of education completed by spouse:								
Eighth grade or less	Percent	2.9	--	3.3	4.2	0.0	5.4	2.5
Some high school	Percent	5.8	5.9	5.4	6.9	2.3	7.1	5.2
Completed high school	Percent	37.5	20.6	27.2	31.9	30.8	19.6	30.0
Attended college or other postsecondary school	Percent	27.9	50.0	35.9	37.5	33.1	46.4	36.2
Completed college	Percent	26.0	23.5	28.3	19.4	33.8	21.4	26.1

In addition to the fact that most of these businesspersons have lived in the community for a number of years (79 percent had lived in the town for six years or more), many appear to have other ties to the area. For instance, 39 percent reported that a member of their immediate family (defined as parents, spouse, children, and siblings) owned a business in the community, and 66 percent said that a family member works in a local business. Many of these persons also have ties to agriculture; 47 percent reported that an immediate family member owns or manages a farm.

Personal Financial Characteristics

Selected personal financial characteristics of the survey respondents are summarized in Table 11 and in Appendix Table 10. Businesspersons reported an average of about \$266,000 in business and personal assets and about \$74,000 in business and personal debt. Personal

TABLE 11. FAMILY FINANCIAL RESOURCES AND INCOME OF BUSINESS OPERATORS, ALL TOWNS, DECEMBER 31, 1985

Item	All Towns
Total assets	
Mean	\$266,217
Median	\$125,000
Total debt	
Mean	\$ 73,768
Median	\$ 35,000
Personal net worth	
Mean	\$168,766
Median	\$ 75,000
Total family income	
Mean	\$ 36,421
Median	\$ 30,000

net worth averaged almost \$169,000. Total family income reported by this group averaged just over \$36,000; wages and salary accounted for 84 percent of this total. Again, caution should be exercised in using average or mean figures. The median, or midpoint, figures for assets, debt, and net worth are about one-half the mean amount and may more accurately reflect the financial conditions of typical households.

Business operators' total family income is summarized by age and education in Appendix Table 11. Neither variable appears to be strongly associated with income, although businesspersons in the older age brackets and with completed college degrees also tend to be represented somewhat more frequently in the upper income groups. College graduates are found to be concentrated in the \$20,000 to \$39,999 and in the \$40,000 to \$99,999 income categories, whereas individuals with less than high school educations are found to more frequently have incomes of \$20,000 or less. The small number of respondents in these lowest education categories, however, suggests that these results should be interpreted with caution.

Respondents' personal net worth is summarized by age and education in Appendix Table 12. Overall, 6 percent of the respondents reported negative net worth, about 56 percent indicated net worth of less than \$100,000, and 37.5 percent reported net worth of \$100,000 or more. The relationship between net worth and age was positive; i.e., older respondents more frequently reported higher levels of net worth. The relationship between education and net worth is not pronounced.

Trade Patterns

Trade patterns of the respondents are summarized in Figure 10 and in more detail in Appendix Table 13. Food, hardware, and banking services reflect trade patterns usually associated with convenience items. With the exception of Casselton residents, more than 90 percent of the respondents reported purchasing the majority of these items in their hometown. In Casselton, located only 20 miles from Fargo, only 61 percent purchased the majority of their food locally, but 88 percent patronized local hardware stores and 100 percent obtained personal banking services locally.

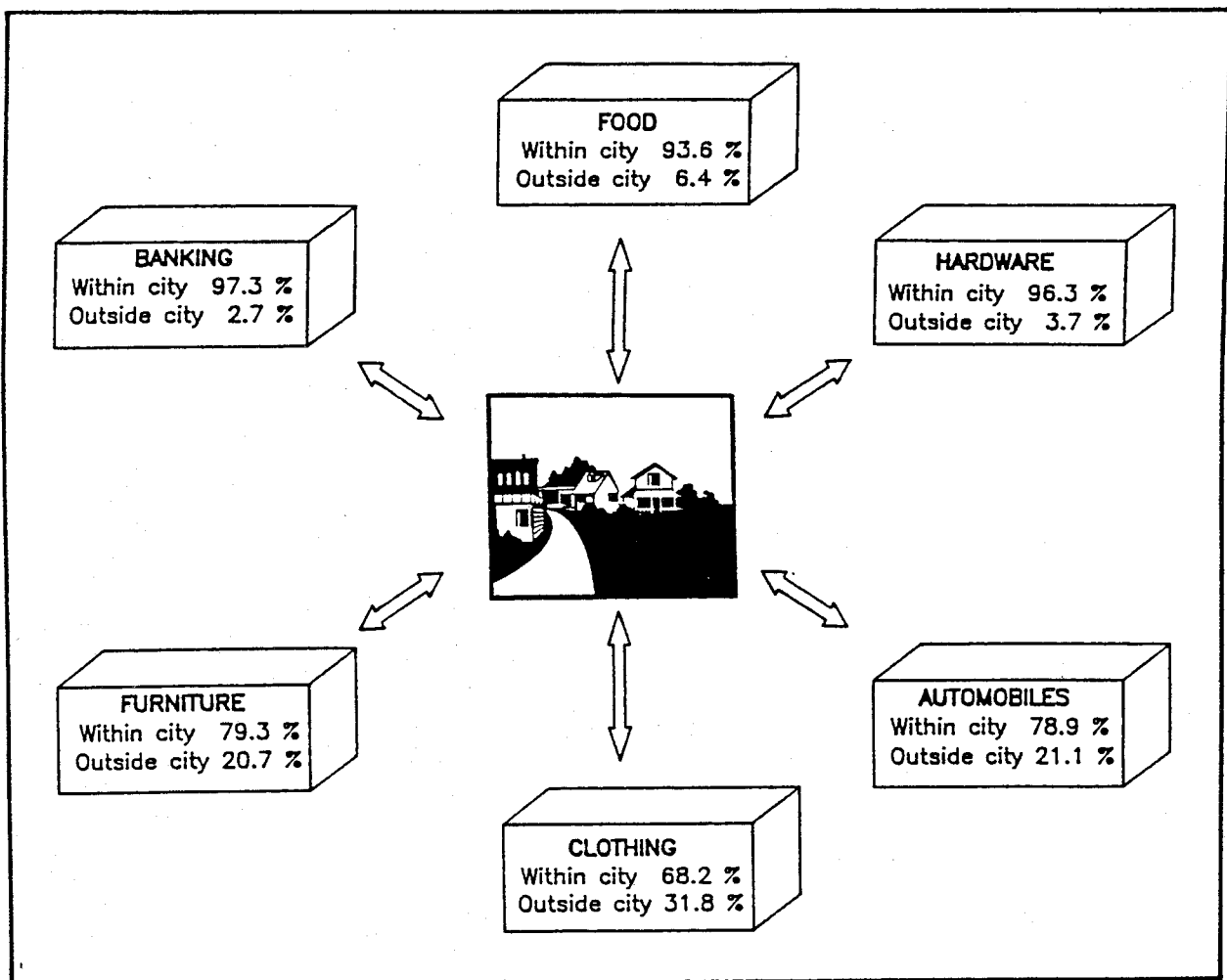


Figure 10. Percentage of Goods and Services Obtained by Business Operators Within and Outside Local City

Furniture, automobiles, and clothing are items which represent major, although infrequent, expenditures. Businesspersons interviewed were more likely to purchase these items in another city, although (except in Casselton) a majority patronized local merchants. Distances traveled to obtain these items from out-of-town locations basically reflect the distances to larger regional trade centers.

Organizational Participation

Participation by businesspersons' families in a variety of community organizations and activities in 1985 is summarized in Figures 11 and 12. Church was the most common form of organization of which business operators were members (81 percent), followed by civic or service clubs (59 percent), and professional or business organizations (58 percent). The frequency with which the respondent or spouse served as an officer in such organizations followed a similar pattern, but respondents were somewhat more likely to hold office in professional or business organizations or civic and service clubs than in the church. Organizational participation by town is summarized in Appendix Table 14.

About one-fifth of the respondents had attended NDSU meetings, field days, or short courses in the last year. About 37 percent had received NDSU publications.

Economic Outlook

The business operators' economic outlook is summarized in Table 12. When asked how they felt their sales or service volume in 1986 would compare to that in 1985, about 62 percent felt it would be greater, and about 61 percent believed their net profit would be greater in 1986. Only about one-fourth of the respondents felt they were likely to expand their business in the next three years, but more than three-fourths felt they were likely to continue to operate for at least three years. Of the respondents, those engaged in finance, insurance, and real estate, or in professional services were most likely to see potential for expansion. More than 40 percent of respondents with these types of businesses felt expansion was likely or very likely. On the other hand, less than one in four proprietors of retail establishments saw potential for expansion (Table 13). Retail proprietors also were the least optimistic concerning the continuation of their business for the next three years; about 20 percent did not know whether their business could continue, and an additional 9 percent felt continuation was unlikely (Appendix Table 15).

Most of the respondents (62 percent) had made no capital improvements in the last three years, and only 44 percent could see any expansion or growth possibilities in the next several years. Jamestown respondents tended to be more optimistic in this regard; 54 percent identified growth opportunities in Jamestown compared to only 27 percent of Carrington businesses.

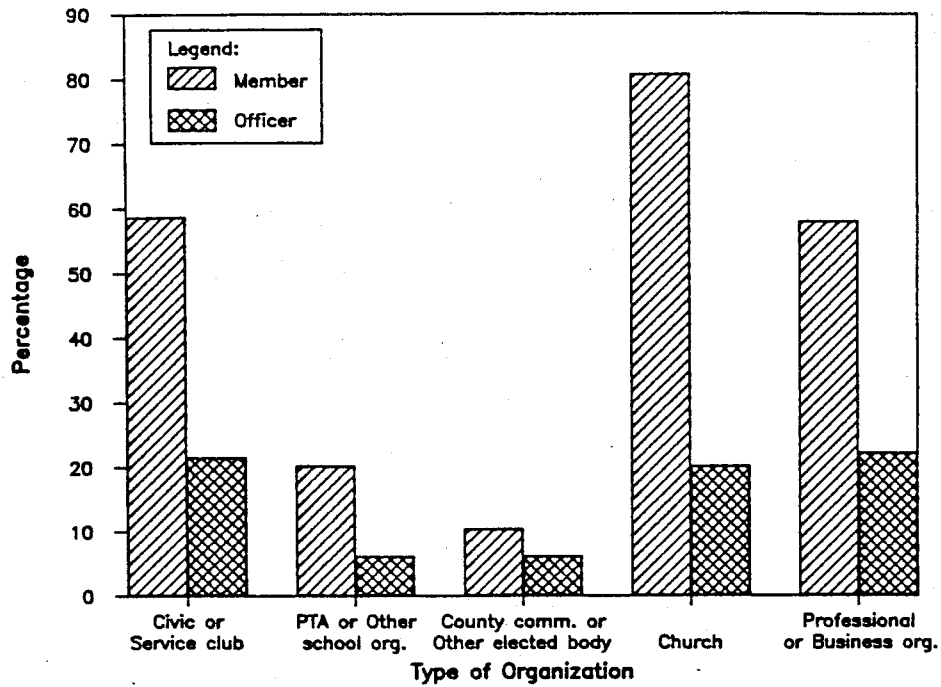


Figure 11. Organizational Participation of Business Operators

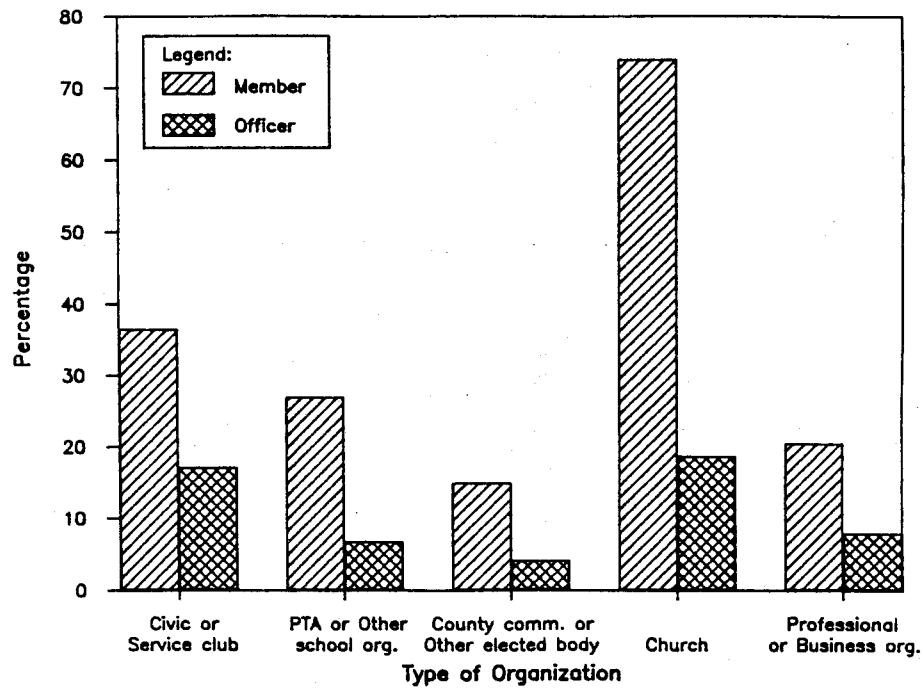


Figure 12. Organizational Participation of Business Operators' Spouses

TABLE 12. BUSINESS OPERATORS' ECONOMIC OUTLOOK IN NORTH DAKOTA, 1986

Item	Units	Carrington	Casselton	Grafton	Hettinger	Jamestown	Stanley	All
-----percent-----								
Expected change in sales or service volume in 1986 compared to 1985:								
-20 percent or less	Percent	19.2	5.9	16.7	10.0	12.5	16.2	14.3
0 to -19.9 percent	Percent	19.3	35.3	20.8	12.5	23.6	40.6	23.7
1 to 20 percent	Percent	50.0	58.8	50.0	55.0	51.4	43.2	50.7
21 percent or greater	Percent	11.5	0.0	12.5	22.5	12.5	0.0	11.3
Expected change in net profit in 1986 compared to 1985:								
-20 percent or less	Percent	15.4	23.5	21.6	12.8	15.2	17.6	16.7
0 to -19.9 percent	Percent	21.1	11.8	18.9	20.5	19.6	38.3	22.1
1 to 20 percent	Percent	52.0	52.9	51.4	51.3	56.1	44.1	51.8
21 percent or greater	Percent	11.5	11.8	8.1	15.4	9.1	0.0	9.4
Likelihood of expanding business in next three years:								
Very likely	Percent	3.9	5.6	11.1	21.8	14.2	12.5	11.9
Likely	Percent	9.7	13.9	15.2	11.5	19.6	12.5	14.4
Do not know	Percent	19.4	27.8	22.2	25.6	25.0	20.3	23.1
Unlikely	Percent	30.1	33.3	31.3	17.9	19.6	29.7	25.8
Very unlikely	Percent	36.9	19.4	20.2	23.1	21.6	25.0	24.8
Likelihood of continuing to operate business for next three years:								
Very likely	Percent	51.5	55.6	66.7	47.4	60.1	50.0	56.3
Likely	Percent	19.4	22.2	17.2	24.4	25.0	23.4	22.0
Do not know	Percent	22.3	16.7	13.1	21.8	10.8	18.8	16.5
Unlikely	Percent	3.9	2.8	1.0	5.1	2.0	3.1	2.8
Very unlikely	Percent	2.9	2.8	2.0	1.3	2.0	4.7	2.5
If business closed, employees would:								
Stay in community	Percent	70.4	78.8	79.8	52.2	72.1	54.4	68.8
Stay in state	Percent	24.7	15.2	16.0	30.4	17.9	26.3	21.3
Move out of state	Percent	4.9	6.1	4.3	17.4	10.0	19.3	9.9
Does respondent see expansion or growth opportunities:								
No	Percent	73.5	62.9	55.7	51.9	45.8	54.7	56.3
Yes	Percent	26.5	37.1	44.3	48.1	54.2	45.3	43.7
Has respondent made major capital improvements in the past three years:								
No	Percent	69.3	67.6	67.7	63.6	53.5	56.3	62.1
Yes	Percent	30.7	32.4	32.3	36.4	46.5	43.8	37.9
Percent who prepare financial statements:								
Balance sheet	Percent	75.3	63.3	70.3	69.3	77.1	69.4	72.4
Income statement	Percent	80.2	71.0	75.8	69.9	84.0	73.0	77.3
Cash flow budget	Percent	30.4	30.0	38.0	28.2	45.4	26.7	34.7
Percent who use financial statements for management decisions:								
Balance sheet	Percent	59.1	41.4	52.1	53.5	54.8	50.8	53.6
Income statement	Percent	62.4	56.7	59.8	56.2	67.7	50.8	60.5
Cash flow budget	Percent	28.6	17.2	38.0	25.4	32.3	26.3	30.0

TABLE 13. BUSINESS OPERATORS' OPINION OF BUSINESS EXPANSION IN THE NEXT THREE YEARS BY INDUSTRY TYPE

Industry Type	Likely ^a	Don't Know	Unlikely ^b
	-----percent-----		
Agriculture, mining, and construction	28.9	18.4	52.6
Manufacturing	22.0	31.7	46.3
Wholesale	21.4	23.8	54.8
Retail trade	17.6	24.4	58.0
Finance, insurance, and real estate	48.5	21.2	30.3
Business, repair, and personal services and entertainment	17.7	26.6	55.7
Professional	44.4	14.3	41.3
Government	0.0	0.0	100.0 ^c

^aIncludes very likely and likely responses.

^bIncludes very unlikely and unlikely responses.

^cN < 5.

Respondents also were asked which types of businesses had the greatest potential for expansion in their communities and which would have the greatest difficulty surviving. Grocery stores, eating places, and health care facilities were felt to have the greatest expansion potential, while farm equipment dealers and clothing stores were seen as having the greatest difficulty. If the business were to close, most respondents believed their employees would remain in the community.

Characteristics of Former Business Operators

The characteristics of the former business operators who responded to the survey are summarized in this section. The summary is organized into sections which describe the following characteristics: business organization and history; business financial attributes; demographic, financial, and employment characteristics; and relocation status. The former business survey differed somewhat from the business survey. Because many former business operators had moved to new communities, they were not asked attitudinal questions about community satisfaction. Many other questions were simply irrelevant.

Business Organization and History

As noted previously, sample selection criteria limited this survey to businesses that had ceased operation since 1981. Of 128 former business operators initially identified, some proved very difficult to contact, and a few were reluctant to discuss their former business. However, 68 of these persons ultimately completed useable questionnaires.

The year the respondent had ceased to operate the business ranged from 1982 to 1986 (Table 14). The higher percentages of closures occurring during the more recent years may reflect rising failure rates but also could merely indicate that recent closures were more likely to be reported and their proprietors easier to locate. When asked why they had ceased to operate their business, 81 percent of respondents cited financial problems as a major factor.

Almost two-thirds of the businesses had been organized as sole proprietorships, a substantially higher percentage than was found for current businesses. Among the other types of firms, the percentages of former businesses that were owned by a relative or organized as a partnership were higher than for current businesses. The respondent had been involved in the business an average of 8.3 years, and in more than half of the cases the period of involvement was five years or less. The business had been established in the town for an average of 13.6 years, but 20 percent had an operating life of one year or less. Thus, both the businesses' operational period and the operators' span of involvement were considerably shorter for former than for current businesses (see Table 14). On the other hand, former businesses reported patterns of sales distribution and inventory purchases which were quite similar to those of the current businesses.

Former businesses also had employed fewer workers on average than current businesses. The average number of workers employed at the time of closing was 2.8 full-time and 1.6 part-time workers. By contrast, current businesses employ an average of 5.5 full-time and 3.2 part-time workers (Table 14). When the number of workers employed by these former businesses at time of closing is compared to their employment one year and five years prior to closing, a modest decrease in the number of full-time workers is noted prior to closing. No change was reported for the last year, on average, in the number of part-time workers, although this category had registered some growth during the period of one to five years prior to closure.

Business Financial Characteristics

Selected financial characteristics of the former businesses are summarized in Table 15 and Appendix Table 16. These firms had average assets of \$101,655 and average debt of \$71,022, but a few large values affected these averages substantially. The median values for assets and debt, respectively, were \$40,000 and \$20,000. As in previous tables, average assets less average debt does not necessarily equal average net worth because some respondents reported the value of only their assets or only their debt but not both.

TABLE 14. SELECTED BUSINESS CHARACTERISTICS OF FORMER BUSINESSES IN NORTH DAKOTA, 1986 (CHARACTERISTICS AS OF TIME OF CLOSING)

Item	Units	Value
Year ceased:		
1982	Percent	10.3
1983	Percent	19.1
1984	Percent	22.1
1985	Percent	26.5
1986	Percent	22.1
Respondent status:		
Sole proprietor	Percent	62.7
Part-owner or partner	Percent	23.9
Hired manager	Percent	13.4
Type of business organization: ^a		
Partnership	Percent	30.8
Family-held corporation	Percent	38.5
Nonfamily-held corporation	Percent	23.1
Owned by relative	Percent	23.1
Number of years respondent had been involved in this business:		
Mean	Years	8.3
Distribution:		
5 years or less	Percent	57.6
6 to 10 years	Percent	18.2
11 to 20 years	Percent	16.6
More than 20 years	Percent	7.6
Number of years business had been established in this town:		
Mean	Years	13.6
Distribution:		
5 years or less	Percent	46.2
6 to 10 years	Percent	9.2
11 to 20 years	Percent	24.6
More than 20 years	Percent	20.0
Number of full-time workers employed at time of closing:		
Mean	Number	2.8
Distribution:		
None	Percent	14.1
1	Percent	32.8
2 - 3	Percent	29.7
4 - 5	Percent	9.4
6 - 10	Percent	9.4
11 - 20	Percent	4.7
21 or more	Percent	0.0

- CONTINUED -

TABLE 14. SELECTED BUSINESS CHARACTERISTICS OF FORMER BUSINESSES IN
NORTH DAKOTA, 1986 (CHARACTERISTICS AS OF TIME OF CLOSING) (CONTINUED)

Item	Units	Value
Number of part-time workers employed at time of closing:		
Mean	Number	1.6
Distribution:		
None	Percent	33.9
1	Percent	22.6
2 - 3	Percent	32.3
4 or more	Percent	11.3
Number of full-time workers employed one year prior to closing:		
Mean	Number	3.2
Distribution:		
None	Percent	10.0
1	Percent	36.7
2 - 3	Percent	23.3
4 - 5	Percent	15.0
6 - 10	Percent	10.1
11 - 20	Percent	3.4
21 or more	Percent	1.7
Number of part-time workers employed one year prior to closing:		
Mean	Number	1.6
Distribution:		
None	Percent	29.3
1	Percent	29.3
2 - 3	Percent	20.7
4 or more	Percent	20.7
Number of full-time workers employed five years prior to closing:		
Mean	Number	3.9
Number of part-time workers employed five years prior to closing:		
Mean	Number	1.3
Percent of sales made to: ^b		
Farmers (residing either within or outside the city limits)	Percent	40.8
Residents of this town	Percent	37.2
Residents of neighboring towns	Percent	19.9
Rural nonfarm residents	Percent	1.1

- CONTINUED -

TABLE 14. SELECTED BUSINESS CHARACTERISTICS OF FORMER BUSINESSES IN NORTH DAKOTA, 1986 (CHARACTERISTICS AS OF TIME OF CLOSING) (CONTINUED)

Item	Units	Value
Percent of sales made to persons who live: ^b		
In this town	Percent	38.7
Outside town but within 10 miles	Percent	20.3
10 to 20 miles from this town	Percent	16.4
21 to 30 miles from this town	Percent	9.8
More than 30 miles from this town	Percent	14.4
Percent of inventory purchased from firms located: ^b		
Within this town	Percent	17.5
Elsewhere within this county	Percent	10.1
Elswhere in the state	Percent	25.2
Out of state	Percent	46.1

^aExcludes sole proprietorship.

^bMay not add to 100 percent as these values represent the average of the percentages reported by each respondent.

TABLE 15. FINANCIAL CHARACTERISTICS OF NORTH DAKOTA FORMER BUSINESSES, FOR LAST YEAR OF OPERATION

Category	Units	Value
Total assets:		
Mean	Dollars	101,655
Median	Dollars	40,000
Total debt:		
Mean	Dollars	71,022
Median	Dollars	20,000
Net worth:		
Mean	Dollars	31,751
Median	Dollars	10,000
Gross profit:		
Mean	Dollars	4,895
Median	Dollars	1,000
Gross income:		
Mean	Dollars	33,994
Median	Dollars	16,000
Debt-to-asset ratio:		
Mean	Percent	52.7

The debt-to-asset ratios of these businesses averaged about 53 percent but covered a wide range. About 22 percent of respondents reported no debt. Interestingly, only about 9 percent had debt ratios exceeding 70 percent, in contrast to the 19 percent of current businesses in that debt category.

Many of these businesses appear to have experienced substantial income problems during their final year of operation. Their gross income averaged only about \$34,000, and more than 40 percent had gross incomes of \$10,000 or less.

Demographic and Financial Characteristics

Selected demographic attributes of the respondents are summarized in Table 16. The average age and educational level of the former business proprietors are almost identical to that of the current operators (see Table 16). The percentage of females and the percentage who were separated or divorced were substantially higher for this group, however.

TABLE 16. SELECTED DEMOGRAPHIC CHARACTERISTICS OF FORMER BUSINESS OPERATORS

Item	Units	Value
Respondent age:		
Average age	Years	42.7
Distribution:		
Less than 25	Percent	6.1
25 to 34	Percent	19.7
35 to 44	Percent	30.3
45 to 54	Percent	22.7
55 to 64	Percent	21.2
Respondent sex:		
Male	Percent	64.2
Female	Percent	35.8
Respondent race:		
White	Percent	100.0
Other	Percent	0.0
Ethnic background:		
German	Percent	44.6
German Russian	Percent	6.2
Norwegian	Percent	20.0
British Isles	Percent	15.4
Other	Percent	13.8

TABLE 16. SELECTED DEMOGRAPHIC CHARACTERISTICS OF FORMER BUSINESS OPERATORS (CONTINUED)

Item	Units	Value
Marital status:		
Single	Percent	4.5
Married	Percent	80.3
Separated or divorced	Percent	12.1
Widowed	Percent	3.0
Spouse age:		
Average age	Years	41.3
Household size:		
Average	Number	3.1
Distribution:		
One	Percent	13.6
Two	Percent	27.3
Three	Percent	13.6
Four	Percent	30.3
Five	Percent	12.1
Six or more	Percent	3.0
Children under age 19:		
Average	Number	1.2
Distribution:		
None	Percent	39.4
One	Percent	15.2
Two	Percent	33.3
Three	Percent	9.1
Four or more	Percent	3.0
Highest level of education completed by respondent:		
Eighth grade or less	Percent	4.5
Some high school	Percent	7.5
Completed high school	Percent	28.4
Attended college or other postsecondary school	Percent	37.3
Completed college	Percent	22.4
Highest level of education completed by spouse:		
Eighth grade or less	Percent	3.7
Some high school	Percent	0.0
Completed high school	Percent	37.0
Attended college or other postsecondary school	Percent	33.3
Completed college	Percent	25.9

The average total family income (adjusted gross income) of former business operators in 1985 was \$28,596 (about \$8,000 less than current business operators), and 54 percent had incomes less than \$20,000 (compared to 27 percent of current businesses) (Table 17). Reflecting these conditions, 58 percent said they were not better off financially than when they ceased to operate their businesses.

TABLE 17. FINANCIAL CHARACTERISTICS OF FORMER BUSINESS OPERATORS

Category	Units	Value
Gross family income:		
Average	Dollars	28,596
Median	Dollars	20,000
Distribution:		
Negative	Percent	6.0
\$0 - \$10,000	Percent	16.0
\$10,001 - \$20,000	Percent	32.0
\$20,001 - \$30,000	Percent	20.0
\$30,001 - \$40,000	Percent	10.0
More than \$40,000	Percent	16.0
Are you better off financially today than when you were operating your former business?		
Yes	Percent	42.4
No	Percent	57.6

Employment Characteristics

Selected employment characteristics of the former business operators are reported in Table 18. At the time of the survey, about 70 percent of the respondents were employed, 9 percent reported that they had retired, and 3 percent said they were students. About 4.5 percent of the respondents had become full-time housewives, and 13.6 percent were currently unemployed. When these statistics are compared with the experience of displaced workers nationwide, it appears that the former business operators have been slightly more successful in obtaining employment and also slightly more prone to leave the labor force. A national survey of workers who had lost their jobs after a tenure of three or more years revealed that 62.6 percent of all white workers had found new jobs, 13.9 percent had left the labor force, and 23.4 percent were unemployed (Flaim and Sehgal 1985).

Survey respondents were distributed among a number of industries with retail trade and durable goods manufacturing being the most important. Male respondents were particularly likely to be employed in retail trade, while women respondents were more likely to be employed in the finance,

TABLE 18. SELECTED EMPLOYMENT CHARACTERISTICS OF NORTH DAKOTA FORMER BUSINESS OPERATORS

Item	Percentage
Current employment status:	
Employed	69.7
Not employed, total:	30.3
Retired	9.1
Student	3.0
Housewife	4.5
Unemployed	13.6
Occupation in which employed:	
Executive or managerial	22.2
Professional specialty	31.1
Technicians and repair services	a
Sales	15.6
Administrative specialties	a
Farming, forestry	a
Mechanics and repair services	a
Construction	a
Transportation	a
Handlers and lab	a
Industry in which employed:	
Agriculture	10.9
Mining	a
Construction	a
Manufacturing, nondurable	a
Manufacturing, durable	13.0
Wholesale, nondurable	a
Retail trade	28.3
Finance, insurance, and real estate	a
Entertainment	a
Professional and related services	a
Government	a
Respondent's satisfaction with present employment:	
Very satisfied	42.4
Satisfied	30.5
Neither satisfied nor dissatisfied	11.9
Dissatisfied	8.5
Very dissatisfied	6.8
Likelihood that respondent will look for work in next 12 months:	
Very likely	22.7
Likely	4.5
Unlikely	9.1
Very unlikely	56.1
Don't know	7.6

aN < 5.

insurance, and real estate industry (Table 18). The respondents also were distributed among a number of occupations; professional specialties and executive or managerial occupations were most common. Women were found in sales and administrative services in higher proportions than men.

Respondents generally were quite satisfied with their present employment (Table 18). About 73 percent indicated they were either satisfied or very satisfied with their present job; only about 15 percent were dissatisfied or very dissatisfied. However, about 27 percent of the respondents indicated they were either likely or very likely to look for a different job in the next 12 months.

Relocation of Former Business Operators

A point of special interest was whether a substantial proportion of the former business operators had moved away from the community after closing their business. At the time of the survey, 63 percent of the respondents were found to be living in the same community where their business had been located, 29 percent had moved to another county within the state, and 7 percent (five individuals) had moved out of state (Table 19). In subsequent analyses, characteristics of the group who had relocated from the county (about 37 percent) are compared to those of the respondents who had remained in the county.¹

Examination of Table 19 indicates that the age and sex of the respondents appears to have been associated with relocation; more than half of those in the 35 to 44 age bracket had relocated. Interestingly, however, only 26 percent of those less than age 35 had relocated. Furthermore, the percentage who had relocated was more than twice as high among the male respondents. Note, however, that the relatively small size of these groups indicates that these results should be interpreted with caution.

The propensity for these former business operators to relocate also can be compared with that of displaced workers nationwide. Of all workers surveyed, only 13.6 percent had relocated (Flaim and Sehgal 1985). The frequency of relocation was substantially less for women (9.2 percent) than for men (15.6 percent).

The percentage of respondents who relocated appears related to their educational attainment (Table 19). One-half of those who had completed post-graduate degrees and 46 percent of those who were college graduates had relocated compared to less than 30 percent of those whose education had ceased at or before high school graduation.

¹When attempting to survey displaced individuals, one concern is the extent to which those who have relocated may be undersampled. In examining this question with respect to former business operators, it was determined that 6.2 percent of the entries on the original list were indicated to have an out-of-state address; whereas, out-of-state persons constituted 4.4 percent of the completed questionnaires. Thus, it appears that only a slight undersampling of out-of-state persons occurred.

TABLE 19. PRESENT RESIDENCE OF NORTH DAKOTA FORMER BUSINESS OPERATORS

Item	Percent
Present residence:	
Same county where business was located	63.2
Another county in North Dakota	29.4
Out of state	7.4
Percent relocating by age:	
Less than 35	26.3
35 - 44	55.0
45 - 54	33.3
55 and over	28.6
Total	36.8
Percent relocating by sex:	
Males	44.2
Females	20.8
Total	35.8
Percent relocating by education:	
High school or less	29.6
Some post-secondary	36.0
Completed college	45.5
Completed graduate degree	50.0
Total	35.8
Percent relocating by marital status:	
Married	39.6
Not married	18.2

Other relationships were explored but found not to be significant. In particular, satisfaction with current employment, satisfaction with the community's quality of life, and present level of family income did not appear to be related to relocation status. Relocation status did appear to be related to the respondent's current occupation, however. Relocating respondents were much more likely to be employed in executive or managerial positions, professional specialties, and administrative support specialties than their counterparts who had not left the area.

A final relationship of interest concerns the proportion of each group who felt they were better off financially in 1986 than when they were operating their business. Of the relocating group, 50 percent indicated they were better off compared to 38 percent for the nonrelocating group.

Conclusions and Implications

This study was initiated because of a concern that depressed farm income and a resulting decrease in retail sales volume had placed substantial pressure on many businesses in North Dakota's agricultural trade centers. The results of the surveys of business operators and former business operators in six North Dakota communities lead to a number of conclusions. The most salient of these include the following:

- Farmers are important customers for many businesses. Overall, businesses surveyed reported that farmers accounted for more than 40 percent of their business volume.
- The viability of the local community is critical to area businesses. In each community surveyed, residents of the town together with farmers accounted for about 75 percent of the total business volume of local establishments.
- Financial resources of the businesses surveyed were quite variable. About one-third of the current business operators reported no debt, while about 19 percent had debt-to-asset ratios greater than 70 percent. High debt-to-asset ratios tended to be associated with operators less than 45 years old and those who had been in business less than 10 years.
- The variability of financial circumstances of the businesses surveyed is also revealed when their levels of net profit are examined. About 21 percent of the respondents reported negative levels of net profit in 1985, and half had a net profit of less than \$13,000. The level of net profit was inversely associated with the businesses' debt-to-asset ratio; i.e., the higher the debt ratio, the lower the net profit.
- A substantial percentage of the businesses surveyed were not current on their debt payments. Overall, about 12 percent of the businesses with debt surveyed fell into this category, and 21 percent of the businesses with debt-to-asset ratios exceeding 70 percent were in this situation.
- Business managers are responding to current financial pressures in a variety of ways. More than two-thirds reported they had stepped up collection efforts on overdue accounts while almost half had attempted to reduce inventories. Almost 40 percent had reduced their labor force in the last three years, and about 38 percent had started charging interest on overdue accounts.
- The economic outlook of the current businesspersons surveyed can best be summarized as cautious. While more than three-fourths felt they could continue to operate for at least three more years, only about one-fourth felt they were likely to expand their businesses during that period. Retail proprietors were the least optimistic concerning business continuation.

- Comparison of salient characteristics of current and former businesses provides several insights. Current and former business operators reported similar reasons for establishing their businesses (Table 20). When the types of businesses are compared, the former businesses were found to be dominated by retail establishments. Fewer former businesses than current establishments were found in the finance, insurance, and real estate; and professional services categories. Former business operators had been involved in their business for a substantially shorter period than their counterparts who were currently operating, and their businesses had been established for a much shorter period. There was little difference in the types of customers they served, but the former businesses had fewer employees. They also had substantially lower levels of financial resources.

The dominant pattern that emerges, then, is that the businesses that have failed were similar to other firms in the study communities with the exception of being smaller and less well-established. The majority of these businesses were started in the 1970s suggesting that the impact of economic stress in agriculture on business operators may be similar to its effects on farmers and ranchers. Business operators who established their firms in the 1970s, like persons who began farming during that period, appear to have been severely affected by declining revenue and falling equity. Circumstances, rather than individual actions, may thus have been the major cause of failure for many rural businesses.

Overall, the results of the analysis suggest that the business community of North Dakota's agricultural trade centers has been affected considerably by the slumping farm economy. For the rural community development practitioner, the results suggest that the retention of businesses, particularly those emphasizing capital goods, will require concerted attention. At the same time, however, the results suggest that programs aimed at assisting communities in retaining businesses may require approaches that emphasize community-wide involvement rather than assistance to individual entrepreneurs. Given that those operators undergoing financial difficulty are not substantially different than those experiencing less difficulty, it appears that programs aimed at addressing the economic and social environment of the community, rather than simply improving the skills of individual business managers, may be necessary.

TABLE 20. CHARACTERISTICS OF CURRENT AND FORMER BUSINESS OPERATIONS IN SIX STUDY COMMUNITIES, NORTH DAKOTA, 1986

Item	Units	Current Business Operations	Former Business Operations
Factors in the decision to establish the business:			
Business opportunity (i.e., business was available or in demand)	Percent	35.8	44.7
Town's <u>economic</u> attributes (i.e., <u>location</u> , size, progressiveness, economy)	Percent	26.2	22.5
Town's <u>social</u> attributes (i.e., <u>hometown</u> , relatives lived there, good place for children)	Percent	20.0	13.4
Job transfer (i.e., company moved respondent to the town)	Percent	9.6	4.5
Desire to be own boss	Percent	2.5	9.0
Other	Percent	5.9	5.0
Type of business (industry):			
Agricultural services	Percent	2.2	0.0
Mining	Percent	0.2	0.0
Construction	Percent	4.6	6.1
Manufacturing, nondurable	Percent	1.3	1.5
Manufacturing, durable	Percent	6.6	7.6
Wholesale, nondurable	Percent	5.9	3.0
Wholesale, durable	Percent	2.2	0.0
Retail trade	Percent	37.1	59.1
Finance, insurance, and real estate	Percent	12.5	3.0
Business and repair services	Percent	5.7	7.6
Personal services	Percent	7.9	6.1
Entertainment	Percent	1.5	4.5
Professional services	Percent	12.0	1.5
Government	Percent	0.2	0.0
Years of involvement in business:	Years	12.7	8.3
Years business established in community:	Years	24.9	13.6

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TABLE 20. CHARACTERISTICS OF CURRENT AND FORMER BUSINESS OPERATIONS IN SIX STUDY COMMUNITIES, NORTH DAKOTA, 1986 (CONTINUED)

Item	Units	Current Business Operations	Former Business Operations
Type of customers:			
Farmers	Percent	41.5	40.8
Town residents	Percent	34.4	37.2
Residents of neighboring towns	Percent	18.1	19.9
Rural nonfarm residents	Percent	6.0	1.1
Number of employees (current for current businesses or one year before closing for former businesses):			
Full-time	Number	5.5	3.2
Part-time	Number	3.2	1.6
Business assets (as of January 1, 1986 or at time of closing):			
Mean	Dollars	1,389,378	101,655
Median	Dollars	126,483	40,000
Business debt:			
Mean	Dollars	390,514	71,022
Median	Dollars	21,000	20,000
Business net worth:			
Mean	Dollars	882,300	31,751
Median	Dollars	75,000	10,000
Business debt-to-asset ratio:			
Mean	Percent	39.0	52.7
Distribution:			
No debt	Percent	32.8	22.2
1 - 40	Percent	30.4	20.0
41 - 70	Percent	17.9	20.0
71 - 100	Percent	15.2	28.9
> 100	Percent	3.7	8.9
Gross income:			
Mean	Dollars	489,254	33,994
Median	Dollars	116,831	16,000
Gross profit:			
Mean	Dollars	167,507	4,895
Median	Dollars	66,302	1,000
Total family income, 1985:			
Mean	Dollars	36,421	28,596
Median	Dollars	30,000	20,000
Distribution:			
Less than \$10,000	Percent	8.8	22.0
\$10,001 to \$20,000	Percent	18.4	32.0
\$20,001 to \$30,000	Percent	24.3	20.0
\$30,001 to \$40,000	Percent	18.1	10.0
More than \$40,000	Percent	30.4	16.0

APPENDIX

APPENDIX TABLE 1. TOTAL RETAIL SALES AND CHANGE IN SALES IN NORTH DAKOTA COUNTIES, 1970-1985 (CONSTANT 1985 DOLLARS)

County Group	No. of Counties	Total Retail Sales ^a				Percent Change		
		1970	1975	1980	1985	1970-85	1970-80	1980-85
		-----dollars-----				-----percent-----		
Agricultural counties	39	773,849,645	964,371,060	755,165,843	617,061,526	-20.261	-2.414	-18.288
Other counties	14	2,100,282,978	2,780,379,900	2,682,964,915	2,391,816,314	13.880	27.743	-10.852

Counties with town(s) over 10,000	8	1,892,500,812	2,506,098,320	2,454,568,753	2,213,259,475	16.949	29.700	-9.831
Counties with no town(s) over 10,000	45	981,631,812	1,238,652,640	983,562,005	795,618,365	-18.949	0.197	-19.108

All counties	53	2,874,132,623	3,744,750,960	3,438,130,758	3,008,877,840	4.688	19.623	-12.485

^aBased on sales reported in North Dakota's 200 largest towns. In 1985, these sales amounted to 88 percent of total taxable sales reported in the state. The reader also should note that, prior to 1976, sales from consolidated firms (those firms filing a single return including data for several plants) were assigned to the city (and county) containing the plant that filed the return. Since then, consolidated returns have not been included in city or county totals but, instead, have been reported in a category called "consolidated returns." The consolidated returns amounted to 10.3 percent of total in-state taxable sales in 1985, and sales of businesses located outside the largest 200 cities were 1.7 percent of the total (North Dakota State Tax Department).

APPENDIX TABLE 2. TOTAL EMPLOYMENT AND EMPLOYMENT CHANGE IN NORTH DAKOTA COUNTIES, 1980, 1984, AND 1985

County Group	No. of Counties	Total Employment			Change in Employment		Percent Change	
		1980	1984	1985	1980-85	1984-85	1980-85 ^a	1984-85 ^b
Agricultural counties ^c	39	109,643	104,554	98,062	-11,581	-6,492	-10.56	-6.21
Other counties	14	203,392	206,447	217,938	+14,546	+11,491	+7.15	+5.57

Counties with town(s) over 10,000	8	173,609	175,107	188,835	+15,226	+13,728	+8.77	+7.84
Counties with no town(s) over 10,000	45	139,426	135,894	127,165	-12,261	-8,729	-8.79	-6.42

All counties	53	313,035	311,001	316,000	+2,965	+4,999	+0.95	+1.61

Study counties:								
Adams	--	2,088	2,008	1,796	-292	-212	-13.98	-10.56
Cass	--	46,049	45,769	52,316	+6,267	+6,547	+13.61	+14.30
Foster	--	2,255	2,098	2,200	-55	+102	-2.44	+4.86
Mountrail	--	3,656	3,405	3,111	-545	-294	-14.91	-8.60
Stutsman	--	11,709	11,494	12,005	+296	+511	+2.53	+4.45
Walsh	--	8,091	8,228	7,706	-385	-522	-4.76	-6.34

a(1985 value minus 1980 value) divided by 1980 value.

b(1985 value minus 1984 value) divided by 1984 value.

cAs defined by Bender et al. 1985.

SOURCE: North Dakota Job Service 1980, 1984, 1985.

APPENDIX TABLE 3. POPULATION AND POPULATION CHANGE FOR STUDY COMMUNITIES AND COUNTIES, 1970-1985

County and Community	Year				% Change 70-80	% Change 80-84	% Change 80-85
	1970 ^a	1980 ^a	1984 ^b	1985 ^c			
Adams	3,832	3,584	3,518	3,580	-6.5	-1.8	-0.1
Hettinger	1,655	1,739	1,765	--	+5.1	+1.5	--
Cass	73,653	88,247	94,782	95,600	+19.8	+7.4	+8.3
Casselton	1,485	1,661	1,714	--	+11.9	+3.2	--
Foster	4,832	4,611	--	4,600	-4.6	-0.6	-0.2
Carrington	2,491	2,614	2,544	--	+4.9	-2.7	--
Mountrail	8,437	7,679	8,093	8,053	-9.0	+5.4	+4.9
Stanley	1,581	1,631	1,718	--	+3.2	+5.3	--
Stutsman	23,550	24,154	23,700	23,696	+2.6	-1.9	-1.9
Jamestown	15,385	16,280	16,118	--	+5.8	-1.0	--
Walsh	16,251	15,371	15,560	15,707	-5.4	+1.2	+2.2
Grafton	5,946	5,293	5,435	--	-11.0	+2.7	--

^aU.S. Bureau of the Census. 1981. 1980 Census of Population. Number of Inhabitants, North Dakota. PC 80-1-A36. Washington, D.C.: Government Printing Office.

^bU.S. Bureau of the Census. 1985. 1984 Subcounty Estimates. Washington, D.C.

^cRathge, Richard and Gary Goreham. 1986. Population Bulletin Series, Vol. 2, No. 7. Fargo, North Dakota: North Dakota Census Data Center, North Dakota State University.

APPENDIX TABLE 4. INDUSTRY OF EMPLOYMENT, SELECTED NORTH DAKOTA COUNTIES, 1980

Industry	County											
	Adams		Cass		Foster		Mountrail		Stutsman		Walsh	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Agriculture	448	27.6	1,980	4.6	474	24.7	772	25.8	1,383	13.2	1,504	26.1
Forestry and fisheries	--	--	27	0.1	5	0.3	3	0.1	36	0.3	--	--
Mining	103	6.4	37	0.1	23	1.2	230	7.7	28	0.3	11	0.2
Construction	81	5.0	2,363	5.5	129	6.7	172	5.7	574	5.5	366	6.3
Manufacturing	56	3.5	3,653	8.5	77	4.0	106	3.5	1,011	9.6	188	3.3
Transportation, communication, and utilities	101	6.2	3,660	8.5	117	6.1	171	5.7	824	7.8	369	6.4
Wholesale trade	66	4.1	3,320	7.7	121	6.3	61	2.0	417	4.0	292	5.1
Retail trade	257	15.9	8,305	19.3	368	19.2	517	17.3	1,814	17.3	1,052	18.2
Finance, insurance, and real estate	55	3.4	3,122	7.2	99	5.2	65	2.2	456	4.3	180	3.1
Services	404	24.9	15,011	34.8	461	23.9	707	23.6	3,562	33.9	1,637	28.4
Public administration	50	3.1	1,660	3.8	47	2.4	188	6.3	403	3.8	166	2.9
Total employment	1,621	100.0	43,138	100.0	1,921	100.0	2,992	100.0	10,508	100.0	5,765	100.0

SOURCE: U.S. Bureau of the Census 1983.

APPENDIX TABLE 5. TOTAL RETAIL SALES FOR SELECTED COUNTIES AND COMMUNITIES AND STATE OF NORTH DAKOTA, 1970-1985 (CONSTANT 1985 DOLLARS)

County and Community	Year				Percent Change	
	1970	1975	1980	1985	1970-85	1980-85
	-----dollars-----				----percent----	
Adams	17,849,488	18,445,344	14,839,670	11,854,636	-33.586	-20.115
Hettinger	15,862,557	16,542,514	13,362,834	10,998,086	-30.670	-17.696
Cass	592,954,745	825,340,104	655,820,172	638,273,552	7.643	-2.676
Casselton	10,483,341	14,477,132	12,010,366	6,871,564	-34.453	-42.786
Foster	26,551,019	37,718,272	27,145,469	18,710,939	-29.528	-31.072
Carrington	26,551,019	37,718,272	27,145,469	18,710,939	-29.528	-31.072
Mountrail	27,227,970	25,715,240	19,908,238	13,430,172	-50.675	-32.540
Stanley	12,279,050	15,700,362	12,441,279	7,967,611	-35.112	-35.958
Stutsman	102,834,233	125,989,858	122,270,505	97,896,062	-4.802	-19.934
Jamestown	98,119,302	122,071,270	119,314,628	96,265,249	-1.890	-19.318
Walsh	64,570,798	88,692,328	64,026,483	54,675,628	-15.325	-14.605
Grafton	40,113,006	53,206,992	42,559,785	38,990,230	-2.799	-8.387
State total	2,874,132,623	3,744,750,960	3,438,130,758	3,008,877,840	4.688	-12.485

SOURCE: North Dakota Tax Department, various issues.

APPENDIX TABLE 6. SELECTED BUSINESS CHARACTERISTICS OF BUSINESSES IN NORTH DAKOTA, 1986

Item	Units	Carrington	Casselton	Grafton	Hettinger	Jamestown	Stanley	All
Respondent status:								
Sole proprietor	Percent	47.1	35.1	52.4	52.5	38.7	53.1	46.5
Part-owner or partner	Percent	26.0	32.4	15.5	17.5	23.3	31.3	23.0
Hired manager	Percent	26.9	32.4	32.0	30.0	38.0	15.6	30.5
Type of business organization: ^a								
Partnership	Percent	25.0	24.0	10.6	21.1	12.9	19.4	17.6
Family-held corporation	Percent	32.1	16.0	29.8	21.1	36.6	32.3	30.3
Nonfamily-held corporation	Percent	26.8	36.0	44.7	39.5	39.8	41.9	37.9
Cooperative	Percent	8.9	0.0	0.0	0.0	0.0	0.0	0.0
Owned by relative	Percent	0.0	24.0	14.9	18.4	10.8	6.5	11.4
Other	Percent	7.2	0.0	0.0	0.0	0.0	0.0	2.7
Number of years respondent has been involved in this business:								
Mean	Years	13.8	12.9	12.5	12.3	12.2	13.3	12.7
Median	Years	10.0	9.5	10.0	9.0	7.0	9.0	10.0
Distribution:								
5 years or less	Percent	19.6	41.7	30.6	34.6	32.6	26.7	29.9
6 to 10 years	Percent	30.4	8.4	21.4	22.2	27.0	26.6	24.5
11 to 20 years	Percent	25.5	25.0	25.6	25.9	21.3	30.0	24.9
More than 20 years	Percent	24.5	25.0	22.4	17.3	19.1	16.7	20.7
Number of years business has been established in this town:								
Mean	Years	24.9	27.4	25.3	26.4	21.7	28.7	24.9
Median	Years	21.0	20.5	20.0	18.0	15.0	23.0	20.0
Distribution:								
5 years or less	Percent	13.5	21.6	19.0	20.0	21.1	12.9	18.1
6 to 10 years	Percent	18.2	5.4	17.0	18.7	21.8	14.5	17.7
11 to 20 years	Percent	16.4	21.6	13.0	13.3	19.7	19.4	17.0
More than 20 years	Percent	51.9	51.4	51.0	48.0	37.4	53.2	47.2
Number of full-time workers currently employed:								
Mean	Number	4.0	3.0	5.9	5.5	7.1	4.4	5.5
Median	Number	1.0	2.0	2.0	2.0	3.0	1.0	2.0
Distribution:								
None	Percent	26.0	18.0	10.6	7.4	6.0	21.2	13.6
1	Percent	23.0	21.1	22.3	30.9	18.8	21.2	22.3
2 - 3	Percent	22.0	36.8	27.7	33.8	26.8	25.0	27.6
4 - 5	Percent	7.0	13.1	13.8	7.4	16.8	9.6	11.9
6 - 10	Percent	13.0	5.2	12.7	13.3	13.3	15.3	12.8
11 - 20	Percent	5.0	5.2	6.5	3.0	6.1	5.8	5.8
21 or more	Percent	4.0	0.0	6.4	4.5	10.7	1.9	6.0

- CONTINUED -

APPENDIX TABLE 6. SELECTED BUSINESS CHARACTERISTICS OF BUSINESSES IN NORTH DAKOTA, 1986 (CONTINUED)

Item	Units	Carrington	Casselton	Grafton	Hettinger	Jamestown	Stanley	All
Number of part-time workers currently employed:								
Mean	Number	1.7	2.3	4.1	4.2	3.8	2.8	3.2
Distribution:								
None	Percent	43.9	35.1	13.3	11.9	26.2	15.8	25.1
1	Percent	22.4	27.0	37.8	35.6	25.5	29.8	29.0
2 - 3	Percent	25.5	18.9	26.7	33.9	25.5	33.3	27.2
4 or more	Percent	8.2	18.9	22.2	18.6	22.8	21.1	18.7
Percent of sales made to:								
Farmers (residing either within or outside the city limits)	Percent	50.4	52.2	40.3	43.7	30.4	44.7	41.5
Residents of this town	Percent	27.9	24.8	33.0	31.2	44.3	34.1	34.4
Residents of neighboring towns	Percent	18.4	19.0	17.8	20.5	19.2	12.2	18.1
Rural nonfarm residents	Percent	2.8	4.3	9.3	4.5	5.8	9.0	6.0
Percent of sales made to persons who live:								
In this town	Percent	28.5	31.6	32.9	32.5	44.5	39.7	35.9
Outside town but within 10 miles	Percent	22.8	26.1	24.1	17.0	14.4	21.4	20.0
10 to 20 miles from this town	Percent	18.5	17.1	18.7	15.5	12.3	15.5	16.0
21 to 30 miles from this town	Percent	12.8	16.0	11.5	13.5	11.3	10.1	12.2
More than 30 miles from this town	Percent	17.4	9.2	12.7	21.5	17.3	13.5	16.0
Percent of inventory purchased from firms located:								
Within this town	Percent	18.5	6.8	22.6	12.1	21.5	14.1	17.7
Elsewhere within this county	Percent	5.7	40.7	4.7	2.5	1.4	2.4	5.9
Elsewhere in the state	Percent	34.6	11.9	35.5	42.2	25.3	46.6	33.3
Out of state	Percent	39.3	39.5	37.2	43.2	50.1	35.1	41.9
Type of business:								
Agriculture	Percent	1.0	2.7	2.9	2.5	2.6	1.5	2.2
Mining	Percent	b	b	b	b	b	1.5	0.2
Construction	Percent	6.7	2.7	6.8	4.9	2.0	4.6	4.6
Manufacturing, durable	Percent	4.8	10.8	7.8	8.6	4.6	7.7	6.6
Manufacturing, nondurable	Percent	0.0	2.7	1.0	1.2	1.3	3.1	1.3
Wholesale, durable	Percent	3.8	0.0	3.9	1.2	0.7	3.1	2.2
Wholesale, nondurable	Percent	8.6	8.1	4.9	7.4	1.3	10.8	5.9
Retail	Percent	42.9	32.4	33.0	32.1	42.4	30.8	37.1
Finance, insurance, and real estate	Percent	10.5	10.8	9.7	9.9	16.6	15.4	12.5
Business and repair services	Percent	6.7	5.4	8.7	4.9	4.0	4.6	5.7
Personal services	Percent	6.7	13.5	7.8	7.4	7.3	9.2	7.9
Entertainment	Percent	1.0	0.0	1.9	2.5	1.3	1.5	1.5
Professional	Percent	7.6	10.8	10.7	17.3	15.9	6.2	12.0
Government	Percent	0.0	0.0	1.0	0.0	0.0	0.0	0.2

^aExcludes sole proprietorship.

^bLess than 1 percent.

APPENDIX TABLE 7. FINANCIAL CHARACTERISTICS OF NORTH DAKOTA BUSINESSES, BY TOWN, DECEMBER 31, 1985

Item	Units	Carrington	Casselton	Grafton	Hettinger	Jamestown	Stanley	All
Total assets:								
Mean	Dollars	1,351,772	589,652	2,586,323	419,353	1,554,425	1,093,914	1,389,378
Median	Dollars	120,000	143,898	162,500	110,000	147,076	90,000	126,483
Distribution:								
\$0 - \$50,000	Percent	31.0	27.6	21.7	28.8	21.4	33.3	26.7
\$50,001 - \$100,000	Percent	17.3	13.8	17.4	23.7	18.4	21.6	18.8
\$100,001 - \$250,000	Percent	19.5	41.4	23.2	25.5	30.6	21.6	25.7
\$250,001 - \$500,000	Percent	10.4	3.4	16.0	8.4	11.2	7.8	10.5
\$500,001 - \$1,000,000	Percent	8.0	3.4	5.8	1.7	7.2	3.9	5.6
> \$1,000,000	Percent	13.8	10.3	15.9	11.9	11.2	11.8	12.7
Total debt:								
Mean	Dollars	966,045	84,504	121,949	159,017	129,860	762,156	390,514
Median	Dollars	34,000	16,000	22,000	26,500	8,800	27,500	21,000
Distribution:								
\$0 - \$25,000	Percent	48.3	58.6	54.4	50.0	64.1	50.0	54.6
\$25,001 - \$50,000	Percent	14.6	6.8	19.0	12.9	4.8	3.7	10.8
\$50,001 - \$100,000	Percent	10.1	13.8	3.8	17.7	13.6	22.2	12.7
\$100,001 - \$250,000	Percent	10.1	13.8	11.4	11.3	10.7	11.1	11.1
\$250,001 - \$500,000	Percent	6.8	3.5	6.3	1.6	1.9	1.9	3.8
> \$500,000	Percent	10.1	3.4	5.1	6.5	4.9	11.1	7.0
Net worth:								
Mean	Dollars	343,611	505,149	1,951,990	266,252	1,415,689	291,974	882,300
Median	Dollars	75,000	100,000	107,750	60,000	94,500	41,700	75,000
Distribution:								
\$0 - \$50,000	Percent	43.4	41.4	33.3	47.3	31.9	53.1	40.5
\$50,001 - \$100,000	Percent	20.5	10.3	13.6	21.8	23.1	12.2	18.2
\$100,001 - \$250,000	Percent	13.3	34.5	28.8	14.5	18.7	20.4	20.1
\$250,001 - \$500,000	Percent	10.8	0.0	6.1	3.6	12.1	4.1	7.5
> \$500,000	Percent	12.0	13.8	18.2	12.7	14.3	10.2	13.7
Business debt-to-asset ratio:								
Mean	Percent	41.2	32.4	26.9	63.0	24.7	55.5	39.0
Distribution:								
No debt	Percent	23.3	37.9	32.9	28.3	40.8	35.8	32.8
10 - 20	Percent	17.4	6.9	21.0	10.0	14.3	11.4	14.7
21 - 40	Percent	15.1	10.4	17.2	13.4	19.4	13.2	15.7
41 - 70	Percent	19.7	34.5	18.4	20.0	14.3	9.4	17.9
71 - 100	Percent	20.9	6.9	10.5	21.6	10.2	18.9	15.2
> 100	Percent	3.5	3.4	0.0	6.7	1.0	11.3	3.7
Gross income:								
Mean	Dollars	361,520	690,684	461,525	620,911	525,151	424,824	489,254
Median	Dollars	77,573	167,899	148,311	103,424	142,843	92,998	116,831
Distribution:								
\$0 - \$9,999	Percent	2.6	4.3	3.8	9.4	1.4	7.1	4.4
\$10,000 - \$39,999	Percent	20.5	8.6	15.1	17.0	9.8	19.0	15.6
\$40,000 - \$99,999	Percent	30.8	17.4	18.9	22.6	22.5	31.0	24.7
\$100,000 - \$249,999	Percent	21.8	26.1	22.6	20.8	38.0	11.9	24.4
\$250,000 - \$499,999	Percent	10.3	30.4	20.8	9.4	9.9	7.1	12.8
\$500,000 and over	Percent	14.1	13.0	18.9	20.8	18.3	23.8	18.1
Gross profit:								
Mean	Dollars	155,916	110,417	111,597	285,210	184,201	120,350	167,507
Median	Dollars	55,000	102,847	70,387	60,000	85,000	50,087	66,302
Distribution:								
\$0 - \$9,999	Percent	4.3	0.0	10.4	10.9	5.0	9.8	7.0
\$10,000 - \$19,999	Percent	14.5	9.1	12.5	15.2	1.7	7.3	10.1
\$20,000 - \$39,999	Percent	20.3	18.2	8.3	13.0	10.0	24.4	15.4
\$40,000 - \$99,999	Percent	29.0	13.6	27.1	30.4	35.0	26.8	28.7
\$100,000 - \$249,999	Percent	18.8	45.5	25.0	17.4	28.3	17.1	23.4
\$250,000 and over	Percent	13.0	13.6	16.7	13.0	20.0	14.6	15.3
Net profit:								
Mean	Dollars	24,437	27,699	39,102	20,571	43,949	47,924	34,009
Median	Dollars	12,500	18,484	13,103	4,831	16,000	12,932	13,000
Distribution:								
Negative	Percent	13.5	26.1	16.7	38.3	18.2	23.8	21.3
\$0 - \$9,999	Percent	27.1	8.7	27.0	19.1	19.7	21.4	22.0
\$10,000 - \$19,999	Percent	25.7	17.4	22.9	17.0	19.7	11.9	20.0
\$20,000 - \$29,999	Percent	5.4	8.7	4.2	2.1	9.1	9.5	6.3
\$30,000 - \$39,999	Percent	10.8	8.7	2.1	2.1	9.1	14.3	8.0
\$40,000 - \$74,999	Percent	10.8	8.6	12.5	12.8	7.6	4.8	9.7
\$75,000 and over	Percent	6.8	21.7	14.6	8.5	16.6	14.3	12.7

APPENDIX TABLE 8. AVERAGE DEBT-TO-ASSET RATIOS OF SELECTED TYPES OF BUSINESSES, 1984

Business Type ^a	Debt-to-Asset Ratio
Retailers:	
Family clothing	57.4
Building materials	59.5
Hardware	59.7
Lumber	58.8
Department store	53.2
Dry goods and general merchandise	51.3
Drugs	62.8
Farm equipment	69.8
Feed and seed, farm and garden supply	64.4
Groceries and meats	69.3
Restaurants	74.7
Furniture	62.6
Hobby, toy, and game shops	60.3
Autos, new and used	68.8
Services:	
Accounting, auditing, and bookkeeping	50.0
Auto repair, general	68.0
Dentists	62.7
Insurance agents and brokers	81.4
Legal services	56.5
Long distance trucking	65.7
Motels, hotels, and tourist courts	71.6
Physicians	54.7
Real estate agents and brokers	65.8
Travel agencies	69.9

^aWhere business statistics were reported for more than one size group, those for the smallest businesses (total assets < \$1 million) are listed here.

SOURCE: Robert Morse Associates. 1985.

APPENDIX TABLE 9. ADJUSTMENTS MADE BY BUSINESS OPERATORS DURING THE LAST THREE YEARS, BY TOWN

Type of Adjustment	Carrington	Casselton	Grafton	Hettinger	Jamestown	Stanley	All
	-----percent-----						
Restructured debt (reamortization or deferrals)	18.7	6.9	16.8	28.8	16.2	20.0	18.6
Reduced excessive inventories	54.8	55.2	40.9	50.0	48.9	54.2	49.7
Reduced hours business is open	16.3	6.7	9.5	16.4	12.9	11.5	12.8
Increased hours business is open	18.5	31.0	17.2	25.7	23.2	23.0	22.0
Reduced labor force	45.5	37.9	37.2	37.0	37.0	45.2	39.8
Increased labor force	19.3	21.4	19.4	26.0	33.6	16.4	24.2
Started charging interest on overdue accounts after a certain time period such as 30 days	47.2	23.3	35.5	39.2	33.3	43.3	37.9
Stepped-up collection efforts on past due accounts	67.4	66.7	70.2	74.0	59.5	79.0	68.2
Leased rather than purchased capital improvements	12.5	6.9	10.1	20.0	14.4	11.9	13.3

APPENDIX TABLE 10. FAMILY FINANCIAL RESOURCES AND INCOME OF BUSINESS OPERATORS, BY TOWN, DECEMBER 31, 1985

Item	Units	Carrington	Casselton	Grafton	Hettinger	Jamestown	Stanley	All
Total assets:								
Mean	Dollars	213,928	170,100	288,367	250,746	322,897	276,640	266,217
Median	Dollars	120,000	110,000	125,000	140,000	125,000	135,000	125,000
Distribution:								
\$0 to \$10,000	Percent	3.4	0.0	4.1	0.0	7.6	0.0	3.5
\$10,001 to \$25,000	Percent	8.1	7.1	5.4	8.8	5.7	3.9	6.5
\$25,001 to \$50,000	Percent	9.2	14.3	2.7	14.0	8.6	5.9	8.4
\$50,001 to \$100,000	Percent	28.7	28.6	31.0	19.3	23.8	33.3	27.1
\$100,001 or more	Percent	50.6	50.0	56.8	57.9	54.3	56.9	54.5
Total debt:								
Mean	Dollars	77,795	48,750	81,011	59,271	78,471	77,570	73,768
Median	Dollars	35,000	31,500	40,000	32,000	31,500	50,000	35,000
Distribution:								
\$0 to \$10,000	Percent	32.2	30.0	20.0	28.8	28.3	20.8	26.9
\$10,001 to \$25,000	Percent	11.1	16.7	20.0	13.6	17.0	13.2	15.2
\$25,001 to \$50,000	Percent	21.1	20.0	21.3	23.7	20.7	20.7	21.3
\$50,001 to \$100,000	Percent	16.7	20.0	24.0	18.6	20.8	26.4	20.9
\$100,001 or more	Percent	18.9	13.3	14.7	15.3	13.2	18.9	15.7
Personal net worth:								
Mean	Dollars	134,798	117,868	206,261	191,647	156,553	198,381	168,766
Median	Dollars	67,500	64,500	82,500	75,000	81,500	65,000	75,000
Distribution:								
Negative	Percent	8.1	0.0	5.4	3.6	6.1	2.8	5.9
\$0 to \$10,000	Percent	4.7	7.1	8.1	7.3	11.2	0.0	6.9
\$10,001 to \$25,000	Percent	9.3	10.8	8.1	14.6	7.2	13.8	9.9
\$25,001 to \$50,000	Percent	19.8	28.5	13.5	12.7	17.3	19.6	17.6
\$50,001 to \$100,000	Percent	26.7	17.9	27.1	18.2	18.4	25.5	22.7
\$100,001 or more	Percent	31.4	35.7	37.8	43.6	39.8	33.3	37.0
Total family income:								
Mean	Dollars	30,174	33,267	39,019	34,204	41,392	36,931	36,421
Median	Dollars	25,865	30,000	32,000	30,000	35,000	28,491	30,000
Distribution:								
\$0 to \$10,000	Percent	16.3	3.3	4.0	15.8	5.6	5.8	8.8
\$10,001 to \$20,000	Percent	20.9	10.0	17.3	19.3	12.9	30.7	18.4
\$20,001 to \$30,000	Percent	22.1	40.0	26.7	19.3	24.1	21.2	24.3
\$30,001 to \$40,000	Percent	17.4	30.0	18.7	12.3	18.5	17.3	18.1
More than \$40,000	Percent	23.3	16.7	33.3	33.3	38.9	25.0	30.4
Percent of income by source:								
Wages/salary	Percent	77.4	89.3	88.5	83.5	88.1	78.5	84.3
Interest	Percent	2.8	3.8	2.5	3.3	2.5	2.9	2.8
Rented out farmland	Percent	2.0	4.6	2.3	2.4	1.9	1.6	2.2
Retirement	Percent	1.0	0.6	2.7	1.7	2.7	2.8	2.1
Public assistance, including unemployment compensation	Percent	0.0	0.3	1.1	1.3	1.1	0.5	0.8
Oil and gas leases	Percent	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Rental property	Percent	2.8	0.0	0.0	0.5	0.2	0.9	0.8
Stocks and bonds	Percent	1.7	0.4	0.8	0.6	0.7	0.6	0.9
Other	Percent	12.3	1.3	1.2	6.5	2.0	10.6	5.6

APPENDIX TABLE 11. BUSINESS OPERATORS' TOTAL FAMILY INCOME BY AGE AND EDUCATION

Category	Family Gross Income				
	Less than \$10,000	\$10,000- \$19,999	\$20,000- \$39,999	\$40,000- \$99,999	\$100,000 and Over
	-----percent-----				
Age					
Less than 35	8.7	22.6	47.0	20.0	1.7
35 - 44	3.6	10.1	47.1	37.0	2.2
45 - 54	5.7	19.3	38.6	30.7	5.7
55 and over	6.7	11.7	38.3	36.7	6.7
Total	6.0	16.0	43.9	30.7	3.5
Education					
Completed 8th grade	0.0	36.4	45.5	18.2	0.0
Some high school	8.3	33.3	50.0	8.3	0.0
Completed high school	9.5	13.7	48.4	24.2	4.2
Attended college or other postsecondary school	6.7	24.6	44.0	21.6	3.0
Completed college	3.4	6.8	40.5	45.9	3.3
Total	6.0	16.0	44.0	30.8	3.3

APPENDIX TABLE 12. BUSINESS OPERATORS' FAMILY NET WORTH BY AGE AND EDUCATION

Category	Family Net Worth				
	Negative	Less than \$49,999	\$50,000-\$99,999	\$100,000-\$249,999	\$250,000 and Over
	-----percent-----				
Age					
Less than 35	5.9	62.4	20.8	8.9	2.0
35 - 44	9.1	27.3	29.6	28.0	6.1
45 - 54	5.5	24.2	19.8	22.0	28.6
55 and over	0.0	12.9	17.7	33.9	35.5
Total	6.0	33.4	23.1	22.5	15.0
Education					
Completed 8th grade	0.0	27.3	9.1	18.2	45.5
Some high school	8.3	33.3	25.0	25.0	8.3
Completed high school	6.5	27.2	21.7	25.0	19.6
Attended college or other postsecondary school	5.6	40.8	24.0	21.6	8.0
Completed college	6.2	31.7	24.1	22.1	15.9
Total	6.0	33.5	23.1	22.6	14.8

APPENDIX TABLE 13. TRADE PATTERNS OF BUSINESS OPERATORS, BY TOWN

Goods or Services	Units	Carrington	Casselton	Grafton	Hettinger	Jamestown	Stanley	All
Food								
Within city	Percent	95.8	60.6	95.9	93.7	98.7	91.9	93.6
Outside city	Percent	4.2	39.4	4.1	6.3	1.3	8.1	6.4
Mean	Miles	55.0	22.7	41.3	84.4	100.0	55.6	47.8
Distribution:								
1-25 miles	Percent	25.0	84.6	0.0	0.0	0.0	0.0	36.4
26-50 miles	Percent	50.0	15.4	100.0	0.0	0.0	0.0	24.2
51-100 miles	Percent	0.0	0.0	0.0	80.0	100.0	100.0	33.3
Over 100 miles	Percent	25.0	0.0	0.0	20.0	0.0	0.0	6.1
Hardware								
Within city	Percent	97.9	87.9	96.9	98.7	97.3	91.9	96.3
Outside city	Percent	2.1	12.1	3.1	1.3	2.7	8.1	3.7
Mean	Miles	41.0	24.5	26.7	65.0	100.5	56.2	53.1
Distribution:								
1-25	Percent	0.0	75.0	33.3	0.0	0.0	0.0	21.1
26-50	Percent	100.0	25.0	66.7	0.0	0.0	0.0	26.3
51-100	Percent	0.0	0.0	0.0	100.0	75.0	100.0	47.4
Over 100	Percent	0.0	0.0	0.0	0.0	25.0	0.0	5.3
Banking								
Within city	Percent	96.8	100.0	99.0	97.5	98.0	91.9	97.3
Outside city	Percent	3.2	0.0	1.0	2.5	2.0	8.1	2.7
Mean	Miles	44.7	0.0	10.0	52.5	350.0	56.4	112.9
Distribution:								
1-25	Percent	33.3	0.0	100.0	0.0	0.0	0.0	14.3
26-50	Percent	33.3	0.0	0.0	50.0	0.0	0.0	14.3
51-100	Percent	33.3	0.0	0.0	50.0	33.3	100.0	57.1
Over 100	Percent	0.0	0.0	0.0	0.0	66.7	0.0	14.3
Furniture								
Within city	Percent	59.3	24.2	88.8	82.3	93.3	85.7	79.3
Outside City	Percent	40.7	75.8	11.2	17.7	6.7	14.3	20.7
Mean	Miles	61.6	21.1	33.2	123.6	92.8	49.9	59.2
Distribution:								
1-25	Percent	13.5	92.0	18.2	7.1	0.0	11.1	30.2
26-50	Percent	59.5	8.0	81.8	14.3	10.0	0.0	34.0
51-100	Percent	0.0	0.0	0.0	28.6	90.0	88.9	19.8
Over 100	Percent	27.0	0.0	0.0	50.0	0.0	0.0	16.0
Automobiles								
Within city	Percent	78.3	6.3	90.8	83.5	85.2	77.4	78.9
Outside city	Percent	21.7	93.8	9.2	16.5	14.8	22.6	21.1
Mean	Miles	70.3	26.2	49.8	110.8	78.0	51.9	60.4
Distribution:								
1-25	Percent	30.0	86.7	0.0	0.0	4.6	7.1	31.5
26-50	Percent	20.0	10.0	88.9	0.0	27.3	7.1	20.4
51-100	Percent	10.0	0.0	0.0	61.5	68.2	85.7	34.3
Over 100	Percent	40.0	3.3	11.1	38.5	0.0	0.0	13.9
Clothing								
Within city	Percent	50.5	15.6	76.3	80.0	84.6	54.8	68.2
Outside city	Percent	49.5	84.4	23.7	20.0	15.4	45.2	31.8
Mean	Miles	79.7	21.7	35.1	109.3	94.8	50.0	63.7
Distribution:								
1-25	Percent	4.4	88.9	13.0	0.0	4.4	10.7	20.3
26-50	Percent	50.0	11.1	87.0	0.0	0.0	3.6	28.8
51-100	Percent	2.2	0.0	0.0	62.5	95.6	85.7	35.0
Over 100	Percent	43.5	0.0	0.0	37.5	0.0	0.0	16.0

APPENDIX TABLE 14. ORGANIZATIONAL MEMBERSHIP AND PARTICIPATION CHARACTERISTICS OF BUSINESS OPERATORS AND SPOUSES, BY TOWN

Item	Carrington		Casselton		Grafton		Hettinger		Jamestown		Stanley		All	
	Resp.	Spouse	Resp.	Spouse	Resp.	Spouse	Resp.	Spouse	Resp.	Spouse	Resp.	Spouse	Resp.	Spouse
	-----percent-----													
Was respondent or spouse a member of:														
Civic or service club														
Yes	58.3	26.8	48.6	35.3	56.4	30.9	54.7	44.4	64.7	39.7	59.4	45.6	58.7	36.5
PTA or other school organization														
Yes	12.9	19.6	16.2	14.7	26.5	37.6	23.9	26.1	20.1	28.8	21.0	26.3	20.3	27.0
County commission or other elected body														
Yes	13.9	20.4	10.8	14.7	5.9	13.0	15.1	13.5	5.4	14.4	19.4	12.3	10.5	15.0
Church														
Yes	85.7	75.8	70.3	61.8	82.2	73.1	77.5	79.2	80.7	75.6	81.3	69.1	80.8	74.0
Professional or business organization														
Yes	59.2	19.8	52.8	5.9	54.5	19.4	56.0	30.9	60.7	21.4	60.9	20.0	58.0	20.5
Was operator or spouse an officer of:														
Civic or service club														
Yes	20.2	12.9	24.3	17.6	25.7	12.9	23.9	19.7	18.7	19.1	20.0	23.6	21.6	17.2
PTA														
Yes	4.1	3.2	5.4	0.0	9.8	6.5	2.8	6.1	6.0	9.8	8.2	11.1	6.2	6.8
County commission or other elected body														
Yes	6.3	6.5	8.1	0.0	1.0	1.1	9.7	5.5	2.7	3.8	12.9	7.0	6.2	4.2
Church														
Yes	18.6	15.3	27.0	20.6	19.8	12.9	17.6	22.2	18.0	21.4	28.1	23.1	20.2	18.7
Professional or business organization														
Yes	19.0	4.5	22.2	2.9	16.8	5.4	26.1	14.8	24.7	10.7	27.1	8.0	22.3	8.0
Did respondent (or spouse) attend NDSU field days, short courses, etc. last year:														
Yes	24.8	--	25.0	--	14.7	--	27.2	--	14.6	--	26.2	--	20.6	--
Did respondent acquire any NDSU literature last year:														
Yes	55.2	--	41.7	--	36.3	--	30.9	--	31.8	--	28.1	--	37.3	--

APPENDIX TABLE 15. BUSINESS OPERATORS' OPINION OF BUSINESS CONTINUATION
FOR THE NEXT THREE YEARS BY INDUSTRY TYPE

Industry Type	Likely ^a	Don't Know	Unlikely ^b
	-----percent-----		
Agriculture, mining, and construction	73.7	23.7	2.6
Manufacturing	82.9	12.2	4.8
Wholesale	78.6	16.7	4.8
Retail trade	70.5	20.2	9.3
Finance, insurance, and real estate	89.4	9.1	1.5
Business, repair, and personal services and entertainment	74.7	20.3	5.0
Professional	92.1	7.9	0.0
Government	100.0 ^c	0.0	0.0

^aIncludes very likely and likely responses.

^bIncludes very unlikely and unlikely responses.

^cN < 5.

APPENDIX TABLE 16. FINANCIAL CHARACTERISTICS OF NORTH DAKOTA FORMER BUSINESSES, FOR LAST YEAR OF OPERATION

Category	Units	Value
Total assets:		
Mean	Dollars	101,655
Median	Dollars	40,000
Distribution:		
\$0 - \$50,000	Percent	61.7
\$50,001 - \$100,000	Percent	12.8
\$100,001 - \$250,000	Percent	19.1
\$250,001 - \$500,000	Percent	4.3
\$500,001 - \$1,000,000	Percent	2.1
> \$1,000,000	Percent	0.0
Total debt:		
Mean	Dollars	71,022
Median	Dollars	20,000
Distribution:		
\$0 - \$25,000	Percent	52.2
\$25,001 - \$50,000	Percent	17.4
\$50,001 - \$100,000	Percent	13.0
\$100,001 - \$250,000	Percent	13.1
\$250,001 - \$500,000	Percent	2.2
> \$500,000	Percent	2.2
Net worth:		
Mean	Dollars	31,751
Median	Dollars	10,000
Distribution:		
Negative	Percent	10.5
\$0 - \$50,000	Percent	57.9
\$50,001 - \$100,000	Percent	18.4
\$100,001 - \$250,000	Percent	13.2
Gross profit:		
Mean	Dollars	4,895
Median	Dollars	1,000
Distribution:		
Negative	Percent	31.0
\$0 - \$9,999	Percent	31.1
\$10,000 - \$19,999	Percent	6.9
\$20,000 - \$39,999	Percent	10.3
\$40,000 - \$99,999	Percent	17.3
\$100,000 - \$249,999	Percent	3.4
\$250,000 and over	Percent	0.0
Gross income:		
Mean	Dollars	33,994
Median	Dollars	16,000
Distribution:		
Negative	Percent	9.4
\$0 - \$9,999	Percent	31.2
\$10,000 - \$39,999	Percent	43.8
\$40,000 - \$99,999	Percent	3.1
\$100,000 - \$249,999	Percent	12.5
Debt-to-asset ratio:		
Mean	Percent	52.7
Distribution:		
No debt	Percent	22.2
10 - 20	Percent	13.4
21 - 40	Percent	6.6
41 - 70	Percent	20.0
71 - 100	Percent	28.9
> 100	Percent	8.9

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