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# Retail Trade Area Analysis

# Lisbon
# North Dakota

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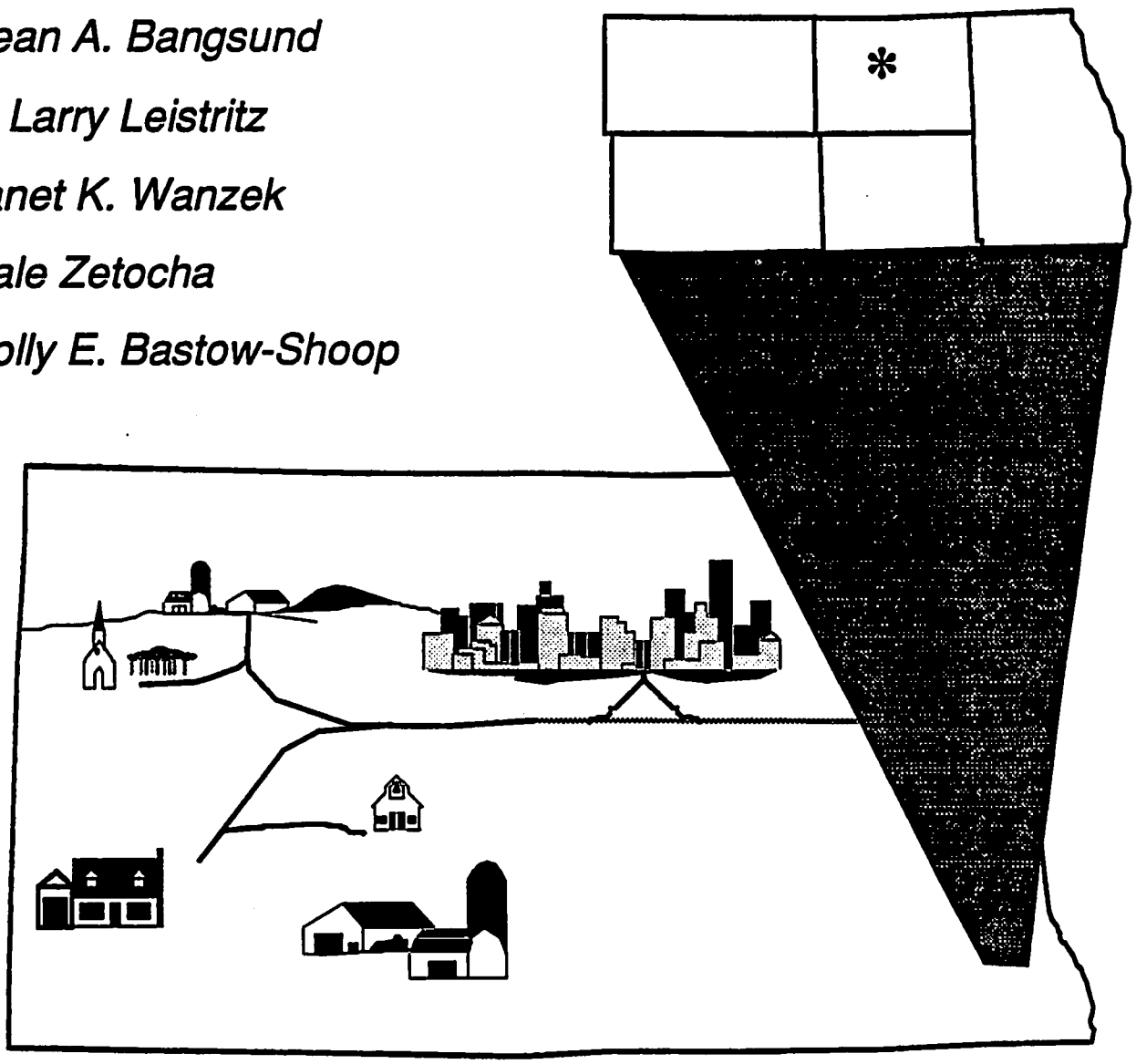

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The authors accept sole responsibility for any remaining errors or omissions.

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## *HIGHLIGHTS*

*This report is intended to provide an indepth trade area analysis of Lisbon, North Dakota. Specific analyses included determining Lisbon's main and greater trade areas, identifying the demographic profile of Lisbon shoppers, examining important and less important services for patron shoppers of Lisbon, identifying neighboring cities that area shoppers patronize, determining distances area shoppers traveled to Lisbon, and listing popular newspapers and radio stations among area residents.*

*Current trade area information for Lisbon was obtained from a statewide trade area survey conducted by the Department of Agricultural Economics at North Dakota State University in 1989.*

*Recent trends (1980 to 1989) in Lisbon population, retail sales, per capita income, pull factors, and Ransom County population and employment were identified and discussed. Lisbon's population, trade area population, and retail sales, along with Ransom County population, average annual employment, and per capita income have all decreased throughout the 1980s. Although most demographic and economic measurements have decreased, Lisbon has fared better than other North Dakota cities with similar populations, and has fared favorably compared to smaller competing trade centers. The economic situation found in Lisbon and Ransom County are somewhat typical of the problems found in rural North Dakota communities in the 1980s.*

*Lisbon's trade areas were broken down into main and greater trade areas. A main trade area (MTA) was defined as an area where the majority of township residents purchase a majority of selected goods and services in one city. A greater trade area (GTA) was defined as the area beyond the MTA where some township residents purchase some selected goods and services in one city. Lisbon's MTA decreased in size by two townships, compared to MTA boundaries determined in 1972.*

*The typical household for survey respondents appears to be a middle-aged married couple, who have completed high school, have few children at home, primarily are employed in agriculture and professional/technical professions, and have resided in the area a large portion of their lives.*

*Main trade area residents traveled an average of 11.8 and 12 miles to Lisbon to purchase selected convenience and specialty goods and services, respectively. Over half (52.1 percent) of all respondents who purchased 50 percent or more of convenience and specialty goods in Lisbon traveled between 11 and 20 miles to purchase the item.*

*Lisbon appears to be capturing much of the potential market for most goods and services on the survey questionnaire; however, Lisbon could capture more of the available market for clothing items and electronic goods.*

*Fargo, Valley City, Enderlin, Wahpeton, Gwinner, and Oakes were the most popular cities for the purchase of nonagricultural goods and services by Lisbon MTA residents who did not purchase a majority of the good or service in Lisbon. Milnor, Kathryn, and Gwinner were popular for purchasing agricultural goods and services.*

*Outshopping analysis revealed no substantial demographic or socioeconomic differences between Lisbon MTA residents purchasing 50 percent or more and those purchasing less than 50 percent of selected goods and services in Lisbon. A slight difference between groups was evident in miles traveled.*

The Forum (Fargo) *was the most popular daily newspaper for both Lisbon MTA and GTA residents. Ransom County Gazette and the Sargent County Teller were the most popular weekly newspapers for Lisbon MTA and GTA residents, respectively. The most popular radio stations for Lisbon MTA residents included KQLX of Lisbon, WDAY of Fargo, and KFGO of Fargo.*

*Although economic times have been difficult, Lisbon appears to be doing a good job of retaining most of its past trade area and remaining an important trade center in southeastern North Dakota.*

# RETAIL TRADE AREA ANALYSIS: LISBON, NORTH DAKOTA

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## INTRODUCTION

North Dakota has witnessed considerable demographic and economic change in the 1980s. Rural population in North Dakota has continued to decline, due, in part, to instate migration to larger cities and outmigration of state residents. The economic base for many of North Dakota's smaller cities has continued to decline due to economic stress in both the farm sector and the energy industries. The combination of rural economic stress and reduced population has had significant impacts on retail trade for most geographic areas of North Dakota.

In addition to demographic and economic influences on retail activity in North Dakota, relative income levels, improved transportation, and changes in consumer tastes and preferences contribute to changes in retail trade patterns. The number and severity of factors influencing retail activity in North Dakota during the 1980s make trade area information crucial to concerned businesses and policymakers interested in developing effective strategies to cope with changing economic conditions. Dissemination of trade area information to rural cities and towns can help communities meet the challenges of the 1990s.

### Purpose

The Department of Agricultural Economics at North Dakota State University has prepared two levels of trade area reports. An overview report was prepared discussing previous trade area work, outlining the methods and procedures used to determine trade areas for all cities in North Dakota, determining trade areas for the 11 largest North Dakota cities, and comparing purchases of services by patrons of different sized trade centers within the state (Bangsund et al. 1991). Other reports have been prepared to disseminate specific trade area information for individual cities.[1] The purpose of this report is to provide specific information about the Lisbon trade area.

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[1]Copies of individual city reports can be obtained from the Department of Agricultural Economics, North Dakota State University, Fargo, North Dakota, 58105, (701) 237-7441.

This report will describe Lisbon's main and greater trade areas, provide information on the demographic characteristics of Lisbon area shoppers, and identify essential and nonessential services Lisbon businesses provide.

## Methods and Scope

The data for this report were obtained from a statewide trade area survey which the Department of Agricultural Economics at NDSU conducted in 1989. The NDSU Extension Service and the North Dakota Agricultural Experiment Station, through their respective Rural Development Center projects, partially financed the study.

The survey was designed to obtain information about geographic shopping preferences for 37 nonagricultural and 12 agricultural goods and services and selected demographic characteristics of those responding. Although the survey provided information on all North Dakota cities and towns where people purchase goods and services, the material presented in this report primarily covers the Lisbon trade area.

This report is organized into four sections: (1) population and other demographic information about Lisbon, (2) trade area delineation criteria and boundaries, (3) trade patterns of Lisbon area shoppers, and (4) summary and conclusions.

## LISBON AND SURROUNDING AREA PROFILE

Understanding changes in population and economic activity is helpful to businesses and community planners. Much of the prosperity of rural trade areas hinges on the population base. The following briefly highlights the patterns and trends from 1980 to 1989 in Lisbon population, retail sales, market share, per capita income, pull factors, and Ransom County population and employment.

Population figures presented in this section are based on the 1980 Decennial Census count, with population estimates for years 1981 through 1989 reflecting adjustments to the 1980 Census count. Population figures from the 1990 Decennial Census count were not available for use in this report. Trade area information in this section is based on trade area boundaries which were determined in the 1970s. Although population and trade area information in this section was not adjusted for current findings (i.e., 1990 Census numbers and new trade area boundaries), the economic information used was current and the general condition of rural communities can be described using this information.

Lisbon's population declined about 12 percent from 1980 to 1988 (Table 1). Of the North Dakota cities in the population

TABLE 1. CITY AND TRADE AREA POPULATION FOR LISBON AND SELECTED CITIES, NORTH DAKOTA, 1980 AND 1988

| City | County | City Population 1980 | City Population 1988 | Percent Change 1980-88 | Trade Area Population[a] 1980 | Trade Area Population[a] 1988 | Percent Change 1980-88 |
|---|---|---|---|---|---|---|---|
| Population over 10,000 | | | | | | | |
| Group Total | | 253,628 | 274,280 | 8.14 | -- | -- | -- |
| Population 2,500 to 10,000 | | | | | | | |
| Wahpeton | Richland | 9,064 | 9,710 | 7.13 | 12,240 | 12,820 | 4.74 |
| Group Total | | 43,813 | 45,650 | 4.19 | 9,602 | 9,579 | 2.52 |
| Population 1,500 to 2,500 | | | | | | | |
| Lisbon | Ransom | 2,283 | 2,010 | -11.96 | 4,866 | 4,620 | -5.06 |
| Oakes | Dickey | 2,112 | 1,870 | -11.46 | 4,534 | 4,090 | -9.79 |
| Group Total | | 39,095 | 37,540 | -3.98 | -- | -- | -- |
| Population 1,000 to 1,500 | | | | | | | |
| Enderlin | Ransom | 1,140 | 960 | -15.79 | 2,796 | 2,590 | -7.37 |
| Hankinson | Richland | 1,158 | 1,030 | -11.05 | 2,081 | 1,870 | -10.14 |
| LaMoure | LaMoure | 1,077 | 990 | -8.08 | 2,166 | 2,080 | -3.97 |
| Group Total | | 29,622 | 27,540 | -7.03 | -- | -- | -- |
| Population 500 to 1,000 | | | | | | | |
| Gwinner | Sargent | 725 | 640 | -11.72 | 878 | 830 | -5.47 |
| Lidgerwood | Richland | 971 | 800 | -17.61 | 2,128 | 1,840 | -13.53 |
| Wyndmere | Richland | 550 | 530 | -3.64 | 1,182 | 1,170 | -1.02 |
| Group Total | | 32,154 | 31,200 | -2.97 | -- | -- | -- |
| Population 200 to 500 | | | | | | | |
| Group Total | | 28,746 | 27,373 | -4.78 | -- | -- | -- |
| All Population Categories | | | | | | | |
| State Total | | 427,058 | 443,583 | 3.87 | -- | -- | -- |

[a]Trade areas were based on previous work by North Dakota State University Extension Service.

SOURCE: Leistritz et al. 1990.

range 1,500 to 2,500, only five had population increases from 1980 to 1988. If Hazen, the population of which increased almost 42 percent, was removed from the group, population in the size category would have declined almost 7 percent. Lisbon's trade area population decreased about 5 percent from 1980 to 1988, the seventh largest decrease for any town in the category. The population of Lisbon's competing trade centers and their trade area populations also decreased, except for Wahpeton and its trade area.

Since Lisbon's trade area covers parts of counties other than Ransom County, population, average annual employment, and per capita income have been identified for surrounding counties (Table 2). Population in Ransom County decreased 7.4 percent from 1980 to 1988. Changes in population for surrounding counties were mixed.

Average annual employment in Ransom County decreased 4.5 percent from 1980 to 1988. Employment declined in half of the surrounding counties. Along with declines in population and employment, real per capita income (i.e., adjusted for inflation)

TABLE 2. POPULATION, AVERAGE ANNUAL EMPLOYMENT, AND PER CAPITA INCOME FOR RANSOM AND SURROUNDING COUNTIES, NORTH DAKOTA, 1980 TO 1989

| County | 1980 | 1982 | 1984 | 1986 | 1988 | 1989 | Percent Change 1980-88/89 |
|---|---|---|---|---|---|---|---|
| | | | Population | | | | |
| Ransom | 6,698 | 6,500 | 6,600 | 6,400 | 6,200 | --- | -7.44 |
| Surrounding Counties | | | | | | | |
| Barnes | 13,960 | 13,700 | 13,700 | 13,300 | 13,100 | --- | -6.16 |
| Cass | 88,247 | 90,500 | 94,500 | 98,000 | 100,200 | --- | 13.54 |
| Dickey | 7,207 | 7,000 | 7,100 | 6,900 | 6,600 | --- | -8.42 |
| LaMoure | 6,473 | 6,300 | 6,200 | 6,100 | 5,800 | --- | 10.40 |
| Richland | 19,207 | 19,600 | 19,500 | 19,600 | 19,300 | --- | 0.43 |
| Sargent | 5,512 | 5,400 | 5,400 | 5,200 | 5,000 | --- | -9.29 |
| North Dakota | 652,717 | 672,000 | 687,000 | 679,000 | 667,000 | --- | 2.19 |
| | | | Average Annual Employment[a] | | | | |
| Ransom | 2,766 | 2,841 | 2,696 | 2,683 | 2,648 | 2,642 | -4.48 |
| Surrounding Counties | | | | | | | |
| Barnes | 5,961 | 5,913 | 5,655 | 5,825 | 5,588 | 5,615 | -5.80 |
| Dickey | 3,290 | 3,246 | 3,310 | 3,260 | 3,034 | 3,020 | -8.21 |
| Cass | 42,369 | 42,592 | 50,231 | 55,917 | 59,912 | 61,026 | 44.03 |
| LaMoure | 2,516 | 2,499 | 2,548 | 2,408 | 2,269 | 2,231 | 11.33 |
| Richland | 7,999 | 8,146 | 8,305 | 8,300 | 8,430 | 8,319 | -1.32 |
| Sargent | 2,528 | 2,475 | 2,450 | 2,463 | 2,592 | 2,624 | 1.23 |
| North Dakota | 288,002 | 297,002 | 310,953 | 313,001 | 316,000 | 317,000 | 10.07 |

| | Per Capita Income[b] | | |
|---|---|---|---|
| | 1979[c] | 1987 | Percent Change 1979 to 1987 |
| Ransom | $8,819 | $8,737 | -0.9 |
| Surrounding Counties | | | |
| Barnes | 9,732 | 8,800 | -9.6 |
| Cass | 12,026 | 11,294 | -6.1 |
| Dickey | 8,204 | 7,942 | -3.2 |
| LaMoure | 8,165 | 8,431 | 3.3 |
| Richland | 9,806 | 10,096 | 3.0 |
| Sargent | 9,014 | 9,156 | 1.6 |
| North Dakota | 10,041 | 9,641 | -4.0 |

[a]Job Service North Dakota. Various Issues. North Dakota Labor Force by County, by Region. Bismarck.

[b]U.S. Department of Commerce, Bureau of the Census, "Current Population Reports," Series P-26 (Spring 1990).

[c]Real Dollars, 1979 dollars inflated to 1987 dollars using Consumer Price Index inflators (U.S. Department of Labor, Bureau of Labor Statistics).

SOURCE: Leistritz et al. 1990.

in Ransom County decreased 1 percent from 1979 to 1987. Per capita income decreased in half of the surrounding counties. Lisbon's deflated taxable sales (i.e., adjusted for inflation) decreased 1.5 and 0.2 percent from 1980 to 1989 and 1987 to 1989, respectively (Table 3). Lisbon had the smallest decrease in taxable sales of any city in the population range 1,500 to 2,500 from 1980 to 1989. Although Lisbon fared favorably compared to other cities in the same populationcategory, average taxable sales for the group decreased 45.6 and 10.1 percent from 1980 to

TABLE 3. DEFLATED TAXABLE SALES AND PURCHASES FOR LISBON AND SELECTED CITIES, NORTH DAKOTA, 1980 TO 1989

| City | Deflated Taxable Sales and Purchases (1989 Dollars) | | | Percent Change | |
|---|---|---|---|---|---|
| | 1980 | 1987 | 1989 | 1980-89 | 1987-89 |
| | dollars | | | | |
| Population over 10,000 | | | | | |
| Group Total | 2,578,781,160 | 2,337,648,605 | 2,396,999,678 | -7.05 | 2.54 |
| Population 2,500 to 10,000 | | | | | |
| Wahpeton | 57,303,733 | 53,978,847 | 52,301,959 | -8.73 | -3.11 |
| Group Total | 398,731,612 | 315,496,552 | 298,875,168 | -25.04 | -5.27 |
| Population 1,500 to 2,500 | | | | | |
| Lisbon | 19,839,136 | 19,597,810 | 19,565,434 | -1.38 | -0.17 |
| Oakes | 21,052,513 | 12,100,125 | 11,900,182 | -43.47 | -1.65 |
| Group Total | 415,612,668 | 251,583,986 | 226,276,758 | -45.56 | -10.06 |
| Population 1,000 to 1,500 | | | | | |
| Enderlin | 6,172,222 | 3,644,095 | 4,436,799 | -28.12 | 21.75 |
| Hankinson | 6,512,856 | 4,479,515 | 4,486,050 | -31.12 | 0.15 |
| LaMoure | 10,611,993 | 7,464,904 | 7,726,092 | -27.19 | 3.50 |
| Group Total | 222,752,746 | 141,859,953 | 130,721,134 | -41.32 | -7.85 |
| Population 500 to 1,000 | | | | | |
| Gwinner | 7,445,987 | 8,222,451 | 15,121,901 | 103.09 | 83.91 |
| Lidgerwood | 7,257,265 | 5,265,856 | 5,531,033 | -23.79 | 5.04 |
| Wyndmere | 5,283,602 | 3,772,899 | 3,768,576 | -28.67 | -0.11 |
| Group Total | 197,005,522 | 124,426,751 | 123,454,776 | -37.33 | -0.78 |
| Population 200 to 500 | | | | | |
| Group Total | 150,696,574 | 96,258,478 | 83,084,913 | -44.87 | -13.69 |
| All Population Categories | | | | | |
| State Total | 3,963,580,282 | 3,267,274,325 | 3,259,412,427 | -17.77 | -0.24 |

SOURCE: Leistritz et al. 1990.

1989 and 1987 to 1989, respectively. Competing cities also suffered large decreases in their adjusted taxable sales for the same time periods, except for Gwinner, which experienced a substantial increase in its taxable sales. Statewide, taxable sales decreased 17.77 and 0.24 percent from 1980 to 1989 and 1987 to 1989, respectively.

Pull factors measure a community's success in capturing the potential purchasing power of residents in its trade area. Pull factors greater than 1.0 mean a community's retail sales are greater than the purchasing power of its trade area, suggesting the community may be "pulling" customers from outside its normal trade area. Conversely, if a pull factor is less than 1.0, the community is not capturing its share of the purchasing power in its trade area.

Lisbon's pull factor increased almost 4 percent from 1980 to 1989 (Table 4). Only Cavalier, in the population group 1,500 to 2,500, had a larger increase in its pull factor from 1980 to 1989. Lisbon's pull factor is above the group average, indicating the community captures a greater percent of its trade area purchasing power than most of the cities with similar

TABLE 4. PULL FACTORS FOR LISBON AND SELECTED CITIES, NORTH DAKOTA, 1980 TO 1989

| City | Pull Factor | | | Percent Change | | |
|---|---|---|---|---|---|---|
| | 1980 | 1987 | 1989 | 1980-87 | 1980-89 | 1987-89 |
| Population over 10,000 | | | | | | |
| Group Average | 1.12 | 0.96 | 1.01 | -14.20 | -9.63 | 5.32 |
| Population 2,500 to 10,000 | | | | | | |
| Wahpeton | 0.76 | 0.79 | 0.86 | 3.64 | 12.61 | 8.66 |
| Group Average | 0.79 | 0.73 | 0.64 | -8.40 | -19.82 | -12.47 |
| Population 1,500 to 2,500 | | | | | | |
| Lisbon | 0.74 | 0.92 | 0.77 | 23.25 | 3.88 | -15.72 |
| Oakes | 0.94 | 0.68 | 0.48 | -27.49 | -48.53 | -29.02 |
| Group Average | 0.89 | 0.65 | 0.52 | -26.93 | -42.26 | -20.99 |
| Population 1,000 to 1,500 | | | | | | |
| Enderlin | 0.40 | 0.31 | 0.31 | -23.39 | -22.39 | 1.30 |
| Hankinson | 0.51 | 0.44 | 0.51 | -12.86 | -0.94 | 13.67 |
| LaMoure | 0.96 | 0.80 | 0.65 | -16.47 | -31.81 | -18.37 |
| Group Average | 0.65 | 0.53 | 0.43 | -18.35 | -34.55 | -19.84 |
| Population 500 to 1,000 | | | | | | |
| Gwinner | 1.55 | 2.08 | 3.48 | 34.41 | 125.13 | 67.49 |
| Lidgerwood | 0.56 | 0.53 | 0.63 | -5.51 | 13.91 | 20.54 |
| Wyndmere | 0.73 | 0.63 | 0.68 | -13.31 | -6.88 | 7.42 |
| Group Average | 0.60 | 0.49 | 0.42 | -18.94 | -29.78 | -13.38 |
| Population 200 to 500 | | | | | | |
| Group Average | 0.41 | 0.35 | 0.28 | -14.30 | -30.65 | -19.07 |

SOURCE: Leistritz et al. 1990.

population. Pull factors for most competing cities decreased from 1980 to 1989. Pull factors in 1989 for cities competing with Lisbon were generally less than Lisbon's pull factor, suggesting Lisbon does a better job of capturing its available market than do neighboring cities.

Both city and county populations have declined in the geographic area near Lisbon. Deflated taxable sales in Lisbon and average annual employment and real per capita income in Ransom County have decreased slightly in the 1980s; however, Lisbon's pull factor increased. Trends in economic activity and population for Lisbon have been similar if not better than other North Dakota cities in the 1,500 to 2,500 population range.

Although Lisbon has lost some economic activity and population, the city is doing better compared to its smaller competing cities. Most smaller cities and towns competing with Lisbon also face tough economic pressures; however, they appear to be suffering more economic decline than is evident in larger cities. Economic pressures and population declines found in Lisbon and Ransom County are somewhat typical of the economic problems found in rural North Dakota communities in the 1980s;however, Lisbon appears to be in good shape when compared to other cities of similar population.

## TRADE AREA DELINEATION

A trade area can be loosely defined as the geographic area from which a business or city draws its customers. Determining a trade area depends heavily on the city size, location of the city with respect to other trade centers, and the criteria used to distinguish the trade area boundaries. Trade area criteria can vary according to trade center classification and type of trade area, and these trade areas can be broken down into primary and secondary trade areas.

Generally, primary (main) trade areas (MTAs) are those geographic regions where a trade center draws a significant portion of its retail activity. Secondary (greater) trade areas (GTAs) are geographic areas outside of the primary trade area where the trade center still extends some retail influence; however, only limited retail or service activity is generated from this region.

A primary trade area (main) was defined as an area where the majority of the people purchase a majority of their goods and services at one location. A secondary trade area (greater) was defined as an area where some of the people purchase some of their goods and services at one location.

Two major criteria were used in determining trade areas in North Dakota. The first criterion was to classify each trade center according to the level of retail activity and use the trade center classification to determine a mix of goods and services, and the second criterion determined how townships were included in the main trade area and greater trade area (Bangsund et al. 1991). The scope of this report does not permit the detailed discussion of all the procedures involved in determining a city's main and greater trade area; however, a brief synopsis is included of the trade area criteria used for Lisbon.

North Dakota cities were put in seven size classifications, and the types of services expected to be provided by each size classification were outlined (Bangsund et al. 1991). Each size of trade center was expected to provide a different number of goods and services and different amounts of similar services across trade center sizes. Thus, trade area boundaries were defined by using a mix of goods and services most appropriately provided by a city of that size.

Lisbon was classified as a partial shopping center based on average retail sales from 1987 to 1989. The mix included some convenience, specialty, and agricultural goods and services. Convenience goods and services are those that typically have a small unit value, are frequently purchased with a minimum of effort, and are purchased soon after the idea of the purchase enters the buyer's mind. Specialty goods are those nonstandardized goods and services that typically have a large

unit value, are purchased only after comparing price, quality, features, and type among stores, and customers are willing to travel and exert more energy to secure the good or service than convenience items.

Convenience Goods and Services

| | |
|---|---|
| Banking and savings | Groceries |
| Eating places | Hardware |
| Gas and diesel service | Prescription drugs |

Specialty Goods and Services

| | |
|---|---|
| Auto repair | Legal services |
| Beautician | Men's clothing |
| Furniture | Radios, TVs, VCRs |
| Hospital | Sporting goods |

Agricultural Goods and Services

| | |
|---|---|
| Farm machinery | Farm supplies |

The main trade area for Lisbon was defined by townships where 50 percent or more of the residents purchased 50 percent or more of the selected mix of goods and services in Lisbon. The greater trade area was defined by townships where 10 percent or more of the residents purchased at least 10 percent of a selected mix of goods and services in Lisbon.

Several problems arise when trying to define trade areas using survey information. The most common problems were lack of usable responses from some townships and unclear distinction of purchase behavior in some townships, i.e., respondents diversified their shopping equally among several trade centers. Bangsund et al. (1991) discussed the procedures and criteria for handling townships which did not clearly meet the requirements for the main and greater trade areas.

Lisbon's MTA captures a relatively even distribution of townships around the city, except to the northeast of town, where its influence is slightly less. The GTA reflects the influences of Wahpeton and Fargo-West Fargo (Figure 1). The Lisbon GTA has more influence on the townships located to the south and west of town. Lisbon's ability to attract customers from the east and north appears limited due to competition from other trade centers.

## CHARACTERISTICS OF LISBON AREA RESIDENTS

Business people and community leaders usually are interested in the characteristics of local shoppers and shopping patterns. The characteristics of Lisbon shoppers were analyzed, using 279

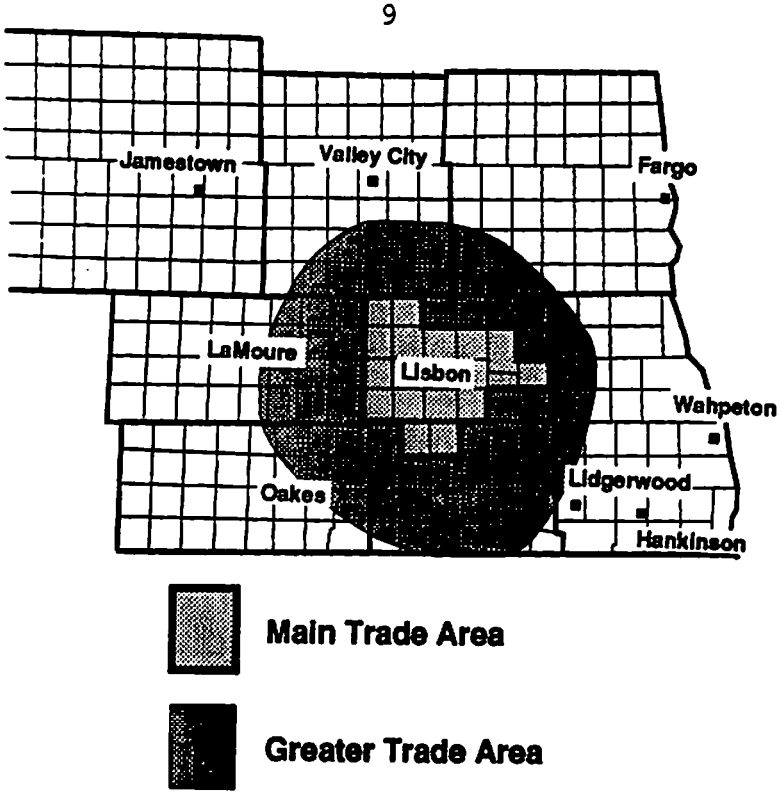


Figure 1. Main and Greater Trade Areas for Lisbon, North Dakota, 1989

survey responses from the Lisbon MTA. Other analyses included examination of important and less important services for patron shoppers of Lisbon, identification of neighboring cities area shoppers patronize, determination of distances area shoppers traveled to Lisbon, and listing popular newspapers and radio stations among area residents.

## Demographic Profile of Shoppers in Lisbon Main Trade Area

Demographic characteristics of the survey respondents for the Lisbon MTA were identified (Table 5). The typical household for survey respondents appears to be a middle-aged married couple who have completed high school, have few children at home, are primarily employed in agriculture and professional/technical professions, and have resided in the area a large portion of their lives.

## Distance Traveled by Lisbon Area Shoppers

Average distances that area residents traveled to Lisbon were determined for each nonagricultural good or service in the 16-item goods and services mix (Table 6). Distances were

TABLE 5. DEMOGRAPHIC PROFILE OF RESPONDENTS IN MAIN TRADE AREA, LISBON, NORTH DAKOTA, 1989

| Demographic Characteristic | Average of Survey Responses | |
|---|---|---|
| Age (Years) | 49.8 | |
| Education (Years) | 12.4 | |
| Lived in County (Years) | 35.2 | |
| Household Size (People) | 2.9 | |
| Average Household Income | $25,618 | |
| Occupation | Respondent | Spouse |
| | ---%--- | ---%--- |
| Farming | 31.2 | 22.2 |
| Retired | 18.1 | 16.7 |
| Tech/Sales/Admin | 15.4 | 15.0 |
| Professional | 15.0 | 16.1 |
| Service Jobs | 8.1 | 7.2 |
| Craft/Repair | 5.4 | 9.4 |
| Equipment Operator | 3.1 | 6.7 |
| Housewife | 1.5 | 3.9 |
| Other | 2.3 | 2.8 |
| Martial Status | --- % --- | |
| Single | 8.8 | |
| Separated/Divorced | 6.9 | |
| Married | 75.9 | |
| Widowed | 8.4 | |
| Male | 59.4 | |
| Female | 40.6 | |

determined by averaging respondents' estimated miles between Lisbon and their home residence. Lisbon residents and any respondents who lived one mile or less from Lisbon were not included in the analysis. Once the average distance was determined for each township, the number of respondents purchasing 50 percent or more of the item in Lisbon was multiplied by the average distance to determine total miles of travel for that township (for the specific good or service).

Townships included in the distance analysis were not limited to those in the MTA; instead distances traveled were included for anyone (living in surrounding counties) who purchased 50 percent or more of the selected good or service in Lisbon. Total miles of travel were summed for all townships for that good or service and divided by the total number of respondents who purchased 50 percent or more of that item in Lisbon.

The average distance traveled to Lisbon to purchase convenience goods and services was less than that traveled for specialty goods and services for all respondents (regardless of

TABLE 6. AVERAGE DISTANCE TRAVELED BY AREA RESIDENTS WHO PURCHASED 50 PERCENT OR MORE OF SELECTED SERVICES IN LISBON, NORTH DAKOTA, 1989[a]

All Respondents Purchasing 50 Percent or More of the Service in Lisbon

| Convenience Items | | Specialty Items | |
|---|---|---|---|
| Goods and Services | Average Miles Traveled | Goods and Services | Average Miles Traveled |
| Gas & Diesel Stations | 12.3 | Auto Repair | 12.9 |
| Groceries | 11.6 | Beautician | 12.1 |
| Eating Places | 12.3 | Radios, TVs, VCRs | 13.5 |
| Banking and Savings | 13.0 | Sporting Goods | 11.5 |
| Hardware | 12.6 | Men's Clothing | 13.4 |
| Prescription Drugs | 14.3 | Hospital | 14.6 |
| | | Legal Services | 14.1 |
| | | Furniture | 15.2 |
| Average | 12.8 | Average | 13.8 |

MTA Respondents Only Who Purchase 50 Percent or More of the Service in Lisbon

| Convenience Items | | Specialty Items | |
|---|---|---|---|
| Goods and Services | Average Miles Traveled | Goods and Services | Average Miles Traveled |
| Gas & Diesel Stations | 11.7 | Radios, TVs, VCRs | 11.7 |
| Eating Places | 11.1 | Auto Repair | 12.3 |
| Prescription Drugs | 12.7 | Furniture | 12.6 |
| Groceries | 11.0 | Beautician | 11.6 |
| Banking and Savings | 11.9 | Legal Services | 12.2 |
| Hardware | 11.9 | Hospital | 12.3 |
| | | Men's Clothing | 11.3 |
| | | Sporting Goods | 10.3 |
| Average | 11.8 | Average | 12.0 |

[a]One-way distance to Lisbon only.

residence location). The average distance traveled to purchase convenience goods and services was less than that traveled for specialty goods and services for respondents in the MTA who purchased 50 percent or more of the item in Lisbon. For those respondents living in the MTA, the average distance traveled for both types of goods and services was nearly identical.

Distance traveled by type of good or service (convenience and specialty) was broken down into distance categories. Over half (52.1 percent) of the respondents (regardless of residence location) who purchase 50 percent or more of a convenience and specialty good or service travel between 11 to 20 miles to purchase the item in Lisbon (Table 7). For those living in the

TABLE 7. MILEAGE BREAKDOWN FOR AREA SHOPPERS PURCHASING 50 PERCENT OR MORE OF A CONVENIENCE AND SPECIALTY SERVICE IN LISBON, NORTH DAKOTA, 1989

| All Respondents Purchasing 50 Percent or More of a Service in Lisbon | | | | |
|---|---|---|---|---|
| | Convenience Goods | | Specialty Goods | |
| Distance (Miles)[a] | Number | Percent | Number | Percent |
| 1 to 5 | 23 | 11.8 | 23 | 9.1 |
| 6 to 10 | 31 | 15.9 | 30 | 11.8 |
| 11 to 15 | 54 | 27.7 | 66 | 26.0 |
| 16 to 20 | 45 | 23.1 | 69 | 27.2 |
| 21 to 25 | 32 | 16.4 | 43 | 16.9 |
| over 25 | 10 | 5.1 | 23 | 9.1 |

| MTA Respondents Only Who Purchase 50 Percent or More of a Service in Lisbon | | | | |
|---|---|---|---|---|
| | Convenience Goods | | Specialty Goods | |
| Distance (Miles)[a] | Number | Percent | Number | Percent |
| 1 to 5 | 23 | 16.4 | 23 | 15.9 |
| 6 to 10 | 28 | 20.0 | 28 | 19.3 |
| 11 to 15 | 47 | 33.6 | 48 | 33.1 |
| 16 to 20 | 27 | 19.3 | 30 | 20.7 |
| 21 to 25 | 13 | 9.3 | 15 | 10.3 |
| over 25 | 2 | 1.4 | 1 | 0.7 |

[a]Those living in Lisbon or traveling less than one mile to Lisbon were not included in the analysis.

MTA, the number of respondents per distance category was concentrated in the range of six to 20 miles for both convenience and specialty goods.

## Area Shoppers' Utilization of Goods and Services Provided in Lisbon

The importance of Lisbon as a trade center for those who shop in Lisbon and the ability of Lisbon to capture the MTA market for selected goods and services was determined (Table 8). The importance of shopping in Lisbon was determined by examining the number of respondents who purchased some of their goods and services in Lisbon and comparing those responses to the number who purchased a majority of their goods and services in Lisbon. A high percentage meant if respondents shopped in Lisbon, they likely would purchase a majority of those goods and services in Lisbon. A low percentage meant that, although some of the goods and services were purchased in Lisbon, the majority of the goods and services was purchased elsewhere.

TABLE 8. RELATIVE IMPORTANCE OF LISBON TO SHOPPERS PURCHASING SOME GOODS AND SERVICES AND FOR THOSE PURCHASING A MAJORITY OF THEIR GOODS AND SERVICES IN LISBON, NORTH DAKOTA, 1989

| Goods and Services | Responses in Lisbon Main Trade Area: Purchase the Goods & Services Somewhere | Purchase Some of the Goods & Services in Lisbon | | Purchase Majority of the Goods & Services in Lisbon | | Measure of Market Capture |
|---|---|---|---|---|---|---|
| | | No. | %[a] | No. | %[b] | %[c] |
| Accounting Services | 197 | 167 | 84.8 | 165 | 98.8 | 83.8 |
| Heating Fuel/Propane | 233 | 159 | 68.2 | 157 | 98.7 | 67.4 |
| Mortician | 183 | 159 | 86.9 | 156 | 98.1 | 85.2 |
| Plumber | 217 | 170 | 78.3 | 166 | 97.6 | 76.5 |
| Florist | 229 | 217 | 94.8 | 210 | 96.8 | 91.7 |
| Legal Service | 240 | 205 | 85.4 | 195 | 95.1 | 81.3 |
| Optometrist | 260 | 205 | 78.8 | 194 | 94.6 | 74.6 |
| Dentist | 266 | 182 | 68.4 | 172 | 94.5 | 64.7 |
| Veterinarian (Sm Animals) | 175 | 151 | 86.3 | 142 | 94.0 | 81.1 |
| Beautician | 236 | 183 | 77.5 | 171 | 93.4 | 72.5 |
| Auto Repair | 255 | 205 | 80.4 | 191 | 93.2 | 74.9 |
| Barber | 231 | 190 | 82.3 | 177 | 93.2 | 76.6 |
| Chiropractor | 199 | 178 | 89.4 | 163 | 91.6 | 81.9 |
| Prescription Drugs | 272 | 244 | 89.7 | 223 | 91.4 | 82.0 |
| Hardware | 262 | 232 | 88.5 | 210 | 90.5 | 80.2 |
| Gas/Diesel Service | 266 | 227 | 85.3 | 205 | 90.3 | 77.1 |
| Appliance/Elec Repair | 216 | 165 | 76.4 | 149 | 90.3 | 69.0 |
| Furniture | 240 | 201 | 83.7 | 179 | 89.1 | 74.6 |
| Auto Sales | 231 | 123 | 53.2 | 106 | 86.2 | 45.9 |
| Banking and Savings | 276 | 222 | 80.4 | 191 | 86.0 | 69.2 |
| Major Appliances | 245 | 193 | 78.8 | 166 | 86.0 | 67.8 |
| Hospital | 261 | 207 | 79.3 | 176 | 85.0 | 67.4 |
| Building Supplies | 246 | 203 | 82.5 | 172 | 84.7 | 69.9 |
| Family Doctor | 272 | 226 | 83.1 | 191 | 84.5 | 70.2 |
| Computers | 71 | 18 | 25.4 | 15 | 83.3 | 21.1 |
| Radios, TVs, VCRs | 254 | 186 | 73.2 | 154 | 82.8 | 60.6 |
| Drinking Places | 159 | 131 | 82.4 | 107 | 81.7 | 67.3 |
| Nursery (Plants) | 218 | 159 | 72.9 | 129 | 81.1 | 59.2 |
| Eating Places | 263 | 243 | 92.4 | 195 | 80.2 | 74.1 |
| Groceries | 276 | 245 | 88.8 | 195 | 79.6 | 70.7 |
| Jewelry | 191 | 157 | 82.2 | 122 | 77.7 | 63.9 |
| Sporting Goods | 190 | 138 | 72.6 | 96 | 69.6 | 50.5 |
| Women's Coats | 229 | 90 | 39.3 | 47 | 52.2 | 20.5 |
| Women's Clothing | 249 | 177 | 71.1 | 90 | 50.8 | 36.1 |
| Shoes | 260 | 140 | 53.8 | 65 | 46.4 | 25.0 |
| Men's Clothing | 245 | 151 | 61.6 | 68 | 45.0 | 27.8 |
| Teenage Clothing | 111 | 67 | 60.4 | 29 | 43.3 | 26.1 |
| Agricultural Goods and Services | | | | | | |
| Other Farm Supplies | 67 | 56 | 83.6 | 52 | 92.9 | 77.6 |
| Farm Mach Repair/Parts | 84 | 81 | 96.4 | 75 | 92.6 | 89.3 |
| Farm Machinery | 77 | 73 | 94.8 | 67 | 91.8 | 87.0 |
| Veterinary Services | 75 | 63 | 84.0 | 57 | 90.5 | 76.0 |
| Crop Seeds | 71 | 37 | 52.1 | 33 | 89.2 | 46.5 |
| Farm Fuel & Lubricant | 86 | 61 | 70.9 | 53 | 86.9 | 61.6 |
| Commercial Feeds | 62 | 45 | 72.6 | 39 | 86.7 | 62.9 |
| Crop Consultants | 24 | 15 | 62.5 | 13 | 86.7 | 54.2 |
| Fertilizer | 78 | 36 | 46.2 | 31 | 86.1 | 39.7 |
| Other Farm Chemicals | 78 | 46 | 59.0 | 32 | 69.6 | 41.0 |
| Grain Marketing | 74 | 33 | 44.6 | 22 | 66.7 | 29.7 |
| Livestock Marketing | 62 | 0 | 0.0 | 0 | 0.0 | 0.0 |

[a]Determined by dividing number of responses of those who purchase some of the service in Lisbon by the number who purchase some of the service anywhere. Number indicates how many buyers of the service are willing to purchase some of the service in Lisbon.

[b]Determined by dividing number of responses of those who purchase majority of the service in Lisbon by the number who purchase some of the service in Lisbon. Number is proxy for relative importance of Lisbon as a provider of the service for those purchasing the item.

[c]Determined by dividing number of responses who purchase majority of the service in Lisbon by the number who purchase some of the service anywhere. Number is proxy for ability of Lisbon to capture potential market for that service.

Goods and services that appear to be most utilized by those shopping in Lisbon include accounting, heating fuel and propane, mortician, plumber, florist, and legal services (items where 95 percent of those buying the service in Lisbon purchase a majority of the service in Lisbon). The goods and services that people are less likely to purchase a majority of in Lisbon include teenage clothing, men's clothing, women's clothing and coats, sporting goods, other farm chemicals, and grain marketing.

The ability of Lisbon to capture the potential market within the MTA was determined by comparing those who purchase the good or service (not necessarily in Lisbon) to the number of respondents who purchase a majority of the good or service in Lisbon. A high percentage meant that Lisbon captures a large amount of the potential market for the good or service. A low percentage meant that Lisbon does not capture much of the market for that good or service.

Goods and services for which Lisbon is capturing a large amount of the potential market (80 percent or more) within the MTA include florist, mortician, accounting services, legal services, veterinarian (small animals), prescription drugs, chiropractor, hardware, farm machinery repair and parts, and farm machinery. Goods and services for which Lisbon does not capture the existing market (less than 50 percent) include shoes, women's coats and clothing, computers, teenage clothing, men's clothing, auto sales, crop seeds, other farm chemicals, fertilizer, and grain marketing.

Goods and services that are important to Lisbon shoppers and those for which Lisbon is capturing a large percentage of the market include florist, mortician, and legal services. Computers, heating fuel and propane, dentist, auto sales, appliance and electronic repair, and radios-TVs-VCRs are important to shoppers in Lisbon, but few of the potential buyers purchase a majority of those goods and services in Lisbon. This suggests some loyalty for those shopping in Lisbon yet a good portion of the market has not been captured. Most of the goods and services for which Lisbon is capturing much of the potential market are also important to Lisbon shoppers, suggesting that most of the potential shoppers (within the MTA) feel Lisbon is an important source for most of their services.

## Where Services Are Purchased When Not Purchased In Lisbon

For most of the goods and services listed in the survey, some respondents did not purchase any of the good or service in Lisbon or purchased more of the good or service in other cities. For people living in the Lisbon MTA and not purchasing a majority of the services in Lisbon, the cities where the majority of those services were purchased were identified (Table 9). Fargo was the most popular choice for services purchased outside of the Lisbon

TABLE 9. MOST POPULAR CITIES FOR THE PURCHASE OF GOODS AND SERVICES BY LISBON MAIN TRADE AREA RESIDENTS WHO DID NOT PURCHASE A MAJORITY OF THE GOOD OR SERVICE IN LISBON, NORTH DAKOTA, 1989

| Goods and Services | Most Popular Cities | Responses Per City | Percent Purchased |
|---|---|---|---|
| Grocery | Gwinner | 3 | 81.0 |
| | Fargo | 17 | 60.8 |
| | Valley City | 10 | 72.5 |
| Drinking Places | Gwinner | 27 | 68.4 |
| | Englevale | 5 | 60.6 |
| | Fort Ransom | 4 | 67.5 |
| Women's Clothing | Fargo | 126 | 72.9 |
| | Valley City | 13 | 60.0 |
| | Catalog Sales | 8 | 75.6 |
| Women's Coats | Fargo | 150 | 83.5 |
| | Valley City | 11 | 48.6 |
| | Wahpeton | 5 | 51.0 |
| | Catalog Sales | 4 | 82.5 |
| Jewelry | Fargo | 57 | 74.4 |
| | Valley City | 3 | 76.7 |
| Major Appliance Rpr | Fargo | 37 | 86.4 |
| | Wahpeton | 8 | 67.1 |
| | Oakes | 4 | 60.0 |
| Auto Sales | Fargo | 69 | 73.7 |
| | Valley City | 16 | 75.6 |
| | Oakes | 15 | 89.3 |
| | Wahpeton | 12 | 78.6 |
| Furniture | Fargo | 42 | 79.2 |
| | Wahpeton | 10 | 74.0 |
| | Valley City | 4 | 72.5 |
| Auto Repair | Gwinner | 11 | 68.6 |
| | Fargo | 10 | 76.0 |
| | Oakes | 10 | 72.9 |
| | Valley City | 9 | 67.2 |
| | Milnor | 6 | 57.2 |
| Heating Fuel/Propane | Gwinner | 36 | 96.1 |
| | Stirum | 8 | 96.3 |
| | Oakes | 6 | 96.7 |
| | Kathryn | 5 | 87.0 |
| Beautician | Gwinner | 25 | 85.2 |
| | Fargo | 16 | 74.0 |
| | Forman | 6 | 93.3 |
| | Sheldon | 4 | 80.0 |
| | Enderlin | 4 | 72.5 |
| Optometrist | Fargo | 42 | 85.7 |
| | Valley City | 8 | 93.8 |
| | Wahpeton | 5 | 95.0 |
| | Oakes | 4 | 88.8 |
| Computers | Fargo | 50 | 91.4 |
| | Valley City | 2 | 87.5 |
| Major Appliance | Fargo | 53 | 77.8 |
| | Valley City | 7 | 70.0 |
| | Wahpeton | 6 | 79.2 |
| Chiropractor | Valley City | 14 | 86.1 |
| | Fargo | 6 | 91.7 |
| | Oakes | 3 | 100.0 |
| | Wahpeton | 3 | 93.3 |
| Dentist | Fargo | 36 | 91.2 |
| | Gwinner | 32 | 90.8 |
| | Oakes | 4 | 97.5 |
| Prescription Drugs | Fargo | 23 | 83.7 |
| | Forman | 5 | 95.0 |
| | Out of State | 4 | 83.8 |
| | Enderlin | 4 | 75.5 |
| Vet (Small Animals) | Enderlin | 18 | 88.1 |
| | Rutland | 6 | 80.0 |
| Sporting Goods | Fargo | 75 | 75.8 |
| | Wahpeton | 7 | 65.7 |
| | Fergus Falls | 4 | 70.0 |
| | Valley City | 4 | 67.5 |
| Farm Machinery Rpr | Milnor | 3 | 88.3 |
| | Valley City | 2 | 50.0 |
| Farm Fuel | Stirum | 9 | 90.6 |
| | Kathryn | 6 | 87.5 |
| | Nome | 4 | 92.5 |
| Commercial Feed | Gwinner | 6 | 89.2 |
| | Five towns with 2 responses | | |
| Eating Places | Fargo | 31 | 62.6 |
| | Gwinner | 12 | 62.4 |
| | Valley City | 6 | 56.7 |
| Men's Clothing | Fargo | 128 | 73.9 |
| | Valley City | 22 | 63.2 |
| | Catalog Sales | 12 | 67.1 |
| | Wahpeton | 3 | 43.3 |
| Teen Clothing | Fargo | 69 | 78.8 |
| | Valley City | 6 | 63.3 |
| Shoes | Fargo | 154 | 79.4 |
| | Valley City | 19 | 62.9 |
| Radios, TVs, VCRs | Fargo | 78 | 78.8 |
| | Valley City | 7 | 80.7 |
| Florist | Oakes | 5 | 55.0 |
| | Fargo | 4 | 75.0 |
| Gas Station | Gwinner | 27 | 75.6 |
| | Fargo | 6 | 50.7 |
| | Enderlin | 5 | 83.0 |
| Plumber | Rutland | 15 | 93.3 |
| | Enderlin | 10 | 82.7 |
| | Gwinner | 8 | 77.5 |
| | Fort Ransom | 6 | 90.0 |
| Nursery (Plants) | Sheldon | 29 | 68.4 |
| | Fargo | 17 | 74.1 |
| | Valley City | 9 | 74.4 |
| | Wahpeton | 8 | 83.1 |
| Legal Service | Forman | 17 | 87.4 |
| | Fargo | 10 | 85.0 |
| | Enderlin | 4 | 95.0 |
| Accounting Service | Forman | 9 | 84.4 |
| | Fargo | 5 | 100.0 |
| | Oakes | 5 | 100.0 |
| | Enderlin | 5 | 94.0 |
| Barber | Gwinner | 19 | 81.8 |
| | Oakes | 7 | 87.9 |
| | Milnor | 7 | 84.3 |
| | Enderlin | 6 | 90.0 |
| | Fargo | 5 | 73.0 |
| Family Doctor | Fargo | 58 | 83.9 |
| | Wahpeton | 9 | 77.6 |
| | Valley City | 5 | 92.0 |
| | Gwinner | 5 | 75.0 |
| Banking and Services | Gwinner | 35 | 90.1 |
| | Enderlin | 17 | 89.6 |
| | Forman | 11 | 80.5 |
| | Milnor | 4 | 87.5 |
| | Fargo | 4 | 71.3 |
| Building Supplies | Fargo | 39 | 74.4 |
| | Gwinner | 16 | 78.4 |
| | Forman | 5 | 77.0 |
| Mortician | Milnor | 8 | 98.1 |
| | Enderlin | 8 | 88.6 |
| | Oakes | 4 | 100.0 |
| Hospital | Fargo | 64 | 87.0 |
| | Valley City | 7 | 82.1 |
| | Oakes | 4 | 97.5 |
| | Breckenridge | 4 | ???? |
| Hardware | Fargo | 64 | 87.0 |
| | Gwinner | 16 | 79.4 |
| | Forman | 4 | 87.5 |
| Farm Machinery | Milnor | 4 | 81.3 |
| | Valley City | 3 | 64.7 |
| Crop Consultant | Gwinner | 3 | 100.0 |
| | Fargo | 2 | 100.0 |
| | Kathryn | 2 | 85.0 |
| Fertilizer | Gwinner | 16 | 95.0 |
| | Kathryn | 10 | 74.4 |
| | Elliott | 6 | 90.8 |
| | Sheldon | 4 | 82.5 |
| Crop Seeds | Gwinner | 16 | 87.8 |
| | Kathryn | 8 | 74.4 |

--CONTINUED--

TABLE 9. MOST POPULAR CITIES FOR THE PURCHASE OF GOODS AND SERVICES BY LISBON MAIN TRADE AREA RESIDENTS WHO DID NOT PURCHASE A MAJORITY OF THE GOOD OR SERVICE IN LISBON, NORTH DAKOTA, 1989, (CONTINUED)

| Goods and Services | Most Popular Cities | Responses Per City | Percent Purchased | Goods and Services | Most Popular Cities | Responses Per City | Percent Purchased |
|---|---|---|---|---|---|---|---|
| Farm Chemical | Gwinner | 15 | 93.3 | Grain Marketing | Gwinnor | 18 | 75.0 |
| | Elliott | 8 | 73.8 | | Kathryn | 10 | 66.0 |
| | Kathryn | 6 | 72.3 | | Sheldon | 4 | 75.0 |
| Livestock Marketing | West Fargo | 17 | 88.5 | Farm Supplies | Oakes | 4 | 50.0 |
| | Sisseton, SD | 13 | 74.2 | | Gwinnor | 2 | 75.0 |
| | Britton, SD | 15 | 81.7 | | Fargo | 2 | 70.0 |
| Veterinary Services | Enderlin | 13 | 89.2 | | | | |
| | Valley City | 3 | 83.3 | | | | |

MTA. Other popular cities included Valley City, Enderlin, Wahpeton, Gwinner, and Oakes. Milnor and Kathryn, along with Gwinner, were popular for purchasing agricultural goods and services.

Lisbon will always lose some shoppers to surrounding cities and towns for several reasons. First, many shoppers in the Lisbon MTA live close to other towns where it may be more convenient to shop for some goods and services (e.g., some agricultural services and convenience items). Second, Fargo, and to a lesser extent, Valley City and Wahpeton, because of their size, will have an image of greater variety and more favorable prices for many goods and services. Thus, many people will travel to those cities to shop even if the same merchandise is available locally and is competitively priced. Third, some towns have businesses which have a reputation for providing excellent service and/or quality products, often drawing customers from areas not normally considered within its trade area. Finally, when people travel to other towns, primarily for reasons other than shopping, they likely may spend some time shopping (e.g., when parents/students travel to a state basketball tournament in Bismarck, Fargo, Minot, etc., they are likely to shop while in town; also trips to larger trade centers to see medical specialists or attend recreational events can result in considerable outshopping).

## Analysis of Outshoppers in Lisbon Main Trade Area

Responses were analyzed to determine if those who bought 50 percent or more of selected goods and services in Lisbon differed from those who bought less than 50 percent. Differences between the two groups also were analyzed by convenience and specialty services.

According to selected demographic characteristics, little difference exists between those who purchase a majority of their goods and services in Lisbon and those who purchase a majority of their goods and services elsewhere (Table 10). The group purchasing less than 50 percent of the four goods and services in Lisbon traveled farther (for each of the services) than the group purchasing 50 percent or more of the same goods and services in Lisbon.

TABLE 10. DEMOGRAPHIC CHARACTERISTICS FOR PEOPLE IN THE MAIN TRADE AREA WHO PURCHASE LESS THAN 50 PERCENT AND THOSE WHO PURCHASE MORE THAN 50 PERCENT OF THEIR SERVICES IN LISBON, NORTH DAKOTA, 1989

| | Group Purchasing 50 Percent or More of Goods in Lisbon | | | | Group Purchasing Less Than 50 Percent of Goods in Lisbon | | | |
|---|---|---|---|---|---|---|---|---|
| Attribute | Groceries | Gas Station | Building Supplies | Major Appliances | Groceries | Gas Station | Building Supplies | Major Appliances |
| Age | 50.5 | 49.3 | 49.3 | 50.9 | 48.4 | 49.7 | 45.0 | 46.2 |
| Education | 12.5 | 12.5 | 12.7 | 12.5 | 12.1 | 12.3 | 12.2 | 12.2 |
| Years Lived In County | 34.8 | 33.4 | 36.2 | 36.7 | 35.8 | 38.6 | 28.2 | 30.1 |
| Number in Household | 2.8 | 2.9 | 3.0 | 2.9 | 3.2 | 3.1 | 3.3 | 3.1 |
| Number in Grade School | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 | 0.5 |
| Number in High School | 0.2 | 0.3 | 0.3 | 0.3 | 0.5 | 0.4 | 0.4 | 0.4 |
| Average Miles Traveled[a] | 10.9 | 11.5 | 11.9 | 11.6 | 21.1 | 21.2 | 34.9 | 47.0 |
| Household Income | $25,058 | $25,913 | $27,194 | $27,205 | $26,667 | $25,714 | $27,067 | $26,053 |

[a]Those living in Lisbon and those traveling less than one mile to Lisbon were not included in the analysis.

Both the average age and years resided in county were very high, suggesting either that the survey respondents were older individuals or the MTA is composed of older clientele (providing the survey is a representative sample of the MTA). Other demographic variables suggest that households in the Lisbon MTA are small, with few school children. Only slight differences were evident between the two main groups, with no substantial differences appearing between those purchasing 50 percent or more and those purchasing less than 50 percent of the goods and services in Lisbon.

## Newspaper Subscriptions of Lisbon Area Residents

Newspaper subscriptions of respondents in the Lisbon main and greater trade areas were identified (Table 11). Newspaper subscriptions were divided into daily and weekly papers for both main and greater trade area respondents. The most popular daily newspaper for both the main and greater trade areas was *The Forum* (Fargo). The most popular weekly papers for the main and greater trade areas were the *Ransom County Gazette* and *Sargent County*

TABLE 11. NEWSPAPER SUBSCRIPTIONS FOR MAIN AND GREATER TRADE AREA RESPONDENTS, LISBON, NORTH DAKOTA, 1989

| Main Trade Area | | | Greater Trade Area | | |
|---|---|---|---|---|---|
| Newspaper | Numbers of Respondents | Percent | Newspaper | Number of Respondents | Percent |
| Daily Newspapers | | | | | |
| Fargo Forum | 197 | 96.6 | Fargo Forum | 262 | 86.2 |
| Valley City Times | 2 | 1.0 | Valley City Times | 25 | 8.2 |
| USA Today | 2 | 1.0 | Wahpeton News | 9 | 3.0 |
| Others | 3 | 1.4 | Jamestown Sun | 3 | 1.0 |
| | | | USA Today | 3 | 1.0 |
| | | | Wall Street Journal | 2 | 0.7 |
| Total | 204[a] | | Total | 304[b] | |
| Weekly Newspapers | | | | | |
| Ransom County Gazette | 201 | 77.6 | Sargent County Teller | 126 | 30.2 |
| Sargent County Teller | 28 | 10.8 | Enderlin Independence | 107 | 25.7 |
| Litchville Bulletin | 6 | 2.3 | Ransom County Gazette | 45 | 10.8 |
| Enderlin Independence | 5 | 1.9 | LaMoure Chronicle | 23 | 5.5 |
| AgWeek-Grand Forks | 4 | 1.5 | Litchville Bulletin | 15 | 3.6 |
| Fargo Forum (Sun.) | 3 | 1.2 | Fargo Forum (Sun.) | 15 | 3.6 |
| Others | 12 | 4.6 | Oakes Times | 15 | 3.6 |
| | | | AgWeek-Grand Forks | 14 | 3.4 |
| | | | Britton Journal | 8 | 1.9 |
| | | | Adams Standard | 7 | 1.7 |
| | | | Aberdeen American | 7 | 1.7 |
| | | | Others[c] | 35 | 8.3 |
| Total | 259[d] | | Total | 417[e] | |

[a]200 respondents subscribe to a daily paper with 4 respondents subscribing to more than one paper.
[b]276 respondents subscribe to a daily paper with 28 respondents subscribing to more than one paper.
[c]Cass County Reporter, Edgeley Mail, Grant County News, McClusky Gazette, Leader, Grand Forks Herald (Sun.), Fergus Falls Daily, Oakes Times, Billings County Pioneer, Bowman County Pioneer, Towner County Record Herald, Cavalier Chronicle, Griggs County Sentinel, Valley News & Views, Carson Press, Dickey County Leader, Lidgerwood Monitor, Emmons County Reports, Benson County Farmer, McHenry County Journal, Foster County Independence, Divide County Journal, Michigan Arena, Sisseton Courier.
[d]231 respondents subscribe to a weekly paper with 28 respondents subscribing to more than one paper.
[e]314 respondents subscribe to a weekly paper with 103 respondents subscribing to more than one paper.

*Teller*, respectively. Other popular weekly newspapers for respondents included *Enderlin Independence* and *Lamoure Chronicle*.

## Radio Stations of Lisbon Area Residents

The most popular radio stations that respondents in Lisbon's main trade area listened to were KQLX of Lisbon, followed by WDAY of Fargo and KFGO of Fargo (Table 12).

## Comparison of Current and Previous Lisbon Trade Area Boundaries

Owens and Vangsness (1972) discussed general information on retail trade and identified both main and greater trade areas for Lisbon. Information from the past Lisbon retail trade report was based on a different questionnaire; however, some comparisons to information in this report can be made. Probably the most valid and worthwhile comparison is to examine changes in Lisbon's main and greater trade areas. Although trade area delineation criteria used in the previous Lisbon trade area report differ, enough similarity exists to make comparisons with the trade area boundaries determined in this report.

The main trade area for Lisbon has changed some from 1972. Lisbon lost one township each to Valley City and Lamoure. Lisbon lost two townships to Fargo but gained two townships from Oakes. Lisbon lost two townships overall since the early 1970s. The greater trade area appears to have diminished slightly to the northeast of Lisbon; however, the GTA appears to have remained constant or increased to the northwest and south of Lisbon. Some of the differences in trade areas may be attributed to different trade area delineation criteria and to changes in the relative strength of the Fargo-West Fargo trade center.

TABLE 12. MOST POPULAR RADIO STATIONS FOR RESPONDENTS IN THE MAIN TRADE AREA, LISBON, NORTH DAKOTA, 1989

| Radio Station | Number of Respondents | Percent |
|---|---|---|
| KQLX-Lisbon | 139 | 53.3 |
| WDAY-Fargo | 89 | 34.1 |
| KFGO-Fargo | 19 | 7.3 |
| KLTA-Fargo | 4 | 1.5 |
| Others | 10 | 3.8 |

## SUMMARY AND CONCLUSIONS

Trade area analysis was conducted for Lisbon based on a statewide trade area survey which the Department of Agricultural Economics at NDSU conducted in 1989. The demographic and economic profile for Lisbon was discussed. Lisbon has suffered in the 1980s from decreased population, reduced taxable sales, and reduced county population, employment, and per capita income. Even though Lisbon lost population, its retail sales only decreased by about 1 percent, which is much better than most North Dakota cities experienced in the 1980s. Lisbon was one of the few North Dakota cities to increase its pull factor in the last ten years. Changes in economic activity and population for Lisbon have been similar to other North Dakota cities in the 1,500 to 2,500 population range during the 1980s; however, Lisbon has fared better than cities of comparable size and the city is doing relatively better than its smaller competing cities.

Main and greater trade areas were defined for Lisbon, using several delineation criteria. Townships where the majority of the respondents purchased 50 percent or more of a mix of goods and services in Lisbon were included in the main trade area. Townships where 10 percent of the respondents purchased at least 10 percent of the goods and services mix in Lisbon were included in the greater trade area (not including main trade area townships). The goods and services mix contained six convenience, eight specialty, and two agricultural goods and services.

Lisbon's main trade area appears to have decreased slightly since 1972. Lisbon lost four townships to neighboring cities but gained two townships, for an overall reduction in MTA size of two townships. The greater trade area decreased slightly to the northeast; however, pull from the northwest may have increased.

Lisbon appears to be doing a good job of capturing most of the available market (those respondents who purchase a majority of the service in Lisbon divided by the total number of respondents in the Lisbon main trade area who purchase the service) for most of the services listed on the survey questionnaire. Also, Lisbon appears to be an important source of services for those shopping in Lisbon (i.e., of those shopping in Lisbon, most individuals will purchase a majority of the item from Lisbon retailers).

Fargo-West Fargo, Valley City, Enderlin, Wahpeton, Gwinner, Oakes and a few smaller towns provide most of the shopping locations for area residents who do not purchase the good or service in Lisbon. No substantial differences were found in the demographic characteristics of those purchasing less than 50 percent and those purchasing more than 50 percent of selected convenience and specialty goods and services in Lisbon. Those purchasing 50 percent or more of one or more convenience or

specialty goods or services in Lisbon traveled an average distance of about 13.5 miles.

Even though the 1980s have been difficult for rural North Dakota cities, Lisbon appears to have fared better than other cities of comparable size and somewhat better than smaller neighboring towns. Lisbon is faced with decreasing city and county population and decreasing county population, employment, and per capita income. Although economic times have been difficult, Lisbon appears to be doing a good job of retaining most of its past trade area and remaining an important trade center in southeastern North Dakota.

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# APPENDIX

# TRADE AREA STUDY
CONFIDENTIAL

- Please fill out both sides of the page.
- Any adult in your household may complete the survey.

## BEGIN HERE...

**LOCATION OF RESIDENCE**

Town: _____

Township Name (or range #): (township information is critical to the survey, please enter) _____

County: _____

To what *daily* newspapers do you subscribe? _____

To what *weekly* newspapers do you subscribe? _____

What are the call letters of the radio station you listen to most for weather, news, and other information?

_____ in _____ (town)

## DIRECTIONS:

For each item below indicate up to three towns where you do a great deal of shopping and the percentage of spending made at each town by your household. Totals do not have to add up to 100% across each category.

| | TOWN NAME | % | | TOWN NAME | % | | TOWN NAME | % | |
|---|---|---|---|---|---|---|---|---|---|
| #. EXAMPLE: Groceries | Carson | 60 | | Bismarck | 15 | | Mandan | 10 | |
| 1. Groceries | | | | | | | | | |
| 2. Eating places | | | | | | | | | |
| 3. Drinking places (alcoholic) | | | | | | | | | |
| 4. Men's clothing | | | | | | | | | |
| 5. Women's clothing | | | | | | | | | |
| 6. Women's coats | | | | | | | | | |
| 7. Teenage clothing | | | | | | | | | |
| 8. Shoes | | | | | | | | | |
| 9. Jewelery | | | | | | | | | |
| 10. Major appliances | | | | | | | | | |
| 11. Radios, TVs, VCRs | | | | | | | | | |
| 12. Appliance/electronic repair | | | | | | | | | |
| 13. Florist | | | | | | | | | |
| 14. Nursery (plants) | | | | | | | | | |
| 15. Furniture | | | | | | | | | |
| 16. Auto sales | | | | | | | | | |
| 17. Auto repair | | | | | | | | | |
| 18. Gas or diesel service sta. | | | | | | | | | |
| 19. Heating fuel/propane | | | | | | | | | |
| 20. Plumber | | | | | | | | | |
| 21. Barber | | | | | | | | | |
| 22. Beautician | | | | | | | | | |
| 23. Legal services | | | | | | | | | |
| 24. Accounting services | | | | | | | | | |
| 25. Computers | | | | | | | | | |
| 26. Eye doctor | | | | | | | | | |
| 27. Family doctor | | | | | | | | | |
| 28. Chiropractor | | | | | | | | | |
| 29. Dentist | | | | | | | | | |
| 30. Hospital | | | | | | | | | |
| 31. Mortician (funeral home) | | | | | | | | | |

*Please continue on the next page* →

*Please continue here*

| | TOWN NAME | % | | TOWN NAME | % | | TOWN NAME | % | |
|---|---|---|---|---|---|---|---|---|---|
| 32. Prescription drugs | | | | | | | | | |
| 33. Veterinarian (sm. animal) | | | | | | | | | |
| 34. Banking & savings | | | | | | | | | |
| 35. Building supplies | | | | | | | | | |
| 36. Hardware | | | | | | | | | |
| 37. Sporting goods | | | | | | | | | |

38. Overall, what are your three main trading centers and the distance to each from your residence?

| Town Name | Miles |
|---|---|
| | |
| | |
| | |

39. What town do you consider to be your main trade center?

40. Are you ..
- ☐ single, never married
- ☐ married
- ☐ separated or divorced
- ☐ widowed

41. What is your age? _____

42. What is your gender? ☐ male ☐ female

43. How many years of formal education have you had? _____

44. How many years have you lived in the county? _____

45. If employed (other than farming), in what town do you work?

46a. How many people live in your household, including yourself? _____

b. How many of these people are in grade school? _____

c. How many of these people are in high school? _____

*Please continue with question 47* →

47. Please check the category that best fits your occupation (and your spouse's):

| Respondent | Spouse | |
|---|---|---|
| ☐ | ☐ | farming (also forestry, fishing) |
| ☐ | ☐ | professional/management (e.g., teachers, registered nurses) |
| ☐ | ☐ | technical, sales, or administrative support (e.g., office workers, salespersons, nurses--LPNs, mail carriers, health care support jobs) |
| ☐ | ☐ | service jobs (e.g., health care aides, policemen, firemen, cooks, barbers, janitors) |
| ☐ | ☐ | precision production, craft, and repair jobs (e.g., mechanics, welders, construction trades) |
| ☐ | ☐ | equipment operators and fabricators (e.g., bus/truck drivers, laborers) |
| ☐ | ☐ | other *(explain)* _____ |

48. What was your total family net income before taxes last year?

- ☐ under $5,000
- ☐ $5,000-$10,000
- ☐ $10,001-$15,000
- ☐ $15,001-$20,000
- ☐ $20,001-$25,000
- ☐ $25,001-$30,000
- ☐ $30,001-$35,000
- ☐ $35,001-$40,000
- ☐ $40,001-$45,000
- ☐ over $45,000

IF YOU ARE A FARMER, PLEASE COMPLETE QUESTIONS 49-60 TO THE LEFT

*If you are a farm operator (not strictly a landlord), please continue with question 49 below.*

| | TOWN NAME | % | | TOWN NAME | % | | TOWN NAME | % | |
|---|---|---|---|---|---|---|---|---|---|
| 49. Farm machinery | | | | | | | | | |
| 50. Farm mach. repair/parts | | | | | | | | | |
| 51. Farm fuel & lubricants | | | | | | | | | |
| 52. Commercial feeds | | | | | | | | | |
| 53. Crop seeds | | | | | | | | | |
| 54. Crop consultants | | | | | | | | | |
| 55. Fertilizer | | | | | | | | | |
| 56. Other farm chemicals | | | | | | | | | |
| 57. Veterinary services | | | | | | | | | |
| 58. Other farm supplies | | | | | | | | | |

WHERE ARE YOUR FARM PRODUCTS MARKETED?

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 59. Grain | | | | | | | | | |
| 60. Livestock | | | | | | | | | |