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Retail Trade Area Analysis

Bowman North Dakota

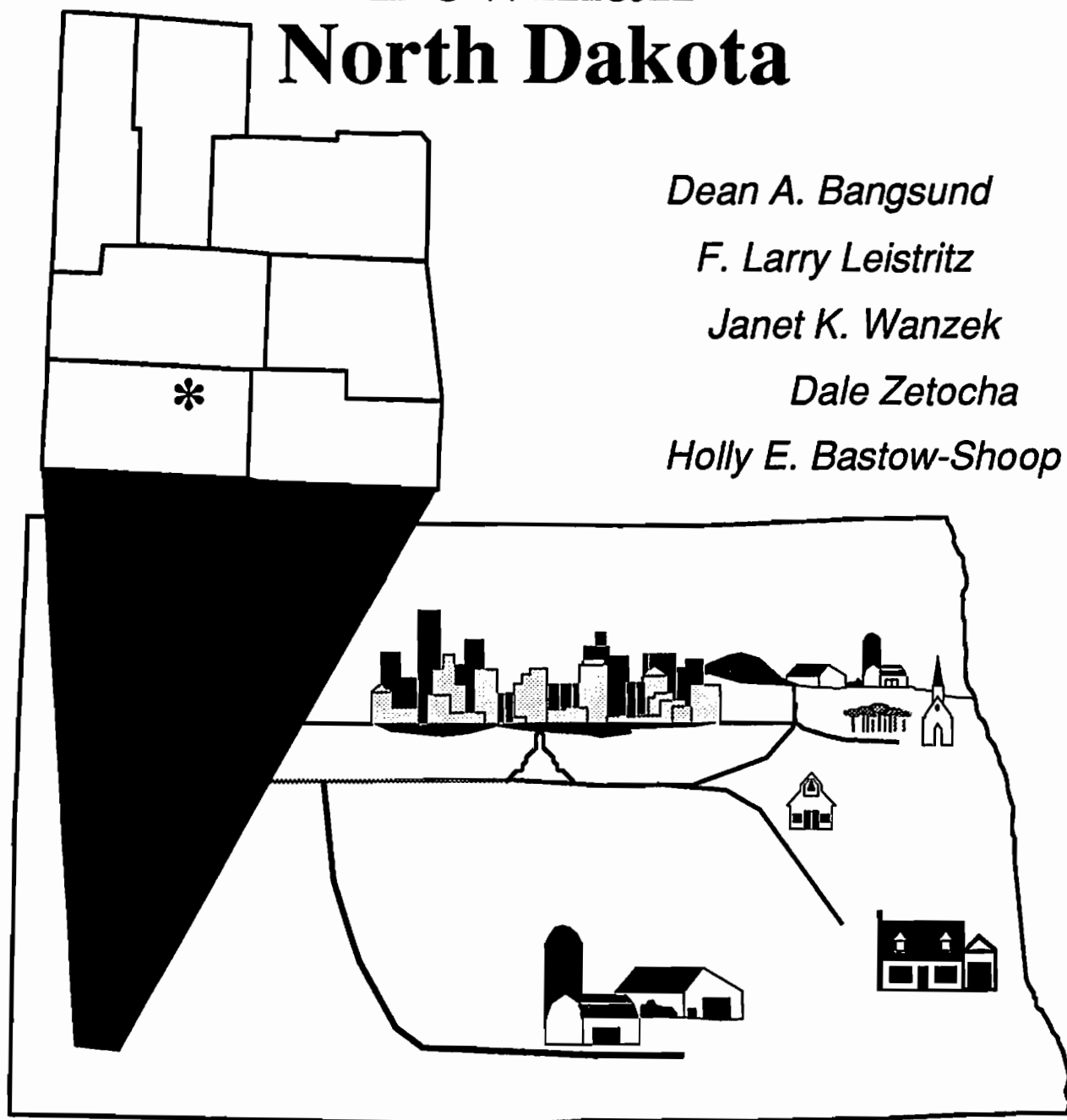
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The authors accept sole responsibility for any remaining errors or omissions.

TABLE OF CONTENTS

| | <u>Page</u> |
|---|-------------|
| List of Tables | ii |
| List of Figures | ii |
| Highlights | iii |
| Introduction | 1 |
| Purpose | 1 |
| Methods and Scope | 2 |
| Bowman and Surrounding Area Profile | 2 |
| Trade Area Delineation | 6 |
| Characteristics of Bowman Area Residents | 8 |
| Demographic Profile of Shoppers in Bowman | |
| Main Trade Area | 9 |
| Distance Traveled by Bowman Area Shoppers | 9 |
| Area Shoppers' Utilization of Goods and Services | |
| Provided in Bowman | 12 |
| Where Services Are Purchased When Not | |
| Purchased in Bowman | 14 |
| Analysis of Outshoppers in Bowman Main Trade Area | 16 |
| Newspaper Subscriptions of Bowman Area Residents | 16 |
| Radio Stations of Bowman Area Residents | 17 |
| Comparison of Current and Previous Bowman | |
| Trade Area Boundaries | 17 |
| Summary and Conclusions | 19 |
| References | 21 |
| Appendix | 23 |

List of Tables

| <u>Table</u> | <u>Page</u> |
|--|-------------|
| 1 CITY AND TRADE AREA POPULATION FOR BOWMAN AND SELECTED CITIES, NORTH DAKOTA, 1980 AND 1988 . . . | 3 |
| 2 POPULATION, AVERAGE ANNUAL EMPLOYMENT, AND PER CAPITA INCOME FOR BOWMAN AND SURROUNDING COUNTIES, NORTH DAKOTA, 1980 TO 1989 | 4 |
| 3 DEFLATED TAXABLE SALES AND PURCHASES FOR BOWMAN AND SELECTED CITIES, NORTH DAKOTA, 1980 TO 1989 . . . | 5 |
| 4 PULL FACTORS FOR BOWMAN AND SELECTED CITIES, NORTH DAKOTA, 1980 TO 1989 | 6 |
| 5 DEMOGRAPHIC PROFILE OF RESPONDENTS IN MAIN TRADE AREA, BOWMAN, NORTH DAKOTA, 1989 | 10 |
| 6 WEIGHTED AVERAGE DISTANCE TRAVELED BY AREA RESIDENTS WHO PURCHASED 50 PERCENT OR MORE OF SELECTED SERVICES IN BOWMAN, NORTH DAKOTA, 1989 | 11 |
| 7 MILEAGE BREAKDOWN FOR AREA SHOPPERS PURCHASING 50 PERCENT OR MORE OF A CONVENIENCE AND SPECIALTY SERVICE IN BOWMAN, NORTH DAKOTA, 1989 | 12 |
| 8 RELATIVE IMPORTANCE OF BOWMAN TO SHOPPERS PURCHASING SOME GOODS AND SERVICES AND FOR THOSE PURCHASING A MAJORITY OF THEIR GOODS AND SERVICES IN BOWMAN, NORTH DAKOTA, 1989 | 13 |
| 9 MOST POPULAR CITIES FOR THE PURCHASE OF GOODS AND SERVICES BY BOWMAN MAIN TRADE AREA RESIDENTS WHO DID NOT PURCHASE A MAJORITY OF THE GOOD OR SERVICE IN BOWMAN, NORTH DAKOTA, 1989 | 15 |
| 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 BOWMAN, NORTH DAKOTA, 1989 | 17 |
| 11 NEWSPAPER SUBSCRIPTIONS FOR MAIN AND GREATER TRADE AREA RESPONDENTS, BOWMAN, NORTH DAKOTA, 1989 | 18 |
| 12 MOST POPULAR RADIO STATIONS FOR RESPONDENTS IN THE MAIN TRADE AREA, BOWMAN, NORTH DAKOTA, 1989 | 18 |

List of Figures

| <u>Figure</u> | <u>Page</u> |
|---|-------------|
| 1 Main and Greater Trade Areas for Bowman, North Dakota, 1989 | 9 |

HIGHLIGHTS

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

Current trade area information for Bowman 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 Bowman population, retail sales, per capita income, pull factors, and Bowman County population and employment were identified and discussed. Bowman's population, trade area population, retail sales, and pull factors along with Bowman County population and per capita income have all decreased throughout the 1980s. Although most demographic and economic measurements have decreased, Bowman has fared as well as other North Dakota cities with similar populations, and has fared favorably compared to smaller competing trade centers. The economic situation found in Bowman and Bowman County are typical of the economic and demographic problems found with southwestern North Dakota communities in the 1980s.

Bowman'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. Bowman's MTA decreased in size by five townships, compared to MTA boundaries determined in 1971.

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 18.2 and 18.1 miles to Bowman to purchase selected convenience and specialty goods and services, respectively. Nearly half (44.8 percent) of the respondents who purchased 50 percent or more of convenience and specialty goods in Bowman traveled over 21 miles to purchase the item.

Bowman appears to be an important provider for most goods and services for MTA residents purchasing items in Bowman; however, Bowman could capture more of the available market for clothing items and electronic goods.

Dickinson, Scranton, Bismarck, Rhame, and Hettinger were the most popular cities for the purchase of nonagricultural goods and services by Bowman MTA residents who did not purchase a majority of the good or service in Bowman. Scranton and Rhame were popular for purchasing agricultural goods and services. Catalog sales also appeared as a popular alternative to shopping in Bowman.

Outshopping analysis revealed no substantial demographic or socioeconomic differences between Bowman MTA residents purchasing 50 percent or more and those purchasing less than 50 percent of selected goods and services in Bowman. Slight differences between groups were evident only in miles traveled and average income.

The Bismarck Tribune and The Dickinson Press were the most popular daily newspapers for both Bowman MTA and GTA residents. Bowman County Pioneer and Adams County Record were the most popular weekly newspapers for Bowman MTA and GTA residents, respectively. The most popular radio stations for Bowman MTA residents included KPOK of Bowman, KNDC of Hettinger, KFLN of Baker, Montana, and KFYZ of Bismarck.

Although economic times have been difficult, Bowman appears to be doing a good job of retaining most of its past trade area and should remain an important trade center in southwestern North Dakota.

RETAIL TRADE AREA ANALYSIS: BOWMAN, 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 indepth 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 Bowman 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 Bowman's main and greater trade areas, provide information on the demographic characteristics of Bowman area shoppers, and identify essential and nonessential services Bowman 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 Bowman trade area.

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

BOWMAN 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 Bowman population, retail sales, market share, per capita income, pull factors, and Bowman 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.

Bowman's population declined about 9.7 percent from 1980 to 1988 (Table 1). Of the North Dakota cities in the population

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, the size category would have a population decline of nearly 7 percent. Bowman's trade area population decreased about 3.8 percent from 1980 to 1988, the sixth smallest decrease of any town in the category. The population of Bowman's competing trade centers and their trade area populations also decreased, except for Dickinson and its trade area.

Since Bowman's trade area covers parts of counties other than Bowman County, population, average annual employment, and per capita income have been identified for surrounding counties (Table 2). Population in Bowman County decreased 5.4 percent from 1980 to 1988. All surrounding counties lost population during the same time period.

Average annual employment in Bowman County increased 2.1 percent from 1980 to 1988. Employment declined in all counties surrounding Bowman County. Even though employment increased in Bowman County, real per capita income (i.e., adjusted for inflation) decreased 7.7 percent from 1979 to 1987. Per capita income decreased in all but one of the surrounding counties.

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

| City | County | City Population | | Percent Change | Trade Area Population ^a | | Percent Change |
|----------------------------|-----------|-----------------|---------|----------------|------------------------------------|--------|----------------|
| | | 1980 | 1988 | 1980-88 | 1980 | 1988 | 1980-88 |
| Population over 10,000 | | | | | | | |
| Dickinson | Stark | 15,924 | 16,630 | 4.43 | 23,909 | 24,951 | 4.36 |
| Group Total | | 253,628 | 274,280 | 8.14 | -- | -- | -- |
| Population 2,500 to 10,000 | | | | | | | |
| Group Total | | 43,813 | 45,650 | 4.19 | 9,602 | 9,579 | 2.52 |
| Population 1,500 to 2,500 | | | | | | | |
| Bowman | Bowman | 2,071 | 1,870 | -9.71 | 5,008 | 4,816 | -3.83 |
| Hettinger | Adams | 1,739 | 1,630 | -6.27 | 3,185 | 2,913 | -8.54 |
| Group Total | | 39,095 | 37,540 | -3.98 | -- | -- | -- |
| Population 1,000 to 1,500 | | | | | | | |
| Mott | Hettinger | 1,315 | 1,110 | -15.59 | 2,896 | 2,513 | -13.23 |
| Group Total | | 29,622 | 27,540 | -7.03 | -- | -- | -- |
| Population 500 to 1,000 | | | | | | | |
| New England | Hettinger | 825 | 690 | -16.36 | 1,690 | 1,447 | -14.38 |
| Group Total | | 32,154 | 31,200 | -2.97 | -- | -- | -- |
| Population 200 to 500 | | | | | | | |
| Scranton | Bowman | 415 | 420 | 1.20 | . | . | . |
| Group Total | | 28,746 | 27,373 | -4.78 | -- | -- | -- |
| All Population Categories | | | | | | | |
| State Total | | 427,058 | 443,583 | 3.87 | -- | -- | -- |

^aTrade areas were based on previous work by North Dakota State University Extension Service.

SOURCE: Leistritz et al. 1990.

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

| County | 1980 | 1982 | 1984 | 1986 | 1988 | 1989 | Percent Change 1980-88/89 |
|--|---------|-------------------------|---------|-------------|---------|---------|---------------------------------------|
| ----- Population ----- | | | | | | | |
| Bowman | 4,229 | 4,300 | 4,300 | 4,300 | 4,000 | --- | -5.41 |
| Surrounding Counties | | | | | | | |
| Adams | 3,584 | 3,500 | 3,500 | 3,500 | 3,300 | --- | -7.92 |
| Hettinger | 4,275 | 4,100 | 4,100 | 3,900 | 3,700 | --- | -13.45 |
| Slope | 1,157 | 1,200 | 1,200 | 1,200 | 1,100 | --- | -4.93 |
| North Dakota | 652,717 | 672,000 | 687,000 | 679,000 | 667,000 | --- | 2.19 |
| ----- Average Annual Employment ^a ----- | | | | | | | |
| Bowman | 2,038 | 2,112 | 2,252 | 2,145 | 2,086 | 2,081 | 2.11 |
| Surrounding Counties | | | | | | | |
| Adams | 1,921 | 1,923 | 1,764 | 1,773 | 1,646 | 1,638 | -14.73 |
| Hettinger | 1,810 | 1,851 | 2,015 | 1,877 | 1,742 | 1,714 | -5.30 |
| Slope | 566 | 517 | 530 | 463 | 439 | 422 | -25.44 |
| North Dakota | 288,002 | 297,002 | 310,953 | 313,001 | 316,000 | 317,000 | 10.07 |
| ----- Per Capita Income ^b ----- | | | | | | | |
| | | <u>1979^c</u> | | <u>1987</u> | | | Percent Change <u>1979 to 1987</u> |
| Bowman | | \$9,693 | | \$8,943 | | | -7.7 |
| Surrounding Counties | | | | | | | |
| Adams | | 9,175 | | 8,416 | | | -8.3 |
| Hettinger | | 7,986 | | 8,099 | | | 1.4 |
| Slope | | 7,723 | | 6,167 | | | -20.1 |
| North Dakota | | 10,041 | | 9,641 | | | -4.0 |

^aJob Service North Dakota. Various Issues. North Dakota Labor Force by County, by Region. Bismarck.

^bU.S. Department of Commerce, Bureau of the Census, "Current Population Reports," Series P-26 (Spring 1990).

^cReal 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.

Bowman's deflated taxable sales (i.e., adjusted for inflation) decreased 38.2 and 10.9 percent from 1980 to 1989 and 1987 to 1989, respectively (Table 3). Bowman's decrease in taxable sales (1980 to 1989) was less than the 1,500 to 2,500 population group average. Bowman fared about the same as other cities in the same population category, with average taxable sales for the group decreasing 45.56 and 10.06 percent from 1980 to 1989 and 1987 to 1989, respectively. Competing cities also suffered large decreases in their adjusted taxable sales for the same time periods. 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

TABLE 3. DEFLATED TAXABLE SALES AND PURCHASES FOR BOWMAN 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 | | | | | |
| Dickinson | 219,686,439 | 127,742,554 | 124,969,545 | -43.11 | -2.17 |
| Group Total | 2,578,781,160 | 2,337,648,605 | 2,396,999,678 | -7.05 | 2.54 |
| Population 2,500 to 10,000 | | | | | |
| Group Total | 398,731,612 | 315,496,552 | 298,875,168 | -25.04 | -5.27 |
| Population 1,500 to 2,500 | | | | | |
| Bowman | 22,101,383 | 15,334,090 | 13,670,286 | -38.15 | -10.85 |
| Hettinger | 15,405,076 | 12,854,192 | 11,893,179 | -22.80 | -7.48 |
| Group Total | 415,612,668 | 251,583,986 | 226,276,758 | -45.56 | -10.06 |
| Population 1,000 to 1,500 | | | | | |
| Mott | 9,878,092 | 5,569,502 | 4,329,037 | -56.18 | -22.27 |
| Group Total | 222,752,746 | 141,859,953 | 130,721,134 | -41.32 | -7.85 |
| Population 500 to 1,000 | | | | | |
| New England | 8,411,132 | 2,490,172 | 2,932,834 | -65.13 | 17.78 |
| Group Total | 197,005,522 | 124,426,751 | 123,454,776 | -37.33 | -0.78 |
| Population 200 to 500 | | | | | |
| Scranton | 2,228,344 | 1,857,940 | 1,509,951 | -32.24 | -18.73 |
| 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.

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.

Bowman's pull factor decreased almost 29 percent from 1980 to 1989 (Table 4). Only Drayton and Walhalla, in the population group 1,500 to 2,500, increased their pull factor from 1980 to 1989. Bowman's pull factor is equal to the group average, indicating the community captures the same amount of its trade area purchasing power as other cities with similar population. Pull factors for all competing cities decreased substantially from 1980 to 1989. Pull factors in 1989 for cities competing with Bowman were generally less than Bowman's pull factor, suggesting Bowman 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 Bowman. Bowman's pull factor and deflated taxable sales have decreased in the 1980s, in addition to decreases in real per capita income and average annual employment

TABLE 4. PULL FACTORS FOR BOWMAN 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 | | | | | | |
| Dickinson | 1.50 | 1.07 | 0.93 | -28.66 | -37.92 | -12.97 |
| Group Average | 1.12 | 0.96 | 1.01 | -14.20 | -9.63 | 5.32 |
| Population 2,500 to 10,000 | | | | | | |
| Group Average | 0.79 | 0.73 | 0.64 | -8.40 | -19.82 | -12.47 |
| Population 1,500 to 2,500 | | | | | | |
| Bowman | 0.74 | 0.66 | 0.53 | -11.93 | -28.86 | -19.22 |
| Hettinger | 0.89 | 0.95 | 0.72 | 6.16 | -19.42 | -24.10 |
| Group Average | 0.89 | 0.65 | 0.52 | -26.93 | -42.26 | -20.99 |
| Population 1,000 to 1,500 | | | | | | |
| Mott | 0.69 | 0.49 | 0.29 | -29.28 | -58.03 | -40.66 |
| Group Average | 0.65 | 0.53 | 0.43 | -18.35 | -34.55 | -19.84 |
| Population 500 to 1,000 | | | | | | |
| New England | 1.01 | 0.39 | 0.34 | -61.25 | -66.16 | -12.66 |
| Group Average | 0.60 | 0.49 | 0.42 | -18.94 | -29.78 | -13.38 |
| Population 200 to 500 | | | | | | |
| Scranton | * | * | * | * | * | * |
| Group Average | 0.41 | 0.35 | 0.28 | -14.30 | -30.65 | -19.07 |

SOURCE: Leistriz et al. 1990.

in Bowman County. Changes in economic activity and population for Bowman have been similar to other North Dakota cities in the 1,500 to 2,500 population range, suggesting Bowman is no worse off than other cities of comparable size.

Although Bowman suffers from decreased economic activity and population declines, the city is doing better than most of its smaller competing cities. Smaller cities and towns competing with Bowman appear to be suffering more economic decline than is evident in larger cities. Economic pressures and population declines found in Bowman and Bowman County are somewhat typical of the economic problems found in southwestern North Dakota communities in the 1980s.

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 Bowman.

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.

Bowman 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
Eating places
Gas and diesel service

Groceries
Hardware
Prescription drugs

Specialty Goods and Services

Auto repair
 Beautician
 Furniture
 Hospital

Legal services
 Men's clothing
 Radios, TVs, VCRs
 Sporting goods

Agricultural Goods and Services

Farm machinery

Farm supplies

The main trade area for Bowman 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 Bowman. 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 Bowman.

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.

The MTA and GTA for Bowman likely extend into Montana and South Dakota; however, only Bowman's trade areas in North Dakota were determined in this report. Bowman's MTA captures a considerable amount of townships to the west and north of the city; however, the GTA extends almost entirely to the east of town (Figure 1). The Bowman GTA has the most influence on townships (within North Dakota) located to the east of town. Bowman's ability to attract customers from the north appears limited due to competition from Dickinson, and to a lesser extent, Beach.

CHARACTERISTICS OF BOWMAN AREA RESIDENTS

Business people and community leaders usually are interested in the characteristics of local shoppers and shopping patterns. The characteristics of Bowman shoppers were analyzed, using 196 survey responses from the Bowman MTA. Other analyses included examination of important and less important services for patron shoppers of Bowman, identification of neighboring cities area shoppers patronize, determination of distances area shoppers traveled to Bowman, and listing popular newspapers and radio stations among area residents.

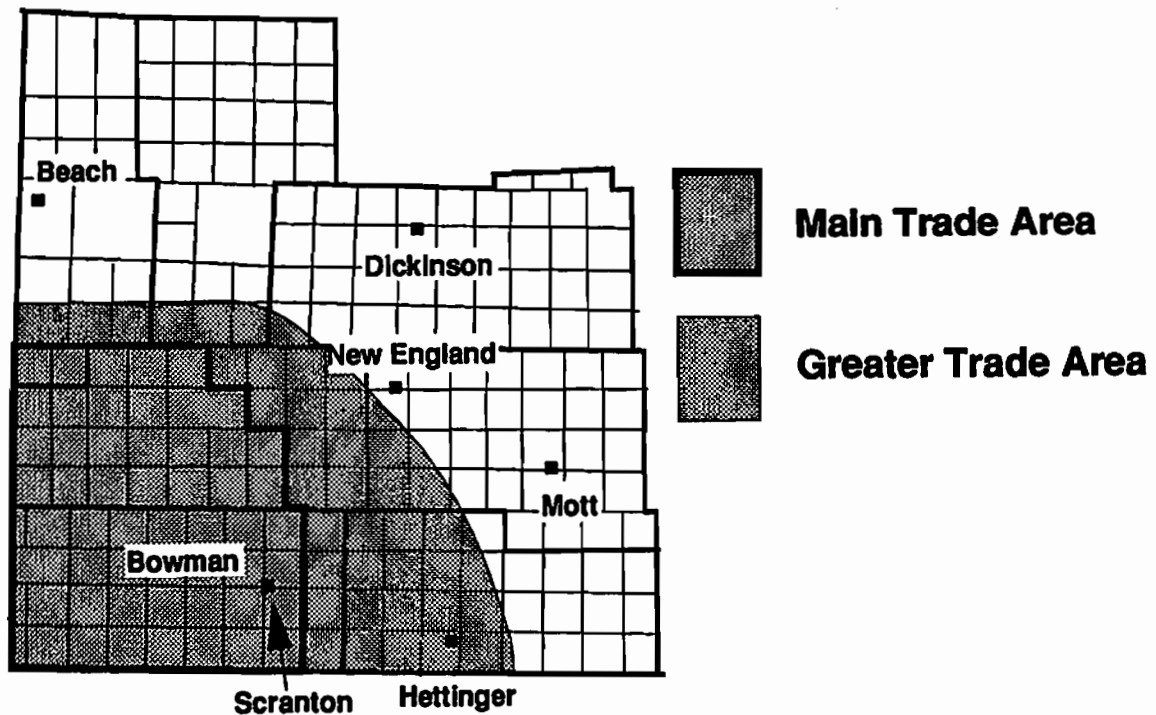


Figure 1. Main and Greater Trade Areas for Bowman, North Dakota, 1989

Demographic Profile of Shoppers in Bowman Main Trade Area

Demographic characteristics of the survey respondents for the Bowman 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 Bowman Area Shoppers

Average distances that area residents traveled to Bowman were determined for each nonagricultural good or service in the 16-item goods and services mix (Table 6). Distances were determined by averaging respondents' estimated miles between Bowman and their home residence. Bowman residents and any respondents who lived one mile or less from Bowman were not

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

| Demographic Characteristic | Average of Survey Responses | |
|----------------------------|-----------------------------|---------|
| Age (Years) | 54.1 | |
| Education (Years) | 12.3 | |
| Lived in County (Years) | 41.0 | |
| Household Size (People) | 2.6 | |
| Average Household Income | \$24,576 | |
| Occupation | Respondent | Spouse |
| | ---%--- | ---%--- |
| Farming | 38.4 | 39.5 |
| Retired | 18.0 | 11.8 |
| Tech/Sales/Admin | 16.9 | 18.5 |
| Professional | 14.0 | 11.8 |
| Craft/Repair | 6.4 | 5.0 |
| Service Jobs | 4.1 | 9.2 |
| Equipment Operator | 2.3 | 2.5 |
| Housewife | -- | 1.7 |
| Other | -- | -- |
| Martial Status | --- % --- | |
| Single | 9.4 | |
| Separated/Divorced | 5.2 | |
| Married | 72.4 | |
| Widowed | 13.0 | |
| Male | 54.6 | |
| Female | 45.4 | |

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 Bowman 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 Bowman. 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 Bowman.

The average distance traveled to Bowman to purchase convenience goods and services was nearly identical to that traveled for specialty goods and services for all respondents (regardless of residence location). The average distance traveled to purchase convenience goods and services also was nearly identical to that traveled for specialty goods and

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

| <u>All Respondents Purchasing 50 Percent or More of the Service in Bowman</u> | | | |
|--|-------------------------------|---------------------------|-------------------------------|
| <u>Convenience Items</u> | | <u>Specialty Items</u> | |
| <u>Goods and Services</u> | <u>Average Miles Traveled</u> | <u>Goods and Services</u> | <u>Average Miles Traveled</u> |
| Gas & Diesel Stations | 17.4 | Auto Repair | 17.4 |
| Groceries | 17.9 | Beautician | 17.6 |
| Eating Places | 19.3 | Radios, TVs, VCRs | 17.0 |
| Banking and Savings | 18.5 | Sporting Goods | 17.0 |
| Hardware | 17.8 | Men's Clothing | 18.7 |
| Prescription Drugs | 18.1 | Hospital | 19.7 |
| | | Legal Services | 18.4 |
| | | Furniture | 18.2 |
| | | | |
| Average | 18.2 | Average | 18.1 |
| <u>MTA Respondents Only Who Purchase 50 Percent or More of the Service in Bowman</u> | | | |
| <u>Convenience Items</u> | | <u>Specialty Items</u> | |
| <u>Goods and Services</u> | <u>Average Miles Traveled</u> | <u>Goods and Services</u> | <u>Average Miles Traveled</u> |
| Gas & Diesel Stations | 16.9 | Radios, TVs, VCRs | 16.8 |
| Eating Places | 18.6 | Auto Repair | 16.9 |
| Prescription Drugs | 16.9 | Furniture | 17.6 |
| Groceries | 18.0 | Beautician | 16.3 |
| Banking and Savings | 17.2 | Legal Services | 17.2 |
| Hardware | 17.2 | Hospital | 18.8 |
| | | Men's Clothing | 17.6 |
| | | Sporting Goods | 16.7 |
| | | | |
| Average | 17.4 | Average | 17.3 |

^aOne-way distance to Bowman only.

services for respondents in the MTA who purchased 50 percent or more of the item in Bowman. For those respondents living in the MTA, the average distance traveled was very similar for both types of goods and services.

Distance traveled by type of good or service (convenience and specialty) was broken down into distance categories. Many (44.8 percent) of the respondents (regardless of residence location) who purchase 50 percent or more of a convenience and specialty good or service travelled over 21 miles to purchase the item in Bowman (Table 7). For those living in the MTA, both the number of respondents per distance category and most common distance traveled were similar.

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

| <u>All Respondents Purchasing 50 Percent or More of a Service in Bowman</u> | | | | |
|---|--------------------------|---------|------------------------|---------|
| Distance (Miles) ^a | <u>Convenience Goods</u> | | <u>Specialty Goods</u> | |
| | Number | Percent | Number | Percent |
| 1 to 5 | 9 | 6.9 | 9 | 7.0 |
| 6 to 10 | 19 | 14.5 | 19 | 14.8 |
| 11 to 15 | 25 | 19.1 | 24 | 18.8 |
| 16 to 20 | 19 | 14.5 | 19 | 14.8 |
| 21 to 25 | 30 | 22.9 | 30 | 23.4 |
| over 25 | 29 | 22.1 | 27 | 21.1 |

| <u>MTA Respondents Only Who Purchase 50 Percent or More of a Service in Bowman</u> | | | | |
|--|--------------------------|---------|------------------------|---------|
| Distance (Miles) ^a | <u>Convenience Goods</u> | | <u>Specialty Goods</u> | |
| | Number | Percent | Number | Percent |
| 1 to 5 | 9 | 8.4 | 9 | 8.7 |
| 6 to 10 | 19 | 17.8 | 19 | 18.3 |
| 11 to 15 | 24 | 22.4 | 23 | 22.1 |
| 16 to 20 | 17 | 15.9 | 17 | 16.3 |
| 21 to 25 | 18 | 16.8 | 17 | 16.3 |
| over 25 | 20 | 18.7 | 19 | 18.3 |

^aThose living in Bowman or traveling less than one mile to Bowman were not included in the analysis.

Area Shoppers' Utilization of Goods and Services Provided in Bowman

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

Goods and services that appear to be most utilized by those shopping in Bowman include computers, florist, legal services, mortician, dentist, heating fuel and propane, plumber, accounting, veterinarian (small animals), nursery, prescription drugs, and crop consultants (items where 95 percent of those

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

| Responses in Bowman Main Trade Area | | | | | | |
|---|---|---|----------------|---|----------------|---------------------------|
| Goods and Services | Purchase the Goods & Services Somewhere | Purchase Some of the Goods & Services in Bowman | | Purchase Majority of the Goods & Services in Bowman | | Measure of Market Capture |
| | | No. | % ^a | No. | % ^b | % ^c |
| Computers | 33 | 12 | 36.4 | 12 | 100.0 | 36.4 |
| Florist | 171 | 169 | 98.8 | 168 | 99.4 | 98.2 |
| Legal Service | 165 | 148 | 89.7 | 147 | 99.3 | 89.1 |
| Mortician | 148 | 142 | 95.9 | 141 | 99.3 | 95.3 |
| Dentist | 179 | 165 | 92.2 | 163 | 98.8 | 91.1 |
| Heating Fuel/Propane | 166 | 126 | 75.9 | 124 | 98.4 | 74.7 |
| Plumber | 157 | 152 | 96.8 | 149 | 98.0 | 94.9 |
| Accounting Services | 139 | 113 | 81.3 | 110 | 97.3 | 79.1 |
| Veterinarian (Sm Animals) | 140 | 131 | 93.6 | 126 | 96.2 | 90.0 |
| Nursery (Plants) | 157 | 149 | 94.9 | 142 | 95.3 | 90.4 |
| Prescription Drugs | 189 | 183 | 96.8 | 174 | 95.1 | 92.1 |
| Beautician | 156 | 132 | 84.6 | 125 | 94.7 | 80.1 |
| Barber | 145 | 131 | 90.3 | 124 | 94.7 | 85.5 |
| Auto Repair | 178 | 166 | 93.3 | 157 | 94.6 | 88.2 |
| Banking and Savings | 193 | 177 | 91.7 | 167 | 94.4 | 86.5 |
| Chiropractor | 115 | 87 | 75.7 | 82 | 94.3 | 71.3 |
| Hospital | 183 | 148 | 80.9 | 139 | 93.9 | 76.0 |
| Family Doctor | 189 | 156 | 82.5 | 144 | 92.3 | 76.2 |
| Appliance/Elec Repair | 156 | 129 | 82.7 | 119 | 92.2 | 76.3 |
| Auto Sales | 171 | 151 | 88.3 | 139 | 92.1 | 81.3 |
| Building Supplies | 180 | 166 | 92.2 | 152 | 91.6 | 84.4 |
| Major Appliances | 168 | 152 | 90.5 | 139 | 91.4 | 82.7 |
| Optometrist | 177 | 123 | 69.5 | 110 | 89.4 | 62.1 |
| Hardware | 183 | 166 | 90.7 | 148 | 89.2 | 80.9 |
| Gas/Diesel Service | 181 | 146 | 80.7 | 126 | 86.3 | 69.6 |
| Eating Places | 184 | 177 | 96.2 | 150 | 84.7 | 81.5 |
| Groceries | 196 | 189 | 96.4 | 159 | 84.1 | 81.1 |
| Men's Clothing | 160 | 144 | 90.0 | 121 | 84.0 | 75.6 |
| Radios, TVs, VCRs | 158 | 128 | 81.0 | 107 | 83.6 | 67.7 |
| Furniture | 158 | 139 | 88.0 | 116 | 83.5 | 73.4 |
| Sporting Goods | 127 | 109 | 85.8 | 87 | 79.8 | 68.5 |
| Drinking Places | 108 | 102 | 94.4 | 81 | 79.4 | 75.0 |
| Shoes | 174 | 140 | 80.5 | 105 | 75.0 | 60.3 |
| Jewelry | 102 | 85 | 83.3 | 63 | 74.1 | 61.8 |
| Women's Clothing | 176 | 146 | 83.0 | 96 | 65.8 | 54.5 |
| Women's Coats | 148 | 72 | 48.6 | 46 | 63.9 | 31.1 |
| Teenage Clothing | 52 | 39 | 75.0 | 22 | 56.4 | 42.3 |
| ----- Agricultural Goods and Services ----- | | | | | | |
| Crop Consultants | 34 | 22 | 64.7 | 21 | 95.5 | 61.8 |
| Farm Mach Repair/Parts | 77 | 76 | 98.7 | 72 | 94.7 | 93.5 |
| Farm Machinery | 77 | 75 | 97.4 | 70 | 93.3 | 90.9 |
| Veterinary Services | 70 | 61 | 87.1 | 55 | 90.2 | 78.6 |
| Farm Fuel & Lubricant | 77 | 54 | 70.1 | 47 | 87.0 | 61.0 |
| Other Farm Supplies | 67 | 57 | 85.1 | 49 | 86.0 | 73.1 |
| Fertilizer | 64 | 32 | 50.0 | 27 | 84.4 | 42.2 |
| Other Farm Chemicals | 56 | 36 | 64.3 | 30 | 83.3 | 53.6 |
| Livestock Marketing | 69 | 64 | 92.8 | 53 | 82.8 | 76.8 |
| Commercial Feeds | 68 | 37 | 54.4 | 26 | 70.3 | 38.2 |
| Crop Seeds | 73 | 33 | 45.2 | 23 | 69.7 | 31.5 |
| Grain Marketing | 72 | 43 | 59.7 | 26 | 60.5 | 36.1 |

^aDetermined by dividing number of responses of those who purchase some of the service in Bowman 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 Bowman.

^bDetermined by dividing number of responses of those who purchase majority of the service in Bowman by the number who purchase some of the service in Bowman. Number is proxy for relative importance of Bowman as a provider of the service for those purchasing the item.

^cDetermined by dividing number of responses who purchase majority of the service in Bowman by the number who purchase some of the service anywhere. Number is proxy for ability of Bowman to capture potential market for that service.

buying the service in Bowman purchase a majority of the service in Bowman). The goods and services that people are less likely to purchase a majority of in Bowman include teenage clothing, women's clothing and coats, crops seeds, and grain marketing.

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

Goods and services for which Bowman is capturing a large amount of the potential market (90 percent or more) within the MTA include florist, plumber, mortician, dentist, veterinarian (small animals), nursery, and prescription drugs. Goods and services for which Bowman does not capture the existing market (less than 70 percent) include women's coats and clothing, teenage clothing, computers, shoes, jewelry, sporting goods, radios-TVs-VCRs, optometrist, gas and diesel service, commercial feeds, crop seeds, other farm chemicals, fertilizer, farm fuel and lubrication, and crop consultants.

Goods and services that are important to Bowman shoppers and those for which Bowman is capturing a large percentage of the market include florist, mortician, dentist, veterinarian (small animals), nursery, prescription drugs, and farm machinery. Computers and heating fuel and propane are important to shoppers in Bowman, but few of the potential buyers purchase a majority of those goods and services in Bowman. This suggests some loyalty for those shopping in Bowman yet a good portion of the market has not been captured. Most of the goods and services for which Bowman is capturing much of the potential market are also important to Bowman shoppers, suggesting that most of the potential shoppers (within the MTA) feel Bowman is an important source for most of their services.

Where Services Are Purchased When Not Purchased In Bowman

For most of the goods and services listed in the survey, some respondents did not purchase any of the good or service in Bowman or purchased more of the good or service in other cities. For people living in the Bowman MTA and not purchasing a majority of the services in Bowman, the cities where the majority of those services were purchased were identified (Table 9). Dickinson was the most popular location for the purchase of services outside of the Bowman MTA. Other popular cities included Scranton, Bismarck, Rhame, and Hettinger. Scranton and Rhame were popular for purchasing agricultural goods and services. Catalog sales also appeared as a popular alternative to shopping in Bowman.

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

| Goods and Services | Most Popular Cities | Responses Per City | Percent Purchased | Goods and Services | Most Popular Cities | Responses Per City | Percent Purchased |
|-----------------------|-------------------------------|--------------------|-------------------|----------------------|--------------------------------|--------------------|-------------------|
| Grocery | Scranton | 24 | 79.7 | Eating Places | Scranton | 16 | 59.6 |
| | Rhame | 8 | 86.4 | | Rhame | 9 | 74.6 |
| | Dickinson | 3 | 66.7 | | Dickinson | 5 | 63.0 |
| Drinking Places | Scranton | 15 | 81.7 | Men's Clothing | Dickinson | 26 | 66.1 |
| | Rhame | 9 | 82.8 | | Catalog Sales | 4 | 75.0 |
| Women's Clothing | Dickinson | 53 | 58.3 | | Bismarck | 4 | 67.4 |
| | Catalog Sales | 9 | 89.4 | Teen Clothing | Dickinson | 18 | 56.3 |
| | Bismarck | 9 | 62.2 | | Bismarck | 4 | 50.0 |
| | Rapid City, SD | 4 | 62.5 | Shoes | Dickinson | 46 | 66.3 |
| Women's Coats | Dickinson | 57 | 70.5 | | Bismarck | 9 | 51.1 |
| | Bismarck | 17 | 65.0 | | Catalog Sales | 6 | 80.0 |
| | Catalog Sales | 12 | 87.9 | Radios, TVs, VCRs | Dickinson | 26 | 72.6 |
| | Rapid City | 4 | 65.0 | | Bismarck | 5 | 81.0 |
| Dickinson | 29 | 66.4 | Catalog Sales | | 4 | 87.5 | |
| Jewelry | Bismarck | 7 | 49.3 | Florist | Three towns w/one response ea. | | |
| | Major Appliance Rpr | Dickinson | 19 | | 73.2 | Auto Sales | Dickinson |
| Hettinger | | 10 | 82.5 | Bismarck | 5 | | 84.4 |
| Scranton | | 4 | 75.0 | Plumber | Scranton | 2 | 95.0 |
| Gas Station | Scranton | 34 | 88.7 | | New England | 2 | 87.5 |
| | Hettinger | 5 | 66.0 | Nursery (Plants) | Dickinson | 4 | 78.8 |
| Furniture | Dickinson | 24 | 65.8 | | Catalog Sales | 3 | 91.7 |
| | Bismarck | 4 | 70.0 | | New England | 2 | 75.0 |
| | Baker, MT | 3 | 78.7 | | Rapid City, SD | 2 | 52.5 |
| | Hettinger | 3 | 50.0 | Legal Service | Dickinson | 12 | 98.3 |
| Auto Repair | Scranton | 6 | 75.0 | | Hettinger | 2 | 40.0 |
| | Rhame | 4 | 75.3 | Accounting Service | Dickinson | 19 | 98.7 |
| Heating Fuel/Propane | Scranton | 38 | 97.0 | | Minot | 6 | 95.8 |
| | Beautician | Rhame | 12 | 82.8 | Barber | Scranton | 8 |
| Scranton | | 10 | 95.5 | Dickinson | | 5 | 92.0 |
| Dickinson | | 4 | 87.5 | Rhame | | 3 | 93.3 |
| Optometrist | Dickinson | 46 | 91.5 | Family Doctor | Hettinger | 35 | 88.9 |
| | Bismarck | 3 | 91.7 | | Scranton | 6 | 76.7 |
| | Lemmon, SD | 3 | 62.0 | Banking and Services | Scranton | 15 | 90.0 |
| Computers | Dickinson | 13 | 86.9 | | Rhame | 3 | 96.7 |
| | Bismarck | 2 | 100.0 | Building Supplies | Scranton | 22 | 79.8 |
| | Out of State | 2 | 90.0 | | Hettinger | 2 | 80.0 |
| | Major Appliance | Dickinson | 12 | 74.6 | Mortician | Baker, MT | 3 |
| Scranton | | 4 | 79.5 | Hospital | | Hettinger | 36 |
| Catalog Sales | | 3 | 88.3 | | Dickinson | 3 | 100.0 |
| Hettinger | | 3 | 83.3 | Bismarck | 3 | 56.7 | |
| Chiropractor | Dickinson | 18 | 86.4 | Hardware | Scranton | 23 | 76.7 |
| | Lemmon, SD | 7 | 85.7 | | Dickinson | 5 | 69.8 |
| Dentist | Marmarth | 6 | 88.3 | | Hettinger | 2 | 50.0 |
| | Dickinson | 4 | 100.0 | Farm Machinery | Dickinson | 3 | 71.3 |
| Prescription Drugs | Out of State | 5 | 87.0 | | Beach | 2 | 70.0 |
| | Vet (Small Animals) | Baker, MT | 6 | 81.2 | Crop Consultant | Scranton | 6 |
| Sporting Goods | | Dickinson | 26 | 59.2 | | Rhame | 5 |
| | Scranton | 4 | 87.5 | Fertilizer | Scranton | 20 | 91.3 |
| | Bismarck | 4 | 37.5 | | Rhame | 15 | 99.0 |
| Farm Machinery Repair | Five towns w/one response ea. | | | Crop Seeds | Scranton | 27 | 88.5 |
| Farm Fuel | Scranton | 17 | 93.2 | | Rhame | 21 | 82.0 |
| | Rhame | 10 | 94.0 | Grain Marketing | Scranton | 25 | 90.6 |
| Commercial Feed | Scranton | 26 | 87.1 | | Rhame | 18 | 90.8 |
| | Rhame | 13 | 76.9 | Farm Supplies | Scranton | 9 | 71.7 |
| Farm Chemical | Scranton | 16 | 91.2 | | Rhame | 3 | 51.7 |
| | Rhame | 8 | 95.6 | | Dickinson | 2 | 90.0 |
| Livestock Marketing | Hettinger | 5 | 70.0 | Veterinary Services | Baker, MT | 8 | 78.8 |
| | Lemmon, SD | 4 | 86.3 | | | | |
| | Dickinson | 4 | 61.3 | | | | |

Bowman will always lose some shoppers to surrounding cities and towns for several reasons. First, many shoppers in the Bowman 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, Dickinson, because of its size, will have an image of greater variety and more favorable prices for many goods and services. Thus, many people will travel to Dickinson 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 Bowman Main Trade Area

Responses were analyzed to determine if those who bought 50 percent or more of selected goods and services in Bowman 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 Bowman and those who purchase a majority of their goods and services elsewhere (Table 10). 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 Bowman 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 Bowman.

Newspaper Subscriptions of Bowman Area Residents

Newspaper subscriptions of respondents in the Bowman 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 newspapers for both the main and greater trade areas were *The Bismarck Tribune* and *The Dickinson Press*. The most popular weekly papers for the main and greater trade areas were the *Bowman County Pioneer* and *Adams County Record*, respectively.

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 BOWMAN, NORTH DAKOTA, 1989

| Attribute | Group Purchasing 50 Percent or More of Goods in Bowman | | | | Group Purchasing Less Than 50 Percent of Goods in Bowman | | | |
|-------------------------------------|--|-------------|-------------------|------------------|--|-------------|-------------------|------------------|
| | Groc-eries | Gas Station | Building Supplies | Major Appliances | Groc-eries | Gas Station | Building Supplies | Major Appliances |
| Age | 54.8 | 53.8 | 52.8 | 54.8 | 51.5 | 51.1 | 55.7 | 53.0 |
| Education | 12.2 | 12.4 | 12.4 | 12.2 | 12.5 | 12.2 | 12.0 | 12.6 |
| Years Lived In County | 41.5 | 39.6 | 41.4 | 41.5 | 39.1 | 41.2 | 42.1 | 42.1 |
| Number in Household | 2.4 | 2.5 | 2.6 | 2.6 | 2.9 | 2.8 | 2.6 | 2.8 |
| Number in Grade School | 1.2 | 1.1 | 1.2 | 1.3 | 1.1 | 1.3 | 1.0 | 1.0 |
| Number in High School | 0.4 | 0.4 | 0.5 | 0.5 | 0.7 | 0.7 | 0.8 | 0.8 |
| Average Miles Traveled ^a | 18.0 | 16.9 | 18.4 | 17.7 | 17.3 | 14.9 | 14.7 | 32.0 |
| Household Income | \$24,485 | \$24,049 | \$25,373 | \$24,917 | \$24,878 | \$26,058 | \$25,000 | \$26,364 |

^aThose living in Bowman and those traveling less than one mile to Bowman were not included in the analysis.

Radio Stations of Bowman Area Residents

The most popular radio stations that respondents in Bowman's main trade area listened to were KPOK of Bowman, followed by KNDC of Hettinger, KFLN of Baker, Montana, and KFYZ of Bismarck (Table 12).

Comparison of Current and Previous Bowman Trade Area Boundaries

Owens and Vangsness (1971) discussed general information on retail trade and identified both main and greater trade areas for Bowman. Information from the past Bowman 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 Bowman's main and greater trade areas. Although trade area delineation criteria used in the previous Bowman trade area report differ, enough similarity exists to make comparisons with the trade area boundaries determined in this report.

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

| Main Trade Area | | | Greater Trade Area | | |
|-------------------------------|------------------------|------------------|-----------------------|-----------------------|-----------------|
| Newspaper | Numbers of Respondents | Percent | Newspaper | Number of Respondents | Percent |
| ----- Daily Newspapers ----- | | | | | |
| Bismarck Tribune | 60 | 52.6 | Dickinson Press | 13 | 52.0 |
| Dickinson Press | 36 | 31.6 | Bismarck Tribune | 12 | 48.0 |
| Fargo Forum | 6 | 5.3 | | | |
| Wall Street Journal | 4 | 3.5 | | | |
| USA Today | 3 | 2.6 | | | |
| Minneapolis Tribune | 3 | 2.6 | | | |
| Others | 2 | 1.8 | | | |
| | Total | 114 ^a | | Total | 25 ^b |
| ----- Weekly Newspapers ----- | | | | | |
| Bowman County Pioneer | 133 | 70.0 | Adams County Record | 26 | 59.1 |
| Slope Messenger | 13 | 6.8 | Bowman County Pioneer | 9 | 20.5 |
| Nation Center News-Buffalo | 8 | 4.2 | Nation Center News | 3 | 6.8 |
| AgWeek-Grand Forks | 7 | 3.7 | Others | 6 | 13.6 |
| Others ^c | 29 | 15.3 | | | |
| | Total | 190 ^d | | Total | 44 ^e |

^a98 respondents subscribe to a daily paper with 16 respondents subscribing to more than one paper.

^b23 respondents subscribe to a daily paper with 2 respondents subscribing to more than one paper.

^cOther weekly newspapers included Golden Valley News, Burke County Tribune, Cass County Reporter, Griggs County Sentinel, Benson County Farmer, Dickinson Press, Foster County Independent, and Billings County Pioneer.

^d150 respondents subscribe to a weekly paper with 40 respondents subscribing to more than one paper.

^e34 respondents subscribe to a weekly paper with 10 respondents subscribing to more than one paper.

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

| Radio Station | Number of Respondents | Percent |
|----------------|-----------------------|---------|
| KPOK-Bowman | 119 | 63.0 |
| KNDC-Hettinger | 21 | 11.1 |
| KFLN-Baker, MT | 17 | 9.0 |
| KFYR-Bismarck | 17 | 9.0 |
| KLTC-Dickinson | 5 | 2.6 |
| Others | 10 | 5.3 |

The main trade area for Bowman has changed some from 1971. Bowman lost six townships to Scranton. Bowman lost one township to Dickinson but gained two townships from Beach. Bowman lost five townships overall since the early 1970s; however, comparisons were made to maps determined without a MTA for Scranton, thus by including Scranton's MTA in the current analysis, Bowman appears to have lost more townships than would be the case if the townships between it and Hettinger were allocated between the two cities. The greater trade area appears to have remained unchanged. Some of the differences in trade areas may be attributed to different trade area delineation criteria.

SUMMARY AND CONCLUSIONS

Trade area analysis was conducted for Bowman based on a statewide trade area survey which the Department of Agricultural Economics at NDSU conducted in 1989. The demographic and economic profile for Bowman was discussed. Bowman has suffered in the 1980s from decreased population, decreased trade area population, reduced taxable sales, lower pull factors, and reduced county population and per capita income. Changes in economic activity and population for Bowman have been similar to other North Dakota cities in the 1,500 to 2,500 population range, suggesting Bowman, during the 1980s, fared at least as well as other cities of comparable size. Although Bowman suffers from decreased economic activity and population declines, the city is doing relatively better than its smaller competing cities. The depressed economic conditions Bowman experienced in the 1980s were common to most western cities in North Dakota.

Main and greater trade areas were defined for Bowman, using several delineation criteria. Townships where the majority of the respondents purchased 50 percent or more of a mix of goods and services in Bowman 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 Bowman 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 items.

Bowman's main trade area appears to have decreased some since 1971. Bowman lost seven townships to neighboring cities, but gained two townships, for an overall reduction in MTA size of five townships. Some of the reduction in Bowman's MTA can be attributed to the inclusion of Scranton's MTA, which was excluded in previous trade area analyses. The greater trade area remained unchanged. The shape of the greater trade area appears to reflect competition from Beach and Dickinson.

Bowman appears to be doing a good job of capturing most of the available market (those respondents who purchase a majority of the service in Bowman divided by the total number of respondents in the Bowman main trade area who purchase the

service) for most of the services listed on the survey questionnaire. Also, Bowman appears to be an important source of services for those shopping in Bowman (i.e., of those shopping in Bowman, most individuals will purchase a majority of the item from Bowman retailers).

Dickinson, Scranton, Bismarck, Rhame, Hettinger and a few smaller towns provide most of the shopping locations for area residents who do not purchase the good or service in Bowman. Catalog sales also appeared quite often as an alternative to shopping in Bowman. 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 Bowman. Those purchasing 50 percent or more of one or more convenience or specialty goods or services in Bowman traveled an average distance of about 18 miles.

Even though the 1980s have been difficult for rural North Dakota cities, Bowman appears to have fared as well as other cities of comparable size and somewhat better than smaller neighboring towns. Although economic times have been difficult, Bowman appears to be doing a good job of retaining most of its past trade area and remaining an important trade center in southwestern North Dakota.

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APPENDIX

