

Retail Trade Area Analysis

Langdon North Dakota

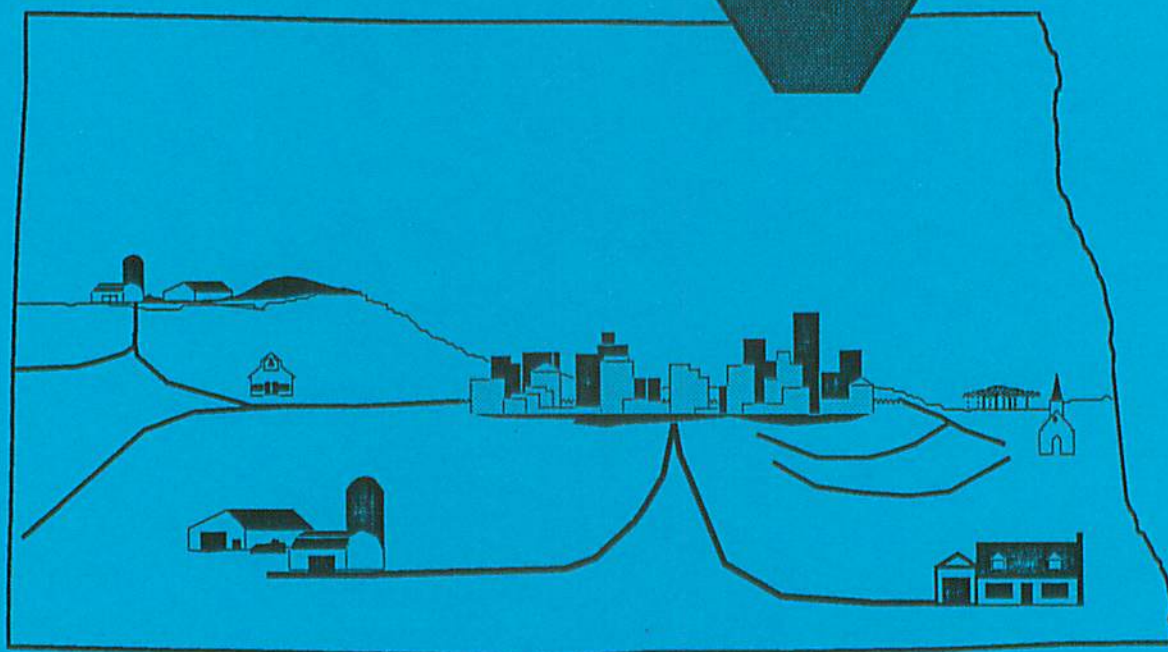
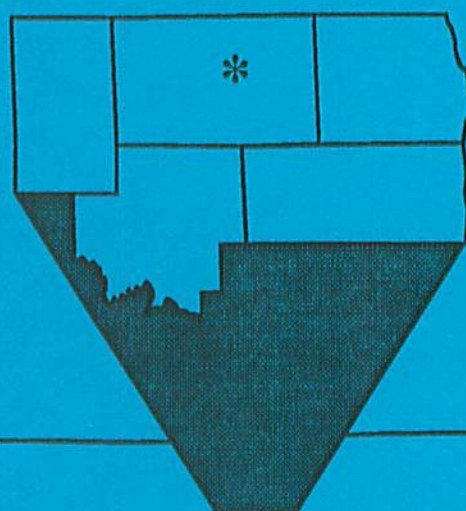
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The authors accept sole responsibility for any remaining errors or omissions.

TABLE OF CONTENTS

	<u>Page</u>
List of Tables	ii
List of Figures	ii
Highlights	iii
Introduction	1
Purpose	1
Methods and Scope	2
Langdon and Surrounding Area Profile	2
Trade Area Delineation	6
Characteristics of Langdon Area Residents	9
Demographic Profile of Shoppers in Langdon	
Main Trade Area	9
Distance Traveled by Langdon Area Shoppers	10
Area Shoppers' Utilization of Goods and Services	
Provided in Langdon	12
Where Services Are Purchased When Not	
Purchased in Langdon	14
Analysis of Outshoppers in Langdon Main Trade Area	14
Newspaper Subscriptions of Langdon Area Residents	17
Radio Stations of Langdon Area Residents	17
Comparison of Current and Previous Langdon	
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 LANGDON AND SELECTED CITIES, NORTH DAKOTA, 1980 AND 1988 . . .	3
2 POPULATION, AVERAGE ANNUAL EMPLOYMENT, AND PER CAPITA INCOME FOR CAVALIER AND SURROUNDING COUNTIES, NORTH DAKOTA, 1980 TO 1989	4
3 DEFLATED TAXABLE SALES AND PURCHASES FOR LANGDON AND SELECTED CITIES, NORTH DAKOTA, 1980 TO 1989 . . .	5
4 PULL FACTORS FOR LANGDON AND SELECTED CITIES, NORTH DAKOTA, 1980 TO 1989	6
5 DEMOGRAPHIC PROFILE OF RESPONDENTS IN MAIN TRADE AREA, LANGDON, NORTH DAKOTA, 1989	9
6 WEIGHTED AVERAGE DISTANCE TRAVELED BY AREA RESIDENTS WHO PURCHASED 50 PERCENT OR MORE OF SELECTED SERVICES IN LANGDON, NORTH DAKOTA, 1989	10
7 MILEAGE BREAKDOWN FOR AREA SHOPPERS PURCHASING 50 PERCENT OR MORE OF A CONVENIENCE AND SPECIALTY SERVICE IN LANGDON, NORTH DAKOTA, 1989	11
8 RELATIVE IMPORTANCE OF LANGDON TO SHOPPERS PURCHASING SOME GOODS AND SERVICES AND FOR THOSE PURCHASING A MAJORITY OF THEIR GOODS AND SERVICES IN LANGDON, NORTH DAKOTA, 1989	13
9 MOST POPULAR CITIES FOR THE PURCHASE OF GOODS AND SERVICES BY LANGDON MAIN TRADE AREA RESIDENTS WHO DID NOT PURCHASE A MAJORITY OF THE GOOD OR SERVICE IN LANGDON, 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 LANGDON, NORTH DAKOTA, 1989	16
11 NEWSPAPER SUBSCRIPTIONS FOR MAIN AND GREATER TRADE AREA RESPONDENTS, LANGDON, NORTH DAKOTA, 1989	18
12 MOST POPULAR RADIO STATIONS FOR RESPONDENTS IN THE MAIN TRADE AREA, LANGDON, NORTH DAKOTA, 1989	18

List of Figures

<u>Figure</u>	<u>Page</u>
1 Main and Greater Trade Areas for Langdon, North Dakota, 1989	8

HIGHLIGHTS

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

Current trade area information for Langdon 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 Langdon population, retail sales, per capita income, and pull factors, and in Cavalier County population and employment were identified and discussed. Langdon's trade area population and retail sales along with Cavalier County population and average annual employment have all decreased throughout the 1980s. Although most demographic and economic measurements have decreased, Langdon has experienced population growth and increased its pull factor in the 1980s. Langdon has fared as well as, if not better than other North Dakota cities with similar populations, and has fared favorably compared to smaller competing trade centers. The economic situation in the 1980s in Langdon and Cavalier County are somewhat typical of the problems found in agriculturally dependent North Dakota communities.

Langdon'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. Langdon's MTA decreased in size by one township, compared to MTA boundaries determined in 1973.

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 16.4 and 17.1 miles to Langdon to purchase selected convenience and specialty goods and services, respectively. One-third of all respondents who purchased 50 percent or more of convenience and specialty goods in Langdon traveled over 25 miles to purchase the item.

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

Grand Forks, Devils Lake, Grafton, Park River, and Cavalier, along with some smaller towns, were the most popular trade centers for the purchase of nonagricultural goods and services by Langdon MTA residents who did not purchase a majority of the good or service in Langdon. Wales, Osnabrock, Edmore, Fairdale, and Calvin were popular for purchasing agricultural goods and services.

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

The Grand Forks Herald was the most popular daily newspaper for both Langdon MTA and GTA residents. Cavalier County Republican and The Walhalla Mountaineer were the most popular weekly newspapers for Langdon MTA and GTA residents, respectively. The most popular radio stations for Langdon MTA residents included KDNK of Langdon, KDLR of Devils Lake, and KFYZ of Bismarck.

Although economic times have been difficult, Langdon is doing a good job of retaining most of its past trade area and remaining an important trade center in north central North Dakota.

RETAIL TRADE AREA ANALYSIS: LANGDON, 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 Langdon trade area.

This report will describe Langdon's main and greater trade areas, provide information on the demographic characteristics of

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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.

Langdon area shoppers, and identify essential and nonessential services Langdon 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 Langdon trade area.

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

LANGDON 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 Langdon population, retail sales, market share, per capita income, pull factors, and Cavalier 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.

Langdon's population increased about 11 percent from 1980 to 1988 (Table 1). Of the North Dakota cities in the population range 1,000 to 2,500, only four 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 negative 6.9 percent population growth. Langdon's trade

TABLE 1. CITY AND TRADE AREA POPULATION FOR LANGDON 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							
Group Total		253,628	274,280	8.14	--	--	--
Population 2,500 to 10,000							
Grafton	Walsh	5,293	4,770	-9.88	11,374	11,080	-2.58
Group Total		43,813	45,650	4.19	9,602	9,579	2.52
Population 1,500 to 2,500							
Cavalier	Pembina	1,505	1,550	2.99	5,568	5,520	-0.86
Langdon	Cavalier	2,335	2,360	1.07	6,348	5,382	-15.22
Park River	Walsh	1,844	1,620	-12.15	4,682	4,300	-8.16
Rolla	Rolette	1,538	1,340	-12.87	3,829	3,546	-7.39
Group Total		39,095	37,540	-3.98	--	--	--
Population 1,000 to 1,500							
Cando	Towner	1,496	1,680	12.30	3,416	3,330	-2.52
Walhalla	Pembina	1,429	1,350	-5.53	2,284	2,160	-5.43
Group Total		29,622	27,540	-7.03	--	--	--
Population 500 to 1,000							
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	--	--	--

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

SOURCE: Leistritz et al. 1990.

area population decreased about 15.2 percent from 1980 to 1988, the largest decrease for any town in the category. The population of Langdon's competing trade centers and their trade area populations also decreased, except for Cando and Cavalier.

Since Langdon's trade area covers parts of counties other than Cavalier County, population, average annual employment, and per capita income have been identified for surrounding counties (Table 2). Population in Cavalier County decreased (16.9 percent from 1980 to 1988) substantially more than in surrounding counties, although they too lost population during the same time period, except for Ramsey County.

Average annual employment in Cavalier County decreased almost 25 percent from 1980 to 1988. Employment declined in all but one of the surrounding counties. Although population and employment declined in Cavalier County during 1980 to 1988, real per capita income (i.e., adjusted for inflation) actually increased (8.3 percent) from 1979 to 1987, while per capita income decreased in half of the surrounding counties.

Langdon's deflated taxable sales (i.e., adjusted for inflation) decreased 33.42 and 7.74 percent from 1980 to 1989

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

County	1980	1982	1984	1986	1988	1989	Percent Change 1980-88/89
----- Population -----							
Cavalier	7,636	7,300	7,100	6,700	6,400	---	-16.19
Surrounding Counties							
Pembina	10,399	10,200	10,300	10,300	10,300	---	-0.95
Ramsey	13,048	13,000	13,000	13,100	13,100	---	0.40
Towner	4,052	4,100	4,200	3,900	3,900	---	-3.75
Walsh	15,371	15,600	15,800	15,000	14,600	---	-5.02
North Dakota	652,717	672,000	687,000	679,000	667,000	---	2.19
----- Average Annual Employment ^a -----							
Cavalier	3,305	3,265	2,631	2,617	2,516	2,487	-24.75
Surrounding Counties							
Pembina	5,333	5,390	4,879	4,848	4,950	4,983	-6.56
Ramsey	6,180	6,114	6,135	6,255	6,302	6,446	4.30
Towner	1,968	2,022	1,744	1,713	1,718	1,704	-13.41
Walsh	7,444	7,817	7,431	7,797	7,681	7,390	-0.73
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>		<u>Percent Change</u> <u>1979 to 1987</u>		
Cavalier	9,556		10,346		8.3		
Surrounding Counties							
Pembina	9,551		9,690		1.5		
Ramsey	9,931		9,649		-2.8		
Towner	9,720		9,082		-6.6		
Walsh	8,154		8,682		6.5		
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.

1987 to 1989, respectively (Table 3). Langdon fared favorably compared to other cities in the same population category, with average taxable sales for the group decreasing 45.56 and 10.06 percent from 1989 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 factors greater than 1.0 mean a community's retail sales are greater than the purchasing power of its trade area, suggesting

TABLE 3. DEFLATED TAXABLE SALES AND PURCHASES FOR LANGDON 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					
Grafton	49,064,196	44,218,845	42,582,528	-13.21	-3.70
Group Total	398,731,612	315,496,552	298,875,168	-25.04	-5.27
Population 1,500 to 2,500					
Cavalier	19,471,384	17,158,747	17,211,421	-11.61	0.31
Langdon	26,352,679	19,015,503	17,544,619	-33.42	-7.74
Park River	12,803,271	8,660,013	7,755,265	-39.43	-10.45
Rolla	18,018,874	13,741,231	12,601,335	-30.07	-8.30
Group Total	415,612,668	251,583,986	226,276,758	-45.56	-10.06
Population 1,000 to 1,500					
Cando	15,032,301	7,930,244	6,214,370	-58.66	-21.64
Walhalla	6,234,193	5,305,575	5,261,024	-15.61	-0.84
Group Total	222,752,746	141,859,953	130,721,134	-41.32	-7.85
Population 500 to 1,000					
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.

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.

Langdon's pull factor increased almost 3 percent from 1980 to 1989 (Table 4). Only four cities in the population group 1,500 to 2,500 increased their pull factors from 1980 to 1989. Langdon'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 population. Pull factors for competing cities decreased from 1980 to 1989, except Cavalier and Walhalla, which experienced increases in their pull factors. Pull factors for cities competing with Langdon were generally less than Langdon's pull factor, suggesting Langdon does a better job of capturing its available market than do neighboring cities.

Some city and most county populations have declined in the geographic area near Langdon. Only Ramsey County's population increased from 1980 to 1988. Deflated taxable sales in Langdon and average annual employment in Cavalier County have decreased substantially in the 1980s. Real per capita income in Cavalier County and Langdon's pull factor have increased in the 1980s.

TABLE 4. PULL FACTORS FOR LANGDON 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 Grafton	0.84	0.86	0.70	2.69	-16.60	-18.78
Group Average	0.79	0.73	0.64	-8.40	-19.82	-12.47
Population 1,500 to 2,500 Cavalier	0.58	0.62	0.63	8.23	9.62	1.28
Langdon	0.68	0.63	0.70	-8.31	2.82	12.14
Park River	0.53	0.43	0.33	-17.84	-38.26	-24.85
Rolla	1.18	1.14	0.45	-3.22	-61.52	-60.24
Group Average	0.89	0.65	0.52	-26.93	-42.26	-20.99
Population 1,000 to 1,500 Cando	0.72	0.49	0.35	-32.84	-51.17	-27.29
Walhalla	0.45	0.48	0.49	5.85	9.71	3.65
Group Average	0.65	0.53	0.43	-18.35	-34.55	-19.84
Population 500 to 1,000 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.

Changes in economic activity and population for Langdon have been similar to other North Dakota cities in the 1,500 to 2,500 population range, except for a small population increase, suggesting Langdon may be no worse off than other cities of comparable size.

Although Langdon suffers from decreased economic activity (lower taxable sales and decreased county employment), the city appears to be doing better compared to its smaller competing cities. Smaller cities and towns competing with Langdon also face tough economic pressures; however, they appear to be suffering more economic decline than is evident in larger cities. Economic pressures found in Langdon and Cavalier County are somewhat typical of the problems found in many rural 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 Langdon.

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.

Langdon 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 Langdon 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 Langdon. 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 Langdon.

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.

Langdon's MTA captures a relatively even distribution of townships around the city, with slightly more townships to the north and west. The GTA has a fairly consistent number of townships around the MTA (Figure 1). Langdon's ability to attract customers from the east and south appears limited due to competition from other trade centers, primarily Grafton, Grand Forks, and Devils Lake.

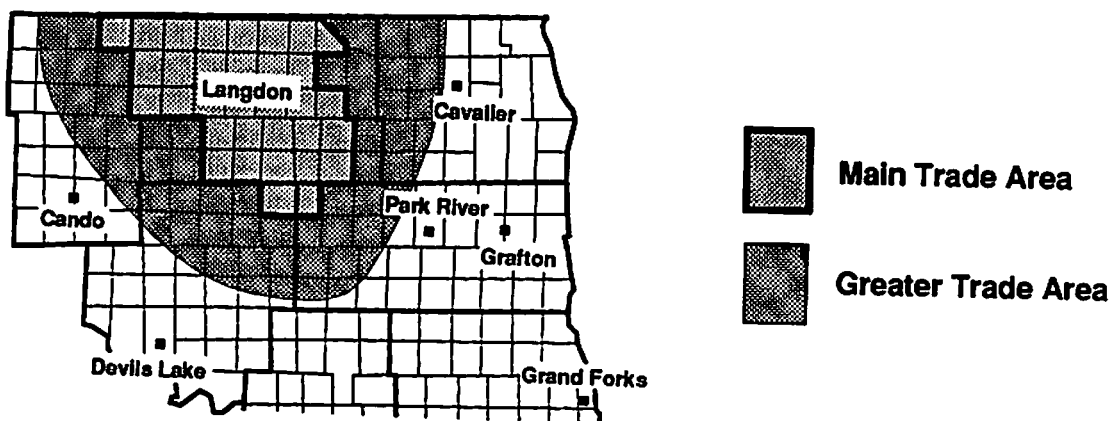


Figure 1. Main and Greater Trade Areas for Langdon, North Dakota, 1989

CHARACTERISTICS OF LANGDON AREA RESIDENTS

Business people and community leaders usually are interested in the characteristics of local shoppers and shopping patterns. The characteristics of Langdon shoppers were analyzed, using 217 survey responses from the Langdon MTA. Other analyses included examination of important and less important services for patron shoppers of Langdon, identification of neighboring cities area shoppers patronize, determination of distances area shoppers traveled to Langdon, and listing popular newspapers and radio stations among area residents.

Demographic Profile of Shoppers in Langdon Main Trade Area

Demographic characteristics of the survey respondents for the Langdon 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.

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

Demographic Characteristic	Average of Survey Responses	
Age (Years)	52.6	
Education (Years)	12.6	
Lived in County (Years)	42.6	
Household Size (People)	2.7	
Average Household Income	\$22,211	
Occupation	Respondent	Spouse
	---%---	---%---
Farming	42.4	40.8
Retired	18.7	11.2
Professional	12.3	12.8
Tech/Sales/Admin	10.3	13.6
Service Jobs	5.9	8.8
Craft/Repair	4.9	4.0
Housewife	2.5	4.8
Equipment Operator	2.0	1.6
Other	1.0	2.4
Martial Status	--- % ---	
Single	12.2	
Separated/Divorced	2.3	
Married	70.9	
Widowed	14.6	
Male	61.6	
Female	38.4	

Distance Traveled by Langdon Area Shoppers

Average distances that area residents traveled to Langdon were determined for each good or service in the 16-item goods and services mix (Table 6). Distances were determined by averaging respondents' estimated miles between Langdon and their home residence. Langdon residents and any respondents who lived one mile or less from Langdon 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 16 items in the service mix in Langdon was multiplied by the average distance to determine total miles of travel for that township (for the specific good or service).

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

<u>All Respondents Purchasing 50 Percent or More of the Service in Langdon</u>			
<u>Convenience Items</u>		<u>Specialty Items</u>	
Goods and Services	Average Miles Traveled	Goods and Services	Average Miles Traveled
Gas & Diesel Stations	14.8	Auto Repair	16.9
Groceries	16.3	Beautician	17.0
Eating Places	16.1	Radios, TVs, VCRs	18.6
Banking and Savings	16.9	Sporting Goods	16.5
Hardware	18.6	Men's Clothing	19.0
Prescription Drugs	19.0	Hospital	20.7
		Legal Services	20.4
		Furniture	20.8
Average	17.3	Average	19.1
<u>MTA Respondents Only Who Purchase 50 Percent or More of the Service in Langdon</u>			
<u>Convenience Items</u>		<u>Specialty Items</u>	
Goods and Services	Average Miles Traveled	Goods and Services	Average Miles Traveled
Gas & Diesel Stations	14.1	Radios, TVs, VCRs	16.5
Eating Places	15.7	Auto Repair	16.2
Prescription Drugs	18.2	Furniture	17.2
Groceries	15.4	Beautician	15.7
Banking and Savings	16.1	Legal Services	18.3
Hardware	17.4	Hospital	18.0
		Men's Clothing	18.2
		Sporting Goods	15.9
Average	16.4	Average	17.1

^aOne-way distance to Langdon only.

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 Langdon. 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 Langdon.

The average distance traveled to Langdon to purchase convenience goods and services was less than that traveled for specialty goods and services for all respondents (regardless of 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 Langdon. For those respondents living in the MTA, the average distance traveled for both types of goods and services was similar.

Distance traveled by type of good or service (convenience and specialty) was broken down into distance categories. One-third of the respondents (regardless of residence location) who purchase 50 percent or more of a convenience and specialty good or service travel over 25 miles to purchase the item in Langdon (Table 7). For those living in the MTA, the number of respondents were skewed towards the greater distance categories, rather than in the lower distance categories.

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

<u>All Respondents Purchasing 50 Percent or More of a Service in Langdon</u>				
Distance (Miles) ^a	<u>Convenience Goods</u>		<u>Specialty Goods</u>	
	Number	Percent	Number	Percent
1 to 5	9	5.4	9	4.7
6 to 10	14	8.3	14	7.3
11 to 15	23	13.7	23	12.0
16 to 20	40	23.8	39	20.3
21 to 25	33	19.6	37	19.3
over 25	49	29.2	70	36.5
<u>MTA Respondents Only Who Purchase 50 Percent or More of the Service in Langdon</u>				
Distance (Miles) ^a	<u>Convenience Goods</u>		<u>Specialty Goods</u>	
	Number	Percent	Number	Percent
1 to 5	9	7.1	9	7.1
6 to 10	14	11.1	14	11.1
11 to 15	22	17.5	22	17.5
16 to 20	37	29.4	36	28.6
21 to 25	20	15.9	20	15.9
over 25	24	19.0	25	19.8

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

Area Shoppers' Utilization of Goods and Services Provided in Langdon

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

Goods and services that appear to be most utilized by those shopping in Langdon include computers, mortician, accounting, florist, beautician, legal services, plumber, optometrist, dentist, chiropractor, heating fuel and propane, major appliances, prescription drugs, veterinarian (small animals), nursery, building supplies, commercial feeds, and crop consultants (services where 95 percent of those buying the service in Langdon purchase a majority of the service in Langdon). The goods and services that people are less likely to purchase a majority of in Langdon include shoes, teenage clothing, women's clothing and coats, men's clothing, and grain marketing.

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

Goods and services for which Langdon is capturing a large amount of the potential market (90 percent or more) within the MTA include florist, nursery, and building supplies. Goods and services for which Langdon does not capture the existing market (less than 60 percent) include women's coats and clothing, computers, veterinarian (small animals), teenage clothing, men's clothing, sporting goods, drinking places, commercial feeds, veterinary services, crop seeds, other farm chemicals, fertilizer, farm fuel and lubrication, farm machinery, farm machinery repair and parts, and grain marketing.

Goods and services that are important to Langdon shoppers and those for which Langdon is capturing a large percentage of the market include florist, building supplies, and nursery. Computers, veterinarian (small animals), auto sales, heating fuel and propane, gas and diesel services, and nearly all of the farm inputs/services are important to shoppers in Langdon, but few of

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

Goods and Services	Responses in Langdon Main Trade Area					
	Purchase the Goods & Services Somewhere	Purchase Some of the Goods & Services in Langdon		Purchase Majority of the Goods & Services in Langdon		Measure of Market Capture
		No.	% ^a	No.	% ^b	
Computers	47	14	29.8	14	100.0	29.8
Mortician	166	139	83.7	138	99.3	83.1
Accounting Services	137	112	81.8	111	99.1	81.0
Florist	182	177	97.3	175	98.9	96.2
Beautician	176	131	74.4	129	98.5	73.3
Legal Service	182	155	85.2	152	98.1	83.5
Plumber	155	134	86.5	131	97.8	84.5
Optometrist	207	174	84.1	170	97.7	82.1
Dentist	203	172	84.7	167	97.1	82.3
Chiropractor	119	102	85.7	99	97.1	83.2
Heating Fuel/Propane	186	129	69.4	125	96.9	67.2
Major Appliances	185	168	90.8	161	95.8	87.0
Prescription Drugs	209	191	91.4	183	95.8	87.6
Veterinarian (Sm Animals)	96	22	22.9	21	95.5	21.9
Nursery (Plants)	173	165	95.4	157	95.2	90.8
Building Supplies	191	183	95.8	174	95.1	91.1
Barber	159	125	78.6	118	94.4	74.2
Appliance/Elec Repair	176	159	90.3	148	93.1	84.1
Radios, TVs, VCRs	190	167	87.9	154	92.2	81.1
Hardware	196	189	96.4	173	91.5	88.3
Auto Sales	192	140	72.9	128	91.4	66.7
Banking and Savings	212	168	79.2	152	90.5	71.7
Hospital	202	166	82.2	150	90.4	74.3
Family Doctor	212	186	87.7	168	90.3	79.2
Furniture	181	161	89.0	144	89.4	79.6
Gas/Diesel Service	208	160	76.9	143	89.4	68.8
Auto Repair	197	157	79.7	139	88.5	70.6
Jewelry	136	117	86.0	96	82.1	70.6
Groceries	213	203	95.3	165	81.3	77.5
Eating Places	200	182	91.0	142	78.0	71.0
Drinking Places	117	89	76.1	69	77.5	59.0
Sporting Goods	140	107	76.4	81	75.7	57.9
Shoes	194	113	58.2	69	61.1	35.6
Men's Clothing	180	136	75.6	79	58.1	43.9
Women's Coats	162	54	33.3	31	57.4	19.1
Women's Clothing	182	138	75.8	70	50.7	38.5
Teenage Clothing	71	48	67.6	17	35.4	23.9
----- Agricultural Goods and Services -----						
Commercial Feeds	27	15	55.6	15	100.0	55.6
Crop Consultants	44	33	75.0	33	100.0	75.0
Veterinary Services	42	11	26.2	10	90.9	23.8
Other Farm Supplies	74	62	83.8	56	90.3	75.7
Other Farm Chemicals	88	55	62.5	49	89.1	55.7
Farm Fuel & Lubricant	89	51	57.3	44	86.3	49.4
Crop Seeds	81	49	60.5	40	81.6	49.4
Fertilizer	88	52	59.1	42	80.8	47.7
Farm Machinery	84	63	75.0	46	73.0	54.8
Farm Mach Repair/Parts	91	71	78.0	51	71.8	56.0
Grain Marketing	86	35	40.7	24	68.6	27.9
Livestock Marketing	19	0	0.0	0	0.0	0.0

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

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

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

the potential buyers purchase a majority of those goods and services in Langdon. This suggests some loyalty for those shopping in Langdon yet a good portion of the market has not been captured. Most of the goods and services for which Langdon is capturing much of the potential market are also important to Langdon shoppers, suggesting that most of the potential shoppers (within the MTA) feel Langdon is an important source for most of their services.

Where Services Are Purchased When Not Purchased In Langdon

For most of the goods and services listed in the survey, some respondents did not purchase any of the good or service in Langdon or purchased more of the good or service in other cities. For people living in the Langdon MTA and not purchasing a majority of the services in Langdon, the cities where the majority of those services were purchased were identified (Table 9). Grand Forks and Devils Lake were the most popular choices for services purchased outside of the Langdon MTA. Other popular cities included Grafton, Park River, and Cavalier. Wales, Osnabrock, Edmore, Fairdale, and Calvin were popular for purchasing agricultural goods and services.

Langdon will always lose some shoppers to surrounding cities and towns for several reasons. First, many shoppers in the Langdon 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, Grand Forks and Devils Lake, 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 Langdon Main Trade Area

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

TABLE 9. MOST POPULAR CITIES FOR THE PURCHASE OF GOODS AND SERVICES BY LANGDON MAIN TRADE AREA RESIDENTS WHO DID NOT PURCHASE A MAJORITY OF THE GOOD OR SERVICE IN LANGDON, 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	Hannah Fairdale Edmore Alsen Sarles	8 8 6 5 5	85.0 63.1 56.7 74.0 68.0	Eating Places	Grand Forks Hannah Fairdale Osnabrock Devils Lake	13 7 7 7 6	53.8 79.3 65.7 57.9 37.5
Drinking Places	Wales Osnabrock Hanna Fairdale	12 7 5 5	79.2 73.3 78.0 37.0	Men's Clothing	Grand Forks Devils Lake Grafton Fargo	55 27 8 5	72.4 66.8 51.3 64.0
Women's Clothing	Grand Forks Devils Lake Grafton	100 27 4	73.4 58.7 50.0	Teen Clothing	Grand Forks Devils Lake	42 8	67.3 50.4
Woman's Coats	Grand Forks Devils Lake Fargo	100 16 6	73.4 71.3 68.3	Shoes	Grand Forks Devils Lake Grafton Fargo	81 27 4 4	70.7 67.8 67.5 66.3
Jewelry	Grand Forks Devils Lake	25 8	66.6 71.3	Radios, TVs, VCRs	Grand Forks Devils Lake	23 4	78.5 77.5
Major Appliance Rpr	Devils Lake Grand Forks Hannah	8 7 6	77.5 60.0 83.3	Florist	Park River Four towns w/one resp ea.	3	70.0
Auto Sales	Devils Lake Grand Forks Grafton	20 18 11	69.7 71.4 76.4	Gas Station	Fairdale Hannah Edmore Calvin	14 9 8 5	80.4 86.7 88.8 73.0
Furniture	Devils Lake Grand Forks	17 14	62.6 64.9	Plumber	Munich Sarles Fairdale Milton	4 3 3 3	65.0 83.3 71.7 71.7
Auto Repair	Devils Lake Hanna Grand Forks Edmore Grafton	13 6 6 6 5	84.2 82.5 70.8 65.0 92.0	Nursery (Plants)	Grand Forks Cando	5 3	96.0 68.3
Heating Fuel/Propane	Fairdale Dresden Edmore Hannah Sarles	11 9 9 8 6	93.6 97.2 91.7 96.3 85.0	Legal Service	Grafton Devils Lake Cavalier	8 8 6	91.9 88.1 85.0
Beautician	Grand Forks Devils Lake Hampden Edmore Hampden	7 6 6 6 5	95.0 81.7 81.7 65.8 81.7	Accounting Service	Grafton Park River Devils Lake Sarles	4 4 4 4	97.5 87.5 85.0 80.0
Optometrist	Devils Lake Grand Forks Park River Cavalier	13 9 5 4	93.1 98.9 69.0 100.0	Barber	Devils Lake Edinburg Wales Edmore	9 8 4 3	95.6 91.9 90.0 60.0
Computers	Grand Forks Fargo Devils Lake	20 3 3	91.5 93.3 66.7	Family Doctor	Cavalier Grand Forks Park River Devils Lake	14 11 5 5	89.0 82.3 80.0 56.0
Major Appliance	Grand Forks Devils Lake	10 8	69.0 80.6	Banking and Services	Munich Osnabrock Edmore Adams	24 10 9 7	91.0 91.0 78.0 92.9
Chiropractor	Devils Lake Grand Forks Out of State	6 3 2	83.3 80.0 85.0	Building Supplies	Park River Grand Forks Munich	4 4 4	85.0 78.8 62.5
Dentist	Edmore Park River Morden, Man	22 4 4	96.1 92.5 82.5	Mortician	Edinburg Devils Lake Cando	14 4 3	93.9 90.0 93.3
Prescription Drugs	Devils Lake Park River Cando Cavalier	6 4 4 4	70.8 98.8 82.5 82.5	Hospital	Grand Forks Cavalier Devils Lake	17 13 6	78.5 90.5 75.0
Vet (Small Animal)	Park River Rocklake Devils Lake	41 26 3	93.3 82.5 63.3	Hardware	Devils Lake Grand Forks Munich	8 6 5	56.3 75.0 46.0
Sporting Goods	Grand Forks Devils Lake Catalog Sales Fargo	34 14 3 3	71.2 73.2 100.0 73.3	Farm Machinery	Wales Grafton Devils Lake	8 5 4	82.5 86.0 37.5
Farm Machinery Rpr	Wales Edinburg Grafton Edmore	13 5 4 4	74.5 65.0 82.5 70.0	Crop Consultant	Rolla Nine towns w/one resp ea.	2	100.0
Farm Fuel	Hanna Dresden Fairdale Edmore	9 8 6 6	90.0 90.6 95.0 82.5	Fertilizer	Fairdale Nekoma Osnabrock Calvin	7 7 7 6	95.7 74.3 70.7 75.8
				Crop Seeds	Fairdale Osnabrock Munich Wales	9 6 6 4	91.7 84.2 48.3 55.0

--Continued--

TABLE 9. MOST POPULAR CITIES FOR THE PURCHASE OF GOODS AND SERVICES BY LANGDON MAIN TRADE AREA RESIDENTS WHO DID NOT PURCHASE A MAJORITY OF THE GOOD OR SERVICE IN LANGDON, 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
Commercial Feed	Sarles	3	100.0	Grain Marketing	Osnabrock	14	61.6
	Fairdale	3	86.7		Nekoma	7	85.0
	Walhalla	2	90.0		Sarles	6	72.5
Farm Chemical					Fairdale	5	71.0
	Calvin	7	65.7	Farm Supplies	Calvin	5	64.0
	Osnabrock	6	81.7		Fairdale	4	72.5
	Edmore	5	85.0		Edmore	3	66.7
	Fairdale	5	83.0		Devils Lake	3	49.7
	Nekoma	5	76.0	Veterinary Services	Park River	18	94.4
Livestock Marketing	West Fargo	4	97.5		Rocklake	11	90.0
	Devils Lake	4	81.3				
	Fargo	3	100.0				

According to selected demographic characteristics, little difference exists between those who purchase a majority of their goods and services in Langdon and those who purchase a majority of their goods and services elsewhere (Table 10).

Household income was higher across all four services for the group purchasing 50 percent or more of the services in Langdon than for the group purchasing less than 50 percent. The group purchasing less than 50 percent of the four goods and services in Langdon traveled farther (for each of the services) than the group purchasing 50 percent or more of the same goods and services in Langdon.

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 LANGDON, NORTH DAKOTA, 1989

Attribute	Group Purchasing 50 Percent or More of Goods in Langdon				Group Purchasing Less Than 50 Percent of Goods in Langdon			
	Groc-eries	Gas Station	Building Supplies	Major Appliances	Groc-eries	Gas Station	Building Supplies	Major Appliances
Age	50.9	50.2	50.7	50.7	57.1	54.2	46.0	51.4
Education	12.9	12.9	12.8	12.8	11.8	12.1	12.7	12.7
Years Lived In County	41.4	41.8	41.7	41.9	45.3	41.6	34.0	39.9
Number in Household	2.7	2.7	2.8	2.8	2.7	2.8	3.1	2.8
Number in Grade School	1.6	1.6	1.6	1.7	0.9	1.1	0.9	0.8
Number in High School	1.0	1.0	1.0	1.0	0.7	0.7	0.5	0.5
Average Miles Traveled ^a	15.4	14.0	18.8	18.1	26.8	23.2	21.2	53.1
Household Income	\$23,444	\$23,550	\$23,281	\$24,560	\$18,611	\$20,583	\$19,881	\$17,759

^aThose living in Langdon and those traveling less than one mile to Langdon 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 Langdon MTA are small, with few school children. Slight differences were evident between the two main groups; however, no substantial differences appeared between those purchasing 50 percent or more and those purchasing less than 50 percent of the goods and services in Langdon.

Newspaper Subscriptions of Langdon Area Residents

Newspaper subscriptions of respondents in the Langdon 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 Grand Forks Herald*. The most popular weekly papers for the main and greater trade areas were *The Cavalier County Republican* and *The Walhalla Mountaineer*, respectively. Other popular weekly newspapers for respondents included *Cavalier Chronicle* and *Edmore Herald*.

Radio Stations of Langdon Area Residents

The most popular radio stations that respondents in Langdon's main trade area listened to were KDNK of Langdon, followed by KDLR of Devils Lake and KFYZ of Bismarck (Table 12).

Comparison of Current and Previous Langdon Trade Area Boundaries

Vangsness (1973) discussed general information on retail trade and identified both main and greater trade areas for Langdon. Information from the past Langdon 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 Langdon's main and greater trade areas. Although trade area delineation criteria used in the previous Langdon trade area report differ, enough similarity exists to make comparisons with the trade area boundaries determined in this report.

The main trade area for Langdon has changed some from 1973. Langdon lost one township to Walhalla and Cavalier and gained one township each from Park River and Cando. Langdon gained one township from Devils Lake, but lost two townships to Devils Lake, for an overall decrease of one township since the early 1970s. The greater trade area appears to have remained increased to the west of Langdon and constant elsewhere. Subtle differences in trade areas may be attributed to different trade area delineation criteria.

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

Main Trade Area			Greater Trade Area		
Newspaper	Numbers of Respondents	Percent	Newspaper	Number of Respondents	Percent
----- Daily Newspapers -----					
Grand Forks Herald	126	81.3	Grand Forks Herald	87	60.4
Fargo Forum	14	9.0	Devils Lake Journal	40	29.8
Devils Lake Journal	11	7.1	Fargo Forum	6	4.2
Dickinson Press	3	1.9	Others	6	4.1
USA Today	1	1.2	Wall Street Journal	5	3.5
USA Today	1	0.6			
Total	155 ^a		Total	144 ^b	
----- Weekly Newspapers -----					
Cavalier County Rep	153	67.1	Walhalla Mountaineer	47	24.5
Towner County Rcrd Herld	10	4.4	Cavalier County Rep	38	19.8
Walsh County Press	9	3.9	Cavalier Chronicle	22	11.5
Grand Forks Herald (Sun.)	9	3.9	Towner Co. Rcrd Press	16	8.3
AgWeek-Grand Forks	7	3.1	Edmore Herald Press	14	7.3
Grafton Rcrd	7	3.1	AgWeek-Grand Forks	11	5.7
Cavalier Chronicle	6	2.6	Grafton Record	11	5.7
Edmore Herald	6	2.6	Walsh County Press	9	4.7
Lakota American	3	1.3	Grand Forks Herald (Sun.)	5	2.6
Others ^c	18	8.0	Others ^c	19	9.9
Total	228 ^d		Total	192 ^e	

^a145 respondents subscribe to a daily paper with 10 respondents subscribing to more than one paper.

^b123 respondents subscribe to a daily paper with 21 respondents subscribing to more than one paper.

^cBowman County Pioneer, Griggs County Sentinel, Enderlin Independence, Harvey Herald, Kulm Messenger, Benson County Farmer, Pierce County Tribune, Minot Daily News (Sunday), Walhalla Mountaineer, Lakota American, Turtle Mountain Star, Mountrail County Record, Mouse River Farmers Press, Adams County Record, and the Freeman Carrier.

^d178 respondents subscribe to a weekly paper with 50 respondents subscribing to more than one paper.

^e134 respondents subscribe to a weekly paper with 58 respondents subscribing to more than one paper.

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

Radio Station	Number of Respondents	Percent
KDNK-Langdon	164	78.8
KDLR-Devils Lake	8	3.8
KFYR-Bismarck	7	3.4
KFGO-Fargo	6	2.9
KDVL-Devils Lake	5	1.9
KZZY-Devils Lake	5	1.9
Others	15	7.3

SUMMARY AND CONCLUSIONS

Trade area analysis was conducted for Langdon based on a statewide trade area survey which the Department of Agricultural Economics at NDSU conducted in 1989. The demographic and economic profile for Langdon was discussed. Langdon has suffered in the 1980s from decreased trade area population, reduced taxable sales, and lower county population and average annual employment. Changes in economic activity for Langdon have been similar to other North Dakota cities in the 2,500 to 10,000 population range; however, Langdon has been fortunate to have experienced population growth and increased pull factors during a period when few North Dakota cities increased population and increased their retail pull. Although Langdon suffers from some decreased economic activity, the city is doing relatively better than its smaller competing cities. The depressed economic conditions Langdon experienced in the 1980s were common to most agriculturally dependent communities in north central North Dakota.

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

Langdon's main trade area appears to have decreased slightly since 1973. Langdon lost four townships to neighboring cities but gained three townships, for an overall reduction in MTA size of one township. The greater trade area increased slightly to the west and remained unchanged elsewhere.

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

Grand Forks, Devils Lake, Grafton, Park River, and Cavalier and a few smaller towns provide most of the shopping locations for area residents who do not purchase the good or service in Langdon. No substantial differences except slight differences in income and miles traveled, 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 Langdon. Those purchasing 50 percent or more of one or more convenience or specialty goods or services in Langdon traveled an average distance of about 18 miles.

Even though the 1980s have been difficult for rural North Dakota cities, Langdon appears to have fared as well as, if not better than other cities of comparable size and somewhat better than smaller neighboring towns. Langdon is faced with decreasing trade area population, and reduced county population and employment. Although economic times have been difficult, Langdon appears to be doing a good job of retaining most of its past trade area and remaining an important trade center in north central North Dakota.

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APPENDIX

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

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?

id

(town)

- #. EXAMPLE: Groceries
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)

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.

[illegible]

Please continue on the next page →

Please continue here

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

TOWN NAME	%	Do you want to move to this area?

TOWN NAME	%	Do you want to move to this area?

TOWN NAME	%	Do you want to move to this area?

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 ☐ separated or divorced
☐ married ☐ 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 | ☐ \$25,001-\$30,000 |
| ☐ \$5,000-\$10,000 | ☐ \$30,001-\$35,000 |
| ☐ \$10,001-\$15,000 | ☐ \$35,001-\$40,000 |
| ☐ \$15,001-\$20,000 | ☐ \$40,001-\$45,000 |
| ☐ \$20,001-\$25,000 | ☐ 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.

- 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

TOWN NAME	%	Do you want to move to this area?

TOWN NAME	%	Do you want to move to this area?

TOWN NAME	%	Do you want to move to this area?

