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Retail Trade Area Analysis

Hillsboro North Dakota

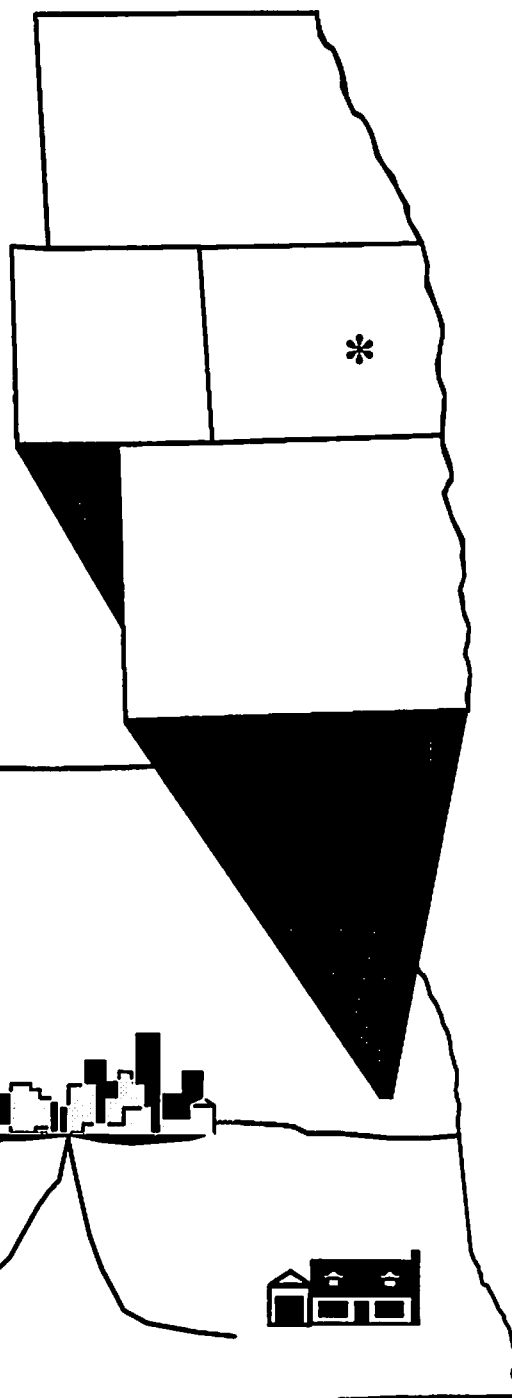
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The authors accept sole responsibility for any remaining errors or omissions.

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HIGHLIGHTS

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

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

Hillsboro'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. Hillsboro's MTA increased in size by one township, 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, are primarily 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 8.0 miles to Hillsboro to purchase selected convenience and specialty goods and services. Nearly half (46.2 percent) of the respondents who purchased 50 percent or more of convenience and specialty goods in Hillsboro traveled between 6 to 10 miles to purchase the item.

Hillsboro appears to be an important source of goods and services for those who shop in Hillsboro; however, Hillsboro could capture much more of the available market for over half of the nonagricultural and three-fourths of the agricultural goods and services included in the survey questionnaire. Hillsboro's

location between Grand Forks and Fargo hinders its ability to capture more of their potential market.

Fargo, Grand Forks, Mayville-Portland, Buxton, and Halstad, MN, were the most popular cities for the purchase of nonagri-cultural goods and services by Hillsboro MTA residents who did not purchase a majority of the good or service in Hillsboro. Hunter, Mayville, Grandin, and Buxton were popular for purchasing agricultural goods and services.

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

The Forum (Fargo) was the most popular daily newspaper for both Hillsboro MTA and GTA residents. The Hillsboro Banner and Traill County Tribune were the most popular weekly newspapers for Hillsboro MTA and GTA residents, respectively. The most popular radio stations for Hillsboro MTA residents included KFGO of Fargo and WDAY of Fargo.

Although economic times have been difficult, Hillsboro has survived the 1980s in relatively good shape and should remain an important trade center for residents of Traill County and the surrounding area.

RETAIL TRADE AREA ANALYSIS: HILLSBORO, NORTH DAKOTA

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INTRODUCTION

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

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

Purpose

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

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

HILLSBORO 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 Hillsboro population, retail sales, market share, per capita income, pull factors, and Traill 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 1988 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.

Hillsboro's population declined about 14.4 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, population in the size category would have declined almost 7 percent. Hillsboro's trade area population decreased 5.1 percent from 1980 to 1988, the eighth smallest decrease for any town in the category. The population of Hillsboro's competing trade centers and their trade area populations (those cities with populations less than 2,500) also decreased, except for Page and Northwood and the Northwood trade area.

Since Hillsboro's trade area covers parts of counties other than Traill County, population, average annual employment, and per capita income have been identified for surrounding counties (Table 2). Population in Traill County decreased 6.5 percent from 1980 to 1988. Only one surrounding county lost population during the same time period.

TABLE 1. CITY AND TRADE AREA POPULATION FOR HILLSBORO 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							
Group Total		43,813	45,650	4.19	9,602	9,579	2.52
Population 1,500 to 2,500							
Hillsboro	Traill	1,600	1,370	-14.37	2,961	2,810	-5.10
Mayville	Traill	2,255	1,950	-13.53	4,512	4,160	-7.80
Group Total		39,095	37,540	-3.98	--	--	--
Population 1,000 to 1,500							
Cooperstown	Griggs	1,308	1,220	-6.73	3,779	3,580	-5.27
Northwood	Grand Forks	1,240	1,160	-6.45	2,115	2,120	0.24
Group Total		29,622	27,540	-7.03	--	--	--
Population 500 to 1,000							
Finley	Steele	718	620	-13.65	1,548	1,380	-10.85
Hatton	Traill	787	730	-7.24	1,669	1,600	-4.13
Portland	Traill	627	570	-9.09	853	800	-6.21
Group Total		32,154	31,200	-2.97	--	--	--
Population 200 to 500							
Buxton	Traill	336	320	-4.76	*	*	*
Hope	Steele	406	340	-16.26	752	690	-8.24
Hunter	Cass	369	350	-5.15	635	620	-2.36
Page	Cass	329	360	9.42	653	660	1.07
Reynolds	Grand Forks	309	130	-57.93	*	*	*
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 TRAILL AND SURROUNDING COUNTIES, NORTH DAKOTA, 1980 TO 1989

County	1980	1982	1984	1986	1988	1989	Percent Change 1980-88/89
----- Population -----							
Traill	9,624	9,600	9,600	9,200	9,000	---	-6.48
Surrounding Counties							
Cass	88,247	90,500	94,500	98,000	100,200	---	13.54
Grand Forks	66,100	67,100	69,100	69,800	70,500	---	6.66
Steele	3,106	2,900	3,000	2,800	2,800	---	-9.85
North Dakota	652,717	672,000	687,000	679,000	667,000	---	2.19
----- Average Annual Employment ^a -----							
Traill	4,338	4,480	4,344	4,368	4,276	4,243	-2.19
Surrounding Counties							
Cass	42,369	42,592	50,231	55,917	59,912	61,026	44.03
Grand Forks	24,911	24,958	31,414	33,866	34,726	35,181	41.23
Steele	1,361	1,353	1,259	1,154	1,102	1,076	-20.94
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>
Traill		\$10,183			\$9,525		-6.5
Surrounding Counties							
Cass		12,026			11,294		-6.1
Grand Forks		10,200			9,957		-2.4
Steele		10,826			11,130		2.8
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.

Average annual employment in Traill County decreased 2.2 percent from 1980 to 1989. Employment increased substantially in all but one surrounding county. Along with declines in Traill County population and employment, real per capita income (i.e., adjusted for inflation) decreased 6.5 percent from 1979 to 1987. Per capita income decreased in all but one of the surrounding counties.

Hillsboro's deflated taxable sales (i.e., adjusted for inflation) decreased 6.4 and 8.3 percent from 1980 to 1989 and 1987 to 1989, respectively (Table 3). Hillsboro had the second smallest decrease in taxable sales of any city in the population range 1,500 to 2,500 from 1980 to 1989, and was below the group average for decreased taxable sales from 1987 to 1989. Although

TABLE 3. DEFLATED TAXABLE SALES AND PURCHASES FOR HILLSBORO 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					
Group Total	398,731,612	315,496,552	298,875,168	-25.04	-5.27
Population 1,500 to 2,500					
Hillsboro	8,795,876	8,978,895	8,232,379	-6.41	-8.31
Mayville	16,481,639	12,116,595	11,216,517	-31.95	-7.43
Group Total	415,612,668	251,583,986	226,276,758	-45.56	-10.06
Population 1,000 to 1,500					
Cooperstown	14,752,326	10,122,606	10,094,243	-31.58	-0.28
Northwood	16,172,391	9,655,663	10,978,981	-32.11	13.71
Group Total	222,752,746	141,859,953	130,721,134	-41.32	-7.85
Population 500 to 1,000					
Finley	4,087,935	2,726,246	2,717,158	-33.53	-0.33
Hatton	3,064,088	1,905,969	1,883,887	-38.52	-1.16
Portland	2,300,364	1,589,489	1,535,509	-33.25	-3.40
Group Total	197,005,522	124,426,751	123,454,776	-37.33	-0.78
Population 200 to 500					
Buxton	1,062,059	981,812	976,859	-8.02	-0.50
Hope	3,659,684	1,240,614	1,010,234	-72.40	-18.57
Hunter	4,923,326	3,447,778	3,498,703	-28.94	1.48
Page	3,520,309	3,122,164	2,262,970	-35.72	-27.52
Reynolds	1,159,466	987,525	881,168	-24.00	-10.77
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.

Hillsboro fared favorably compared to other cities in the same population category, average taxable sales for the group decreased about 45.5 and 10.1 percent from 1980 to 1989 to 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 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.

Hillsboro's pull factor increased almost 24.5 percent from 1980 to 1989 (Table 4). Only five cities in the population group 1,500 to 2,500, increased their pull factor from 1980 to 1989. Hillsboro's increase in its pull factor was the largest of the population group. Hillsboro's pull factor is above the group

TABLE 4. PULL FACTORS FOR HILLSBORO 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 Group Average	0.79	0.73	0.64	-8.40	-19.82	-12.47
Population 1,500 to 2,500						
Hillsboro	0.47	0.63	0.58	34.16	24.48	-7.21
Mayville	0.58	0.56	0.54	-2.95	-6.83	-4.00
Group Average	0.89	0.65	0.52	-26.93	-42.26	-20.99
Population 1,000 to 1,500						
Cooperstown	0.69	0.64	0.50	-7.50	-27.78	-21.93
Northwood	1.22	0.91	1.08	-25.69	-11.78	18.72
Group Average	0.65	0.53	0.43	-18.35	-34.55	-19.84
Population 500 to 1,000						
Finley	0.40	0.33	0.46	-17.36	15.08	39.25
Hatton	0.29	0.24	0.23	-15.37	-19.05	-4.34
Portland	0.42	0.41	0.38	-4.51	-10.17	-5.92
Group Average	0.60	0.49	0.42	-18.94	-29.78	-13.38
Population 200 to 500						
Buxton	*	*	*	*	*	*
Hope	0.73	0.31	0.34	-57.73	-53.56	9.85
Hunter	1.06	0.97	1.33	-7.76	26.10	36.70
Page	0.73	0.84	0.81	14.50	10.19	-3.77
Reynolds	*	*	*	*	*	*
Group Average	0.41	0.35	0.28	-14.30	-30.65	-19.07

SOURCE: Leistritz et al. 1990.

average, indicating the community captures a greater percent of its trade area purchasing power than most of the cities with similar population. Changes in pull factors for competing cities were mixed (1980 to 1989). Pull factors in 1989 for cities competing with Hillsboro were mixed compared to Hillsboro's pull factor, suggesting Hillsboro does an average job of capturing its available market, compared to neighboring cities.

City populations have declined in the geographic area near Hillsboro; however, changes in county populations were mixed (1980 to 1989). Deflated taxable sales in Hillsboro and average annual employment in Traill County have decreased slightly in the 1980s. Real per capita income in Traill County decreased from 1979 to 1987; however, Hillsboro's pull factor has increased (1980 to 1989). Changes in economic activity and population for Hillsboro have been similar to generally better than other North Dakota cities in the 1,500 to 2,500 population range, suggesting Hillsboro has fared better than other cities of comparable size.

Although Hillsboro suffers from decreased economic activity and population declines, the city is doing better compared to its smaller competing cities. Economic pressures and population declines found in Hillsboro and Traill County are somewhat

typical of the economic problems found in 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 Hillsboro.

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.

Hillsboro was classified as a full convenience 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
Hardware

Groceries

Specialty Goods and Services

Barber
Doctor
Florist
Heating fuel and propane

Legal services
Mortician
Plumber

Agricultural Goods and Services

Farm machinery

Farm supplies

The main trade area for Hillsboro 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 Hillsboro. 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 Hillsboro.

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.

Hillsboro's MTA captures a relatively even distribution of townships around the city. The GTA only extends slightly beyond the MTA (Figure 1). Hillsboro's ability to attract customers appears limited, possibly due to competition from other trade centers, primarily Fargo, Grand Forks, and Mayville-Portland.

CHARACTERISTICS OF HILLSBORO AREA RESIDENTS

Business people and community leaders usually are interested in the characteristics of local shoppers and shopping patterns. The characteristics of Hillsboro shoppers were analyzed, using 173 survey responses from the Hillsboro MTA. Other analyses included examination of important and less important services for

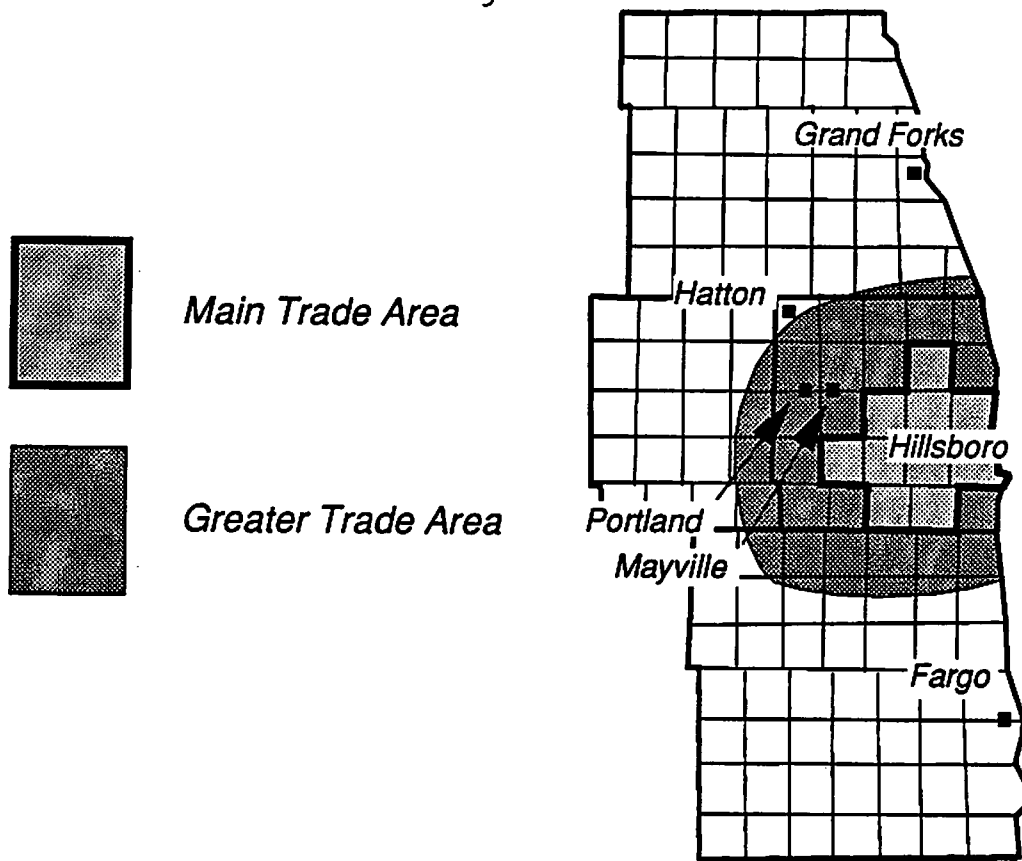


Figure 1. Main and Greater Trade Areas for Hillsboro, North Dakota, 1989

patron shoppers of Hillsboro, identification of neighboring cities area shoppers patronize, determination of distances area shoppers traveled to Hillsboro, and listing popular newspapers and radio stations among area residents.

Demographic Profile of Shoppers in Hillsboro Main Trade Area

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

Average distances that area residents traveled to Hillsboro were determined for each good or service in the 12-item goods and services mix (Table 6). Distances were determined by averaging respondents' estimated miles between Hillsboro and their home

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

Demographic Characteristic	Average of Survey Responses	
Age (Years)	54.1	
Education (Years)	12.3	
Lived in County (Years)	39.8	
Household Size (People)	2.8	
Average Household Income	\$26,105	
Occupation	Respondent	Spouse
	---%---	---%---
Farming	30.1	22.4
Retired	26.0	22.4
Professional	10.3	11.2
Service Jobs	10.3	5.1
Equipment Operator	9.6	6.1
Tech/Sales/Admin	8.2	18.4
Craft/Repair	3.4	7.1
Housewife	0.7	6.1
Other	1.4	1.2
Martial Status	--- % ---	
Single	9.9	
Separated/Divorced	3.5	
Married	73.8	
Widowed	12.8	
Male	65.0	
Female	35.0	

residence. Hillsboro residents and any respondents who lived one mile or less from Hillsboro were not included in the analysis. Once the average distance was determined for each township, the number of respondents purchasing 50 percent or more of the item in Hillsboro 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 Hillsboro. 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 Hillsboro.

The average distance traveled to Hillsboro 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 identical to that traveled for

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

<u>All Respondents Purchasing 50 Percent or More of the Service in Hillsboro</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>
Groceries	7.7	Barber	10.6
Banking and Savings	9.3	Doctor	11.5
Hardware	8.6	Florist	8.2
		Heating Fuel	8.0
		Legal Services	11.2
		Mortician	8.6
		Plumber	7.7
	<u>8.7</u>		<u>9.8</u>
<u>MTA Respondents Only Who Purchase 50 Percent or More of the Service in Hillsboro</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>
Groceries	7.1	Barber	8.0
Banking and Savings	8.3	Doctor	9.3
Hardware	8.4	Florist	7.7
		Heating Fuel	6.9
		Legal Services	8.7
		Mortician	7.3
		Plumber	7.3
Average	<u>8.0</u>	Average	<u>8.0</u>

^aOne-way distance to Hillsboro only.

specialty goods and services for respondents in the MTA who purchased 50 percent or more of the item in Hillsboro.

Distance traveled by type of good or service (convenience and specialty) was broken down into distance categories. Many (46.2 percent) of the respondents (regardless of residence location) who purchase 50 percent or more of a convenience and specialty good or service traveled between 6 to 10 miles to purchase the item in Hillsboro (Table 7). For those living in the MTA, 54.5 percent of the respondents traveled between 6 to 10 miles to purchase items in Hillsboro.

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

<u>All Respondents Purchasing 50 Percent or More of a Service in Hillsboro</u>				
Distance (Miles) ^a	<u>Convenience Goods</u>		<u>Specialty Goods</u>	
	Number	Percent	Number	Percent
1 to 5	17	23.9	18	18.6
6 to 10	37	52.1	36	37.1
11 to 15	12	16.9	22	22.7
16 to 20	3	4.2	15	15.5
21 to 25	2	2.8	6	6.2
over 25	--	--	--	--

<u>MTA Respondents Only Who Purchase 50 Percent or More of a Service in Hillsboro</u>				
Distance (Miles) ^a	<u>Convenience Goods</u>		<u>Specialty Goods</u>	
	Number	Percent	Number	Percent
1 to 5	17	27.4	18	25.0
6 to 10	37	59.7	36	50.0
11 to 15	8	12.9	16	22.2
16 to 20	--	--	2	2.8
21 to 25	--	--	--	--
over 25	--	--	--	--

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

Area Shoppers' Utilization of Goods and Services Provided in Hillsboro

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

Goods and services that appear to be most utilized by those shopping in Hillsboro include optometrist, mortician, heating fuel and propane, plumber, legal services, barber, beautician, banking and savings, accounting services, and crop consulting (goods/services where 95 percent of those buying the item in Hillsboro purchase a majority of the item in Hillsboro). The

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

Responses in Hillsboro Main Trade Area						
Goods and Services	Purchase the Goods & Services Somewhere	Purchase Some of the items in Hillsboro		Purchase Majority of the items in Hillsboro		Measure of Market Capture
		No.	% ^a	No.	% ^b	
Optometrist	151	3	2.0	3	100.0	2.0
Mortician	121	93	76.9	92	98.9	76.0
Heating Fuel/Propane	134	90	67.2	89	98.9	66.4
Plumber	135	119	88.1	117	98.3	86.7
Legal Service	150	128	85.3	125	97.7	83.3
Barber	134	110	82.1	107	97.3	79.9
Beautician	139	100	71.9	97	97.0	69.8
Accounting Services	114	78	68.4	75	96.2	65.8
Banking and Savings	168	139	82.7	132	95.0	78.6
Florist	144	121	84.0	114	94.2	79.2
Dentist	161	96	59.6	89	92.7	55.3
Family Doctor	164	131	79.9	119	90.8	72.6
Prescription Drugs	167	142	85.0	125	88.0	74.9
Drinking Places	75	64	85.3	56	87.5	74.7
Hardware	161	139	86.3	120	86.3	74.5
Hospital	155	114	73.5	97	85.1	62.6
Appliance/Elec Repair	135	85	63.0	71	83.5	52.6
Nursery (Plants)	140	107	76.4	89	83.2	63.6
Auto Repair	160	127	79.4	105	82.7	65.6
Auto Sales	160	109	68.1	90	82.6	56.3
Gas/Diesel Service	170	141	82.9	116	82.3	68.2
Groceries	171	150	87.7	122	81.3	71.3
Computers	47	16	34.0	13	81.3	27.7
Veterinarian (Sm Animals)	66	12	18.2	9	75.0	13.6
Major Appliances	151	91	60.3	67	73.6	44.4
Building Supplies	134	90	67.2	57	63.3	42.5
Eating Places	166	141	84.9	85	60.3	51.2
Furniture	147	87	59.2	52	59.8	35.4
Radios, TVs, VCRs	156	48	30.8	25	52.1	16.0
Jewelry	120	38	31.7	19	50.0	15.8
Women's Coats	145	5	3.4	2	40.0	1.4
Sporting Goods	113	46	40.7	17	37.0	15.0
Shoes	161	8	5.0	2	25.0	1.2
Women's Clothing	148	14	9.5	3	21.4	2.0
Men's Clothing	153	20	13.1	4	20.0	2.6
Chiropractor	63	1	1.6	0	0.0	0.0
Teenage Clothing	71	2	2.8	0	0.0	0.0
----- Agricultural Goods and Services -----						
Crop Consultants	30	13	43.3	13	100.0	43.3
Fertilizer	41	17	41.5	15	88.2	36.6
Farm Mach Repair/Parts	42	35	83.3	29	82.9	69.0
Other Farm Supplies	34	28	82.4	23	82.1	67.6
Farm Machinery	43	37	86.0	30	81.1	69.8
Commercial Feeds	12	4	33.3	3	75.0	25.0
Farm Fuel & Lubricant	43	23	53.5	17	73.9	39.5
Other Farm Chemicals	41	19	46.3	14	73.7	34.1
Grain Marketing	43	25	58.1	18	72.0	41.9
Crop Seeds	42	24	57.1	16	66.7	38.1
Veterinary Services	9	0	0.0	0	0.0	0.0
Livestock Marketing	8	0	0.0	0	0.0	0.0

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

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

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

goods and services that people are less likely to purchase a majority of in Hillsboro include teenage clothing, women's clothing and coats, men's clothing, shoes, sporting goods, jewelry, radios-TVs-VCRs, veterinary services, and livestock marketing.

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

Goods and services for which Hillsboro is capturing a large amount of the potential market (80 percent or more) within the MTA include plumber and legal services. Hillsboro does not capture the existing market (less than 60 percent) for over half of the nonagricultural and 75 percent of the agricultural goods and services.

Goods and services that are important to Hillsboro shoppers and those for which Hillsboro is capturing a large percentage of the market include plumber and legal services. Computers, heating fuel and propane, dentist, hospital, appliance and electronic repair, crop consulting, and fertilizer are important to shoppers in Hillsboro, but few of the potential buyers purchase a majority of those goods and services in Hillsboro.

Many patrons purchase a majority of their goods and services in Hillsboro. This phenomenon suggests some strong trade center loyalty exists for those shopping in Hillsboro, but at the same time a large portion of the market is being lost to other trade centers. Hillsboro appears to be an important source of services for those shopping in Hillsboro, but Hillsboro could improve its market capture for about half of the convenience and specialty items, and nearly all of the agricultural items. Hillsboro is in a difficult situation considering its location between Grand Forks and Fargo and must compete with the selection and prices found in two of the largest trade centers in the state.

Where Services Are Purchased When Not Purchased In Hillsboro

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

TABLE 9. MOST POPULAR CITIES FOR THE PURCHASE OF GOODS AND SERVICES BY HILLSBORO MAIN TRADE AREA RESIDENTS WHO DID NOT PURCHASE A MAJORITY OF THE GOOD OR SERVICE IN HILLSBORO, 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	Fargo	22	72.1	Eating Establishments	Fargo	49	64.4
	Grand Forks	16	71.4		Grand Forks	18	65.5
	Mayville	8	74.3		Mayville	8	51.0
Drinking Places	Fargo	9	70.6	Men's Clothing	Fargo	112	75.8
	Grand Forks	3	73.0		Grand Forks	27	77.6
	Mayville	3	65.0		Mayville	4	61.0
Women's Clothing	Fargo	107	77.9	Women's Coats	Fargo	107	80.4
	Grand Forks	29	73.4		Grand Forks	29	71.6
	Mayville	3	61.3	Shoes	Fargo	118	77.8
Teen Clothing	Fargo	52	82.7		Grand Forks	32	72.2
	Grand Forks	18	74.4		Catalog Sales	3	80.0
Jewelry	Fargo	68	75.7	Major Appliances	Fargo	62	74.8
	Grand Forks	26	64.0		Grand Forks	18	75.8
	Mayville	3	70.0		Mayville	4	70.0
	Catalog Sales	3	80.0	Appliance Repair	Fargo	44	80.9
Radios, TVs, VCRs	Fargo	99	80.0		Grand Forks	10	65.5
	Grand Forks	19	71.1		Mayville	8	85.0
	Mayville	10	86.4	Nursery (Plants)	Fargo	24	66.9
Florist	Fargo	13	78.8		Grand Forks	14	72.4
	Grand Forks	7	80.6		Mayville	5	61.8
	Mayville	6	85.8	Auto Sales	Fargo	34	74.1
Furniture	Fargo	68	73.6		Mayville	18	80.0
	Grand Forks	14	63.9		Grand Forks	10	78.5
	Mayville	11	69.9	Gas Station	Fargo	16	77.5
Auto Repair	Fargo	24	70.2		Grandin	9	82.2
	Mayville	11	92.2		Grand Forks	8	73.8
	Grand Forks	8	68.8		Mayville	7	91.4
	Cummings	4	75.0		Buxton	5	88.0
Heating Fuel/Propane	Mayville	13	99.2	Plumber	Mayville	14	97.3
	Grandin	10	92.0		Beautician	Fargo	16
Barber	Fargo	14	88.1	Mayville		12	87.9
	Grand Forks	7	69.3	Grand Forks		5	80.0
	Mayville	5	77.5	Accounting Service	Fargo	22	87.7
Legal Service	Fargo	12	85.0		Mayville	6	96.7
	Mayville	9	88.9		Grand Forks	4	87.5
	Grand Forks	3	100.0	Optometrist	Fargo	64	88.5
Computers	Fargo	22	95.9		Mayville	64	87.2
	Grand Forks	6	84.2		Grand Forks	20	77.5
	Mayville	4	90.0	Chiropractor	Fargo	37	91.9
Family Doctor	Fargo	22	88.8		Mayville	15	81.0
	Mayville	16	95.0		Grand Forks	9	87.8
Dentist	Fargo	26	92.7	Hospital	Fargo	42	85.2
	Halstad, MN	22	85.9		Mayville	11	85.0
	Mayville	10	90.0		Grand Forks	3	100.0
Mortician	Mayville	18	100.0	Prescription Drugs	Fargo	15	74.7
	Buxton	6	100.0		Mayville	14	97.6
Vet (small animals)	Fargo	22	82.4		Grand Forks	5	84.8
	Grand Forks	14	83.9	Banking and Savings	Mayville	14	85.4
	Mayville	11	90.0		Buxton	6	90.0
	Casselton	5	100.0	Hardware	Fargo	15	63.7
Building Supplies	Fargo	47	76.7		Mayville	12	72.5
	Grand Forks	10	68.4		Grand Forks	10	57.7
	Mayville	8	67.5	Farm Machinery	Mayville	5	77.0
	Reynolds	5	67.0		Hunter	4	76.3
Sporting Goods	Fargo	70	73.7	Farm Machinery Repair	Mayville	5	75.0
	Grand Forks	18	71.1		Hunter	4	52.5
	Catalog Sales	3	55.0	Commercial Feed	Mayville	4	76.3
Farm Fuel/Lubricant	Grandin	10	91.5		Grandin	3	100.0
	Mayville	4	100.0	Farm Chemical	Halstad, MN	6	81.7
	Buxton	3	93.3		Grandin	6	55.8
Crop Seeds	Grandin	7	74.3		Hunter	5	86.0
	Buxton	3	73.3		Buxton	3	66.7
	Mayville	3	56.7	Vet Service	Casselton	4	100.0
Fertilizer	Hunter	7	78.6		Fargo	2	100.0
	Grandin	6	67.3		Grand Forks	2	100.0
	Buxton	4	68.8	Grain Marketing	Hunter	6	78.3
Farm Supplies	Fargo	4	60.0		Halstad, MN	5	76.0
	Mayville	3	83.3		Mayville	3	81.7
	Grand Forks	2	100.0		Buxton	3	70.0
Livestock Marketing	West Fargo	8	96.3				

cities included Grand Forks, Mayville-Portland, Buxton, and Halstad, MN. Hunter, Mayville, Grandin, and Buxton were popular for purchasing agricultural goods and services.

Hillsboro will always lose some shoppers to surrounding cities and towns for several reasons. First, many shoppers in the Hillsboro MTA live close to other towns where it may be more convenient to shop for some goods and services (e.g., some agricultural services and convenience items). Second, Fargo and Grand Forks, 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 Hillsboro Main Trade Area

Responses were analyzed to determine if those who bought 50 percent or more of selected goods and services in Hillsboro 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 Hillsboro and those who purchase a majority of their goods and services elsewhere (Table 10). The group purchasing less than 50 percent of the four goods and services in Hillsboro traveled farther (for each of the services) than the group purchasing 50 percent or more of the same goods and services in Hillsboro.

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 Hillsboro 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 Hillsboro.

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 HILLSBORO, NORTH DAKOTA, 1989

Attribute	Group Purchasing 50 Percent or More of Goods in Hillsboro				Group Purchasing Less Than 50 Percent of Goods in Hillsboro			
	Prescrip. Drugs	Gas Station	Building Supplies	Radios TVs, VCRs	Prescrip. Drugs	Gas Station	Building Supplies	Radios TVs, VCRs
Age	53.7	55.1	55.9	61.9	54.7	51.4	49.0	52.3
Education	12.3	12.5	12.9	10.4	12.3	12.2	12.2	12.6
Years Lived In County	37.7	39.1	39.4	47.6	45.0	38.8	36.7	37.9
Number in Household	2.9	2.9	2.7	2.3	3.0	2.9	3.3	3.0
Number in Grade School	0.4	0.4	0.4	0.5	0.4	0.5	0.6	0.4
Number in High School	0.5	0.4	0.3	0.6	0.2	0.4	0.6	0.4
Average Miles Traveled ^a	8.5	7.8	5.9	6.8	17.9	16.4	27.0	35.0
Household Income	\$27,108	\$26,630	\$28,636	\$20,000	\$23,710	\$25,233	\$27,500	\$28,287

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

Newspaper Subscriptions of Hillsboro Area Residents

Newspaper subscriptions of respondents in the Hillsboro main and greater trade areas were identified (Table 11). Newspaper subscriptions were divided into daily and weekly papers for both main and greater trade area respondents. The most popular daily newspaper for both the main and greater trade areas was *The Forum* (Fargo). The most popular weekly papers for the main and greater trade areas were *The Hillsboro Banner* and *Trails County Tribune*, respectively. Other popular weekly newspapers for respondents included *Cass County Reporter* and *AgWeek-Grand Forks*.

Radio Stations of Hillsboro Area Residents

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

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

Main Trade Area			Greater Trade Area		
Newspaper	Numbers of Respondents	Percent	Newspaper	Number of Respondents	Percent
----- Daily Newspapers -----					
Fargo Forum	101	82.1	Fargo Forum	88	68.8
Grand Forks Herald	20	16.3	Grand Forks Herald	37	28.9
Others	2	1.6	Others	3	2.3
Total	<u>123^a</u>		Total	<u>128^b</u>	
----- Weekly Newspapers -----					
Hillsboro Banner	120	76.9	Traill County Tribune	49	44.5
Traill County Tribune	12	7.7	Cass County Reporter	22	20.0
Agweek-Grand Forks	9	5.8	Hillsboro Banner	19	17.3
Fargo Forum (Sunday)	7	4.5	Agweek-Grand Forks	7	6.4
Others ^c	8	5.1	Others ^c	13	11.8
Total	<u>156^d</u>		Total	<u>110^e</u>	

^a116 respondents subscribe to a daily paper with 7 respondents subscribing to more than one paper.

^b121 respondents subscribe to a daily paper with 7 respondents subscribing to more than one paper.

^cOther weekly newspapers included Cavalier Chronicle, Steele County Press, Lidgerwood Monitor, Northwood Gleaner, Fargo Forum (Sunday), and Norman County Index.

^d137 respondents subscribe to a weekly paper with 19 respondents subscribing to more than one paper.

^e91 respondents subscribe to a weekly paper with 19 respondents subscribing to more than one paper.

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

Radio Station	Number of Respondents	Percent
KFGO - Fargo	71	44.4
WDAY - Fargo	54	33.8
KQWB - Fargo	9	5.6
KFNW - Fargo	7	4.4
KMAV - Mayville	6	3.8
KYCK - Crookston	3	1.9
Others	10	6.1

Comparison of Current and Previous Hillsboro Trade Area Boundaries

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

The main trade area for Hillsboro has changed little from 1971. Hillsboro lost one township to Fargo-Moorhead, gained two townships from Mayville, for an increase of one township since the early 1970s. The greater trade area appears to have diminished slightly to the south of Hillsboro; however, the GTA has remained unchanged elsewhere. Some of the differences in trade areas may be attributed to different trade area delineation criteria and to changes in the relative strength of competing trade centers, primarily the Fargo-Moorhead trade center.

SUMMARY AND CONCLUSIONS

Trade area analysis was conducted for Hillsboro based on a statewide trade area survey which the Department of Agricultural Economics at NDSU conducted in 1989. The demographic and economic profile for Hillsboro was discussed. Hillsboro has experienced decreased population and a slight reduction in its taxable sales in the 1980s; however, Hillsboro was one of the few cities to increase its pull factor. Changes in economic activity and population for Hillsboro have been better than other North Dakota cities in the 1,500 to 2,500 population range, suggesting Hillsboro, during the 1980s, fared better than other cities of comparable size. Although Hillsboro has experienced some decreased economic activity and population declines, the city is doing comparatively better than its smaller competing cities. The economic pressures Hillsboro experienced in the 1980s were common to most cities in North Dakota.

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

Hillsboro's main trade area appears to have increased slightly since 1971. Hillsboro lost one township to neighboring cities, but gained two townships, for an overall increase in MTA size of one township. The greater trade area decreased slightly to the south; however, pull in other directions remained unchanged.

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

Fargo, Grand Forks, Mayville-Portland, Halstad, MN, and a few smaller towns provide most of the shopping locations for area residents who do not purchase the good or service in Hillsboro. 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 Hillsboro. Those purchasing 50 percent or more of one or more convenience or specialty goods or services in Hillsboro traveled an average distance of about 9.4 miles.

Even though the 1980s have been difficult for rural North Dakota cities, Hillsboro appears to have fared better than most cities of comparable size and better than smaller neighboring towns. Although economic times have been difficult, Hillsboro has had relatively small reductions in its retail sales, increased its pull factor during a period when most cities experienced decreases in their pull factors, and actually increased its MTA. Hillsboro could improve its market capture for most goods and services listed on the survey questionnaire, but Hillsboro's location between Fargo and Grand Forks hinders its ability to capture more of its available market. Hillsboro is an important source for many goods and services for those that patronize Hillsboro and should remain an important trade center for residents of Traill County and the surrounding area.

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APPENDIX

Please continue here

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

TOWN NAME	%	DO NOT WRITE IN THIS AREA	TOWN NAME	%	DO NOT WRITE IN THIS AREA	TOWN NAME	%	DO NOT WRITE IN 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 ...
- | | |
|--|--|
| <input type="checkbox"/> single, never married | <input type="checkbox"/> separated or divorced |
| <input type="checkbox"/> married | <input type="checkbox"/> 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 |
| <input type="checkbox"/> | <input type="checkbox"/> farming (also forestry, fishing) |
| <input type="checkbox"/> | <input type="checkbox"/> professional/management (e.g., teachers, registered nurses) |
| <input type="checkbox"/> | <input type="checkbox"/> technical, sales, or administrative support (e.g., office workers, salespersons, nurses-LPNs, mail carriers, health care support jobs) |
| <input type="checkbox"/> | <input type="checkbox"/> service jobs (e.g., health care aides, policemen, firemen, cooks, barbers, janitors) |
| <input type="checkbox"/> | <input type="checkbox"/> precision production, craft, and repair jobs (e.g., mechanics, welders, construction trades) |
| <input type="checkbox"/> | <input type="checkbox"/> equipment operators and fabricators (e.g., bus/truck drivers, laborers) |
| <input type="checkbox"/> | <input type="checkbox"/> other (explain) _____ |

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

TOWN NAME	%	DO NOT WRITE IN THIS AREA	TOWN NAME	%	DO NOT WRITE IN THIS AREA	TOWN NAME	%	DO NOT WRITE IN THIS AREA

WHERE ARE YOUR FARM PRODUCTS MARKETED?

59. Grain					
60. Livestock					

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

- | | |
|--|--|
| <input type="checkbox"/> under \$5,000 | <input type="checkbox"/> \$25,001-\$30,000 |
| <input type="checkbox"/> \$5,000-\$10,000 | <input type="checkbox"/> \$30,001-\$35,000 |
| <input type="checkbox"/> \$10,001-\$15,000 | <input type="checkbox"/> \$35,001-\$40,000 |
| <input type="checkbox"/> \$15,001-\$20,000 | <input type="checkbox"/> \$40,001-\$45,000 |
| <input type="checkbox"/> \$20,001-\$25,000 | <input type="checkbox"/> over \$45,000 |

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