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Retail Trade Area Analysis

Ashley North Dakota

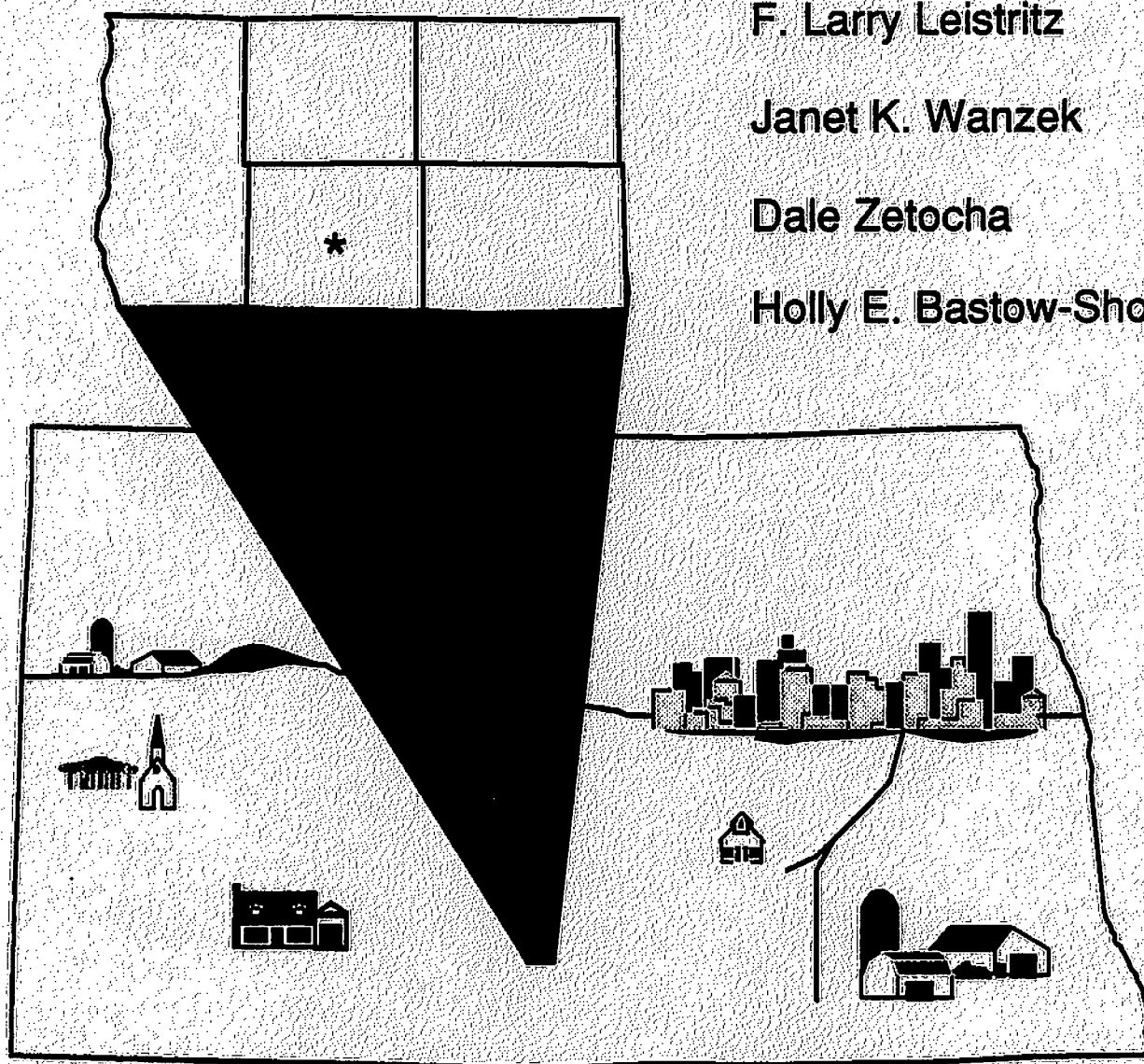
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The authors accept sole responsibility for any remaining errors or omissions.

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HIGHLIGHTS

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

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

Ashley's trade areas were broken down into main and greater trade areas. A main trade area (MTA) was defined as an area where 35 percent or more of the 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. The size of Ashley's MTA has not changed since 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 predominately employed in agriculture or retired, and have resided in the area a large portion of their lives.

Main trade area residents traveled an average of 13.3 and 12.8 miles to Ashley to purchase selected convenience and specialty goods and services, respectively. Over half (55.4 percent) of the respondents who purchased 50 percent or more of convenience and specialty goods in Ashley traveled between 6 to 15 miles to purchase the item.

Ashley appears to be capturing much of the potential market for most goods and services on the survey questionnaire; however, Ashley could capture more of the available market for clothing items, electronic goods, and selected medical services. Ashley appears to be an important source for most goods and services for those who shop in Ashley for the items.

Aberdeen, S.D., Wishek, Ellendale, and Bismarck were the most popular cities for the purchase of nonagricultural goods and services by Ashley MTA residents who did not purchase a majority of the good or service in Ashley. Wishek, Fredonia, and Aberdeen, S.D. were popular for purchasing agricultural goods and services.

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

The Bismarck Tribune and The Forum (Fargo) were the most popular daily newspapers for Ashley MTA and GTA residents, respectively. Ashley Tribune and Wishek Star were the most popular weekly newspapers for Ashley MTA and GTA residents, respectively. The most popular radio stations for Ashley MTA residents included KSJB of Jamestown and KFYR of Bismarck.

Although economic times have been difficult, Ashley has retained its past trade area and should remain an important trade center for residents in McIntosh County and the surrounding area.

RETAIL TRADE AREA ANALYSIS: ASHLEY, 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 Ashley trade area.

This report will describe Ashley'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.

Ashley area shoppers, and identify essential and nonessential services Ashley 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 University 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 Ashley trade area.

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

ASHLEY 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 Ashley population, retail sales, market share, per capita income, pull factors, and McIntosh 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.

Ashley's population declined about 10.2 percent from 1980 to 1988 (Table 1). Of the North Dakota cities in the population range 1,000 to 1,500, only three had population increases from

TABLE 1. CITY AND TRADE AREA POPULATION FOR ASHLEY 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
<hr/>							
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							
Ellendale	Dickey	1,967	1,710	-13.07	3,477	3,140	-9.69
Linton	Emmons	1,561	1,340	-14.16	4,647	4,307	-7.32
Group Total		39,095	37,540	-3.98	--	--	--
Population 1,000 to 1,500							
Ashley	McIntosh	1,192	1,070	-10.23	2,328	2,058	-11.60
Napoleon	Logan	1,103	930	-15.68	2,143	1,985	-7.37
Wishek	McIntosh	1,345	1,220	-9.29	2,772	2,456	-11.40
Group Total		29,622	27,540	-7.03	--	--	--
Population 500 to 1,000							
Edgeley	LaMoure	843	640	-24.08	1,433	1,180	-17.66
Group Total		32,154	31,200	-2.97	--	--	--
Population 200 to 500							
Kulm	LaMoure	570	480	-15.79	1,158	1,070	-7.60
Strasburg	Emmons	623	490	-21.35	--	--	--
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.

1980 to 1988, with population in the size category decreasing about 7 percent. Ashley's trade area population decreased about 11.6 percent from 1980 to 1988, the third largest decrease for any town in the category. The population of Ashley's competing trade centers and their trade area populations also decreased.

Since Ashley's trade areas cover parts of counties other than McIntosh County, population, average annual employment, and per capita income have been identified for surrounding counties (Table 2). Population in McIntosh County decreased about 10.4 percent from 1980 to 1988, which was close to the largest population decrease of any surrounding county. Population decreased in all surrounding counties.

Average annual employment in McIntosh County decreased 2.3 percent from 1980 to 1989. Employment declined substantially in most counties surrounding McIntosh. Although population and employment declined in McIntosh County from 1980 to 1988, real

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

County	1980	1982	1984	1986	1988	1989	Percent Change 1980-88/89
----- Population -----							
McIntosh	4,800	4,500	4,600	4,400	4,300	---	-10.42
Surrounding Counties							
Dickey	7,207	7,000	7,100	6,900	6,600	---	-8.42
Emmons	5,877	5,800	5,800	5,700	5,400	---	-8.12
LaMoure	6,473	6,300	6,200	6,100	5,800	---	-10.40
Logan	3,493	3,400	3,300	3,200	3,100	---	-11.25
North Dakota	652,717	672,000	687,000	679,000	667,000	---	2.19
----- Average Annual Employment ^a -----							
McIntosh	2,242	2,339	2,304	2,222	2,194	2,191	-2.27
Surrounding Counties							
Dickey	3,290	3,246	3,310	3,260	3,034	3,020	-8.21
Emmons	2,302	2,400	2,204	2,169	2,080	2,089	-9.25
LaMoure	2,516	2,499	2,548	2,408	2,269	2,231	-11.33
Logan	1,449	1,394	1,498	1,452	1,422	1,429	-1.38
North Dakota	288,002	297,002	310,953	313,001	316,000	317,000	10.07
----- Per Capita Income ^b -----							
	1979 ^c		1987		Percent Change 1979 to 1987		
McIntosh	\$8,050		\$8,318		3.3		
Surrounding Counties							
Dickey	8,204		7,942		-3.2		
Emmons	7,342		8,044		9.6		
LaMoure	8,165		8,431		3.3		
Logan	7,259		7,020		-3.3		
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.

per capita income (i.e., adjusted for inflation) actually increased from 1979 to 1987, while per capita income decreased in all but two of the surrounding counties.

Ashley's deflated taxable sales (i.e., adjusted for inflation) decreased about 26.7 and 13 percent from 1980 to 1989 and 1987 to 1989, respectively (Table 3). Ashley had the smallest decrease (-26.7%) in taxable sales of any competing city (1980 to 1989). Although Ashley fared favorably compared to other cities in the same population category, average taxable sales for the group decreased 41.3 and 7.9 percent from 1980 to 1989 and 1987 to 1989, respectively. Competing cities also

TABLE 3. DEFLATED TAXABLE SALES AND PURCHASES FOR ASHLEY 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					
Ellendale	11,948,031	5,855,283	5,820,123	-51.29	-0.60
Linton	12,237,182	8,087,687	7,828,082	-36.03	-3.21
Group Total	415,612,668	251,583,986	226,276,758	-45.56	-10.06
Population 1,000 to 1,500					
Ashley	5,898,217	4,972,359	4,323,835	-26.69	-13.04
Napoleon	9,159,048	6,495,609	5,322,539	-41.89	-18.06
Wishek	10,300,143	7,218,169	7,295,253	-29.17	1.07
Group Total	222,752,746	141,859,953	130,721,134	-41.32	-7.85
Population 500 to 1,000					
Edgeley	7,662,811	4,837,705	4,346,211	-43.28	-10.16
Group Total	197,005,522	124,426,751	123,454,776	-37.33	-0.78
Population 200 to 500					
Kulm	4,166,352	2,836,764	2,322,911	-44.25	-18.11
Strasburg	2,902,126	2,473,112	2,109,908	-27.30	-14.69
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.

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.

Ashley's pull factor decreased about 29 percent from 1980 to 1989 (Table 4). Only Drayton and Walhalla, in the population group 1,000 to 1,500, increased their pull factor from 1980 to 1989. Ashley's pull factor, however, is better than 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

TABLE 4. PULL FACTORS FOR ASHLEY 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						
Ellendale	0.69	0.43	0.31	-38.48	-55.69	-27.99
Linton	0.58	0.44	0.31	-23.96	-47.24	-30.62
Group Average	0.89	0.65	0.52	-26.93	-42.26	-20.99
Population 1,000 to 1,500						
Ashley	0.51	0.54	0.36	4.29	-29.08	-32.00
Napoleon	0.99	0.88	0.39	-10.57	-60.18	-55.48
Wishek	0.75	0.65	0.52	-13.26	-31.63	-21.18
Group Average	0.65	0.53	0.43	-18.35	-34.55	-19.84
Population 500 to 1,000						
Edgeley	1.05	0.90	0.65	-14.00	-38.05	-27.97
Group Average	0.60	0.49	0.42	-18.94	-29.78	-13.38
Population 200 to 500						
Kulm	0.70	0.58	0.38	-17.90	-45.73	-33.90
Strasburg	*	*	*	*	*	*
Group Average	0.41	0.35	0.28	-14.30	-30.65	-19.07

SOURCE: Leistritz et al. 1990.

substantially from 1980 to 1989. Pull factors in 1989 for cities competing with Ashley were similar to Ashley's pull factor, suggesting Ashley does an average job of capturing its available market compared to neighboring cities.

Both city and county populations have declined in the geographic area near Ashley. No county in the Ashley area increased in population from 1980 to 1989. Deflated taxable sales in Ashley and average annual employment in McIntosh County have decreased in the 1980s. Although real per capita income in McIntosh County increased from 1979 to 1987, Ashley's pull factor has continued to decrease (1980 to 1989). Changes in economic activity and population for Ashley have been similar to other North Dakota cities in the 1,000 to 1,500 population range, suggesting Ashley is no worse than other cities of comparable size.

Although Ashley suffers from decreased economic activity and population declines, the city is doing as well as its smaller competing cities. Smaller cities and towns competing with Ashley also face tough economic pressures; however, they appear to be suffering more economic decline than is evident in larger cities. Economic pressures and population declines found in Ashley and McIntosh 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 Ashley.

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.

Ashley was classified as a minimum 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
Gas and diesel service

Groceries
Hardware

Specialty Goods and Services

Plumber

Agricultural Goods and Services

Farm fuel and lubricant

Crop consultant

The main trade area for Ashley was defined by townships where 35 percent or more of the residents purchased 50 percent or more of the selected mix of goods and services in Ashley. 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 Ashley.

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.

Although Ashley has trade areas extending into South Dakota, only trade areas within North Dakota were determined in this report. Ashley's MTA lies mostly to the east and north of the city; however, the GTA extends mostly to the north and west of the city, with only limited influence to the east (Figure 1). Ashley's GTA is fairly large considering its retail strength and the number of competing trade centers located near or within Ashley's GTA.

CHARACTERISTICS OF ASHLEY AREA RESIDENTS

Business people and community leaders usually are interested in the characteristics of local shoppers and shopping patterns. The characteristics of Ashley shoppers were analyzed, using 71 survey responses from the Ashley MTA. Other analyses included examination of important and less important services for patron shoppers of Ashley, identification of neighboring cities area shoppers patronize, determination of distances area shoppers traveled to Ashley, and listing popular newspapers and radio stations among area residents.

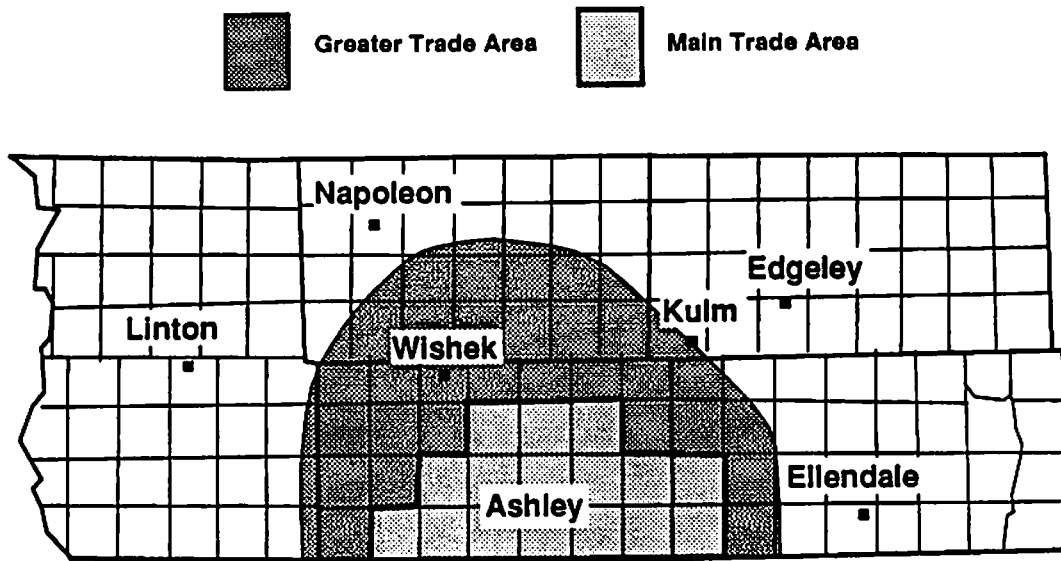


Figure 1. Main and Greater Trade Areas for Ashley, North Dakota, 1989

Demographic Profile of Shoppers in Ashley Main Trade Area

Demographic characteristics of the survey respondents for the Ashley 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 predominately employed in agriculture or retired, and have resided in the area a large portion of their lives.

Distance Traveled by Ashley Area Shoppers

Average distances that area residents traveled to Ashley were determined for each good or service in the 7-item goods and services mix (Table 6). Distances were determined by averaging respondents' estimated miles between Ashley and their home residence. Ashley residents and any respondents who lived one mile or less from Ashley 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 Ashley 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 Ashley. Total miles

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

Demographic Characteristic	Average of Survey Responses	
Age (Years)	53.7	
Education (Years)	10.9	
Lived in County (Years)	43.6	
Household Size (People)	2.6	
Average Household Income	\$20,161	
Occupation	Respondent	Spouse
	---%---	---%---
Farming	52.5	39.2
Retired	23.0	19.6
Tech/Sales/Admin	8.2	11.8
Professional	3.3	7.8
Service Jobs	3.3	13.7
Craft/Repair	3.3	5.9
Equipment Operator	3.3	---
Housewife	1.6	2.0
Other	1.6	---
Marital Status	--- % ---	
Single	3.0	
Separated/Divorced	3.0	
Married	87.9	
Widowed	6.1	
Male	69.2	
Female	30.8	

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 Ashley.

The average distance traveled to Ashley to purchase convenience goods and services was more 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 also more than that traveled for specialty goods and services for respondents in the MTA who purchased 50 percent or more of the item in Ashley. 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. Over half (55.4 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 15 miles to

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

<u>All Respondents Purchasing 50 Percent or More of the Service in Ashley</u>			
<u>Convenience Items</u>		<u>Other Items</u>	
Goods and Services	Average Miles Traveled	Goods and Services	Average Miles Traveled
Gas & Diesel Stations	12.8	Plumber	14.8
Groceries	14.0	Farm Fuel	13.3
Banking and Savings	16.3	Crop Consultant	13.4
Hardware	13.3		
Average	14.3	Average	13.9
<u>MTA Respondents Only Who Purchase 50 Percent or More of the Service in Ashley</u>			
<u>Convenience Items</u>		<u>Other Items</u>	
Goods and Services	Average Miles Traveled	Goods and Services	Average Miles Traveled
Gas & Diesel Stations	12.0	Plumber	14.1
Groceries	13.3	Farm Fuel	12.7
Banking and Savings	14.5	Crop Consultant	10.8
Hardware	13.1		
Average	13.3	Average	12.8

^aOne-way distance to Ashley only.

purchase the item in Ashley (Table 7). For those living in the MTA, 62.3 percent of the respondents who purchased an item in Ashley traveled between 6 to 15 miles.

Area Shoppers' Utilization of Goods and Services Provided in Ashley

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

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

<u>All Respondents Purchasing 50 Percent or More of a Service in Ashley</u>				
Distance (Miles) ^a	<u>Convenience Goods</u>		<u>Other Goods</u>	
	Number	Percent	Number	Percent
1 to 5	1	2.8	1	3.4
6 to 10	9	25.0	9	31.0
11 to 15	10	27.8	8	27.6
16 to 20	7	19.4	5	17.2
21 to 25	5	13.9	3	10.3
over 25	4	11.1	3	10.3

<u>MTA Respondents Only Who Purchase 50 Percent or More of a Service in Ashley</u>				
Distance (Miles) ^a	<u>Convenience Goods</u>		<u>Other Goods</u>	
	Number	Percent	Number	Percent
1 to 5	1	3.6	1	4.0
6 to 10	9	32.1	9	36.0
11 to 15	8	28.6	7	28.0
16 to 20	6	21.4	5	20.0
21 to 25	3	10.7	2	8.0
over 25	1	3.6	1	4.0

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

Goods and services that appear to be most utilized by those shopping in Ashley include dentist, barber, beautician, mortician, veterinarian (small animals), drinking places, appliance and electronic repair, heating fuel and propane, legal services, plumber, banking and savings, family doctor, fertilizer, and other farm chemicals (services where 95 percent of those buying the service in Ashley purchase a majority of the service in Ashley). The goods and services that people are less likely to purchase a majority of in Ashley include shoes, teenage clothing, women's clothing and coats, jewelry, chiropractor, sporting goods, and grain marketing.

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

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

Goods and Services	Responses in Ashley Main Trade Area					
	Purchase the Goods & Services Somewhere	Purchase Some of the Goods & Services in Ashley		Purchase Majority of the Goods & Services in Ashley		Measure of Market Capture
		No.	% ^a	No.	% ^b	% ^c
Dentist	63	53	84.1	52	98.1	82.5
Barber	56	49	87.5	48	98.0	85.7
Beautician	54	47	87.0	46	97.9	85.2
Mortician	48	45	93.8	44	97.8	91.7
Veterinarian (Sm Animals)	45	39	86.7	38	97.4	84.4
Drinking Places	38	32	84.2	31	96.9	81.6
Appliance/Elec Repair	54	29	53.7	28	96.6	51.9
Heating Fuel/Propane	62	55	88.7	53	96.4	85.5
Legal Service	52	46	88.5	44	95.7	84.6
Plumber	56	46	82.1	44	95.7	78.6
Banking and Savings	67	61	91.0	58	95.1	86.6
Family Doctor	65	58	89.2	55	94.8	84.6
Groceries	65	63	96.9	59	93.7	90.8
Accounting Services	48	29	60.4	27	93.1	56.3
Hospital	60	53	88.3	49	92.5	81.7
Hardware	65	61	93.8	56	91.8	86.2
Florist	49	45	91.8	41	91.1	83.7
Building Supplies	62	55	88.7	50	90.9	80.6
Nursery (Plants)	44	33	75.0	30	90.9	68.2
Computers	15	10	66.7	9	90.0	60.0
Gas/Diesel Service	64	58	90.6	52	89.7	81.3
Prescription Drugs	63	58	92.1	51	87.9	81.0
Major Appliances	55	32	58.2	28	87.5	50.9
Auto Repair	61	54	88.5	46	85.2	75.4
Radios, TVs, VCRs	54	29	53.7	24	82.8	44.4
Eating Places	61	52	85.2	43	82.7	70.5
Auto Sales	57	39	68.4	32	82.1	56.1
Optometrist	64	34	53.1	26	76.5	40.6
Furniture	46	20	43.5	15	75.0	32.6
Sporting Goods	43	29	67.4	19	65.5	44.2
Jewelry	36	14	38.9	9	64.3	25.0
Chiropractor	37	11	29.7	7	63.6	18.9
Men's Clothing	59	8	13.6	5	62.5	8.5
Women's Clothing	60	8	13.3	3	37.5	5.0
Shoes	58	7	12.1	1	14.3	1.7
Women's Coats	50	3	6.0	0	0.0	0.0
Teenage Clothing	27	2	7.4	0	0.0	0.0
----- Agricultural Goods and Services -----						
Fertilizer	23	21	91.3	21	100.0	91.3
Other Farm Chemicals	26	24	92.3	23	95.8	88.5
Farm Fuel & Lubricant	35	29	82.9	27	93.1	77.1
Livestock Marketing	32	25	78.1	23	92.0	71.9
Commercial Feeds	28	26	92.9	23	88.5	82.1
Farm Mach Repair/Parts	35	32	91.4	28	87.5	80.0
Farm Machinery	33	30	90.9	26	86.7	78.8
Veterinary Services	33	29	87.9	25	86.2	75.8
Crop Seeds	32	28	87.5	24	85.7	75.0
Crop Consultants	17	16	94.1	13	81.3	76.5
Other Farm Supplies	28	26	92.9	19	73.1	67.9
Grain Marketing	31	25	80.6	15	60.0	48.4

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

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

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

Goods and services for which Ashley is capturing a large amount of the potential market (85 percent or more) within the MTA include mortician, groceries, banking and savings, hardware, heating fuel and propane, barber, mortician, family doctor, legal services, fertilizer, and other farm chemicals. Goods and services for which Ashley does not capture much of the existing market (less than 60 percent) include shoes, women's clothing and coats, teenage clothing, men's clothing, chiropractor, jewelry, sporting goods, furniture, optometrist, auto sales, radios-TVs-VCRs, major appliances, accounting services, and grain marketing.

Goods and services that are important to Ashley shoppers and those for which Ashley is capturing a large percentage of the market include all of the same goods and services which met the criteria for important items to Ashley shoppers, except accounting services and appliance and electronic repair. These items are important to shoppers in Ashley, but few of the potential buyers purchase a majority of those goods and services in Ashley. This suggests some loyalty for those shopping in Ashley, yet a good portion of the market has not been captured. Most of the goods and services for which Ashley is capturing much of the potential market are also important to Ashley shoppers, suggesting that most of the potential shoppers (within the MTA) feel Ashley is an important source for most of their services. Ashley, for a minimum convenience trade center, captures a large amount of the potential market for many goods and services listed on the survey questionnaire.

Where Services Are Purchased When Not Purchased In Ashley

For most of the goods and services listed in the survey, some respondents did not purchase any of the good or service in Ashley or purchased more of the good or service in other cities. For people living in the Ashley MTA and not purchasing a majority of the services in Ashley, the cities where the majority of those services were purchased were identified (Table 9). Aberdeen, S.D. was the most popular choice for services purchased outside of the Ashley MTA. Other popular cities included Ellendale, Wishek, and Bismarck. Wishek, Fredonia, and Aberdeen, S.D. were popular for purchasing agricultural goods and services.

Ashley will always lose some shoppers to surrounding cities and towns for several reasons. First, many shoppers in the Ashley 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, Aberdeen and Bismarck, 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

TABLE 9. MOST POPULAR CITIES FOR THE PURCHASE OF GOODS AND SERVICES BY ASHLEY MAIN TRADE AREA RESIDENTS WHO DID NOT PURCHASE A MAJORITY OF THE GOOD OR SERVICE IN ASHLEY, 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 Shopping	Ellendale	3	85.0	Eating Establishments	Aberdeen, SD	8	52.5
	Aberdeen, SD	2	50.0		Ellendale	3	63.3
					Wishek	2	70.0
Drinking Places	Wishek	3	76.7	Women's Clothing	Aberdeen, SD	27	66.4
	Forbes	2	80.0		Bismarck	19	64.5
Men's Clothing	Aberdeen, SD	27	75.7		Jamestown	3	30.0
	Bismarck	15	64.7	Teen Clothing	Aberdeen, SD	13	70.8
	Jamestown	4	40.8		Bismarck	9	61.7
	Fargo	3	65.0				
Women's Coats	Aberdeen, SD	25	69.8	Shoes	Aberdeen, SD	22	74.3
	Bismarck	17	65.3		Bismarck	18	61.4
	Catalog Sales	3	73.3		Fargo	4	73.8
Jewelry	Aberdeen, SD	12	63.8	Radios, TVs, VCRs	Aberdeen, SD	16	79.7
	Bismarck	11	52.7		Bismarck	8	54.4
					Ellendale	4	88.8
Major Appliances	Aberdeen, SD	14	72.5	Florist	Wishek	3	73.3
	Bismarck	6	74.2		Aberdeen, SD	2	52.5
	Wishek	3	70.0		Bismarck	2	45.0
Mjr Appliance Repair	Aberdeen, SD	14	85.4	Nursery (plants)	Aberdeen, SD	7	57.1
	Bismarck	5	62.0		Bismarck	5	46.0
	Ellendale	3	70.0				
Furniture	Aberdeen, SD	19	77.1	Auto Repair	Wishek	5	73.0
	Bismarck	7	71.4		Aberdeen, SD	4	67.5
Auto Sales	Aberdeen, SD	9	72.2	Gas Station	Ellendale	4	48.5
	Wishek	5	86.0		Fredonia	3	86.7
	Bismarck	4	65.0		Wishek	2	70.0
Heating Fuel/Propane	Ellendale	4	82.5	Plumber	Wishek	8	93.8
	Fredonia	2	100.0	Beautician	Wishek	2	85.0
Barber	Wishek	3	73.3		Aberdeen, SD	2	57.5
	Ellendale	2	100.0	Accounting Service	Bismarck	10	90.5
Legal Service	Bismarck	5	96.0		Ellendale	4	72.5
	Ellendale	2	100.0		Minot	3	100.0
Optometrist	Aberdeen, SD	21	85.0	Computers	Bismarck	5	76.0
	Bismarck	9	86.7	Chiropractor	Aberdeen, SD	11	83.6
	Eureka, SD	3	100.0		Ellendale	5	70.0
Family Doctor	Ellendale	3	76.7		Bismarck	4	90.0
	Aberdeen, SD	3	48.3	Hospital	Aberdeen, SD	4	85.0
	Bismarck	2	90.0		Bismarck	4	65.0
Dentist	Aberdeen, SD	6	98.3	Mortician	Four cities with one response		
	Wishek	2	100.0	Vet (small animals)	Fredrick, SD	3	83.3
Prescription Drugs	Aberdeen, SD	4	83.8		Ellendale	2	40.0
	Out of State	4	75.0	Building Supplies	Aberdeen, SD	6	69.2
	Ellendale	3	96.7		Ellendale	3	100.0
Banking and Saving	Ellendale	3	88.3	Hardware	Aberdeen, SD	4	64.8
	Jamestown	2	27.0		Ellendale	3	83.3
Sporting Goods	Aberdeen, SD	10	57.4	Farm Machinery	Wishek	2	60.0
	Bismarck	8	61.6	Farm Fuel/Lubrication	Fredonia	3	93.3
	Jamestown	2	32.5		Ellendale	3	88.3
	Ellendale	2	30.0	Commercial	Wishek	2	80.0
Farm Machinery Repair	Wishek	2	65.0	Crop Consultant	Fargo	2	85.0
	Forbes	2	61.5	Farm Chemicals	Three cities with one responses		
	Aberdeen, SD	2	60.0	Farm Supplies	Aberdeen, SD	5	58.0
Crops Seeds	Fredonia	3	63.3		Four cities with one response		
Fertilizer	Two cities with two responses			Livestock Marketing	Wishek	3	80.0
Vet Service	Wishek	2	95.0		Aberdeen, SD	2	100.0
	Aberdeen, SD	2	75.0		Horreid, SD	2	87.5
	Fredrick, SD	2	75.0				
	Ellendale	2	40.0				
Grain Marketing	Fredonia	4	87.5				
	Wishek	4	80.0				
	Aberdeen, SD	3	56.7				

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 Ashley Main Trade Area

Responses were analyzed to determine if those who bought 50 percent or more of selected goods and services in Ashley 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 Ashley and those who purchase a majority of their goods and services elsewhere (Table 10). The average age of the group purchasing 50 percent or more of the selected goods and services in Ashley was older than the average age of the group purchasing less than 50 percent of the same items in

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 ASHLEY, NORTH DAKOTA, 1989

Attribute	Group Purchasing 50 Percent or More of Goods in Ashley				Group Purchasing Less Than 50 Percent of Goods in Ashley			
	Banking & Savings	Plumber	Hardware	Farm Fuel	Banking & Savings	Plumber	Hardware	Farm Fuel
Age	53.8	56.0	55.5	53.8	53.6	48.8	46.5	39.4
Education	10.9	10.9	11.1	11.0	11.4	10.5	10.5	10.5
Years Lived In County	43.3	46.6	46.0	46.2	45.2	42.0	33.4	41.9
Number in Household	2.6	2.4	2.5	2.8	2.8	3.1	3.1	3.1
Number in Grade School	0.4	0.3	0.4	0.5	0.7	1.1	0.9	0.9
Number in High School	0.2	0.2	0.2	0.2	0.3	0.1	0.2	0.3
Average Miles Traveled ^a	14.5	14.1	13.1	12.7	38.0	16.4	28.7	17.0
Household Income	\$19,906	\$21,731	\$20,365	\$22,900	\$21,667	\$18,750	\$20,577	\$18,750

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

Ashley. The group purchasing less than 50 percent of the four goods and services in Ashley traveled farther (for each of the services) than the group purchasing 50 percent or more of the same goods and services in Ashley.

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 Ashley 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 Ashley.

Newspaper Subscriptions of Ashley Area Residents

Newspaper subscriptions of respondents in the Ashley main and greater trade areas were identified (Table 11). Newspaper subscriptions were divided into daily and weekly papers for both main and greater trade area respondents. The most popular daily newspapers for the main and greater trade areas were *The Bismarck Tribune* and *The Forum* (Fargo), respectively. The most popular weekly newspapers for the main and greater trade areas were the *Ashley Tribune* and *Wishek Star*, respectively. Other popular weekly newspapers for respondents included *Aberdeen American* and *Napoleon Homestead*.

Radio Stations of Ashley Area Residents

The most popular radio stations that respondents in Ashley's main trade area listened to were KSJB of Jamestown and KFYZ of Bismarck (Table 12).

Comparison of Current and Previous Ashley Trade Area Boundaries

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

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

Main Trade Area			Greater Trade Area		
Newspaper	Numbers of Respondents	Percent	Newspaper	Number of Respondents	Percent
----- Daily Newspapers -----					
Bismarck Tribune	12	52.5	Fargo Forum	8	34.8
Fargo Forum	8	34.8	Bismarck Tribune	7	30.4
Others	3	12.9	Jamestown Sun	7	30.4
			Others	1	4.3
Total	23 ^a		Total	23 ^b	
----- Weekly Newspapers -----					
Ashley Tribune	55	56.1	Wishek Star	20	38.5
Aberdeen American	15	15.3	Ashley Tribune	8	15.4
Wishek Star	8	8.2	Napoleon Homestead	7	13.5
Dickey County Leader	6	6.1	Dickey County Leader	4	7.7
Northwest Blade	3	3.1	Emmons County Record	4	7.7
Others ^c	11	11.2	Others ^c	9	17.2
Total	98 ^d		Total	52 ^e	

^a23 respondents subscribe to a daily paper with 0 respondents subscribing to more than one paper.

^b20 respondents subscribe to a daily paper with 3 respondents subscribing to more than one paper.

^cOther weekly newspapers included Edgeley Mail, Tri County Sun, Kulm Messenger, Fargo Forum (Sunday), and Oak Times.

^d63 respondents subscribe to a weekly paper with 35 respondents subscribing to more than one paper.

^e32 respondents subscribe to a weekly paper with 20 respondents subscribing to more than one paper.

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

Radio Station	Number of Respondents	Percent
KSJB-Jamestown	43	65.2
KFYR-Bismarck	20	30.3
Others	3	4.5

The size of the main trade area for Ashley has not changed from 1971. Ashley lost one township each to Wishek and Zeeland; however, Ashley gained two townships from Ellendale, for no change in MTA size. The greater trade area appears to have diminished slightly to the east of Ashley, as could be expected since Ashley's MTA expanded to the east. The GTA appears to have increased slightly to the north of Ashley, but may have decreased slightly to the west. 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.

SUMMARY AND CONCLUSIONS

Trade area analysis was conducted for Ashley based on a statewide trade area survey which the Department of Agricultural Economics at NDSU conducted in 1989. The demographic and economic profile for Ashley was discussed. Ashley has suffered in the 1980s from decreased population, reduced taxable sales, and lower pull factors. Changes in economic activity and population for Ashley have been similar to other North Dakota cities in the 1,000 to 1,500 population range, suggesting Ashley, during the 1980s, fared at least as well as other cities of comparable size. Although Ashley suffers from decreased economic activity and population declines, the city is doing relatively better than its smaller competing cities. The depressed economic conditions Ashley experienced in the 1980s were common to most cities in North Dakota.

Main and greater trade areas were defined for Ashley, using several delineation criteria. Townships where 35 percent or more of the respondents purchased 50 percent or more of a mix of goods and services in Ashley 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 Ashley were included in the greater trade area (not including main trade area townships). The goods and services mix contained four convenience, one specialty, and two agricultural items.

Ashley's main trade area has not changed in size since 1971. Ashley lost two townships to neighboring cities, but gained two townships, for no change in MTA size. The greater trade area decreased slightly to the east and west; however, pull to the north increased slightly.

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

Aberdeen, S.D., Bismarck, Ellendale, Wishek, and a few smaller towns provide most of the shopping locations for area residents who do not purchase the good or service in Ashley. 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 Ashley. Those purchasing 50 percent or more of one or more convenience or specialty goods or services in Ashley traveled an average distance of about 14.2 miles.

Even though the 1980s have been difficult for rural North Dakota cities, Ashley appears to have fared as well as other cities of comparable size and somewhat better than smaller neighboring towns. Ashley is doing a good job of capturing a large portion of the potential market for many goods and services and appears to have strong trade center loyalty among its area patrons. Although economic times have been difficult, Ashley has retained its past trade area and should remain an important trade center for residents in McIntosh County and the surrounding area.

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APPENDIX

TRADE AREA STUDY
CONFIDENTIAL

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

BEGIN HERE...

LOCATION OF RESIDENCE

Town:

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

County:

To what daily newspapers do you subscribe?

To what weekly newspapers do you subscribe?

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

iso.

(down)

DIRECTIONS:

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

- # 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)

[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	%	PERCENT OF TOTAL IN THIS AREA

TOWN NAME	%	PERCENT OF TOTAL IN THIS AREA

TOWN NAME	%	PERCENT OF TOTAL 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?

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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):

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

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

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	%	PERCENT OF TOTAL IN THIS AREA

TOWN NAME	%	PERCENT OF TOTAL IN THIS AREA

TOWN NAME	%	PERCENT OF TOTAL IN THIS AREA

WHERE ARE YOUR FARM PRODUCTS MARKETED?

- 59. Grain
- 60. Livestock

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