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# TRADE ANALYSIS OF RETAIL AND SERVICE INDUSTRIES IN NORTH DAKOTA FOR PLANNING LOCAL ECONOMIC DEVELOPMENT 

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#### Abstract

Trade analysis of retail and service sectors allows economic development practioners to evaluate the performance of these sectors in their respective communities. Estimation of market potential identifies specific business categories (e.g., computer stores) that have potential for further growth. Trade analysis of retail and service sectors in North Dakota shows that except in a few urban counties, such as Cass, Grand Forks, or Burleigh, these sectors were inefficient in retaining and attracting customer dollars. Market potential estimation of over 130 specific business categories showed that a considerable number of business categories have potential for further growth, e.g., computer and software stores, used merchandise stores, and heavy construction equipment rental and leasing services.


Key words: trade analysis, market potential, economic development

## PREFACE

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#### Abstract

Trade analysis of retail and service sectors allows economic development practioners to evaluate the performance of these sectors in their respective communities. Estimation of market potential identifies specific business categories (e.g., computer stores) that have potential for further growth. Trade analysis of retail and service sectors in North Dakota shows that except in a few urban counties, such as Cass, Grand Forks, or Burleigh, these sectors were inefficient in retaining and attracting customer dollars. Market potential estimation of over 130 specific business categories showed that a considerable number of business categories have potential for further growth, e.g., computer and software stores, used merchandise stores, and heavy construction equipment rental and leasing services.


Key words: trade analysis, market potential, economic development

## HIGHLIGHTS

This study evaluates the performance of retail and service sectors in 53 North Dakota counties and analyzes the availability and market potential of over 130 retail and service sector businesses in the state. The analyses are conducted using central place theory-based regional economics models and secondary data.

Trade analysis is an inexpensive and relatively simple way to assess the performance of local retail and service sector activities in terms of attracting customer dollars, market size, or growth potential of businesses. Knowledge of such information has proven useful in building awareness and support for local economic development activities (Harris and Shonkwiler, 1996). Trade analysis provides answers to questions such as "what is the level of goods and services currently provided locally and what goods and services are imported from elsewhere?" Or "what is the market size, in terms of sales dollars in a specific line of business?'" And 'given the existing demand and competition, does his/her line of business have market or business potential?'"

Over the years, both the population and businesses have declined gradually in nearly all counties in North Dakota--the exceptions are the relatively urban counties of Cass, Grand Forks, Burleigh, Ward, and Stutsman. The U.S. Small Business Administration (1995) reported that during 1991-92 business failure in the state was $16.4 \%$ compared to the national average of $9.9 \%$. In terms of population, while the U.S. population rose by $9.8 \%$ during 1980-92, population in North Dakota fell by $2.1 \%$. A recent report by the U.S. Small Business Administration (SBA, 1995) shows that retail sales in North Dakota (adjusted for inflation) fell about 20 percent from 1980 to 1988. Such shrinkage in population and economic activity was substantially more severe in outlying rural areas and towns than in areas with relatively higher population such as Cass County, which includes the City of Fargo.

The purpose of this paper is to (1) analyze the effectiveness of retail and service sectors in North Dakota counties in attracting potential consumer purchases and (2) to examine which kinds of retail and service businesses have the potential for future growth in the state. Evaluation of retail and service sector performances in North Dakota shows that for most counties these two sectors were less successful in retaining and attracting customer purchases. Moreover, the situation has deteriorated over the last decade for most rural counties in the state. Given such an outcome, the past or ongoing economic development programs and strategies to improve business environment and attract customers may not have been as desired. However, it is more than likely that the situation would have been worse had no economic development programs been undertaken in these communities. Reevaluation of on-going economic development programs and strategies may be required to improve the performance of retail and service trades in those communities that did not perform well. Active cooperation among private businesses, potential entrepreneurs, or economic development agencies may also contribute towards improving retail and service sectors performances in North Dakota.

Analysis of market potential of specific businesses in retail and service sectors has shown that among the 130-plus business categories selected for this study, the following have higher market potential in their respective sectors: in the service sector -- computer rent/lease and maintenance services; public golf courses; and heavy construction equipment rental and leasing services retail sector -- computer and software stores; catalog and mail-order houses; and used merchandise stores. These are some of the businesses that may be targeted by potential entrepreneurs in North Dakota for opening new business ventures. However, before deciding to open a new business venture, an entrepreneur must conduct a thorough feasibility study as a part of his/her business plan. For those interested in starting a new business in North Dakota, contact the Department of Economic Development and Finance at (701) 221-5320 for information and assistance or regional economic development commissions for further information.

# TRADE ANALYSIS OF RETAIL AND SERVICE INDUSTRIES IN NORTH DAKOTA FOR PLANNING LOCAL ECONOMIC DEVELOPMENT 

Sanjib Bhuyan ${ }^{*}$

## BACKGROUND

It is common for economists and development planners to conduct applied research and extension education programs to help local economic development practioners evaluate the performance of their local business sectors, e.g., retail sector. It is essential for the economic development practioners to know how effective the retail or service sectors in their community are in attracting potential consumer purchases. This information is important, because if these sectors are not performing well, local business and community leaders will need to reevaluate their on-going programs and strategies and start new ones to improve the performance of various local businesses. Conversely, communities where these sectors are doing well may intensify their existing economic development strategy. Bringing such performance evaluations to a group of citizens or decision-makers concerned with the economic future of a community has proven useful in building awareness and support for local economic development activities (Harris and Shonkwiler, 1996).

Trade analysis is a commonly used procedure to provide local economic development planners and decision makers with information about current local retail and service sector activities (Shaffer, 1989; Ariyaratne and Darling, 1995). Trade analysis is an inexpensive and relatively simple way to obtain information such as relative performance of different communities in attracting customer dollars, market size, or performance of specific business categories. Economic development practioners face questions such as what is the level of goods and services currently provided locally and what goods and services are imported from elsewhere? A crucial question faced by any entrepreneur is what is the market size, in terms of sales dollars, in his/her line of business? And given the existing demand and competition, does his/her line of business have market or business potential? Trade analysis tries to provide answers to such questions.

Over the years, both population and businesses are declining gradually in nearly all counties in North Dakota--the exceptions are the relatively urban counties of Cass, Grand Forks, Burleigh, Ward, and Stutsman. Declining population and businesses put financial stress on these communities to provide and maintain services such as local credit, health services, garbage disposal, grocery stores, and other retail and service related outlets. For instance, on average North Dakota residents drive 68 miles to and from the closest hospital (Hamm et al., 1993). The U.S. Small Business Administration (1995) reported that during 1991-92 business failure in the state was $16.4 \%$ compared to the national average of $9.9 \%$. In terms of population, while the
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U.S. population rose by $9.8 \%$ during 1980-92, population in North Dakota fell by $2.1 \%$. A recent report by the U.S. Small Business Administration (SBA, 1995) shows that retail sales in North Dakota (adjusted for inflation) fell about $20 \%$ from 1980 to 1988. Such shrinkage in population and economic activity was substantially more severe in outlying rural areas and towns than in areas with relatively higher population such as Cass County, which includes the City of Fargo.

Economic development efforts in North Dakota are carried out by organizations such as local and regional economic development agencies (e.g., Traill County Economic Development Commission), by state government agencies (e.g., Department of Economic Development and Finance), and trade associations (e.g., North Dakota Association of Rural Electric Cooperatives). In some rural communities, cooperatives have taken direct action by entering into new ventures to keep small town businesses alive and well. For example, Farmers Union Oil Company in Lidgerwood had taken over a lumber store and a grocery store which were closing, and recently reported a profit of over $\$ 12,000$ in each operation (Miller, 1996).

Irrespective of the measures or strategies used by economic development planners and practioners to retain local customers and attract outside customers, some communities may not be able to make much progress. These communities may not be able to make strategic investment in commercial development, often a common way of attracting customers, since many small communities are usually unable to garner the financial strength necessary to make such investments. In some circumstances, those communities with poorly performing retail and/or service sectors may cooperate with adjacent communities with similar characteristics to provide combined and stronger retail and service sectors offerings to their residents and outside consumers.

Another way of retaining local customer dollars is to provide locally the goods and services that are in demand. Residents in Bonaparte, Iowa (population: 465) cooperated to invest $\$ 2,000$ each to become partners in the local stores to save this hamlet from economic ruin. With similar concerted efforts, some rural communities in North Dakota may also be able to make their economies more healthy. Potential entrepreneurs who may not have the financial strength necessary to open a new business may cooperate to open a new business venture as a cooperative. To survive in a competitive business environment, similar kinds of businesses in adjacent rural communities may cooperate to combine resources to capture benefits a single business enterprise may not realize if the tasks were undertaken individually (Bhuyan, 1996).

While the purpose of this paper is not to analyze customers' shopping patterns or finding ways to retain customer dollars locally, an attempt is made (1) to analyze the effectiveness of retail and service sectors in North Dakota counties in attracting potential consumer purchases and (2) to examine which kinds of retail and service businesses have the potential for future growth in the state. Most of the past trade analysis for North Dakota focused on evaluating the performance of the retail sector (Bangsund et al., 1991; Leistritz and Wanzek, 1993). A few others went further to evaluate trade performance of specific business categories, such as eating
and drinking places, automotive dealers, and drug stores (Bangsund et al., 1995). This study is broader in scope as it estimates market potentials of over 130 retail and service business categories in addition to evaluating the trade performance of retail and service sectors in North Dakota.

## RETAIL AND SERVICE SECTOR PERFORMANCE

Evaluation of retail and service sectors performance at the county level is carried out using County Trade Pull Factors (CTPF) and Trade Area Captures (TAC) for North Dakota counties in 1992. The CTPF is a measure of relative performance of retail or service activities in a county compared to the respective state averages. It is computed by dividing the per capita county sales by per capita North Dakota sales for each sector, i.e., CTPF is the per capita retail or service sales in each county relative to that of the state for the retail or service sector. Data sources were the 1990 Census of Population and Housing and the 1992 Economic Census, both published by the U.S. Department of Commerce. Obviously, the pull factors for both retail and service sectors at the state level are equal to 1.00 . If a county has a CTPF value less than 1.00 in , for example, retail trade, then its retail trade is losing customers to other counties or communities; conversely, a CTPF value greater than 1.00 implies that the county attracts customers from other communities or counties.

The purpose of estimating TAC is to measure how many customers are drawn to a particular community to shop for specific products or services. TAC is one way of measuring market capture by existing establishments in retail or service sectors in a community/county. It is computed by multiplying the community/county population by its CTPF. Both CTPF and TAC values are used to evaluate the performance of retail and service sectors in each county.

There were over 4,700 retail and 4,200 service establishments in North Dakota in 1992 which grossed over $\$ 4.6$ billion and $\$ 1.5$ billion in sales, respectively (Table 1). Only 4 counties crossed the half-billion dollar mark in retail sales (Cass, Grand Forks, Burleigh, and Ward counties) and only one county reached this mark in service revenue (Cass County). Among 53 counties, Slope County (population: 907) had the lowest retail sales, which amounted to $\$ 222,000$, or a per capita yearly sale of only $\$ 244.76$. Data on service revenue was not available for Billings, Sioux, and Slope counties. Over $45 \%$ of retail and over $57 \%$ of service establishments were concentrated in the counties which have the major population centers in North Dakota: Cass, Grand Forks, Burleigh, Ward, and Stutsman. Each of the following counties reported less than 10 establishments in either retail or service sectors: Billings, Burke, Oliver, Sheridan, Sioux, and Slope.
Table 1. Trade Performance of Retail and Service Sectors in North Dakota by County, 1992

| County | Total revenue ('000 \$) |  | No. of establishments |  | CTPF |  |  |  | TAC |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Retail | Service | Retail | Service | Retail sector |  | Service sector |  | Retail sector |  | Service sector |  |
|  | sector | sector | sector | sector | AV | Rank | AV | Rank | AV | Rank | AV | Rank |
| North Dakota | 4,696,871 | 1,575,711 | 4,790 | 4,221 | 1.00 | -- | 1.00 | -- | 638,800 | -- | 638,800 | -- |
| Adams | 22,936 | 4,240 | 33 | 23 | 0.98 | 10 | 0.54 | 15 | 3,119 | 23 | 1,719 | 26 |
| Barnes | 76,832 | 13,064 | 98 | 72 | 0.83 | 14 | 0.42 | 17 | 10,450 | 11 | 5,296 | 13 |
| Benson | 8,430 | 1,995 | 25 | 10 | 0.16 | 50 | 0.11 | 47 | 1,147 | 44 | 809 | 39 |
| Billings | 1,224 | 0 | 7 | 2 | 0.15 | 51 | NA | NA | 166 | 51 | NA | NA |
| Bottineau | 42,682 | 7,204 | 79 | 40 | 0.72 | 18 | 0.36 | 20 | 5,805 | 15 | 2,921 | 16 |
| Bowman | 21,058 | 5,625 | 37 | 34 | 0.80 | 15 | 0.63 | 10 | 2,864 | 26 | 2,280 | 21 |
| Burke | 11,785 | 624 | 29 | 8 | 0.53 | 28 | 0.08 | 49 | 1,603 | 38 | 253 | 49 |
| Burleigh | 597,326 | 265,672 | 459 | 551 | 1.35 | 2 | 1.79 | 2 | 81,240 | 3 | 107,705 | 2 |
| Cass | 1,094,647 | 574,908 | 676 | 924 | 1.45 | 1 | 2.27 | 1 | 148,878 | 1 | 233,070 | 1 |
| Cavalier | 33,376 | 4,942 | 58 | 34 | 0.75 | 17 | 0.33 | 24 | 4,539 | 18 | 2,004 | 22 |
| Dickey | 29,905 | 4,406 | 57 | 36 | 0.67 | 22 | 0.29 | 31 | 4,067 | 21 | 1,786 | 25 |
| Divide | 12,126 | 2,546 | 32 | 20 | 0.57 | 26 | 0.36 | 21 | 1,649 | 35 | 1,032 | 36 |
| Dunn | 14,084 | 3,274 | 27 | 18 | 0.48 | 31 | 0.33 | 22 | 1,916 | 32 | 1,327 | 31 |
| Eddy | 6,597 | 1,621 | 18 | 13 | 0.30 | 44 | 0.22 | 38 | 897 | 48 | 657 | 42 |
| Emmons | 15,850 | 3,442 | 45 | 23 | 0.45 | 34 | 0.29 | 32 | 2,156 | 30 | 1,395 | 29 |
| Foster | 22,045 | 5,920 | 38 | 31 | 0.75 | 16 | 0.60 | 13 | 2,998 | 25 | 2,400 | 20 |
| Golden Valley | 16,800 | 1,587 | 22 | 15 | 1.08 | 7 | 0.31 | 28 | 2,285 | 29 | 643 | 43 |
| Grand Forks | 695,895 | 199,978 | 476 | 412 | 1.34 | 3 | 1.15 | 3 | 94,646 | 2 | 81,072 | 3 |
| Grant | 10,137 | 1,900 | 28 | 15 | 0.39 | 36 | 0.22 | 39 | 379 | 39 | 770 | 40 |
| Griggs | 7,423 | 1,899 | 21 | 15 | 0.31 | 43 | 0.23 | 37 | 1,010 | 47 | 770 | 41 |
| Hettinger | 9,192 | 2,504 | 21 | 14 | 0.36 | 39 | 0.29 | 30 | 1,250 | 42 | 1,015 | 37 |
| Kidder | 7,980 | 1,530 | 15 | 13 | 0.33 | 41 | 0.19 | 42 | 1,085 | 46 | 620 | 44 |
| LaMoure | 11,806 | 2,471 | 41 | 22 | 0.30 | 46 | 0.19 | 43 | 1,606 | 37 | 1,002 | 38 |
| Logan | 8,540 | 1,412 | 24 | 13 | 0.41 | 35 | 0.20 | 40 | 1,161 | 43 | 572 | 45 |
| McHenry | 12,511 | 1,397 | 40 | 17 | 0.26 | 47 | 0.09 | 48 | 1,702 | 34 | 566 | 46 |
| McIntosh | 19,942 | 3,282 | 46 | 23 | 0.67 | 21 | 0.33 | 23 | 2,712 | 27 | 1,331 | 30 |
| McKenzie | 15,039 | 3,961 | 44 | 27 | 0.32 | 42 | 0.25 | 36 | 2,045 | 31 | 1,606 | 27 |

Table 1. continued.

| County | Total revenue ('000 \$ ) |  | No. of establishments |  | CTPF |  |  |  | TAC |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Retail | Service | Retail | Service | Retail sector |  | Service sector |  | Retail sector |  | Service sector |  |
|  | sector | sector | sector | sector | AV | Rank | AV | Rank | AV | Rank | AV | Rank |
| McLean | 26,650 | 6,942 | 70 | 54 | 0.35 | 40 | 0.27 | 35 | 3,625 | 22 | 2,814 | 17 |
| Mercer | 42,623 | 6,735 | 69 | 50 | 0.59 | 24 | 0.28 | 33 | 5,797 | 16 | 2,730 | 18 |
| Morton | 154,064 | 36,148 | 145 | 116 | 0.88 | 12 | 0.62 | 12 | 20,954 | 8 | 14,655 | 8 |
| Mountrail | 32,639 | 2,998 | 76 | 30 | 0.63 | 23 | 0.17 | 44 | 4,439 | 19 | 1,215 | 34 |
| Nelson | 12,057 | 3,586 | 37 | 19 | 0.37 | 37 | 0.33 | 25 | 1,640 | 36 | 1,454 | 28 |
| Oliver | 1,076 | 708 | 7 | 8 | 0.06 | 52 | 0.12 | 46 | 146 | 52 | 287 | 48 |
| Pembina | 61,500 | 19,172 | 103 | 48 | 0.91 | 11 | 0.84 | 7 | 8,364 | 13 | 7,772 | 11 |
| Pierce | 32,040 | 7,829 | 42 | 31 | 0.86 | 13 | 0.63 | 11 | 4,358 | 20 | 3,174 | 15 |
| Ramsey | 121,587 | 23,101 | 126 | 95 | 1.30 | 4 | 0.74 | 9 | 16,536 | 9 | 9,365 | 10 |
| Ransom | 19,710 | 4,755 | 47 | 36 | 0.45 | 33 | 0.33 | 26 | 2,681 | 28 | 1,928 | 23 |
| Renville | 12,617 | 3,179 | 28 | 13 | 0.54 | 27 | 0.41 | 18 | 1,716 | 33 | 1,289 | 32 |
| Richland | 96,344 | 25,221 | 116 | 103 | 0.72 | 19 | 0.56 | 14 | 13,103 | 10 | 10,225 | 9 |
| Rolette | 47,124 | 6,197 | 68 | 36 | 0.50 | 30 | 0.20 | 41 | 6,409 | 14 | 2,512 | 19 |
| Sargent | 9,986 | 3,111 | 34 | 21 | 0.30 | 45 | 0.28 | 34 | 1,358 | 40 | 1,261 | 33 |
| Sheridan | 3,859 | 175 | 12 | 4 | 0.24 | 48 | 0.03 | 50 | 525 | 50 | 71 | 50 |
| Sioux | 5,849 | 0 | 15 | 2 | 0.21 | 49 | NA | NA | 795 | 49 | NA | NA |
| Slope | 222 | 0 | 3 | 3 | 0.03 | 53 | NA | NA | 30 | 53 | NA | NA |
| Stark | 196,884 | 47,844 | 200 | 180 | 1.17 | 6 | 0.85 | 6 | 26,777 | 5 | 19,396 | 6 |
| Steele | 8,269 | 884 | 15 | 13 | 0.46 | 32 | 0.15 | 45 | 1,125 | 45 | 358 | 47 |
| Stutsman | 168,237 | 42,543 | 173 | 127 | 1.03 | 8 | 0.78 | 8 | 22,881 | 6 | 17,247 | 7 |
| Towner | 9,880 | 2,656 | 34 | 13 | 0.37 | 38 | 0.30 | 29 | 1,344 | 41 | 1,077 | 35 |
| Traill | 37,950 | 8,231 | 79 | 59 | 0.59 | 25 | 0.38 | 19 | 5,161 | 17 | 3,337 | 14 |
| Walsh | 71,459 | 14,928 | 126 | 96 | 0.70 | 20 | 0.44 | 16 | 9,719 | 12 | 6,052 | 12 |
| Ward | 520,534 | 133,663 | 422 | 408 | 1.22 | 5 | 0.94 | 4 | 70,795 | 4 | 54,188 | 4 |
| Wells | 22,858 | 4,501 | 59 | 40 | 0.53 | 29 | 0.31 | 27 | 3,109 | 24 | 1,825 | 24 |
| Williams | 154,685 | 48,745 | 188 | 191 | 1.00 | 9 | 0.94 | 5 | 21,038 | 7 | 19,761 | 5 |

In terms of CTPF for the retail sector, 8 counties out of 53 had pull factors greater than 1.00: Burleigh (1.35), Cass (1.45), Golden Valley (1.08), Grand Forks (1.34), Ramsey (1.30), Stark (1.17), Stutsman (1.03), and Ward (1.22). Williams County had a pull factor equal to 1.00, closely followed by Adams County ( 0.98 ). The remaining 43 counties had retail pull factors less than 1.00. The counties that showed lowest retail pull factors include Benson (0.16), Billings (0.15), McHenry (0.26), Oliver (0.06), Sheridan (0.24), Sioux (0.21), and Slope (0.03). In a previous study where CTPF for retail sectors in North Dakota counties were computed for 1980 and 1990, Bangsund et al. (1995) found that 13 counties out of 53 had CTPF values greater than 1.00 in 1980 while that count dropped to 10 in 1990. The only counties that had a retail CTPF of greater than 1.00 in 1980, 1990, and 1992 were Burleigh, Cass, Golden Valley, Grand Forks, Ramsey, Stark, Stutsman, and Ward. Among these, Burleigh, Cass, and Grand Forks counties were able to improve their ability to attract customers, i.e., they showed an increase in the retail CTPF value. For example, the CTPF increased from 1.10 in 1990 to 1.35 in 1992 for Burleigh County and from 1.20 to 1.45 for Cass County during the same period. Therefore, the trend of urban counties pulling more and more dollars from non-urban counties is continuing. On the other hand, Golden Valley, Stark, and Stutsman counties showed a slight decline in CTPF value from 1990, and Ramsey County's retail CTPF value remained unchanged. Economic development agencies and public policy makers may want to examine the factors responsible for declining business performance in the concerned North Dakota counties/communities.


Figure 1: County Trade Pull Factors (CTPF) of Retail and Service Sectors, North Dakota, 1992 (CTPF values at top and bottom refer to the retail and the service sectors, respectively. NA $=$ not available)

When it comes to the service industry, most North Dakota counties did not perform well.

Only 3 counties had a service sector CTPF greater than 1.00: Cass (2.27), Burleigh (1.79), and Grand Forks (1.15). Figure 1 shows the retail and service sector CTPF (and TAC values) for all 53 counties in North Dakota. Counties with strong trade pull factors, whether retail or service related, have large urban or metro areas which include a dominant city, e.g., Fargo in Cass County or Grand Forks in Grand Forks County. Each of these cities has a well established and well organized business community and generally caters to 20,000 or more residents. Such characteristics may have contributed toward these counties' ability to attract more customers to their retail and service establishments compared to other counties in the state. Not surprisingly, mostly rural counties with low population had lower pull factors in both retail and service sectors, e.g., Sheridan County's (pop. 2,148 in 1990) retail pull factor was 0.24 and service pull factor was 0.03.

The TAC estimates show the relative level of patronage received by business establishments (retail or service) in a community. Retail and service business establishments in Cass County were the most efficient in capturing their potential customer base and thus received the maximum patronage among 53 counties (Table 1). The continued growth of retail and service businesses in the Fargo-Moorhead area is an indication of the continued ability of the retail and service sectors in that area to attract customers from other communities. In terms of TAC values, Cass County was most efficient in attracting customer dollars, followed by Burleigh, Grand Forks, Ward, and Stark counties. On the other hand, the retail sector businesses in Slope, Oliver, Billings, Sheridan, and Sioux counties were the least efficient in attracting potential customers, while similar inefficiency was shown by the service sector businesses in Burke, Sheridan, Oliver, Steele, and McHenry counties.

## MARKET POTENTIAL OF RETAIL AND SERVICE SECTOR INDUSTRIES

To analyze the growth potential of individual business categories (e.g., beauty and barber shops) two measures are used: market potential and location quotient. The analysis is conducted at the 3- and 4-digit Standard Industrial Classification (SIC) levels for 48 retail business categories (e.g., grocery stores) and 88 service business categories (e.g., beauty and barber shops). Data on sales, number of establishments, and employment in individual business categories were obtained from the 1992 Economic Census. Data on per capita income were obtained from the Statistical Abstract of the United States, 1994, while population and sectoral employment data came from the 1990 Census of Population and Housing.

Many of these 48 retail and 88 service business categories identified here are not available in most North Dakota counties. Therefore, when estimating market potential for specific retail and service business categories, this study assumes uniformity in terms of distribution of population and business establishments in the state, i.e., estimates are state averages. In reality, a majority of the retail and service businesses in North Dakota are located in the urban counties of Burleigh, Cass, Grand Forks, Stutsman, and Ward. For this reason, overestimation of market potentials for some business categories, particularly those that are urban oriented, is possible. In addition, the out-of-state demands for retail and service related
goods and services from North Dakota establishments are assumed negligible relative to in-state demands. Although a detailed feasibility study of a specific business is an effective counter measure against such potential defects, it is beyond the scope of this study. Conducting such a detailed feasibility study would be a next step for a potential entrepreneur who is considering opening a new business venture in a category that has business potential.

Market potential is the expected total sales of a commodity, a group of commodities, or a service in a market for all firms (U.S. Department of Commerce, 1979). This definition is slightly modified to suit the needs of this study where the interest is to identify businesses that have potential for further growth.

To identify businesses with market potential, the following steps are taken:
Step 1: Expected total sales (ETS) of business category $x$ (e.g., gasoline service stations) in North Dakota in 1992 is estimated by

$$
\begin{equation*}
E T S_{x}={\text { Per capita } \text { sales }_{x} * \text { Total population }_{N D} * \frac{\text { per capita income in North Dakota }(N D)}{\text { National per capita income }} . . . . . ~}_{\text {. }} \tag{1}
\end{equation*}
$$

Per capita sales is the national average per capita sales in category $x$ and is obtained by dividing the total national revenue in business $x$ by total U.S. population. ETS is a demand related concept. Although this measure ignores differences in state consumption patterns except for adjusting the level by relative state income, it does provide a readily calculated estimate of market size (Shaffer, 1989).

Estimation of ETS is demonstrated using the gasoline service stations category. The necessary data to compute ETS are total U.S. revenue (1992) $\$ 134,705,359,000$; total U.S. population (1990) 249,908,000; North Dakota population (1990) 638,800; per capita income in North Dakota and the United States (1992) \$15,688 and \$18,177, respectively. Then, the ETS for gasoline service stations for 1992 is (rounded),

$$
\begin{align*}
\text { ETS }_{\text {gas. serv. str. }} & =\frac{134,705,359}{249,908,000} * 638,800 * \frac{15,688}{18,177}  \tag{2}\\
& =0.53902 * 638,800 * 0.86307 \\
& =297,177(000 \$) .
\end{align*}
$$

Step 2: The share of actual revenue to the expected total sales in 1992 is estimated for business $x$. This share is termed "sales goal achieved," and defined as

Sales goal achieved ${ }_{x}=\frac{\text { Actual total sales in } 1992_{x}}{E T S_{x} \text { in } 1992}$,
and expressed in percentage terms. Continuing the demonstration, using (3), it can be shown that gasoline service station category exceeded expected sales in 1992, i.e.,

$$
\begin{equation*}
\text { Sales goal achieved }_{\text {gas. serv. stn. }}=\frac{297,177(000 \$)}{439,968(000 \$)} * 100=148.05 \% \text {. } \tag{4}
\end{equation*}
$$

Step 3: All business categories are ranked in terms of their respective sales goal achieved in ascending order, i.e., 1 being the business with the least amount of sales goal achieved. Based on sales goal achieved in 1992, the gasoline service stations category is ranked 39th out of the 46 ranked retail trade categories in North Dakota.

Those businesses that either did or did not achieve their total sales potential in 1992 are identified in Step 3. To identify the businesses that may have potential for further growth it is assumed that those businesses that have achieved $70 \%$ or more of their expected total sales have reached market saturation and, thus, have no further growth potential. On the other hand, those businesses that have yet to reach at least $70 \%$ of their expected sales have unfulfilled demand and, thus, have potential for growth. A ranking of 1 in Step 3 thus implies a market potential ranking of 1 , indicating the business category that has the highest market potential.

Location quotient is an additional measure used to supplement the above procedure for determining market potential. A common question faced by communities in both rural and urban areas is what is the level of goods and services currently provided locally and what goods and services are imported from elsewhere--location quotient ( $L Q$ ) provides an answer to such questions. $L Q$ thus is a measure of self-sufficiency of goods or services in a community (Shaffer, 1989). Location quotient is a commonly used tool to identify non-manufacturing industries for industrial recruitment, which is a popular economic development strategy. For example, Doescher et al. (1986) used this tool to identify non-manufacturing industries for industrial recruitment in Oklahoma.

Location quotient is defined as the ratio of the share of state employment in a particular business category $(x)$ to the share of national employment in that category:

$$
\begin{equation*}
\text { LQ for } x=\frac{\text { Percent of North Dakota employment in } x}{\text { Percent of U.S. employment in } x} . \tag{5}
\end{equation*}
$$

A location quotient of $1(L Q=1)$ means that local consumption demand is met through local production of specified good or service (Shaffer, 1989). Similarly, a location quotient of less than one $(L Q<1)$ means lack of self-sufficiency in good or service $x$, i.e., what is produced or available is not sufficient to meet the local demand. A location quotient greater than $1(L Q>1)$ means that the concerned state or community has a larger proportion of its employment in industry $x$ than does the nation or whatever economic aggregate is used as the denominator in equation (5).

Continuing the demonstration, using (5), $L Q$ s for the gasoline service stations category are estimated as follows: total persons employed in North Dakota and the United States in the gasoline service stations category, respectively were 2,590 and 675,080 (1992); total retail sector employment in North Dakota and the United States in 1990 were 53,309 and 19,485,666, respectively. Thus, using (5), the $L Q$ for gasoline service stations category is

$$
\begin{equation*}
L Q_{\text {gas. serv. stn. }}=\frac{2,590 / 53,309}{675,080 / 19,485,666}=1.40 . \tag{6}
\end{equation*}
$$

Although location quotient has such shortcomings as assuming identical state and national demand and supply functions and similar tastes and preferences and income levels, it is a reliable measure of local self-sufficiency (Shaffer, 1989). To reduce the problem of © misinterpretation of estimated $L Q \mathrm{~s}$, a disaggregated 4-digit SIC level data is used in this study and a lower threshold point is selected to determine self-sufficiency. It is assumed that an estimated $L Q$ in the range $0.75-1.25$ suggests self-sufficiency while those below 0.75 suggest lack of self-sufficiency, and $L Q>1.25$ suggests abundance of that business or service. While lack of self-sufficiency implies potential for new business or possible expansion of existing ones, an abundance of business or services implies market saturation if export is not a principal activity in that particular business or service category.

## Retail Trade Industries

Retail sector was the second largest provider of employment in North Dakota in 1990 ( $19 \%$ of total employment). A list of 48 available retail trades in North Dakota presented in Table 2 shows the number of establishments, sales, average population served, location quotient, and sales goal achieved for each retail business category. Among the retail business categories, the eating places category (for SIC numbers, see Table 2) had the highest number of establishments in North Dakota, while the maximum revenue (almost $\$ 1$ billion) was earned by the new and used car dealers. On average, existing eating places in North Dakota served 643 persons while some other categories catered to several thousand people per establishment, e.g., mobile home dealers serving over 37,000 people per establishment.
Table 2. Market Potential and Other Related Information on Retail Industries in North Dakota, 1992

| SIC | Industry | Number of establishments * | Revenue *('000 \$) | Average pop served (persons) | Location Quotient |  | Sales goal achieved (\% of expected sale) | Market Potential Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | AV | Rank |  |  |
| 521,3 | Building materials and supply stores | 165 | 228,405 | 3,872 | 1.13 | 33 | 138.97 | 37 |
| 525 | Hardware stores | 117 | 42,177 | 5,460 | 1.44 | 41 | 155.55 | 43 |
| 526 | Retail nurseries, lawn \& garden supply | 34 | 19,518 | 18,788 | 0.74 | 4 | 139.81 | 38 |
| 527 | Manufactured (mobile) home dealers | 17 | 16,888 | 37,576 | 1.36 | - 39 | 134.01 | 36 |
| 5311 | Department stores (incl. leased depts.) | 41 | 626,536 | 15,580 | NA | NA | 148.86 | 41 |
| 5315 | Department stores (excl. leased depts.) | 41 | 610,945 | 15,580 | 1.25 | 37 | 148.55 | 40 |
| 533 | Variety stores | 44 | 17,597 | 14,518 | 0.96 | 28 | 88.07 | 21 |
| 5391 | Miscellaneous general merchandise store | - 41 | 131,007 | 15,580 | 1.56 | 42 | 119.12 | 33 |
| 5411 | Grocery stores | 359 | 758,886 | 1,779 | 0.95 | 27 | 97.57 | 27 |
| 542 | Meat and fish markets | 31 | 9,558 | 20,606 | 0.89 | 23 | 85.95 | 19 |
| 5461 | Retail bakeries | 45 | 8,182 | 14,196 | 0.79 | 17 | 68.85 | 12 |
| 543 | Other food stores ${ }^{\text {a }}$ | 35 | 6,233 | 18,251 | 0.63 | 11 | 45.48 | 7 |
| 551 | New and used car dealers | 122 | 967,217 | 5,236 | 1.23 | 36 | 131.34 | 35 |
| 552 | Used car dealers | 44 | 29,712 | 14,518 | 0.74 | 13 | 84.01 | 15 |
| 5531 | Auto and home supply stores | 94 | 69,797 | 6,796 | 0.94 | 25 | 110.76 | 30 |
| 555 | Miscellaneous automotive dealers ${ }^{\text {b }}$ | 52 | 57,083 | 12,285 | 1.23 | 35 | 154.48 | 42 |
| 554 | Gasoline service stations | 422 | 439,968 | 1,514 | 1.40 | 40 | 148.05 | 39 |
| 561 | Men's and boys' clothing and accessory | 48 | 24,812 | 13,308 | 1.14 | 34 | 112.32 | 31 |
| 562,3 | Women's clothing and specialty stores | 181 | 73,846 | 3,529 | 0.98 | 29 | 95.88 | 25 |
| 565 | Family clothing stores | 58 | 38,283 | 11,01 | 0.52 | 6 | 52.93 | 9 |
| 566 | Shoe stores | 89 | 33,582 | 7,178 | 0.78 | 16 | 85.12 | 18 |
| 564,9 | Other apparel and accessory stores | 28 | 4,540 | 22,814 | 0.40 | 4 | 33.64 | 3 |
| 5712 | Furniture stores | 95 | 67,024 | 6,724 | 1.11 | 32 | 99.88 | 28 |
| 5713 | Home furnishings stores ${ }^{\text {c }}$ | 75 | 38,565 | 8,517 | 0.73 | 12 | 88.52 | 22 |
| 572 | Household appliance stores | 32 | 12,625 | 19,963 | 0.82 | 20 | 70.17 | 13 |
| 5731 | Radio, TV, and electronics stores | 39 | 20,212 | 16,379 | 0.58 | 8 | 46.29 | 8 |
| 5734 | Computer and software stores | 9 | 3,785 | 70,978 | 0.34 | 3 | 26.19 | 1 |
| 5735 | Record and prerecorded tape stores | 20 | 10,884 | 31,940 | 0.76 | 15 | 84.19 | 16 |
| 5736 | Musical instrument stores | 15 | 12,234 | 42,587 | 2.03 | 43 | 206.55 | 45 |
| 5812 | Eating places ${ }^{\text {d }}$ | 993 | 352,867 | 643 | 0.93 | 24 | 86.13 | 20 |
| 5813 | Drinking places | 423 | 73,921 | 1,510 | 2.61 | 45 | 301.49 | 46 |

Table 2. continued.

| SIC | Industry | Number of establishments * | $\begin{aligned} & \text { Revenue * } \\ & \text { ('000\$) } \end{aligned}$ | Averagepop. served (persons) | Location Quotient |  | Sales goal achieved (\% of expected sale) | Market Potential Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | AV | Rank |  |  |
| 5911 | Drug and proprietary stores | 176 | 152,951 | 3,630 | 0.89 | 21 | 89.47 | 23 |
| 592 | Liquor stores | 137 | 78,018 | 4,663 | 2.10 | 44 | 174.04 | 44 |
| 593 | Used merchandise stores | 46 | 5,028 | 13,887 | 0.62 | 9 | 40.33 | 4 |
| 594 | Miscellaneous shopping goods stores ${ }^{\text {e }}$ | 335 | 140,761 | 1,907 | 1.03 | 31 | 96.42 | 26 |
| 5942 | Book stores | 25 | 10,095 | 25,552 | 0.56 | 7 | 57.09 | 11 |
| 5944 | Jewelry stores | 68 | 28,450 | 9,394 | 0.89 | 21 | 92.10 | 24 |
| 5943 | Other misc shopping goods stores ${ }^{\text {f }}$ | 179 | 47,710 | 3,569 | 0.94 | 26 | 72.82 | 14 |
| 5961 | Catalog and mail-order houses | 25 | 25,036 | 25,552 | 0.42 | 5 | 32.82 | 2 |
| 5962 | Automatic merchandising machine operator | r 11 | 5,991 | 58,073 | 0.24 | 1 | 42.90 | 6 |
| 5963 | Direct selling establishments ${ }^{g}$ | 41 | 27,849 | 15,580 | 1.01 | 30 | 124.12 | 34 |
| 598 | Fuel dealers | 42 | 30,995 | 15,210 | 0.80 | 18 | 101.26 | 29 |
| 5992 | Florists | 89 | 14,349 | 7,178 | 1.26 | 38 | 113.72 | 32 |
| 5993 | Tobacco stores and stands | 1 | D | 638,800 | NA | NA | NA | NA |
| 5994 | News dealers and newsstands | 3 | 634 | 212,938 | NA | 2 | 40.80 | 5 |
| 5995 | Optical goods store | 30 | 8,970 | 21,293 | 0.80 | 19 | 84.60 | 17 |
| 5999a | Pet shops | 12 | 3,283 | 53,233 | 0.63 | 10 | 55.57 | 10 |
| 5999b | Art dealers | 2 | D | 319,400 | NA | NA | NA | NA |




 information not available to provide a value, $\mathrm{D}=$ not disclosed.

Location quotient or self-sufficiency estimation of retail business categories in North Dakota ranged from 0.24 in the automatic merchandising machine operators category to 2.61 in the drinking places category. Among the 48 retail business categories, the state is self-sufficient in those ranked 15 or higher, i.e., their estimated location quotient is greater than 0.75 . The following businesses are ranked among the ten least self-sufficient businesses in North Dakota: news dealers and newsstands; computer and software stores; apparel and accessory stores; catalog and mail-order houses; family clothing stores; book stores; radio, TV, and electronics stores; used merchandise stores; and pet shops. The existing business establishments in these retail business categories were unable to fulfill the local/state demand for their respective service or merchandise. This also implies that to fulfill the local/state demand, these goods and services were imported from out-of-state sources; customers of these businesses shopped away from the local stores.

In terms of the extent of sales goal achieved by the existing establishments and consequent evaluation of market potential of individual business categories, those retail categories ranked 12 or higher in Table 2 are considered lacking potential for further growth because they already achieved $70 \%$ or more of their sales goal. For those business categories for which market potential could not be estimated, a potential entrepreneur may conduct more desegregated market research (e.g., city level) to study their respective business potential. Market potential rankings of retail businesses show that computer and software stores category have the highest market potential in North Dakota, followed by catalog and mail-order houses. It is likely that the ranking of the catalog and mail-order businesses could be either over- or underestimated because this business caters to both out-of-state and in-state customers. Other retail businesses among the top 10 categories with high potential for future growth are apparel and accessory stores; used merchandise stores; news dealers and newsstands; automatic merchandising machine operators; food stores (other than grocery stores, meat and fish markets, and retail bakeries); radio, TV, and electronics stores; family clothing stores; and pet shops.

## Service Sector Industries

The service sector was the largest employer in North Dakota in 1990 ( $35 \%$ of total employment), reflecting a pattern similar to the national average. A list of 88 service categories available in North Dakota is presented in Table 3. Among the service categories, the maximum number of establishments was reported by the beauty and barber shop category (total 369) followed closely by the automotive repair shops (total 360). In terms of earnings, the maximum earning was reported by offices and clinics of doctors of medicine (over $\$ 420$ million). As in the retail sector, those ranked 38 and higher are considered self-sufficient because their location quotient was 0.75 or higher. Self-sufficiency rankings show that computer rent/lease and maintenance services were the least self-sufficient service category in North Dakota in 1992. This kind of service was imported from out-of-state sources to satisfy local or in-state demand. Other services that were identified as lacking self-sufficiency are camps and recreational vehicle parks; personal supply services such as employment agencies; theatrical production; heavy
construction equipment rental and leasing services; interior designing; watch, clock, and jewelry repair services; commercial photography, art, and graphics services; photocopying and duplicating services; and advertising services.

In Table 3, businesses ranked 37 or higher achieved $70 \%$ or more of their market potential and are considered lacking further growth potential. Among the service businesses for which market potential rankings were obtained, computer lease/rent and maintenance services tops the ranking, indicating it has the highest potential for further growth. Other business categories with higher market potentials are public golf courses; heavy construction equipment rental and leasing; personnel supply services; photocopying and duplicating services; advertising; commercial photography, art and graphic services; computer programming and data processing services; mailing, copying, photography, and steno services; and management and public relations services.
Table 3. Market Potential and Other Related Information on Service Industries in North Dakota, 1992

| SIC | Industry | Number of establishments * | $\begin{aligned} & \text { Revenue * } \\ & \text { ('000 \$) } \end{aligned}$ | Average pop. served (persons) | Location Quotient |  | Sales goal achieved (\% of expected sale) | Market Potential Rank |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | AV | Rank |  |  |
| 7011a | Hotels | 69 | 64,508 | 9,258 | 0.86 | 49 | 52.73 | 32 |
| 7011b | Motels, motor hotels, and tourist courts | 160 | 59,712 | 3,993 | 2.62 | 65 | 230.60 | 66 |
| 702 | Rooming and boarding houses | 4 | 344 | 159,700 | 0.74 | 37 | 52.93 | 33 |
| 703 | Camps and recreational vehicle parks | 12 | 1,071 | 53,233 | 0.15 | 2 | 28.28 | 16 |
| 721 | Laundry, cleaning, and garment services | 119 | 29,635 | 5,368 | 0.76 | 39 | 78.37 | 45 |
| 722 | Photographic studios, portrait | 52 | 8,153 | 12,285 | 0.75 | 38 | 115.81 | 57 |
| 723,4 | Beauty and barber shops | 369 | 33,270 | 1,731 | 1.40 | 59 | 145.75 | 60 |
| 725 | Shoe repair shops and shoe shine parlor | 10 | 857 | 63,880 | 1.64 | 62 | 140.86 | 59 |
| 726 | Funeral service and crematories | 68 | 23,208 | 9,394 | 1.07 | 55 | 147.23 | 62 |
| 7291 | Tax return preparation services | 44 | 3,059 | 14,518 | 0.79 | 43 | 107.04 | 54 |
| 7299 | Miscellaneous personal services, n.e.c. ${ }^{\text {a }}$ | 35 | 5,370 | 18,251 | 0.61 | 29 | 62.65 | 37 |
| 7299a | Diet and weight reducing services | 16 | 2,880 | 39,925 | 0.91 | 52 | 86.34 | 46 |
| 731 | Advertising agencies \& services (all types) | 28 | 8,096 | 22,814 | 0.31 | 10 | 18.86 | 7 |
| 732 | Adjustment, collection, credit agencies | 31 | 9,944 | 20,606 | 0.87 | 51 | 73.28 | 42 |
| 733 | Mailing, copying, photography, steno. serv. | 43 | 9,005 | 14,856 | 0.32 | 12 | 22.26 | 10 |
| 7331 | Direct mail advertising services | 5 | D | 127,760 | NA | NA | NA | NA |
| 7334 | Photocopying and duplicating services | 5 | 1,392 | 127,760 | 0.24 | 9 | 18.21 | 6 |
| 7335 | Commercial photography, art, and graphics | 16 | 2,910 | 39,925 | 0.23 | 8 | 20.32 | 8 |
| 7338 | Secretarial and court reporting services | 17 | D | 37,576 | NA | NA | NA | NA |
| 7342 | Disinfecting and pest control services | 3 | D | 212,933 | NA | NA | NA | NA |
| 7349 | Building cleaning and maintenance services | 129 | D | 4,952 | NA | NA | NA | NA |
| 7352 | Medical equipment rental and leasing | 9 | 7,357 | 70,978 | 1.19 | 57 | 107.23 | 55 |
| 7353 | Heavy construction equip rental and leasing | - 4 | 1,298 | 159,700 | 0.22 | 5 | 15.17 | 4 |
| 7359 | Equipment rental and leasing, n.e.c | 41 | 23,842 | 15,580 | 0.63 | 30 | 73.07 | 41 |
| 736 | Personnel supply services (emp. agen., etc.) | 26 | 14,997 | 24,569 | 0.15 | 3 | 17.81 | 5 |
| 737 | Computer program, data process, other | 57 | 48,370 | 11,207 | 0.32 | 11 | 21.69 | 9 |
| 7377 | Computer rent/lease, maintenance, n.e.c. ${ }^{\text {b }}$ | 14 | 3,496 | 45,629 | 0.11 | 1 | 10.40 | 2 |
| 738 | Miscellaneous business services ${ }^{\text {c }}$ | 134 | 48,359 | 4,767 | 0.41 | 22 | 43.04 | 28 |
| 7383 | News syndicate | 2 | D | 319,400 | NA | NA | NA | NA |
| 7384 | Photo finishing laboratories | 21 | 16,770 | 30,419 | 1.31 | 58 | 172.19 | 63 |
| 7389a | Sign painting shops | 7 | 1,693 | 91,257 | 1.58 | 61 | 146.53 | 61 |

Table 3. continued.

| SIC | Industry es | Number of establishments * | $\begin{aligned} & \text { Revenue * } \\ & \text { ('000 \$) } \end{aligned}$ | Average pop. served (persons) | Location Quotient |  | Sales goal achieved | Market Potential |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | AV | Rank | (\% of expected sale) | Rank |  |  |
| 7389b | Interior designing | 6 | 1,395 | 106,467 | 0.22 | 6 | 27.11 | 15 |  |  |
| 7389c | Telephone answering services | 3 | D | 212,933 | NA | NA | NA | NA |  |  |
| 7389d | Other business services ${ }^{\text {d }}$ | 71 | 21,365 | 8,997 | 0.43 | 23 | 33.41 | 18 |  |  |
| 751 | Automotive rent and lease, without drivers | 29 | 16,503 | 22,028 | 0.40 | 20 | 36.36 | 21 |  |  |
| 7514,5 | Passenger car rental and leasing | 16 | 7,455 | 39,925 | 0.40 | 21 | 26.33 | 14 |  |  |
| 752 | Automobile parking | 16 | 2,023 | 39,925 | 0.37 | 17 | 25.01 | 12 |  |  |
| 753 | Automotive repair shops | 360 | 85,690 | 1,774 | 0.82 | 46 | 97.73 | 53 |  |  |
| 7538 | General automotive repair shops | 161 | 35,921 | 3,968 | 0.78 | 41 | 91.62 | 51 |  |  |
| 7533 | Other automotive repair shops ${ }^{\text {e }}$ | 73 | 20,765 | 8,751 | 0.82 | 45 | 96.93 | 52 |  |  |
| 754 | Automotive services, except repair ${ }^{f}$ | 49 | 9,626 | 13,037 | 0.78 | 42 | 72.16 | 40 |  |  |
| 762 | Electrical repair shops ${ }^{\text {g }}$ | 47 | 16,850 | 13,591 | 0.76 | 40 | 71.60 | 39 |  |  |
| 763 | Watch, clock, and jewelry repair | 3 | 215 | 212,933 | 0.22 | 7 | 35.48 | 20 |  |  |
| 764 | Re-upholstery and furniture repair | 18 | 887 | 35,489 | 0.53 | 25 | 41.01 | 26 |  |  |
| 769 | Miscellaneous repair and related services ${ }^{\text {h }}$ | 159 | 37,377 | 4,018 | 0.84 | 48 | 90.07 | 49 |  |  |
| 783 | Motion picture theaters (includes drive-ins) | ) 36 | 11,366 | 17,744 | 1.04 | 54 | 88.58 | 48 |  |  |
| 784 | Video tape rental | 43 | 8,578 | 14,856 | 0.68 | 33 | 76.61 | 43 |  |  |
| 792 | Theatrical prod(ex mot.pic, incl. bands, orc | ch.etc) | 7 | 572 | 91,257 | 0.16 | 4 | 3. | 0 | 1 |
| 793 | Bowling centers | 51 | 11,701 | 12,525 | 2.13 | 64 | 186.42 | 64 |  |  |
| 794 | Commercial sports (incl. pro sports clubs) | 3 | D | 212,933 | NA | NA | NA | NA |  |  |
| 7948 | Racing, including track operation | 2 | D | 319,400 | NA | NA | NA | NA |  |  |
| 791 | Dance studios, schools, and halls | 2 | D | 319,400 | NA | NA | NA | NA |  |  |
| 7991 | Physical fitness facilities | 26 | 2,842 | 24,569 | 0.69 | 35 | 33.69 | 19 |  |  |
| 7992 | Public golf courses | 3 | 555 | 212,933 | NA | NA | NA | 3 |  |  |
| 7997 | Membership sports and recreation clubs | 27 | 4,113 | 23,659 | 0.34 | 15 | 37.15 | 22 |  |  |
| 7999 | Amuse and rec serv, incl museums,n.e.c. ${ }^{\text {i }}$ | 106 | D | 6,026 | NA | NA | NA | NA |  |  |
| 801 | Offices and clinics of doctors of medicine | 243 | 422,058 | 2,629 | 1.41 | 60 | 135.27 | 58 |  |  |
| 802 | Offices and clinics of dentists | 250 | 70,632 | 2,555 | 0.84 | 28 | 90.13 | 50 |  |  |
| 803 | Offcs/clincs of docs of osteopathics | 2 | D | 319,400 | NA | NA | NA | NA |  |  |
| 8041 | Offices and clinics of chiropractors | 90 | 14,992 | 7,098 | 1.02 | 53 | 114.83 | 56 |  |  |

Table 3. continued.






 disclosed.

## CONCLUSIONS

Evaluation of retail and service sector performances in North Dakota shows that for most counties these two sectors were less successful in retaining and attracting customer purchases. Moreover, the situation has deteriorated over the last decade for most rural counties in the state. Given such an outcome, the past or on-going economic development programs and strategies to improve business environment and attract customers may not have been as desired. However, it is more than likely that the situation would have been worse had no economic development programs been undertaken in these communities. Nonetheless, finding the cause of inefficient retail and service sector performance and incorporating countervailing strategies should be a priority in any new economic development plans in most communities in North Dakota.

Reevaluation of on-going economic development programs and strategies may be required to improve the performance of retail and service trades in those communities that did not perform well. Active cooperation among private businesses, potential entrepreneurs, or economic development agencies may also contribute towards improving retail and service sectors performances in North Dakota. Conversely, business leaders and economic development planners in those counties where these two sectors are performing well may strengthen their existing economic development strategies to improve their competitive advantage.

Analysis of market potential of specific businesses in retail and service sectors has shown there is considerable number of businesses in North Dakota with substantial potential for future growth. For example, among the 130-plus business categories, the following are found to have higher market potential in their respective sectors: in the service sector -- computer rent/lease and maintenance services; public golf courses; and heavy construction equipment rental and leasing; in the retail sector -- computer and software stores; catalog and mail-order houses; and used merchandise stores. Those businesses that are identified as having market potential may be targeted by potential entrepreneurs in North Dakota for opening new business ventures. However, before deciding to open a new business venture, an entrepreneur must conduct a thorough feasibility study as a part of his/her business plan. For those interested in starting new business in North Dakota, contact the Department of Economic Development and Finance at (701) 221-5320 for information and assistance or regional economic development commissions for further information.

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