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**POTENTIAL ROLE OF NON-AGRICULTURAL COOPERATIVES IN
RURAL DEVELOPMENT: A REPORT ON FOCUS GROUP STUDIES
CONDUCTED IN RURAL NORTH DAKOTA**

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PREFACE

Preparation of this report was funded by cooperative research agreement FMHA-94-57 between the Rural Business and Cooperative Development Service, Rural Economic and Community Development, USDA, and the North Dakota State University Agricultural Experiment Station. Dr. Randall Torgerson of the RBCS/RECD/USDA, served as liaison; and Dr. David Cobia and Dr. Larry Leistritz were principal investigators. The report was also partially funded by the New Jersey Agricultural Experiment Station, which paid part of the first author's salary. Thus, this report simultaneously contributes to (i) NDSU Agricultural Experiment Station project 1394, titled "Strategies for Rural Cooperative Development" and (ii) NJAES project 02263.

This report is based on two focus group meetings conducted in mid-April 1997 by the authors in LaMoure and Sioux Counties of North Dakota. The authors are grateful to Al Ulmer, County Extension Agent of LaMoure County, and Charlie Soiseth, County Extension Agent of Sioux County--without their help and assistance this study would not have been possible. The authors would like to thank the participants of these two meetings. Suggestions, comments and criticisms of David Cobia, Gary Goreham, David Kraenzel (who also accompanied the authors to meeting sites), and Brooks Wilson during the formulation and execution stages of this study are acknowledged and greatly appreciated. The authors thank these individuals for their comments on an earlier draft. However, any remaining errors are that of the authors.

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ABSTRACT

Focus group discussions were conducted in April 1997 in two rural North Dakota counties to examine whether the problem of inadequate or missing goods and services in those areas can be solved by using the cooperative business approach. An earlier study (Bhuyan, 1996a) has shown that many rural North Dakota communities lack essential goods and services, such as supermarket or grocery stores, clothing stores, drug stores, bank/credit facilities, and ambulance or fire-services. Focus group participants corroborated those earlier findings at the local level. It was also found that the rural residents were not fully aware of the potential role of cooperatives in the non-agricultural sectors as a means to provide inadequate or missing goods and services. Participants demonstrated motivation for follow-up action.

Key words: non-agricultural cooperatives, rural development strategies, focus group

HIGHLIGHTS

Using a focus group approach, this study examines the existence of inadequate or missing goods and services in rural communities in North Dakota and whether participants viewed cooperative businesses as a possible solution. These focus groups were conducted on two separate days in mid-April 1997 in two rural North Dakota counties. Members of these focus groups were selected to represent various sectors of their counties, such as farming, public entities, households, and private businesses. They also had varied background in terms of experience and knowledge.

Over the years, both the population and number of businesses have declined gradually in nearly all counties in North Dakota, except for the relatively urban counties of Cass, Grand Forks, Burleigh, Ward, and Stutsman. While the U.S. population rose by 9.8% during 1980-92, population in North Dakota fell by 2.1%. At one extreme, for instance, population in Sheridan County fell by almost 24% during 1980-90, while Cass County had the state's largest gain in population (almost 7%) during the same period. Shrinkage in population and economic activity was substantially more severe in rural areas and towns in the state, such as Sioux County and Rolette County, both of which reported almost 15% unemployment in 1993.

The aim of this study was to examine three questions based on the discussions with and among the participants: (1) what were the current problems in their specific communities and in their county in general?, (2) did they perceive or envision that some of their problems could be solved by the cooperative approach?, and (3) was there any motivation for follow-up action by the participants? Evaluation of the first question revealed that the goods and services identified by the participants as missing or inadequate in their respective communities or counties were also among the businesses that showed substantial growth potential in an earlier study based on secondary data, (e.g., family clothing stores, veterinary services, emergency medical services, computer related services, vocational training services, and public golf courses, among others).

Although the idea of cooperation was not new to the participants, the idea of using the concept and principles of cooperatives to provide or maintain needed goods and services was new to most of them. Participants were unaware that non-agricultural cooperatives have been active in both rural and urban areas around the country in businesses such as grocery retailing/wholesaling, supermarkets, buying clubs, rural health care, child care, and housing. Participants were also reminded that the cooperative approach is no panacea for all their problems.

Participants showed interest in learning about cooperative models and how such models could be applied to their individual or community situations. They acknowledged that the cooperative model has some immediate use in some local situations, such as providing vocational education at local schools in cooperation with local trade shops, or jointly training volunteer fire-fighters and emergency medical personnel. However, individuals, communities, or businesses interested in cooperatively doing business must realize that for any kind of cooperation to

succeed, the initiative and efforts must come from within, i.e., from those who will benefit from such cooperation. Participants of these focus groups discussed follow-up meetings in their respective communities to disseminate lessons learned in these meetings. It remains to be seen what such follow-up meetings will accomplish in the near future.

Potential Role of Non-agricultural Cooperatives in Rural Development: A Report on Focus Group Studies Conducted in Rural North Dakota

Sanjib Bhuyan and Frayne E. Olson *

BACKGROUND

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, compounded by declining state and federal funding, put financial stress on these communities to provide and maintain services such as grocery stores or super markets, local credit/banking facilities, rural emergency health services, garbage disposal, 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 (SBA, 1995) reported that during 1991-92 the rate of 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%. At one extreme, the population in Sheridan County fell by almost 24% during 1980-90, while Cass County had the state's largest gain in population (almost 7%) during the same period (Coon *et al.*, 1995). 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 rural areas and towns in the state, such as Sioux County and Rolette County, both of which reported almost 15% unemployment in 1993. Rural businesses in rural towns, such as Dunseith in Rolette County, Enderlin in Ransom County, and McVile in Nelson County, were affected the most (Coon *et al.*, 1995).

The Quentin Burdick Center for Cooperatives embarked on a research project, funded by the USDA, titled "Strategies for Rural Cooperative Development" to identify non-agricultural businesses and services in North Dakota (and other Great Plains states) that have market potential. It was also to examine whether residents of the state recognize the potential for opening and/or operating such businesses and services as cooperatives. As a part of this research project, evaluation of retail and service sector performance in North Dakota showed that for most counties these two sectors were less successful in retaining and attracting customer purchases (Bhuyan, 1996a; Appendix 1). Moreover, it was also observed that the situation has deteriorated over the last decade for most rural counties in the state.

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Analysis of market potential of specific businesses in the retail and service sectors showed that a considerable number of businesses in North Dakota have substantial potential for future growth (Table 1, see Appendix Tables 2 and 3 for the complete list). For example, some of the retail businesses that showed substantial market potential in the state were computer and software stores, catalog and mail-order houses, used merchandise stores, family clothing stores, apparel and accessory stores, and pet shops (Table 1). Similarly, some of the service sector businesses that have growth potential are theatrical production, computer service and maintenance, public golf courses, personnel supply services, advertising agencies and services, and computer programming/data processing services. Obviously, some of these business categories with market potential will have demand in urban areas only, such as advertising-related services. Considering the lack of various retail and service-related goods and services in many rural North Dakota communities and existing growth potential for various businesses in the state, an obvious research interest was to examine how closely the findings of Table 1 (or those in Appendices 2 and 3) approximate the situations at the community or county level in the state.

Irrespective of the measures or strategies used by economic development planners and practitioners¹ 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 sector offerings to their residents and outside consumers.

Another way of retaining local customer dollars is to locally provide the goods and services that are in demand. An example of cooperation at the local level is from Bonaparte, Iowa (population: 465). Residents of this small town cooperated to invest \$2,000 each to become partners in the local stores to save the town from economic demise. 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, 1996b).

Table 1. Market Potential and Other Related Information on Retail and Service 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		
<i>RETAIL INDUSTRY</i>								
5734	Computer and software stores	9	3,785	70,978	0.34	3	26.19	1
5961	Catalog and mail-order houses	5	25,036	25,552	0.42	5	32.82	2
564.9	Apparel and accessory stores ^a	28	4,540	22,814	0.40	4	33.64	3
593	Used merchandise stores	46	5,028	13,887	0.62	9	40.33	4
5994	News dealers and newsstands	3	634	212,938	NA	2	40.80	5
5962	Automatic merchandising machine operator	11	5,991	58,073	0.24	1	42.90	6
543	Food stores ^b	35	6,233	18,251	0.63	11	45.48	7
5731	Radio, TV, and electronics stores	39	20,212	16,379	0.58	8	46.29	8
565	Family clothing stores	58	38,283	11,01	0.52	6	52.93	9
5999	Pet shops	12	3,283	53,233	0.63	10	55.57	10
<i>SERVICE INDUSTRY</i>								
792	Theatrical prod(ex mot.pic, incl. bands, orch.etc)	7	572	91,257	0.16	4	3.01	1
7377	Computer rent/lease, maintenance, n.e.c. ^c	14	3,496	45,629	0.11	1	10.40	2
7992	Public golf courses	3	555	212,933	NA	NA	NA	3
7353	Heavy construction equip rental and leasing	4	1,298	159,700	0.22	5	15.17	4
736	Personnel supply services (emp. agen., etc.)	26	14,997	24,569	0.15	3	17.81	5
7334	Photocopying and duplicating services	5	1,392	127,760	0.24	9	18.21	6
731	Advertising agencies & services (all types)	28	8,096	22,814	0.31	10	18.86	7
7335	Commercial photography, art, and graphics	16	2,910	39,925	0.23	8	20.32	8
737	Computer program, data process, other	57	48,370	11,207	0.32	11	21.69	9
733	Mailing, copying, photography, steno. serv.	43	9,005	14,856	0.32	12	22.26	10

Source: Appendix Tables 2 and 3. Note: (i) a= other than family clothing stores, b= excludes grocery stores; includes fruit and vegetable markets, candy and confectionery vendors, dairy product stores, and misc. food ; c= includes computer rental and leasing, and maintenance and repair, and computer related services;(ii) Location quotient or self-sufficiency ranking= 1 being the least self-sufficient industry/business. Those ranked 15 or higher are self-sufficient (i.e., LQ> 0.75); (iii) Market potential ranking= 1 implies highest market potential given current number of establishments. Those ranked higher than 12 achieved 70 percent or more of their market potential; (iii) * = data from 1992 *Economic Census CD ROM*, Bureau of Census, U.S. Dept. of Commerce; (iv) AV= absolute value, NA= information not available to provide a value, D= not disclosed, N.E.C. (or n.e.c.)= not elsewhere classified.

Although the idea of cooperation is not new in North Dakota, most cooperatives in the state deal with agricultural input supply or output marketing or processing. Cooperatives, regardless of the sector they are involved in, are user-owned and user-controlled businesses that return net income (or benefit) to users (or patrons), based on their patronage, while investor oriented firms (IOFs) return net income (or benefit) to investors on the basis of investment. Most cooperative approaches evolve out of attempts by individuals, businesses, or public entities to address two major economic problems: market problems and lack of economies of size (Anderson *et al*, 1995). Market problems arise when the market is imperfect (or not workable), such as when there are too few buyers or sellers in the market, consistent quality is in doubt, or there is a barrier to market entry. Individuals or businesses may not be able to compete because individually they do not have the capacity, in terms of volume or financial strength, to achieve potential economies of size. The cooperative way of doing business may help resolve some of these problems.² Given the problems faced by many rural communities in North Dakota in recent years in providing necessary goods and services, do the residents of these rural communities recognize the usefulness of the cooperative approach as a means to solve some of their problems?

REASON FOR THE STUDY AND HOW IT WAS CONDUCTED

To examine whether there is potential for the cooperative approach to provide non-available goods and services in the rural areas of North Dakota, and to find corroborative evidence at the local level of an earlier finding that considerable numbers of business and services in the state have market potential, two separate focus group studies were conducted in the state during mid-April 1997. These meetings took place on April 15th in Edgeley, LaMoure County, and on April 16th in Fort Yates, Sioux County.

The specific objectives of the focus group meetings were: (1) to identify major problems as seen by the residents in obtaining goods and services in the study area (this also facilitated identifying trade/business categories that had excess demand at the local level), (2) to examine whether there was potential for cooperation in the study area to provide needed goods and services, and (3) to examine whether there was motivation for follow-up action among the participants.

The process of organizing and conducting focus group meetings with the above objectives was accomplished in several steps.

Stage 1: Once the objectives of the focus group meetings were finalized, outcomes from Appendix 1 (performance of the retail and service sectors) were used as the principal criteria to select counties as potential targets for conducting focus group studies. The primary target areas were the counties of Benson, Billings, Burke, McHenry, Oliver, Sheridan, Sioux, and Slope, all of which consistently showed declining performance in their respective retail and service sectors in 1992. However, after consulting with officials of various state and regional economic

development agencies regarding the current economic conditions in the eight counties, the study area was narrowed to two counties: LaMoure and Sioux.

Stage 2: Once the study areas were identified, their respective county agents were contacted to serve as a liaison between the authors and the participants. County agents were selected as the contacts of potential participants because these agents have insight into the current economic conditions and know most residents in their respective counties, and are also in a position of leadership. County agents, Al Ulmer, of LaMoure County, and Charlie Soiseth, of Sioux County, were contacted in early March 1997 and the objectives of the study were explained in detail.

The county agents were requested to provide a list of potential participants with diverse expertise and knowledge in local economic and social conditions, including but not limited to farming, community work, education, business, local government, health care, child care, elderly care, single parenting, and law-related civic services. A stipulation of that request was that the potential participants were willing and able to be a spokesperson for their group, such as the elderly. Thus, the aim of selective sampling was to obtain a cross-section of the population from the study areas.. Each county agent provided over 15 potential participants from their respective counties. They also finalized the venues and the time for focus group meetings.

The potential participants were contacted and provided with the objectives of the study, names of other potential participants, and the time and place of the meeting.

Stage 3: The first focus group meeting was conducted on April 15, 1997 at the Security State Bank of Edgeley in Edgeley, LaMoure County, and the second meeting was conducted at the Prairie Knights Casino and Lodge near Fort Yates, Sioux County (courtesy of the Standing Rock Sioux Tribe), on April 16, 1997. The focus groups were conducted by the authors and David Kraenzel, all from NDSU. Observers from state and regional economic development agencies also attended.

FOCUS GROUP MEETINGS AND THEIR OUTCOMES

Focus Group Meeting in LaMoure County

Participants in the LaMoure County meeting had varied professional backgrounds which included: bank loan fund manager, farmers, attorney, housewives, health care worker (nurse), newspaper publisher, engineer, and accountant³. In addition to the local county agent, Al Ulmer, Tracy Whitney of the South Central Dakota Regional Council, and Ron LeClerc of the Department of Economic Development and Finance were observers and resource persons.

After acknowledgments and introductions, the authors reviewed the rationale and objectives of the focus group and the concepts and principles of cooperation. The role and

models of non-agricultural cooperatives in various economic sectors around the country were also reviewed (Appendix Table 4). The following is a summary of the discussion that took place.

Major Problems: One objective was to identify major problems, as seen by the residents, in obtaining goods and services in the study area. The participants were asked to identify major problems facing the residents and businesses in their communities and then collectively identify not more than 10 of the most important problems. The problems identified by the participants are summarized below from the taped transcripts of the focus group meeting. In the process, the participants identified several non-agricultural businesses that they feel are lacking and have demands for in their respective communities.

Competition from national retail discount chain stores, such as Walmart or K-Mart, was identified by the participants as one of the major problems for local area merchants in all rural communities in the county. Many local retailers (e.g., clothing stores, rental stores) in LaMoure and other rural counties were unable to compete with the retailing giants and went out of business. This is a typical problem of rural retail centers which are close to larger cities (i.e., either primary or secondary retail-wholesale centers). According to the participants, merchants in larger cities/towns provide a wide variety of merchandise to satisfy their clientele at a relatively cheaper price. In some cases, the selling price at some of the discount stores was lower than the price paid by rural merchants to buy their merchandise. Participants agree that easy and quick access to these major city centers influences residents to shop outside their local area. The average traveling distance (by car) to nearby major urban centers, such as Fargo (the largest city in North Dakota), Bismarck, or Jamestown is only one to two hours for most people of LaMoure County, making it easy for the rural residents to shop in these larger retail-wholesale centers.

Lack of adequate child care, speciality care (e.g., care for children with disabilities with working mothers), and elderly care were also major problems in most rural communities in LaMoure County. Working mothers, particularly those with disabled children, find it extremely difficult to find child care services even in urban areas, so, it was not surprising to find that rural working mothers face similar problems. Many rural residents are elderly or have elderly parents at home who, although they do not need hospital care, need regular medical care. Participants identified lack of visiting nurse and/or physician services to take care of the elderly at home as a common problem in their rural communities. In addition, lack of dentists and optometrists was identified as another problem in most communities in the county.

Lack of adequate funding also makes maintaining available public services and facilities a major problem in the participants' home communities. Such services and facilities include emergency health care (or ambulance service), fire-fighting services, public swimming pools, tennis courts, and golf courses (i.e., public recreational facilities). According to the participants, funding of public services and facilities through property taxation from a declining rural population was gradually encountering opposition in rural communities across the state, and that was forcing communities to make choices that left some communities without services they want or desire.

Participants identified the absence of a resident veterinarian in LaMoure County and resulting lack of regular veterinary care for their pets and livestock as another important problem for the residents. In a similar vein, they also identified a lack of adequate numbers of professional service personnel, such as plumbers, auto mechanics, electricians, and computer technicians, as a growing problem in the county. Local schools lack (or have inadequate) vocational education programs or lack teachers to teach such programs. Participants discussed promoting vocational education and training at the high school level as not only a way to solve such problems, but also a way to keep young people employed locally and stop out-migration from rural areas.

Potential for Cooperation and Motivation for Action: Another goal was to examine whether cooperatives could be used as a vehicle in the study area to provide needed goods and services. A related objective was to gauge the motivation for follow-up action by participants in their respective communities. Participants came from different communities in LaMoure County and were knowledgeable about the problems and prospects of their respective communities. Any indication of cooperation by the participants and their motivation to follow-up on the discussions that took place were considered encouraging.

Regarding the continued problem of uneven competition from national discount chains or large city stores for local area merchants, the cooperative model may provide a feasible solution. One way of becoming competitive, regardless of location, is to operate at a lower or reduced cost. Non-agricultural cooperatives in various sectors of the economy (Appendix Table 4) have shown that the cooperative approach is one way of reducing operating costs of businesses. For instance, independent merchants in similar or related businesses may join together to form a purchasing cooperative (or a less formal buyers' club) to purchase supplies, equipment and services, train employees, or conduct other activities to share and reduce costs. Examples of such purchasing cooperative models are abundant around the country. Individual franchisees of such well known businesses as Kentucky Fried Chicken (KFC), Taco Bell, Dairy Queen, or Burger King have reported saving money on their food and supplies, equipment, advertising, insurance, service, and financing thorough forming service/purchasing cooperatives (NCB, 1994). Using their combined buyers' power to purchase supplies and services at a reduced (or discounted/bargained) price, independent merchants in rural communities may be able to offer their merchandise at a lower price and attract more customers.

During discussions, participants and observers were given examples of how the cooperative approach can also be applied in the areas of providing and/or maintaining civic services, such as rural emergency medical care or fire fighting services. Lang (1993) suggested a model of an emergency medical services (EMS) cooperative where member-owners (and member-controllers) are the county-level EMSs. The EMS cooperative provides training to the county-level EMS personnel and facilitates sharing communications and other expertise among the county-level EMSs. Similarly, various examples and models of service-related cooperatives where public entities, such as municipalities or county governments, have formed cooperatives (either formal or informal) to purchase equipment and supplies jointly, were introduced during discussion.⁴ Participants reported recent developments among several school districts in LaMoure

County that were cooperating to share the cost of purchasing sports equipment as well as the sending their respective school teams to state or regional sports events. Examples of such community based cooperation elicit a fundamental principle of any successful cooperative effort -- the initiative and efforts must come from those who would benefit from such cooperation, i.e., it is a bottom-up approach.

Although information on the benefit-cost of various on-going civic cooperation ventures among North Dakota communities is not yet available, focus group participants acknowledged that effective cooperation would result in continuation of necessary services, while reducing operating costs and at the same time saving taxpayers' money. Residents of North Dakota are familiar with the benefits obtained from increasing cooperation in the state's agricultural sector and its positive and substantial impact on the state's economy (Bhuyan and Leistriz, 1996). Such positive impact assessment of cooperatives in the state may encourage people in rural North Dakota to examine whether the cooperative approach is applicable in their communities to provide needed non-agricultural goods and services.

According to the participants, rural communities in LaMoure County may consider the cooperative model/approach to provide and/or maintain essential services such as child care/day care, schooling for special needs students, public swimming pools, park services, public golf courses, garbage disposal, recycling, health care, and animal care facilities. Developing a high school vocational education and training mentoring program for local area youth was a possibility because such a program could be developed as a cooperative effort among local school districts and local area merchants (e.g., auto repair shops, building contractors). Participants also admitted that the concept of a purchasing or shared-services cooperative to share and reduce cost to do business or provide services was thought provoking and did not occur to them prior to attending the meeting. They were also pleased with the non-agricultural cooperative examples and models presented during discussion.

Although all the participants were from LaMoure County, most did not know each other prior to coming to the meeting. They were pleased to establish personal contact with each other and with the resource persons. They also decided to meet again and publicize the idea of developing cooperation among local area merchants, public entities, non-profit groups such as fire fighting organizations, school districts, and communities at large. The newspaper publisher informed the group that she would consider devoting newspaper resources for this purpose. Another participant, who was a voting member of a town board, announced that she would inform the board of the lessons learned in the focus group and encourage the town board, town residents and local businesses to examine whether needed goods and services could be provided through formal or informal cooperation among interested parties. The attorney among the participants volunteered to assist in legal matters at the initial stage of follow-up discussions and negotiations. Regarding developing a mentoring program at local schools for vocational education and training, participants agreed to discuss and share this idea with their fellow residents, concerned parents, local business owners, and school officials.

Interest and enthusiasm shown by the participants at the conclusion of the focus group meeting, indicated motivation for action was there, or at least the seeds of such action have been planted in the meeting. The fact that some North Dakota communities are already cooperating to save and share their available economic resources demonstrates the potential for further cooperation in non-agricultural sectors in the state. The participants were reminded that effective cooperation requires a strong core of leadership, commonly shared goals among members, members' willingness to work together for mutual benefit, and support and participation of members. Cooperatives, however, will not survive if the people involved do not identify themselves with the goals of such cooperatives. Participants also acknowledged the importance of professional assessment of business potential of any cooperative venture, such as conducting a thorough feasibility study, as part of any proposed cooperative's business plan.

LaMoure County participants suggested exploring the possibility of hiring a person dedicated to coordinating the cooperative efforts of different communities. According to the observer from the North Dakota Department of Economic Development and Finance, 26 out of 53 counties in the state have some form of economic development programs as of January 1997. The problem, according to this observer, was that most communities find it hard to raise the money through taxation to hire a dedicated economic development personnel. However, the idea of several communities or townships cooperatively hiring such a person, dedicated only to coordinating their common development efforts, may solve such a problem.

Participants, and observers alike, agreed that traditional school games and sports-related rivalry between rural communities was a serious barrier for cooperation among these communities. After lengthy discussion on this issue, it was concluded that rural communities in LaMoure County (as well as other counties) must broaden the scope of their community definition and look beyond the boundaries of their school districts or towns, or even counties and the state for effective cooperation among rural communities. It was argued by several observers and participants that such cooperation among rural communities is possible while keeping their individual identity intact, which is a matter of pride in these communities.

Focus Group Meeting in Sioux County

Sioux County is home to the Standing Rock Sioux Tribe (SRST), and almost the entire county is designated as Native American Reservation. Therefore, the laws and regulations governing this county are quite different from other counties, including those related to businesses, such as cooperatives. For instance, SRST officials indicated that at that time there were no specific laws or regulations governing cooperatives in Sioux County reservations. The Standing Rock Sioux Tribe Reservation extends into Corson County of South Dakota, thereby involving public officials from both South Dakota and North Dakota in matters such as environmental/resource management in the county.

The major source of private income for the tribe is from the Prairie Knights Casino located near Fort Yates, North Dakota. In addition to employing Native American residents of the reservation, the tribe is also trying to attract other non-casino businesses (e.g., gas station, grocery store) to Fort Yates and surrounding areas, using the casino as a generator of economic activities. According to the Director of the SRST, Steve Defender, economic development and other development efforts in the Reservation were undertaken by the tribe itself and in coordination with the Bureau of Indian Affairs (BIA) and other federal, state, and regional authorities.

The focus group meeting was convened at the Prairie Knights Casino, courtesy of the SRST. In addition to the local county agent Charlie Soiseth, Al Nygard from the EDF (coordinator of Native American projects), Kathy Tweeten of the North Dakota State University Extension Services, and Mark Wagner, Economic Development Specialist of the Lewis and Clarke Regional Development Council, attended as observers and resource persons. There were ten participants from various parts of Sioux County, including one public official from South Dakota. The names of these participants were provided by Mr. Soiseth and they were contacted by the author in late March 1997. In terms of their professional backgrounds, there were ranchers, public officials (e.g., mayor, county auditor), agricultural credit manager, and members of the SRST, most of whom were official representatives of the tribe, such as its Director.

As in Edgeley, acknowledgments and introductions were made, the authors reviewed the rationale and objectives of the focus group and the concepts and principles of cooperation. The role and models of non-agricultural cooperatives in various economic sectors around the country were reviewed. The discussion that followed is summarized below.

Major Problems: Several problems were identified by the participants as serious impediments to economic development in their communities. Participants agree unequivocally that lack of any financial institutions and affordable housing were two major problems in the reservation/county. Although the tribe has been trying to bring in branches of state or regional banks into the county, so far these banking institutions have not accepted such invitations. According to the participants, lack of a Uniform Commercial Code (UCC) in the reservation and lack of familiarity with tribal laws and regulations make commercial businesses apprehensive about entering into agreements with the tribe. The SRST has been trying to adopt a UCC similar to that of the state of North Dakota and at the time of this meeting were waiting for comments from its legal counsel.

Another problem closely related to not having any financial institutions in the county/reservation is the difficulty faced by residents in obtaining financing from commercial banks or financial institutions outside the reservation. According to the participants, most individual tribal members had low equity due to fragmented land holdings, which was a major barrier in obtaining loans from commercial banks. Participants expressed the belief that a financial institution located in the reservation will understand the local situation better and is likely to be more willing to work with the tribe in securing loans and mortgages.

The casino near Fort Yates has generated numerous casino-related jobs in the area, thereby helping young people in the county to stay within the county and bringing in people from outside the county. Unfortunately, due to lack of adequate affordable housing in and around the Fort Yates area, many people working in the casino and related businesses commute as much as 60-80 miles per day. Because the tribe plans to use the Casino as a generator of economic development for the county and the tribe, participants anticipated a rise in housing problems in the future.

According to the participants, most of the people who worked at the casino or related-services also lived and shopped in the Bismarck-Mandan area, including teachers of local schools. Thus, these income-earning people were not spending their money locally in the reservation on such daily necessities as housing, grocery, gas, or car repair. Availability of affordable housing may bring some changes in the commuting behavior and spending habits of workers in the reservation.

Participants stated that the reservation also did not have basic retail and service outlets such as super markets, good restaurants, car-repair shops, drug stores, or family clothing stores, among others. One of the reason behind non-availability of retail and service stores in Sioux County was again a land related problem, according to the participants. That is, the inability of the SRST to provide long-term leases to non-Indian businesses due to existing tribal laws. For this reason alone, the county had lost several potential businesses. For instance, when a gasoline service station chain (Super Pumper) wanted to open their business in Fort Yates, the tribe was able to offer only a 25-year lease (which was quickly rejected by the chain), and even coming to that decision took three years due to bureaucratic red-tape at the local tribal council and federal level.

Similar to the participants in LaMoure County, participants here also expressed that vocational education should be stressed at the high school level to reflect the needs of the communities they serve. They felt that because the demand for such trades as car repair, plumbing, masonry, and electrician were rising gradually, local young people should be given the opportunity to learn such trades and help them stay in the county, instead of going outside the county in search of jobs.

Participants also acknowledged that although drug and alcohol abuse was not uncommon in the county/reservation, there was no treatment center for such illness. Some patients have to travel several hundred miles to centers in Minnesota for treatment.

Although lack of leadership among the members of the tribe was a problem in the past, participants showed enthusiasm and support for the leadership that existed for its approach toward economic and social development in the county. It is noteworthy that all participants disapproved and criticized the bureaucratic red-tape at various agencies dealing with Native American affairs.

Potential for Cooperation and Motivation for Action: As in the focus group meeting in LaMoure County, a goal of the meeting here was to examine whether there was potential for cooperation in the study area to provide needed goods and services, and a related objective was to gauge the motivation for follow-up action by participants in their respective communities.

According to the SRST officials, the tribe has been trying to open a tribal-based financial institution in the reservation/county in coordination with various agencies (e.g., the BIA) without any success. Participants agreed that they, however, had not considered opening the financial institution as a cooperative of the SRST members or county residents, i.e., a tribe-based credit union. In the discussion that followed, the cooperative concept was re-examined and re-explained in terms of a credit union, and participants agreed that the potential for cooperation among the residents of the reservation to open such a credit union needed closer examination.

In addition, examples of non-agricultural cooperatives in various sectors of the economy (Appendix Table 4) were presented to elicit that the cooperative model was one way of doing business and at the same time providing needed goods and services. Examples of successful purchasing cooperatives (e.g., FoodService Purchasing Cooperative of independent KFC franchisees) and shared-services cooperatives among public entities (e.g., Western Area Cities/Counties Cooperative, or WACCO, in Minnesota) were discussed. As in Edgeley, the participants were reminded that effective cooperation requires a strong core of leadership, commonly shared goals among members, members' willingness to work together for mutual benefit, and support and participation of members. Participants were also reminded of the importance of professional assessment of business potential of any cooperative (or business) venture, such as conducting a thorough feasibility study as part of the cooperative's business plan.

Participants discussed a holistic approach of economic development in the reservation starting with a cooperative financial institution (i.e., credit union) as the focal point. For example, once such a financial institution is organized, the tribe or the members of the credit union may use various services of the credit union to solve some of their current problems, e.g., using loans for housing or business. In addition, establishing such a local financial institution may also speed up the responses of outside agencies, such as HUD (Housing and Urban Development) and the BIA, because such agencies encourage disbursement of their funds through local banks or financial institutions.

Establishment of a local cooperative financial institution may also help solve the affordable housing problem. Participants pointed out that eligible residents and entrepreneurs from the county may decide to build houses and/or apartments individually or as a group (i.e., a housing cooperative) to either rent out to commuting workers in the reservation or use as a personal home. However, the problem of low equity may still arise if the cooperative members continued to own fragmented land. According to the participating SRST officials, the tribe has been slowly consolidating fragmented land in recent years to solve such problem. They also noted that if financing problems were solved through land consolidation and establishment of a local credit

union, then business development opportunities for various retail and service-related businesses in the county may increase in the near future.

Regarding vocational education, participants were informed that the participants in the LaMoure County focus group were going to examine whether such training could be provided in cooperation with local area trade shops, such as car-repair shops, electricians, or other businesses. However, according to the participants of Sioux County, because there were very few such trade shops in the county and most residents traveled to towns in nearby counties (e.g., Bismarck, Mandan) for such goods and services, the possibility of offering vocational education in cooperation with area merchants was less likely in Sioux County than in some other counties.

Economic development planners from the state and regional levels suggested using a task force consisting of both tribal and non-tribal residents of the county to examine the feasibility of a local credit union. Information on available state or regional resources for such purposes, such as grants for conducting a feasibility study, were presented. It was suggested during discussion that such a task force should travel around the county/reservation to gauge peoples' perception of working cooperatively, and the task force should explain the concepts and models of cooperation with the help from outside resources. Economic development planners also reminded the participants that all economic development efforts, whether through a task force or through any other means, must come from the communities and they must be willing to participate actively in the development efforts. The same principle applies for effective cooperation at any level.

CONCLUSIONS

Over the years, both the population and number of businesses have declined gradually in nearly all counties in North Dakota, and such shrinkage in population and economic activity was substantially more severe in rural areas and towns than in areas with relatively higher population such as Cass County, which includes the city of Fargo. To examine whether the problem of inadequate or missing goods and services in rural communities in North Dakota can be solved by using the cooperative approach, two separate focus group studies were conducted during mid-April 1997 in LaMoure County and Sioux County in North Dakota. More specifically, the focus group discussions were carried out to examine (1) the current problems in rural communities in particular and in the selected counties in general, (2) whether participants perceive or envision that some of their problems could be solved by the cooperative approach, and (3) whether there was motivation for follow-up action by the participants. Total number of participants in the LaMoure County focus group meeting was eight, excluding three observers from various state and regional economic development authorities. In addition to four observers, ten residents participated in the Sioux County meeting. Members of these two focus groups came from various parts of their respective counties, had varied backgrounds in terms of experience and knowledge, and were willing and able to serve as a spokesperson for their group, such as the elderly.

Evaluation of the two separate focus group discussions revealed that the goods and services identified by the participants as missing or inadequate in their respective communities or counties were also in the list of businesses that showed substantial growth potential in an earlier study based on secondary data, e.g., family clothing stores, computer related services, and public golf courses. Although the idea of cooperation is not new in North Dakota, the idea of using the cooperative concept and principles to provide or maintain needed goods and services was new to most of the participants. Participants were unaware that non-agricultural cooperative businesses were successfully providing needed goods and services, such as such as grocery retailing/wholesaling, supermarkets, buying clubs, rural health care, child care, and housing in both rural and urban areas around the country. Participants showed interest in learning about non-agricultural cooperative models and discussed how such models could be applied to their individual or community needs. They also acknowledged that there may be some immediate applications of the cooperative model in situations such as providing vocational education at local high schools in cooperation with local trade shops, or jointly training volunteer fire-fighters and emergency medical personnel among several communities, or several communities sharing the costs of their common sports-related activities.

Participants of these focus group meetings also decided to plan follow-up meetings among residents, public officials, and businesses in their respective communities to disseminate the lessons or information learned in these meetings. Considering the dispersed and declining nature of population in these communities/counties, it may be useful for these community residents to seriously examine whether they can cooperate with other communities and/or businesses to provide or maintain some of the needed goods and services locally. However, individuals, communities or businesses interested in cooperatively doing business must realize that for any kind of cooperation to succeed, the initiative and efforts must come from within, i.e., from those who will benefit from such cooperation.

ENDNOTES

1. Economic development efforts in North Dakota are carried out by local and regional economic development councils, state agencies, and trade associations such as the North Dakota Association of Rural Electric Cooperatives. Contact The Coordinator, Marketplace, HCO5, Box 107, Mandan, ND 58554 for more information related to recent rural economic development efforts in the state.

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 took over a lumber store and a grocery store which was closing. This enterprise recently reported a profit of over \$12,000 in each operation (Miller, 1996).

2. According to Anderson *et al* (1995), some of the economic solutions that a cooperative might allow are (1) to overcome high individual fixed costs by spreading fixed costs across the members, (2) increase bargaining power or purchasing power for marketing or purchasing supplies and services, (3) reduce redundant resources of the members by consolidating operations, (4) reduce risk and uncertainty by spreading risk among members, (5) improve market coordination, (6) improve quality of product or service by setting group/member standards or negotiating premium prices for quality, (7) penetrate new markets otherwise inaccessible by individuals, (8) improve access to information, and (9) overcome isolation from market or sources of needed services.
3. Due to the policy of the Institutional Review Board of the North Dakota State University, the names of these nine participants (as well as those from Sioux County) can not be disclosed.
4. For example, the Western Area Cities/Counties Cooperative (WACCO), established by 19 cities and seven counties in western Minnesota, started with sharing costly but under-used equipment and then extended its function to provide joint employee training and purchasing supplies (e.g., road salt). In New Hampshire, the New Hampshire Resource Recovery Association (NHRRA), a nationally known recycling agency and a cooperative of several municipalities and other civic and non-civic members, has been providing recycling education, technical assistance, and marketing services since 1983.

As far as cooperation among rural public entities in North Dakota is concerned, some communities have already taken steps in that direction. For instance, the City of Hettinger (pop. 1,574) in Adams County (pop. 3,174) has contractual agreements with the county government and some nearby towns (e.g., Reeder, pop. 252) to share and provide civic services, such as police protection, and water and sewer services. More recently, the towns of Drake (pop. 361) and Anamoose (pop. 277) in McHenry County (pop. 6,528) and the county government have formed a cooperative economic development agency which shares and utilizes resources from all three sources.

REFERENCES

- Anderson, B. L., B. M. Henehan, and J. R. Kelcher, 1995. *Putting Cooperatives to Work: A Handbook for Rural Businesses, Economic Development, and Planning Agencies*. Cornell Cooperative Enterprise Program, Department of Agricultural, Resource, and Managerial Economics, Cornell University, Ithaca, NY.
- Bhuyan, S., 1996a. *Trade Analysis of Retail and Service Industries in North Dakota for Planning Local Economic Development*. Agricultural Economics Report No. 363, Department of Agricultural Economics, North Dakota State University, Fargo, ND.
- Bhuyan, S., 1996b. *Potential Applications for Shared-services Cooperatives in North Dakota*. Agricultural Economics Miscellaneous Report No. 178, Department of Agricultural Economics, North Dakota State University, Fargo, ND.
- Bhuyan, S. and F. L. Leistritz, 1996. *Economic Impacts of Cooperatives in North Dakota*. Agricultural Economics Report No. AE 96009, Department of Agricultural Economics, North Dakota State University, Fargo, ND, December. (Also presented as a poster at the 1997 AAEA Annual Meetings, Toronto, Canada, July 27-30, 1997).
- Coon, R. C., J. M. Thompson, and F. L. Leistritz, 1995. *The State of North Dakota: Economic, Demographic, Public Services, and Fiscal Conditions, A Presentation of Selected Indicators*, Department of Agricultural Economics, North Dakota State University, Fargo, ND, September.
- Hamm, R. R., J. M. Thompson, J. K. Wanzek, and F. L. Leistritz, 1993. *Medical Services in North Dakota*. Agricultural Economics Statistical Series No. 52, Institute for Business and Industry Development and Department of Agricultural Economics, North Dakota State University, Fargo, ND.
- Lang, M. G., 1993. "The Cooperative Model." in *Cooperative Solutions to Rural Health Care Problems: Emergency Medical Services*, D. Gray (ed.), UC Center for Cooperatives, Davis, CA.
- Miller, P., 1996. "Keeping Main Street Alive." *Cooperative Profiles*, 3rd Quarter, published by CENEX-Land O' Lakes, Inver-Grove Heights, MN.
- NCB, 1994. *A Day in the Life of Cooperative America*. National Cooperative Bank, Washington, D.C.
- Small Business Administration (SBA), 1995. "1993 Small Business Profiles - North Dakota." in *The National Economic, Social, and Environmental Data Bank* (CD-ROM), Office of Advocacy, U.S. Small Business Administration, Department of Commerce, Washington, D.C.

APPENDIX

Appendix 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 sector	Service sector	Retail sector	Service sector	Retail sector		Service sector		Retail sector		Service sector	
					AV	Rank	AV	Rank	AV	Rank	AV	Rank
<i>North Dakota</i>	<i>4,696,871</i>	<i>1,575,711</i>	<i>4,790</i>	<i>4,221</i>	<i>1.00</i>	<i>--</i>	<i>1.00</i>	<i>--</i>	<i>638,800</i>	<i>--</i>	<i>638,800</i>	<i>--</i>
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

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Appendix Table 1 (continued)

County	Total revenue ('000 \$)		No. of establishments		CTPF				TAC			
	Retail sector	Service sector	Retail sector	Service sector	Retail sector		Service sector		Retail sector		Service 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

* Source: Bhuyan, 1996a, (ii) AV= absolute value; NA= not available; CTPF= county trade pull factor; TAC= trade area capture; CTPF Ranking= 1 implies businesses are most efficient in attracting shoppers relative to other counties; TAC ranking=1 implies its businesses received maximum patronage from shoppers relative to other counties.

Appendix 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	
					AV	Rank		Rank	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	14	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 ^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 ^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 ^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 ^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	

contd./

Appendix Table 2 (continued)

SIC	Industry	Number of establishments *	Revenue * ('000 \$)	Averagepop. served (persons)	Location Quotient		Sales goal achieved (% of expected sale)	Market Potential	
					AV	Rank		Rank	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 ^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 ^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	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

Source: Bhuyan, 1996b. Note: (i) a= includes fruit and vegetable markets, candy and confectionery vendors, dairy product stores, and misc. food stores; b= includes boat dealers, RV dealers, and motorcycle dealers; c= includes SIC 5713 (floor covering stores), 5714 (drapery, curtain, and upholstery stores), and 5719 (misc. home furnishing stores); d= includes restaurants, cafeterias, refreshment places, and other eating places; e= includes sporting goods store and bicycle shops; f= includes stores dealing with stationery, hobby, toy and game, gift, novelty and souvenir, luggage and leather goods, and sewing and needlework; g= includes furniture, home furnishing, mobile food service, books and stationery and other; (ii) Location quotient or self-sufficiency ranking= 1 being the least self-sufficient industry/business. Those ranked 15 or higher are self-sufficient (i.e., LQ> 0.75); (iii) Market potential ranking= 1 implies highest market potential given current number of establishments. Those ranked higher than 12 achieved 70 percent or more of their market potential; (iii) * = data from 1992 *Economic Census CD ROM*, Bureau of Census, U.S. Dept. of Commerce; (iv) AV= absolute value, NA= information not available to provide a value, D= not disclosed.

Appendix Table 3

Market Potential and Other Related Information on Service 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
					AV	Rank		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. ^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. ^b	14	3,496	45,629	0.11	1	10.40	2
738	Miscellaneous business services ^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

contd.

Appendix Table 3 (continued)

SIC	Industry	Number of establishments *	Revenue * ('000 \$)	Average pop. served (persons)	Location Quotient		Sales goal achieved (% of expected sale)	Market Potential	
					AV	Rank		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 ^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 ^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 ^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 ^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, orch.etc)	7	572	91,257	0.16	4	3.01	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. 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	

contd./

Appendix Table 3 (continued)

SIC	Industry	Number of establishments *	Revenue * ('000 \$)	Average pop. served (persons)	Location Quotient		Sales goal achieved (% of expected sale)	Market Potential Rank
					AV	Rank		
8042	Offices and clinics of optometrists	64	21,635	9,981	1.82	63	198.54	65
8043	Offices and clinics of podiatrists	7	1,382	91,257	0.37	16	32.63	17
8049	Office/clinic of health practitioner	31	6,543	20,606	0.57	27	48.24	29
8051	Skilled nursing care facilities	9	D	70,978	NA	NA	NA	NA
8052a	Intermediate care facilities	16	D	39,925	NA	NA	NA	NA
8052b	Nursing and personal care facilities	3	D	212,933	NA	NA	NA	NA
8062	General medical and surgical hospitals	1	D	638,800	NA	NA	NA	NA
807	Medical and dental laboratories	28	27,795	22,814	0.65	32	87.13	47
808	Home health care services	15	8,612	42,587	0.45	24	37.49	23
809	Misc health and allied services, n.e.c. ^j	16	D	39,925	NA	NA	NA	NA
81	Legal services	335	91,586	1,907	0.58	28	41.06	27
823	Libraries (part of educational services)	1	D	638,800	NA	NA	NA	NA
824	Vocational schools (incl. data proc. sch.)	5	D	127,760	NA	NA	NA	NA
8244	Business and secretarial schools	4	D	159,700	NA	NA	NA	NA
835	Child day care services	146	9,012	4,375	0.87	50	77.51	44
832	Individual and family social services	18	2,091	35,489	0.79	44	55.95	35
833	Job training, vocational rehabilitation	8	1,228	79,850	0.40	19	38.00	25
836	Residential care	21	4,900	30,419	0.65	31	50.96	31
839	Social services, n.e.c.	10	602	63,880	3.71	66	48.53	30
8711	Engineering services	65	36,708	9,828	0.33	13	25.50	13
8712	Architectural services	34	13,179	18,788	0.53	26	53.13	34
8713	Surveying services	12	1,908	53,233	0.40	18	37.93	24
872	Accounting, auditing, and bookkeeping	191	46,579	3,345	0.68	34	62.03	36
8731	Commercial physical/biological research	7	D	91,257	NA	NA	NA	NA
8732	Commercial econ, socio, educ. research	3	D	212,933	NA	NA	NA	NA
8734	Testing laboratories	20	6,695	31,940	0.73	36	63.71	38
874	Management and public relations services	92	30,880	6,943	0.33	14	24.42	11

Source: Bhuyan, 1996b. Note: (i) a=includes SIC 7299a; b= includes computer rental and leasing, maintenance and repair, and computer related services; c=includes detective agencies and protection services, armored car services, and security system services; d= includes following services: packaging and labeling, water softening and conditioning, trading stamp, convention and trade show, and private mail carrier; e= includes body repair, tire retreading and repair, automotive glass replacement, transmission repair, radiator repair, brake, front end repair and wheel alignment, carburetor repair, automotive electrical repair shops; f=includes carwashes, lubrication shops, towing, etc.; g= includes radio and TV repair, refrigeration and AC repair, and electrical/electronic repair shops; h= includes welding repair, armature rewinding, farm machinery & equipment repair, lawn mower/other small engine repair, sewer and septic tank cleaning service, and other related services; i= includes museums, art galleries, botan/zoological gardens, roller skating rinks, ice skating rinks; j= includes kidney dialysis centers and specialty outpatient facilities. (ii) Location quotient or self-sufficiency ranking = 1 being the least self-sufficient industry/business. Those ranked 38 or higher are self-sufficient (i.e., LQ>0.75); (iii) Market potential ranking= 1 implies the highest given current number of establishments. Those industries ranked higher than 37 achieved 70 percent or more of their market potential; (iv) *= data from 1992 *Economic Census CD ROM*, Bureau of Census, U.S. Dept of Commerce; (v) AV= absolute value, NA = information not available to provide a value, D= not disclosed.

Appendix Table 4

Examples of Non-agricultural Cooperative Businesses in the United States, 1995

Business sectors	Number of firms	Number of members
Food retail (e.g., IGA; Grand Forks Food Co-Op)	330+	124,000+
Food wholesale (e.g., Tucson Co-op Warehouse, Tucson, AZ; Wakefern, NJ)	NA	NA
Supermarkets (e.g., Central Coop, Seattle, WA)	20+	198,000+
Purchasing (school system, e.g., Central Purchasing of St. Paul, MN; pharmacy, e.g., Independent Pharmacy Coop of WI; hardware stores, e.g., True Value, ACE, ServiStar; government agencies, e.g., WACCO of MN; hospitals, e.g., Business Healthcare Action Gp., MN; among others.)	106+	NA
Health Care		
Shared-service hospitals / Health care provider network (e.g., Quality Health Alliance, Mankato, MN)	22+	NA
HMO (e.g., Group Health of MN, WI)	700+	NA
Community health centers (e.g., Yakima Valley Farm Workers' Clinic, Yakima, WA)		
Rural emergency medical services (e.g., Northern CA EMS, Inc.--non-profit)	NA	NA
Child care / day care (mostly parent owned) (e.g., Tyson Corner Play and Learn, Tyson Corner, VA; Lyndhurst Coop Nursery, Lyndhurst, OH)	650+	NA
Housing (including senior housing) (e.g., Homestead Housing, Inver Grove Heights, MN)	6,300+	NA
Funeral / Memorial Societies (e.g., People's Coop Funeral Home, Lone Wolf, OK)	NA	NA
Buying clubs (consumer oriented, Sam's club type)	NA	NA
Various retail / service categories , such as bookstores, antique, electronics, furniture, bakery, laundry, pharmacy, video stores, tire shop, automotive stores, among others.	NA	NA

Source: Compiled by the author from various sources, such as the National Cooperative Business Association, Washington, D.C., for distribution at the Focus Group Meetings for Cooperatives, April 15-16, 1997 in Edgeley and Fort Yates, North Dakota.