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Measuring the Economic Impact of Cooperatives in Minnesota



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I. Executive Summary

Cooperatives as a form of business have been a part of Minnesota's economic and cultural history. Its 1,026 cooperatives make it one of the leading states in the country with this form of business structure. The ability to collectively create an organizational structure to meet community needs makes them an effective tool for economic and community development.

Input-output analysis provides some measure of quantifying economic and employment impacts of businesses. With this tool, we can measure the direct effects attributable to the firm, those resulting from purchases made by the firm, and the induced effects as a result of local spending by firms attributable to the demand change resulting from the firm's actions. The study methodology measures the total impact and the impact of local ownership and a single-level taxation.

Revenue data collected from 311 respondents to a survey of Minnesota cooperatives was used for IMPLAN, an input-output economic analysis software tool. The value-added component within the IMPLAN model includes employee compensation, proprietary income, other property income, and indirect taxes. Treating the "other property income" element as "proprietary income" determines the impact of local ownership and single level taxation.

Responding cooperatives represented 44 business sectors and had 943,450 members, representing an estimated 50 percent of the total co-op membership. The 185 credit unions serve another 1,457,183 members.

The $6.07 billion in revenues generated by the 311 cooperatives and 185 credit unions result in total direct, indirect, and induced impacts of $10.89 billion in output and total employment of 79,363. Most significant, however, are the benefits attributable to local ownership and single level taxation that increases $600 million in output, employment of 7,725, and tax revenues of $210.5 million.

The benefits of local ownership and single-level taxation are also attributable to business structures such as sole proprietorships with these characteristics. Policy considerations should foster an environment conducive to development of and investment in locally owned business enterprises, such as cooperatives.

II. Introduction

Mention the word "cooperative " in rural Minnesota and the response will likely refer to the local grain elevator, agricultural supply cooperative, or rural electric cooperative. If the discussion were to go further, one might hear the name Land O' Lakes or CHS Cooperatives. Few know that the cooperative form of business also includes Ace Hardware, TruValue Hardware, Associated Press, REI, and Roundy's Inc.

Minnesota is a leading State in the nation in using the cooperative form of business with 841 cooperatives[1] and 185 credit unions (http://www.ncua.gov/data/directory/cudir.html, April 26, 2002). Cooperatives have been a part of

[1] Compilation of 2001 reregistrations of cooperatives and 2001 registrations of new cooperatives with the Minnesota Secretary of State's office.

Minnesota's historical legacy, beginning with the opening of stores in rural communities for purchasing farm production supplies in the 1860s.

What defines a business as a cooperative? The definition is not universal, but in practice is considered a democratically controlled **business** that is:

- User owned
- User controlled
- User benefited

It is often supplemented with the seven principles adopted by the International Cooperative Alliance (ICA).

ICA 7 Co-op Principles

- Voluntary and open membership
- Democratic member control
- Member's economic participation
- Autonomy and independence
- Education, training and information
- Cooperation among cooperatives
- Concern for community

Just what is the economic impact of the cooperative business structure on the State's economy and upon rural communities in particular? Having some measure of the value shows that cooperatives are an excellent tool in promoting rural economic growth and leadership development.

III. Economic Development Tool

Cooperatives provide tangible and intangible benefits to the communities in which they operate. Martin and Stiefelmeyer cite numerous examples of cooperatives and their strategic alliances enhancing the rural communities they call home.

Congress, recognizing the value of cooperatives in economic development, directed USDA's Rural Development to study the role cooperatives may fill in rural development and economic development. This report (Cooperatives and Rural Development, 1989) provides numerous examples of the variety of cooperatives that have been used to meet member and community needs. It concludes that cooperatives can be an effective economic development tool to meet challenges of market failure due to a lack of presence or the need for the provision of goods and services.

Nadeau and Wilson (Merrett and Walzer, 2001) conclude from their case studies looking at the positive and negative impacts of cooperatives on communities that "cooperative development can be an effective strategy for creating and expanding locally based businesses and for creating and retaining jobs."

IV. Evaluating Economic Impact of Cooperatives

A review of published literature on the impact of cooperatives in their community and region finds researchers have generally used either the case study approach, an analysis of the fiscal and employment impacts related to the cooperative's business, or some form of analysis to evaluate impacts.

Case Study Approach

The case study approach has been used to evaluate the community and economic impact of cooperatives. Most recent research work has studied new generation cooperatives.[2] Three reports that look at specific impacts of these cooperatives on rural communities using the case study approach are "New Generation Cooperatives: Case Studies *Expanded 2001*" (Holmes et al.), "A Cooperative Approach to Local Economic Development" (Merrett & Walzer), and "The Impact of New Generation Cooperatives on Their Communities" (Trechter et al., 2001).

"New Generation Cooperatives: Case Studies *Expanded 2001*" focuses on the developmental process, factors leading to success or failure, challenges, some discussion on lessons learned, and community impacts.

The book, "A Cooperative Approach to Local Economic Development," has targeted a number of objectives: first to provide information on new generation cooperatives and second to give its readers an approach to improving the overall economic well-being of rural communities through awareness of the cooperative form of business and how it can add value to local resources. Economic impacts are quantified in terms of annual sales and employment along with impacts of a subjective nature such as environmental concerns, access to goods, changes in communication, education, and building leadership capacity.

[2] New Generation Cooperatives have defined or limited membership, require up-front capital contribution, and have delivery rights and obligations in the form of marketing agreements tied to the up-front capital contribution. (Holmes et al, 2001).

The research objectives in the report, "The Impact of New Generation Cooperatives on Their Communities," are focused on how and why cooperatives contribute to economic development. Again, the results are more descriptive in nature with some financial, employment, and statistical data provided. The report discusses the difficulty in quantifying benefits in dollar terms and concludes, "Because the relationship between cooperatives and their communities is so important, cooperatives face the challenge of clearly documenting and describing the benefits they create, not just for their members but also for the broader community (Trechter, 2001)."

The case study method does not lend itself to quantifying the magnitude of the impacts, particularly in terms of dollars. The measures evaluated are process oriented and descriptive in nature. The research done on these cooperatives indicates they have an impact on their membership and communities. Lorendahl (1996) concluded in an earlier case analysis of six cooperatives in Sweden "a scanning of the literature shows their impact on local economic development is a neglected research problem."

Fiscal/Employment/Income Impacts

The use of fiscal or employment changes takes us a step closer to quantifying impacts. There has been no recent work examining the cooperative sector as a whole in Minnesota. In fact, until the recent reregistration of cooperatives in the State, there has been no accurate data on their number within the State.

The best informational resource using this approach has been the data collected by USDA's Rural Business-Cooperative Service in its annual survey of agricultural and ethanol cooperatives. The reports give us a fairly good state and national picture of the agricultural and cooperative sectors, but do not address housing, consumer cooperatives, and other non-agricultural cooperatives. The most recent, "Farmer Cooperative Statistics, 2000," includes 148 marketing, 154 farm supply and service, 36 rural electric cooperatives, and 35 rural credit unions in Minnesota. Gross and net business volume for these sectors by State are included.

The Centre for The Study of Co-operatives, University of Saskatchewan, used a similar approach in measuring the impact of cooperatives in the province of Saskatchewan in its report, "An Economic Impact Analysis of the Co-operative Sector in Saskatchewan, Update 1998." Its report is broader than the USDA report and includes all cooperatives and sectors. Cooperatives are grouped into the categories of agriculture and resource, community development, recreation, childcare and preschool, retail and wholesale, financial, community service, and other. The breadth of these categories and the sectors themselves reflect the importance of this business structure in community and economic development in the province. Periodic reports to the province's Department of Justice was the primary source of the data for the research report, which included financial statement data, memberships, employment and wages, and capital investment. Key statistics derived from these data indicated that the 1,306 cooperatives in the province through its 963,415 members generate $6.9 billion in revenue and directly employ 15,046 people.

Input-Output Analysis (I/O)

Input-output analysis measures economic impacts businesses have on their local economies. It is a model of the economy for a defined area such as county or State and shows how we can view the interactions and behavior in that economic region on a sector basis. It measures the flows of economic transactions. The descriptive data provided by the analysis will give us a more in depth perspective beyond the direct impacts of our interactions in the economy being studied.

The model predicts the effect a given change in output will have on final demand within the economy. These direct, indirect, and induced effects are defined as follows:

- **Direct effects** are attributable to the actions of the firm as a result of the change in final demand.
- **Indirect effects** are generated in the regional economy being studied resulting from purchases by the firm to meet the change in final demand. An example would be the inputs purchased by the firm in response to the change in production to meet the new final demand.
- **Induced effects** are the changes in local spending by households from income changes (primarily wages) as a result of the direct and indirect effects of the demand change.

These effects are expressed in the form of multipliers. **Type I** reflects the direct and indirect effects. **Type II** includes the induced effects along with the direct and indirect effects. **Social Accounting Matrix (SAM)** multipliers include direct, indirect, and induced effects. The SAM multiplier accounts for institutional trade flows and transactions within the economy such as Social Security and income tax. The output

analysis is based on the impact of changes in final demand resulting from a change in expenditures (shock) within the study area.

This analysis makes a number of assumptions regarding the economy and its reaction to the shock applied to it in the analysis (Shaffer, 1989 and Maki and Lichty 2000). Assumptions applied to the model include:

- Supply of labor and other resources are sufficient and don't change prices.
- The percentage of imports relative to the economy as a whole will not change with demand.
- Household consumption will change in direct proportion to its income.
- Production technology is known and fixed resulting in constant production coefficients.
- There are no economies of scale.
- No substitution of inputs due to price changes.

Input-output models can be constructed in several ways. The methodologies require extensive work using survey and non-survey techniques (Schaffer, 1999). For example, the North Dakota model was developed from primary survey data from firms and households in the State (Bangsund and Leistritz, 1998). Fortunately, there are several sources available that can either provide the models themselves or the tools for constructing them that do not require conducting extensive surveys. The most readily available are RIMS and IMPLAN. RIMS is a product of the Regional Economic Analysis Division of the Bureau of Economic Analysis (BEA). The BEA can construct models for states, counties and multi-county areas. IMPLAN is a product of Minnesota IMPLAN Group, Inc. (MIG). MIG markets IMPLAN as Windows-based software with the necessary databases to construct models based upon State, county, and zip code areas.

Research work to study the economic impact of cooperatives has been conducted in North Dakota using the North Dakota State model, in Wisconsin using the IMPLAN model, and in Minnesota with a single cooperative using IMPLAN. The models and approaches used have both strengths and weaknesses.

North Dakota Model

The North Dakota model was used to study the impact of cooperatives in that State in 1996 (Bhuyan and Leistritz) and again in 2001 (Coon and Leistritz). These two studies used surveys of all the cooperatives in the State to gather information on revenues, number of employees, future expansion and plans, expenses, and taxes paid. The North Dakota input-output model analyzed data to ascertain the impact of cooperatives on the State economy. Direct and indirect effects were measured.

The 2001 report estimated the economic contribution (direct plus indirect effect) from North Dakota's 337 cooperatives, 26 utility cooperatives and 62 credit unions at $5.2 billion. They provide 9,078 direct jobs and secondary or induced job creation of 42,290. Induced effects to personal income amounted to $1.9 billion (Coon and Leistritz, 2001).

The two North Dakota studies imply that if cooperative businesses did not exist, the products and services would neither be provided nor exist in the economy. This assumption does not compare one business structure with another.

A third study conducted on the sugar beet sector used the North Dakota model. This 1998 report, "Economic Contribution of the Sugarbeet Industry to North Dakota and Minnesota (Bangsund and Leistritz)," measured the direct and indirect impacts of the sugar beet sector in both states including the production stage. Total economic activity (direct and indirect) was estimated at $2.3 billion for both states with about 55 percent attributed to Minnesota. Direct and indirect impacts in the household sector were $350 million and $496 million, respectively. This study linked the production and processing impacts, for without each other neither would exist, as there are no processing facilities in the region.

IMPLAN I/O Analysis

A recent University of Wisconsin Center for Cooperatives report, "Assessing State and Community Impacts of Agricultural and Rural Cooperatives," (Zeuli, 2002) was based upon the social accounting matrix (SAM) using IMPLAN. The report found 17,413 fulltime and 6,021 part-time jobs directly created by the 798 cooperatives in the State. When multiplier effects are considered, this translates into support for nearly 30,000 full-time jobs. Sales generated by the cooperatives totaled $5.5 billion in the State.

To distinguish the impact of the cooperative organizational structure from other forms of business, the economic impact of the cash patronage refunds[3] distributed in the State was estimated. When the refunds are measured, the direct effects amounted to $11.1 million, resulted in the support of 4,637 jobs and generated over $114 million in income (Zeuli, 2002). The

[3] The cash portion returned to patrons based upon the amount of business done with the cooperative.

authors noted the methodology did not account for the organizational structure and differentiate the impacts that may be attributed solely to the structure itself.

The IMPLAN model has also been used to measure the economic impact of individual cooperative projects. For example, Golden Oval Eggs in Renville, MN, was found to have direct economic impacts of $51,035,000 and total direct, indirect, and induced impacts of $60,425,073 (Merrett, Holmes, Walzer, Brown. 2002).

V. Hypothesis and Research Methodology

Hypothesis

The economic value of cooperatives as measured by employment, revenues or business volume, and net income can be measured. The question unanswered is whether the structure or form of business results in a different level of economic impact in the community or region. This study suggests that cooperatives, by nature of their being locally owned and having benefits accrue to the local member-owners, result in a higher level of impact than businesses such as a corporations where benefits (dividends) are mainly distributed outside the community and local ownership is missing.

Research Methodology

RIMs and IMPLAN modeling tools use the most current economic data. IMPLAN, however, provides additional flexibility in use and the ability to work with the value- added component of the economy. It divides the value-added component into four sub components of 1) employee compensation, 2) proprietary income, 3) other property type income, and 4) indirect business taxes. Employee compensation is wage and salary payments including benefits; proprietary income consists of self-employed individuals; other property type income consists of royalty payments, rents and dividends including corporate profits and dividends; and indirect business taxes consist primarily of sales and excise taxes.

To determine the impact of the cooperative business structure compared with the traditional investor-owned firms, some assumptions and understanding of the tax treatment and characteristics of cooperatives is essential.

Cooperatives, like other business models, pay taxes. Contrary to some perceptions they pay property, sales, employment, and income taxes. Income taxes are paid at the ownership level, providing a single-level taxation, much like other business models such as sole proprietorships, partnerships, sub-chapter S corporations, and limited liability companies.

Cooperatives are subject to the single level taxation for member-derived income and, in the case of some agricultural cooperatives, the nonmember income. Non-member-derived income is taxed at both the organizational and ownership levels much like a regular C corporation for all other situations.

Cooperatives are unique from other business structures in that the earnings are not distributed based upon investment, but rather on the use or amount of business the owner / member conducts with the cooperative. Cooperatives are locally owned and the patronage or dividends received are spent locally similar to profits in a sole proprietorship.

Proprietary income in the IMPLAN model is treated as if it were all spent locally, or within the region, and with single-level taxation. This would be the same as treating patronage dividends as being spent locally and with a single level of taxation in the first round of spending. Within the IMPLAN model, "other property income" is like subject to corporate-level taxation with a leakage of revenues out of the region. The assumed leakage is for payment to non-local investors who are not a part of the local economy defined by the IMPLAN model. Treating cooperatives in the model as if they were sole proprietorships will show the benefits attributable to the cooperative business form.

The economic impact as measured by sector sales will be applied to the model twice. The first measures impacts using IMPLAN's default values for proprietary and property income for the sectors and region being studied. The second application will be performed with the value-added components modified by treating "other property income" as if it were all proprietary income. This comparison will demonstrate whether local ownership and single level taxation have an impact on a local economy.

A survey of cooperatives in the State was conducted. The survey requested information necessary to provide the input data into the input-output model. Key data consisted of revenues by sector within the

[4] Gross revenues for regional cooperatives and others with earnings generated outside of Minnesota were reduced by the amount of Out of State earnings. Gross revenues were also reduced by intercooperative transactions to eliminate double counting.

state. The survey was sent to all registered cooperatives with a series of followup procedures for those who did not respond. A copy of the survey and the cover letter are included in Appendix A. Sector data were compiled for the model.[4]

A careful review of survey responses eliminated the potential for double counting, particularly for inter-cooperative transactions.

Data produced and reported includes jobs, wage, and salary income plus total income tax flows.

VI. Cooperative Minnesota Survey

In 1999, a list of 2,770 cooperatives registered in the State was obtained from the Secretary of State's office. The list, however, did not contain current information. Cooperatives at the time were not required to periodically reregister. Consequently, unless the Secretary of State's office was notified, it had no way of knowing if the registered contact information was current or even if the cooperative was in business.

Backed by the Secretary of State's office and the Minnesota Association of Cooperatives, a periodic reregistration requirement was passed by the Minnesota legislature. The first required reregistration was conducted during 2001. Copies of the submitted reregistration forms were obtained from the Secretary of State's office and formed the core of the database of cooperatives. Added to the reregistrations were cooperatives that had filed incorporation documents from July 7, 1999 to Sept. 10, 2001.

The initial database of 880 names was reduced to 868. The survey (Exhibit A) was mailed on June 28, 2002 with cover letter from Minnesota Association of Cooperatives. Results were compiled by USDA Rural Development.

One hundred forty-five valid surveys were returned. Sixteen were no longer in business, and 5 were not cooperatives. Forty-one of those who did not reregister, but were included in the registration filings from the time period July 7, 1999 to Sept. 10, 2001, were returned "addressee unknown."

Follow-up phone calls were made to the non-respondents with telephone numbers. The calls focused on obtaining correct contact information, membership numbers, sales information, and sector data.

A follow-up mailing was conducted with those cooperatives for whom correct addresses could be found and for which we did not have phone numbers. The number of active cooperatives in the State is 841 plus 185 credit unions for a total of 1,026. This is based on the information from the Secretary of State reregistrations adjusting for known changes such as dissolutions, cooperatives known to still be operating and did not reregister and those not required to reregister in 2001.

The Secretary of State's office posted a listing of dissolved cooperatives based upon the reregistrations. A number of cooperatives listed as dissolved were still operational. Some failed to reregister and some were errors in the reregistration process. Refinement and updating of the list of registered cooperatives is in progress.

Credit unions were not surveyed. Data for the period ending December 2001 for the credit unions were taken from the National Credit Union Administration (NCUA) data posted web site *(http://www.ncua.gov/data/custmqry.html).*

VII. Economic Impact Analysis

A total of 429 cooperatives provided full or partial responses from the initial mailing, the subsequent mailing and followup phone calls. These cooperatives represent 44 of the 528 sectors in the IMPLAN industrial sector classification scheme.

Cooperatives provide products and services for agricultural marketing/supply, agricultural processing, electric, telephone, housing, debt collection, shared purchasing, health care, funeral home, water supply, recreational products, food, educational services, rural fire protection, worker owned businesses, and craft marketing.

Minnesota's 429 cooperatives have 943,450 members.

Gross revenues, including those derived from operations outside of the State, were obtained from 311 cooperatives and amounted to $18.4 billion. Adjustments to eliminate out-of-state revenues and inter-cooperative transactions reduce the gross revenues of the respondents, for the purpose of determining economic impact, to $6.47 billion. The 311 were: 189 agricultural (supply, marketing, production and processing), 49 utility (electric, telephone, TV and radio), 24 housing, and 20 food cooperatives.

Minnesota's 185 credit unions regulated by the NCUA form that database. They generated $743,856,020 in revenues, employed 4,112 employees, and served 1,457,183 members in 2001.

Table 1—IMPLAN sectors represented by survey respondents

7	HOGS, PIGS AND SWINE	26	AGRICULTURAL, FORESTRY, FISHERY SERVICES
27	LANDSCAPE AND HORTICULTURAL SERVICES	48	NEW RESIDENTIAL STRUCTURES
49	NEW INDUSTRIAL AND COMMERCIAL BUILDINGS	55	MAINTENANCE AND REPAIR, RESIDENTIAL
58	MEAT PACKING PLANTS	59	SAUSAGES AND OTHER PREPARED MEATS
60	POULTRY PROCESSING	61	CREAMERY BUTTER
62	CHEESE, NATURAL AND PROCESSED	64	ICE CREAM AND FROZEN DESSERTS
65	FLUID MILK	70	FROZEN FRUITS, JUICES AND VEGETABLES
72	FLOUR AND OTHER GRAIN MILL PRODUCTS	76	CORN MILLING
78	PREPARED FEEDS, N.E.C	79	BREAD, CAKE, AND RELATED PRODUCTS
81	SUGAR	138	WOOD KITCHEN CABINETS
210	PETROLEUM REFINING	435	MOTOR FREIGHT TRANSPORT AND WAREHOUSING
440	TRANSPORTATION SERVICES	441	COMMUNICATIONS, EXCEPT RADIO AND TV
442	RADIO AND TV BROADCASTING	443	ELECTRIC SERVICES
447	WHOLESALE TRADE	449	GENERAL MERCHANDISE STORES
450	FOOD STORES	451	AUTOMOTIVE DEALERS & SERVICE STATIONS
455	MISCELLANEOUS RETAIL	456	BANKING
457	CREDIT AGENCIES	459	INSURANCE CARRIERS
460	INSURANCE AGENTS AND BROKERS	461	OWNER-OCCUPIED DWELLINGS
462	REAL ESTATE	463	HOTELS AND LODGING PLACES
464	LAUNDRY, CLEANING AND SHOE REPAIR	467	FUNERAL SERVICE AND CREMATORIES
479	AUTOMOBILE REPAIR AND SERVICES	482	MISCELLANEOUS REPAIR SHOPS
489	MEMBERSHIP SPORTS AND RECREATION CLUBS	497	OTHER EDUCATIONAL SERVICES
501	RESIDENTIAL CARE	502	OTHER NONPROFIT ORGANIZATIONS
506	ENGINEERING, ARCHITECTURAL SERVICES	508	MANAGEMENT AND CONSULTING SERVICES

Table 2—Business Sector Capture ($ in millions)

Sector	Total Revenue[5]	Cooperative portion[6]	Percentage cooperative
Dairy	$3,261.93	$3,077.87	94
Sugar	$761.59	$728.00	96
Electric	$6,320.68	$514.54	8
Banking	$13,089.27	$678.60	5
Soybean milling	$554.37	$81.26	15

[5] IMPLAN, 1999 Database, sum of industry output and total value added.
[6] USDA, Rural Business-Cooperative Servive publication, “Farmer Cooperative Statistics, 2000.” and survey data.

Table 3—Overall Economic Impacts ($ in millions) of the 311 respondents

Entity Type	Total Output Impactst	Indirect Output Impacts	Induced Output Impacts	Direct Impacts	Total Employment Impact	Direct State and and Local Tax Impact	Indirect State and Local Tax Impact
Co-op	$10,890	$2,267	$1,901	$6,721	79,363	$146	$476
Non-coop	$10,290	$2,267	$1,301	$6,721	71,638	$116	$442
Difference	$600	$0	$600	$0	7,725	$30	$34

Table 2 shows examples where cooperatives represent a significant portion of the business activity in some business sectors.

Overall Economic Impacts

The sum of the $6.47 billion in revenues from the survey respondents and the $0.74 billion in credit union revenues reduced by the default values for non-local portion of the trade flows results in $6.07 billion in revenues to be applied to the Implan model. Applying the $6.07 billion in revenues to a normal mix of business structures including corporations, partnerships, limited liability companies, cooperatives and sole proprietorships in the Implan model enables us to ascertain the economic impact of local ownership and tax implications of the cooperative business structures. The results are summarized in Table 3.

Direct output impacts for the 311 cooperatives and 185 credit unions are $6.721 billion. Using the SAM multiplier, they in turn generate indirect and induced impacts totaling $10.89 billion within the Minnesota economy. Direct employment generated is estimated at 45,922 with direct, indirect, and induced employment generated estimated at 79,363. These estimates are based upon the first round of spending (direct impacts) being 100 percent local and with a single level of taxation, a characteristic of cooperatives and sole proprietorships.

The benefits of the local ownership amount to $600 million in total economic impacts, an increased level of employment of 7,725 jobs and State and local tax impacts of $64 million.

Housing Cooperatives

Though not all housing cooperative respondents provided revenue information, unit data was provided and obtained for 91 housing cooperatives totaling 5,064 housing units. It is estimated there may be as many as 230 housing cooperatives in the State based upon a review of the non-respondents and communication with organizations associated with cooperative housing. Housing cooperatives were treated as owner-occupied housing in the IMPLAN analysis. Owner-occupied housing generates no indirect impacts, induced impacts or employment impacts. This is different from the construction of housing, which does generate economic impact.

Agricultural Sector

It is estimated there are 347 agricultural cooperatives.[7] One hundred eighty-nine responded to the survey and reported $5.455 billion in revenues. These 189 cooperatives generate $8.4 billion in economic impacts.

The USDA Rural Business-Cooperative Service publication, "Farmer Cooperative tatistics, 2000," gathered data on 305 agricultural cooperatives for the year 1999 and reports net business volume of $9.3 billion.[8] The net business volume has been adjusted for inter-cooperative transactions and non-local activities. Data is summarized in Table 4.

Due to the cooperative types not matching fully with the Implan sectors an input output analysis of

[7] Estimate is based upon the author's review of the list of agricultural cooperatives maintained by USDA Rural Business-Cooperative Service (1999), respondents to the survey, and personal knowledge of the cooperatives comprising the database of reregistered cooperatives.

[8] Data covering operations of cooperatives, whoe businesss years ended in calendar 1999, includes independent local cooperatives, federations, centralized regionals, and those with mixed organizational structures. Products marketed were allocated to the States in which they were originated and farm supply sales were allocated to the States in which they were sold; service volume and other income were allocated to the States of origin when services related to farm products marketed or to the State of destination when related to farm supplies sold. Gross business volume includes sales between cooperatives while net business volume excludes such sales.

Table 4—Summary of USDA cooperative data for Minnesota ($ in thousand)

Cooperative type	Number	Members	Gross business volume	Net business volume	IMPLAN Sectors
Dairy	35	17,097	$3,538,065	$3,077,872	61,62,64,65
Fruit & Vegetable	3	221	$1,680	$1,680	447
Grain & Oilseed	94	52,651	$3,028,311	$2,162,165	447
Sugar	3	2,467	$728,081	$728,081	81
Misc. Mktg.	5	11,069	$920,260	$810,166	447
Total Marketing	**143**	**85,225**	**$8,571,499**	**$7,082,996**	
Crop Protectants			$323,664	$263,001	447
Feed			$604,214	$420,152	447
Fertilizer			$609,418	$358,865	447
Petroleum			$712,220	$543,442	447
Seed			$64,306	$48,170	447
Misc.			$262,306	$222,648	447
Farm Supply	**142**	**96,651**	**$2,576,129**	**$1,856,279**	
Services	**20**	**5,026**	**$366,614**	**$366,614**	26
Total	**305**	**186,902**	**$11,514,242,000**	**$9,305,888,000**	

Source: USDA Rural Business-Cooperative Service publication, "Farmer Cooperative Statistics, 2000"

Table 5—Credit Union Impacts

Entity Type	Total Output Impacts	Indirect Output Impacts	Induced Output Impacts	Total Employment Impact	Total State and Local Tax Impact
Credit union	$1,059	$146	$234	6668	$133
Banking Sector	$936	$146	$111	5087	$90
Difference	$123	$0	$123	1581	$43

this data creates a best guess estimate. The author's best estimate of the total economic impact of agricultural cooperatives in the State using the USDA data is $17.257 billion with $647 million attributable to the cooperative business structure.

Another approach to estimating the total impact of the agricultural cooperatives is to extrapolate from the survey results of the 311 cooperatives. The number of agricultural cooperatives responding to the survey represents 55 percent of the estimated number of agricultural cooperatives in the State and about 58 percent of the known net revenues of the agricultural cooperatives in the State. Assuming the non-respondents are similar in type and income as the respondents and one adjusts for the non-responses, about $14.5 billion in economic impact would be realized by the agricultural cooperatives and a benefit attributable to the agricultural cooperative business structure of $439 million.

Credit Unions

The 185 credit unions generate total economic impact of $1.059 billion. The benefit of local ownership translates into $123 million when compared with the rest of the banking sector.

Electric Cooperative Impacts

Minnesota has 43 electric distribution cooperatives and 3 generation and transmission cooperatives

Table 6—Electric Cooperative Impacts ($ in million)

Entity Type	Total Output Impacts	Indirect Output Impacts	Induced Output Impact	Total Employment Impact	Total State and Local Tax Impact
Credit union	$1,059	$146	$234	6,668	$133
Electric Co-op	$1,043	$74	$257	5,431	$196
Non-coop	$876	$74	$90	3,283	$138
Difference	$167	$0	$167	2,148	$58

(GTE). The GTE's provide power to the distribution cooperatives. Thirty-eight of the distribution cooperatives responded to the survey and reported revenues of $715,866,000. Revenues of the GTE cooperatives are not included in the IMPLAN analysis to avoid double counting. The impact of the power generation is captured in the indirect effects of the 39 distribution cooperatives, which serve 516,600 members.

This report does not address the aspect that if not for the cooperative form of business in some areas the services would not be available to community members. Rural electric cooperatives that were formed in the early part of the 20th century are a prime example of providing service in rural areas not served by investor-owned firms. Consideration of this aspect would increase overall impacts.

Tax impacts

The ability to keep the dividend and other property-type income within the local economy, in this case the State of Minnesota, increases the level of household expenditures and employee compensation as a result of the employment generated by the increase in household expenditures. The result is an increase in State and local tax revenue due to household expenditures of $43.1 million and State and local tax revenue from increased employee compensation of $351 thousand. Indirect business taxes increase by $33.5 million while enterprise (corporate) taxes decline by $13.1 million. The bulk of the corporate tax decline is in corporate profit taxes. Appendixes B and C detail the tax impacts.

The net increase in tax revenues counters the perception that there is a loss in revenue due to single-level taxation with the cooperative business structure.

VIII. Summary

The analysis used as a tool provides some measure of quantifying economic and employment impacts of Minnesota's cooperative businesses and in particular the impact of local ownership and a single level taxation.

The economic impact (direct, indirect, and induced) from the 311 cooperatives and 185 credit unions totals $10.89 billion and total estimated direct, indirect, and induced employment of 79,365.

The net gain to the economy of the local ownership and single-level taxation as a result of the nature of the cooperative business structure is $600 million. A net gain in tax revenue of $210.5 million and 7,725 jobs is also realized. The 311 cooperatives represent slightly more than one-third of the cooperatives in the State.

The benefits are attributable to local ownership and single-level taxation and being able to retain the economic benefits, primarily in the form of profits and dividends, within the local community. These are normal characteristics of cooperative and sole proprietorships. However, they may at times also be characteristics of other business structures such as limited liability companies, partnership, and S corporations.

The results of this research demonstrate the value of locally owned businesses. Policy considerations should foster an environment conducive to the development and investment in local business enterprises by community members. These policy considerations include:

- Providing technical and financial resources for entrepreneurial business development that engage members of the community in local business development.

- Supporting infrastructure that helps to develop and grow locally owned businesses such as the small business development centers, business incubators, community development financial institutions, and the various cooperative development programs.
- Developing and supporting programs that improve the access to equity capital for locally developed projects from local investors. This could include the removal of the 8 percent cap on the payment of dividends on capital stock for cooperatives and creation of a market forum for local investors and businesses.[9]
- Tax incentives or credits for local investors for local investments modeled after those now available for investments made in designated communities such as renewal communities and the empowerment and enterprise zones.
- Supporting cooperative and / or collaborative purchasing alliances can reduce the cost of purchasing non-local goods and services. This has been very effective for schools, non-profit organizations, and local governments in a number of Minnesota rural communities.
- Using cooperative models to reduce costs and provide access to services that are either unavailable or at high cost such as cooperative and / or collaborative purchasing alliances for healthcare insurance and wellness programs.

These are just a few ideas for consideration and discussion that have the potential to increase local investment within local communities and foster local community development.

[9] Minnesota statute 308.131 limits the dividend paid on capital stock to 8 percent thereby limiting a cooperative's access to equity capital where market and associated risk factors demand a higher return than 8 percent.

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APPENDIXES

Appendix A, Survey Cover Letter and Survey

Economic Impact of Cooperatives

A Study by USDA Rural Development

Information in the box below (with the exception of email address) will go into a public directory. Please correct any inaccurate information. An explanation of terms is on the back of this page.

Name of Cooperative:		
Type of Cooperative:		Open / Closed membership (circle one)
Board President:		
General Manager / Contact:		
Main Address:		
Telephone:	Web Page:	
Fax:	Email contact (confidential):	

ALL ANSWERS BELOW WILL BE KEPT STRICTLY CONFIDENTIAL — Use most recent fiscal year

1.	Membership: a. Total	b. Minnesota	
2.	Annual Meeting Month		
3.	a. Total assets	b. Total liabilities	
4.	Gross Sales		
5.	Expenditures: a. Operating	b. Capital	
6.	Percentage of Expenditures Paid to Minnesota Firms & Employees		

7. Please List up to 5 Primary Products / Services Provided By Your Cooperative :

	Product / Service (SIC / NAICs code if known)	Percentage of total sales associated with products / services (total should equal 100%)
a.		
b.		
c.		
d.		
e.		
f.	Other	
	Total	100%

8.	Net Margin (Before Income Taxes and Distributions)	
9.	Unallocated equity retained for the year	
10.	Cash Patronage Paid for the Year within MN	
11.	Member equity revolved or paid out to MN members for the year	
12.	Patronage Retained for the Year within MN	
13.	Federal Income Taxes	
14.	Minnesota Income Taxes	
15.	Number of Full-Time Employees in Minnesota	
16.	Number of Part-Time Employees in Minnesota	
17.	Wages, Salaries & Benefits Paid in Minnesota	
18.	Estimated Number of Hours Employees and Directors Donate To Community Service and Community Activities	

Please check this box if you would like a copy of the study's summary results.

Thank you  for taking the time to complete this survey.

Name of Cooperative- provide the legal name of the cooperative

Type of cooperative- for example: ag supply, ag marketing, dairy, housing, electric, worker, consumer, and ag processing. If not sure, list products/services provided to the membership

Open/closed membership- please indicate if membership is open or if the cooperative has a defined or limited number of members.

Board President- provide the name of the cooperative's board president or chairperson.

General Manager/contact- provide the name of the general manager, CEO, or organizational contact

Main address- provide the legal or primary mailing address for the cooperative.

Telephone- provide the telephone number for the organization or organizational contact.

Web page- please provide the web address/URL if the cooperative has a website.

Fax- provide a fax number, if any for the cooperative or organizational contact.
Email contact- provide the e-mail address of the cooperative's key contact.

1a. Total membership- provide the total number of members. If a regional or federated cooperative provide a separate number for member cooperatives and individual members.

1b. Minnesota membership- provide the number of members based in Minnesota. If a regional or federated cooperative, provide a separate number for member cooperatives and individual members.

2. Annual meeting month- indicate the month of the annual meeting.

3a. Total assets- provide the dollar value of total assets based upon the year end balance sheet from the last completed fiscal year.

3b.Total liabilities- provide the dollar value of total liabilities not including equity based upon the year-end balance sheet from the last completed fiscal year.

4. Gross sales- provide gross sales from the last complete fiscal year-end income statement.

5a. Operating expenditures- provide gross sales from the last complete fiscal year end income statement.

5b. Capital Expenditures- provide the total capital expenditures from the last completed fiscal year. Contained in Statement of Cash Flows on the year-end financial statement, Cash Provided By (Used In) Investing Activities.

6. The percentage of line 5 paid to Minnesota firms and employees- estimate this percentage if it is not readily available.

7. Primary products and services provided by your cooperative- please list up to 5 primary products/services your cooperative provides to members. If the NAICS or SIC code is known provide it. The percentage should be based upon annual sales. The total should equal 100%. Products/services making up small percentage of sales should be listed under Other.

8. Net margins earned or net profit-provide net margins or profits earned.

9. **Unallocated equity retained for the year-** provide the dollar amount of retained unallocated equity earned for the past year.

10. **Cash Patronage Paid for the Year within MN-** provide the dollar amount of allocated cash patronage paid on earnings from the past year.

11. **Member equity revolved or paid out to MN members for the year-** provide the dollar amount of member equity retained form prior years (not including he most recent year) revolved or paid back to members.

12. **Patronage Retained for the Year within MN-** Provide the dollar amount of allotted patronage retained form the most recent year's earnings.

13. **Federal Income Taxes-** enter the amount paid for the most recent year.

14. **Minnesota Income Taxes-** enter state taxes paid for the most recent year.

15. **Number of Full-Time Employees in Minnesota-** provide the average number of full-time employees employed in Minnesota.

16. **Number of Part-Time Employees in Minnesota-** provide the average number of full-time employees employed in Minnesota.

17. **Wages, Salaries & Benefits Paid in Minnesota-** provide total wages, salaries and benefits paid to full-time and part-time employees employed in Minnesota the past year.

18. **Estimated Number of Hours Employees and Directors Donate To Community Service and Community Activities-** provide and estimate of the number of hours of service to community by employees and directors. Include uncompensated volunteer time for board meetings.

TAX IMPACT

November 22, 2002

IMPACT NAME: non cooperative MULTIPLIER: Type SAM

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		Employee Compensation	Proprietary Income	Household Expenditures	Enterprises (Corporations)	Indirect Business Taxes	Total
	Transfers	2,067,588					2,067,588
Enterprices *(Corporations)*	Total	2,067,588	0	0	0	0	2,067,588
	Corporate Profits Tax				95,480,345		95,480,345
	Indirect Bus Tax: Custom Duty					13,235,720	13,235,720
Federal	Indirect Bus Tax: Excise Taxes					45,222,042	45,222,042
Government	Indirect Bus Tax: Fed NonTaxes					10,891,895	10,891,895
NonDefense	Personal Tax: Estate and Gift Tax						0
	Personal Tax: Income Tax			235,782,844			235,782,844
	Personal Tax: NonTaxes (Fines- Fees)			2,379,120			2,379,120
	Social Ins Tax- Employee Contribution	127,089,379	14,427,032				141,516,411
	Social Ins Tax- Employ-er Contribution	132,107,710					132,107,710
	Total	259,197,089	14,427,032	238,161,964	95,480,345	69,349,656	676,616,086
	Corporate Profits Tax				20,561,437		20,561,437
State /	Dividends				228,205		228,205
Local	Indirect Bus Tax: Motor Vehicle Lic					6,641,900	6,641,900
Govt							

Continued

Appendix B, Non Cooperative Tax Impact (Continued)

TAX IMPACT

November 22, 2002

IMPACT NAME: non cooperative MULTIPLIER: Type SAM

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		Employee Compensation	Proprietary Income	Household Expenditures	Enterprises (Corporations)	Indirect Business Taxes	Total
NonEdu-cation	Indirect Bus Tax: Other Taxes					17,956,746	17,956,746
	Indirect Bus Tax: Property Tax					173,351.241	173,351.241
	Indirect Bus Tax: S/L Non Taxes					47,656,558	47,656,558
	Indirect Bus Tax: Sales Tax					196,533,164	196,533,164
	Indirect Bus Tax: Severance Tax					89,097	89,097
	Personal Tax: Estate and Gift						0
	Personal Tax: Income Tax			77,597,015			77,597,015
	Personal Tax: Motor Vehicle Licence			5,763,712			5,763,712
	Personal Tax: NonTaxes (Fines- Fees)			5,424,571			5,424,571
	Personal Tax: Other Tax (Fish/Hunt)			1,569,868			1,569,868
	Personal Tax: Property Taxes			1,271,936			1,271,936
	Social Ins Tax- Employee Contribution	741,192					741,192
	Social Ins Tax- Employer Contribution	3,003,777					3,003,777
	Total	3,744,969	0	91,627,102	20,789,642	442,228,706	558,390,419
	Total	265,009,645	14,427,032	329,789,066	116,269,987	511,578,363	1,237,074,092

TAX IMPACT

November 22, 2002

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		Employee Compensation	Proprietary Income	Household Expenditures	Enterprises (Corporations)	Indirect Business Taxes	Total
Enterprices *(Corporations)*	Transfers	2,261,189					2,261,829
	Total	2,261,189	0	0	0	0	2,261,189
	Corporate Profits Tax				35,426,855		35,426,855
	Indirect Bus Tax: Custom Duty					14,240,443	14,240,443
Federal	Indirect Bus Tax: Excise Taxes					48,654,847	48,654,847
Government	Indirect Bus Tax: Fed NonTaxes				11,718,698	11,718,698	
NonDefense	Personal Tax: Estate and Gift Tax						0
	Personal Tax: Income Tax			348,483,562			348,483,562
	Personal Tax: NonTaxes (Fines- Fees)	3,516,304		3,516,304			
	Social Ins Tax- Employee Contribution	139,028,871	77,472,199				216,501,070
	Social Ins Tax- Employer Contribution	144,518,653					144,518,653
	Total	283,547,523	77,472,199	351,999,866	35,426,855	74,613,988	823,060,432

Continued

Appendix C, Cooperative Tax Impact (Continued)

TAX IMPACT

November 22, 2002

IMPACT NAME: cooperative MULTIPLIER: Type SAM

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		Employee Compensation	Proprietary Income	Household Expenditures	Enterprises (Corporations)	Indirect Business Taxes	Total
	Corporate Profits Tax				7,629,079		7,629,079
	Dividends				84,673		84,673
	Indirect Bus Tax: Motor Vehicle Lic					7,146,086	7,146,086
State / Local	Indirect Bus Tax: Other Taxes					19,319,843	19,319,843
Govt	Indirect Bus Tax: Property Tax					186,510,333	186,510,333
Non-							
Education	Indirect Bus Tax: S / L NonTaxes					51,274,167	51,274,167
	Indirect Bus Tax: Sales Tax					211,451,995	211,451,995
	Indirect Bus Tax: Severance Tax					95,860	95,860
	Personal Tax: Estate and Gift Tax						0
	Personal Tax: Income Tax			114,135,842			114,135,842
	Personal Tax: Motor Vehicle License			8,477,724			8,477,724
	Personal Tax: NonTaxes (Fines- Fees)			7,926,120			7,926,120
	Personal Tax: Other Tax (Fish / Hunt)			2,308,857			2,308,857
	Personal Tax: Property Taxes			1,858,492			1,858,492
	Social Ins Tax- Employee Contribution	810,823					810,823
	Social Ins Tax- Employer Contribution	3,285,969					3,285,969
	Total	4,096,792	0	134,707,035	7,713,751	475,798,285	622,315,864
	Total	289,906,144	77,472,199	486,706,901	43,140,606	550,412.2	1,477,638.125

U.S. Department of Agriculture

Rural Business–Cooperative Service

Stop 3250

Washington, D.C. 20250-3250

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The cooperative segment of RBS (1) helps farmers and other rural residents develop cooperatives to obtain supplies and services at lower cost and to get better prices for products they sell; (2) advises rural residents on developing existing resources through cooperative action to enhance rural living; (3) helps cooperatives improve services and operating efficiency; (4) informs members, directors, employees, and the public on how cooperatives work and benefit their members and their communities; and (5) encourages international cooperative programs. RBS also publishes research and educational materials and issues *Rural Cooperatives* magazine.

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