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# **Co-operatives, Credit Unions and Social Engagement in Canada**

**Undergraduate Student Paper**

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### **Abstract**

Co-operatives serve as engines for local economies; generating and retaining local wealth, operating through existing social networks within communities and providing economic opportunities for local people. Is there a correlation between levels of social engagement and the presence of co-operatives and credit unions? Using the Statistics Canada GSS survey, 2003 and Environics Analytics, Business Locations data it is possible to assess the linkages between social engagement and the presence of co-operatives in Canada. Linkages between demographics (including the breakdown of rural/urban co-operatives and credit unions) and social engagement we isolated volunteerism as a dependant variable in logit regressions. It was established that: across Canada, the older people are, if an individual is female, the larger her or his household is, the less TV he or she watches, the more she or he uses internet, the higher the rate of highschool graduation, the more trusting people are of their neighbours, the more rural an area is, the more fully employed people are, the less likely they are to say no to volunteerism. Although, in all provinces the rural areas have higher levels of social engagement, social engagement is not a direct indicator for the existence of higher levels of co-operative businesses.

## **Acknowledgements**

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## **Introduction**

It has long been recognized that social engagement is critical to motivating and improving the economic and social well-being of communities (Putnam, 1995). Co-operatives and credit unions, serve as engines for local economies; providing goods and services, generating and retaining local wealth, operating through existing social networks within communities and providing economic opportunities for local people. Co-operatives and credit unions (financial co-operatives) are “autonomous associations of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise.” (International Cooperative Association, 2007). The nature of co-operatives suggests that in communities with higher levels of social engagement, there might be increased numbers of co-operatives and credit unions. The aim of this paper is to examine if there is a correlation between levels of social engagement and the presence of co-operatives and credit unions in Canada, by province. This issue is particularly germane in the context of rural Canada, where there are serious concerns about rural depopulation, provision of social services and there was a traditional allegiance to the co-operative model. The existence of a recent Statistics Canada survey (GSS, 2001) on the levels of social engagement across the country provides an opportunity to examine possible links between the existence of co-operatives and credit unions and social engagement.

## **Background**

The exit of large co-operative organizations from Canadian agriculture has been occurring at an alarming rate. At the time of this paper, a large proportion of co-operative grain processors, poultry processors and agricultural input suppliers have been

transformed into investor owned firms. Major Canadian players who have ceased to be co-operative organizations include: United Grain Growers, the Alberta Wheat Pool, Saskatchewan Wheat Pool, Dairyworld (Agrifoods International Co-operative) and Lilydale (Goddard 2002, p. 473). All of these Canadian players transformed themselves into investor owned firms over a twenty year period. To put this in context, United Grain Growers had operated as a co-operative business since 1912 (University of Manitoba 2007). Reasons for the declining presence of co-operatives in the rural landscape include: better technology and marketing tools in the hands of farmers, horizon problems that have arisen as a result of poor life cycle planning by traditional cooperatives, implications of property rights issues associated with withheld member equity and a lack of transferability inherent in the model (Cook 1995). Other arguments discuss global consolidation in agri-food business and the need for significant capital infusions to compete with multinationals as a strong catalyst (Goddard 2002, p. 473).

The Canadian government has invested heavily in the survival of the co-operative business model. A federal Co-operative Secretariat was established in 1987 to respond more effectively to the needs and concerns of co-operatives (Co-operative Secretariat 2007). As of 1999, Canada's Co-operative Act was put in place. This new legislation "... provides co-operatives with greater flexibility in responding to the demands of the competitive domestic and global marketplace" (COBSC 2007). The federal government has also invested in a New Generation model of co-operative enterprise. Proponents of this model claim it addresses many of the perceived weaknesses that were identified within the structure of the traditional co-operatives. Despite the introduction of this legislation, very little growth has actually occurred on the rural co-operative front. In the

period of 1999 to 2003, the decline of cooperative market share in the agricultural sector has been staggering. In three important areas where traditional co-operatives had built a strong market presence; dairy, fertilizer and chemicals and grains and oilseeds, there were percentage declines in market share of 40.9%, 47.5%, and 55% respectively (Figure 1). It should be noted that there have been comparatively small scale gains in other sectors of the co-operative industry, notably: honey, poultry and egg production.

These declines come during a time when realized national farm income is at its lowest level in decades (Figure 2). Although the scaling up of smaller production systems into large corporate run farms has definitely put pressure on the ability of smaller communities to value add to their agricultural production operations, the recent transformations of large scale agricultural co-operatives into investor owned firms seems to indicate that other factors must be at play besides economies of scale. To complicate matters, trends indicate that cooperatives in urban areas have been increasing, though many of these co-ops are centering on health care and financial services. Perhaps the reasons for the decline of rural co-operatives are associated with broader trends.

A concurrent trend has seen rural communities decreasing in population size (Statistics Canada, 2003). The ability of rural residents to earn a comparable income to their urban counterparts is also on the decline (Statistics Canada, 2003). Rural communities have been the topic of numerous socio-economic studies, and yet, it is difficult to pinpoint the exact reasons for their deterioration. It is widely recognized that co-ops serve as engines for local economy; the Co-operative Secretariat in Canada illustrates this by pointing out four key traits of rural co-operatives. First, co-operatives provide good and services to communities where other forms of enterprise will not

operate because the profit margin is too low. Second, co-operatives generate and retain local wealth. Third, co-operatives operate through existing social networks and federations within communities which allow them direct access to the needs and issues of local communities. Finally, co-operatives are a self sufficient and community based activity that provide quality employment and economic opportunities for local people (Co-operative Secretariat 2007). The issue of co-operative success seems to be intimately bound to the ability of a business to tie into existing social networks and relies on member skills to access and utilize their collective social strengths.

This concept of strength in social cohesion and the ability of social engagement to motivate and improve the economic and social well being of communities has been presented in numerous papers, most notably Social Engagement in the United States: *Bowling Alone* (Putnam, 1995, p. 65). Initial examination of the Statistics Canada survey ( Statistics Canada 2005) on social engagement suggest that the level of social engagement is higher in rural Canada than in urban Canada, although there is little difference in the degree to which residents provide help to a neighbour or their level of political involvement and trust in other people ( Rural and Small Town Canada Analysis Bulletin, 2005). It appears that there might be a discontinuity between the ‘demise’ of largely rural focused co-operatives across Canada and social engagement. At a time when rural communities would seem to need the collective power of co-operatives the most, we are witnessing widespread transformations that trend in the opposite direction. By identifying social engagement in a Canadian context and analyzing that engagement in the context of co-operative enterprise, preliminary conclusions can be made to identify



whether or not there is a correlation between the presence of social engagement and co-operative and credit unions.

### **Materials and Methods**

By using two existing databases it is possible to provide a preliminary assessment of the linkages between social engagement and the presence of co-operatives and credit unions within communities. . This demographic analysis focused on the Statistics Canada General Social Survey Cycle 17(GSS, 2003). Cycle 17 is the first cycle of this annual survey to collect detailed information on social engagement in Canada. Topics include social contact with friends and relatives, unpaid help given and received, volunteering and charitable giving, civic engagement, political engagement, religious participation, trust and reciprocity (Statistics Canada 2003). Data on the location of co-operatives and credit unions was extracted from the larger Business Locations database (Environics Analytics 2004). This database provides a detailed list of businesses, including information such as company name, SIC code and location co-ordinates (coded by Environics Analytics). This is a geo-coded location database for mapping and analytical applications (Environics Analytics 2004). Analysis of the Environics database was completed using ESRI arcMap version 9. Using public use files from Natural Resource Management geogratis network and a NAD 1983 Datum with a Lambert Conformal Conic projection, data was disaggregated into Shapefiles corresponding to: provincial boundaries, Census Metropolitan Areas, co-operative businesses and credit unions.

Statistical summaries and analysis were performed in SPSS, EXCEL, and TSP Version 5.0. Frequency analysis was used to analyze the structure of the data sets in specific provinces. Statistical linkages between variables were established through

regressions. Various different variables from the Statistics Canada survey could have been used to identify social engagement. In explaining social engagement previous research has suggested the importance of demographic characteristics (age, income education etc.) as well as variables such as TV viewing (Putnam, 1995). Logistic regression can be used to estimate relationships between dichotomous choice variables and demographic explanatory variables. Multinomial logit can be used when there is more than one alternative in the dependent variable. Logit regressions have chooser-specific data and coefficients vary over the choices. In this case, the chooser-specific data relates to the respondents' answers to the questions on whether they volunteer or not (yes or no). The coefficients reported relate the independent variables to the choice of the respondent. In this way the model was used to identify linkages between 'social engagement' and demographic variables.

The data set of the 2001 Statistics Canada survey of social engagement was used for this comparative study. From this data, information from all ten Canadian provinces was chosen for examination. Twenty eight variables were chosen from the survey results, on the basis that they either indicated social engagement or were factors projected to have an impact on the social engagement of individuals (Figure 5). These variables were originally discussed by Putnam, and more recently in an analysis of social engagement in Alberta by Pickup. Pickup identifies "four elements of a strong civic community are the products of social capital. Forms of social capital are trust, norms of reciprocity and networks of civic participation" (Pickup, et al. 2005, p. 617) In an article to the Fannie-Mae Foundation, Putnam further identifies two dimensions of social capital that are relevant in the context of this paper. First, he recognizes that civic engagement takes

place in both a formal and informal environment, and secondly he points out that the purpose of an institution can be public regarding or private regarding (Putnam 1998). It is the member welfare maximizing function of a co-operative that distinguishes this business form as a public regarding institution which ought to contribute to a “virtuous circle”, wherein, social engagement helps the institution and the institution fosters social engagement. Putnam identified volunteerism and trust as two of the strongest indicators of social engagement (Putnam 1995, p. 65).

Statistics Canada (2005) reported that

“In 2003, approximately 34 percent of all Canadians said that they did unpaid volunteer work for any organization. There was a clear and strong association between place of residence and volunteering. The more rural the place of residence, the greater the likelihood of having volunteered in the past 12 months.” (Rural and Small Town Canada Analysis Bulletin, 2005) On the basis of the previous studies, the selected indicator of engagement in this study was volunteerism.

## **Results**

This analysis of co-operatives and credit unions consisted of separating the locations of co-operatives and credit unions, from the Environics database, into Census Metropolitan Areas and non Census Metropolitan Areas. Figures 3 and 4 illustrate the location of co-operative and credit union outlets (multiple outlets per firm, in many cases) across Canada. Although it is not clear from the maps, it becomes clearer from the data in Table 1 that there are significant differences in the rural/urban distribution of co-operatives and credit unions across provinces. In the provinces British Columbia, Ontario, and Quebec (co-operatives only) the co-operatives occur at higher frequencies in the urban areas. The

proportional presence of rural cooperatives and credit unions is much higher in the prairie provinces of Alberta, Saskatchewan and Manitoba. Ontario has the strongest presence of urban co-operatives and credit unions with more than three times as many. Saskatchewan has by far the strongest proportional representation of rural co-ops and credit unions.

The descriptive statistics of the dependant variables illustrate important inter-provincial variation (Table 2). The dependant variables showed differences depending on province.

In volunteerism provincial respondents showed a range between 36.1% in British Columbia to 44% Saskatchewan; in general, the Prairie Provinces averaged higher percentages of volunteerism. For television hours between 0 – 14 watched in the provinces, most provinces ranged from 69% to 73.6%, with Alberta being the exception with a whopping 82.5 percent. Albertans tend to watch more television, albeit for shorter periods of time. New Brunswick took the top spot for viewing times greater than 14 hours per week with 29 % of respondents. Internet usage in the past year ranged from a low in PEI of 58.3 % of respondents to a high of 72 % in Alberta. Quebec was by far and away the least trusting of their neighbours. From the Quebecois minimum of 44.7 % who trusted only a few of their neighbours, the opposite end of the spectrum is illustrated by Newfoundland, where 76.6 % of respondents felt they trusted most of their neighbours.

The 2003 GSS analysis found significant differences in their survey. Notably, the urban and rural divide was a significant factor in influencing the engagement factors of residents. The Rural and Small Town Canada Analysis Bulletin illustrates 5 variables: 1) the proportion of individuals who knew most of their neighbours 2) the extent to which individuals trusted their neighbours 3) the incidence of volunteering 4) participation in a service club or fraternal organization and 5) the sense of belonging to the local

community. The differences between the residents of CMA's and residents of smaller places was important and not explained by the fact that individuals living in more rural areas had different socio economic and demographic characteristics than individuals living in more urban areas.( 2005)

In combining the two data sources, the survey results can be used in regressions, by province, to explain the level of volunteerism with an additional explanatory variable around the rural/urban split between co-operative and credit union locations. Results of the regression analysis show similarities to those found by Putnam. The results in each province were identical in many respects (Table 3). For example, by analyzing volunteerism as a dependant variable indicative of social engagement, it was found that, in all provinces: the older people are, if individuals are female, the larger her or his household is, the less TV he or she watches, the more she or he uses internet, the higher the rate of highschool graduation, the more trusting people are of their neighbours, the more rural an area is, the more fully employed people are, the less likely they are to say no to volunteerism. These results are consistent with the results from Putnam (1995).

The sign of the coefficient on the rural/urban split of co-operatives and credit unions highlights provinces (Alberta, Saskatchewan, Manitoba and the Maritimes) where there is consistency between the number of co-operatives and credit unions and high social engagement as measured by the level of volunteerism (-ve) and provinces (British Columbia, Ontario and Quebec) where there is inconsistency (+ve). Although in all provinces the rural areas have higher levels of social engagement, social engagement is not a direct indicator for the existence of higher levels of co-operative businesses.

From this analysis, a conclusion that social engagement is a precursor for the existence of co-operatives is not clear.

## **Conclusion**

This paper was the start of an analysis that sought to understand the complex relationships that exist between the occurrences of co-operative businesses and the related social engagement that is fundamental to their long term support and survival in the rural landscape. This analysis revealed that many of the features of social engagement that occur in the United States are also relevant in Canada. At the provincial level, there exist large geographic differences in the distribution of cooperatives. Future studies need to investigate other measures of social engagement within the General Social Survey and see if they are linked to the occurrence of cooperatives..

Better disaggregation of the Social Engagement Survey would allow for a more accurate understanding of the implications of social engagement in the context of cooperative development. With a more focused analysis, data could be analyzed at a community level in order to determine more specific and accurate associations between social engagement and co-operative existence in Canada.

Given the present concerns with rural development in North America, if co-operative and credit unions can play a role, we need to understand what social demographics contribute to a supportive environment for them. It is clearly not as simple as a single indicator of social engagement. The prevalence of co-operatives and credit unions in urban areas with lower levels of social engagement implies that unexplained factors are important in the formation and longevity of co-operatives and credit unions.

## References

- Canada-Ontario online business centre, Accessed April 25, 2007  
[http://www.cbsc.org/servlet/ContentServer?pagename=CBSC\\_ON%2Fdisplay&lang=en&cid=1081944206016&c=Regs](http://www.cbsc.org/servlet/ContentServer?pagename=CBSC_ON%2Fdisplay&lang=en&cid=1081944206016&c=Regs)
- Cook, M. Chaddad, F. "Redesigning Cooperative Boundaries: The Emergence of New Models" *American Journal of Agricultural Economics* (2004) 86:5 1249
- Cook, M. "The Future of U.S. Agricultural Co-operatives: A Neo-institutional Approach" *American Journal of Agricultural Economics* (1995) 77:5 1153-59
- EnviroNics Database, (CD) Tetrad, demographics for mapping for business and government. 2003
- International Cooperative Association, Accessed June 14, 2007  
<http://www.ica.coop/coop/index.html>
- Turcotte M. Rural and Small Town Canada Analysis Bulletin  
<http://www.statcan.ca/bsolc/english/bsolc?catno=21-006-X&CHROPG=1>
- Goddard, E. "Factors underlying the evolution of farm-related cooperatives in Alberta." *Canadian Journal of Agricultural Economics* 50 (2002):473-96.
- Goddard E. personal communication, April 20, 2007
- General Social Survey 2003, (CD) Housing, Family and Social Statistics Division Cycle 17: Social Engagement, Statistics Canada.
- Pickup, M., A. Sayers, R. Knopff, and K. Archer "Social Capital and Civic Community in Alberta." *Canadian Journal of Political Science/Revue canadienne de science politique* 37 (2005):617-45.
- Putnam, R. "Social Capital: Its importance to housing and community development." *Housing Policy Debate* 9 (1998):
- Putnam, R.D. "Bowling Alone: America's Declining Social Capital." *Journal of Democracy* 6 (1995):65-78.
- Rothwell N. and Turcotte M. Rural and Small Town Canada Analysis Bulletin Catalogue no. 21-006-XIE Vol. 7, No. 1 (July 2006)  
<http://www.statcan.ca/english/freepub/21-006-XIE/21-006-XIE2006001.pdf>
- Statistics Canada. Demographic trends in Canada's communities. April 20, 2007  
<http://www.statcan.ca/Daily/English/050531/d050531b.htm>

Statistics Canada. *Dissemination Area Digital Cartographic File [Canada CMA]*[electronic resource]. Ottawa, ON: Statistics Canada, Geography Division, 2001 Geogratis, <http://geogratis.cgdi.gc.ca/geogratis/en/index.html> Statistics Canada.

University of Manitoba, March 2, 2005, accessed April 25, 2007  
[http://www.umanitoba.ca/libraries/units/archives/exhibits/agric\\_exper/assoc\\_%20soc/ugg\\_history.html](http://www.umanitoba.ca/libraries/units/archives/exhibits/agric_exper/assoc_%20soc/ugg_history.html)



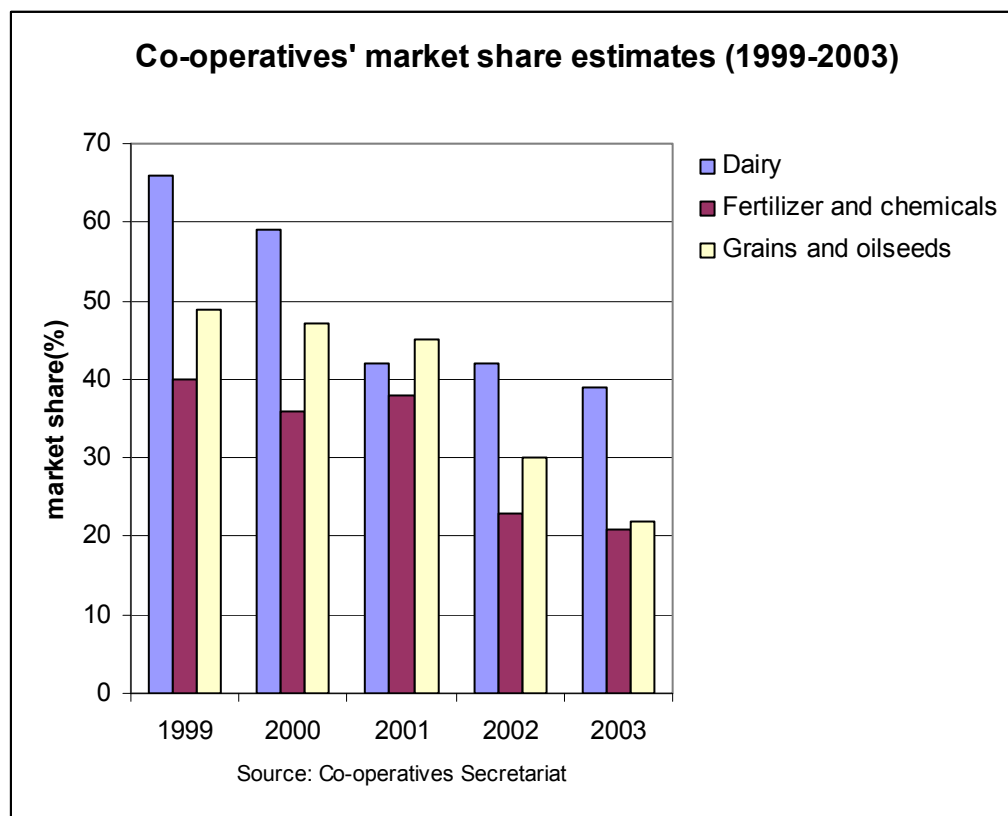


Figure 1

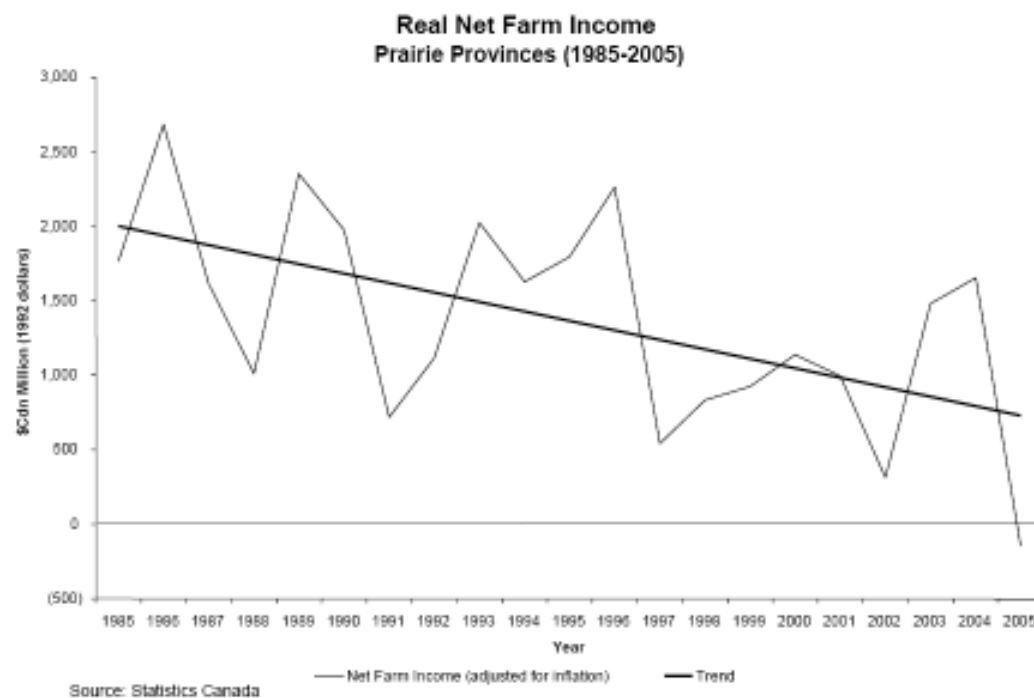


Figure 2

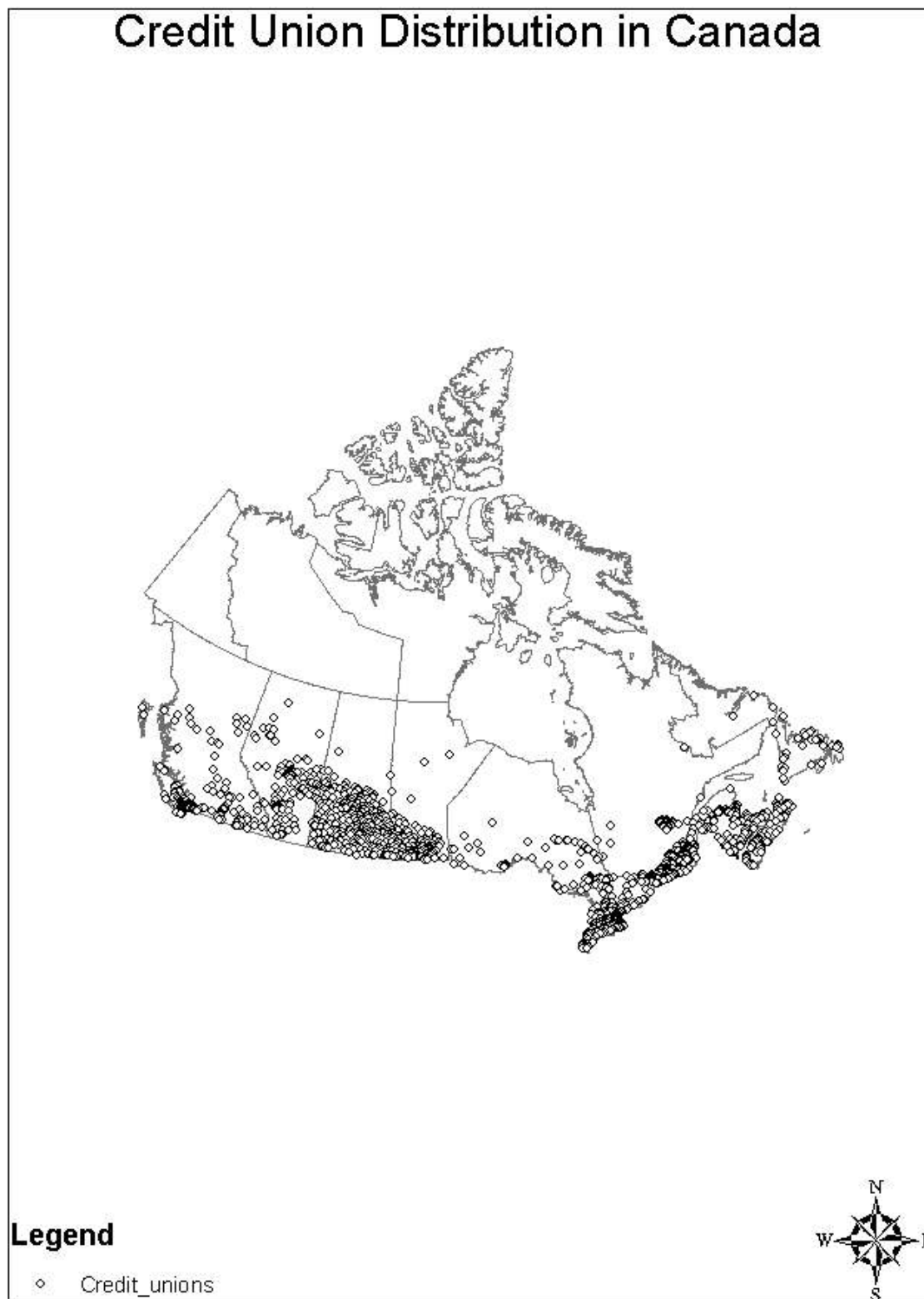


Figure 3

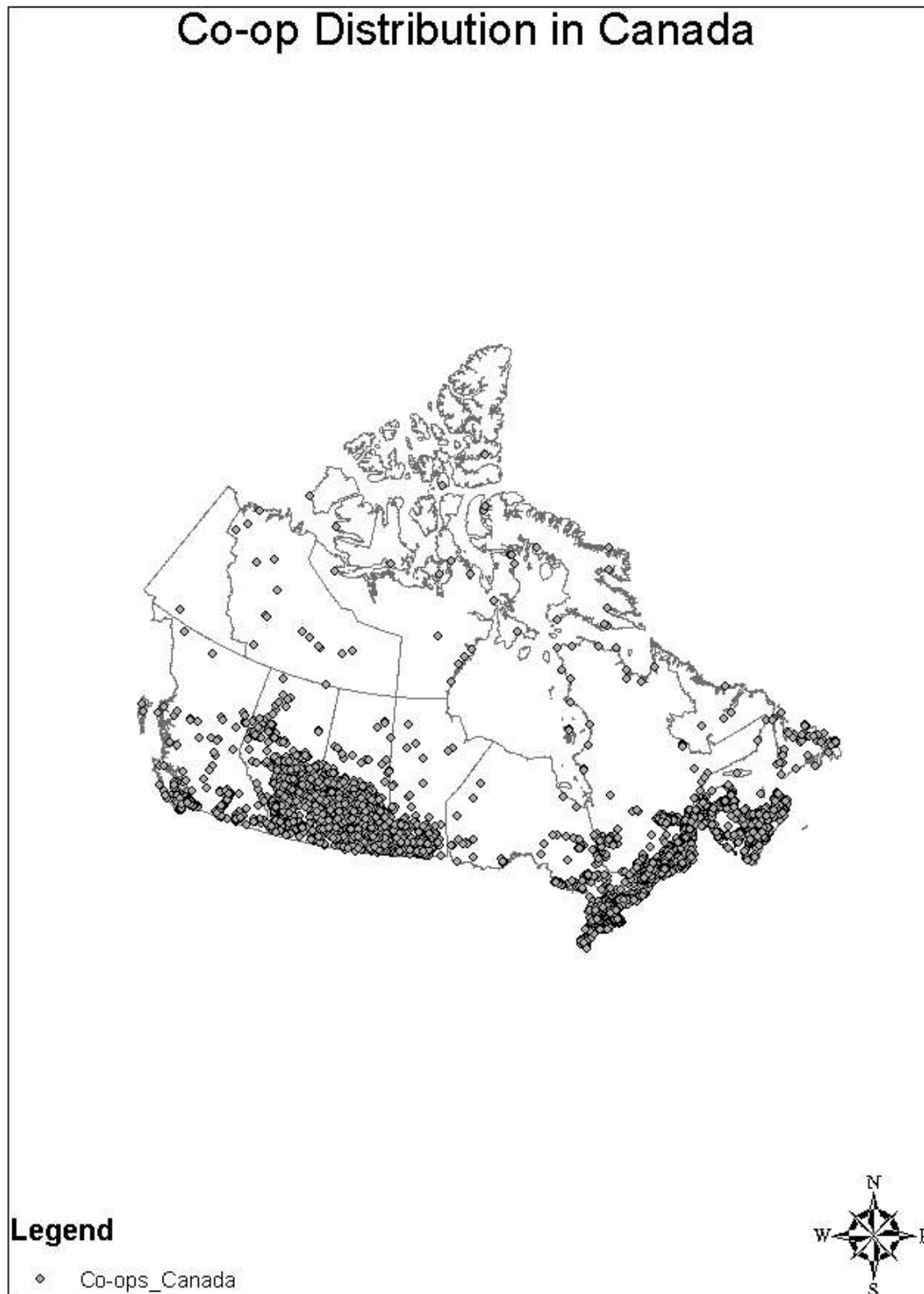


Figure 4

**Table 1: Distribution of Co-ops**

| <b>Provinces</b>     | <b>Co-ops</b> |              | <b>Credit Unions</b> |              |
|----------------------|---------------|--------------|----------------------|--------------|
|                      | <b>Rural</b>  | <b>Urban</b> | <b>Rural</b>         | <b>Urban</b> |
| British Columbia     | 301           | 801          | 124                  | 171          |
| Alberta              | 888           | 506          | 83                   | 75           |
| Saskatchewan         | 1909          | 386          | 275                  | 33           |
| Manitoba             | 673           | 266          | 141                  | 74           |
| Ontario              | 837           | 2687         | 165                  | 427          |
| Quebec               | 1124          | 1525         | 174                  | 113          |
| New Brunswick        | 250           | 100          | 92                   | 18           |
| Nova Scotia          | 399           | 125          | 73                   | 14           |
| Prince Edward Island | 172           | 0            | 18                   | 0            |
| Newfoundland         | 132           | 58           | 36                   | 8            |

(Environics 2004)

**Table 2 Attributes of Social Engagement by Province**

| <b>Survey Population (%)</b> |                    |              |                  |           |                      |               |                     |           |                        |             |
|------------------------------|--------------------|--------------|------------------|-----------|----------------------|---------------|---------------------|-----------|------------------------|-------------|
|                              | <b>Respondents</b> |              | <b>Volunteer</b> |           | <b>Television hr</b> |               | <b>Internet use</b> |           | <b>Trust Neighbour</b> |             |
|                              | <b>Urban</b>       | <b>Rural</b> | <b>Yes</b>       | <b>No</b> | <b>0-14</b>          | <b>&gt;14</b> | <b>Yes</b>          | <b>No</b> | <b>Few</b>             | <b>Most</b> |
| <b>BC</b>                    | 87.8               | 12.2         | 36.1             | 62.2      | 73.5                 | 26.5          | 66.1                | 33.8      | 30.5                   | 64.2        |
| <b>AB</b>                    | 75.8               | 24.2         | 38.4             | 60.9      | 82.5                 | 17.5          | 72.2                | 27.8      | 27.9                   | 65.8        |
| <b>SK</b>                    | 62.7               | 37.3         | 44               | 55.5      | 70.7                 | 27.7          | 60.9                | 39.1      | 21.8                   | 74.4        |
| <b>MN</b>                    | 62.3               | 37.7         | 39.6             | 60.1      | 73.6                 | 25.1          | 59.2                | 40.7      | 26.3                   | 68.2        |
| <b>ON</b>                    | 88.3               | 11.7         | 34.4             | 64.7      | 73.2                 | 24.7          | 70.5                | 29.5      | 30.4                   | 62.9        |
| <b>QC</b>                    | 81.3               | 18.7         | 22.3             | 77.1      | 70.9                 | 27.9          | 61.6                | 38.4      | 44.7                   | 51.3        |
| <b>NB</b>                    | 57.1               | 42.9         | 37.3             | 61.6      | 69.8                 | 28.9          | 60.5                | 39.4      | 22.7                   | 74          |
| <b>NS</b>                    | 72.2               | 27.8         | 36.5             | 63.1      | 71.8                 | 27.6          | 65.7                | 34.3      | 23.7                   | 73.9        |
| <b>PEI</b>                   | 100                | 0            | 39.3             | 60.4      | 71.3                 | 28.1          | 58.3                | 41.7      | 17                     | 81.1        |
| <b>NL</b>                    | 61.5               | 38.5         | 37.3             | 61.6      | 72                   | 27            | 59.6                | 40.4      | 20.9                   | 76.6        |

(GSS 2003)

**Table 3 Multinomial Logit Regression Results**

| <b>Variables</b>              | <b>BC</b>        | <b>AB</b>        | <b>SK</b>        | <b>MN</b>        | <b>ON</b>        | <b>QC</b>        | <b>NB</b>        | <b>NS</b>        | <b>PEI</b>       | <b>NFLD</b>      |
|-------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Constant</b>               | -.542<br>(-2.03) | 1.65<br>(2.76)   | -.481<br>(-1.33) | .094<br>(.249)   | -.679<br>(-3.73) | -1.01<br>(-2.19) | .156<br>(.408)   | -.219<br>(-.560) | .335<br>(.574)   | -.014<br>(-.033) |
| <b>Age</b>                    | -.091<br>(-3.27) | -.199<br>(-5.55) | -.098<br>(-2.31) | -.196<br>(-4.29) | -.059<br>(-3.32) | -.101<br>(-3.95) | -.124<br>(-2.81) | -.160<br>(-3.51) | -.259<br>(-3.49) | -.113<br>(-2.38) |
| <b>Sex</b>                    | -.222<br>(-2.77) | -.338<br>(-3.46) | -.140<br>(-1.15) | -.347<br>(-2.82) | -.273<br>(-5.47) | -.086<br>(-1.23) | -.312<br>(-2.56) | -.210<br>(1.72)  | -.308<br>(-1.64) | -2.06<br>(-1.65) |
| <b>Household size</b>         | .113<br>(-3.67)  | -.195<br>(-5.01) | -.130<br>(-2.64) | -.059<br>(-1.20) | -.070<br>(-3.56) | -.097<br>(-3.29) | -.082<br>(-1.51) | -.117<br>(-2.23) | -.224<br>(-2.70) | -.117<br>(-2.02) |
| <b>TV use</b>                 | .113<br>(2.66)   | .207<br>(3.98)   | .177<br>(2.86)   | .148<br>(2.31)   | .094<br>(3.55)   | .059<br>(1.51)   | .116<br>(1.76)   | .152<br>(2.12)   | .044<br>(.408)   | .090<br>(1.22)   |
| <b>Internet use</b>           | .885<br>(8.06)   | .699<br>(5.14)   | .883<br>(5.51)   | .941<br>(5.68)   | .938<br>(13.27)  | .601<br>(6.46)   | .812<br>(5.17)   | .984<br>(5.72)   | 1.16<br>(4.70)   | 1.11<br>(6.46)   |
| <b>&gt;Highschool</b>         | .060<br>(3.18)   | .138<br>(5.36)   | .077<br>(2.86)   | .122<br>(4.35)   | .047<br>(3.89)   | .061<br>(3.99)   | .093<br>(3.36)   | .138<br>(4.77)   | .136<br>(3.36)   | .086<br>(3.06)   |
| <b>Trust your neighbours</b>  | .135<br>(5.14)   | .061<br>(2.12)   | .163<br>(3.36)   | .125<br>(3.02)   | .092<br>(5.93)   | .133<br>(4.77)   | .101<br>(2.16)   | .191<br>(3.45)   | .058<br>(.729)   | .159<br>(2.66)   |
| <b>Employment status</b>      | -.015<br>(-2.24) | -.022<br>(-2.11) | -.025<br>(-2.28) | .016<br>(.833)   | -.016<br>(-3.94) | -.016<br>(-2.68) | -.014<br>(-1.22) | -.025<br>(-2.00) | -.012<br>(-.232) | .019<br>(-1.42)  |
| <b>Rural/Urban Co-op/CU</b>   | .340<br>(2.47)   | -.154<br>(-2.06) | -.349<br>(-4.74) | -.895<br>(-3.20) | .177<br>(4.93)   | .104<br>(4.04)   | -.497<br>(-9.18) | -.867<br>(-2.11) |                  | -.569<br>(-4.24) |
|                               |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>Number of observations</b> | 2980             | 1962             | 1274             | 1287             | 7729             | 4988             | 1367             | 1321             | 581              | 1254             |
| <b>Scaled R-squared</b>       | .063             | .081             | .103             | .096             | .058             | .0322            | .064             | .095             | .119             | .093             |

T-Statistics in parentheses

