IS THERE A CREDIT UNION DIFFERENCE?
COMPARING CANADIAN CREDIT UNION AND
BANK BRANCH LOCATIONS

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ABSTRACT
This study of credit union and bank branch locations and neighbourhoods in Canada seeks to discover if there is a distinct credit union niche. We find that credit union branches are over-represented in rural areas, and under-represented in large population centres relative to bank branches. Additionally, credit unions are over-represented in middle-income areas and under-represented in high-income areas compared to bank branches both at the national level and in all provinces where differences are statistically significant. While both credit unions and banks cater to marginalized communities, the type of marginalized communities they cater to distinguishes them. Making use of the Canadian Marginalization Index, we find credit union branches in Canada to be over-represented in communities marginalized along the dimensions of material deprivation and dependency, while bank branches are over-represented in communities marginalized along the dimensions of residential instability and ethnic concentration.
tandis que les banques sont surreprésentées dans les communautés marginalisées par leur instabilité résidentielle et concentrations ethniques.

KEYWORDS / MOTS CLÉS: Credit union; Bank; Canadian Marginalization Index; Rural/urban; Coopérative financière; Banque; Indice de marginalisation canadien; Rural/urbain

INTRODUCTION

As member-based associations and a form of co-operative, credit unions in Canada fulfill a social mission alongside the financial services they provide. In a Canadian financial landscape dominated by chartered banks, credit unions are finding themselves under increasing pressure to compete while at a disadvantage given that they cannot raise capital in the market in the same manner as banks. In addition, they no longer receive the tax benefits they enjoyed since 1972, as these were removed from the 2013 federal budget (Flaherty, 2013).

In this context, this study explores how credit unions distinguish themselves by exploring the communities they serve. Research studying credit unions in three U.S. states (Arizona, Wisconsin, and New Hampshire) found that credit union branches are predominantly located in urban centres, much like bank branches; however, they are overrepresented in lower-income areas as compared to banks (Mook, Maiorano, & Quarter, 2015). This finding was consistent with the credit union tradition of offering financial services to demographic groups in need. In a similar manner, this study explores if this phenomenon holds in Canada. That is, are credit unions in Canada overrepresented in lower-income or more marginalized communities as compared to banks?

CREDIT UNIONS IN CANADA

Credit unions in Canada are a form of co-operative with share capital that differs from that of a bank. In credit unions, share capital is not publicly traded on a stock market, and its value is not as tied to market forces. Voting rights in credit unions, like co-operatives in general, are associated with membership, with each member holding one vote and one membership share. For banks, voting rights are tied to shares representing ownership and influence can be associated with large blocks of capital.

While recent changes to federal tax policy have not favoured Canadian credit unions, recent changes to federal financial policy have supported credit union expansion and competitiveness. In 2012, following the credit crisis, the federal government adopted new legislation enabling credit unions to expand beyond their provincial borders as national financial institutions in order to promote their growth, their competitiveness with banks, and to enhance stability of the financial system (Flaherty, 2010; Government of Canada, 2012). Given challenges credit unions have faced in expanding nationally, the federal government has indicated it will propose legislative measures to smooth the expansion process for credit unions, and to provide protection for them against transitional risks (Morneau, 2016), including potential changes in deposit insurance associated with different provinces. Only one credit union in Canada, Uni Financial, has obtained a federal charter, in July 2016 (CCUA, 2016).

Credit unions have less stringent disclosure requirements than banks, which are federally regulated, making risks for banks easier to measure (Shecter, 2014). Credit unions are provincially regulated, and these agencies may have less capacity to monitor larger more complex credit unions (IMF, 2014). In this vein, the Bank of Canada has highlighted that smaller non-federally regulated institutions, entities such as credit unions, may be more vulnerable to economic downturns, potentially having adverse financial and economic spillover effects.
Reasons for this vulnerability include that credit unions may have a higher portion of business and lending directed at riskier areas, and varying requirements on policy to mitigate these risks, such as higher capital positions and tighter supervision (Bank of Canada, 2014).

In our study of U.S. credit unions (Mook, Maiorano, & Quarter, 2015), we posit that credit union location was driven by at least two theoretical factors: the need to find a distinct niche that struck an appropriate balance between market forces and social mission and that separated credit unions from banks; and market accommodation, or the need to accommodate themselves to the market forces that all financial institutions must compete within. The current study analyzes Canadian credit union and bank branch locations along various geographic and demographic factors to explore if the social mission of credit unions is conveyed in the communities they serve. Overall, it asks the question, is there a distinct credit union niche in Canada?

A BRIEF HISTORY

The first credit union in Canada was founded in 1900 by Alphonse and Dormène Desjardins in Lévis, Québec, largely because loans from banks to ordinary citizens either were unavailable or available only at usurious rates of interest. The credit unions founded by the Desjardins have evolved into a huge corporate conglomerate that bears the founders' name (MacPherson, 1979, 1999, 2012). The first credit unions were developed in church parishes in rural Québec, before branching out from there into workplaces and community locations both in Québec and other parts of Canada. The Desjardins also founded the first U.S. credit union in 1909 in the St. Mary’s parish of Manchester, New Hampshire (Pierce, 2011). The Desjardins Group is more extensive than credit unions (caisses populaires in Québec and other francophone areas in Canada) and involves a complex conglomerate that consists of insurance companies (including the Canadian assets of State Farm), a bank, brokerage, foundation, historical society, etc. (Desjardins, 2016a). In the first quarter of 2015, the Desjardins Group had assets of $254 billion, an operating income of $3.6 billion, and a surplus (referred to as a profit by conventional financial institutions) of $464 million (Desjardins, 2015). Desjardins had 45,966 employees, predominantly in Québec, about 4,800 elected officers or members who form the governance of the caisses populaires, and in its last complete financial year gave $82.3 million in financial support to local communities through donations and sponsorships. For many communities in rural Québec, Desjardins caisses populaires are the only financial outlets (Desjardins, 2016b; Mook, Hann, & Quarter, 2012). This conglomerate would have been unimaginable to the pioneers who founded the first caisses populaires and were simply trying to make loans available to underserved populations. That was the social mission or value proposition that credit unions were founded on, and it has evolved in response to changing times (MacPherson, 2012).

In English Canada as a whole, credit unions do not have as strong a presence relative to the population size as in Québec, nor are they as centrally co-ordinated within one overarching organization. The umbrella organization is the Canadian Credit Union Association (CCUA) and its members consist of regional affiliates (excepting for Québec): Atlantic Central, Central 1 Credit Union (representing Ontario and British Columbia), Credit Union Central of Alberta, Credit Union Central of Manitoba, SaskCentral, and L’Alliance des caisses populaires de l’Ontario limitée (representing caisses populaires in Ontario that are not affiliated with Desjardins). These regional affiliates are second-tier co-operatives whose members are credit unions (not individuals) within the region that they represent. Although many credit unions were founded on a bond of association based on a workplace or ethnicity, the predominant bond in Canada and the U.S. is a community charter or a locale. A community charter allows credit unions to expand beyond a specific group and to compete more effectively with banks.
In combining all of the credit unions and 
caisses populaires in Canada, affiliated either with the Canadian Credit Union Association or Desjardins, there are 664 credit unions with a total of 2,953 branches, 10.1 million members (nearly 30 percent of the total population and 35 percent of those 18 and over), and $332.3 billion of assets (Canadian Credit Union Association, 2015a). There is a relatively equal division between credit unions affiliated with the Credit Union Central of Canada and Desjardins (predominantly Québec). There are 351 Desjardins affiliated credit unions with 1,197 branches, 4.7 million members and $158.8 billion of assets. There are four provinces in Canada in which credit union membership borders on half of the population: Manitoba, Québec, Saskatchewan, and British Columbia (Canadian Credit Union Association, 2016a).

In spite of its significant presence in Canada, the credit union system is secondary to the chartered banks. The total assets of the credit union system for all of Canada, including Québec, are about $80 billion less than the Canadian Imperial Bank of Commerce (CIBC), the fifth largest chartered bank (CIBC, 2016a). Although a credit union is the primary financial institution for many Canadians, for others it is a supplementary service. With the exception of Desjardins, which could be characterized as a co-operative bank, similar to those found in many European countries (European Association of Co-operative Banks, 2013), credit unions in Canada are relatively small for modern financial institutions. Vancity, which is the largest, has $18.4 billion of assets (Canadian Credit Union Association, 2015b). At the end of 2014, there were only 32 credit unions with at least one billion dollars of assets (Canadian Credit Union Association, 2015b). However, one difference between a credit union and a bank is that it is concentrated in a region rather than attempting to serve the entire country as well as participate in international markets. Desjardins 
caisses populaires have a very strong presence in Québec, with about 40 percent of deposits in that province (McNish, 2011), and Vancity has a strong presence in the lower mainland of British Columbia. As a system, credit unions serve all regions, but unlike banks each credit union is not simply a branch of a large corporation but rather an independently incorporated financial institution focused in a region or even more specifically, in a workplace.

Nevertheless, credit unions in Canada are consolidating, or expanding their community charter, and becoming more centralized in their operations, a pattern discussed by Ian MacPherson (2012) in referring to their stages of development. In a historical analysis of the credit union development in Canada, MacPherson (2012) argues:

> The Canadian credit union movement has gone through a series of periods or stages, particularly over the last eighty years, which can be understood as: formative, stabilizing, building, re-examining, and reformulating. The last two stages, re-examining and reformulating, are cyclical because credit unions are constantly buffeted by internal and external pressures and the need to adapt. The great challenge they face is how, amid those changes, they can retain their commitment to members, co-operative structures, community relations, developing appropriate government relations, and co-operative management. (p. 37)

This consolidation is also found in the U.S. (Mook et al., 2015). As noted, a distinctive feature of U.S. credit unions is that they are nonprofit corporations, and in the three states that we studied previously, their branches were over-represented relative to banks in lower-income areas. In Canada, it is unclear whether this same pattern of over-representation in lower-income areas is evident, as one might expect for organizations with the credit union history. In both countries, credit unions are consolidating, facilitated by their community charter, with larger credit unions taking over smaller ones, though retaining outlets where there were independent credit unions previously.
EXISTING RESEARCH ON CREDIT UNION DEMOGRAPHICS

There is a limited body of research specifically on credit union location. As electronic commerce has increased, it could be argued that location involving bricks and mortar is of lesser importance than in the past. In other words, people can use the services of a financial institution from afar just as easily as if there was a physical location. Nevertheless, credit unions do have physical locations and the choice of these locations, mostly branches, speaks to who the credit union wants to serve. While some services such as paying bills, depositing funds, and fund transfers can be done with ease electronically, electronic access facilities are not a universal norm and some sectors of the population may lack access for a variety of reasons, such as language in the case of recent immigrants, the cost or associated proficiency of appropriate technology, or physical limitations, as in the case of some seniors. In addition to basic financial services, credit unions, in the manner of financial institutions in general, are involved in more complex financial services, such as access to credit, and various forms of investment, including retirement savings. Having a physical location facilitates access to such services and having to travel a long distance reduces access.

An earlier study of credit unions, focusing on Québec and Atlantic Canada (Mook, Hann, & Quarter, 2012) found that credit union branches tended to be more rural relative to bank branches. In Québec, the relationship was very strong: caisses populaires were over-represented in rural areas relative to the population and relative to bank branches. For communities of fewer than 3,000 people, the relationship was striking: they contained about 36 percent of Desjardins branches but fewer than 2 percent of bank branches. In varying degree, credit union branches were over-represented in relation to the population in small towns and rural areas throughout Canada, suggesting that they may have a niche market in those areas.

Another Canadian study centred in Winnipeg, covering the period 1980 to 2009, focused on the geographic location of various forms of financial institutions (Brennan, McGregor, & Buckland, 2011). It not only included branches of banks and credit unions, but also payday lenders. In brief, this study, which is very comprehensive, found that bank branches experienced a sharp decline in the inner-city of Winnipeg; credit union branches experienced a slight decline; and payday lenders, which originated much later than either banks or credit unions, were by 2009 “disproportionately represented” relative to banks and credit unions, suggesting they have taken over a clientele of underserved citizens that credit unions were originally set up to serve. However, an important qualifier is that the payday lenders serve these clients at rates of interest that many in the public would view as exorbitant.

A similar finding about payday lenders locating in low-income areas and banks neglecting these areas was revealed in a study undertaken by Steven Graves (2003). That study focused on Illinois and Louisiana, but did not include credit unions. Nevertheless, both studies suggest that payday lenders are taking over a market that was originally the niche for credit unions.

A U.S. study of credit union and retail bank headquarters found that credit unions have distinct locations (Deller & Sundaram-Stukel, 2012). This study, building on earlier research by Robert M. Feinberg (2008), used central-place theory (Eaton & Lipsey, 1982; King, 1984) to determine whether credit unions followed the herd, so to speak, and were concentrated in the same locations as other financial institutions or whether they stayed true to their mission and focused on underserved areas. The research, nationwide, shows that credit unions tend to avoid areas that have higher concentration of banks. In fact, “if spatial geography can be viewed as an accurate measure of ‘yardstick competition’, then credit unions serve a distinct market share” (Feinberg, 2008, p. 442). That same study also indicated that credit unions were in areas of “higher concentration of civic-social organizations and labor unions” (Feinberg, 2008, p. 442).
There is one fundamental problem with the study by Steven Deller and Reka Sundaram-Stukel (2012): it does not include credit union and bank branches in the analysis, only head offices. With credit unions consolidating, branches are servicing communities previously serviced by independent credit unions. Our research in Arizona, Wisconsin, and New Hampshire, which uses the branch as the unit of analysis (Mook, Maiorano, & Quarter, 2015), produces different results to Deller and Sundaram-Stukel's (2012). As noted, our research shows that credit union branches in those three states are indeed heavily urban, even to a greater degree than bank branches, but to a significant degree they are more likely than bank branches to service lower-income communities. Therefore, the herd mentality that Deller and Sundaram-Stukel (2012) refer to is confirmed in part in that credit unions are navigating with the population and other financial institutions to urban centres, but they still have a niche, or at least a partial niche, consistent with the credit union tradition.

In the U.K., credit unions were slower to develop than either in Canada or the U.S., the first ones emerging in the 1960s and the movement never attaining the scale found in Canada and the U.S. (MacPherson, 1999). A comprehensive study of U.K. credit unions (Ward & McKillop, 2005) looked at success, utilizing the measures of payouts of patronage dividends and administrative efficiency. The research found that larger credit unions were the most successful as were those located primarily in wealthier areas. While this finding may not be surprising, it does beg the question of whether there is a distinct credit union niche and if this niche is serving underserved communities in line with co-operative principles, or if market principles acts as a stronger force. This is something the current study seeks to determine for Canadian credit unions.

**METHODOLOGY**

To address our research question of whether or not there is a distinct credit union niche and if this niche is serving underserved communities, we undertook three types of analysis: First, we looked at the representation of credit union and bank branches by rural/urban spatial characteristics. Second, we compared credit union and bank branches in areas by household income. Third, we compared branches using the Canadian Marginalization Index dimensions.

The addresses of all bank branches in Canada were collected in the spring of 2015 from the corporate websites of the five largest chartered banks: Bank of Montreal, Bank of Nova Scotia, Canadian Imperial Bank of Commerce, Royal Bank of Canada, and TD Canada Trust. Credit union branch addresses for all provinces but Quebec were acquired from the Canadian Credit Union Association in the fall of 2014 and cross-checked with individual credit union websites. In Quebec, credit union branches consist of all caisse populaire branches of Desjardins, the addresses of which were collected in the spring of 2015 from the Desjardins corporate website.

Geographic data and corresponding postal code data were collected from Statistics Canada (Statistics Canada, 2013a, 2013b). The 2011 Census and National Household Survey provided median household income (MHI) data for the study (Statistics Canada, 2014). These data were collected by census tract for postal codes within Census Metropolitan Areas or Census Agglomeration Areas, and census subdivision or forward sortation areas (FSA) for postal codes outside. The location of each branch was classified as either low-, middle- or high-income based on the ratio of the MHI of the census tract, subdivision, or FSA, to the larger census division in which the branch was located.

Our aim was to explore issues of marginalization or social disadvantage that extend beyond issues of material deprivation, such as income level. Individuals or social groups may be denied access to opportunities, resources, or social integration for reasons beyond income. Marginalization may be related to an individual or social group’s ethno-racial identity, social class, education level, immigration status, or household composition.
Sharon Collard (2007) outlines increased consequences for marginalized individuals and social groups of being financially excluded. It is more difficult to operate a household budget, more costly to borrow money from sub-prime lenders, more difficult to obtain investment or debt advice, and more difficult to be insured. The Canadian Marginalization Index is an area-based deprivation index that accounts for broader issues surrounding marginalization, beyond material deprivation (Matheson, Dunn, Smith, Moineddin, & Glazier, 2012a). Making use of theoretical perspectives on inequality and marginalization in Canada, the index is comprised of four factors or dimensions of marginalization: residential instability, material deprivation, dependency, and ethnic concentration (Matheson, Dunn, Smith, Moineddin, & Glazier, 2012b). The census variables that make up each of these four dimensions are listed in Table 1 below. All of Canada is divided into dissemination areas, small areas of dissemination blocks, with a population between 400 to 700 people (Statistics Canada, 2011). The marginalization level of the dissemination area of each dimension was sectioned into terciles, and assigned to each credit union and bank branch, allowing analysis throughout Canada.

**Table 1: Canadian Marginalization Index**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Variables</th>
</tr>
</thead>
</table>
| Residential Instability    | Proportion living alone  
Proportion who are non-youth (16+)*  
Reverse coding of average number of persons per dwelling*  
Proportion of dwellings that are apartment buildings  
Proportion of the population that are single/divorced/widowed*  
Proportion of dwellings that are not owned*  
Proportion who moved within the past five years |
| Material Deprivation       | Proportion 20+ without certificate, diploma, or degree  
Proportion of lone-parent families  
Proportion receiving government transfer payments  
Proportion unemployment 15+  
Proportion below low income cut-off  
Proportion of homes in need of major repair |
| Dependency                 | Proportion of seniors (65+)  
Dependency ratio (0–14 & 65+)/(15–64)  
Proportion not participating in labour force (15+)* |
| Ethnic Concentration       | Proportion of five-year recent immigrants  
Proportion of visible minority |

* Derived by reverse coding original measures

Chi-square tests of homogeneity were used to test whether credit union and bank branches distributed over geographic areas of differing size, median household income level, and marginalization level for each of the four dimensions, are the same. Using Pearson’s chi-squared test, we rejected the null hypothesis that branching of credit unions and banks are the same under the variable studied when p values were less than 0.05.

**FINDINGS**

Findings are presented next by rural/urban special characteristics, by median household income level, and by Canadian Marginalization Index dimensions.
By rural/urban spatial characteristics

The proportion of credit union and bank branches in Canada in rural and urban areas are provided in Table 2 below. We used the population centre size as assigned by Statistics Canada to postal codes. Small, medium, and large population centres have populations from 1,000 to 30,000; 30,000 to 100,000; and 100,000 or more, respectively. Areas in Canada not satisfying minimum population and population density levels are considered rural (Statistics Canada, 2013a). Census metropolitan areas (CMAs) or agglomeration areas (CAs) are “formed by one or more adjacent municipalities centred on a population centre (known as the core)” (Statistics Canada, 2013a, p.37). A CMA must have a total population of at least 100,000, with a core of at least 50,000 people, while a CA must have a “core” population of at least 10,000. Areas within a CMA or CA not classified as core or fringe are classified as rural. A third dimension identifies whether an area is located within or outside a CMA or CA. Areas “outside CMAs and CAs” are considered either small population centres or rural areas only. By combining statistical area classifications along these three dimensions: size, type, and relation to CMA or CA, the rural/urban spatial characteristics of each bank and credit union branch within a postal code was determined.

### Table 2: Credit union and bank branches by rural/urban spatial characteristics

<table>
<thead>
<tr>
<th>Province</th>
<th># of Branches</th>
<th>Credit Unions</th>
<th></th>
<th>Banks</th>
<th>Statistical</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Credit Union</td>
<td></td>
<td>Large</td>
<td>Medium</td>
<td>Small</td>
</tr>
<tr>
<td>Quebec</td>
<td>1,104</td>
<td>605</td>
<td>31%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Ontario</td>
<td>577</td>
<td>2,508</td>
<td>58%</td>
<td>11%</td>
<td>10%</td>
</tr>
<tr>
<td>British Columbia</td>
<td>363</td>
<td>733</td>
<td>56%</td>
<td>14%</td>
<td>7%</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>284</td>
<td>239</td>
<td>9%</td>
<td>2%</td>
<td>5%</td>
</tr>
<tr>
<td>Manitoba</td>
<td>211</td>
<td>201</td>
<td>31%</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>Alberta</td>
<td>208</td>
<td>638</td>
<td>32%</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>75</td>
<td>184</td>
<td>19%</td>
<td>5%</td>
<td>12%</td>
</tr>
<tr>
<td>Newfoundland</td>
<td>40</td>
<td>103</td>
<td>20%</td>
<td>0%</td>
<td>8%</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>30</td>
<td>129</td>
<td>20%</td>
<td>27%</td>
<td>13%</td>
</tr>
<tr>
<td>PEI</td>
<td>14</td>
<td>25</td>
<td>14%</td>
<td>7%</td>
<td>29%</td>
</tr>
<tr>
<td>Yukon Territory</td>
<td>0</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NWT</td>
<td>0</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nunavut</td>
<td>0</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CANADA</td>
<td>2,906</td>
<td>5,388</td>
<td>37%</td>
<td>8%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Nationally, credit unions have far greater representation in rural areas than banks. Almost one-third of credit union branches can be found in rural areas, while only six percent of bank branches are located in rural areas. Meanwhile, banks have far greater representation in large population centres as compared credit union branches (59 percent to 37 percent). This holds true for all the different regions of Canada with the exception of Atlantic Canada, where the data counts were too small to provide statistically reliable results. There were no credit union branches in the Yukon, Northwest Territories, or Nunavut.

The difference in branching distribution between large, medium, small, and rural areas are statistically significant at the national level with medium association, and in all provinces but New Brunswick. This branching difference is large in Québec, medium in Saskatchewan, Manitoba, Alberta, and Nova Scotia, and small in British Columbia and Ontario, as measured by effect size.
By household income level
We next analyzed credit union and bank branch locations by median household income level, classified as low, middle, and high (Table 3). Starting at the national level, we find credit union branches are overrepresented in middle-income areas, and underrepresented in high-income areas as compared to bank branches. This difference is statistically significant, although with small effect size. Analyzing by province, we find three that have statistically significant results: Québec, Nova Scotia, and Ontario.

### Table 3: Comparison of income levels

<table>
<thead>
<tr>
<th>Province</th>
<th>Credit Unions</th>
<th></th>
<th></th>
<th></th>
<th>Banks</th>
<th></th>
<th></th>
<th>Statistical</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% low</td>
<td>% mid</td>
<td>% high</td>
<td>% low</td>
<td>% mid</td>
<td>% high</td>
<td>$p$ value</td>
<td>Effect Size</td>
</tr>
<tr>
<td>Québec</td>
<td>15%</td>
<td>71%</td>
<td>14%</td>
<td>19%</td>
<td>56%</td>
<td>26%</td>
<td>0.00</td>
<td>0.17</td>
</tr>
<tr>
<td>Ontario</td>
<td>24%</td>
<td>60%</td>
<td>15%</td>
<td>21%</td>
<td>58%</td>
<td>21%</td>
<td>0.01</td>
<td>0.06</td>
</tr>
<tr>
<td>British Columbia</td>
<td>27%</td>
<td>59%</td>
<td>15%</td>
<td>29%</td>
<td>57%</td>
<td>14%</td>
<td>0.72</td>
<td>0.83</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>18%</td>
<td>70%</td>
<td>12%</td>
<td>18%</td>
<td>74%</td>
<td>8%</td>
<td>0.37</td>
<td>0.43</td>
</tr>
<tr>
<td>Manitoba</td>
<td>14%</td>
<td>64%</td>
<td>23%</td>
<td>18%</td>
<td>63%</td>
<td>19%</td>
<td>0.43</td>
<td>0.50</td>
</tr>
<tr>
<td>Alberta</td>
<td>23%</td>
<td>66%</td>
<td>11%</td>
<td>23%</td>
<td>60%</td>
<td>17%</td>
<td>0.10</td>
<td>0.12</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>11%</td>
<td>84%</td>
<td>5%</td>
<td>22%</td>
<td>70%</td>
<td>8%</td>
<td>0.05</td>
<td>0.15</td>
</tr>
<tr>
<td>Newfoundland</td>
<td>18%</td>
<td>63%</td>
<td>20%</td>
<td>14%</td>
<td>58%</td>
<td>28%</td>
<td>0.57</td>
<td>0.60</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>33%</td>
<td>63%</td>
<td>3%</td>
<td>29%</td>
<td>66%</td>
<td>5%</td>
<td>0.89</td>
<td>0.90</td>
</tr>
<tr>
<td>PEI</td>
<td>29%</td>
<td>64%</td>
<td>7%</td>
<td>24%</td>
<td>72%</td>
<td>4%</td>
<td>0.85</td>
<td>0.86</td>
</tr>
<tr>
<td>Yukon Territory</td>
<td></td>
<td></td>
<td></td>
<td>14%</td>
<td>86%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NWT</td>
<td></td>
<td></td>
<td></td>
<td>73%</td>
<td>27%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nunavut</td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CANADA</td>
<td>19%</td>
<td>67%</td>
<td>14%</td>
<td>22%</td>
<td>59%</td>
<td>19%</td>
<td>0.00</td>
<td>0.07</td>
</tr>
</tbody>
</table>

To delve further, we analyzed branching patterns along income levels by community size (Table 4). Nationally, differences between credit union and bank locations were statistically significant in rural and large population areas, although in opposite directions. In rural areas, bank branches were more likely to be located in low MHI areas. In large population centres, credit union branches were more likely to be located in low MHI areas. In small and medium population centres, the branching between credit unions and banks did not differ to a degree that is statistically significant.
**Table 4: Branching pattern along income levels by community size**

<table>
<thead>
<tr>
<th>Province</th>
<th>Rural Credit Union</th>
<th>Rural Bank</th>
<th>Rural Statistics</th>
<th>Small Credit Union</th>
<th>Small Bank</th>
<th>Small Statistics</th>
<th>Medium Credit Union</th>
<th>Medium Bank</th>
<th>Medium Statistics</th>
<th>Large Credit Union</th>
<th>Large Bank</th>
<th>Large Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>low</td>
<td>mid</td>
<td>high</td>
<td>low</td>
<td>mid</td>
<td>high</td>
<td>p value</td>
<td>Effect size</td>
<td>low</td>
<td>mid</td>
<td>high</td>
<td>low</td>
</tr>
<tr>
<td>Quebec</td>
<td>11%</td>
<td>77%</td>
<td>12%</td>
<td>5%</td>
<td>70%</td>
<td>25%</td>
<td>0.07</td>
<td>0.61</td>
<td>7%</td>
<td>84%</td>
<td>9%</td>
<td>7%</td>
</tr>
<tr>
<td>Ontario</td>
<td>7%</td>
<td>78%</td>
<td>15%</td>
<td>11%</td>
<td>61%</td>
<td>27%</td>
<td>0.07</td>
<td>0.61</td>
<td>8%</td>
<td>81%</td>
<td>11%</td>
<td>11%</td>
</tr>
<tr>
<td>British Columbia</td>
<td>9%</td>
<td>87%</td>
<td>4%</td>
<td>17%</td>
<td>83%</td>
<td>0%</td>
<td>0.07</td>
<td>0.61</td>
<td>11%</td>
<td>75%</td>
<td>14%</td>
<td>11%</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>17%</td>
<td>73%</td>
<td>9%</td>
<td>21%</td>
<td>74%</td>
<td>6%</td>
<td>0.61</td>
<td>0.61</td>
<td>16%</td>
<td>68%</td>
<td>16%</td>
<td>9%</td>
</tr>
<tr>
<td>Manitoba</td>
<td>10%</td>
<td>72%</td>
<td>19%</td>
<td>23%</td>
<td>68%</td>
<td>10%</td>
<td>0.07</td>
<td>0.07</td>
<td>9%</td>
<td>68%</td>
<td>23%</td>
<td>20%</td>
</tr>
<tr>
<td>Alberta</td>
<td>12%</td>
<td>82%</td>
<td>6%</td>
<td>11%</td>
<td>84%</td>
<td>5%</td>
<td>0.07</td>
<td>0.07</td>
<td>8%</td>
<td>77%</td>
<td>14%</td>
<td>9%</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>3%</td>
<td>91%</td>
<td>6%</td>
<td>6%</td>
<td>85%</td>
<td>9%</td>
<td>0.07</td>
<td>0.07</td>
<td>13%</td>
<td>87%</td>
<td>0%</td>
<td>13%</td>
</tr>
<tr>
<td>Newfoundland</td>
<td>27%</td>
<td>67%</td>
<td>7%</td>
<td>25%</td>
<td>70%</td>
<td>5%</td>
<td>0.07</td>
<td>0.07</td>
<td>6%</td>
<td>65%</td>
<td>29%</td>
<td>4%</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>33%</td>
<td>50%</td>
<td>17%</td>
<td>13%</td>
<td>87%</td>
<td>0%</td>
<td>0.07</td>
<td>0.07</td>
<td>20%</td>
<td>80%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>PEI</td>
<td>29%</td>
<td>71%</td>
<td>0%</td>
<td>50%</td>
<td>33%</td>
<td>17%</td>
<td>0.07</td>
<td>0.07</td>
<td>40%</td>
<td>60%</td>
<td>0%</td>
<td>33%</td>
</tr>
<tr>
<td>CANADA</td>
<td>12%</td>
<td>76%</td>
<td>12%</td>
<td>15%</td>
<td>69%</td>
<td>16%</td>
<td>0.04</td>
<td>0.07</td>
<td>10%</td>
<td>78%</td>
<td>13%</td>
<td>11%</td>
</tr>
</tbody>
</table>

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By Canadian Marginalization Index (CMI) dimensions

Our final analysis used the Canadian Marginalization Index, with its four dimensions of residential instability, material deprivation, dependency, and ethnic concentration (see Table 1). The total number of credit union branches found in each tercile of marginalization under each dimension was compared against the totals for bank branches. Chi-squared testing was used to reject the null hypothesis that branching of credit unions and banks are the same under each of the dimensions of marginality when p values were less than 0.05. Analysis of the standardized residuals informed the underlying patterns of whether credit unions or banks cater to more marginalized areas for each dimension of marginalization. Table 5 below provides results of the analysis at the national and provincial levels for each dimension.

Table 5: National and provincial comparison along Canadian Marginalization Index dimensions

<table>
<thead>
<tr>
<th>Province</th>
<th>All Communities</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Residential</td>
<td>Material</td>
<td>Dependency</td>
<td>Ethnic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Instability</td>
<td>Deprivation</td>
<td></td>
<td>Concentration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>p value</td>
<td>Effect Size</td>
<td>p value</td>
<td>Effect Size</td>
<td>p value</td>
<td>Effect Size</td>
<td>p value</td>
</tr>
<tr>
<td>Quèbec</td>
<td>0.00&lt;sup&gt;b&lt;/sup&gt;</td>
<td>30%</td>
<td>0.00&lt;sup&gt;c&lt;/sup&gt;</td>
<td>23%</td>
<td>0.00&lt;sup&gt;c&lt;/sup&gt;</td>
<td>19%</td>
<td>0.00&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Ontario</td>
<td>0.05&lt;sup&gt;c&lt;/sup&gt;</td>
<td>4%</td>
<td>0.01&lt;sup&gt;c&lt;/sup&gt;</td>
<td>5%</td>
<td>0.04&lt;sup&gt;c&lt;/sup&gt;</td>
<td>5%</td>
<td>0.00&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>British Columbia</td>
<td>0.29</td>
<td>14%</td>
<td>0.06&lt;sup&gt;c&lt;/sup&gt;</td>
<td>17%</td>
<td>0.01&lt;sup&gt;c&lt;/sup&gt;</td>
<td>11%</td>
<td>0.00&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>0.00&lt;sup&gt;b&lt;/sup&gt;</td>
<td>32%</td>
<td>0.38</td>
<td>0.14</td>
<td>0.00&lt;sup&gt;c&lt;/sup&gt;</td>
<td>11%</td>
<td>0.00&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Manitoba</td>
<td>0.00&lt;sup&gt;b&lt;/sup&gt;</td>
<td>23%</td>
<td>0.85</td>
<td>0.80</td>
<td>0.00&lt;sup&gt;b&lt;/sup&gt;</td>
<td>24%</td>
<td>0.80</td>
</tr>
<tr>
<td>Alberta</td>
<td>0.65</td>
<td>0.65</td>
<td>0.06&lt;sup&gt;c&lt;/sup&gt;</td>
<td>15%</td>
<td>0.69</td>
<td>0.07</td>
<td>0.00</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>0.00&lt;sup&gt;b&lt;/sup&gt;</td>
<td>21%</td>
<td>0.06&lt;sup&gt;c&lt;/sup&gt;</td>
<td>15%</td>
<td>0.00&lt;sup&gt;c&lt;/sup&gt;</td>
<td>13%</td>
<td>0.00</td>
</tr>
<tr>
<td>Newfoundland</td>
<td>0.31</td>
<td>0.30</td>
<td>0.84</td>
<td>0.80</td>
<td>0.00</td>
<td>0.00&lt;sup&gt;b&lt;/sup&gt;</td>
<td>24%</td>
</tr>
</tbody>
</table>

Nationally, there were significant differences between credit union and bank branch locations along all four dimensions of the CMI. These findings hold true at the national level and in all provinces where the chi-square test was statistically significant, with the one exception of credit unions being overrepresented along the dimension of Residential Instability in Ontario. Consistently throughout Canada we find that credit unions serve communities that are more marginalized on two specific dimensions: material deprivation and dependency. Banks on the other hand serve communities more marginalized on the dimensions of residential instability and ethnic concentration.

Credit union branches dominant in areas of material deprivation and dependency

The finding that credit union branches are overrepresented in areas of material deprivation and dependency holds true at the national level, and in all provinces with statistically significant count differences.
The material deprivation dimension is composed of traditional definitions of exclusion focused on issues of economic inequality, including the proportion of the population: below the low income cut-off, receiving government transfer payments, unemployed, lone-parent families, in homes needing repairs, and people without postsecondary education who are over 25 years old. The dependency dimension includes populations that may need a greater deal of social or economic support. This includes those that are out of the workforce, seniors, and children.

In many respects, the material deprivation and dependency dimensions represent individuals who would likely find it more challenging to get a loan or to access credit from a bank, given the dependence banks place on metrics of evaluation for loans, such as debt service ratio, and on a consistent source of income and job security.

**Bank branches dominant in areas of residential instability and ethnic concentration**

Banks are overrepresented along the dimensions of residential instability and ethnic concentration at the national level. This finding is generally consistent at the provincial level with the exception that credit unions are overrepresented in areas more marginalized along residential instability in Ontario.

Residential instability focuses on those marginalized because they are non-youth, single, alone, renters, apartment dwellers, or recently in transit. The characteristics of the people in these communities is not completely clear—the metrics may include communities with a high proportion of young urban professionals living alone, the elderly living alone, or areas with individuals that have become disenfranchised in some way. There seems little reason to deter banks from serving these areas, in fact they are likely areas with young urban professionals that would be targeted based on a market strategy.

The ethnic concentration dimension focuses on communities that face social or economic adversity because they comprise recent immigrants (within the last five years) or visible minorities. This finding is the most consistent, as banks are overrepresented in areas marginalized along this dimension nationally, in all provinces where the chi-square test is statistically significant.

**DISCUSSION**

The results of our research offer evidence of a credit union niche in Canada, but one that differs from the original niche for credit unions when they were in their pioneering period; between when they were founded through to their formative period (Macpherson, 2012). First, there is clear evidence that credit union branches are more likely to be located in Canada’s rural and small towns than bank branches. This is true of all parts of Canada with the exception of New Brunswick. Next, by making use of the Canadian Marginalization Index, which draws on theoretical perspectives surrounding inequality and marginalization in Canada to create a set of indicators of marginalization, we found that credit unions and banks both serve marginalized communities. What distinguishes them is the type of marginalized communities they serve. Banks are more likely to serve ethnic communities with large immigrant and visible minority populations, and to a lesser extent, those communities composed of individuals that are isolated or alone. That is, banks are overrepresented in communities marginalized along the dimensions of ethnic concentration, and residential instability. Credit unions, however, are located in areas marginalized along the dimensions of material deprivation and dependency. Arguably, this finding offers some support that credit unions in Canada are being true to their founding social mission.

Banks being overrepresented in communities of recent immigrants would appear to be a reasonable market strategy as approximately 67 percent of Canada’s current population growth comes from immigration, and that...
Maiorano, Mook, & Quarter (2016)

proportion is projected to increase to more than 80 percent by 2031 (Statistics Canada, 2012). Canadian banks offer unique programs and services to immigrants through the “Newcomer Package” at the Royal Bank of Canada (RBC, 2016), the “Welcome to Canada Package” at CIBC (CIBC, 2016b), the BMO “NewStart program” (Bank of Montreal, 2016a), the “StartRight Program” for landed immigrants (BNS, 2016) at Scotiabank, and the “New to Canada” package at TD Bank (TD, 2016). These programs offer discounted fees, loans, or mortgages despite little credit history, increased services, or opportunities to open bank accounts prior to arriving in Canada (Bank of Montreal, 2016b). Several of the programs also differentiate the type of immigrant, for example, offering more targeted services to international students or business owners and investors. To bolster clients through immigration networks and associations, one bank offered incentives to immigration consultants for each new client referred to a branch (Trichur, 2007). While credit unions are offering programs directed at recent immigrants in localities (Brown, 2015), they have only recently begun to investigate further methods to target immigrant communities (Cheung, Christian, & La Rose, 2013). As the dimension of ethnic concentration includes both proportion of immigrants arriving within the last five years, and the proportion of the population that identifies as a visible minority, one question for future research is to explore the degree to which immigration accounts for the overrepresentation by banks as compared visible minority status.

Credit unions serve those communities composed of individuals who are more likely to face obstacles getting a loan or securing credit from a bank; those communities marginalized due to material deprivation and dependency. Given the dependence banks place on metrics of evaluation for loans, such as debt service ratio, and on a consistent source of income and job security, this analysis does provide evidence to support the perception that credit unions fulfill a public purpose, as defined by Andrew Reschovsky (2010), by “providing access to credit markets for families, individuals and businesses that commercial banks do not lend to” (para. 16).

The data for median household income level are more equivocal. However, it appears that credit union branches are overrepresented in middle-income areas nationally, even more so than bank branches, and the pattern is most pronounced for Québec, Nova Scotia, and Alberta. Our data offer support for the supposition that credit union branches are more likely than bank branches to service low-income areas within large core population centres, and middle-income areas in rural areas. Overall, credit unions throughout Canada are underrepresented in higher-income areas as compared to banks, with few exceptions.

Although our study did not include payday lenders, the implication from our data is consistent with earlier research (Brennan et al., 2011) that credit unions are serving a different market than banks, and not the lower-income inner-city communities. In that respect, they seem to differ from the U.S. credit unions we studied in Wisconsin, Arizona, and New Hampshire (Mook, Maiorano, & Quarter, 2015). Perhaps this is because credit unions in the U.S. are nonprofit and credit unions in Canada are a form of co-operative with share capital. Possibly having the nonprofit status obliges U.S. credit unions to make a greater effort to locate in lower-income areas. This is a question that merits further research. The shift of credit union branches away from low-income communities suggests a difference from credit unions during the pioneering period.

With the exception of New Brunswick, the credit union market is much more rural than that of the banks. Along with the findings related to the different types of marginalized communities credit unions and banks serve, the rural difference is a very consistent and strong credit union difference. One could speculate on possible explanations. Credit union roots and their historic strength has been in agricultural communities, and even though they have shifted their business to urban centres in response to population shifts, they have not done this to the same extent as bank branches. A possible hindering factor for credit unions is that their board is elected by their members (credit union clients), and the members may have a vested interest in keeping the
credit union in their community, even if it could earn more by shifting its business to major population centres. This explanation is speculative, but if it were accurate, one would expect credit union branches to become more urban and over time to assume a similar location pattern to bank branches.

An alternative explanation is that credit unions value having a distinct niche, and even though there may be greater market potential in shifting more business to urban centres, they are comfortable with their niche market and are unwilling to take the financial risks associated with reducing their rural niche. One could say that serving rural Canada is a credit union difference.

The findings in this article also align to some extent with the Bank of Canada’s (2014) assessment of vulnerabilities and risks threatening financial stability in Canada, in its 2014 Financial System Review. In the review, the Bank of Canada suggests credit unions have a higher portion of business and lending directed at riskier areas. These areas, according to the report, may include smaller credit unions that offer mortgages to borrowers who do not qualify for insured mortgages. This includes low-income individuals, recent immigrants, rural residents with income that is more disposed to being volatile, and borrowers lacking income documentation. This risk to credit quality is especially significant in economic downturns (Bank of Canada, 2014). Given recent changes in federal tax and financial policy, an important concern in need of further research, is to explore how ongoing federal policy will attempt to mitigate financial vulnerabilities in the economic system, while not impeding the ability of credit unions to serve underserved communities, or to further exclude marginalized communities through financial exclusion (see Collard, 2007).

The elephant in the room with respect to rural markets is electronic banking. Will electronic banking and internet banking overtake place as the primary mode of operation, and will it threaten the credit union advantage in rural markets? The answer is uncertain, but it is a pattern that merits investigation. As the connection to local communities decreases, will credit unions retain a distinctiveness that speaks clearly to the credit union difference? This is another question that merits further research.

Credit unions have consolidated into larger units with more branches, and within the context of a highly competitive market, it is likely that this pattern will continue. For banks, consolidation is simply a business decision; for credit unions, it can challenge the credit union difference of independent entities that are governed by representatives from a local community. In an effort to create greater connection to a larger and more diverse membership, credit unions are creating more complex governances with regional representation (Quarter, Mook, & Armstrong, in press), a strategy advocated by Lou Hammond Ketilson and Kimberly Brown (2011). However, it remains to be seen whether this change in governance will be sufficient to overcome the challenges of serving a larger area and population in a way that is consistent with the expectations of democratic governance and a credit union difference.

REFERENCES


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