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Analysis in Brief

A comparison of investments of official language minority owned businesses in rural and urban areas

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Table of contents

A comparison of investments of official language minority owned businesses in rural and urban areas

by **Francis Demers, Julio Rosa** and **Mahamat Hamit-Haggar**

Abstract

This analysis compares the investment efforts of official language minority (OLM) owned businesses[1] depending on whether they are located in a rural or urban area. The study is based on a model that uses a seemingly unrelated regression equation (SURE) system estimator to simultaneously assess the impact of determinants that explain the investment of businesses in rural and urban areas and to statistically test the differences between the two areas. According to longitudinal data from 42,316 OLM-owned businesses in Canada from 2018 to 2021, the results show significant disparities in the determinants of investments of businesses in rural and urban areas. For rural businesses, which were relatively more common in the agriculture and construction sectors, expenses affected investments the most, and this impact was much greater than for urban businesses. For urban businesses, being foreign-controlled resulted in an increase in investments compared with Canadian-controlled businesses, and this impact was much greater for urban businesses than for rural businesses. The results also suggest that the COVID-19 pandemic had a major impact, encouraging businesses to adopt a more careful approach of protecting liquid assets in the face of economic uncertainty.

Introduction

Official language minority (OLM) owned businesses represent a considerable portion of the Canadian economy. This group includes businesses operating in the province of Quebec and owned by an anglophone and businesses operating in a province or territory outside Quebec and owned by a francophone.

OLM entrepreneurs contribute to economic diversity and innovation in Canada by bringing a unique perspective and culture and innovative ideas and business solutions to their community. However, these entrepreneurs can face unique challenges, such as language barriers that affect business relations, visibility and expansion, as well as limited access to networks and resources, and differences in perception.

OLMs also face other challenges that vary depending on the region where the business operates. In urban centres, OLM-owned businesses must deal with a more competitive market and a more diversified clientele. Furthermore, businesses located outside large urban centres face challenges related to market access, limited infrastructure and a more local clientele.

To help OLM entrepreneurs overcome these challenges, the federal government created initiatives such as the Action Plan for Official Languages and the Economic Development Initiative to support linguistic minorities (Canadian Heritage, 2023). The purpose of these linguistic minority-focused strategies is to foster economic growth and regional development, create jobs, stimulate local economies, and reduce interregional economic disparities.

Because analysis of OLM-owned businesses has been limited, this study sheds light on them by assessing their investment efforts in urban and rural Canada. The study will identify interregional economic and sectoral disparities for these businesses by trying to answer the following question: What are the determinants that account for the differences in investment efforts of OLM-owned businesses between urban and rural areas?

The findings from this analysis will guide the development of strategic recommendations on federal government policies related to supporting the growth and innovation of OLM-owned businesses. This study, based on panel data from administrative sources, contributes to the Canadian economic literature by looking at the new topic of investment efforts of OLM-owned businesses in rural and urban areas.

1. Official language minority (OLM) owned businesses cover businesses operating in the province of Quebec and owned by an anglophone and businesses operating in a province or territory outside Quebec and owned by a francophone.

This report is organized as follows: the next section gives a brief overview of the economic literature on OLM-owned businesses and rural and urban businesses. Section 3 covers the data sources used for this analysis and provides the definitions of rural and urban areas and OLM-owned businesses. Section 4 presents descriptive statistics on the OLM-owned business group examined in this analysis by rural or urban area, while section 5 gives a detailed explanation of the methodology used to assess the determinants that affect investment efforts. Section 6 presents an empirical analysis of the results, and finally, section 7 concludes with suggestions for future analyses on OLM-owned businesses.

A brief literature overview

To date, few analyses have examined OLM-owned businesses (Bourgeois, 2007; Hamit-Haggar and Alasia, 2016; Statistics Canada, 2022 and 2023) despite growing interest in businesses owned by minority groups. This interest can be explained by entrepreneurial diversity, which is viewed as an essential driver of business growth and innovation and of a more diverse society in general. This analysis enriches the empirical literature on OLM-owned businesses in rural and urban areas in terms of the determinants that affect these businesses' investments by filling certain persistent gaps in the assessment of government policies related to support for growth and innovation of minority groups.

The economic literature includes several comparative studies of the performance of rural and urban businesses. In Canada, Ha et al. (2023) reported a larger average increase in revenues for small rural businesses (+3.6%) than for their urban counterparts (+1.4%) from 2019 to 2020. The study shows that during this period, small urban businesses had a higher increase in the return on total assets ratio (+6.2%) than small rural businesses (+4.3%), indicating that small urban businesses have a better ability than small rural businesses to generate profits in relation to total assets.

Internationally, a study of rural and urban businesses in England (Phillipson et al., 2019) showed two groups of businesses with similar revenues, but the proportion of profit-making businesses was higher in rural areas than in urban areas. It also revealed that rural businesses were much more likely to export, but were less innovative than urban businesses. The study also referred to obstacles to business success specific to rural businesses, which increased the further the business was located from major centres.

Furthermore, various analyses examined immigrant-owned businesses and the problems they encountered, which may resemble the challenges faced by OLM-owned businesses, including the language barrier. In Canada, a number of studies have analyzed immigrant entrepreneurship in recent years (Ostrovsky and Picot, 2020; Ostrovsky et al., 2019; Cardoso and Ramanarayanan, 2019; Fung et al., 2019; Hou et al., 2018; Green et al., 2016). Although they may face specific challenges related to cultural and linguistic differences, immigrant entrepreneurs can still compete with non-immigrant entrepreneurs because they are innovative.

In Germany, Sabary and Ključnikov's study (2023) identified causal relationships between the main obstacles to immigrant entrepreneurship. The study established that the language barrier was one of the main challenges that hinders business performance. Hack-Polay et al. (2020) also confirmed that immigrant entrepreneurs in rural areas of England had to deal with challenges related to growth owing to cultural and language differences, not just to the smaller size of the market in rural areas.

Data sources

This analysis uses data from Statistics Canada's Business Linkable File Environment (B-LFE), which is based on administrative data available at Statistics Canada, including the Business Register, data on incorporated business tax returns (T2) from the Canada Revenue Agency, accounts for source deductions (PD7), data on trade by exporter characteristics, the Survey of Research and Development in Canadian Industry, and data from Business Innovation and Growth Support.

In addition, the linkage of the B-LFE and the Census of Population is used to determine the characteristics of business owners. In this analysis, a business is OLM-owned when

- it operates in Quebec and the first official language spoken[2] of its primary owner[3] is English, or both English and French
- it operates in a province or territory other than Quebec and its primary owner's first official language spoken is French, or both English and French.

Businesses in urban areas are those that operate in a census metropolitan area or census agglomeration.[4] The rest of this analysis will use the term "rural businesses" to refer to other businesses that operate in rural and small town Canada (i.e., outside census metropolitan areas and census agglomerations).

This study covers all incorporated OLM-owned businesses for the 2021 reference year and offers a longitudinal look at these businesses' net investments in capital and intangible assets over the period from 2018 to 2021.

Descriptive analysis

Table 1 below summarizes the panel dataset used in this analysis for the 2018-to-2021 period by the business's area (rural or urban). The dataset contains 42,316 incorporated OLM-owned businesses. Each business (panel) is observed four times (i.e., in four years). Of these 42,316 businesses, 7,515 (17.8%) were in rural and small town areas and 34,801 (82.2%) were in urban areas.

Nearly two-thirds of OLM-owned businesses in urban areas operated in Quebec, whereas rural businesses were more likely to be located in New Brunswick, Nova Scotia and the Prairies (see Table 3 in the appendix). Rural businesses were more concentrated in goods-producing industries, namely the agriculture, forestry, fishing and hunting sector and the construction sector. By contrast, urban businesses were mainly in the professional, scientific and technical services sector, which is more focused on technology, and the health care and social assistance sector (see Table 4 in the appendix).

Table 1 shows a considerable gap between rural businesses and urban businesses in terms of median net investments; urban businesses seem more likely to be startups, given their younger age. The median values of total liabilities, equity, total revenues, total expenses, current assets and current liabilities were all higher for rural businesses than urban businesses. Urban businesses had three times more employees on average and higher internal research and development (R&D) expenses. Urban businesses also had a higher average export value than rural businesses. However, whether in rural or urban areas, fewer than 10% of businesses conducted R&D, exported or received federal innovation support.

The percentage of urban businesses that were foreign-controlled was 1.1%, compared with 0.3% for rural businesses.

The owners of OLM-owned businesses in urban areas had a higher level of education than their counterparts in rural areas. The proportion of owners with a university degree among OLM-owned businesses in urban areas was 45.2%, compared with 26.1% for businesses in rural areas.

It is important to note that even though there were fewer OLM-owned businesses in rural areas (7,515), their median net investment amount is considerably higher ($218,802, compared with $40,257 in urban areas). This difference may be because in rural areas, many OLM-owned businesses are in the agriculture sector, which generally requires considerable capital (investments) for agricultural buildings, machinery and livestock.

Overall, the statistics in Table 1 reflect the industries in which OLM-owned businesses operate in urban and rural areas.

2. The variable "first official language spoken" from the Census of Population is derived by first considering knowledge of official languages; secondly, mother tongue; and thirdly, the language spoken most often at home (source: https://www12.statcan.gc.ca/census-recensement/2016/as-sa/98-200-x/2016011/98-200-x2016011-eng.cfm).
3. The primary business owner is the individual most likely to be the owner (or manager) among all known owners and office bearers. The primary owner is the person with the largest share of ownership. If multiple owners meet this criterion, the primary owner is the person with the largest income.
4. For a definition of census metropolitan area and census agglomeration, see the 2021 Standard Geographical Classification (SGC) – Volume I, The Classification. According to Statistics Canada's 2021 Standard Geographical Classification, businesses located in census metropolitan areas or census agglomerations are classified as "urban" and all other businesses are considered to be in "rural and small town areas."

Table 1
Characteristics of official language minority–owned businesses, by rural or urban area, 2018 to 2021

	Rural area	Urban area
Number of individual businesses (number of panels)	7,515	34,801
Percentage of businesses	17.8	82.2
Number of periods observed per panel (in years)	4	4
Total number of observations from 2018 to 2021	30,060	139,204
	2018-to-2021 average	
Number of employees	11	31
Age of business (in years)	18	15
Amount of federal innovation support (in dollars)	2,481	5,154
Percentage of businesses receiving federal innovation support	1.7	0.8
Research and development (R&D) expenditures (in dollars)	7,023	55,014
Percentage of businesses that conduct R&D	0.6	1.7
Export value (in dollars)	444,383	1,082,858
Percentage of exporters	4.0	5.7
Percentage of publicly traded businesses	0.1	0.4
Percentage of foreign-owned businesses	0.3	1.1
Percentage of university graduate-owned businesses	26.1	45.2
	2018-to-2021 median (in dollars)	
Net investments	218,802	40,257
Total liabilities	202,235	128,421
Equity	364,221	269,275
Total revenues	500,610	417,818
Total expenses	361,463	280,250
Current assets	234,177	226,475
Current liabilities	72,193	63,753

Sources: Statistics Canada, Business Linkable File Environment, and authors' calculations.

Methodological approach

This study uses the seemingly unrelated regression equation (SURE) system approach for the specific estimation case of two different-sized subpopulations (urban and rural). For each of these subpopulations, each business is observed every year from 2018 to 2021. The SURE estimator is chosen to account for the correlation between OLM-owned businesses in rural and urban areas while considering the observable and non-observable factors shared by both areas.

The SURE estimator dissociates the effect of the region where the business is located by providing more accurate estimates for both groups and using a common variance-covariance matrix between the equations for urban and rural businesses. This common variance-covariance matrix considers the contemporary correlations that are common to both equations while also considering non-observable factors—the advantage of using the SURE estimator.

Many studies in the economic literature use the SURE model. The vast majority of these studies use this approach to estimate the parameters from several independent equations. The present study uses this model for the same reasons.

This type of model is particularly widely used in the fields of energy and the environment (Patiño et al., 2020; Rose and Lynch, 2001; Khan et al., 2019 and 2021), travel and tourism (Hu and Donnell, 2010; Xu et al., 2018; Weng and Wang, 2006; Tiong et al., 2023), politics (Morgenstern et al., 2009), and international economics (Jarco and Pipien, 2020), but its use in regional economics is relatively limited (Xu, 2021; DiBartolomeo and Turnbull, 2023). This study therefore looks at a new topic, the impact of OLM-owned businesses' investment efforts in the regional economy, using a SURE estimator-based approach.

To compare the impact of determinants of OLM-owned businesses' investments in urban areas with that of determinants for rural businesses, the relationship between the net amount of capital and intangible assets (*Log_NetInvestments*) and the characteristics (X) of urban and rural businesses is examined with the following model:

$$\begin{pmatrix} Log\_NetInvestments_{rural;it} \\ Log\_NetInvestments_{urban;it} \end{pmatrix} = \begin{pmatrix} Log\_X_{rural;it} & 0 \\ 0 & Log\_X_{urban;it} \end{pmatrix} \begin{pmatrix} \beta_{rural;it} \\ \beta_{urban;it} \end{pmatrix} + \begin{pmatrix} \varepsilon_{rural;it} \\ \varepsilon_{urban;it} \end{pmatrix}$$

where $Var\left[\begin{pmatrix} \varepsilon_{rural;it} \\ \varepsilon_{urban;it} \end{pmatrix}\right] = \begin{pmatrix} \sigma^2_{rural} & \sigma_{rural;urban} \\ \sigma_{rural;urban} & \sigma^2_{urban} \end{pmatrix}$, i = 1 to 42,316 and t = 2018 to 2021.

The explanatory variables that can directly or indirectly explain the variation in businesses' investments are included in the model in logarithmic (Log) form. The size in terms of number of employees (*Log_Employment*) is included because it is reasonable to expect a larger business to have more assets than a smaller business. Businesses with higher revenues (*Log_TotalRevenue*) are generally more able to accumulate capital and invest in intangible assets such as R&D and intellectual property. Furthermore, the federal innovation support amount received (*Log_BIGSAmount*) may be directly related to the increase in intangible assets through investments in R&D or innovation initiatives. A business's ownership structure, such as being publicly traded or not (*PubliclyTraded*), may affect the availability of resources for asset acquisition. To account for businesses operating for longer being possibly more likely to have accumulated more assets over the years than recent startups, a binary variable is included to indicate whether the business was in operation for less than five years or not (*StartUp*). The value of exports (*Log_ExportValue*) is included, given that businesses that export generally perform better, and this should have an impact on domestic and foreign investment. R&D expenses (*Log_R&DExpenses*) may include capital investment, warranting the addition of this variable. Total expenses (*Log_TotalExpenses*) may affect a business's ability to invest in assets, because higher expenses could be associated with greater investments in capital and intangible assets. Total liabilities (*Log_TotalLiabilities*) can reflect a business's debt and financial obligations, and higher debt can affect the availability of resources for acquiring and maintaining assets. Higher equity (*Log_Equity*) may indicate a stronger financial ability to invest in long-term assets. Current assets (*Log_CurrentAssets*) can affect the business's short-term financial stability, as well as its ability to invest in longer-term assets. Current liabilities (*Log_CurrentLiabilities*) could indicate the business's short-term obligations and may affect its ability to invest in long-term assets. A binary variable to indicate whether the business was foreign-controlled (*ForeignControlled*) is used to reflect differences in the governance structure and management strategies, possibly affecting asset investment choices. A binary variable to indicate whether the business is owned by a university graduate (*UniversityGraduate*) is included to capture differences that may be associated with entrepreneurial strategies, long-term perspectives and asset investment choices based on a more advanced education. A control variable for the industry sector was added given that the industries in which businesses operate can play a crucial role. Rural businesses are more likely to operate in the agriculture sector, which generally requires more capital stock, whereas urban businesses are more concentrated in sectors with more intangible assets, such as intellectual property. Another control variable was added to reflect the business's province or territory of operation to account for the differences in provincial and territorial distribution presented in the previous section.

Variables related to the number of patents or trademarks were not included, given the unavailability of data for the most recent years.

The SURE estimator involves estimating both investment equations simultaneously (i.e., estimating the equation for rural businesses and that for urban businesses in the same model). This estimator provides an estimate of the coefficients of each explanatory variable *X* for rural businesses (β_{rural}) and urban businesses (β_{urban}). As mentioned above, the SURE estimator dissociates the effect of the area where the business is located while considering the correlations between the businesses *i* and the years *t* and the heterogeneity for business *i* attributable to non-observable factors shared by the subsamples of the two areas by estimating a common variance-covariance matrix of errors for both equations for urban and rural businesses ($Var\left[\begin{pmatrix} \varepsilon_{rural;it} \\ \varepsilon_{urban;it} \end{pmatrix}\right]$).

Once the coefficients have been estimated for both areas, a test is conducted to verify whether the impact of each determinant is significantly different between rural and urban businesses. For each explanatory variable, a Wald test is used to test the following null hypothesis:

$$H_0 : \beta_{rural} - \beta_{urban} = 0$$

Empirical analysis

Table 2 below shows the regression coefficients estimated with the SURE estimator for rural businesses (column 2) and urban businesses (column 3), and the difference between the coefficients for the rural business group and the urban business group (column 4).

Generally, a statistically significant and positive difference between the coefficients for the rural business group and the urban business group means that an increase in the explanatory variable is equivalent to higher investments for rural businesses. A statistically significant and negative difference means that an increase in the explanatory variable is equivalent to higher investments for urban businesses.

A difference that is not significantly different from 0 indicates that an increase in the explanatory variable has the same effect on investments for rural and urban businesses. In other words, the area has no impact on the explanatory variable's effect on investments.

The results in Table 2 show that an increase in revenues, the number of employees and total liabilities, as well as being less than 5 years old, publicly traded or foreign-controlled, contributed to significantly higher investments for OLM-owned businesses in urban areas compared with those in rural areas. By contrast, an increase in total expenses, current assets, current liabilities and equity, as well as being owned by a university graduate, contributed to significantly higher investments for rural businesses compared with urban businesses. Rural or urban area had no significant impact on the effect of the federal innovation support amount or the R&D expense amount on investments.

A 1% gain in employment size in rural and urban areas resulted in a significant increase of 0.076% in urban businesses' investments and 0.025% in rural businesses' investments.[5] The impact of employment size on investments was significantly bigger for urban businesses than for rural businesses, with a differential impact of 0.051 percentage points. The significant impact of an increase in employment size on investments suggests that businesses that invested in hiring employees did so to support growth or expansion plans.

In terms of the impact of government assistance on investments, a 1% gain in the amount of federal government innovation and growth support resulted in a significant increase of 0.007% in investments for businesses in urban and rural areas. The impact of the increase in the amount of support on investments did not differ significantly between the two areas. Support recipients may have used this assistance to invest in projects they would not have invested in otherwise, thereby increasing their investments. Federal innovation support may be a big incentive for investment, mainly in projects aligned with government priorities. This federal innovation support did not target rural OLM-owned businesses operating primarily in the agriculture, forestry, fishing and hunting sector and the construction sector, mainly because it mostly applies to businesses in the professional, scientific and technical services sector and the manufacturing sector. In 2021, 17% of the businesses receiving federal innovation support were operating in the manufacturing sector and 25% were in the professional, scientific and technical services sector.[6]

In terms of the effect of a business's total expenses on its investments, a 1% rise in expenses in rural and urban areas resulted in a significant investment increase of 0.471% for rural businesses and 0.441% for urban businesses. The impact of total expenses on investments was significantly bigger for rural businesses than for urban businesses, with a differential impact of 0.030 percentage points. However, R&D expenses in particular did not have a significant impact on investments for rural or urban businesses. Rural businesses, operating mainly in goods-producing industries, may have invested more in capital expenses, whereas urban businesses were mainly operating in industries more focused on R&D, such as professional, scientific and technical services.

5. This interpretation reflects the correlation between the variables but is not necessarily a causal link.
6. Statistics Canada, Enterprises (ultimate beneficiary) with business innovation and growth support by industry and year (statcan.gc.ca), Table 33-10-0221-01.

As for the impact of a business's debts on its investments, a 1% rise in the amount of total liabilities in rural and urban areas resulted in a significant increase of 0.401% in urban businesses' investments and 0.382% in rural businesses' investments. The impact of total liabilities amounts on investments was significantly bigger for urban businesses than for rural businesses, with a differential impact of 0.019 percentage points. This relationship suggests that businesses used debt as a driver to finance their investments for growth.

A business's assets also had an effect on its investments, because a 1% gain in equity in rural and urban areas resulted in a significantly increase of 0.326% in rural businesses' investments and 0.246% in urban businesses' investments. The impact of equity on investments was significantly bigger for rural businesses than for urban businesses, with a differential impact of 0.080 percentage points. This result suggests that businesses with higher equity were in a better financial position for higher investments.

The results show that a business being foreign-controlled or publicly traded led to an increase in investments compared with being domestic or not publicly traded. The impact of these variables was significantly bigger for urban businesses than for rural businesses (with a differential impact of 0.203 percentage points for foreign control and 0.348 percentage points for being publicly traded).

In terms of short-term assets and obligations, a 1% increase in current assets and current liabilities resulted in a significant decrease in business investments in rural and urban areas. This decline was significantly bigger for urban businesses than for rural businesses. A 1% increase in current assets resulted in an investment decrease of 0.159% for urban businesses and 0.117% for rural businesses. A 1% increase in current liabilities resulted in an investment decrease of 0.125% for urban businesses and 0.091% for rural businesses. These results suggest that, on the one hand, businesses with more current assets such as cash on hand tended to invest less, perhaps preferring to keep more liquid assets during the study period, marked by the COVID-19 pandemic, instead of making big investments. On the other hand, businesses with more short-term debt tended to invest less, and this may be explained by businesses with limited funds preferring to pay off current debt instead of investing in longer-term projects. It would seem that between 2018 and 2021, businesses prioritized immediate financial stability over investment growth in an uncertain economic situation.

Table 2
Econometric results for rural and urban official language minority–owned businesses estimated using the seemingly unrelated regression equation system approach

Variable	Rural equation	Urban equation	Rural coefficient – Urban coefficient
Log_TotalRevenue			
Coefficient	-0.049***	-0.036***	-0.013**
Robust standard error	(0.003)	(0.004)	…
Log_TotalExpenses			
Coefficient	0.471***	0.441***	0.030***
Robust standard error	(0.004)	(0.005)	…
Log_TotalLiabilities			
Coefficient	0.382***	0.401***	-0.019***
Robust standard error	(0.003)	(0.003)	…
Log_CurrentAssets			
Coefficient	-0.117***	-0.159***	0.042***
Robust standard error	(0.003)	(0.003)	…
Log_CurrentLiabilities			
Coefficient	-0.091***	-0.125***	0.035***
Robust standard error	(0.002)	(0.003)	…
Log_Equity			
Coefficient	0.326***	0.246***	0.080***
Robust standard error	(0.003)	(0.003)	…
Log_Employment			
Coefficient	0.025***	0.076***	-0.051***
Robust standard error	(0.005)	(0.005)	…
Log_BIGSAmount			
Coefficient	0.007***	0.007***	-0.001
Robust standard error	(0.001)	(0.003)	…
Log_R&DExpenses			
Coefficient	-0.004	0.002	-0.006
Robust standard error	(0.003)	(0.002)	…
Log_ExportValue			
Coefficient	-0.005***	0.001	-0.006***
Robust standard error	(0.001)	(0.002)	…
StartUp			
Coefficient	0.069***	0.096***	-0.027**
Robust standard error	(0.009)	(0.009)	…
PubliclyTraded			
Coefficient	0.161**	0.509***	-0.348***
Robust standard error	(0.075)	(0.082)	…
ForeignOwned			
Coefficient	0.364***	0.567***	-0.203**
Robust standard error	(0.083)	(0.058)	…
UniversityGraduate			
Coefficient	-0.103***	-0.195***	0.092***
Robust standard error	(0.019)	(0.021)	…
Constant			
Coefficient	0.017***	0.415***	…
Robust standard error	(0.004)	(0.021)	…

… not applicable
** significantly different from reference category ($p < 0.05$)
*** significantly different from reference category ($p < 0.01$)
Notes: The model controls for industry and province or territory (not presented); $\sigma^2_{rural} = 0.513$; $\sigma^2_{urbain} = 3.948$; $\sigma_{rural;urbain} = -0.007$; number of observations = 169,264.
Sources: Statistics Canada, Business Linkable File Environment, and authors' calculations.

In terms of business revenues, a 1% increase in total revenue also resulted in a significant decrease in investments for businesses in rural and urban areas. This decline was significantly bigger for rural businesses (-0.049%) than for urban businesses (-0.036%). A 1% increase in exports resulted in a significant decrease of 0.005% in investments for rural businesses and had no significant effect on investments for urban businesses. This result may seem counterintuitive because, in favourable economic conditions, a revenue increase could be expected to lead to higher capital investments. However, the last two years of the study period in this analysis were marked by a difficult economic situation because of the COVID-19 pandemic. This economic uncertainty may have deterred businesses from making major investments during this period and may have encouraged them to be careful and save profits as a contingency fund, even if these businesses had successfully managed to increase their revenue.

The analysis also reveals that being owned by a university graduate resulted in a significant decrease in investments for rural businesses (-9.8%) and urban businesses (-17.7%), compared with businesses not owned by a university graduate. This impact was significantly different for urban businesses compared with rural businesses.

Conclusion and direction for future research

Based on an approach modelled by a SURE system, this study looks at the identification and the effect of factors that affect investments made by OLM-owned businesses in rural and urban Canada.

The results show significant disparities in the determinants of investments by these businesses between rural and urban areas. Expenses were clearly a determinant with a relatively bigger impact on investments for rural businesses than for urban businesses. For urban businesses, being foreign-controlled was the factor with the biggest impact on investments, and this impact was significantly greater than for rural businesses. Federal government innovation support amounts had an equivalent effect on OLM-owned businesses in urban and rural areas.

The results also suggest that the COVID-19 pandemic has had a major impact, encouraging businesses to be more careful and prioritize protecting liquid assets in the face of economic uncertainty.

Lastly, the use of an estimation technique that can correlate non-observable factors between the equations for rural and urban areas shows that this approach yields more accurate estimates of determinants of investment.

What comes out of this study is that determinants of investment and the intensity of effects differ by area, and it is important to consider these differences when making regional development decisions for OLM-owned businesses.

Further analysis should be conducted to get a better understanding of how OLM-owned businesses' characteristics affect their ability to overcome economic challenges. Furthermore, better understanding regional differences in terms of federal innovation support and R&D expenses would help determine how these factors can be better adapted to encourage investments from these businesses in rural and urban areas. This study highlights the importance of taking a separate approach with regard to economic policies and support for OLM-owned businesses, to account for their characteristics and regional characteristics, and thus foster their growth and their economic resilience.

Lastly, considering the demographic weight of the francophone minority outside Quebec and the anglophone minority in Quebec, especially in Montréal, it would be interesting to explore the urban investment model specifically for these two groups. Although more restrictive, it would also be interesting to analyze the contribution to investment by urban or rural area for the unilingual OLM group exclusively.

Appendix

Table 3
Official language minority-owned businesses, by rural or urban area and province or territory, 2021

Province or territory	Rural area	Urban area
	percent	
Newfoundland and Labrador	0.4	0.1
Prince Edward Island	0.6	0.1
Nova Scotia	7.6	0.6
New Brunswick	28.7	5.3
Quebec	20.3	62.7
Ontario	22.9	21.0
Manitoba	4.5	1.5
Saskatchewan	3.1	0.6
Alberta	8.2	4.5
British Columbia	2.7	3.7
Yukon	0.4	0.0
Northwest Territories	0.4	0.0
Nunavut	0.3	0.0

Note: The percentages in each column do not always add up to 100% because of rounding.
Sources: Statistics Canada, Business Linkable File Environment, and authors' calculations.

Table 4
Official language minority-owned businesses, by rural or urban area and sector group, 2021

Sector groups	Rural area	Urban area
	percent	
11 Agriculture, forestry, fishing and hunting	21.0	1.0
21–22 Mining, quarrying, and oil and gas extraction, and utilities	0.9	0.2
23 Construction	13.3	9.6
31–33 Manufacturing	4.8	5.1
41 Wholesale trade	4.4	7.0
44–45 Retail trade	10.3	7.7
48–49 Transportation and warehousing	5.0	6.3
51 Information and cultural industries	0.6	1.3
52–53 Finance and insurance, and real estate and rental and leasing	10.5	15.2
54 Professional, scientific and technical services	5.8	14.6
55–56 Management of companies and enterprises, and administrative and support, waste management and remediation services	3.7	5.5
61 Educational services	0.5	0.9
62 Health care and social assistance	5.7	11.3
71–72–81 Arts, entertainment and recreation; accommodation and food services; and other services (except public administration)	11.5	11.1
91 Public administration	0.4	0.0
Unclassified	1.7	3.1

Note: The percentages in each column do not always add up to 100% because of rounding.
Sources: Statistics Canada, Business Linkable File Environment, and authors' calculations.

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