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Marginalized Tenants, Poor Proximity? Market Rental Housing and Supportive Amenities And Services in a Regional Geography

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Abstract

Proximity to supportive amenities and services is critically important for marginalized renter households in communities of all sizes. In response, we examine the distance from market rentals to a range of resources in an Atlantic Canadian regional municipality, including health care services, grocery stores, internet access sites, and recreational facilities, identified in partnership with community organizations. We compare distances to amenities and services based on whether units are lower- or higher-cost, and whether rentals are located in the core or more peripheral areas of the region. Network analysis shows that, in the core, lower-cost units are closer to most amenities and services, but that only seven types of resources have median distances which are walkable from such rentals. In the periphery, lower-cost and higher-cost units have similar distances to most resources, and only parks are walkable. For policy and practice, including both the delivery of Housing First programs in rural regions and new affordable rental housing development in smaller geographies, results demonstrate the importance of fostering transportation initiatives, community hubs, mobile services for tenants, and considering transportation costs in the calculation of housing affordability.

Keywords: proximity, affordable housing, network analysis, poverty, Nova Scotia

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Locataires marginalisés, faible proximité? Marché du logement locatif et des aménagements et services de soutien dans une géographie régionale

Résumé

La proximité de commodités et de services de soutien est d'une importance cruciale pour les ménages locataires marginalisés dans les collectivités de toutes tailles. En réponse, nous examinons la distance entre les locations du marché et une gamme de ressources dans une municipalité régionale du Canada atlantique, y compris les services de santé, les épiceries, les sites d'accès Internet et les installations récréatives, identifiées en partenariat avec des organismes communautaires. Nous comparons les distances par rapport aux commodités et aux services selon que les unités sont moins chères ou plus chères, et si les locations sont situées dans les zones centrales ou plus périphériques de la région. L'analyse du réseau montre que, dans la zone centrale, les unités à moindre coût sont plus proches de la plupart des commodités et des services, mais que seuls sept types de ressources ont des distances médianes qui sont accessibles à pied depuis de telles locations. En périphérie, les unités à moindre coût et à coût plus élevé ont des distances similaires à la plupart des ressources, et seuls les parcs sont accessibles à pied. Pour les politiques et les pratiques, y compris à la fois la prestation de programmes Logement d'Abord dans les régions rurales et le développement de nouveaux logements locatifs abordables dans les régions plus petites, les résultats démontrent l'importance de favoriser les initiatives de transport, les carrefours communautaires, les services mobiles pour les locataires et la prise en compte des coûts de transport dans le calcul de l'accessibilité au logement.

Mots-clés: proximité, logement abordable, analyse de réseau, pauvreté, Nouvelle-Écosse

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1.0 Introduction

Increasingly, researchers, planners, and community developers recognize the importance of proximity to supportive amenities and services for marginalized individuals and families, including renter households. This recognition manifests in different ways: through evidence linking proximity to positive outcomes for individuals and families (Carson et al., 2010; Plane & Klodawsky, 2013; Veugelers et al., 2008), through the emergence and popularity of community hubs (Cranston, 2017; Haig, 2014; McShane et al., 2012; Province of Ontario, n.d.), and in the emphasis on distance to resources when evaluating new affordable housing proposals (Canada Mortgage and Housing Corporation [CMHC], n.d.; Leung, 2015).

Aside from urban-focused American research on the topic, little is known about proximity to supportive amenities and services on the part of tenants residing in lower-cost housing, particularly in peripheral geographies. This is an important gap: although there are programs and initiatives working to secure affordable rentals and provide assistance to marginalized tenants in urban and rural communities (Henwood et al., 2014; Waegemakers Schiff & Turner, n.d.), some raise concerns that tenants in smaller locales may lack access to the services and resources they require (Waegemakers Schiff et al., n.d.; see also Frank, 2020; Karabanow et al., 2014). This is especially important given that those who rent typically experience

greater economic and social marginalization compared to home-owning households (CMHC, n.d.; Kemp, 2011).

In response, we examine and compare the location of lower- versus higher-cost rental units vis-à-vis places that support and enhance the well-being of tenants in an Atlantic Canadian municipality, one with a small but urban core and a rural periphery. In addition to our emphasis on a smaller geography, we use a unique list of community resources generated in partnership with organizations on the front lines of assisting renter households in the study region, which includes more common resources such as grocery stores and recreational sites, but also ones reflective of a rural region, including mobile library sites and internet access points.

1.1 Framework and Background

More than two decades of research highlight the ways in which some—disproportionately low-income individuals and families—are disadvantaged by virtue of where they live (de Souza Briggs 2005a, 2005b; Ellen & Turner, 1997; Galster & Sharkey, 2017; Squires & Kubrin, 2005; Wilson, 2005; Woo & Kim, 2016). As suggested by Squires and Kubrin (2005) "access to decent housing, safe neighbourhoods, good schools, useful contacts and other benefits is largely influenced by the community in which one is born, raised and currently resides" (p. 47). This is not to ignore the impact of individual and familial attributes on various outcomes—socio-economic and otherwise—but rather to raise equal attention to the *structural* drivers of opportunity (Galster & Sharkey, 2017). For some, ensuring geographic equality of opportunity thus becomes a question of justice; to include the role of the state in mitigating inequities (de Souza Briggs 2005a, 2005b; Dawkins, 2017; Galster, 2017; Galster & Sharkey, 2017; Wilson, 2005).

Galster and Killen (1995) have conceptualized opportunity as bi-dimensional, involving both "process" and "prospects"(p. 9). The former involves the process of navigating various structures and, in turn, being shaped by these (e.g., housing, mortgage and labour markets; political, education and social service systems, etc.), while the latter constitutes the "prospective socioeconomic outcomes" (p. 9) that individuals consider may emanate from their housing location, and their level of education, employment opportunities pursued, etc.. Using the geography of opportunity as a framework for our research, we specifically examine proximity to supportive amenities and services for market renter households. Other researchers have also examined opportunity looking at neighbourhood-level characteristics—such as area-level poverty, unemployment, crime and housing condition—or have created opportunity metrics which combine both proximity and socio-demographic characteristics of neighbourhoods (Walter et al., 2018). The mechanisms through which place may impact household-level outcomes are poorly understood and depend on the element of geography of opportunity considered—concentrated, area-level poverty may affect one's socio-economic outcomes due to access to networks or collective efficacy, while proximity to amenities and services entails geographic mechanisms including potential spatial mismatches between, for example, low-income neighbourhoods and the location of infrastructure, and a lack of public services for reasons including disinvestment in high-poverty geographies (Galster, 2012; Wilson, 1987).

Prior research, largely conducted in the U.S. and in urban communities, has examined proximity to resources from rental housing of different kinds (Apparicio & Séguin, 2006; Ellen & Weselcouch, 2015; Koschinsky & Talen, 2016; Revington & Townsend, 2016). Koschinsky and Talen (2016) found that, in urban areas across

the United States, 39% of public housing tenants, 31% of those in project-based housing—meaning for-profit and nonprofit affordable housing which has obtained government support to finance the construction/renovation of their buildings—and 23% of those with housing vouchers—typically for market rentals—live in neighbourhoods with pedestrian access to amenities, compared to 13% of urban American households as a whole. Amenities included in their study were (a) retail and entertainment sites, (b) food stores, (c) restaurants, (d) coffee shops, (e) banks, (f) parks, (g) schools, and (h) bookstores. They also examine how walkability intersects with neighbourhood characteristics and tenant type, finding that seniors living in all three types of affordable housing options—public, project-based, and housing vouchers—have the greatest likelihood of living in walkable places, which are also (racially and ethnically) integrated neighbourhoods with less poverty. Tenants with disabilities residing in public or project-based units are also more likely to live in such neighbourhoods.

In more localized research, again based in the United States, results are mixed with respect to proximity. In a twelve-state study, Ellen et al. (2018) reported that neighbourhoods with project-based units—and specifically, developed with low-income housing tax credits [LIHTC]—compared to neighbourhoods with other rentals have greater transit access, but no differences were found with respect to proximity to employment opportunities. In addition, the lowest-income LIHTC tenants, as well as low-income, African American and Hispanic LIHTC renters, have better transit access and are closer to job centres, although they also live in areas with poorer performing schools and greater air pollution. Walter et al. (2018) looked at the location of newer versus older LIHTC units in a metropolitan, Texan county; they compared the siting of units created before and since 2009, when government began emphasizing 'opportunity neighbourhoods' when evaluating new project proposals. They concluded that post-2008 developments were more likely to be located in neighbourhoods offering lower-than-county-average access to amenities and services, including (a) transit, (b) schools, (c) recreational and employment opportunities, (d) retail centres and restaurants, and are also unhealthier—for example, due to greater exposure to traffic and waste sites. They also found better proximity to amenities in the urban core of the area they studied versus neighbourhoods near county boundaries.

In New York, Ellen and Weselcouch (2015) concluded that publicly-subsidized, privately-owned units were in neighbourhoods closer to public transportation, parks, child care, and seniors' centres. They also reported that public housing offered greater access to parks and transit, although both types of affordable housing were in proximity to schools which were lower performing. In Chicago, Talen and Koschinsky (2011) looked at the location of subsidized rental housing using the lens of sustainability, which included how close tenants were to amenities—(a) shopping areas, (b) grocery stores, (c) transit stops, (d) parks, and (e) schools—but also whether their neighbourhoods featured building density, street connectivity, diversity (including having a mix of housing tenures, building types, and residents with varying socio-demographic backgrounds), and were pedestrian friendly—for example, lacking industrial buildings or vacant properties. When neighbourhoods with and without subsidized (i.e., public and project-based) rental housing are compared, those with subsidized units have higher sustainability scores overall, as well as greater access to amenities and walkability. In turn, tracts with renter households receiving housing vouchers are further from amenities.

Little research is available from other countries, including Canada. Apparicio and Séguin (2006) examined accessibility to a wide range of community resources in Montréal and found that those living in public housing in suburban locations were further from amenities and services versus those living in the urban core. In Winnipeg, Carter and Osborne (2009) reported that refugees residing in inner-city market rentals note nearness to transit and helpful programs—including ones mandated to support refugees. In a more recent work, Revington and Townsend (2016) examined the location of affordable rentals in Montréal and Vancouver by zone—namely, the urban core, inner city, and inner and outer suburbs—in relation to major transit lines for two household types (e.g., couples with and without children) and two income levels (defined as the two lowest-income sextiles based on household type and for each city). They found the same basic pattern in both geographies: generally, the percentage of available, affordable housing increases as one moves further from the core, and, for both household types and income levels, lower proportions of affordable rentals are close to transit stops.

The review clearly shows a lack of emphasis on smaller geographies, and a dearth of research in countries outside the U.S. Prior research also generally analyzes a limited set of community resources, none of which have been generated in partnership with housing and allied organizations. At the same time, however, smaller communities across the country feature tenant households experiencing housing precarity, to which organizations have responded by creating Housing First programs and proposals for new affordable housing development.

1.2 Research Questions

In the context of the importance of proximity to supportive amenities and services on the part of marginalized tenants, the current research is guided by the following questions:

1. Do lower-cost rental units have greater proximity to amenities and services compared to rentals with higher costs?
2. Do lower-cost rental units in peripheral areas have the same proximity to amenities and services as lower-cost rentals in a core community?

2.0 Study Setting and Methods

2.1 Setting

This research took place in a municipality in Atlantic Canada with a population of 94,285 (Statistics Canada, 2017). Located in the province of Nova Scotia, Cape Breton Regional Municipality (CBRM) covers an expansive 2,430 km^2, and includes a core community of about 30,000, and smaller towns ranging from fewer than a thousand to one of approximately 17,500 residents (Statistics Canada, 2017). The region is in Mi'kma'ki, and there are two First Nations communities nearby—Membertou, which is jurisdictionally distinct but located within CBRM boundaries, and Eskasoni. The CBRM has experienced population decline, outmigration, and de-industrialization following the closure of a steel plant and coal mines (Merrifield & Toner, 2015), but there is population growth in Indigenous communities and Membertou operates a successful community development corporation. Important economic sectors include health care, social services, and tourism (Statistics Canada,

2017). There is significant poverty in the region as well as in much of rural Nova Scotia (Frank et al., 2020; Karabanow et al., 2014); in a study of child poverty in the province based on census divisions and using 2018 tax filer data, Cape Breton was found to have the highest rate at 34.9% (Frank et al., 2020).

The most recent period-prevalence count of those experiencing homelessness in the CBRM identified 278 adults, including 96 who were known to be experiencing absolute homelessness and 166 who were provisionally accommodated—such as couch surfing, staying in transitional housing, or in residential centres–institutions with no home identified upon discharge (Bickerton & Roy, 2019). Characteristics of those enumerated include that 55% were male-identifying and 39% were female-identifying—with 7% identifying 'other' or not responding—and that 42% were between the ages of 16 and 29, while 28% were in the 30 to 39 age category (Bickerton & Roy, 2019). Locally, 32.4% of renters are in core housing need (CMHC, n.d.), which typically means their housing is unaffordable and they are paying more than 30% of their pre-tax household income on their shelter costs, and 33% of renters have gross household incomes less than $20,000. In 2015, a supported housing program was launched by the lead community partner for this research project, and this agency's staff help clients secure market rentals, maintain their leases with landlords, and connect to resources and community supports. Their clients are individuals who live alone, and screening is done based on their lack of housing stability, experiences with homelessness, their severity of need, and level of vulnerability (see Aubry et al., n.d.).

Given the limited number of rent subsidies available and minimal state assistance to low-income households for living expenses, staff search for the lowest-cost rental units in the region, while also using a checklist to ensure housing quality standards are met. This context directly informs our data analysis strategy; specifically, our comparison of low-cost versus high-cost rentals. This approach is also in line with current attention being paid to needed protections for low-cost market rentals in Canada, such as right of first purchase legislation, which provides opportunities for a municipality to purchase more affordable, market-based rental units as a way to prevent them from being sold to financialized landlords (Devet, 2020; see also August, 2020), and cautions about decreased supply of such housing internationally. In other words, this lower-cost rental housing is recognized to provide shelter to lower-income households, although it is known that higher-income households also inhabit this space (Joint Center for Housing Studies of Harvard University, 2020).

2.2 Rental Housing Sample

The current research calls upon a unique dataset created by the first author in 2015–2016 for an extensive, community-based study on affordable rental housing. A sampling frame was created by merging a list of all suspected rental properties—generated using a windshield survey conducted by the local planning and development department, during which they looked for visual clues of rental housing such as multiple utility metres and walk-out basements—and a list of property owners available through the provincial government. This list was supplemented with advertisements for rental housing located at a nearby university and in local media.

Data on rentals were collected primarily by contacting landlords by phone, with a 63% response rate. A comparison between the data collected and information on stock obtained through the National Household Survey (Statistics Canada, 2012) and the local planning and development department show that the rental housing data

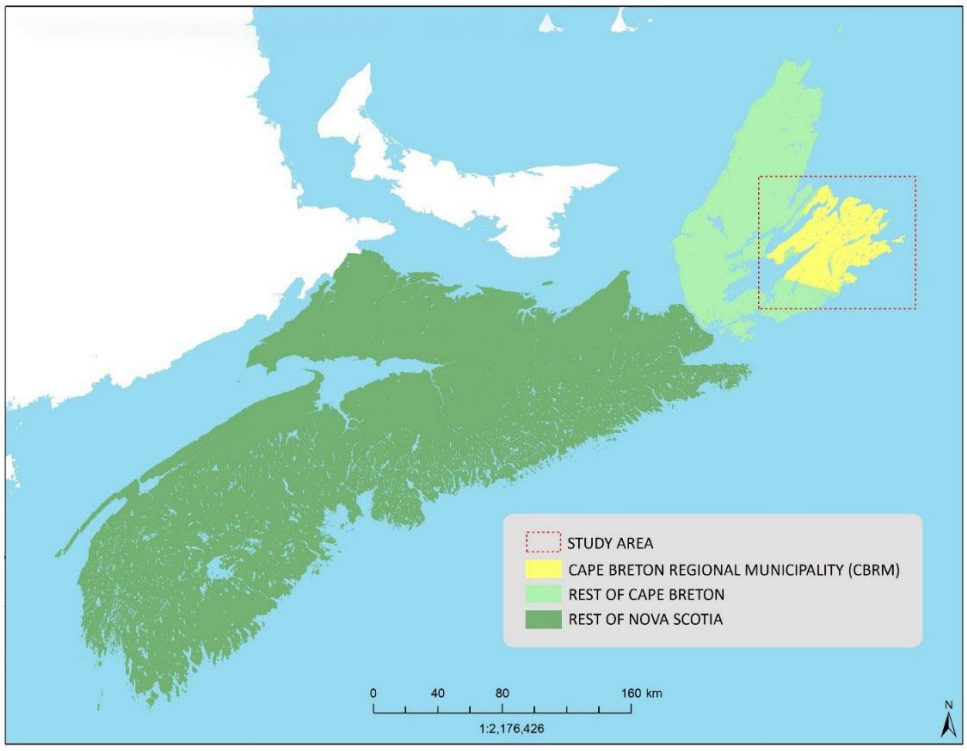
reflect the population of rental units based on structure type (e.g., purpose-built apartment, row housing etc.), location—that is, whether they are located in the largest community in the municipality or not—and whether they are primary or secondary market rentals—the former defined as a unit in a building with three or more rentals and the latter meaning a rental in a building with only two or one units. Data on 2,305 market rental units were collected.

Although there exist public and nonprofit–cooperative housing units in the study region, we focus specifically on market rentals in this work for two, inter-related reasons. First, our organizational research partner places tenants in market-based units specifically. Second, and related to the first, the majority of low-income renters in CBRM and across Canada seek shelter in the private market, given the small amount of social housing in both the province and country (Canadian Centre for Policy Alternatives-Nova Scotia, 2021). Although we bring specific attention to market rentals for these reasons, we encourage future research to explore proximity to supportive amenities and services among tenants living in social housing as well, given the economic and social marginalization they also face (Silver et al., 2015).

2.3 Variables

2.3.1 Core and periphery of CBRM. Being located in the municipality's core community was determined using boundaries established by the local planning and development department; the area's geography is captured in Figure 1.

Figure 1. Context map-geographic location of research and analysis.



Source: Statistics Canada, 2016.

2.3.2 Amenities and services. The categories and sub-categories of amenities and services used in this study (see Table 1) were developed by working closely with a multi-stakeholder, community-based group that addresses affordable housing and homelessness in the region. This group includes representation from (a) public health, (b) municipal council, (c) police services, (d) the nonprofit housing sector, and (e) a community advisory board on homelessness which includes the involvement of those with lived experience of housing precarity and homelessness. Members of this group have significant knowledge of the services used by individuals living in poverty in the community. It was also informed through prior, local research on renter households (Bickerton et al., 2017; Leviten-Reid et. al, 2014;, Leviten-Reid & Horel, 2016), our review of the literature on place and proximity to amenities and services (for example, Apparicio & Séguin, 2006; Koschinsky & Talen, 2016; Walter et al., 2018), and current funding programs on new affordable rental housing development. Specifically, questions about distance to the following resources are included in applications to the federal government's co-investment fund: (a) grocery stores, (b) parks, (c) community centres, (d) pharmacies, (e) elementary schools, (f) libraries, (g) child care centres, (h) health care services, and (i) employment opportunities (CMHC, n.d.). The amenities and services in our study include those provided by businesses, community-based organizations (some of which are faith-based, to include those offering emergency food and second-hand retail items) and government.

Table 1. *Categories and Sub-categories of Amenities and Services with Information Sources, Descriptions and Counts*

Categories **Sub-categories***	**Information Sources and Descriptions**	**Number of Locations**
Recycling/ Refund Centres		
Bottle Depots	CBRM web site	7
Child Care		
After School Care	Education and Early Childhood Development, Province of Nova Scotia—licensed locations	8
Day Care Centres	Education and Early Childhood Development, Province of Nova Scotia—licensed locations	24
Computer–Internet Access		
Community Access Sites	NS Community Technology	13

Table 1 continued

Retail		
New Items	Google maps—businesses selling new housewares and clothes	7
Secondhand Items	Google maps—businesses or organizations selling used housewares and clothes	6
Education		
Adult Education	Government of Nova Scotia—includes adult high school and organizations providing adult literacy and General Education Diplomas	9
Early Childhood Development	211; Education and Early Childhood Development, Province of Nova Scotia—provides resources for families	4
Bookmobile Stops	Library web site; library staff	37
Libraries	Library web site—includes library branches and the publicly-accessible university library	11
Post-secondary	Labour and Advanced Education, Province of Nova Scotia—includes technical colleges, career colleges and the local university	7
Pre-kindergarten	Education and Early Childhood Development, Province of Nova Scotia	19
Employment Services		
General Services	211—offers employment services to the general population	5

Table 1 continued

Supported Employment	211; local social enterprise network—offers programming to individuals with disabilities	4
Financial Services		
Alternative Lenders	Google maps	7
Banks/Credit Unions/Branded ATMs	Branch and ATM locators for all commercial banks and credit unions	41
Food		
Food Banks	211; Feed Nova Scotia	14
Grocery stores	Google maps	17
Financial Assistance		
Financial Assistance Access Points	on-line phone directory—offers access to government assistance including social assistance and employment insurance	6
Legal Aid		
Legal Aid–Justice	211; local expert	1
Registration Services		
Registries	on-line phone directory—offering drivers' licensing and government-issued personal identification	3
Healthcare		
Dental	Provincial Dental Board of Nova Scotia; Google maps	26
Emergency Rooms	Nova Scotia Health Authority	2**
Harm Reduction Centres	211; local expert	5
Methadone Services	Pharmacy Association of Nova Scotia	16
Optometry	Nova Scotia Association of Optometrists; Google maps	13

Table 1 continued

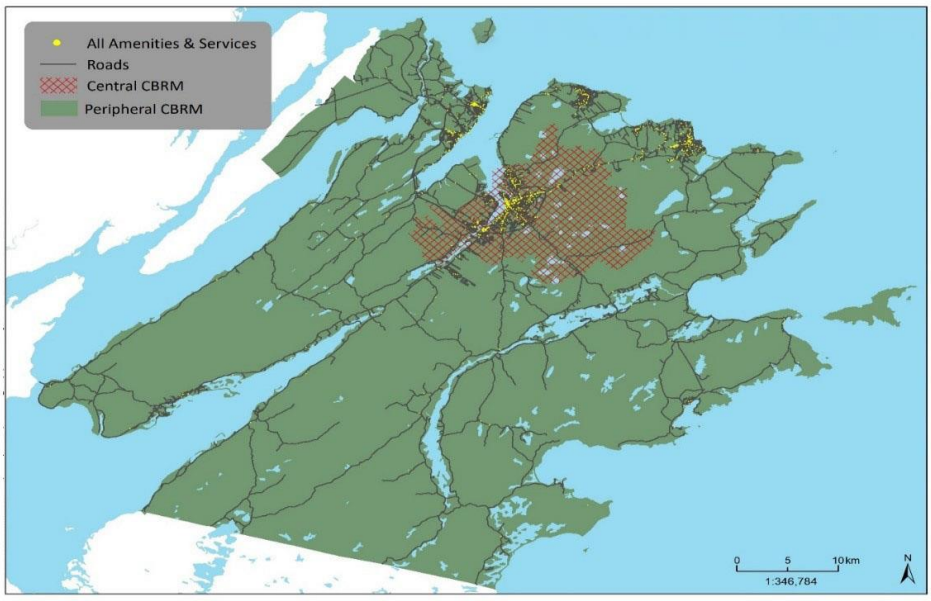
Pharmacies	Pharmacy Association of Nova Scotia	42
Walk-in Clinics	Public Health; two local experts	4
Laundry Facilities		
Laundromats	on-line phone directory	5
Recreation		
Nonprofit Gyms	Google maps	2
Parks	CBRM planning department	33
Playgrounds	CBRM planning department	39
Private Gym Facilities	Google maps	13
Recreation Centres	CBRM planning department	12
Walking Tracks	CBRM planning department	20
Youth Support		
Youth Organizations	211; two local experts	14
Total		**496**

*There are no neighbourhood associations in the study region. **Two additional emergency rooms with chronic closures were not included in the study.

The list of amenities and services thus overlaps with extant research (Apparicio & Séguin, 2006; Koschinsky & Talen, 2016; Walter et al., 2018) but also reflects the lives of renter households living in the municipality of focus: for example, members of the multi-stakeholder group with which we worked indicated that cheque-cashing businesses were important to include because, despite their significant fees, they serve, unlike conventional financial institutions, those who lack identification. Depots which refund deposits for beverage containers were also identified as an important source of supplementary income for tenants, and thus included as well. Regarding health care services, although studies on proximity to these may include all physician offices in a community (Apparicio & Séguin, 2006), a significant lack of general practitioners locally means that many residents access primary care through emergency departments and, to some degree, walk-in clinics. An additional, atypical service included in this list is internet access sites; including these was warranted given the popularity of such locations and the high cost of personal devices and telecommunications in the study region. Prior research on local tenants has also identified the importance of access to laundry facilities (Leviten-Reid et al., 2014).

The 496 specific locations included under the fifteen categories in Table 1 and illustrated in Figure 2 were identified in the spring and summers of 2019 using a combination of sources, including an on-line directory of government services and community agencies—called 211 Nova Scotia—and location listings provided by entities including the central library, the Nova Scotia Department of Education, and the Cape Breton Regional Municipality's planning and development department. For categories which lacked such lists, the community organizations included were reviewed by local subject experts for completeness, while government and commercial resources were verified by the research team—for example, businesses were called to ensure they were active and to review products or services offered. Addresses were verified using Google Maps to ensure precision and then geocoded to ensure accuracy.

Figure 2. Locations–distributions of amenities and services within central–peripheral CBRM



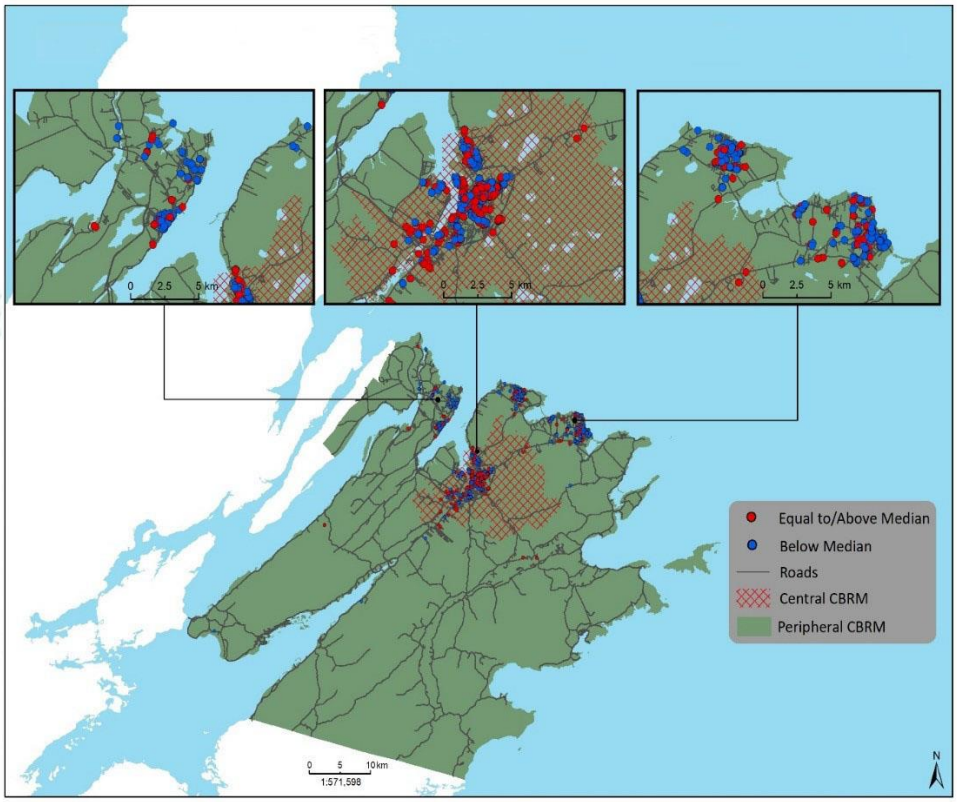
Sources: Cape Breton Regional Municipality Planning Department, 2016; Statistics Canada, 2016.

2.3.3 Low-cost rental housing. Low-cost rental housing is operationalized as costing less than median market shelter costs (see Government of New Brunswick, n.d.). Note that the threshold used by CMHC was also considered; in their adjudication of project proposals under their current co-investment program, rental housing affordability is defined as less than 80% of median market rent (CMHC, n.d.). However, due to the limited number of market rentals available at this cost (224 units), our analysis used the cutoff of less than median. Note too that housing affordability is often defined as shelter costs which are no more than 30% of pre-tax household income, but our cutoff, like that used in the federal co-investment program, is based solely on costs of units due to the fact that we collected data from landlords. However, as described earlier, our decision on how to operationalize low-cost housing was informed and validated by our community-based research partner delivering Housing First. Our calculations were based on unit size: bachelor (with less than median equaling less than CDN $585/month), one-bedroom ($650), two-

bedroom ($850) and three or more bedrooms ($1,060). The location of lower- and higher-cost units is illustrated in Figure 3.

We focused on shelter costs—meaning rent and utilities—given that landlords sometime include utility charges in their rents. To ensure consistency, then, we asked landlords whether their rents included utilities, and if not, asked for estimates of these—water, electricity, and heating.

Figure 3. Locations–distributions of rental units within central–peripheral CBRM



Sources: Cape Breton Regional Municipality Planning Department, 2016; Leviten-Reid, 2016; Statistics Canada, 2016.

2.3.4 Proximity. Proximity to amenities and services is informed by prior research on renter households in the study region which indicates that most travel by car, followed by on foot (Leviten-Reid & Horel, 2016; see also Frank et al., 2020, for a description of transportation barriers for low-income households in Cape Breton), and is operationalized in two ways. First, the minimum distance to the nearest amenity or service within each category is measured in metres, using the shortest network distance between each rental housing unit and the amenity–service. Second, to consider whether the closest amenity or service is within walking distance, we use 1,000 metres (0.62 miles) as the cutoff based on extant work (Cushon et al., 2013; Leslie et al., 2005).

2.4 Data Analysis

Although data were collected on 2,305 units, 83 were dropped from the dataset due to missing cost information, while the remainder of dropped units had incomplete

addresses that could not be geocoded. The shelter costs of units for which addresses were and were not provided were compared, and no differences were found.

The sample size used for our analysis thus consists of 2,070 market rental units owned by for-profit landlords. We analyzed 1,336 rental units in the core of the CBRM—507 of which are low-cost and 829 of which are high-cost—and 734 in the periphery—451 of which are low-cost and 283 of which are high-cost.

Using ArcGIS, a network analysis was conducted to calculate the proximity of each market rental, geocoded and coded using the median shelter cost as a parameter, to each of the 496 subcategories of amenities and services. To do so, the official road network data from the CBRM was utilized. For each rental unit, the distance—in metres—was recorded from the amenity–service that was ranked first, proximally (i.e., the closest subcategory of service to the rental unit).

After distances were calculated, median values as well as means and ranges were generated based on whether rental units were low or high cost, in both the core of the municipality and the periphery. To answer questions one and two, we used non-parametric Wilcoxon rank sum tests to compare distances based first on unit cost and then based on location for low-cost units specifically. Because 144 rental units are located in the most rural and low-density parts of the municipality—versus towns outside of the core—we conducted sensitivity analyses with and without these data included in the periphery, with any differences reported in the results section.

3.0 Results

In the context of the importance of proximity to supportive amenities and services on the part of marginalized tenants, we examined whether lower-cost rental units have greater proximity to amenities and services compared to rentals with higher costs, and whether lower-cost rental units in peripheral areas have the same proximity to amenities and services as lower-cost rentals in the core community of CBRM.

For question one, our analyses show that, in the core of the municipality, lower-cost units are closer to most amenities and services compared to higher-cost units when considering distances in metres, but that few show walkability. Table 2 reveals that lower-cost units are closer to 25 of the 36 amenities and services included in the study, while higher-cost units are closer to four. In turn, seven destinations show no difference in distances based on unit cost. Amenities and services furthest from low-cost units in the core, looking at median values, include registries (at 12,771 metres), emergency rooms (at 3,505 metres), and new retail stores (at 2,924 metres). Looking at walkability in the core of the municipality, lower-cost units have median distances with pedestrian access to only seven community resources—(a) licensed day care centres, (b) pharmacies, (c) dental offices, (d) parks, (e) playgrounds, (f) conventional financial service locations, and (g) youth organizations—while higher-cost units are similarly walkable to five of these.

In terms of question one, for units located in peripheral areas of the municipality, somewhat different findings emerge. Table 3 shows that lower-cost units are closer to only four out of 36 amenities and services compared to higher-cost rentals—organizations offering (a) adult education, (b) food banks, (c) methadone services, and (d) conventional financial services. When outliers are dropped—that is, those units located outside of small towns which are part of the periphery—these lower-cost units are closer to adult education organizations and legal aid clinics [$z = 3.19$, $p \leq 0.001$], while food banks, methadone services, and conventional financial

services are no longer statistically different. Higher-cost units are closer to four resources (pre-kindergarten sites, alternative financial services, financial assistance access points, and registries), with six more added to this list when outliers are dropped (optometry services [$z = -4.04$, $p \leq 0.001$], dental offices [$z = -2.568$, $p \leq 0.01$], walk-in clinics [$z = -2.614$, $p \leq 0.01$], businesses selling new retail items [$z = -3.261$, $p \leq 0.001$], playgrounds [$z = -2.51$, $p \leq 0.01$], and laundromats [$z = -4.21$, $p \leq 0.001$]). For the remaining resources, there are no differences between the distances of higher- and lower-cost units. Amenities and services with the greatest median distances from affordable units in the periphery are registries (29,911 metres), legal aid services (20,349 metres), and nonprofit gyms (19,804 metres). In addition, for both lower-cost and higher-cost units, only parks demonstrate median distances which are walkable. This means that categories which show *no* walkability in peripheral areas based on median distances include educational and employment services, childcare, youth support, retail, healthcare services, and food, laundry, and internet access points.

With respect to our second research question, results also show differences in the distances of low-cost rental units to amenities and services in the more urban part of the municipality as compared to the periphery. In most cases, distances to amenities and services are greater for lower-cost units in peripheral locations. With outliers included in the analysis, lower-cost units in peripheral areas are further away from 30 amenities and services compared to the core, while they are closer to only internet access sites and new retail stores. When outliers are dropped, seven resources lose their significance—(a) adult education sites, (b) pre-kindergarten sites, (c) grocery stores, (d) methadone services, (e) private gyms, (f) walking tracks, and (g) youth organizations), while lower-cost units in peripheral areas become closer than their more urban counterparts to food banks [$z = -3.40$, $p \leq 0.001$] and libraries [$z = -3.43$, $p \leq 0.001$]. Differences in distances for low-cost units in the periphery versus the core are particularly great for emergency rooms, walk-in clinics, registries, legal aid services, retailers offering second-hand items, after-school childcare facilities, and nonprofit gyms. Based on median distances, the number of community resources walkable from low-cost units in the periphery versus the core is also lower, at one compared to seven, although tenants living in low-cost units in both the core and the periphery have limited amenities and services which they are able to access on foot.

Table 2. *Distances to Amenities by Unit Cost in the Core of CBRM*

Category	**<Median Shelter Costs (n = 507) Distance (m)**			**≥ Shelter Costs (n = 829) Distance (m)**			
Sub-category	**Median**	**Mean**	**Range**	**Median**	**Mean**	**Range**	***Z***
Recycling–Refund Centres							
Bottle Depots	1829	1808	164–5617	1991	1927	164–8052	1.63
Child Care							
After School Care	1282	1577	24–6014	1631	1852	86–9488	4.71***
Day Care Centres	691	777	34–2887	903	1064	33–2392	7.59***
Computer–Internet Access							
Community Access Sites	1961	2203	86–9583	1975	2466	6–9575	4.20***
Retail							
New Items	2924	2818	117–5433	2696	2718	274–7406	-3.17**
Secondhand Items	1573	2058	66–10741	2024	2420	66–10733	3.68***
Education							
Adult Education	1423	1917	211–9895	1807	2188	211–9886	4.18***

Table 2 continued

Early Childhood Development	1421	1651	52–7701	1622	1836	44–10817	2.76**
Bookmobile Stops	1841	1988	271–5351	1949	1980	271–10673	-1.26
Libraries	1674	1935	82–9579	1971	2371	10–9571	6.96***
Postsecondary	1888	1934	5–8062	1408	1776	219–8054	-3.99***
Pre-kindergarten	1244	1293	88–2922	1289	1403	88–6265	2.41*
Employment Services							
General Services	1799	2222	215–9929	2099	2236	113–9921	-0.16
Supported Employment	1940	2280	130–10490	2289	2485	130–10482	2.29*
Financial Services							
Alternative Lenders	1775	1826	88–5983	1967	2001	404–9384	3.14**
Banks–Credit Unions–Branded ATMs	796	1124	12–5617	1229	1525	3–7539	7.81***
Food							
Food Banks	1448	1620	45–6477	2070	1934	72–10119	4.81***
Grocery stores	1227	1522	119–5433	1640	1807	149–7406	4.11***

Table 2 continued

Financial Assistance							
Financial Assistance Access Points	1843	2116	194–10057	2260	2406	194–10049	3.19***
Legal Aid							
Legal Aid–Justice	2136	2239	189–9755	2147	2532	117–10955	3.92**
Registration Services							
Registries	12771	12567	2580–17433	12382	12252	2569–22830	-3.59***
Healthcare							
Dental	889	1170	104–4680	888	1143	1–6298	-0.38
Emergency Rooms	3505	3871	778–10670	3598	3773	848–11610	-0.48
Harm Reduction Centres	1502	1969	146–9677	2069	2177	89–10370	4.30***
Methadone Services	1185	1504	12–9219	1611	1788	12–10004	6.02***
Optometry	1029	1313	72-5924	1494	1540	36-7539	3.59***
Pharmacies	739	1026	12–5393	837	1144	12–8366	4.05***
Walk-in Clinics	1772	2106	9–9518	1910	2376	9–11089	4.36***

Table 2 continued

Laundry Facilities							
Laundromats	1692	1652	136–5978	1901	1886	83–9105	4.01***
Recreation							
Nonprofit Gyms	1712	1976	141–8639	1776	2014	33–11073	0.21
Parks	708	933	46–5061	940	1176	37–5888	7.00***
Playgrounds	628	794	48–2449	556	732	0–5490	-2.69**
Private Gym Facilities	1275	1563	15–5280	1230	1558	15–8522	1.64
Recreation Centres	1203	1381	153–5397	1750	2042	6–23989	2.71**
Walking Tracks	1242	1370	44–3665	1808	1808	44–10292	7.12***
Youth Support							
Youth Organizations	888	1404	41–9416	1656	1813	21–10022	7.09***

$p \leq .05$*; $p \leq .01$**; $p \leq .001$***

Table 3. *Distances to Amenities by Unit Cost in the Periphery of the CBRM, and Core vs. Periphery Comparison*

Category	**<Median Shelter Costs (n = 451) Distance (m)**			**≥ Median Shelter Costs (n = 283) Distance (m)**			**Core vs Periphery**	
Sub-category	**Median**	**Mean**	**Range**	**Median**	**Mean**	**Range**	**Z**	**Z**
Recycling–Refund Centres								
Bottle Depots	2617	3117	26–49954	2634	3693	841–29672	-0.42	15.92***
Child Care								
After School Care	13640	11961	359–45193	12692	11045	380–26580	-1.61	18.74***
Day Care Centres	1550	1959	146–48762	1673	2503	146–28914	1.36	17.92***
Computer–Internet Access								
Community Access Sites	1205	1605	26–50612	1369	2172	95–28287	0.90	-8.80***
Retail								
New Items	2065	2817	232–50138	1959	3219	318–28216	-0.19	-5.42***
Secondhand Items	15083	11615	40–54826	13936	10978	288–28302	-0.63	16.32***
Education								
Adult Education	1928	2634	2–54156	3013	3815	134–32585	4.37***	4.19***
Early Childhood Development	17347	13904	102–51962	16108	13534	102–32747	-.60	23.26***

Table 3 continued

	Bookmobile Stops	2004	4949	303–13515	2199	5295	312–13045	1.47	5.32***
	Libraries	1537	2059	66–53841	1574	2613	135–28071	1.20	-1.06
	Postsecondary	9911	8302	106–52324	9491	7783	106–28327	-1.62	18.24***
	Pre-kindergarten	1357	1624	45–44445	1058	1752	96–25831	-3.59***	2.17*
Employment Services									
	General Services	2043	2678	137–54191	1646	3160	355–28589	-0.67	1.46
	Supported Employment	3654	6513	16–54752	4248	6239	77–31218	1.11	12.53***
Financial Services									
	Alternative Lenders	2704	5895	336–49639	2393	5124	288–28216	-2.92**	12.03***
	Banks–Credit Unions–Branded ATMs	1058	1665	7–49605	1369	2275	19-–	2.37*	4.42***
Food									
	Food Banks	1196	1845	61–49093	1472	2656	61–28907	3.77***	-0.11
	Grocery Stores	1491	1919	200–22529	1388	2623	200–28216	1.13	2.79*
Financial Assistance									
	Financial Assistance Access Points	2654	5987	158–54319	2570	5221	88–27843	-2.06*	7.00***

Table 3 continued

Legal Aid								
Legal Aid–Justice	20349	20140	8123–54017	20489	20285	7662–35221	1.05	26.74***
Registration Services								
Registries	29911	26944	12116–58010	28845	25742	11655–33815	-2.38*	26.30***
Healthcare								
Dental	1237	1811	23–45367	1124	2346	21–26754	0.05	4.83***
Emergency Rooms	17330	13845	602–54396	17050	14411	1125–35528	1.04	13.63***
Harm Reduction Centres	4413	6538	18–53939	4917	6532	61–32602	1.37	12.94***
Methadone Services	1463	1903	68–26342	1439	2702	68–28221	1.93*	3.20**
Optometry	2162	5375	115–50186	2277	4886	115–28093	-1.31	13.98***
Pharmacies	1240	1483	28–16102	1240	2004	68–24627	0.80	5.86***
Walk-in Clinics	12316	9415	470–53780	11626	9317	653–34984	-1.36	18.84***
Laundry Facilities								
Laundromats	3325	5850	25–50239	2924	5342	25–28338	-1.82	15.79***
Recreation								
Nonprofit Gyms	19804	19956	7007–52901	20223	19963	6546–34105	0.21	26.74***
Parks	828	1179	25–35665	917	1500	133–17192	1.16	1.58

Table 3 continued

Playgrounds	1893	2309	154–45363	1847	2760	88–25572	0.40	20.72***
Private Gym Facilities	1437	2051	41–49639	1408	2651	177–28802	1.64	2.14*
Recreation Centres	1750	2042	6–23989	1584	2513	225–27951	-1.01	8.72***
Walking Tracks	1335	1842	320–36304	1289	2374	365–17691	1.22	3.78***
Youth Support								
Youth Organizations	1139	1904	88–53678	1050	2576	18–28277	-0.23	4.30***

$p \leq .05$*; $p \leq .01$**; $p \leq .001$***

4.0 Discussion

Overall, results show poor proximity to amenities and services on the part of tenants living in low-cost market rentals in the municipality, particularly for those living in the peripheral parts of the community where almost half of the affordable market rental housing stock is located. Even in the core, however, tenants living in these units have limited walkability to supports. Results bear out concerns on the part of researchers focusing on housing and homelessness in rural communities with respect to access to services (Karabanow et al., 2014; Waegemakers Schiff et al., n.d.). For tenants with access to their own cars or who are able to pay for taxi fare, lower-cost units situated in the core of the municipality do demonstrate closer proximity to services and amenities compared to higher-cost units. However, for those who travel by foot, , a similar number of resources are walkable from lower- and higher-cost units, and overall, less than a quarter of the amenities and services included in our study are walkable from units located in the municipality's largest community. These findings could partly be explained by the development of new commercial districts outside of the downtown area of the core (Adorno et al., 2018; Mackeigan et al., 2011; Schatz, 2010; United Way Halifax, 2016). In the case of service delivery on the part of federal and provincial governments, retrenchment might also lend some explanatory power, given that health care and services such as licensing and income support are increasingly provided in fewer locations (Halseth & Ryser, 2006; MacKeigan et al., 2011; Ryser & Halseth, 2014).

Similar to Walter et al. (2018) and Apparicio and Séguin (2006), results show that for most amenities and services, no differences are found in distances based on unit cost in more peripheral parts of the municipality. Results also show similarities in walkability to resources from both lower-cost and higher-cost units in the periphery, and notably, demonstrate that almost none are accessible by foot. These findings point to an important need for transportation in these outlying areas in particular; results which show greater distances to resources on the part of low-cost units in the periphery versus low-cost units the core also highlight this transportation burden. Once again, these findings are also noteworthy given the significant percentage (47%) of low-cost units situated in the peripheral part of the municipality.

For those working on the front lines with organizations assisting tenants, particularly those most vulnerable, results suggest that renters living in low-cost units need financial support not only to pay their rent, but also to assist with transportation costs. As identified by partner organizations, access to a range of basic amenities and services is critical to support health and well-being. In addition, organizations working with tenants could also consider implementing programming which facilitates access in other ways. One such example is offering direct transportation services for clients; although some transportation is currently offered in the municipality by housing support workers, funds to support this service are limited. Another is developing place-based hubs that bring together services, such as child development and primary care, and which are often situated in frequently accessed sites such as schools (Haig, 2014) or existing community organizations. Such hubs could also be expanded to include additional services or social enterprises, such as internet access and laundry facilities. Still another potential intervention is the development of government-funded mobile services, which take services and goods to neighbourhoods where they are lacking; both co-location of services and mobile outreach—particularly of health services—have been identified as potential solutions in community-based research with service providers and vulnerable

residents (Bickerton et al., 2017). A last suggestion is to potentially partner with businesses that demonstrate walkability: pharmacies might be appropriate locations to carry healthy foods (Lucan et al., 2010), and private gyms could potentially provide, in partnership with the community sector or government, subsidies to reduce user fees.

From a policy perspective, results also suggest that proposals for the development of new affordable rental housing may need to be assessed differently based on whether they are to be situated in a community's core or periphery. In other words, it may be challenging for new developments in more peripheral areas to be walkable to any range of amenities and services, and so funding criteria could instead consider including whether service delivery or community transportation have been incorporated into project proposals (Leung, 2015; Leviten-Reid & Lake, 2016. To support this, funders of housing development projects could work in partnership with other agencies to make financial and planning support for transportation initiatives available to project proponents. Of course, results challenge governments to re-think their centralization of service delivery as well, given the continued consolidation of services in rural Canada. Finally, research findings suggest that definitions of what constitutes 'housing affordability' be expanded beyond the proportion of income spent on rent and utilities, to include transportation costs (Smetanin et al., 2015).

5.0 Conclusions and Limitations

Similar to many studies on proximity to amenities and services, we do not assess quality (see for example, Apparicio & Séguin, 2006; Dastrup & Ellen, 2016; Macintyre et al., 2008). In the case of medical services, we do not explore the number of hours clinics are open per week or staff's responsiveness to, for example, serving patients with addictions and complex needs (Bickerton et al., 2017). In the case of parks or playgrounds, as a second example, we do not assess whether they are considered safe places by community members (Carson & Janssen, 2012; Plane & Klodawsky, 2013; Wang et al., 2015). Relatedly, we capture walkability by distance only, and do not examine whether the walking route involves (a) high traffic, (b) pollution, (c) design features which allow opportunities for social interaction, or (d) the availability of sidewalks (Koshinsky & Talen, 2016; Walter et al., 2018). Lastly, we explore services and amenities utilized by tenants located only within municipal boundaries, when in reality they may also need to travel by shuttle service or by bus for appointments as far away as the provincial capital. Beyond addressing these limitations, we recommend that future research include proximity to harmful amenities and services, such as fast-food restaurants and gambling sites, in addition to the supportive ones examined in this study, and that similar studies be conducted in other, smaller geographies. Research is also much needed on proximity and social housing in communities across the country given the economic and social marginalization experienced by these tenants (see, for example, Silver et al., 2015).

Limitations notwithstanding, this study features many strengths. First, the amenities and services included are responsive to local conditions, and counter the interests of higher-income households, such as cafes and locations offering entertainment, that are emphasized when Walk Scores are utilized (Koschinsky & Talen, 2016). Second, we offer a unique emphasis on market rentals, an overlooked type of housing for low-income individuals and families, even though most non-homeowners, including low-income households, live in units provided by the private sector in our study site

and across Canada (Madden & Marcuse, 2016; Stamsø, 2010). Third, we examine proximity in a small region rather than a major metropolitan area, thereby extending the focus to renters living in peripheral geographies. Additional research on proximity to supportive resources, in communities of different sizes, will further inform the efforts of those working in affordable housing initiatives in rural areas as well as researchers advancing our understanding of the geography of opportunity, for everyone.

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