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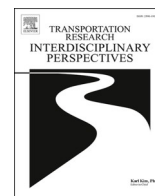
Telecommuting and food E-commerce: Socially sustainable practices during the COVID-19 pandemic in Canada

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ABSTRACT

Telecommuting has become a dominant professional experience for many Canadian business and workers due to the COVID-19 pandemic. Telecommuting has several benefits that are separate from COVID-19. Two prevalent changes have been in regard to telecommuting and online food buying habits, both of which impact social wellbeing as a dimension of social sustainability. We discuss two exploratory surveys on the perception of telecommuting and food e-commerce. We found that while telecommuting has the potential to increase social wellbeing and the social sustainability of both urban and rural Canadian communities through a variety of mechanisms, food e-commerce does not offer similar returns. Instead, the prevalence of food e-commerce merely adds convenience to the lives of those who already have adequate food access while maintaining the status quo, or even worsening access for disadvantaged Canadians.

Introduction

Social sustainability recognizes that the social lives of both individuals and communities are instrumental in creating and maintaining just, sustainable societies. It is considered to be one of three pillars of long-term sustainability alongside the environmental and economic (Dempsey et al., 2011; Purvis et al., 2019). These pillars do not exist separately from each other, but are interrelated, requiring a system that balances all three components to support communities and development (Bijl, 2011; Dempsey et al., 2011). Despite being recognized by the United Nations in 1987, social sustainability has previously been somewhat neglected within the wider discussion of "sustainability," either subsumed within environmental or economic sustainability or ignored entirely (Vallance et al., 2011). With more attention being given to this human dimension of sustainability, certain key themes emerge such as social capital, human capital, and human wellbeing, frequently used in the application of social sustainability values in development and management (Weingaertner and Moberg, 2014). Focusing specifically on the human wellbeing dimension of social sustainability, two relevant activities to discuss involve transportation and the food industry. Time dedicated to commuting has a direct influence on social

wellbeing (Delmelle et al., 2013; Newbold and Scott, 2013), as does having easy access to healthy, affordable, fresh food (Bublitz et al., 2019b, 2019a; Scott and Vallen, 2019). Both of these aspects of human wellbeing have been directly affected by the COVID-19 pandemic, as lockdown and isolation mandates served to limit social and employment in-person interaction. Technological interaction became a prominent driver in how individuals and communities conduct their daily lives. To investigate the relationships between social sustainability, telecommuting, food access, and the COVID-19 pandemic, surveys exploring exactly how Canadians' commuting and food buying habits have changed over the course of the first six months of the COVID-19 pandemic.

Social sustainability

Social sustainability is interdependent on the other pillars of sustainability, environmental and economic and yet ephemeral in definition and in understanding (Hansmann et al., 2012; Purvis et al., 2019). Physical design of community infrastructure cannot guarantee the health and longevity of communities or community members yet places a vital role in the social well-being and prosperity of community

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members (Ungar, 2011). In terms of commuting, public and private transportation, and delivery and shipments of goods, environmental sustainability often takes precedence (Goldman and Gorham, 2006; Le et al., 2019; Rześny-Cieplińska et al., 2021). This is because environmental aspects are considered urgent and are measurable. Social sustainability, while not as easily measured, should also be considered urgent. Quality of life, equality, social cohesion and democracy are cornerstones of social sustainability, and speak to the importance of having infrastructure that support these dimensions.

Populations within Canadian communities are growing rapidly (Slaughter, 2021). Provincial and municipal governments must now consider how to handle urban housing, employment, and transportation effectively for more sustainable outcomes that recognize the social well-being of urban dwellers. Provincial and municipal community development initiatives, such as parks and other recreational spaces, can contribute to better social outcomes, but also have the unintentional effect of creating longer commute times (Newbold and Scott, 2013). There are definitive negative impacts to social wellbeing associated with long commute times (Delmelle et al., 2013; Newbold and Scott, 2013). Individuals with long commute times (more than thirty minutes one way), have reported much lower satisfaction in their lives overall, while reports of higher individual satisfaction are linked to shorter commute times and access to public transportation (Delmelle, Haslauer, and Prinz, 2013). Longer commute times are also associated with higher rates of obesity (Quist et al., 2018; Sha et al., 2019).

While food insecurity is generally thought of as an economic issue in Canada (Long et al., 2020), the social aspects of food insecurity as they relate to transportation infrastructure have not been explored in great depth. In Canada, populations in urban centres tend to be food insecure if they are economically disadvantaged (Gassman-Pines and Schenck-Fontaine, 2019), live in food deserts (Balcaen and Storie, 2018; Engler-Stringer et al., 2019) and/or are from demographic populations more likely to experience both (Jones et al., 2021; Testa and Jackson, 2019). Food insecurity is tied to lower quality diets that ultimately lead to a variety of health and quality of life issues (Eicher-Miller and Zhao, 2018; Tait et al., 2018).

Substantial strain on the global food production and supply system is exacerbating by climate change (Molotoks et al., 2021), exponential population growth and resource scarcity (Alexandratos, 2005). Food supply channels must therefore be strategically developed and maintained through sustainable approaches that integrate social, environmental, and economic values to promote equitable access to food. This is difficult due to the often-conflicting business goals of maximizing profits versus achieving sustainable objectives (Sharpe and Barling, 2019). Business owners and operators often have difficulties engaging in socially and environmentally sustainable best practices while prioritizing economic goals, with social and environmental sustainability needing to be justified through economic objectives (Sharpe and Barling, 2019).

Small-scale operations such as farm co-ops and local markets that do promote sustainability and equitable food access often struggle within a capitalist economy dominated by large industries, where balancing social and environmental sustainability against economic needs becomes extremely difficult (Pilgeram, 2011). The rise of urban gardening during the COVID-19 pandemic has contributed positively to social and environmental sustainability, promoting better access to healthy, safe, and nutritious foods (Martin et al., 2016; Rogge et al., 2018), although it is similarly limited to small-scale projects with outputs that cannot sustain larger urban communities or challenge the dominant food production and supply system (Martin et al., 2016).

Covid-19 pandemic

Telecommuting has become a dominant professional experience for many Canadian business and workers due to the COVID-19 pandemic. Using various technologies, primarily video conferencing and online collaborative platforms, telecommuting has allowed many Canadian employees to work remotely from their home or other location (Masuda et al., 2017). While telecommuting has traditionally been exclusive to upper management and highly-qualified individuals, this has changed due to the COVID-19 pandemic, offering routine workers the opportunity previously not afforded to them to work remotely (Thulin et al., 2019). Telecommuting reduces or eliminates the negative impacts of long commute times on well-being and can facilitate better work-life balance by providing Canadians with more time, autonomy, and flexibility with regards to their working hours (Gajendran and Harrison, 2007; Thulin et al., 2019).

Yet, there are also negative impacts brought on by telecommuting. There is evidence that telecommuting can lead to further stress (Song and Gao, 2020), lack of communication or feeling 'left-out' from important work-place decisions (Howe et al., 2021) and mental health issues (Magnavita et al., 2021). Furthermore, working from home has been shown to impact exercise frequency (Paleti and Vukovic, 2017; Semple et al., 2021), and sleep (Houle et al., 2021; Svetieva et al., 2017). Eating habits as well have been shown to change with telecommuting during COVID-19 (Kubo et al., 2021). The widespread closures of restaurants in Canada necessitated a resurgence of home cooking (Charlebois et al., 2021). Further, many workers who were participating in telecommuting or lost their jobs because of the pandemic reported snacking more often during the day (Bakaloudi et al., 2021).

Social safety-net measures, such as the CERB, taken by the federal government during the early months of the Covid-19 pandemic precluded most dire predictions of food shortages and insecurity (Busby, 2021). However, as income assistance programs reached their ends, food bank usage began to rise toward the end of 2020 (Matern et al., 2021). Despite this, many service and retail workers remained unemployed or underemployed into 2021. Concurrently, food price inflation rose exponentially (Charlebois, 2020). These conditions were not felt evenly across sectors nor regions of Canada. Many large urban centres experienced a rate of food bank usage than smaller cities or rural areas (Matern et al., 2021).

E-grocery shopping

Globally, online food delivery sector was a growth industry worth rising 17.5% to $107.4 billion in 2019 (Janairo, 2021). Online food services were promoted as more convenient, and expanded consumer choice (Elvandari et al., 2018; Ray et al., 2019; Yeo et al., 2017). The Covid-19 pandemic necessitated the restriction of dine-in services in restaurants in Canada, while encouraging the use of curb-side pick-up and delivery (Maragoni-Santos et al., 2021). This allowed some restaurants to stay solvent during the crisis, though, many restaurants were not staffed nor equipped to pivot their business models in this way (de Freitas and Stedefeldt, 2020). Early fears during the pandemic, led people to believe that the virus was communicable on surfaces such as counters, railings and packages (Masotti et al., 2021). As a result, grocery retail that offered click-and-collect services grew in popularity in many Canadian communities (Hobbs, 2020). For some consumers, the pandemic marked the first point of contact of online ordering food ordering.

As a result of the COVID-19 pandemic, online food ordering has expanded significantly to allow for consumers to safely access food, relying on technology to minimize in-person interactions (Li et al., 2020; Zhao and Bacao, 2020). Public health officials and politicians encouraged the public to utilize online food ordering in order to support small businesses and the restaurant industry, that suffered significant loses during the provincial shut-downs (Haeffele et al., 2020).

While increasing options for online ordering and delivery of food may appear at first glance to promote better, safer food access, in reality, it further exposes the disadvantages of marginalized populations and does not address persistent sociopolitical barriers to food access that have been exacerbated by the COVID-19 pandemic (Niles et al., 2020; O'Hara and Toussaint, 2021). There are also concerns regarding safety

of low-wage food delivery workers and the high commission fees that online service providers often charge, disproportionately affecting local and small businesses that more often support socially sustainable outcomes (Li et al., 2020).

This study discusses the results of two exploratory surveys that sought to measure Canadians' food e-commerce and intentions. The role of online food apps in reproducing patterns of food insecurity can be better understood as a means for improving social sustainability and potentially expanded to allow for more equitable food access. This research will serve as a starting point for in depth modelling of these behaviours.

Methods

Participants

Survey 1: Telecommuting

Study one is an exploratory study was designed as a cross-sectional., national survey. The population of interest included Canadian's who had lived in Canada for 12 months and were over 18 years of age. The study sample consists of 10,851 participants from 10 provinces and two territories: Alberta (n = 1053), British Columbia (n = 1237), Manitoba (n = 467), New Brunswick (n = 304), Newfoundland and Labrador (n = 326), Northwest Territories (n = 11), Nova Scotia (n = 510), Ontario (n = 4948), Prince Edward Island (n = 43), Quebec (n = 1639), Saskatchewan (n = 304) and Yukon Territory (n = 11). In terms of gender, respondents identified as female (n = 8572) or male (n = 2062). 217 did not self-identify a gender. Finally, the generational categories of the respondents are as follows: Greatest Generation (1900–1945) (n = 54), Baby Boomers (1946–1964) (n = 1639), Generation X (1965–1980) (n = 3700), Millennial (1981–1996) (n = 4916) and Generation Z (1997–2019) (n = 543). As this was an exploratory study, the study does not have a representative sample for Canada.

Survey 2: Food e-commerce

Study two is an exploratory study was designed as a cross-sectional., national survey. The population of interest included Canadian's who had lived in Canada for 12 months and were over 18 years of age. The study sample consists of 7290 participants from 10 provinces and one territory: Alberta (n = 656), British Columbia (n = 744), Manitoba (n = 284), New Brunswick (n = 204), Newfoundland and Labrador (n = 204), Northwest Territories (n = 7), Nova Scotia (n = 350), Ontario (n = 3426), Prince Edward Island (n = 29), Quebec (n = 1159), and Saskatchewan (n = 211). In terms of gender, respondents identified as female (n = 5759) or male (n = 1385). 146 respondents did not self-identify a gender. Finally, the generational categories of the respondents are as follows: Greatest Generation (1900–1945) (n = 36), Baby Boomers (1946–1964) (n = 1123), Generation X (1965–1980) (n = 2522), Millennial (1981–1996) (n = 3244) and Generation Z (1997–2019) (n = 357). As this was an exploratory study, the study does not have a representative sample for Canada.

Data collection

A third-party marketing research firm, Caddle, collected the data for both studies using an online survey during July 2020 (Telecommuting) and October 2020 (Food E-commerce). Sample for both studies were drawn from Caddles proprietary panel. Caddle invites participants to join their panel on the condition that they self-select for the survey for three surveys per year. Those that meet the conditions, are eligible for promotional offers of a monetary value of $50 or less. The panel currently has 100,000 members. Ethics approval was granted by the research team's university research ethics board for both studies in accordance with the *Tri-council Policy Statement: Ethical Conduct for Research Involving Humans.* In order to proceed with the survey, participants had to grant consent, which could be rescinded by closing their

browser. Each survey took approximately 3–5 min to complete. No partially completed surveys were used in the final analysis.

Both studies were conducted between the first and second wave of COVID-19 in Canada. At the time of study one, COVID-19 cases had been reduced significantly in regions across Canada. Study two was conducted in October, when positive cases were beginning to rise again. By fall of 2020, it was unknown when a vaccine would become available to the general public, nor was it known if the virus would surge again among the population.

Survey instruments

Survey one (Telecommuting) consisted of nine questions. First, respondents were asked about their work-from-home arrangements. Next, they were asked about their restaurant habits during their working hours, before and during the pandemic. Finally, respondents were asked whether they planned on continuing telecommuting, either partially or fully once the pandemic was declared over.

Survey two (Food e-commerce) consisted of 12 questions. Respondents were first asked about the types of food they purchase through e-commerce. Following this, respondents were asked about their food e-commerce habits prior to the pandemic. Next, they were asked about price points for e-commerce food items. Finally, they were asked about their satisfaction with food e-commerce.

Limitations

Limitations exist with this research. First, the exploratory nature of these studies allowed for very short survey instruments, pre-determined categories and no open text. Second, neither study is representative of the Canadian public. Therefore, results must be presented as descriptive correlations. Similarly, surveys consist of different samples, therefore there can be no comparisons between studies. Statistically, only two-tailed test of significance produced using Microsoft Excel can be conducted on individual samples. Two-tailed tests of significance (p value) can only predict that there is an effect. All reported p values are statistically significance at 95% confidence level (α = 0.05). Finally, both studies rely on self-reported data, which is often inaccurate. While these limitations effect the discussion of the topic within this study, the research topic is important, and offers a preliminary understanding for more in-depth analysis.

Results

Post-Pandemic Survey: Telecommuting

Since the beginning of the COVID-19 pandemic, many Canadians are working remotely from their homes, likely for the first time, and recent reports suggest that many are considering working remotely more often, even when it is no longer necessary due to public health measures (Fig. 1).

Notably, 23.6% of respondents will continue working remotely. This is a significant number of respondents ($p < .0001$). Of those who said they intended to work remotely in the future, only 20.6% indicated their intention to work remotely on a full-time basis. Yet, this still represents a significant number of re respondents ($p < .0001$). Significantly ($p = .0006$), 36.4% of all respondents surveyed admitted that they enjoyed working remotely more than expected prior to the pandemic.

Of respondents whose employer is considering allowing staff to telecommute (n = 2355), 35.1% intend to relocate permanently within a year. This change is statistically significant ($p = .003$). Over the entire survey, a total of 10.7% of respondents are looking to relocate since telecommuting has become possible. Additionally, 59.9% of respondents whose employers intend to allow for telecommuting in their workplaces intend to do so permanently. This would be a significant change ($p = .045$).

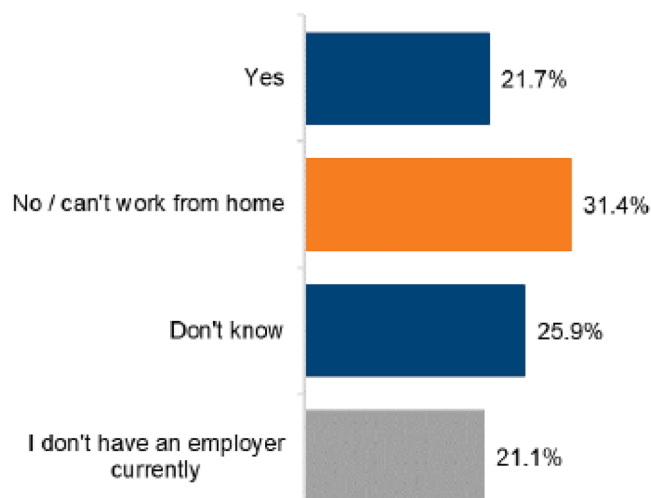## Is your employer currently planning to allow more people to work from home in the future?

Fig. 1. Survey results showing what percentages of Canadians plan to telecommute in the future, regardless of public health measures.

The increase in telecommuting will have a significant financial impact on the food industry, as more people work remotely outside of the urban core. Of the respondents intending to work remotely (n = 2561), 57% plan on spending less at restaurants, primarily located within the urban core. While this is a large number of people, the change is not significant (p = .157). Prior to the COVID-19 pandemic, 36.8% of respondents went to restaurants for a meal at least twice a week, although that number decreases to 23.3% when asked about intentions after public health measures ease. This decrease is not significant (p = .081).

Before the pandemic, 63.2% of respondents reported having a meal or coffee at a restaurant during the workday. Interestingly, this number increases to 76.7% during the pandemic. While this is a percentage increase, the jump is not significant (p = .252). When asked if respondents would meet colleagues for a meal or coffee at a restaurant, this number jumps to 83.5%. This is still not a significant increase (p = .093) (See Fig. 2).

Food e-commerce

Overall, 62.8% of respondents have ordered food online in some capacity within the defined six-month period. This is statistically significant (p = .01). Respondents ordered slightly more grocery store items (curb-side pick-up and delivery) at 31.3% than direct from restaurants at 28.6%, though this is not significant (p = .727). Almost as many respondents indicated that they used third-party delivery services for restaurants (Uber Eats, Skip the Dishes ect.) at 26.3%.

Among those that have used e-commerce for food purchases, 33.1% stated that they ordered fast food. Other food purchases consist of fruits & vegetables (22.0%), dairy (21.5%), bakery, (20.6%) and non-perishable items (19.5%). These grocery-type items are not statistically different than the fast-food purchases (See Fig. 3).

When surveyed as to why respondents chose to order food online, convenience was cited as the most popular reason at 33.8%. 13.8% of respondents cited concern for health as the deciding factor to utilize e-commerce for food. This is a statistically significant difference between motivations (p = .004). Prior to the pandemic, 29.6% of respondents reported to have ordered food online once a week. Within the six-month period surveyed, that percentage increased to 45.4%. This this is an

Which of the following ONLINE shopping experiences have you used in the past 6 months? (Please select all that apply)
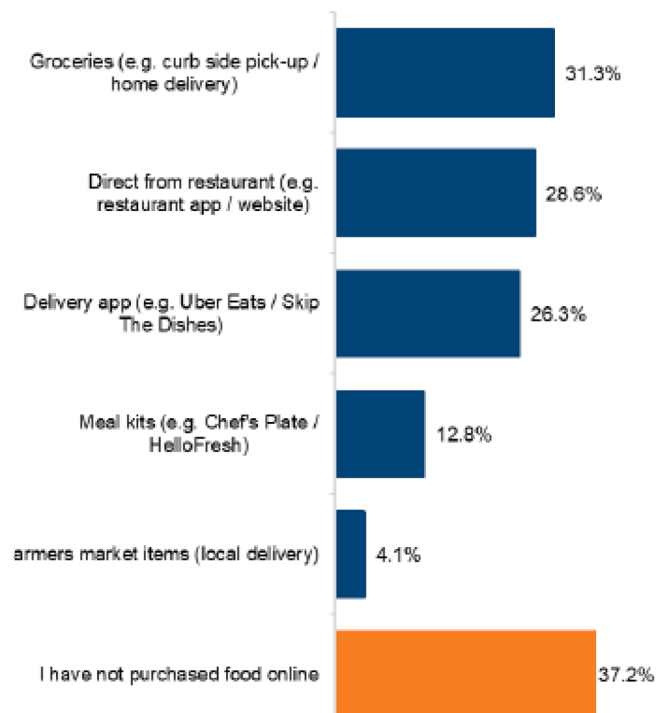

Fig. 2. Survey results showing online food buying activities of surveyed participants between May 2020 and October 2020.
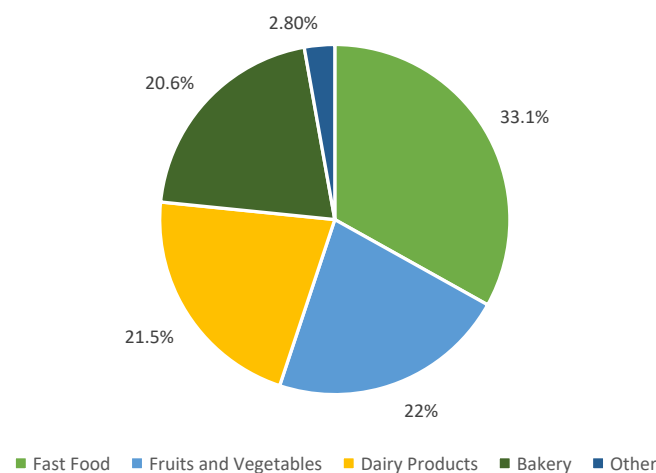
Categories of Food Ordered Online

Fig. 3. Food categories for e-commerce between May 2020 and October 2020.

increase of 15.8%, it's not a statistically significant increase (p = .067). When asked if Canadians intend to order food online at least once a week after the pandemic, 49.4% responded that they intend to do so. Significantly (p = .025), this suggests that the pandemic could compel many consumers and households to adopt long-lasting online dominated consumer habits.

Delivery and service fees are a significant barrier for many Canadians

that are seeking to use online services. While 45.7% of Canadians are not willing to pay any fees for online services, 32.4% are willing to pay a fee of up to 5%. These groups are not statistically significant (p = .131). This could be why 46.4% of respondents did not order food before the Covid-19 pandemic and 40.5% will not after the pandemic ends. Food control (17.9%) and food quality (14.6%) are cited as the major concerns for e-commerce by respondents. These two concerns are statistically more significant that all other concerns with food e-commerce. It should be noted that respondents were not given the option of price as a concern with grocery e-commerce.

Discussion

Telecommuting and social sustainability

Although telecommuting was already on the rise in Canada prior to the COVID-19 pandemic, the sudden shift to telework in the interests of public health and safety has most certainly accelerated this phenomenon. Over a third of respondents surveyed (36.4%) enjoy working remotely more than they expected prior to the COVID-19 pandemic. This statistic demonstrates a significant shift in attitude towards telecommuting, as some Canadians who would not have considered it previously now have first-hand experience of how it can work and the various benefits it affords.

Telecommuting allows for more flexibility and freedom for workers to choose where to live. Over a third of those surveyed whose employer is considering allowing staff to telecommute on a more permanent basis (35.1%) intend to relocate permanently within a year. Although this survey does not indicate *where* Canadians intend to relocate, it suggests that large, centralized urban cities may see an exodus of workers leaving these areas for smaller communities or other provinces. Community resilience (the ability of a community to weather change through adaptation and transformation) is a key component of social sustainability (Magis, 2010). Small, rural communities face significant social and economic challenges associated with dwindling populations, as young people leave these communities for higher education and better employment opportunities and only a few return to infuse the community with new skills and knowledge (von Reichert et al., 2014). The slow death of rural Canadian communities due to urban centralization represents a long-present crisis of community resilience and social sustainability. With the emergence of telecommuting as a more viable option with employers, these struggling communities may see an infusion of new residents either returning to their home communities or moving to new communities to escape the urban environment, having only stayed there for the sake of better employment opportunity. If this becomes the case, it is possible that social sustainability within these rural communities could improve significantly.

As previously mentioned, studies have shown that time dedicated to commuting is negatively correlated with social wellbeing (Delmelle, Haslauer, and Prinz, 2013; Newbold and Scott, 2013). The more time that one spends travelling to one's job, the less time is spent with family, engaging with the community, pursuing leisure activities, or other behaviours associated with high social wellbeing. Telecommuting has allowed Canadians to dedicate hours previously spent travelling towards establishing a healthier work-life balance, a key component of social wellbeing and sustainability (Gálvez et al., 2020). Increased use of telework and telecommuting also allows for organizations to improve inner-organizational social sustainability through diversification across dimensions of gender, race, class, and the differently abled (Blake-Beard et al., 2010). These improvements to social wellbeing, within both personal lives and the workplace, can have substantial effects on the overall social sustainability of Canadian communities, both urban and rural. A little less than a quarter of those surveyed (23.6%) confidently planned to continue telecommuting, while only a fifth (21.7%) indicated that their employer planned on allowing telecommuting as an option. These numbers are not insubstantial by any means, but they do indicate

that the majority of Canadians either cannot or will not be telecommuting in a post-pandemic future. This significantly hinders the possible social wellbeing benefits that telecommuting provides, but the extent of that limitation is unknown.

In terms of access, the potentially *hollowing out* of urban cores, as workers move to other areas has the potential to create food deserts, as restaurants close in these areas or relocate to follow the working population. While it is unknown how this effect would affect food security, the redistribution of prepared food providers would presumably have some impact on those who rely on them for both food and/or employment.

E-commerce, food Access, and social sustainability

Initial data from a pre-pandemic survey on food delivery by Charlebois & Music (2020) indicated that Canadians were having food delivered to their home through online delivery services. This study indicated that the industry had tripled in the five years prior to the pandemic and was expected to exceed $400 million CAD in the coming year before the COVID-19 pandemic became widespread in Canada (Lovgreen, 2020). 21% of Canadians surveyed had used a meal kit at some point, with only 4% using them regularly (Charlebois and Music, 2020). Food delivery apps were increasingly popular, with 39% of Canadians surveyed having tried an online food delivery app at least once, an increase of 29% from the year before (Charlebois and Music, 2020). Meal kits and online delivery apps in Canada are growing businesses that are often seen as disruptive to the traditional food industry (Hobbs, 2021). It was expected that food delivery apps in particular would develop exponentially over the proceeding several years due to their overall success, but that service providers will need to address significant issues of concern to Canadians high prices (64%), inadequate food temperature and quality (45%), overpackaging (32%), favourite restaurants not using the service (28%), not receiving the same amount of food as in-person dining (18%), unprofessional service (17%), and inadequate menu selection (15%) to remain successful (Charlebois and Music, 2020). Similarly, meal kit providers would need to address their inability to convert one-time consumers into regular users, causing the industry as a whole to be unprofitable despite recent increases in sales and subscribers. With the COVID-19 pandemic affecting Canadians in March 2020, this anticipated growth to these industries accelerated quickly to adapt to new circumstances.

Overall, the online food delivery industry and its many sub-groups will no doubt continue to grow post-pandemic, with the majority of those surveyed (63.8%) having ordered food online at least once during the initial six months of the pandemic. The increase in availability of food online in all its forms (grocery orders, takeout, or meal kits, etc.) has done very little to address problems of social sustainability by facilitating better food access. Easy access to safe, fresh, healthy, and affordable food is a cornerstone of human wellbeing and social sustainability (Elgar et al., 2021). A third of those surveyed (33.6%) cited "convenience" as the primary reason for ordering food online, as opposed to necessity due to lack of transportation (2.5%), a role as a primary caregiver (2.5%), or illness (2.7%). What this indicates is that online food ordering is not necessarily facilitating equitable food access, but simply making it more convenient for those that already have easy food access. This is also supported by examining the category of foods being ordered.

Food insecurity has been severely exacerbated by the COVID-19 pandemic, with millions of people across the globe falling further into poverty, preventing them from accessing safe, healthy food (Klassen and Murphy, 2020; Niles et al., 2020; O'Hara and Toussaint, 2021). Canadians already struggling have found themselves at even more of a disadvantage when it comes food access. Primary barriers to food access include the presence of food deserts, food mirages (grocery stores are plentiful, but food is unaffordable for low-income households), and lack of transportation (Breyer and Voss-Andreae, 2013; DeMartini et al.,

2013). With the increase in online food ordering and other COVID-19 inspired developments to the food industry, lack of reliable high-speed internet access is now also a barrier to food access. These issues are often prevalent in rural communities that often do not have the same resources as urban centers. While the possibility of ordering food online from grocery stores and farmers markets to be delivered does appear to address the barriers of food deserts and lack of transportation, the barriers of unaffordability and reliance on internet access remain high. Delivery and service fees make accessing affordable food even more difficult, with 45.7% of Canadians surveyed seeking to use online services either unwilling or *unable* to pay fees for online services. It is clear from the survey results that online food delivery has provided more convenience to many Canadians who already have adequate food access, while simultaneously not addressing, or even exacerbating, issues of food access for disadvantaged Canadians, thereby eroding social wellbeing and sustainability.

Conclusion

The COVID-19 pandemic has initiated or accelerated many changes to the everyday behaviours and patterns of Canadians. Two prevalent changes have been in regard to telecommuting and online food buying habits, both of which impact social wellbeing as a dimension of social sustainability. Based on survey results, Canadians are expected to continue telecommuting in higher numbers than before the COVID-19 pandemic, while the online food delivery industry is also expected to grow post-pandemic. While telecommuting has the potential to increase social wellbeing and the social sustainability of both urban and rural Canadian communities through a variety of mechanisms, online food delivery does not have the same capacity. Instead, the prevalence of online food delivery merely adds convenience to the lives of those who already have adequate food access while maintaining the status quo, or even worsening access for disadvantaged Canadians. Food access is a critical cornerstone of social wellbeing that is often neglected or inadequately addressed. Researchers should further examine how online food delivery could be adapted or expanded to address issues of equitable food access, taking what is currently a convenience for most Canadians and transforming it into a tool for supporting vulnerable populations and promoting food equity. Additionally, further study that focuses telecommuting, online food delivery, and other COVID-19 inspired behaviours as they pertain to rural issues may be of value to supporting and revitalizing Canada's rural communities.

CRediT authorship contribution statement

Janet Music: Conceptualization, Methodology, Writing – review & editing, Investigation. **Sylvain Charlebois:** Conceptualization, Methodology, Writing – original draft, Visualization. **Virginia Toole:** Writing – review & editing. **Charlotte Large:** Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgments

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