

The Resilience of Canadian Small- and Medium-sized Environmental Enterprises

during COVID-19

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ABSTRACT

This research examines the response of Canadian small- and medium-sized environmental enterprises (SMEEs) during the COVID-19 pandemic. The aim is to understand whether SMEEs continued their environmental work during the time of the COVID-19 crisis. In a world where sustainable development is increasingly important, and businesses are asked to act in environment, it is critical to understand how environmental businesses react to shocks into the socio-economic system. Data from the PIVOT project – an action-research project aiming to understand what kinds of narratives best motivate climate action within SMEs – was used to conduct a before-and-during analysis. Seventeen in-depth semi-structured interviews with SMEE leaders from across Canada were used as the baseline before COVID-19 and 17 shorter follow-up interviews, up to a few months into the pandemic, served as a data point during the pandemic. As a third data point, to validate preliminary results, 2 focus group activities with initial and new participants were conducted in April of 2020. Opportunities for sustainable responses in times of crisis were identified at the macro, meso and micro levels of society. Participant SMEEs advocated for sustainable systemic change and answered new societal needs all the while maintaining their environmental practices. SMEEs also used the buy local momentum that was amplified during the pandemic to educate their customers on sustainability related themes. The results of this study suggest that SMEEs are resilient and maintain their environmental practices even in times of crisis, which challenges the idea that small businesses in survival mode only focus on their economic bottom line.

Key words – SMEs, SMEEs, environmental entrepreneurs, Canada, COVID-19, sustainability, sustainable development, resilience, transition

Cette recherche examine la réponse des petites et moyennes entreprises environnementales (PMEE) canadiennes pendant la pandémie de la COVID-19. L'objectif est de comprendre si les PMEE ont maintenu leur approche environnementale pendant la crise de la COVID-19. Avec l'essor du développement durable dans le cadre duquel les entreprises sont invitées à agir en environnement, il est essentiel de comprendre comment les PMEE réagissent aux chocs dans le système socio-économique. Les données du projet PIVOT - un projet de recherche-action visant à

comprendre quels types de discours motivent efficacement l'action climatique au sein des PME ont été utilisées pour effectuer une analyse « avant-et-pendant ». Dix-sept entrevues semistructurées avec des chefs de PMEE de partout au Canada ont servi de point de référence avant la COVID-19. Puis, 17 entrevues de suivi réalisées jusqu'à quelques mois après le début de la pandémie ont servi de point de données pendant la pandémie. Pour valider les résultats préliminaires, 2 activités de groupe de discussion avec les participants initiaux et de nouveaux participants ont été complétées en avril 2020. Des opportunités de réponses durables en temps de crise ont été identifiées aux niveaux macro, méso et micro de la société. Les PMEE participantes ont plaidé en faveur de changements systémiques durables et ont répondu à de nouveaux besoins sociétaux tout en maintenant leurs pratiques environnementales. Les PMEE ont également utilisé l'intensification de la vague d'achat local pendant la pandémie pour éduquer leurs clients à propos du développement durable. Les résultats de cette étude suggèrent que les PMEE sont résilientes et maintiennent leurs pratiques environnementales même en temps de crise, ce qui remet en question l'idée que les petites entreprises en mode *survie* se concentrent uniquement sur leurs performances économiques.

Mots clés – PME, PMEE, entrepreneurs environnementaux, Canada, COVID-19, durabilité, développement durable, résilience, transition

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CONTRIBUTION OF AUTHORS

All the data used was collected as part of the PIVOT¹ action-research project developed in partnership between the National Film Board of Canada and McGill researchers Catherine Potvin, Dror Etzion, Animesh Animesh, Andrew Piper, Stephanie Posthumus and Jérôme Waldisphül. More specifically, as a research assistant, Divya Sharma conducted all the interviews with SMEE leaders in 2019. As part of the NFB team, Vali Fugulin, accompanied by Jérémy Battaglia, conducted the interviews during the COVID-19 pandemic.

I was in charge of transcribing the COVID-19 interviews, designing and doing the analysis of the COVID-19 interviews in relation to the baseline data of 2019, as well as planning and leading focus group activities in the spring of 2021. Altogether, this data is the heart of my Master's thesis.

I'm the only author of my thesis, but Divya Sharma wrote a paragraph on her approach during the interviews of 2019 that I edited and incorporated in the appendix I for supplemental material. My committee member Howard Ramos, as well as my co-supervisors Catherine Potvin and Suzy Basile have commented and revised my thesis, suggesting edits that I included along the way.

¹ <u>https://www.gopivot.org/home</u>

PREFACE

From a positionality to embracing the world in between

Conducting objective qualitative data analysis is not a simple endeavor (Ratner, 2002). Exercises that recognize past experiences and power relationships allow to reflect on how one's interpretation of a data might be influenced by their positionality (Haraway, 1991). These reflections are useful to position the knowledge created by academia and establish their partiality (Idem). While acknowledging the research context and making visible the researcher's background - what has been called transparent reflexivity - gives new tools to the interpreter, it also assumes that the messy process of research is comprehensible (Rose, 1997). In her piece *Getting personal:* Reflexivity, positionality, and feminist research, England (1994) beautifully uncovers the concept of betweenness that intents to move beyond transparent reflexivity: "We do not conduct fieldwork on the unmediated world of the researched, but on the world between ourselves and the researched. At the same time this "betweenness" is shaped by the researcher's biography, which filters the "data" and our perceptions and interpretations of the fieldwork experience" (England, 1994). In this world between the participants and the researcher, knowledge is negotiated and both parties can learn and be changed, constructing – ever constructing – their positionalities and identities along the way.

I discuss the concepts of positionality and situated knowledge here not because of the potential power relationships that could affect the interpretation of the data in my thesis, but because of my anti-capitalist vision of the world and my unique background that shaped my connection to the participant entrepreneurs and my analysis. When I first got involved in the PIVOT project, I was not sure what the main topic of my analysis would be. The pandemic of COVID-19 was undermining my capacity to continue my initial biology focus research on the botanical signature of ancestral Anicinabe portage sites. Fieldwork was not permitted, nor ethical, given the sanitary restrictions in place. I therefore needed to reorient my thesis and work with data that had already been gathered. The PIVOT project offered me the opportunity to work in a completely new field, with qualitative data in small businesses, but with the lens of sustainability and climate change.

At first, I was curious to work with entrepreneurs, but I had little hope that working with them could be helpful for the climate per say. However, as I started to engage with the interview material and the richness of each case study, I could feel the world between me and them be created, a world where people were eager to change the status quo of business and act for climate.

INTRODUCTION

The COVID-19 pandemic has disrupted most peoples' activities, affecting public services like health care and schools as well as the private sector with businesses' activities. As of January 2021, 58,000 Canadian independent businesses had to close because of COVID-19, and 71,000 to 222,000 were considered at risk of closing (Canadian Federation of Independent Business, 2021). Supply chains were interrupted (Baral, Singh, & Kazançoğlu, 2021), even in essential sectors such as the food industry (Ali et al., 2021) and most small- and medium- sized enterprises (SMEs) had to change their business to adapt to the pandemic (Gregurec, Tomičić Furjan, & Tomičić-Pupek, 2021; Ritter & Pedersen, 2020).

While COVID-19 is a major threat to the majority of SMEs, research on the impact of crisis on SMEs has also shown that a high state of perceived uncertainty can foster innovation in medium-sized businesses and stimulate internal reorganization as well as new partnerships in small-sized businesses (Giannacourou, Kantaraki, & Christopoulou, 2015). Innovation and reorganization have indeed been witnessed during the pandemic. One example is the development and use of digital technologies by SMEs (Gregurec et al., 2021; Indriastuti & Fuad, 2020; Rakshit, Islam, Mondal, & Paul, 2021) that used different pathways depending on their initial capacities and financial means to work remotely, reach their clients and maintain their business afloat (Priyono, Moin, & Putri, 2020).

SMEs in times of crises are suggested to contribute to communities' resilience as well, with businesses offering new services or answering needs that can't be met by governments alone (Doern, Williams, & Vorley, 2019). In the context of natural catastrophes, this has been called *disaster entrepreneurship* as "the private sector [tries to] maintain value during and in the

immediate aftermath of a natural disaster by taking advantage of business opportunities and providing goods and services required by community stakeholders" (Linnenluecke Martina & McKnight, 2017). Even if responding proactively and innovatively to new market orientations has a positive effect on businesses' performances (Eggers, 2020), it requires a lot of resources which are often limited in times of crisis, especially for SMEs who face a liability of smallness, (Beliaeva, Shirokova, Wales, & Gafforova, 2020).

Emerging from a global pandemic, while continuing to wrestle with the ongoing climate crisis, it is essential to examine SMEs' resilience when faced with disruptions. The concept of resilience, that has been defined and used in ecology (Pimm, 1984), in engineering, and in many other disciplines over the past decades (Chandler & Coaffee, 2016), is now gaining considerable momentum because of COVID-19, especially in management studies (Ford, ElAlfy, Wilson, & Weber, 2021). It has been argued by Woods (2017) that resilience should not only be considered in a reactive manner, with the ability to bounce back, but also in a pro-active manner (Woods, 2017), capturing the cultivation of systems' preparedness to thrive in changing and uncertain environments (Magis, 2010).

Transition scholars have advanced that sustainable practices among SMEs could contribute to resilience-building in our ever-changing worlds (Burch et al., 2020; Loorbach & Wijsman, 2013; Quintás, Martínez-Senra, & Sartal, 2018). However, SMEs are now facing a long-lasting crisis that has shaken all sectors of society, constraining their capacity to stay open. Moreover, because the emergence of purpose-driven, environmental, and social SMEs is recent (Burch & Di Bella, 2021; Villela, Bulgacov, & Morgan, 2021), there is a gap in the literature to understand their responses and capacities in times of crisis. Can they maintain their sustainable practices and contribute to the resilience of their communities as suggested above? Or do they have to strip down their sustainable initiatives to focus on their economic bottom line? The later would be aligned with the established neo-liberal assumption that the only social responsibility of a business is to guarantee profit maximization for its shareholders (Friedman, 1970), thus not prioritizing the environment in challenging times. For this study, SMEs engaging in sustainable practices will be called small- and medium-sized environmental enterprises (SMEEs) and will be defined as SMEs that act on their active concerns for the lived environment (Tsvetkova, Bengtsson, & Durst, 2020).

To better understand the impact of the COVID-19 crisis on SMEEs and their sustainability practices, the rich data from the PIVOT action-research project was used to conduct a qualitative before-and-during analysis. PIVOT is a research project led by the McGill Sustainability Systems Initiative in partnership with the National Film Board of Canada to examine how different narratives can stimulate climate action within SMEs. In my Master's thesis research, 17 Canadian SMEEs were followed over a period of two years. Qualitative data before and during the pandemic was collected through semi-structured in-depth interviews, follow-up shorter interviews and focus group activities. The hypothesis was that SMEEs would focus primarily on financial strategies to survive, putting aside their sustainable practices during the pandemic (Kirkwood, Dwyer, & Walton, 2017). However, as will be illustrated in my thesis, results suggest that, even amid a global pandemic, Canadian SMEEs are resilient, innovative and maintain their environmental practices, making them key actors to include in sustainability.

LITERATURE REVIEW

2.1) SMEs' attributes and distinctiveness

In Canada, small businesses have between 1 and 99 paid employees and medium-sized businesses have between 100 and 499 paid employees (ISDE, 2020). However, this definition varies between countries and most articles published on SMEs focus on businesses with 250 employees or less (Harvie & Lee, 2002; Juergensen, Guimón, & Narula, 2020; Soundararajan, Jamali, & Spence, 2018). The number of employees is not the single characteristic defining SMEs as they are fundamentally different from larger firms (Luederitz, Caniglia, Colbert, & Burch, 2021; Linda Westman et al., 2019). SMEs, for example, tend to be organized in a less formal way than larger firms (Stubblefield Loucks, Martens, & Cho, 2010; Wickert, 2014). They are first and foremost influenced by their owner-manager (Jenkins, 2006; Kearney, Harrington, & Kelliher, 2018). The often-limited number of employees in SMEs frequently leads to one person "wearing" many different hats" (Johnson & Schaltegger, 2016). SMEs are also often independent and frequently experience cash flow challenges (Association of Chartered Certified Accountant, 2012). Most distinctively, SMEs are embedded in their local environment and can contribute to a sense of place in their community (Shrivastava & Kennelly, 2013; Thomas & Cross, 2007). In their book on small scale entrepreneurship in cities and Business Improved Areas, Gomez, Isakov and Semansky (2015) have identified a co-dependence for thriving between engaged SMEs and large urban areas. Put simply, appealing neighborhoods where people want to live were correlated with areas with a dynamic SME community engaging in urban revitalization (BIA) programs (Gomez, Isakov, & Semansky, 2015).

In 2019, businesses with less than 500 employees accounted for 99.8% of all Canadian businesses (ISDE, 2020), employing 88.5% of the private sector employees (Idem). Giving their importance for the economy, SMEs have gained academic attention in the past 30 years, with an increasing body of literature since the 2000's.² Researchers around the world, but especially from the US, the United Kingdom and from China, have explored the realities of SMEs' ranging from management practices and knowledge making, to network development (Gallego-Roquelaure, 2020), leader's values role and impact on business (Schaefer, Williams, & Blundel, 2020), ethics/corporate social responsibility (Lepoutre & Heene, 2006; Soundararajan et al., 2018; Spence & Rutherfoord, 2001) and more.

2.2) Research at the intersection of sustainability and business

With the rise of sustainable development³, a small, but growing body of literature is interested in SMEEs with business leaders focusing not only on their economic bottom line, but also on their environmental footprint and on their social impact. This is what has been called "the

² Gauthier, Scopus search analysis, 2021. Iterations used: "Small business*" OR "SME" OR "Small and medium enterprise*", excluding the field of medicine using the acronym SME in a different context.

³ The key aspect of sustainability is to add the spheres of equity and environment to the economical one and make them all equal elements in the process of decision making in development (Portney (2015).) This relates to the wellknown definition coined in the Brundtland report stating that sustainable development is a form of development that "meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, World Commission on, and Development (1987))

triple bottom line" approach to business (Isensee, Teuteberg, Griese, & Topi, 2020). Research at the intersection of SMEs and sustainability is necessary because, annually, Canadian SMEs have been said to be responsible for 200 million tonnes of greenhouse gas emissions (Climate smart, 2018), which corresponds to 27% of Canada's total 2019 emissions (Government of Canada, 2021). To better understand SMEEs and support them in their sustainability efforts, we gain insight from new business and management research subfields and transition scholars emerging to address sustainability issues in the context of businesses. (Burch et al., 2020; Journeault, Perron, & Vallières, 2021).

The field of sustainable entrepreneurship includes all three spheres of sustainability – economic, social, and environmental - and focuses "on the preservation of nature, life support, and community in the pursuit of perceived opportunities to bring into existence future products, processes, and services for gain, where gain is broadly construed to include economic and noneconomic gains to individuals, the economy, and society" (Shepherd & Patzelt, 2011). Research on social entrepreneurship is interested in opportunities that will innovatively increase social wealth, addressing various forms of inequalities in society (Zahra, Gedajlovic, Neubaum, & Shulman, 2009). The concept of corporate social responsibility (CSR) is linked to responsible and ethical behaviors within a business, encompassing how a business treats people in its network and creates shared value, how it manages its employees' health, safety and professional growth, and how it interacts with its local community (Jenkins, 2006; Lepoutre & Heene, 2006; Rubio-Andrés, Ramos-González, Sastre-Castillo, & Danvila-del-Valle, 2020). CSR has also been revised and analysed through the ethic of care as a way to make it more relevant to small businesses and bring a feminist perspective into the discussion (Spence, 2016). Although social entrepreneurship and CSR operate at different levels, with the former as the essence of a business and the latter as a tool

to foster entrepreneurial ethical behaviors, they both focus on the equity and economy elements of sustainability. Environmental entrepreneurship, on the other hand, is involved with the environmental and economic spheres, seeking to understand why and in what ways businesses can contribute to the protection of the environmental world and to climate change mitigation and adaptation strategies (Outsios & Kittler, 2018).

Even if these business and management subfields adopt slightly different perspectives, they are all interested in purpose-driven SMEs, like hybrid organizations that organize their business to improve social or environmental matters (Haigh, Walker, Bacq, & Kickul, 2015). A rising number of purpose-driven businesses are joining movements like *B corporation*, determined to "use businesses as a force for good" (Honeyman & Jana, 2019). Yet, socially and environmentally focused businesses remain scarce (Burch & Di Bella, 2021). Even if Brammer, Hoejmose and Marchant advance (2012) that "most small businesses are engaged in some environmental initiatives, [with] significant heterogeneity in the engagement of SMEs" (Brammer, Hoejmose, & Marchant, 2012), Boiral, Baron and Gunnlaugson (2014) rather suggest a bias in the literature due to a focus on SMEs' success stories, mentioning that most SMEs are not interested in sustainability, or are at least passive in their approach to sustainability (Boiral, Baron, & Gunnlaugson, 2014). There is therefore a pressing need to understand SMEEs' success and realities better to inform the development of favorable policies, programs and/or networks to help them flourish and propagate as part of a transition towards sustainable futures.

2.3) The operationalization of sustainability

To build sustainability within businesses more effectively, the concept has been operationalized in different ways. More specifically, a variety of voluntary certifiable ecomanagement systems have been established, such as ISO 14001, EMAS, or ISO/TS 14072 with a life cycle thinking approach (Boiral, 2007; Heras-Saizarbitoria, Boiral, & Díaz de Junguitu, 2020; Seidel-Sterzik, McLaren, & Garnevska, 2018), which have been associated with both enhanced environmental performances at times (Testa et al., 2014) and weak long term contributions to global sustainability (Wagner, 2019). However, recent work discusses how voluntary certifiable eco-management systems are not adapted to the realities of smaller businesses, making these worldwide standards less likely to be implemented among SMEs than in large organizations (Johnson & Schaltegger, 2016; Rajendran & Sharaai, 2020). Nonetheless, in their research on small US wineries, Cordano, Marshall and Silverman found that voluntary environmental management programs that are industry-specific and SME-focused increase the successful implementation of new sustainable initiatives by 1) establishing clear goals and/or policies, 2) budgeting funds for environmental projects, and 3) addressing waste management with suppliers (Cordano, Marshall, & Silverman, 2010). The operationalization of sustainability is thus helpful for SMEs to implement socio-environmental initiatives, but it has to be adapted to their unique realities.

2.4) Drivers and barriers of sustainability practices in SMEs

The adoption of sustainability initiatives in SMEEs is shaped by many factors. The impact of the owner-manager's values and attitude has been identified as a key driver for SMEs to go green (Hamann, Smith, Tashman, & Marshall, 2017; Jenkins, 2006; J. A. Massoud, Daily, & Willi, 2020; Testa, Gusmerottia, Corsini, Passetti, & Iraldo, 2016; Williams & Schaefer, 2013). Analyzing the interactions between drivers of sustainable practices in South African rural SMEs, Hamann, Smith, Tashman and Marshall (2017) found that leaders' strong environmental ethic spurred environmental practices and was enhanced by "expectations of competitiveness gains" through sustainability (Hamann et al., 2017). In a systematic review on food manufacturing firms, Rajendran and Sharaai (2020) also found that younger and formally educated owner-managers had higher sustainable practices adoption rates and that self-innovation attitude along with awareness of environmental issues were also linked with higher sustainability adoption rates (Rajendran & Sharaai, 2020).

Although an owner-manager's attitudes have a great influence on a business' pursuit of sustainability goals, there are a lot of obstacles for SMEs to deeply and rigorously engage in sustainable initiatives (Johnson & Schaltegger, 2016). The barriers identified in the literature are the lack of awareness of SMEs' impact on the natural environment (Lawrence, Collins, Pavlovich, & Arunachalam, 2006; Rajendran & Sharaai, 2020), the absence of perceived benefits for the business (Brammer et al., 2012; Zorpas, 2009) and the lack of time and human as well as financial resources (Cordano et al., 2010; M. A. Massoud, Fayad, El-Fadel, & Kamleh, 2010; Rajendran & Sharaai, 2020). In relation to the limited human resources, SMEs often lack expertise in sustainability and don't have the tools and skills within their business to implement environmental initiatives (K. H. Lee, 2009). It has also been argued that the lack of visibility of SMEs' environmental actions, compared to larger firms, leads to a form of "anonymous exposure", which reduces the incentive to take action for external stakeholders (S. Y. Lee & Klassen, 2008; Rajendran & Sharaai, 2020).

Internal obstacles are not the only challenge to include SMEs efficiently in sustainability, as some external obstacles exist as well. First, the rapid rise of greenwashing in the past decades (Delmas & Burbano, 2011) has made consumers skeptical about firms' environmental claims, threatening sustainable firms' competitive advantage (Furlow, 2010). Second, the association between corporations and economic growth is extended to SMEs and points to what Westman, Moores and Burch (2021) have called "the normative dimension of the governance divide" pointing to the fact that, in urban governance, SMEs are included in sectors of innovation and development, but absent from sustainability initiatives and planning (L. Westman, Moores, & Burch, 2021). Moreover, SMEs that might lack the resources (time, employees, etc.) to get involved in environmental policy making, also face the lack of capacities from the political side to know how to deal with entrepreneurs, which has been described as "the cognitive dimension of the governance divide" (L. Westman et al., 2021). Put simply, in governance, SMEs are recognized as important actors of the economic sphere but are overlooked when it comes to sustainable development (Kundurpi, Westman, Luederitz, Burch, & Mercado, 2021; L. Westman et al., 2021).

While SMEEs must cope with internal and external challenges if they are to engage in sustainability, the development of a network through collaborations and new connections has been shown to alleviate some of the challenges of the SME context (Jenkins, 2006). Through time, networks become a source of information (Kundurpi et al., 2021) and resources that help SMEs to be flexible and to provide employment safety for their employees (Jämsä, Tähtinen, Ryan, & Pallari, 2011). In particular, learning networks help small businesses to improve their organizational performances (Chaston & Mangles, 2000). Looking at 13 case studies, Journeault, Perron and Vallières (2021) moved beyond naming the importance of network growth and identified how different stakeholders contribute to the progress of sustainability within their

collaborating SMEs (Journeault et al., 2021). The analysis suggests that stakeholders play the roles of trainers, analysts, coordinators, specialists, and financial providers, with SMEs benefiting from 3 roles on average to develop their sustainable practices (Idem). These intermediaries specialized on socio-environmental advancement offer an alternative to conventional developmental units that usually favor economic growth and innovation over sustainability when working with SMEs (Kundurpi et al., 2021; Quartey & Oguntoye, 2020). Moreover, through meaningful relationships and because of their substantial role in helping SMEs on their journey towards sustainability, external intermediaries and employees come to shape environmental and social strategy making in SMEs (C. M. J. Lee, Che-Ha, & Syed Alwi, 2021). Studying microbreweries with the use of thick description⁴, Luederitz, Caniglia, Colbert and Burch (2021) also found that meaningful relationships could sprout between SMEs, their suppliers and their customers, leading to the co-evolution of a collective purpose and emergent strategies to address sustainability issues (Luederitz et al., 2021).

In trying to see if the role of SMEEs as educators, or knowledge hubs within their network of clients and stakeholders had been examined in the literature⁵, no articles were found. Rather,

⁴ In social sciences, thick description "refers to the researcher's task of both describing and interpreting observed social action (or behavior) within its particular context. (...) [it] accurately describes observed social actions and assigns purpose and intentionality to these actions, [while also capturing] the thoughts and feelings of participants as well as the often complex web of relationships among them." (Ponterotto, 2006)

⁵ Scopus research, iterations: "SME*" OR "Small business*" OR "purpose-driven business*" OR "sustainable business*" coupled with "education" OR "knowledge sharing", coupled with "employees" OR "customer*" OR "client*" OR "stakeholder*", limited to literature of the last 10 years (2012 and after) and the fields of management, environmental science and social science. 75 references were looked at, reading the title and if necessary, the abstract.

articles were focused on the importance of knowledge sharing within the business and its positive impact on innovation and organisational performances (Salehzadeh, Pool, Mohseni, & Tahani, 2017; Saunders, Gray, & Goregaokar, 2014; Soto-Acosta, Colomo-Palacios, & Popa, 2014). There is therefore a gap in the literature to explore the role of SMEEs as knowledge hubs that can engage the public and other stakeholders in relation to themes in sustainability.

SMEs' networks, adaptability and dynamism might position them well to respond to times of crisis, but their limited resources rather make them vulnerable to a long-term disruptions such as COVID-19. Most SMEs have been severely impacted by the pandemic without knowing if they will stay open in the near future (Shafi, Liu, & Ren, 2020), especially if governments don't step in (Al-Fadly, 2020). In the COVID-19 context, my Master's research ought to look at the resilience of Canadian SMEEs and their sustainable practices.

METHODS

3.1) The PIVOT action-research project

To better understand what kinds of narratives are effective motivators for climate action for SMEs, the ongoing PIVOT⁶ action-research project (Luederitz and Etzion 2021) uses digital storytelling to encourage Canadian SME leaders to take action around climate change. In partnership with a creative team from the National Film Board of Canada, a team of McGill researchers from management, humanities, computer science and biology developed a virtual platform for entrepreneurs to share their journeys towards a low-carbon economy. Working with SMEEs in the sectors of food, manufacturing, retail and building, the PIVOT project has now completed four phases. The pilot phase explored the motivators to act on climate change, Phase 1 built a database of Canadian SMEEs (see appendix I, section 1 to learn more about the construction and the selection criteria for the PIVOT database as well as their implications), the COVID phase looked at the impact of the pandemic on SMEEs, and Phase 2 created narratives of why entrepreneurs act on climate change.⁷ To conduct a before-and-during analysis, my Master's research focuses primarily on the data from the COVID phase and beforehand (see figure 1).

⁶ <u>https://www.gopivot.org/home</u>

⁷ See appendix I, section 1 to learn more about the research strategies and approaches for each phase of the PIVOT project.

Figure 1. Data collection timeline for the PIVOT project and the selection of the data set for this current study



3.2) Data set for this current study

COVID data

Three weeks to eight months into the pandemic, 38 SMEEs from the PIVOT project⁸ were contacted by email and asked how they were reacting to the crisis. In partnership with the National Film Board of Canada, 15 were chosen to film an interview on Zoom. The creative team decided to work with entrepreneurs that were good storytellers and who had an inspiring business COVID

⁸ See appendix I, section 1 to learn more about the construction and the selection criteria for the PIVOT database

story to tell. Moreover, giving the lack of consideration of indigenous business practices in the literature (Berge, 2020), 2 indigenous SMEE leaders were also interviewed during the COVID phase (total PIVOT COVID participants = 17, see Appendix II for detailed characteristics). The objective of the filmed interviews was to unravel how PIVOT SMEEs were coping with the crisis through understanding their main reorganization strategies, their vision of the future as well as their business priorities (See appendix III, section 3 for interview guide). The videos were edited to create short clips and were published on PIVOT social media platforms during the spring of 2020 with the aim of inspiring the business community to be resilient and hopeful. As the research team engaged with the COVID interview content (18-to-45-minute videos), it became clear that these precious snapshots richly conveyed SMEEs' main strategies and discourses when forced to close or forced to adopt new sanitary protocols to function.

Before-COVID: baseline data

The 17 COVID participants all had a solid before-COVID baseline with an in-depth interview done in 2019, as part of the phase 1 of PIVOT. Because the focus of these before-COVID interviews was around the theme of sustainability (See appendix III, section 2 for the interview guide), they were well suited to speak to the question of the study "how SMEEs are adapting in times of crisis and are they maintaining their sustainability practices?" This allowed to compare the sustainability initiatives and their motivators before the pandemic with the adaptive strategies and practices amid the crisis. To my knowledge, seventeen participant SMEEs in the context of a longitudinal in-depth qualitative analysis is rich and provides a strong basis for understanding. Important comparative studies (qualitative or mixed, longitudinal, working with SMEs) have been

working with between 4 and 8 businesses (Fletcher & Prashantham, 2011; McAdam, Keogh, Reid, & Mitchell, 2007; McAdam, Reid, & Mitchell, 2010).

All interviews were conducted remotely on Zoom, in the interviewees' language of choice (English or French). They were all recorded and transcribed to be used for an inductive qualitative analysis. During the process, pseudonyms were given to participants to respect their confidentiality. The names used throughout the thesis are therefore not the real names of the entrepreneurs. Ethics approval was obtained from the McGill Research Ethics Board (appendix IV file #84-0719).

3.3) Coding and categorizing

I coded all the 17 COVID interviews along with the 17 before-COVID interviews from the same participants as part of my thesis, thus ensuring consistency in coding. Moreover, in the first stages of coding, the codes were shared with a professor in sociology to ensure that they were specific and extensive enough to capture the diversity in the data while grouping concepts and actions together. Figure 2 summarizes the approach in coding and the different steps that were followed during the analysis.

Figure 2. Summary of the qualitative analysis done for the study; the red arrows make explicit the iterative steps during the process



For the first coding cycle, an inductive approach was used to let the codes arise from the data and inform the main themes in the interviews. The method followed was inspired by the lineby-line and open coding approach of grounded theory (Strauss & Corbin, 1997), thinking about the theme of sustainability at large. During that initial coding round, the codes were kept as large categories such as "COVID challenges", "SMEs roles", "reorientation strategies", "inspiration" and "employees". The objective was to structure the data through descriptive coding and be familiar with the content of all interviews. This open coding cycle was followed by a second one for which a more deductive approach was applied; using the categories that had emerged from the data and adding new specificities within them. To keep the analysis close to actions rather than solely beliefs, the interviews were coded by looking for specific sustainability actions done by the SMEEs before the pandemic and while adapting to COVID pressures (process coding). Coding was therefore focused on verbs and gerunds, and only actions related to sustainability and/or reorientation strategies were included. First-order categories were created by moving codes around to group them in relevant ways in the context of sustainability: were the codes related to the reduction of carbon emissions, to the reduction of waste or the optimization of resources use. Annotations were used to underline anomalies in the transcripts, to double-check words and confirm facts. Both specific memos to the interview and general memos related to questions about the research were written.

The interviews were analyzed iteratively, going back and forth between the data and the first-order categories, adding new ones when needed and modifying others to include more data along the way (Locke 2001). Twelve categories (descriptive and in relation to the environment) were identified in the before-COVID interviews based on their potential explicative power to enlighten how environmental businesses were likely to react to the crisis, including 1) number of employees, 2) age, 3) gender of the leader, 4) sector of activity, 5) network and inspiration, 6) motivators to act in environment, 7) visibility of the sustainable actions, 8) activism, 9) environmental actions, 10) Bcorp affiliation⁹, 11) location (province) and 12) measures of success. The basic characteristics (gender, number of employees, location, age, sector) were chosen to account for any confounding variables to ensure that the patterns observed were not solely the result of the sector of activity for example. The environmental categories were chosen because of their interesting variability among the participants, to understand if they could be good predictors of environmental resilience in times of crisis.

⁹ <u>https://bcorporation.net/</u>

Once all interviews were coded and codes were linked to first-order categories, there was a focus on the before-and-during aspect of the analysis. As suggested by Small (2009) in his reflection on generalization and transferability in qualitative research, each business was taken as a small case study (Small, 2009). The before-COVID interview was read followed by the COVID interview and condensed in one page per business leader (case study). Using the main categories found while coding (see above) along with the 1-pager per business, the columns of a table were designed to do a case-by-case comparison (Gibbs, 2007): each column was associated with one of the 12 categories at a specific phase (before COVID or during COVID), and every SMEE had one row. For each SMEE, the columns were filled with quotes from the text – meaning unit – that were illuminating regarding the category (Erlingsson & Brysiewicz, 2017). In some cases, the SMEE leader's position was summarized if no quotes were particularly typical. The quotes were carefully selected to be representative of the overall interview.

To condense and simplify the comparative table described above and facilitate the beforeand-during analysis, the quotes in the columns of the case-by-case comparative table were classified (See appendix I, methods' supplemental material, section 2). Finally, three main ways in which PIVOT SMEEs maintained their sustainable approach in times of crisis emerged from the data with the use of the comparative table.

3.4) Validation of preliminary findings during focus group activities

In the context of the PIVOT action-research project, participants are an integral part of the research process, and their reflections and experiences shape the kind of stories shared on the PIVOT platform, while the results of the analyses might motivate and guide them on sustainable pathways. To get feedback on the analysis done for this study, focus group activities were

organized on Teams. The objective was to discuss the theme of sustainability in times of crisis using the opportunities for sustainable practices identified in the analysis as food for thought.

In April of 2021, two focus groups were conducted to get feedback on the three categories created about SMEEs' environmental practices in times of COVID. All participants from the COVID interviews (17) and phase 2 of PIVOT (11) were invited to participate by email, with a follow-up phone call if there was no answer. The PIVOT SMEE leaders from phase 2 were added to expand the validation phase to SMEEs that were not initially interviewed during COVID-19. A total of 14 SMEE leaders participated in the two focus group activities: 7 from the COVID phase and 7 from phase 2, who had not been interviewed during COVID-19. There were 4 women entrepreneurs among the participants, with representation from 8 Canadian provinces (none from Newfoundland and Saskatchewan) and all four sectors studied (retail, manufacture, food, construction). No indigenous PIVOT SMEE leaders were available to join. Because the three francophone participants were all bilingual, the focus group discussions were led in English and francophones were invited to speak in French if they wished to, especially to name untranslatable concepts. During the discussions, the three categories that arose from my analysis of the COVID interviews about the ways in which SMEEs had adapted their business sustainably in times of crisis were described. Each brief category description was followed by a 20-minute discussion for participants to share their thoughts about the proposed category. At the end of the activity, after all the discussions on each category, there was a discussion session to talk about what was missing in the categories that were identified in the analysis. At any point, if a participant directed a question to the interviewer, the question was redirected to the group as a whole.

For each of the focus group, the discussions lasted 90 minutes. Saturation on the theme of sustainability in times of COVID-19 was met in the answers both times, which happens when all

ideas and responses in relation to a theme have been shared and start to be repeated towards the end of the discussion. The focus group activities were recorded on Teams and transcribed by me using detailed notes taken during the group discussions. The same deductive process coding approach used with the interviews was followed, with the focus on sustainability in COVID-19 adaptive strategies. The coding was mostly deductive at that point since the first-order categories had been developed with the initial data, although some new categories arose such as "taking advantage of the buy local momentum".

3.5) Construction of map journeys for specific case studies

Inspired by the data visualisation of the customers' map journey which "illustrates the steps customers go through in engaging with [a] company" (Richardson, 2010; Temkin, 2010), four SMEE's sustainable journeys were mapped on a graph to create profiles and see in one image the environmental engagement before COVID-19 and during COVID-19. Four SMEEs were chosen because they represented different sectors of the economy and, together, captured well the diversity of sustainable initiatives implemented before and during the pandemic. Typologies were chosen to illustrate the kind of actions taken during the pandemic. The sustainable practices before-COVID were divided into two categories: the structural and the educational initiatives. The COVID sustainable practices were divided by scale, including what was done at the micro level, with customers, what was done at the meso level, within the business, to adapt to COVID sustainably, and what was related to the macro level, with governments and bigger institutions. These categories were chosen based on the analysis of the interviews showing that sustainable initiatives before-COVID were mainly divided into structural and educational initiatives and that

opportunities during the pandemic were sought at all levels of society. (See results, section 4.2 and 4.3) Moreover, the sustainable initiatives were classified by "level of implication required" to see the commitment to sustainability before and during the pandemic. A low level referred to actions that were punctual and did not need an ongoing investment of resources (time, money, employees), a moderate level referred to actions that were repetitive, but still needed a small amount of resources, and a high level referred to actions that were repetitive and required the investment of combined resources (time, money and/or employees).

Even if the map journey is a valuable snapshot of a SMEE's sustainable initiatives, the data does not allow to compare directly if actions that were ongoing before COVID-19 were kept exactly as they were. This is because the data was obtained through semi-structured interviews and not through a survey repeated before and during the pandemic. Moreover, the focus of the COVID-19 interviews was the reorientation strategies during the pandemic rather than sustainability itself. Therefore, when looking at a PIVOT SMEE's map journey, one needs to think about each dot as an addition to one another rather than a change through time.

3.6) Caveats

The bulk of the analysis was based on in-depth interviews and focus group discussions. However, interviews have some limitations, especially considering the gap between what people say and what they actually do (Deutscher, 1973), which has been called the attitudinal fallacy (Shamus & Colin, 2014). "Because meaning and actions are collectively negotiated and contextdependent (...) self-reports of attitudes and behaviors are of limited value in explaining what people actually do because they are overly individualistic and abstracted from lived experience" (Shamus & Colin, 2014). Therefore, business leaders could have over emphasised their environmental actions during the pandemic, unintentionally hiding their struggles, or speaking more about their values and aspirations than about their day-to-day realities in times of COVID. The analysis could thus be coupled with participant observation to reveal how sustainability is managed within the business, who is part of it and how much attention is really dedicated to environmental actions over time.

Adding quantitative data could also be valuable in a before-and-during analysis to be able to quantify SMEEs' progress, carbon and/or waste reduction, etc. This quantification could help SMEEs to prioritize initiatives that have the biggest impact in terms of time, or financial investment, depending on the limiting factor for the SMEE. Yet, as it is the case for educational initiatives, for the business culture and for the relationships nurtured with the employees, some deeply sustainable practices are not easily quantifiable. Consequently, the qualitative analysis in this study is necessary and valuable, but also complementary to quantitative approaches that could be taken in future analyses.

The 17 participant SMEEs were selected – based on their responses to COVID-19 – from a database of 81 Canadian SMEEs that ought to represent the diversity of SMEEs in Canada (See appendix 1, section 1 to better understand how saturation was met). Nonetheless, one needs to be careful when generalizing the findings of this study to all Canadian SMEEs as the participants are not meant to be a representative sample of a larger population. They are rather meant to be a collection of diversified and in-depth case studies from which similarities or trends can be drawn and analyzed. To address the transferability limitation of this study, focus group activities were conducted with 7 of the 17 initial SMEEs as well as with 7 new SMEEs. This validation phase in the research process confirmed that the 17 initial SMEEs were not such a unique collection of SMEEs that the results could not speak to other Canadian SMEE leaders.

Ultimately, the profiles and analyses are meant to illuminate if different forms of sustainability practices are maintained by SMEEs during COVID-19 and assess whether or not SMEEs' reorientation strategies are aligned with their sustainability purpose even in challenging times. Since we did not conduct a sustainability assessment, we used SMEEs' own definition and description of sustainability initiatives. For instance, "putting beehives on rooftops" can be seen as a sustainability initiative by an entrepreneur because it creates cohesion in their business, offers a platform for employees and customers' education on environmental themes, while also contributing to the pollination of flowers and to the production of local honey. However, no analysis was performed to specifically quantify the positive and negative impacts of the beehives.

RESULTS

Giving (1) the lack of financial and human resources in the SME context, (2) the major impact of COVID-19 for businesses and (3) previous literature finding that environmental values are flexible in times of disruption (Kirkwood et al., 2017), my hypothesis was that SMEEs would focus on their bottom line and pause their sustainable practices and approach during the pandemic. The hypothesis was rather falsified because, even in times of crisis, the participant SMEE leaders in the study saw themselves as being part of the solution when it comes to transitioning towards sustainable futures. Our results show that PIVOT SMEEs' environmental practices were maintained in times of crisis through the pursuit of opportunities for sustainable change and practices. This section begins with an analysis of the SMEEs' sustainable map journeys, which offers an overview of the participants' practices to help understand what kinds of shifts were done during the pandemic. This is followed by an examination of a detailed description of participants' sustainable practices discussed in interviews before-COVID and their responses to COVID-19.

4.1) The map journeys of four participant SMEEs

Throughout the pandemic, sustainable structural initiatives – initiatives that are related to how the business functions in its day-to-day operations – were usually maintained since the SMEE's organization was based on them. However, some sustainable educational initiatives – initiatives that are meant to educate peers, employees, or the general public on themes related to sustainability – were more often on pause given the sanitary restrictions in place. Concrete examples of the sustainable initiatives SMEEs followed or implemented before and during the
pandemic are shown in the following sustainable map journeys of four PIVOT SMEEs. Together, the four profiles exemplify the visionary, the caregiver, the opportunist, and the typical SMEE, which will be defined and discussed below.

The profiles underline distinct characteristics of SMEEs and their leaders in times of crisis. Namely SMEEs 1) maintained a clear vision of what needed to be done collectively and at the macro-scale to ensure sustainable futures, 2) understood their social importance and responsibility towards their employees and customers, 3) looked for new needs in their communities that could be filled. Profiles 1, 2 and 3 are valuable to convey a message, but they were not representative of most PIVOT participants. The last profile is a good example of a typical SMEE.

It is worth noting that actions at the macro level of society, in relation to governments and big institutions, seemed to require lower levels of implication from the SMEEs since actions were more about pointing out and advocating than engaging in concrete measures. Moreover, the profiles chosen clearly show that PIVOT SMEEs are taking action towards sustainability at different levels of society and maintain their resilient approach even in times of crisis.

Profile 1: The visionary

George embodies the entrepreneur that has a clear vision of the future, where businesses with a sense of purpose pave the way for other businesses to become greener and meaningful in their communities. In times of crisis, this type of leader focuses on developing local collaborations to adapt to new restrictions, while maintaining their commitment to previous sustainable initiatives. Most distinctively, the crisis is seen as an opportunity for sustainable change, with entrepreneurs being optimistic about the outcome of the pandemic and advocating for green action plans.

Geor Men CEO fr	George Men CEO from BC "Customers respond to authentic businesses that are doing everything they can to play a positive role in society. I think that's really where entrepreneurs should be focused these days."			k in sustainability Very strong # sustainable initiatives High f crisis on demand Increase	of sustainable initiatives
f n	Before COVID:	sustainable initiatives	During CO	VID: sustainable initiativ	res
Level or implication required	Structural	Educational	Macro – within governments	Meso scale – within the business	Micro scale – With costumers
High	Participating in carbon footprint reduction programs Having a full-time employee working on sustainability for the company	Involving customers in a carbon reduction program (creating demand for greener products)	Wanting to be included in the sustainability global action plan	Keeping the employee working full-time on sustainability Developing new local collaborations	
Moderate	Buying carbon offsets be carbon neutral	to Creating a sustainability committee with the employees		Printing social distancing signs at no charge for other local businesses	
Low	Installing LED lights		Calling for a sustainability coordinated action plan from all levels of governance, <u>similar to the response for</u> COVID-19, but for longer		

Profile 2: The caregiver

Monique represents businesses that focus on costumers, with a deep sense of responsibility towards their community. This is translated by a focus on customers' safety and needs, but also by the caring way of treating them and worrying about their wellbeing. For the caregiver, staying open during COVID-19 serves as means to keep serving customers while providing a safety net for employees and suppliers. The focus during the pandemic is first and foremost social and local.

Monique "I really do believe business is a great vehicle for # of sustainable initiatives Very weak Very strong Network in sustainability building community and social change. I think Women Restaurant owner businesses can and should lead in this climate change. Visibility of sustainable initiatives High And what we eat matters." Manitoba Decrease Impact of crisis on demand

Ę	Before COVID: sustainable initiatives		During COVID: sustainable initiatives		
Level of implicatio required	Structural	Educational	Macro – within governments	Meso scale – within the business	Micro scale – With costumers
High	Retrofitting with geothermal Using older varieties of wheat grain that are easier on the land Minimizing steps in production to reduce transport Sourcing everything locally	Bringing employees on tours to meet with the local farmers			
Ø Moderate	Working with organic local farmers Modifying packages to make them recyclable, reusable or compostable	Organizing educational activities around the environment and food issues		Making deliveries with electrical and hybrid vehicles	Taking news of customers when they order on the phone
Ø Low	Buying good equipment that can be repaired	Closing the restaurant to go on strike with the employees			

Profile 3: The opportunist

Brad illustrates the archetype of the opportunistic business leader that seeks new opportunities to adapt to changing circumstances. In the case of SMEEs, the focus is on business opportunities that are aligned with the environment and/or with communities' needs, like the development of renewable energies, or the development of tools or goods that are essential, such as sanitary products, etc. Opportunistic business leaders have to invest a lot of resources when reorienting their business operations (Beliaeva et al., 2020), leaving less time to engage in initiatives at the macro- and micro- scales. Nonetheless, they contribute to the resilience of their community by responding to new needs in society (Doern et al., 2019).

Brad Man C Yukon	"What I hope for is t economy of helping trying to help provid allow businesses ar	hat I can further grow in this people transition well throu e a lot of supports and mech nd communities to continue	part of the Very we gh COVID. We're hanisms that to operate."	visibility of sustainability Very strong Visibility of sustainable initiatives High Impact of crisis on demand Increase	# of sustainable initiatives
Level of implication required	Before COVID: sust	ainable initiatives Educational	Durir Macro – within governments	ng COVID: sustainable initi Meso scale – within the business	atives Micro scale – With costumers
High	Developing renewable energy projects in communities	Giving tours to explain environmental actions/initiatives		Developing new local collaborations Providing a virtual event service to support local communities' governance	
Moderate		Giving talks and conferences around the theme of sustainability			
Ø					

Profile 4: The typical

As the pandemic started, Josée was hyper-focused on the safety of her employees and customers. As the pandemic unfolded, she started to develop new local collaborations to adapt to COVID-19, looking to secure funding, to provide resources to her customers (tenants in that case) and to think about new business opportunities in relation to COVID-19 (like a drive-through local market). Like most PIVOT SMEE leaders, Josée was enthusiastic about the idea that the pandemic could be a big enough disruption in our system to trigger behavioral change in our society, which could be leveraged by the government to massively invest in a green recovery.

Josée Women CEO Quebec

"I could not see myself as just a profit company. Now I have a cool expression for it: mission aligned investment. It means Building sector that every decision is making sure our values and profit are aligned. It means we make money doing good, every day."

of sustainable initiatives Very strong Network in sustainability Low Visibility of sustainable initiatives Decrease Impact of crisis on demand



4.2) Before-COVID baseline

Before-COVID structural sustainable initiatives

Pre-COVID sustainable initiatives were largely focused on structural actions which are related to the way a business functions in its every-day operations (see figure 4). Structural actions include procurement strategies, usage of resources and energy, waste management, transportation in the supply chain and distribution, etc. All SMEEs (17) were engaging in one or more structural environmental actions, which is not surprising since participants were selected based on their environmental actions, excluding solely selling green products.

Figure 4: Number of PIVOT SMEEs engaging in different categories of structural sustainable initiatives before COVID-19 (see appendix V for the exhaustive table and codes)



An example of a structural action in the category of "optimizing the use of resources and energy" is from a small entrepreneur on Prince Edouard Island, who did not want to run tap water to cool his still for alcohol production. Instead, he worked with an engineer to create a closed water loop. As mentioned in his interview, this decision impacts his whole production because he now needs to distill his alcohol during colder seasons:

"And one of the techniques we developed, so when you're running a still, you have to be running cold water constantly [...] So if I'm running my tap water eight or ten hours that's a huge waste. Ground water, especially in PEI you know we've got some issues, heavily farmed land and our ground water is a bit precious right, our water sources. So, we developed a technique. What we do is we take a white barrel with about 20 gallons of cold water and we put a sub pump and the sub pump pumps the cold water into my condensing unit. [...] So it's kind of a closed loop so your water is flowing constantly from the barrel to the condenser to the radiator, back to the barrel. Now I am using some electricity, a lot less than my pump would use. I'm using a fan and a little cheap sub pump so it's not a big draw on electricity and I have purchased a couple of small solar panels so when the weather permits, then I will run some of those pumps with solar, but that's not always so. But basically using that kind of a system to cool my water and one thing it does, it does affect my business a little bit because in order to cool the water effectively it's better when your outside temperature is cool. If you get a hot day, 30, 31 degrees your water is coming out at about 40 and you want to cool it down to about 20, well you can't really do that. So it works better in the spring, fall and winter. So we just adjust our business processing around that." – Luke

Implementing this kind of environmental action impacts one's business operations and strategies and can become center in the way the business functions.

In other cases, optimizing water or energy use required a punctual investment and was not front and center afterwards. This was the case for SMEE leaders who switched to LED lights, retrofitted their buildings to geothermal, installed charging stations for electrical vehicles, etc. However, as Steven underlined, what is important is to keep implementing new initiatives in the business to make it more sustainable. There is no finishing line. This Ontarian manufacturer had completed more than 100 initiatives in his business (which are not all listed above) and claimed that it was economically and environmentally beneficial: "So over 100 initiatives is what we've done and I mentioned 100, because it's not a single initiative that made us successful. It's the fact that we've done so many. (...) We actually put our data online into a database that calculates your carbon footprint for your business. And we actually know every ton of GH gas is \$900, either saved or wasted, right. So, over the last 12 years, not including this year, we've saved over \$2 million. Over half of that is energy savings. Our building is now larger, it's actually 120% larger. We went from 11,000 square feet to 26,000 square feet. We've reduced our energy footprint in terms of per square meter. We spend a tenth of the energy that we used to spend." – Steven

For punctual investments, there is also a need to do maintenance on the new installations. Therefore, even for punctual types of environmental actions, maintenance becomes part of the business operations as employees learn how to manage and maintain them.

Ten SMEEs out of 17 engaged in waste reduction strategies, ranging from aiming to be zero waste to diverting construction waste, as express by Maxime, CEO of a construction company based in Alberta:

"As part of the LEED project, you've got to do waste diversion. So we figured out how to do it. And then we said to ourselves, we said, well, this isn't that complicated, this isn't that difficult. Why don't we do this on all our other projects? And so we just did that. Since the early 2000s, we've been diverting construction waste in all of our projects across Canada, regardless of delivery type. And company-wide, roughly the number is 80 percent of all waste that our sites generate is diverted and recycled." – Maxime

SMEEs who engaged in waste reduction initiatives were also pursuing other environmental strategies. In fact, waste reduction was never the only focus in a SMEE. Instead, the most widespread initiatives among participants (13/17) were related to the reduction of carbon emissions. The diversity of environmental actions coupled with a focus on carbon emissions reduction shows the entrepreneurs' complex understanding of climate change mitigation and adaptation strategies.

Specifically, five SMEE leaders mentioned they were prioritizing local sourcing to reduce transportation and lower their emissions. Catherine, a manufacturer from the province of Quebec,

described this approach with the idea of prioritizing "short circuits" for the transformation and

distribution of her products:

"Donc l'objectif aussi du changement climatique c'est : si on est capable de réduire par exemple, pour faire des circuits courts comme [ma compagnie] : c'est une entreprise qui est dans l'Est de Montréal, donc c'est sûr que si on dessert les hôpitaux de Montréal et de la rivesud, on fait des circuits courts donc le produit ne part pas des États-Unis ou de l'Ontario. Il part vraiment de l'Est de Montréal donc je pense que de pouvoir favoriser en termes de changements climatiques, les circuits courts et l'achat local. (...) Avec [ma compagnie], ce qu'on a commencé à faire, c'est de voir d'où proviennent nos matières premières. On a différentes possibilités avec un fournisseur mais ça va être de favoriser celui qui va aller faire la transformation le plus près possible chez nous. On a un des fabricants de solvants qui va faire la transformation de l'alcool à Trois-Rivières, pour moi c'est génial. » - Catherine

Sourcing locally is great, but as one bakery from Manitoba mentioned, to keep their low

carbon footprint, raw local products also need to be transformed on site:

"We realized if we want to reduce the carbon footprint, which from the beginning was a conversation, the pollution that happens when we move food 2,000 miles every time is just massive. Right? And our situation was easy to understand, the farmers are so present [in Manitoba]. So the wheat was being grown here, shipped to Thunder Bay to be bleached, sorted, the wheat germ taken out and brought back. So I think that was our biggest motivation to stop that move, keep the money and reduce the carbon footprint. That has driven us then and it still does." – Monique

This resonates with Catherine's idea of short circuits aiming to minimize the transport and

the steps between raw material - transformation - packaging and distribution.

SMEE leaders were creative to find ways to optimize transportation in their business. One restaurant was buying dry food to reduce the weight and not spend energy transporting water. Another restaurant reorganized all food deliveries and decreased by two-fold the number of deliveries necessary for his restaurants. These are other examples of why structural initiatives are categorized this way; they create a new structure in the business' operations and once implemented, they become the new standard employees engage with. Even with all the creativity and information they can access, SMEE leaders do not necessarily have the background to understand the complexity of environmental issues, which sometimes makes it harder for them to prioritize one environmental initiative over others. Vincent, a restaurant owner in Quebec, explains the necessity to be guided while taking environmental initiatives:

"Vu qu'on n'a pas toute la connaissance qu'un scientifique a, on a une certaine limite, comme moi je me serais peut-être juste arrêté au compost. Mettons le transport, je ne savais pas à quel point, ça avait un gros impact, je ne l'avais pas réalisé. À partir du moment où on sait que ça a un gros impact, là on peut s'assoir puis faire comme... Ok, comment on peut réduire ça sans que le resto écope non plus. Puis, surtout au niveau du bœuf : moi avant qu'on commence à en jaser, je savais que le bœuf, c'était pas si bon pour les gaz à effet de serre, mais à tel point que quand elle m'a envoyé un document avec les graphiques comme quoi le bœuf, c'était comme au top et exponentiel comparé à toutes les autres viandes, comme le poulet, le canard... Tu vois le graphique, c'est comme, ok, le bœuf est vraiment élevé. Je pense que comme entrepreneur si tu n'as pas d'éducation, je pense que tu vas y aller avec ce que tu connais, toi personnellement, puis ce que tes parents t'ont montré puis ce que la société dit mais là déjà la société parle un peu plus qu'avant. Mais c'est sûr qu'on a besoin de leader, puis on n'a pas juste besoin de leader en entreprise, on a besoin de leaders au niveau de notre gouvernement." - Vincent

In order to gain environmental capacities to reduce their carbon emissions, SMEEs can join organizations and programs meant to improve their ecological footprint. Out of the 17 participant SMEEs, 4 were part of the B-corporation movement, a certification scheme for SMEEs that ought "to use business as a force for good", of which a few were climate smart certified. As one women manufacturer and retailer from British-Columbia pointed out, being part of a specific program with guidelines can help to reduce emissions efficiently by integrating new knowledge on how to do it:

"So before we became Climate Smart certified, we measured and said, okay, this is how much we're shipping product or raw materials to come to us. And we'd often air freight it or whatever – to spend time and money to do it a certain way. And then we realized, oh, there's actually ways to do this much more effectively. And we have some statistics on a program that we did I think in 2014 where we actually reduced our emissions by 50% in certain categories. So that was just a really nice way for us to see an immediate impact." – Jenny

Before-COVID educational sustainable initiatives

In addition to engaging in structural sustainable initiatives, 12 participants also engaged in practices meant to educate their customers, their employees and/or society at large about environmental issues (See figure 5).

Figure 5: Number of PIVOT SMEEs engaging in different categories of educational sustainable initiatives before COVID-19 (see appendix V for the exhaustive table and codes)



For instance, one participant led a six-month awareness campaign around the theme of waste, another participant closely worked with clients to teach them how to use their products to optimize – and therefore reduce – their usage.

One entrepreneur from British-Colombia said that educating his clients to want a more sustainable product is part of what they do and is necessary to create a shift in society:

"We have 1,000 customers. If we're promoting sustainability to that group, we're also facilitating the creation of the demand for those [sustainable] products, right. And then, as we do that, our competitors and other industry players see that it's not about waiting for the customer to ask for something or demand for something, you can actually play a role in creating the demand because you're explaining to people that there is a difference between these products. I do see a lot of businesses taking somewhat of a passive approach where they say: "Well, my customers aren't asking for this." But that's really... That isn't acceptable anymore basically, is my view. Like you have to [ask] what's important to my staff? what's important to our business? to society? And go "Okay, how can I play a role in trying to create demand for things that are better?"" – George

As an aspiration to create demand for better products, the entrepreneur created the *Zero Program* that calculates the carbon footprint of his products to help clients make informed-based decisions on their consumption. Through that program, customers participate in the company's efforts to reduce their carbon emissions.

Six SMEE leaders out of 17 were also giving conferences around the theme of sustainability in colleges, in universities, at events for other businesses, etc., and 3 participants were giving tours of their installations to explain how their environmental initiatives functioned as well:

"I've toured 2,000 plus people individually through the heating system in [the community] as a further way of promoting best practice." – Brad (CEO, Yukon)

One manufacturer from Ontario even mentioned that he was adapting his discourse depending on his audience to make sure to use the angle that was more likely to trigger climate action:

"For example, tonight I'm speaking at McMaster. So I'm speaking to postgraduates at McMaster. I'll be using both concepts – greenhouse gas tons reduction, and also the financial. But when I'm with business owners, I typically speak more about the dollars because my general impression is that business owners will say they care about the environment, but they're constrained by the financials. Because if a company isn't profitable then they won't be around. So at the end of the day, they're constrained by profit." – Steven

Before COVID, PIVOT SMEEs were therefore engaging in a wide range of educational as well as structural sustainable initiatives within their business.

Motivations to act on climate change before COVID-19

Out of 17 SMEEs, the accounts of 5 entrepreneurs were by far dominated by external

motivations. The other 12 had a mix of motivations, of which 4 had motivations from all three

categories (see figure 6), which is well illustrated by Catherine, a manufacturer in Quebec:

(External) "Puis moi, c'est une question de valeurs personnelles aussi, j'ai une fille de 3 ans et je ne veux pas que dans 20 ans, elle me regarde pour me dire « tu aurais pu faire quelque chose et tu n'as rien fait »." (Economic) "Ça va de soi le développement durable, je crois que pour l'avenir, ceux qui ne feront pas *le move* d'ici 20 ans, vont avoir des problèmes à quelque part. Même au niveau de la rentabilité des entreprises, au niveau du recrutement. Comme j'avais dit à mon équipe : soit on le fait doucement tout de suite ou à la course dans quelques années." (Internal) « pour le développement durable, je pense qu'on est déjà sur une voie intéressante donc j'aimerais inspirer des gens, des jeunes femmes (...). » - Catherine

Figure 6: Numbers of participants in each category of motivation: internally oriented, externally oriented, or economically oriented, with some participants having two to three motivations



The analysis shows that all 17 PIVOT SMEE leaders were externally motivated (see appendix I, section 4 and the methods section to see the more specific classification) and were taking climate actions to *be part of the solution*, often thinking about future generations. One manufacturer from Quebec shared his thoughts on the perspective of leaving waste behind.

"Est-ce que moi dans la vie, la seule fonction que je vais avoir vraiment, mon seul objectif, c'est de me rendre à la fin, et de laisser derrière moi cette montagne de choses-là [de déchets], qui va contribuer à détruire le monde? (...) Qu'est-ce que je pourrais léguer aux générations futures?" – François

For one restaurant owner in Nova-Scotia, it was crucial to address food security challenges while tackling climate change issues with sustainable farming:

"I decided to open a restaurant to rebuild and help support the food system of [my province]. Bring back the slaughtering houses and the processing plants and the small-scale sustainable farmers that are helping fight climate change." – Greta

The SMEE leaders were never solely motivated by economic factors, nor solely by internal ones, but 8 entrepreneurs were praising the financial benefits of investing in sustainability. For one manufacturer in Ontario, each ton of carbon emitted has a cost, which should be avoided by improving energy usage in the business. One entrepreneur from Alberta was also very pragmatic when taking about his motivation:

"And because of that brand [Bcorp, employee owned, waste management], we win extra. We have won a whole bunch of work that we would not have had otherwise, and we've earned incremental margin. So there's a cold, hard business return on investment that is behind social purpose, that is behind grappling with climate change." – Maxime

Another entrepreneur in the construction sector from Yukon saw the high potential in the renewable energy sector as an economic opportunity to create jobs and to help communities become more resilient:

"I should start off saying everything that I've worked on, climate change, GHG reduction, that's never been the primary motivator. I will say that it's always been... Biomass, wood chip, high efficiency wood chip boilers that are also renewable energy is also one of the biggest local community economic impact projects you could do. For instance, in [the community], we've offset 300,000 liters a year in space heating needed, or diesel that was needed for space heating that generates probably close to 678 tons before I added on... It's getting close to 1,000 tons of GHG annual offset with the district heating system. But that wasn't the primary motivator. The primary motivator was: now we're creating 26 contracting opportunities in the construction. (...) It's always been economic. And there's stronger economic opportunities in the renewable sector than I've ever seen before. So it just happens to be really aligned." – Brad

Finally, 8 SMEE leaders were internally motivated, including the 4 leaders motivated in all 3 categories. People internally motivated hoped to inspire change within other businesses, to challenge the impossible by implementing sustainable initiatives in polluting sectors, and to lead by example. One participant from Quebec in the construction sector was motivated by the challenge to make a highly polluting sector more sustainable:

"Looking into my own industry. It's an industry I didn't choose. It became my mission. And when I can't do something, it's more interesting to do it. Construction industry, enormous pollution, and it's in every city, then I got really intrigued, what is my footprint? – Josée

This reflection was echoed by a participant from Alberta in the same sector:

"I'm very entrepreneurial. So I love kind of the thrill of the chase. I love growing businesses. I love sales. I love marketing, and all those sorts of things. And for me, the thing that drives me and I think drives a lot of entrepreneurs in the SME space [is] kind of proving that it can be done, proving that what everyone says is impossible is in fact possible. So it's the challenge of that. For me, where we're recycling [construction waste], everyone says, "That's crazy. You guys can't do that." And I'm like, "All right, you said it can't be done. Now watch us," kind of a thing, right. That's what drives me." – Maxime

All SMEE leaders had an external motivation to take climate action that was either for nature, society, or future generations. Moreover, for the majority (12/17), this was not the only motivation to act. Rather, participants also saw an economic benefit to implement environmental

initiatives in their business and/or were keen on taking a leadership role in the transition towards sustainable futures, which was seen as a noble aspiration.

To conclude this section on the before-COVID data, PIVOT SMEEs were all developing more than one sustainable initiative before the pandemic and most of the participants engaged in structural as well as educational initiatives. Moreover, far from being solely motivated by profit, PIVOT SMEE leaders were all at least externally motivated, with a focus on future generations.

4.3) SMEEs' sustainable practices and leverages in times of COVID-19

To highlight the wide range of environmental actions taken by SMEEs during the pandemic, sustainable practices in times of crisis were identified at the micro-, meso- and macro-levels of society, i.e., at the individual level in relation with customers and clients, at the business level within the SMEE and at the institutional level with governments. Table 1 presents sustainable actions (codes) taken during the crisis along with their categorization.

Table 1: Organization of sustainable initiatives in times of COVID-19 in categories and overarching categories after the focus group activities. (Black: codes from the COVID-interviews Purple: codes from the focus groups¹⁰)

Sustainable initiatives during COVID-19	Categories of sustainable initiatives during COVID-19	Overarching categories of sustainable initiatives in times of COVID-19
(Codes)	(First-order categories)	(Second-order themes)
	((
Rebuilding food systems - GretaCalling for sustainability infusedpolicies - JennyCalling for a sustainabilitycoordinated action plan from alllevels of governance - GeorgeUsing COVID-19 as an opportunityfor change at macro-levels -FrançoisRethinking the urban space toaccess services in active transport- JoséePerceiving governmental socialsupport as a mechanism toenhance sustainability - LiamWanting a green recovery	Advocating for high levels of governance to step in and take global action to foster sustainability	Advocating for general and specific forms of systemic changes
Translating COVID-19 global efforts to sustainability issues - George		
Advocating for cradle-to-crave programs for plastics - Lucas Suggesting hooking local farmers to institutions (hospitals, schools) - Greta Acknowledging the local salary scale - Jacqueline Asking for governmental loans to buy electrical delivery trucks - Vincent Suggesting that social and sustainable criteria be included in public calls for tenders - Catherine	Looking for governmental specific structural support in sustainability	

¹⁰ As mentioned in the methods' section, pseudonyms were used to guarantee participants' confidentiality.

Praising the government initiative	
of promoting local purchase	
through "Le panier bleu" -	
Cynthia, Josée	

Developing new local	Strengthening local ties	Tackling every opportunity
collaborations		to adapt one's business
Increasing the local supplies		sustainably / Engaging in
Printing free COVID signage -	Answering a new pressing need for society	business practices that serve the environment
George		
Shifting initial production focus to		and the communities
make hand sanitizer - Luke,		
Catherine, Cynthia		
Shifting initial production focus to		
make masks - Jenny		
Renovating a hospital - Maxime		
Providing a virtual event service to		
support local communities'		
governance - Brad		
Saving the production of hand		
sanitizer for hospitals and local		
population - JB_O		
Implementing delivery services for		
drugs - William		
Developing insulating containers		
for vaccines - Lucas		
Producing hand sanitizer stations -		
Lucas		
Cooking comfort food - Liam	Answering a new need for society	
Cooking frozen meals - Greta,		
Vincent		
Pre-package bulk products to		
follow health guidelines - Gaël		
Improving the phone system -		
William		
Reducing the packaging of	Engaging in new environmental	
products - Cynthia	initiatives	
Making masks with material		
already available within the		
manufacture - Jenny		
Making deliveries with an		
electrical vehicle - Monique		
Increasing capacity to grow food -		
Liam		

Compromising environmental	Maintaining one's commitment to	
initiatives as little as possible -	sustainability	
Greta		
Refusing to sell meat that was		
misleadingly labelled as local -		
Greta		
Keeping only what is essential,		
including sustainability practices -		
Liam		
Building resilience through		
sustainability initiatives - Steven		

Developing a sense of community with customers Helping customers to discover new local businesses Maintaining a high level of	Helping customers who are gaining interest for local businesses Pushing the local-sustainability	Using the buy local momentum to influence customer's behavior
customers' interest post- pandemic Weaving sustainability stories in the buy local movement - Nancy	message after COVID-19	
Discussing with customers who increasingly hear the environmental message in the news Explaining the business changes to customers as they don't take business for granted - Vincent	Making customers more accepting of change	

Each second order theme is associated with a level within society (see figure 7) and points to opportunities/leverages in times of COVID-19 to respond to the crisis sustainably. The term leverage is used as a metaphor to speak about different areas of opportunities that initiate or amplify some sustainable practices during the pandemic. Each leverage will be discussed extensively in the coming sections.



Figure 7. Integration of the leverages in sustainability arising during COVID-19

Leverage 1 – Micro scale: Benefiting of the buy local momentum by changing clients'

behavior

During the pandemic, the buy local movement gained a lot of interest and momentum, which was highly noticed and mentioned by the focus groups' participants. Concretely, a shock like COVID-19, coupled with the buy local momentum, was perceived as ideal to attract new customers interested in local businesses. A woman manufacturer from New-Brunswick shares her experience of having a new opportunity to tell her business' story:

"We've been able to promote that part [local] of what small businesses are. Even if people are not looking for a sustainable or a green product, how do we weave that into our story as they are looking for a local product or something else and start to change the way our customers think about what they are buying. You know, we tell ourselves stories. If we start to encourage our customers to tell themselves stories about buying local AND buying sustainable and then that becomes part of how they see themselves and what they look for in other businesses—then you create that demand. If the demand is there for sustainable and green products, then the other companies say low cost is what matters, then that momentum starts to build. We think there is an opportunity just because there's so much focus on local, but then local and sustainable, that's such a close link, that there's kind of an opportunity to do built on that now." – Nancy

COVID-19 was also seen as an opportunity to explain to customers the business' environmental choices as the customers were not taking things for granted anymore. As specified by a restaurant owner in Quebec, for the restaurant sector that was hit hard, the disruption appeared be the occasion to re-educate customers on the real cost of dining out: "People are realizing that normal things like going to restaurants, when we can reopen, it will be something that's a bit more special. When they come back, it will be an opportunity maybe to tell people that yes, we serve this now. It's an opportunity to re-educate people on

how we pay our employees, what we serve, scarcities. It's an opportunity to show it's a special thing to go to a restaurant and maybe it was not so normal before to go there every day." – Vincent

A few weeks into the pandemic, during the COVID-interviews, the enthusiasm about

opening a dialogue on environmental issues with people to help them understand the necessity for

change was already present. With a pragmatic tone, one CEO of a construction company in Alberta

mentioned:

"But with COVID, I think when people see pictures of smog not blanketing major cities and the ability to see the bottom of the Venice canal that you haven't seen for 60 years, I think people will have more tangible examples of the impact of consumption and what we do on the environment. And I think it will lead to more robust conversations. I hesitate to say it will be a catalyst to accelerate positive change. But it's certainly another data point for everyone to look to in terms of making the case for why we change." – Maxime

This observation was reaffirmed almost one year later during the focus group activities. Indeed, according to some participants of the first focus group activity, people were starting to be aware of the connectivity on the planet and had gained some capacities to think about global issues in a novel way, which encouraged new discussions about climate change. An Albertan manufacturer shared his observations on the increasing concerns about environmental issues in the

media:

"People would say it's not my problem, it's a problem over there. Now we realized that one little bug connects us all together. The challenge we all have to deal with and hopefully that mobilizes people to think more about the environment as well because that's a challenge. People are not going out, probably spending more time reading or watching TV, and it's amazing how much is spoken about the environment: commercials, businesses, news stories. It's all about that. And hopefully, we get a bit of a boost from that attendance. The people who are worried about COVID, now they are starting to hear another message that this is a problem [climate change], and we have to deal with it too, guys." – Lucas

However, one manufacturer and retailer from PEI warned that the buy local momentum,

along with the sustainable message attached to it, needed to be cultivated because customers could

easily return to buy from above-seas, which had happened to him:

"The challenge is going to be, [when things will get back to a form of normalcy] to maintain the momentum, because from our experience, as soon as the global supply of hand sanitizer caught up, and they were putting container on ship across the globe, the demand for local stuff fell right off. My sales basically disappeared. So as humans, we forget quickly; as soon as some conditions change. That's part of the human condition. I think we need to be thinking of that post our current situation. How will we maintain this level of interest? Cause it does take money to do what you're pivoted to, there's an expense. To pay bills, you'll need to continue to have those local supporters. I don't believe we need to rely on government to do that for us, though they need to help. I think we ourselves need to be pushing. I'm not sure pushing what, somehow to maintain that interest in your local providers so we can be sustainable on an ongoing basis. What we've seen will happen again, it'll be another scenario, but we'll see other disruptions like the tie-up in the Suez Canal, as simple as when a ship's getting stuck. I think we need to be surviving now, but forward-thinking. How are we going to maintain momentum down the road?" – Luke

In definitive, PIVOT SMEEs were trying to utilize the intensification of the buy local

movement and the raise of awareness around the theme of environment to their advantage by

educating their customers about their sustainable initiatives. This echoes their role as educators

before the pandemic. If cultivated properly, the buy local momentum is perceived as an

opportunity to improve customers' demand for sustainable products and businesses, while perhaps motivating other SMEs to take action to tackle climate change issues within their business.

Leverage 2 – Meso scale: Answering a need for society while adopting a sustainable approach

Apart from utilizing the buy local momentum to educate customers, 10 environmental SMEEs out of 17 also readjusted their production and services to answer a new need for society, be it a pressing need or not. More specifically, some businesses started to produce hand sanitizer, masks and social distancing signs, others started to pre-package bulk products to serve the customers while following new health guidelines, or cook frozen meals/ready-to-eat meals and comfort food.

This capacity to rapidly shift one's business resonates with SMEs' adaptability, which was perceived as a major advantage by 7 SMEE leaders who pivoted to serve the local community they are rooted in. A manufacturer from Quebec felt empowered by this flexibility :

"Donc, il y a une grande réflexion qu'il va falloir se faire aussi et nous, en étant des propriétaires uniques, on n'a pas de gros conseil d'administration, on a pas huit strates. Moi là, mon père il dit on tourne à gauche : on tourne à gauche. Donc, et la même affaire avec [notre partenaire]. Ce qui nous a permis de faire un projet un peu... on va se le dire, un projet de fou, d'acheter des équipements, d'augmenter nos lignes de crédit, de dire, il n'y a personne qui va dire *tu peux pas le faire*. C'est à toi. Fait que la force des entrepreneurs indépendants, on le voit beaucoup en temps de crise actuellement que c'est plus qu'important, c'est essentiel. " – Catherine

The owner of an independent general store in Alberta also underlined his capacity to respond efficiently:

"You know, that's what's so fantastic about small independent businesses, they can respond. When you have a huge corporation like say for example, it's a major grocery store, it has to go through so many different levels and distribution, that they cannot react that fast. You know, that's why local is good for that too." – Gaël

This perspective of adaptability as an advantage was also present during the focus group activities, during which an Ontarian CEO in the retail sector advanced that:

"Answering needs for society is not something COVID brought, it's something that we do as SMEs if we want to stay open. Adaptability is key: You see the trends and change as you need. Small businesses are adaptable, that's why they live all these years. (...) I think businesses in general, especially SMEs, are nimble and changing constantly. COVID made the changes faster and steeper in order to accommodate." – William

For most of the participant SMEE leaders, the shift in their business during the pandemic was not focused on the theme of sustainability. However, their previous engagement in environment led them to weave in some sustainable practices while also framing their new activities within the theme of local community's resilience and/or sustainability. Predominantly, SMEE leaders put forward their new partnerships with other local businesses for their supply chains and services; out of 17 environmental businesses, 11 from all sectors strengthened their professional local ties by developing new collaborations and/or increasing their local supplies. One manufacturer in Quebec was particularly focused on the reorganization of her disrupted supply chain, embracing the advantages of increasing local supplies:

"Je pense que cette crise là nous remet en question notre chaine d'approvisionnement. Donc automatiquement on va revoir cette chaine là pour qu'elle soit plus accessible, plus flexible, plus agile, et tout le monde est en train de repenser à ça. Donc justement, on va essayer de les réduire [les chaines d'approvisionnement] parce qu'on a vu comment on était dépendant de cet emballage-là. Donc, principalement, on va essayer de la réduire, et de la rendre plus locale.

Interviewer : Et donc, ça a un impact au niveau du transport aussi?

Au niveau du transport, au niveau de l'entreposage, parce qu'on a pas besoin de faire venir des containers à la fois. Tu peux peut-être avoir huit boîtes et au bout de 3 mois, retourner

chez ton fournisseur à Saint-Constant ou au Québec en quelque part pour chercher ta balance. Tandis que quand ça vient de loin, t'es obligé de toujours faire venir des grandes quantités, ce qui nécessite beaucoup d'entreposage. " – Cynthia

One manufacturer from PEI also said that the crisis had made him reflect on and modify

his suppliers:

"The discussion around buying local and supporting our neighbor businesses has been around for quite a while but really got brought to the forefront. It forced us at the delivery level to say, it's nice to talk about it, but let's get down and do it, we didn't have a choice. For us, we also sell fruits at a local farmers market and maple syrup, my son makes maple syrup, and alcohol products. We are a small craft distillery. We're always promoting the "buy local" and so on. Then I had to look internally: how well are we doing as a business in supporting local suppliers? So, we made some adjustments. It forced us to look inwards and analyze our business beginning to end. We're not expecting it to be 100% but at least we do what we can to demonstrate and lead the way and support other local businesses." – Luke

Many of the 10 SMEE leaders who pivoted during COVID-19 to answer a need for society

mentioned that strengthening their local ties had helped them to become more sustainable because

it had reduced the overall transport and/or packaging needed for their production. This mirrors

what Jacob (manufacturer, Alberta) referred to in a focus group activity with his idea of "circular

expansion of the supply chain", which helps to support the home community and save

transportation.

"I might as well add that we are now very conscious of buying local, as much as possible. We buy first in Edmonton, then Alberta and then we expand [circularly] as much as possible to minimize the distance of the product that comes here." – Jacob

For a manufacturer and retailer of the east of Canada, local is associated with green and environmental, but not solely because of the transport reduction:

"I echo this focus on local. There's a definite link between local and green or good for the environment because of the transport, because of the local scale and the care that goes into products." - Nancy

Another opportunity to adapt one's business sustainably was to optimize one's practices while keeping the initial environmental practices in place (6/17) or while adding new environmental practices (4/17). During the COVID-19 pandemic, some environmental businesses started doing deliveries with electrical cars, produced cotton masks with material that they already had in stock, reduced their packaging, started to have refilling containers, and increased their capacity to grow food.

One business leader from the construction sector even mentioned that he was inspired by "business leaders who lead with a sense of purpose and understand what their organization stands for, and don't compromise the values or the purpose of the organization in response to these sorts of challenges [COVID]". -Maxime

One other manufacturer from Quebec was able to rethink her products to limit the packaging:

"La suite des choses va être repensée complétement au niveau du produit. Donc on va mettre de l'avant beaucoup plus les produits sans emballages. Donc pour moi, la pandémie va avoir un bon côté au niveau de la recherche développement, de mettre cette gamme de produits là, mais combien ça va être positif pour la planète, parce qu'on mettra plus d'emballage de plastique, ça va être fini." – Cynthia

During the focus group activities, the tangent of optimizing one's practices while keeping

an environmental mindset was also confirmed and discussed by a restaurant owner from Ontario:

"A lot of service workers have lost their jobs. It shows a ton of vulnerability in our industry. I've had to let go of 3 of our staff. Next week, I'm bringing back my sous-chef, the first person I've been able to bring back in a year. So as a catalyst, it made me think of changing my business model—no more front-of-house services. It's stripping away what's unnecessary to survive. Because the things that are more important, which is the green initiative that we have here at the [restaurant], is paramount. We still use compostable containers, local pasture, pork, chicken. We still don't sell any sea food that is not considered sustainable. We've stayed true to our values and our mission, but we have not grown any of it because we have no money to do it." – Liam

For one plastic manufacturer from Alberta, maintaining their sustainable initiatives was not a burden, but rather the rational decision to make:

"COVID for a lot of companies that are working on sustainability efforts might've been a reason for pause or distraction from it. But the message is getting out there and more and more that environment is the next challenge to address head-on. And companies are going to get a renewed interest in investing. I've got a team of researchers, we've got a lab where we're developing technology to use about 10% of the energy we currently use in our process and we're going to scale up the equipment to a commercial scale in May. We always made sure that was going to stay on track." – Lucas

At the end of a focus group discussion, Nancy asked "I'm curious, in the conversations that you've been monitoring, are you hearing companies that were committed to environment have pulled back because they can't afford it? Or once they're built on that commitment, it's a nonnegotiable for them?"

To that, instead of answering, the question was redirected for everyone to share their thoughts, and people were definitive: "Just talking about our commitment to sustainability, we kept it, we wouldn't change it at all." – William. Oliver even wrote in the chat: "I've never heard of any business pulling out of sustainable practices. I guess if that ever happens, it comes from a change in ownership."

The main nuances on the ability to maintain environmental initiatives during the pandemic were brought by two restaurant owners from Quebec and New-Brunswick: (1) initiatives implemented by employees themselves were harder to keep in times of crisis because the employees were already overworked and were trying to adapt to a lot of new realities at work:

"At the level of partners and employees, I have two restaurants, so two chefs that are really tired. We've asked them to make many changes. Composting starts to be... they want to ask me if they can leave it for today. I have the impression that, after the pandemic, when we're back to normal, I feel I'll have to sit down again with the partners and teams. Even if you have all this willingness, but if the team doesn't participate in the whole process... the team has to be on board." – Vincent

(2) Compromises needed to be done at some point to make sure to survive and maintain the ability to sustain all the local farmers [or other local partners] embedded in the business:

"There are challenges in our sector. We have business partners who are looking after the money and I'm the environmentalist and it's a really difficult thing because there is no? to me. I do compromise obviously. We had to discuss, can we still afford non-GMO canola oil? I'm like "yes we have to", but it's something the customer doesn't see. So, we have to talk about many products like that. The bottom line is that we have to survive because, if we don't, all the farmers go down with us. It's a huge responsibility, The more farmers we got with the restaurant, it felt great, but it gives me anxiety too because we need to stay alive for them. It's challenging when you have to talk about the bottom line, and the triple bottom line. It is tough. We still have hard discussions in the business." – Greta

Overall, business leaders were proactive to pivot their business and look for new needs in society to stay open and serve their local community. Although only one business impressively grew its sustainable practices, all SMEE leaders maintained the core of their environmental initiatives during the crisis of COVID-19. Finally, the pandemic was perceived as an opportunity to optimize one's business and make room for more sustainable and efficient practices.

Leverage 3 – Macro scale: Advocating for general and specific systemic changes

During the COVID-19 interviews, the reference to the need for actions at the governmental level was strong. Out of 17 PIVOT SMEE leaders interviewed, 9 were advocating for systemic change by challenging the government, directly and indirectly, to take the COVID-19 pandemic as an opportunity to offer more structural support for the benefit of the environment and of the population.

Within this category of macro systemic change, some entrepreneurs were specific concerning the kind of change they wanted to see from the government, while others were more general, with requests related to a theme without mentioning identifiable actions. Jenny (woman

CEO, retail/manufacture in British Colombia) had a general approach since she believed sustainability needed to be included in policies rather than being optional:

"I think naturally sustainability issues have been brought forward just by virtue of the challenge that everyone's facing. We had the privilege of saying, "well that's nice to have before COVID happened", but now it's front and center. We cannot ignore the fact that sustainability in terms of where we get our supplies and how we survive as a species is front and center. And so I believe that has to be infused in all our new policies going forward as we come out of this." - Jenny

Along the same lines, George (man CEO, printing business in British Colombia) saw the response to COVID-19 as a great case study to learn how to coordinate many levels of governance and act together to respond to an issue. He thought the approach to tackle sustainability issues should be similar to the one for COVID-19:

"Well, from a policy perspective, I think all governments are going to be looking at how to have a more cohesive, broad plan for this [pandemic], for how to respond. I think this could be a blueprint for other topics. Obviously, this whole thing has highlighted the need for a very coordinated effort. And I think our infrastructure, federal, provincial, and municipal [are all] we need to coordinate effectively. There needs to be a plan, obviously, that is adopted by all these parties. And then I do think obviously, the business community has a role to play. (...) So, I think government needs to pull business into the response as well, to make sure just like they're doing now, with the ventilators and other materials from the medical side (...) So obviously, from a sustainability point of view, I think that is essentially exactly what needs to happen, but not over a matter of weeks, but over a matter of years and decades. You know that same philosophy needs to apply in Canada. In my role as a business, we want to fit into that equation in some way." George

What is surprising here, is how George proposed the development of a coordinated plan of action for sustainability, without externalizing the efforts needed to achieve these goals. Externalizing the efforts entails asking the government to do the work and not take any responsibility as a business. However, George wanted to be included in a coordinated plan as a business and be part of the solution. This proactive attitude was present in 6 participants out of 9

that were advocating for systemic change, where SMEE leaders would name the kind of support system they wished for while also identifying how they could contribute through it.

For instance, Vincent (man owner of a restaurant in Quebec) wanted to see loans specifically dedicated to sustainably adapt one's business to the crisis. He, himself, waned to buy electrical delivery trucks since the pandemic had led him to develop the delivery side of his business and he was concerned of the environmental impact of that reorientation strategy:

"Ben de voir toutes les mesures, tout l'argent qui sort en ce moment pour « relancer » l'économie, ben comment on peut mettre cet argent là aussi pour aider les entrepreneurs aussi pour pouvoir peut-être offrir une alternative durable. Exemple, là en ce moment, je fais des livraisons, mais avec nos voitures, c'est des voitures au gaz. Ben les take-out, c'est sûr que là en ce moment en plus, les gens gardent leurs take-out, donc on donne des beaux takeout réutilisables, mais je ne peux pas les reprendre, y'a pas de consigne. Donc, moi si on me disait « écoute, on va te donner un prêt de 100 000\$ pour que t'achètes une flotte de voitures de livraison électriques, exemple et faut que tu le rembourses sur trois ans. » Toutes les mesures extraordinaires qui sont là, ben c'est sûr que j'aimerais ça qu'on les redonne, qu'on continue de les donner pour que, comme entrepreneur, on puisse investir dans du développement durable, surtout si on parle qu'il va y avoir plus de take-out, plus de livraisons et plus de commerces en ligne. Ça implique qu'il va y avoir plus de transport, ça implique peut-être justement de plus détruire la planète si on prend pas les bonnes mesures. Fait que moi ce qui me fait peur dans le « après », c'est que tout ça va être un peu comme la courbe du COVID (gestuelle de courbe exponentielle) C'est que là, là oui on est au ralenti, pis quand ça va reprendre : BOOM, ça va faire comme la courbe et là on va tous se remettre en mode économique qui recommence, mais ça va être peut-être deux fois pire. Ça dépend. Moi c'est de ça que j'ai peur. » Vincent

Similarly, a Quebec manufacturer (woman CEO) thought it would be beneficial for the

economy, for society, and for the environment if the government would include sustainability

criteria in their call for tenders, favoring local manufacturers:

"Dans les appels d'offres publiques par exemple, plus tard, est-ce que justement, sans être protectionniste ou quoi que ce soit, est-ce que les grands donneurs d'ordres vont pouvoir soutenir un peu plus les entreprises québécoises locales qui fabriquent? Ça pourrait être une bonne idée pour être sûr qu'on soit en bonne santé financière et qu'on soit en mesure de générer nos emplois sur le long terme. (...) on m'a dit qu'il y a bien des années, dans des appels d'offres publiques, (...) si t'[étais] à quelques pourcents d'une compagnie étrangère, on pouvait favoriser le local. La proximité, autant c'est une question d'environnement, de

transport, de production de richesse réinvestie à l'interne. Moi je crois personnellement que le Québec serait extrêmement gagnant de faire ça. Parce que mettons que moi je vends 5% plus cher qu'une compagnie américaine, mais le 5%, tous les profits s'en vont aux États-Unis, les jobs s'en vont aux États-Unis, tout ça. Fait qu'en bout de ligne, je crois que les critères d'approvisionnement, peut-être aussi, pourraient être revus en termes de conscience sociale aussi et environnementale." – Catherine

SMEE leaders were undeniably asking for all levels of governance to step-in and help them be better actors in sustainable development. Both the specific and general kinds of request showed a concern for concerted environmental actions that could empower SMEEs to act on climate change. These entrepreneurs thought COVID-19 should be a catalyst for systemic changes. While asking the government to take action could be seen as a form of externalization of environmental actions, the participants were also showing their interest to be included in sustainable global action plans, policies or strategies that were bigger than themselves. This desire to be included in global actions spoke to what SMEE leaders were mentioning before the pandemic: that they want to be part of the solution, while recognizing that they are not the only solution.

To summarize, PIVOT SMEEs cultivated their sustainability approach during the pandemic at three different levels of society by using the buy local momentum to change their customers' behavior, by sustainably answering new needs for society, and by advocating for systemic changes. This capacity to collectively act at the micro- meso and macro-levels for change puts PIVOT SMEEs in a distinctive position to foster transformation within society.

DISCUSSION

COVID-19 has caused the disruption of socio-economic systems in what Claudio Borio has defined as a "dangerously unique way", pointing to the fact that the global economic downturn was not caused by collapses in the economy, but rather by a health crisis with an unpredictable end (Borio, 2020). "The policy response has been equally unique, in terms of speed, size and scope, eliciting an unprecedented concerted effort combining monetary, fiscal and prudential policies [which] has contained the fallout" (Idem). At the time of finalizing my thesis, the World Health Organization has identified a new variant of concern (WHO, 2021) and little information is available about the possible outcomes of its emergence. After twenty months of living in a pandemic, SMEEs are thus still facing considerable uncertainties about the future, a substantial challenge for most of them (Etemad, 2020).

Literature on drivers and obstacles of sustainable practices adoption in SMEEs suggested that limited human and financial resources, as well as lack of time and expertise, were barriers for the implementation of sustainability (Johnson & Schaltegger, 2016), with network development helping to alleviate these obstacles (Jämsä et al., 2011). As described earlier, COVID-19 also disrupted SMEEs' supply chains and day-to-day practices (Al-Fadly, 2020), further affecting their network along with their financial and human resources. Previous literature had also argued that environmental values were rather variable in the long run since extreme events "inhibit the green values of an ecopreneur as [he] works to ensure business survival" (Kirkwood et al., 2017). Combined, this literature had led to the formulation of the hypothesis that SMEEs would pause their environmental practices in times of COVID-19 to focus on their bottom line. However, the hypothesis was falsified as participant SMEEs found ways to strengthen their local ties and reorient their business sustainably, rather showing their deep and continued care for environmental and social issues.

The finding that participant SMEEs maintained their sustainable focus even in times of crisis has important implications. First, it suggests that these SMEEs are resilient when systems are disrupted. Second, it highlights the potential for some SMEEs to become education hubs. Third, it suggests that if supported adequately to navigate the challenging SME context during the pandemic, SMEEs could keep implementing sustainable practices within their business and contribute to sustainable futures. Put simply, this finding supports the idea that SMEEs can be competent socio-environmental actors that should be included in sustainability governance (L. Westman et al., 2021), planning and action.

5.1) SMEEs' necessary inclusion in sustainability

The pro-active and reactive resilience of SMEEs in times of crisis

There are two main components of resilience: the pro-active aspect, that needs to be developed before a disruption, and the reactive aspect that focuses on the ability of a system to bounce-back (Ford et al., 2021). Participant SMEEs showed great adaptability and reactive resilience during COVID-19 by shifting their attention to answer pressing needs for society, such as producing hand sanitizer, masks, or delivering food and prescription drugs, etc. While rethinking the stakeholder theory through the lens of the ethic of care, Spencer (2016) argued that the flexibility of small firms is a strength that allows them to thrive in difficult times; by constantly cultivating their ability to adapt to new requests, SMEs "internalize the changing needs of their stakeholders, blurring the internal and external boundaries of the firm" (Spence, 2016). This

implies that SMEEs are highly attuned to their changing environment, thus nurturing a form of pro-active resilience, which becomes essential to their survival when facing disruptions. Pro-active resilience is also cultivated when SMEEs construct their network (Journeault et al., 2021), learn how to manage new sustainable tools and attract stakeholders that care about sustainability to build a shared vision of best practices (Luederitz et al., 2021).

Additionally, our before-and-during analysis revealed that environmental practices were maintained in times of crisis. This continuity suggests that the pre-crisis development of structural and educational sustainable initiatives became an enabler to pursue sustainable business opportunities when systems were disrupted, contributing to both, pro-active and reactive SMEEs' resilience.

Outsios and Kittler's (2018) research on "the formation of the environmental entrepreneurship mindset" offers critical insight to explain the observed continuity in the environmental practices of SMEE leaders. Working with twenty environmental entrepreneurs from the UK, Outsios and Kittler conclude that through (1) education, (2) environmental movements, (3) parenthood and (4) travel experiences, environmental entrepreneurs develop an array of environmental dispositions that concretely influence their practices as SMEE leaders (Outsios & Kittler, 2018). The SMEE leaders therefore acquirer lasting entrepreneurial dispositions, while also developing environmental dispositions that are contextual to their past lived experiences. Looking at the stability of SMEEs' sustainability practices in times of COVID-19, participant SMEE leaders were thus influenced by their unique entrepreneurial and sustainable dispositions acquired over time to take the environment into account when developing reorientation strategies.

SMEEs as accessible knowledge hubs

While there is a considerable gap in the literature around the role of SMEEs as educators, this study shows that it is the case that SMEEs inform and create practical learning opportunities at the local scale that are accessible to the general population. This could be due to many factors. SMEEs are rooted in places that have a meaning for them which can prompt them to become actors in their local communities and act on socio-environmental challenges (Shrivastava & Kennelly, 2013) The unique position SMEEs hold within their local community (Gomez et al., 2015) and with their employees becomes increasingly important when thinking about the leverage they have through education to foster empowerment (Verhulst & Boks, 2014) and thriving at work (Spreitzer, Porath, & Gibson, 2012). With 65% of the general Canadian population believing "CEOs should step in when the government is not fixing societal problems" (EdelmanCanada, 2021), SMEEs have the opportunity to share their knowledge with their community and take action.

As shown by SMEEs' before-COVID engagement in educational initiatives, small businesses can play an influential role in educating their customers, employees, and society at large. SMEEs' potentiality to become accessible knowledge hubs was made even clearer as participant SMEEs taught and shared their green practices with their customers during the pandemic, sensing they were more receptive to changes at that moment.

SMEEs as key actors towards sustainable futures

Moving beyond of the widely established neo-liberal assumption that the single social responsibility of a business is to work on profit maximization for its shareholders (Friedman, 1970), a recent body of literature from the field of transition research (Burch et al., 2016; Burch et

al., 2020; Loorbach & Wijsman, 2013; Linda Westman et al., 2019), documents the value and the commitment of SMEEs to socio-environmental issues. It has been discussed that if we are to move towards sustainable futures, we need to involve all actors of society, including SMEs (Journeault et al., 2021) and SMEEs.

As the data from the PIVOT project suggests, SMEEs are innovative and resilient in times of crisis, and they maintain environmental practices at all levels of society when pursuing new opportunities. This resonates with conclusions from the latest TRANSFORM report published in 2020. TRANSFORM is a multidisciplinary team of researchers from Canada, the United-States, Europe, and Australia that specializes in urban sustainable transitions, with a focus on SMEs. In their report, the research team explains that SMEs' rich sustainable initiatives contribute to resilient local communities (Burch et al., 2020). Building on the Sendai Framework for Disaster *Risk Reduction* (Pearson & Pelling, 2015), the authors identify 6 avenues of transformation, with SMEEs helping to achieve a sustainable post-COVID recovery (Burch et al., 2020). In the report, examples given for rich sustainable initiatives are the adoption of collaborative and "culture first" approaches that have the advantage to favor SMEs' complementarity and collective work without compromising their initial business mission and values. The promotion of clients' engagement is also presented as a sustainable practice since it fosters a sense of community that could help to maintain a customer base when facing more difficult circumstances (Idem). The inclusion of SMEEs in urban transition projects, such as the Business Improved Areas discussed in the literature review (Gomez et al., 2015), is another example of initiatives SMEEs can engage in that will support their own resilience as well as the resilience of their community. Not surprisingly, constructing trustful networks and sharing information within them are recognized as durable practices contributing to SMEEs sustainability (Dapilah, Nielsen, & Friis, 2020). Ultimately,

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committing to sturdy and long-lasting sustainability visions is also described as necessary because it "serves as a driving force allowing for failures to become learning opportunities, which is part of the resilience-building process for organizations" (Burch et al., 2020). SMEEs' capacities to engage in a wide range of complex sustainable practices further exposes them as key actors in sustainable transitions.

It is impossible to address the subject of sustainable transitions without mentioning the ongoing climate crisis. There are two main approaches to address the ongoing climate crisis: climate change mitigation strategies to limit the scope of changes and climate change adaptation strategies to cope with the emergent realities caused by climate change (Laukkonen et al., 2009). PIVOT SMEEs have shown great leadership in both approaches. Participant SMEEs are mitigating climate change by implementing sustainability initiatives to move towards a low carbon economy, and by working with local farmers to control the negative impacts of climate perturbations on the land for instance. Participant SMEEs are also engaging in adaptation strategies as they have provided essential services and products during the crisis of COVID-19, demonstrating their capacity to react quickly (Keskgn, Gentürk, Sungur, & Kgrgg, 2010) and serve the communities they are rooted in (Burch et al., 2020) to manage complex challenges. Giving the results of my Master's thesis, I believe SMEEs' ability to answer pressing needs for society while making new local partnerships and engaging with their customers will be much needed to respond to climate change.

CONCLUSION

6.1) Key findings

This research contributes to the ongoing conversation in the field of transition studies on the place of SMEEs in the post-COVID recovery and in ecological transitions. Before-COVID interviews revealed that PIVOT SMEEs implemented structural as well as educational sustainable initiatives in their business, exposing an under discussed involvement of businesses in environment: their role as educators. Structural initiatives were also influencing the SMEEs' business organization, going from the reorganization of management practices or supply chains to shifts in the production calendar and the development of diverse collaborations. The before-andduring analysis also uncovered how PIVOT SMEEs maintained their commitment to sustainability in times of crisis and opportunities for sustainable practices were identified at all levels of society. At the micro-level, SMEEs were trying to benefit from the buy local momentum by weaving in sustainability messages and educating their customers about their sustainable initiatives. At the meso-level, within their businesses, SMEEs pivoted to answer pressing needs for society while adapting their supply chains and developing or strengthening their local ties. At the macro-level, SMEE leaders were advocating for sustainability action plans and policies, with the desire to be included and supported as actors of sustainable change. PIVOT SMEEs are therefore not aligned with the capitalistic vision of the shareholders' theory (Friedman, 1970), and rather cultivate their capacities to bring value to many stakeholders.

By concluding that participant SMEEs were resilient, innovative, and maintained their environmental practices in times of crisis, this study further exposes SMEEs' capacity to contribute to the resilience of their communities. The study also prompts the necessary inclusion of SMEEs in Canadian ecological transitions, as they have the potential to be actors of change at all levels of society, even in highly disrupted times.

Overall, my objective is not to romanticize SMEEs and say that this inclusion is without obstacles and disputes, but rather to point to missed environmental and educational opportunities. I believe that in the betweenness of environmentalists, corporations, governments and SMEEs exists a messy mix of anti-capitalist ideas, of care for shared communities, of needs for resources, of common values, of polarized views of ecological transitions, and more. SMEs are entangled in the complex economic and social web of society (Luederitz et al., 2021), sometimes working for bigger corporations, collaborating with local NGOs, applying for governmental funding, etc. We now need to move to a place where we develop the skills to favor the inclusion of SMEEs and SMEs in sustainability planning, to give them the space to grow and transform their practices and to start recognizing them as allies in sustainability education, and in climate action.

6.2) Further research

Further comparative studies with SMEEs would be needed to evaluate if more traditional SMEs are resilient and contribute to the resilience of their communities in times of crisis. As SMEEs are emergent in society, it would also be necessary to understand how traditional SMEs could transition efficiently to more sustainable business practices and make explicit what is already sustainable within their business.

One other theme that should be examined more thoroughly in the context of sustainable practices in SMEEs is the relationship with employees as well as their inclusion and interest in sustainability initiatives. Indeed, many PIVOT SMEE leaders mentioned employee's safety and

health as one of their main concerns at the beginning of the pandemic. They also felt responsible to maintain their business afloat to support their employees and were proud to mention they had not panickily dismissed all their employees. Because the analysis was rather focused on environmental aspects, it is not possible to conclude anything from these anecdotal pieces of evidence, but it certainly inspires further research to be done on social topics, especially on employees, which would well complement sustainable leverages in times of crisis at the micro level. Moving forward, this research endeavor leaves me wanting more information about practices of collaborative actions between SMEEs. Now that we know SMEEs could individually contribute to sustainable futures, we ought to document the leverage they could create collectively.

REFERENCES

- Al-Fadly, A. (2020). Impact of COVID-19 on SMEs and employment. *Entrepreneurship and Sustainability Issues, 8*(2), 629-648. doi:10.9770/jesi.2020.8.2(38)
- Ali, M. H., Suleiman, N., Khalid, N., Tan, K. H., Tseng, M.-L., & Kumar, M. (2021). Supply chain resilience reactive strategies for food SMEs in coping to COVID-19 crisis. *Trends in Food Science & Technology*, 109, 94-102. doi:<u>https://doi.org/10.1016/j.tifs.2021.01.021</u>

Association of Chartered Certified Accountant, A. (2012). Embedding sustainability in SMEs. 10.

- Baral, M. M., Singh, R. K., & Kazançoğlu, Y. (2021). Analysis of factors impacting survivability of sustainable supply chain during COVID-19 pandemic: an empirical study in the context of SMEs. *The International Journal of Logistics Management, ahead-of-print*(ahead-of-print). doi:10.1108/IJLM-04-2021-0198
- Beliaeva, T., Shirokova, G., Wales, W., & Gafforova, E. (2020). Benefiting from economic crisis? Strategic orientation effects, trade-offs, and configurations with resource availability on SME performance. *International Entrepreneurship and Management Journal*, *16*(1), 165-194.
- Berge, S. T. (2020). Pedagogical Pathways for Indigenous Business Education: Learning from Current Indigenous Business Practices. International Indigenous Policy Journal, 11(1). doi:<u>http://dx.doi.org/10.18584/iipj.2020.11.1.9374</u>
- Boiral, O. (2007). Corporate Greening Through ISO 14001: A Rational Myth? Organization Science, 18(1), 127-146. doi:10.1287/orsc.1060.0224
- Boiral, O., Baron, C., & Gunnlaugson, O. (2014). Environmental Leadership and Consciousness Development: A Case Study Among Canadian SMEs. *Journal of Business Ethics*, 123(3), 363-383. doi:10.1007/s10551-013-1845-5
- Borio, C. (2020). The Covid-19 economic crisis: Dangerously unique. *Business Economics*, 55(4), 181-190.
- Brammer, S., Hoejmose, S., & Marchant, K. (2012). Environmental management in SME s in the UK: Practices, pressures and perceived benefits. *Business Strategy and the Environment, 21*(7), 423-434.
- Brundtland, G. H., World Commission on, E., & Development. (1987). *Report of the World Commission on environment and development : "our common future."*. [New York]: [United Nations].
- Burch, S., Andrachuk, M., Carey, D., Frantzeskaki, N., Schroeder, H., Mischkowski, N., & Loorbach, D. (2016). Governing and accelerating transformative entrepreneurship: exploring the potential for small business innovation on urban sustainability transitions. *Current Opinion in Environmental Sustainability, 22*, 26-32. doi:<u>https://doi.org/10.1016/j.cosust.2017.04.002</u>
- Burch, S., & Di Bella, J. (2021). Business models for the Anthropocene: accelerating sustainability transformations in the private sector. *Sustainability Science*, 1-14.
- Burch, S., DiBella, J., Rao-Williams, J., Forrest, N., Hermelingmeier, V., Ninomiya, S. D. M., & Chisholm, K. (2020). Sustainable business practices can build resilient local economies for a post-COVID-19 recovery. *Transform. University of Waterloo*.
- Canadian Federation of Independent Business, C. (2021). 181,000 Canadian small business owners now contemplating pulling the plug, putting 2.4 million jobs at risk. doi:<u>https://www.cfib-fcei.ca/en/media/news-releases/181000-canadian-small-business-owners-now-contemplating-pulling-plug-putting-24</u>

Chandler, D., & Coaffee, J. (2016). *The Routledge Handbook of International Resilience* [1 online resource (447 pages)]. Retrieved from

<u>https://public.ebookcentral.proquest.com/choice/publicfullrecord.aspx?p=4741938</u> <u>https://www.taylorfrancis.com/books/e/9781315765006</u>

https://0-www-taylorfrancis-com.pugwash.lib.warwick.ac.uk/books/9781317655992

- Chaston, I., & Mangles, T. (2000). Business networks: assisting knowledge management and competence acquisition within UK manufacturing firms. *Journal of Small Business and Enterprise Development*.
- Cordano, M., Marshall, R. S., & Silverman, M. (2010). How do Small and Medium Enterprises Go "Green"? A Study of Environmental Management Programs in the U.S. Wine Industry. *Journal of Business Ethics*, 92(3), 463-478. doi:10.1007/s10551-009-0168-z
- Dapilah, F., Nielsen, J. Ø., & Friis, C. (2020). The role of social networks in building adaptive capacity and resilience to climate change: a case study from northern Ghana. *Climate and Development*, 12(1), 42-56. doi:10.1080/17565529.2019.1596063
- Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California Management Review*, 54(1), 64-87.
- Deutscher, I. (1973). What we say/what we do: Sentiments & acts.
- Doern, R., Williams, N., & Vorley, T. (2019). Special issue on entrepreneurship and crises: business as usual? An introduction and review of the literature. *Entrepreneurship & Regional Development*, 31(5-6), 400-412. doi:10.1080/08985626.2018.1541590
- EdelmanCanada. (2021). 2021 Edelman trust barometer: Canada. Retrieved from <u>https://www.edelman.ca/trust-barometer/edelman-trust-barometer-2021</u>
- Eggers, F. (2020). Masters of disasters? Challenges and opportunities for SMEs in times of crisis. *Journal* of Business Research, 116, 199-208. doi:<u>https://doi.org/10.1016/j.jbusres.2020.05.025</u>
- England, K. V. L. (1994). Getting personal: Reflexivity, positionality, and feminist research. *Professional Geographer*, 46(1), 80-89. doi:10.1111/j.0033-0124.1994.00080.x
- Erlingsson, C., & Brysiewicz, P. (2017). A hands-on guide to doing content analysis. *African journal of emergency medicine : Revue africaine de la medecine d'urgence, 7*(3), 93-99. doi:10.1016/j.afjem.2017.08.001
- Etemad, H. (2020). Managing uncertain consequences of a global crisis: SMEs encountering adversities, losses, and new opportunities. *Journal of International Entrepreneurship*, *18*(2), 125-144. doi:10.1007/s10843-020-00279-z
- Fletcher, M., & Prashantham, S. (2011). Knowledge assimilation processes of rapidly internationalising firms. Journal of Small Business and Enterprise Development, 18(3), 475-501. doi:10.1108/14626001111155673
- Ford, S., ElAlfy, A., Wilson, J., & Weber, O. (2021). Business resilience in the Sustainable Development Goals (SDGs) era: A conceptual review. *Corporate Governance and Sustainability Review*, 5(4), 8-19. doi:<u>https://doi.org/10.22495/cgsrv5i4p1</u>
- Friedman, M. (1970). A theoretical framework for monetary analysis. *journal of Political Economy, 78*(2), 193-238.
- Furlow, N. E. (2010). Greenwashing in the new millennium. *The Journal of Applied Business and Economics*, 10(6), 22.
- Gallego-Roquelaure, V. (2020). The emergence process of an international network of SMEs and the evolution of the leader's role. *Journal of International Entrepreneurship, 18*(1), 44-62. doi:10.1007/s10843-019-00258-z

- Giannacourou, M., Kantaraki, M., & Christopoulou, V. (2015). The Perception of Crisis by Greek SMEs and its Impact on Managerial Practices. *Proceedia - Social and Behavioral Sciences*, 175, 546-551. doi:<u>https://doi.org/10.1016/j.sbspro.2015.01.1235</u>
- Gibbs, G. (2007). Analyzing qualitative data. Los Angeles: SAGE Publications.
- Gomez, R., Isakov, A., & Semansky, M. (2015). Small Business and the City
- The Transformative Potential of Small Scale Entrepreneurship: University of Toronto Press.
- Government of Canada, e. a. n. r. c. E. (2021). *National Greenhouse Gaz Emissions*. Retrieved from <u>https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/greenhouse-gas-emissions.html</u>
- Gregurec, I., Tomičić Furjan, M., & Tomičić-Pupek, K. (2021). The impact of COVID-19 on sustainable business models in SMEs. *Sustainability*, *13*(3), 1098.
- Haigh, N., Walker, J., Bacq, S., & Kickul, J. (2015). Hybrid organizations: origins, strategies, impacts, and implications. *California Management Review*, *57*(3), 5-12.
- Hamann, R., Smith, J., Tashman, P., & Marshall, R. S. (2017). Why Do SMEs Go Green? An Analysis of Wine Firms in South Africa. *Business & Society, 56*(1), 23-56. doi:10.1177/0007650315575106
- Haraway, D. J. (1991). Simians, cyborgs, and women : the reinvention of nature. New York: Routledge.
- Harvie, C., & Lee, B.-C. (2002). The role of SMEs in national economies in East Asia (Vol. 2): Edward Elgar Publishing.
- Heras-Saizarbitoria, I., Boiral, O., & Díaz de Junguitu, A. (2020). Environmental management certification and environmental performance: Greening or greenwashing? *Business Strategy and the Environment, 29*(6), 2829-2841. doi:<u>https://doi.org/10.1002/bse.2546</u>
- Honeyman, R., & Jana, T. (2019). *The B corp handbook: How you can use business as a force for good*: Berrett-Koehler Publishers.
- Indriastuti, M., & Fuad, K. (2020). *Impact of covid-19 on digital transformation and sustainability in small and medium enterprises (smes): A conceptual framework.* Paper presented at the Conference on Complex, Intelligent, and Software Intensive Systems.
- ISDE, C. (2020). Key Small Business Statistics 2020. *Gouvernement du Canada*, 33. Retrieved from <u>https://www.ic.gc.ca/eic/site/061.nsf/eng/h_03126.html#how-SME</u>
- Isensee, C., Teuteberg, F., Griese, K.-M., & Topi, C. (2020). The relationship between organizational culture, sustainability, and digitalization in SMEs: A systematic review. *Journal of Cleaner Production, 275*, 122944. doi:<u>https://doi.org/10.1016/j.jclepro.2020.122944</u>
- Jämsä, P., Tähtinen, J., Ryan, A., & Pallari, M. (2011). Sustainable SMEs network utilization: the case of food enterprises. *Journal of Small Business and Enterprise Development, 18*(1), 141-156. doi:10.1108/14626001111106479
- Jenkins, H. (2006). Small Business Champions for Corporate Social Responsibility. *Journal of Business Ethics*, 67(3), 241-256. doi:10.1007/s10551-006-9182-6
- Johnson, M. P., & Schaltegger, S. (2016). Two Decades of Sustainability Management Tools for SMEs: How Far Have We Come? *Journal of Small Business Management*, 54(2), 481-505. doi:<u>https://doi.org/10.1111/jsbm.12154</u>
- Journeault, M., Perron, A., & Vallières, L. (2021). The collaborative roles of stakeholders in supporting the adoption of sustainability in SMEs. *Journal of Environmental Management, 287*, 112349. doi:<u>https://doi.org/10.1016/j.jenvman.2021.112349</u>
- Juergensen, J., Guimón, J., & Narula, R. (2020). European SMEs amidst the COVID-19 crisis: assessing impact and policy responses. *Journal of Industrial and Business Economics*, 47(3), 499-510. doi:10.1007/s40812-020-00169-4

- Kearney, A., Harrington, D., & Kelliher, F. (2018). Strategizing in the micro firm: A 'strategy as practice' framework. *Industry and Higher Education*, *33*(1), 6-17. doi:10.1177/0950422218816232
- Keskġn, H., Ġentürk, C., Sungur, O., & Kġrġġ, H. M. (2010). *The importance of SMEs in developing economies.* Paper presented at the 2nd International Symposium on Sustainable Development.
- Kirkwood, J., Dwyer, K., & Walton, S. (2017). An ecopreneur's growing resilience after a series of earthquakes. Journal of Enterprising Communities, 11(1), 129-148. doi:http://dx.doi.org/10.1108/JEC-12-2014-0028
- Kundurpi, A., Westman, L., Luederitz, C., Burch, S., & Mercado, A. (2021). Navigating between adaptation and transformation: How intermediaries support businesses in sustainability transitions. *Journal* of Cleaner Production, 283, 125366. doi:<u>https://doi.org/10.1016/j.jclepro.2020.125366</u>
- Laukkonen, J., Blanco, P. K., Lenhart, J., Keiner, M., Cavric, B., & Kinuthia-Njenga, C. (2009). Combining climate change adaptation and mitigation measures at the local level. *Habitat International*, 33(3), 287-292. doi:<u>https://doi.org/10.1016/j.habitatint.2008.10.003</u>
- Lawrence, S. R., Collins, E., Pavlovich, K., & Arunachalam, M. (2006). Sustainability practices of SMEs: the case of NZ. *Business Strategy and the Environment*, *15*(4), 242-257.
- Lee, C. M. J., Che-Ha, N., & Syed Alwi, S. F. (2021). Service customer orientation and social sustainability: The case of small medium enterprises. *Journal of Business Research*, *122*, 751-760. doi:<u>https://doi.org/10.1016/j.jbusres.2019.12.048</u>
- Lee, K. H. (2009). Why and how to adopt green management into business organizations? *Management Decision*, 47(7), 1101-1121. doi:10.1108/00251740910978322
- Lee, S. Y., & Klassen, R. D. (2008). Drivers and enablers that foster environmental management capabilities in small-and medium-sized suppliers in supply chains. *Production and Operations management*, 17(6), 573-586.
- Lepoutre, J., & Heene, A. (2006). Investigating the Impact of Firm Size on Small Business Social Responsibility: A Critical Review. *Journal of Business Ethics*, 67(3), 257-273.
- Linnenluecke Martina, K., & McKnight, B. (2017). Community resilience to natural disasters: the role of disaster entrepreneurship. *Journal of Enterprising Communities: People and Places in the Global Economy*, *11*(1), 166-185. doi:10.1108/JEC-01-2015-0005
- Loorbach, D., & Wijsman, K. (2013). Business transition management: exploring a new role for business in sustainability transitions. *Journal of Cleaner Production, 45,* 20-28. doi:<u>https://doi.org/10.1016/j.jclepro.2012.11.002</u>
- Luederitz, C., Caniglia, G., Colbert, B., & Burch, S. (2021). How do small businesses pursue sustainability? The role of collective agency for integrating planned and emergent strategy making. *Business Strategy and the Environment, n/a*(n/a). doi:<u>https://doi.org/10.1002/bse.2808</u>
- Magis, K. (2010). Community Resilience: An Indicator of Social Sustainability. *Society & Natural Resources,* 23(5), 401-416. doi:10.1080/08941920903305674
- Massoud, J. A., Daily, B. F., & Willi, A. (2020). A qualitative study of Argentine small and medium enterprises: Factors driving social responsibility. *Business Strategy and Development, 3*(1), 28-38. doi:10.1002/bsd2.76
- Massoud, M. A., Fayad, R., El-Fadel, M., & Kamleh, R. (2010). Drivers, barriers and incentives to implementing environmental management systems in the food industry: A case of Lebanon. *Journal of Cleaner Production*, *18*(3), 200-209.
- McAdam, R., Keogh, W., Reid, R. S., & Mitchell, N. (2007). Implementing innovation management in manufacturing SMEs: a longitudinal study. *Journal of Small Business and Enterprise Development*, 14(3), 385-403. doi:10.1108/14626000710773501

- McAdam, R., Reid, R., & Mitchell, N. (2010). Longitudinal development of innovation implementation in family-based SMEs. *International Journal of Entrepreneurial Behavior & Research, 16*(5), 437-456. doi:10.1108/13552551011071887
- Outsios, G., & Kittler, M. (2018). The mindset of UK environmental entrepreneurs: A habitus perspective. International Small Business Journal, 36(3), 285-306. doi:10.1177/0266242617739343
- Patton, M. Q. (2015). *Qualitative research & evaluation methods : integrating theory and practice* (Fourth edition. ed.). Thousand Oaks, California: SAGE Publications, Inc.
- Pearson, L., & Pelling, M. (2015). The UN Sendai framework for disaster risk reduction 2015–2030: Negotiation process and prospects for science and practice. *Journal of Extreme Events, 2*(01), 1571001.
- Pimm, S. L. (1984). The complexity and stability of ecosystems. *Nature, 307*(5949), 321-326. doi:10.1038/307321a0
- Ponterotto, J. G. (2006). Brief note on the origins, evolution, and meaning of the qualitative research concept thick description. *The qualitative report*, *11*(3), 538-549.
- Portney, K. E. (2015). Sustainability.
- Priyono, A., Moin, A., & Putri, V. N. A. O. (2020). Identifying Digital Transformation Paths in the Business Model of SMEs during the COVID-19 Pandemic. *Journal of Open Innovation: Technology, Market, and Complexity, 6*(4), 104. Retrieved from <u>https://www.mdpi.com/2199-8531/6/4/104</u>
- Quartey, S. H., & Oguntoye, O. (2020). Promoting corporate sustainability in small and medium-sized enterprises: Key determinants of intermediary performance in Africa. *Business Strategy and the Environment*, 29(3), 1160-1172. doi:<u>https://doi.org/10.1002/bse.2423</u>
- Quintás, M. A., Martínez-Senra, A. I., & Sartal, A. (2018). The Role of SMEs' Green Business Models in the Transition to a Low-Carbon Economy: Differences in Their Design and Degree of Adoption Stemming from Business Size. *Sustainability, 10*(6), 2109. Retrieved from https://www.mdpi.com/2071-1050/10/6/2109
- Rajendran, N. A., & Sharaai, A. H. (2020). Uptake of sustainable manufacturing practices by food manufacturing firms: A systematic review. *International Journal of Advanced Science and Technology, 29*(9 Special Issue), 1759-1769. Retrieved from <u>https://www.scopus.com/inward/record.uri?eid=2-s2.0-</u> 85084370001&partnerID=40&md5=9d79de91dc16ea51f3edaeff2bebcd82
- Rakshit, S., Islam, N., Mondal, S., & Paul, T. (2021). Mobile apps for SME business sustainability during COVID-19 and onwards. *Journal of Business Research*, *135*, 28-39. doi:<u>https://doi.org/10.1016/j.jbusres.2021.06.005</u>
- Ratner, C. (2002). *Subjectivity and objectivity in qualitative methodology*. Paper presented at the Forum Qualitative Sozialforschung/Forum: Qualitative Social Research.
- Richardson, A. (2010). Using customer journey maps to improve customer experience. *Harvard Business Review, 15*(1), 2-5.
- Ritter, T., & Pedersen, C. L. (2020). Analyzing the impact of the coronavirus crisis on business models. *Industrial Marketing Management, 88,* 214-224. doi:<u>https://doi.org/10.1016/j.indmarman.2020.05.014</u>
- Rose, G. (1997). Situating knowledges: Positionality, reflexivities and other tactics. *Progress in Human Geography*, 21(3), 305-320. doi:10.1191/030913297673302122
- Rubio-Andrés, M., Ramos-González, M. D. M., Sastre-Castillo, M. Á., & Danvila-del-Valle, I. (2020). Exploring sustainability, good governance, and social responsibility in small and medium enterprises. *Corporate Social Responsibility and Environmental Management, 27*(2), 852-869. doi:10.1002/csr.1849

- Salehzadeh, R., Pool, J. K., Mohseni, A. M., & Tahani, G. (2017). Factors influencing organisational performance: The role of knowledge sharing and organisational agility. *International Journal of Business Excellence*, *11*(3), 344-356. doi:10.1504/IJBEX.2017.081930
- Saunders, M. N. K., Gray, D. E., & Goregaokar, H. (2014). SME innovation and learning: The role of networks and crisis events. *European Journal of Training and Development*, 38(1-2), 136-149. doi:10.1108/EJTD-07-2013-0073
- Schaefer, A., Williams, S., & Blundel, R. (2020). Individual Values and SME Environmental Engagement. Business & Society, 59(4), 642-675. doi:10.1177/0007650317750134
- Seidel-Sterzik, H., McLaren, S., & Garnevska, E. (2018). Effective life cycle management in SMEs: Use of a sector-based approach to overcome barriers. *Sustainability*, *10*(2), 359.
- Shafi, M., Liu, J., & Ren, W. (2020). Impact of COVID-19 pandemic on micro, small, and medium-sized Enterprises operating in Pakistan. *Research in Globalization*, *2*, 100018.
- Shamus, K., & Colin, J. (2014). Talk Is Cheap : Ethnography and the Attitudinal Fallacy. *Sociological Methods* & *Research*, 43(2), 178-209. doi:10.1177/0049124114523396
- Shepherd, D. A., & Patzelt, H. (2011). The New Field of Sustainable Entrepreneurship: Studying Entrepreneurial Action Linking "What is to be Sustained" with "What is to be Developed". *Entrepreneurship Theory and Practice*, *35*(1), 137-163. doi:10.1111/j.1540-6520.2010.00426.x
- Shrivastava, P., & Kennelly, J. J. (2013). Sustainability and Place-Based Enterprise. *Organization & Environment*, 26(1), 83-101. doi:10.1177/1086026612475068
- Small, M. L. (2009). 'How many cases do I need?' On science and the logic of case selection in field-based research. *Ethnography*, *10*(1), 5-38.
- Soto-Acosta, P., Colomo-Palacios, R., & Popa, S. (2014). Web knowledge sharing and its effect on innovation: An empirical investigation in SMEs. *Knowledge Management Research and Practice*, *12*(1), 103-113. doi:10.1057/kmrp.2013.31
- Soundararajan, V., Jamali, D., & Spence, L. J. (2018). Small Business Social Responsibility: A Critical Multilevel Review, Synthesis and Research Agenda. *International Journal of Management Reviews*, 20(4), 934-956. doi:<u>https://doi.org/10.1111/ijmr.12171</u>
- Spence, L. J. (2016). Small Business Social Responsibility : Expanding Core CSR Theory. *Business & Society*, 55(1), 23-55. doi:10.1177/0007650314523256
- Spence, L. J., & Rutherfoord, R. (2001). Social responsibility, profit maximisation and the small firm ownermanager. *Journal of Small Business and Enterprise Development*, 8(2), 126-139.
- Spreitzer, G., Porath, C. L., & Gibson, C. B. (2012). Toward human sustainability: How to enable more thriving at work. *Organizational Dynamics*, *41*(2), 155-162.
- Strauss, A. L., & Corbin, J. M. (1997). *Grounded theory in practice*. Thousand Oaks: Sage Publications.
- Stubblefield Loucks, E., Martens, M. L., & Cho, C. H. (2010). Engaging small- and medium-sized businesses in sustainability. *Sustainability Accounting, Management and Policy Journal,* 1(2), 178-200. doi:10.1108/20408021011089239
- Temkin, B. D. (2010). Mapping the customer journey. *Forrester Research, 3*, 20.
- Testa, F., Gusmerottia, N. M., Corsini, F., Passetti, E., & Iraldo, F. (2016). Factors Affecting Environmental Management by Small and Micro Firms: The Importance of Entrepreneurs' Attitudes and Environmental Investment. *Corporate Social Responsibility and Environmental Management*, 23(6), 373-385. doi:<u>https://doi.org/10.1002/csr.1382</u>
- Testa, F., Rizzi, F., Daddi, T., Gusmerotti, N. M., Frey, M., & Iraldo, F. (2014). EMAS and ISO 14001: the differences in effectively improving environmental performance. *Journal of Cleaner Production*, 68, 165-173. doi:<u>https://doi.org/10.1016/j.jclepro.2013.12.061</u>

- Thomas, D., & Cross, J. (2007). Organizations as Place Builders. *Journal of Behavioral and Applied Management*. doi:10.21818/001c.16778
- Tsvetkova, D., Bengtsson, E., & Durst, S. (2020). Maintaining Sustainable Practices in SMEs: Insights from Sweden. *Sustainability*, *12*(24), 10242.
- Verhulst, E., & Boks, C. (2014). Employee empowerment for sustainable design. *Journal of Corporate Citizenship*(55), 73-101.
- Villela, M., Bulgacov, S., & Morgan, G. (2021). B Corp Certification and Its Impact on Organizations Over Time. *Journal of Business Ethics*, *170*(2), 343-357. doi:10.1007/s10551-019-04372-9
- Wagner, M. (2019). Global governance in new public environmental management: An international and intertemporal comparison of voluntary standards' impacts. *Business Strategy and the Environment*, 29(3), 1056-1073.
- Westman, L., Luederitz, C., Kundurpi, A., Mercado, A. J., Weber, O., & Burch, S. L. (2019). Conceptualizing businesses as social actors: A framework for understanding sustainability actions in small- and medium-sized enterprises. *Business Strategy and the Environment, 28*(2), 388-402. doi:<u>https://doi.org/10.1002/bse.2256</u>
- Westman, L., Moores, E., & Burch, S. L. (2021). Bridging the governance divide: The role of SMEs in urban sustainability interventions. *Cities*, *108*. doi:10.1016/j.cities.2020.102944
- WHO. (2021). Update on Omicron. *World Health Organization*. Retrieved from https://www.who.int/news/item/28-11-2021-update-on-omicron
- Wickert, C. (2014). "Political" Corporate Social Responsibility in Small- and Medium-Sized Enterprises: A Conceptual Framework. *Business & Society*, *55*(6), 792-824. doi:10.1177/0007650314537021
- Williams, S., & Schaefer, A. (2013). Small and Medium-Sized Enterprises and Sustainability: Managers' Values and Engagement with Environmental and Climate Change Issues. *Business Strategy and the Environment, 22*(3), 173-186. doi:10.1002/bse.1740
- Woods, D. D. (2017). Essential characteristics of resilience. In *Resilience engineering* (pp. 21-34): CRC Press.
- Zahra, S. A., Gedajlovic, E., Neubaum, D. O., & Shulman, J. M. (2009). A typology of social entrepreneurs: Motives, search processes and ethical challenges. *Journal of Business Venturing, 24*(5), 519-532. doi:10.1016/j.jbusvent.2008.04.007
- Zorpas, A. (2009). Environmental Management Systems as Sustainable Tools in the Way of Life for SMEs and VSMEs. *Bioresource technology*, *101*, 1544-1557. doi:10.1016/j.biortech.2009.10.022

APPENDIX I

Methods' supplemental material

Construction of the PIVOT database

Pilot phase

In 2019, as part of the pilot phase of the PIVOT project, exploratory interviews were conducted with 10 SMEE leaders from four different sectors to investigate which values were important in choosing to act on climate change and what environmental actions they had put forward in their business and why. Based on these conversations, an interview guide was developed to identify the narratives SMEE leaders used when explaining why they engaged in climate action. (See appendix III for the interview guide).

Phase 1

In the fall of 2020, a purposive sampling strategy was used to find Canadian SMEEs to participate in the PIVOT project. The selection of participants was based on three criteria: (1) Belonging to food and agriculture; buildings (including real estate and construction); manufacturing; or retail sectors. These non-obviously green sectors were chosen to reflect their high emissions, large scope for emissions reduction, economic importance, and proximity to the public (i.e., customers). (2) Implementing sustainable initiatives in their operations. (3) Representing all provinces in Canada, with an attempt to represent the territories – but only Yukon ended up being represented. This was important because Canadian provinces are culturally diverse, have distinctive demographics and are governed by provincial governments that implement

different rules and strategies to address environmental issues. With this sampling strategy, PIVOT was able to select "information-rich cases for in-dept study" of what motivates entrepreneurs to act on climate change. p.264 (Patton, 2015). Studying SMEEs from non-obviously green sectors helps to address a gap in the environmental entrepreneurs' literature by including businesses from polluting sectors that implement structural environmental initiatives. A database of potential participant SMEEs was created through existing online repertoires like Green Economy Canada, Climate Smart, Sustainable Kingston, Sustainable Waterloo Region, Parcours développement durable Montréal, PME Durable 02, Écohabitation, Regeneration Canada and Chambers of Commerce. Google searches were also conducted with iterations such as "sustainable business AND 'province'", for provinces in which businesses were harder to find through existing networks. Concerted efforts were made to include indigenous business leaders.

In total, 172 businesses were first contacted by email. A 47% response rate led to conducting 81 semi-structured phone interviews with Canadian SMEEs. These SMEEs and their interviews now form the main PIVOT database.

Classification of the comparative table

Before-COVID environmental actions

The column "Before-COVID environmental actions" was classified in two main categories: structural and educational actions. More specifically, educational actions were divided into three targeted populations: clients/customers, employees, and society at large. Structural actions were divided into six sub-categories: optimizing the use of resources and energy, choosing procurement based on environmental criteria, developing renewable energy alternatives, fostering sustainable agriculture, reducing carbon emissions, reducing waste. This classification helped to understand whether SMEEs were acting in one specific sphere of sustainability or in many. This also helped to identify what role SMEEs could play to transition towards a low carbon economy.

Before-COVID network and inspiration

The quotes in the column "Before-COVID network and inspiration" were classified: Very strong (5 points), Strong (4 points), Moderate (2 to 3 points), Weak (1 point) or very weak (0 points) based on 5 criteria that were each worth 1 point: a) having a mentor; b) naming 3 partners or more; c) collaborating with a sustainability program; d) feeling connected to other SMEs and e) getting recognition in one's sector. If the SMEE leader felt isolated, one point was subtracted from the total. The objective was to see whether the strength of one's network would help them maintain their environmental practices in times of crisis.

Motivators to act in environment

The quotes in the column "motivators to act in environment" were classified as *externallyoriented* when they referred to nature, society, community and future generations; *internallyoriented* when they were about status, accomplishments, pride and ambition; and *economic* when they were related to profitability, business case or customer demand. The same SMEE leader could be classified in one, two or three categories, depending on the different motivations they mentioned. This was done to understand if a certain kind of motivation would persist better in times of crisis.

Visibility of sustainable actions

The "visibility of sustainable actions" column was classified as being *high* if the sustainability message was front and center; the SMEE leader gave talks/conferences or tours, if the business had a clear sustainability discourse on social media and on their website and when the SMEE engaged with their customers and their supply chain around the theme of environmental initiatives. Visibility was coded as being *moderate* when the SMEE had a clear sustainable engagement, that people new about it organically, but there was no extra effort to showcase the efforts and to bring the message/influence people. For moderate, the social media and the website focused on other aspects of the business, but still included sustainability as a second message. Finally, visibility was *low* if the SMEE was implementing sustainable actions internally but did not displaying any of them in a clear way. The rational behind looking at this category was to know whether SMEEs who visibly engaged in sustainability were more likely to maintain an environmental focus in times of crisis.

Initial COVID categories

Three main ways in which PIVOT SMEE leaders maintained their sustainable approach in times of crisis were first identified in the interviews:

1 – PIVOT SMEEs are hopeful COVID-19 is a catalyst for systemic change;

2 - COVID-19 is an example of why businesses need to change [to move towards sustainability];
3 - PIVOT SMEEs have shifted their attention to answer a new pressing need for society and might still engage in sustainable initiatives when doing so.

After the focus group activities, it became clear that these categories were capturing something important in the entrepreneurs' reality: they were still concerned by and active in sustainability. The focus group activities also made apparent that there were a few important components missing in the analysis.

Reorganization of the categories after focus groups

As one participant pointed out during a focus group activity, the categories were not mutually exclusive: "There's a lot of overlap in these categories. As we talk about them, they apply to others. I think there was a fairly extensive conversation around that [category], but I'm sure there's more to hear from the group." - Jacob

This mutual inclusivity came from the fact that governmental actions were not perceived as clearly distinct from the business, nor the customers' demand; everything was highly intertwined and had the potential to affect the business. Therefore, when discussing systemic changes, business leaders were bringing up topics related to changes within their businesses and vice versa. About half of the leaders had the tendency to focus more on the business level, while the others focused on the governmental level. Most of the entrepreneurs engaged with at least two categories at some point.

To address a gap in the analysis, categories 2 and 3 - COVID as an example of why businesses need to change and answering a pressing need for society – were merged since both were related to actions within businesses. Then, a new category was added to focus on customers' demand and the buy local movement.

Additionally, the discourse around the theme of opportunity for positive change was omnipresent during the focus group activities. The initial categories were therefore reorganized around the theme of opportunities and leverages for sustainability in times of COVID-19 (See table 1).

This choice was also based on specific feedback given during the focus group activities, where

participants promptly agreed with the following statement:

"This is related to each category, but because this is an entrepreneurship discussion, a category should be the opportunities post-COVID for entrepreneurs. Based on these cultural and larger, macro changes we talked about, what is the opportunity for entrepreneurs to succeed, grow, adapt their business while also driving sustainable growth? Because entrepreneurs are a critical piece of this. For a lot of the themes we talked about, there's a lot of underlying consumer demand for companies that help solve big problems [climate change], there's more demand for that. Or if there's potential demand if companies are really going at it. If validated by governments, that's great. Then you've got a stronger message, there's more weight behind the message. It's a really important piece." – George

APPENDIX II

Table 2: SMEE leaders in the current study, their characteristics, and the phase in which they participated (only pseudonyms appear throughout the thesis and in the table)

ID code	Pro	Company	Gender	Lang	Age	# Employees	Before-	COVID	Focus
	•	Sector					COVID	phase	group
Josée	QC	Construction	F	E	46-	21-50	Pilot	yes	invited
					54				
Vincent	QC	Food/Agriculture	Μ	F	<35	21-50	Pilot	yes	group 1
TR_RA	BC	Manufacturing	F	E			Pilot		invited
Maxime	AB	Construction	М	Е	36-	200+	Pilot	yes	invited
					45				
George	BC	Retail/Manufact	М	E	46–	100–199	Phase 1	yes	group 2
		uring			54				
Greta	NS	Food/Agriculture	F	E	55+	51–99	Phase 1	yes	group 1
Luke	PE	Food/Agriculture	Μ	E	55+	<5	Phase 1	yes	group 1
William	ON	Retail	М	E	46–	6–20	Phase 1		group 1
					54				
FA_CA	QC	Construction	М	F	36–	<5	Phase 1		invited
					45				
François	QC	Manufacturing	М	F	46–	<5	Phase 1	yes	group 2 no
					54				show, sick

Catherine	QC	Manufacturing	F	F	<35	12	Phase 1	yes	invited
Brad	ΥT	Construction	Μ	Е	<35	2	Phase 1	yes	group 2 no
									show
Cynthia	QC	Retail/Distributi	F	F	46–		Phase 1	yes	group 2
		on			54?				
Steven	ON	Manufacturing	Μ	E	55+?	21–50	Phase 1	yes	group 1 no
									show
Jenny	BC	Retail	F	E		6–20	Phase 1	yes	invited
GG_W	QC	Manufacturing	F	E	<35	21–50	Phase 1		invited
Simon	AB	Construction	М	Е	46–	6–20	Phase 1	yes	invited
					54				
James	MB	Manufacturing	М	Е	36–	6–20	Phase 1		group 1
					45				
Gaël	AB	Food/ Retail	М	E	55+	6–20	Phase 1	yes	invited
Frederic	MB	Food/Agriculture	Μ	Е	46–	200+	Phase 1	yes	group 2
					54				
Nancy	NB	Manufacturing	F	E	36–	<5	Phase 1		group 1
					45				
Lucas	AB	Manufacturing	М	Е	55+	21–50	Phase 1		group 2
BE_CR	BC	Construction	М	E	46–	51–99	Phase 1		invited
					54				

Jacqueline	QC	Food/Agriculture	F	Е	46–	<5	Phase 1	yes	invited
					54				
TD_WB	QC	Food/Agriculture	F	E	<35	<5	Phase 1		invited
Olivier	QC	Food/Agriculture	М	F	46– 54	34	Phase 1		group 1
Monique	MB	Food/Agriculture	F	E	55+	51–99	Phase 1	yes	group 2
Liam	ON	Food	Μ	Е			NA		group 1
Jacob	AB	Construction	М	Е			Phase 1		group 2
Linda	ON	Food/Agriculture	F	Ε	45- 54?	6–20	NA	yes	NA
Rupi	QC	Retail	F	Е	<35	6–20	NA	yes	NA
Alison	ON	Manufacturing/R etail	F	E	35- 44?	?	NA	yes	NA
Benjamin	ON	Food/Agriculture	М	E	35- 44?	6–20	NA	yes	NA
Chris	ON	Retail	М	Е	50?	6–20	NA	yes	NA
Nicolas	ON	Retail	Μ	E	<35	<5	NA	yes	NA

APPENDIX III

Loose interview guide for the pilot phase

Interviews done in June 2019

Questions liées à leurs valeurs

- 1) Quel a été le moment où ils ont pris conscience du problème des GES ?
- 2) Quels sont les sentiments qui les ont poussés à agir ?
- 3) Quel a été le point de bascule pour eux : le moment où ils ont agi, au-delà du ressenti?
- 4) Quelle est leur relation à la nature ? (Spontanément, en quelques mots clés)

Questions liées à leurs projets / initiatives concrètes

- 1) La nature de leur projet et de leurs initiatives : en une minute.
- 2) Quelles sont les premières décisions qui ont entraîné les actions?
- 3) Quels ont été les écueils rencontrés et comment ils les ont surmontés.?
- 4) Quels sont leurs sentiments face aux échecs ou aux revers (setbacks: what made you mad? what surprised you)?
- 5) Comment ils se préparent activement et concrètement à ces revers?
- 6) Quelles leçons vous avez tirées après avoir surmonté ces obstacles (grit)?
- 7) Comment ils mesurent leurs progrès ou leurs succès?
- 8) Qui ou quoi- ont été leurs plus grandes sources d'inspiration pour leur projet?
- 9) Qui sont leurs mentors? Ou leurs complices?
- 10) Comment ou à quel endroit ont-ils connus leurs mentors (plateformes? médias? entourage?)
- 11) Où ont-ils trouvé de l'information concrète pour mettre sur pied leur projet?
- 12) (How) Do they engage with others (suppliers, customers, employees, etc.) to make their projects more impactful?
- 13) Who in your network cares that you are doing these things? Who do you tell about these activities?

Questions liées à leurs valeurs à poser à la fin

- 1) Quels sentiments ont-ils maintenant, suite aux changements apportés dans leur entreprise ? **De quoi ils sont fiers ?** (En écho aux sentiments du « avant »)
- 2) Quelles sont les règles qui gouvernent leur vie (life rules / commandments / core values).
- 3) Comme chef de PME, se sentent-ils isolés? Ou au contraire, connectés aux autres chefs de PME?
- 4) Qui les soutient au quotidien? Qui fait partie du « support network »?

Si possible, poser des questions liées à leurs habitudes de consommation médiatique.

Interview Guide for phase 1

Interviews done from November 2019 to February 2020

SMEE's main questions and prodding ones:

- 1) In a few minutes, what did you do to address climate change in your company?
 - a) What is the nature of your project and initiatives? [one minute]
 - b) What are the first steps you took?
- 2) Why did you do it?
 - a) What feelings pushed you to act?
 - b) When did you become aware of the climate change problem?
 - c) What is your relationship to nature? [spontaneously, in a few keywords]
- 3) How did you do it?
 - a) How do you measure progress or success?
- 4) What were the biggest obstacles?
 - a) What obstacles did you encounter and how were they overcome?
 - b) What were/are your feelings about obstacles, failures or setbacks?
 - c) How were/are you concretely preparing for these setbacks?
- 5) How did you overcome them?
 - a) What lessons did you learn after overcoming these obstacles?
- 6) What role did your social network play?
 - a) Who (or what) were your greatest sources of inspiration?
 - b) Who are your mentors? Your accomplices?
 - c) Where did you find the concrete information necessary?
 - d) Do you engage with others (suppliers, customers, employees, etc.) to make your projects more impactful? If so, how?
 - e) In your network, who cares about what you do? Who do you talk to about these activities?
 - f) Who supports you every day? Who is part of your support network?
 - g) Do you belong to an association or a professional group?
- 7) How do you feel about this process/the steps you have taken to address climate change?

- a) What feelings do you now have, following the changes in your business?
- b) What are the rules that govern your life (rules of life/commandments/core values)? [the core values that drive you in your business or your life]
- c) As an SME owner-manager, do you feel isolated, or do you feel connected to other SME leaders?
- 8) What kinds of information would be useful for you to understand the greenhouse gas emissions of your business activities?

Questions to ask if info is not available online, or to ask in a subsequent written survey: Section 1. Identification—Can be starting questions if they're a bit uncomfortable (maybe not age):

Age Range: 35 and under; 36–45, 46–55, 55+ Sex: Business Sector: Brief description of company activities: Number of employees:

Interview guide for COVID phase

Interviews done from mid-April to the beginning of June

Background information for SMEEs

We decided to seize the momentum to support SMEs during the crisis. We propose to launch a campaign on the week of April 13th giving voices to SMEs leaders on how they are coping with the crisis and how the crisis can reshape our future.

Opening instructions

please pick up my question + short answers + 10-15 minutes total + give us facts and numbers

- 1) Tell us you name type of business- number of employees Location
- 2) What word defines for you the current situation of your business? (ex. survival, resilience)
- 3) There's much to learn from SME right now: how is your business facing the pandemic crisis? What is complicated to change?
- 4) How does it make a change in your community?
- 5) What greatest challenges are you facing now?

- 6) Can these be overcome, if so how?
- 7) Do you think the pandemic will reshape your future? How?
- 8) What are your hopes and desires for the future?
- 9) After the crisis we need to pay close attention to how we re-build our economy. How will you need to be supported to achieve the future you hope for?
- 10) (Are there policy measures you hope for or are concerned with?)
- 11) Do you have a message that you wish to send to other SME leaders?
- 12) Who or what inspires you right now?
- 13) Ask again for **facts and numbers** if the SME leaders has not included them in their answers.

Interview guide for in-depth COVID phase interviews

Interviews done in November 2020

Hi, thank you for agreeing to a second interview with us today. A lot has changed since last fall. My interest in meeting with you today is to discuss how your business has adapted and reorganized itself since the beginning of COVID-19.

Before we start, I would need your consent to record this zoom interview.

Did you have time to read the consent form?

Do you have any question for me before we start?

If not, could you start by giving me the type of business you have, the number of employees, as well as your location in Canada.

Now, I would like you to think about the first time you realized that COVID-19 would affect your business.

- 1) When was that? (probe) Could you walk me through what you did at that moment to respond to COVID-19?
 - a. How did you come to this decision?
 - b. How did you adjust your business?
 - c. Are people working from home?
 - d. (For restaurants) Do you do take-out?
 - e. Did you have to layoff anybody?
 - f. What were the main obstacles you faced while doing that?
- 2) Is there anything else that you have done in your business to adapt to the pandemic since then?
 - a. How did you come to this decision?

- b. What were the main obstacles you faced while doing that?
- c. Did you overcome them? If so, how?
- 3) How have all those changes in your business influenced the environmental initiatives we discussed last fall? Are they helping them? Is it similar or more difficult to pursue them?
 - a. How do you feel about that?
 - b. If negative impact
 - i. When did you start noticing that during the crisis?
 - ii. If you think about the first time you had to reorganize your business for COVID-19, did it involve environmental issues.

Now, looking at a broader scale;

- 4) (How is the crisis affecting your community?) Do you think that COVID-19 affects indigenous-owned businesses in different ways than non-indigenous businesses?
 - a. Can you think of a specific example that would illustrate your thought?
 - b. What would be your specific needs and challenges as an indigenous SME leader?

Now, if we think about the impact of the pandemic on our society.

- 5) Do you think the pandemic will reshape the way our society works?
 - a. How do you think it will reshape it?
 - b. What makes you think so?
 - c. What are your hopes for the coming years?
 - d. As a business owner, how will you need to be supported to achieve the future you hope for?
 - e. What is the place of SMEs in our post-pandemic economy?

Giving the current difficult times,

- 6) Is there something special that inspires you right now?
 - a. Do you have a message that you wish to send to other SME leaders?
 - b. Why?

These were all my questions for you today,

7) Is there anything else you would like to share with me about the response of your business to COVID-19?

Thank you so much for your time and I wish you the best of luck with your business.

APPENDIX IV

Research ethics certificates and approvals

Research Ethics Board Office

Tel: (514) 398-6193 James Administration Bldg. 845 Sherbrooke Street West. Rm 325 Website: www.mcgill.ca/research/research/compliance/human/ Montreal, QC H3A 0G4

Research Ethics Board 1 Certificate of Ethical Acceptability of Research Involving Humans REB File #: 20-06-059

Project Title: Collaboration with National Film Board on Small- and Medium-Size Enterprises and Climate Action Principal Investigator: Prof. Dror Etzion **Department:** Faculty of Management **Other Researchers:** McGill University: Andrew Piper, Professor, Dept of Languages, Literatures, and Cultures Animesh Animesh, Associate Professor, Faculty of Management Catherine Potvin, Professor, Dept of Biology Jerome Waldispuhl, Associate Professor, School of Computer Science Stephanie Posthumus, Associate Professor, Dept of Languages, Literatures, and Cultures Jean-Francois Soubliere, Postdoctoral Researcher, Faculty of Management Divya Sharma, Research Assistant, Dept of Biology National Film Board: Louis-Richard Tremblay, Executive Producer, Interactive Studio (Lead), National Film Board Etienne Lessard, Community Manager, National Film Board Isabelle Limoges, Project Administrator, National Film Board Jeremie Battaglia, Director-Coordinator, National Film Board Laurence Dolbee, Production Lead, Interactive Studio, National Film Board Marie Eve Bergeron, Strategy Lead, National Film Board Vali Fugulin, Chief Editor, National Film Board Veronique Tessier, Production Coordinator, National Film Board

Funding: McGill Sustainability Systems Initiative, 'Sustainability Transitions', co-PI: C. Potvin

Approval Period: June 15, 2020 to June 14, 2021

The REB-1 reviewed and approved this project by delegated review in accordance with the requirements of the McGill University Policy on the Ethical Conduct of Research Involving Human Participants and the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans. 2/2

Deanna Collin, Senior Ethics Review Administrator

* The REB must be promptly notified of any new information that may affect the welfare or consent of participants.

Research ethics amendment for focus group activities

REB#84-0719(0221)- approved Feb-26-2021

McGill University ETHICS REVIEW AMENDMENT REQUEST FORM

This form can be used to submit any changes/updates to be made to a currently approved research project. Changes must be reviewed and approved by the REB before they can be implemented. Amendments to studies should be changes within the scope of the original study, not new studies that are simply related to the original study. Significant or numerous changes to study methods, participant populations, location of research or the research question or where the amendment will change the overall purpose or objective of the originally approved study will require the submission of a complete new application.

REB File #: 84-0719 Project Title: Pilot Research for Collaboration with National Film Board on Small- and Medium-Size Enterprises and Climate Action Principal Investigator: Dror Etzion Email: dror.etzion@mcgill.ca Faculty Supervisor (for student PI): N/A

1) Explain what these changes are, why they are needed, and if the risks or benefits to participants will change.

We will conduct focus group activities with existing participants of the project to validate the data gathered during the interviews. This is an addition of a new method to the procedures outlined for the pilot stories in the 84-0719 application. This step is needed to produce a more robust analysis. Moreover, this is an important opportunity for participants to engage with the analysis, give their perspective, confirm some aspects of it and discuss what is missing or what they think is not right.

- 8 to 24 participants will engage in a focus group activity that will be done on an online platform approved by McGill IT for research. (McGill teams) This activity will last between 60 to 120 minutes.

^{*} Approval is granted only for the research and purposes described.

^{*} Modifications to the approved research must be reviewed and approved by the REB before they can be implemented.

^{*} A Request for Renewal form must be submitted before the above expiry date. Research cannot be conducted without a current ethics approval. Submit 2-3 weeks ahead of the expiry date.

ethics approval. Sublin 2-3 weeks allead of the expiry date.

^{*} When a project has been completed or terminated, a Study Closure form must be submitted.

^{*} Unanticipated issues that may increase the risk level to participants or that may have other ethical implications must be promptly reported to the REB. Serious adverse events experienced by a participant in conjunction with the research must be reported to the REB without delay.

^{*} The REB must be notified of any suspension or cancellation imposed by a funding agency or regulatory body that is related to this study.

^{*} The REB must be notified of any findings that may have ethical implications or may affect the decision of the REB.

Participants will answer questions verbally, in the form of a guided discussion, they will interact on a collaborative white board and answer "pop-up questions" on their screen.

- Data gathered will be confidential, but not anonymous since the SME leaders will see each other on the virtual platform.

- Each focus group activity will include 6 to 12 participants at a time, depending on the participants' availabilities.

Because of the major economic and logistic impact of the pandemic of COVID-19, it is also impossible not to include discussions around this theme. Indeed, it has affected SME leaders and their businesses greatly, as some of them had to close their businesses, or pivot their activities significantly. For this reason, some discussions will be around the impact of COVID-19, directly in relation to the PIVOT project and its initial objectives.

No changes to the study participant population or location of research outlined in the REB application are anticipated. The participants (storytellers) will still be owner-managers (i.e., leaders) of SMEs across Canada. They will be selected from the same cohort from which the pilot story participants were selected. Minor modifications will be done on the consent form for interview participants (Annex 5), with amendments for the new method of focus group activity (see below). No compensation will be given to participants. Participants are free to refuse to participate in a focus group activity.

We do not foresee any change to the risk of participation. We do expect the added benefit of bringing their perspectives in the analysis and maybe clarify some of their previous thoughts so that the analysis is truly representative of them.

2) Attach relevant additional or revised documents such as questionnaires, consent forms, recruitment ads.

See attached Annex 8: Consent form for focus group participants. Revised sections from previous consent form (Annex 5) are highlighted. We describe the new method. Clarify that anonymity is not possible in a focus group activity.

See attached Annex 9: question themes and activities for guided discussions.

Principal Investigator Signature: __as per email_____ Date: Feb-19-2021___

REB#84-0719(0221)

This amendment request has been approved

Project Approval Expires: October 15, 2021

Annex 8: Consent Document for Focus Group Activity Participants

Consent document for focus group activity participants *McGill University, Canada Consent Document for Participants REB file # 84-0719*

Researchers: Andrew Piper, Professor, Dept of Languages, Literatures, and Cultures Animesh Animesh, Associate Professor, Faculty of Management Catherine Potvin, Professor, Dept of Biology Jérôme Waldispuhl, Associate Professor, School of Computer Science Stephanie Posthumus, Associate Professor, Dept of Languages, Literatures, and Cultures Jean-François Soublière, Postdoctoral Researcher, Faculty of Management Christopher Luederitz, Postdoctoral Fellow, Faculty of Management Madeleine Gauthier, Master's student, Dept of Biology Divya Sharma, Research Assistant, Dept of Biology Accompanied by the creative team at the National Film Board.

Principal Investigator: Dror Etzion (dror.etzion@mcgill.ca)

The following information describes the research project in which you have been invited to participate. This document will explain the research in detail and then you will be asked if you want to participate. Researchers at *McGill University* and the *National Film Board of Canada's Digital Interactive Studio* (NFB) have joined forces to develop Pivot, a pan-Canadian communication project that aims to engage Small- and Medium-sized Enterprises (SMEs) in the fight against climate change. In Canada, SMEs employ ~90% of the private sector workforce, are an engine of innovation, and are present everywhere. Whether through visits to local businesses, via corporate supply chains, or online, virtually all Canadians engage with SMEs on a daily basis. Hence, SMEs are an ideal vehicle to reach people across the country in the pursuit of immediate and transformational climate action. Pivot's target audience is therefore SME leaders.

This research is funded by the McGill Sustainability Systems Initiative.

Overall Research Objective: To use storytelling to amplify the actions of people in SMEs, as they are happening, to accelerate tipping points that reveal opportunities in the new climate economy.

Research Objective of current Focus group activity:

a) Engage with participants' perspectives of preliminary results;

b) Understand participants' environmental mindset in time of COVID-19;

c) What can we learn from SMEs' resilience in time of COVID-19 to be well prepared for climate change actions.

Participant recruitment

Participants were selected from the researchers' personal networks, recommendations from collaborating partners and online searches.

By ensuring that participants can decline to answer any questions, redact any responses and/or withdraw their participation prior to dissemination of the stories online, no discomfort or risk is expected to occur to any participant as a result of this research.

The data collected during the focus group activity will be used by me and my research team to answer the research questions. Data will be collected largely on McGill Teams recording, with the researcher making additional notes as required. Once the data have been obtained, they will be transcribed from audio recording to a digital text file for the purposes of analysis. Audio, video and transcript data will be stored on the McGill OneDrive and identifiable data will be kept in a password protected file at all times and destroyed after 7 years. The audio and video recordings are only for use by the research team and will not be published.

The researchers and principal investigator will have access to identifiable data. We will ensure confidentiality if you so wish. No identifying information will be disseminated in publications.

Confidentiality within the focus group will not be ensured, since you will be discussing with other participants of the project.

Participant involvement

The time limit of this video/audio taping will be at the discretion of your time availability. Do you agree to be video recorded as part of this focus group activity? Yes __ No __ Do you agree to be audio-recorded as part of this focus group activity? Yes __ No __

Participant's rights

You have the right to:

 \Box decline to participate;

 \Box decline to answer any particular question;

□ withdraw from the study at any point prior to publication;

 \Box ask any questions about the study at any time during participation;

 \Box be given access to a summary of the project findings when the project is concluded;

 \Box request that we stop recording at any time during which you are speaking during the focus group session;

 \Box request that your answers not be used in any subsequent study.

Project contacts

You are welcome to contact me and my supervisors at any time to ask questions regarding the project. The researcher and supervisors can be contacted at the above address. If you have questions about your rights or wellbeing as a participant in this study, please contact the McGill Ethics Office: lynda.mcneil@mcgill.ca.

Name of Participant

Signature of Participant Date

Annex 9: Guide for the Focus Group Activity

Participants will enter a the online platform approved by McGill IT for research, where they will be with other SME leaders and one or two researchers from the research team. They will participate in a discussion with all the SME leaders, and look at a power point that explain de preliminary results. Then, they will be divided in break out rooms to reflect on the main categories.

Categories:

- Systemic changes: In time of COVID-19, the business leader recognizes the importance of systemic changes at multiple levels;

- Example of why businesses should change: In time of COVID-19, the business leader sees the pandemic as a reason to change to be more resilient (in his own businesses and in businesses in general);

- Shift in focus: In time of COVID-19, the business leader had to shift his focus completely from environmental initiatives to answer a pressing need for society.

Participants will be asked to discuss these categories, to play with them on a white board, to add some details, to tell where they think they fit, and whether the categories are exclusive or not and why.

APPENDIX V

Codes and Categories Before-COVID

Table 3: Codes and categories for sustainable initiatives PIVOT SMEE leaders implemented in
their business before COVID-19

Codes	First-order category	Second order themes
Buying carbon offsets		
Participating in climate strike (with	Promoting education and	Educational sustainable
employees) - Monique	climate action with	initiatives (12)
Having employees take workshops	employees (3)	
in environment - Steven		
Inviting a scientist to present on		
sustainable changes and motivate		
the team to take action - Vincent		
Subsidizing staff's environmental		
acquisitions - Steven		
Helping clients to optimize the	Promoting education and	
products' use and limit their need -	climate action with	
Catherine	clients/customers (6)	
Having a six-month awareness		
campaign on waste - Josée	-	
Involving customers in a carbon		
reduction program - George	-	
Providing information and		
resources about the environment to		
customers - Gaël	-	
Reducing clients' water waste -		
Catherine		
Giving green acts token rewards to		
customers - Gaël		
Organizing educational activities		
around the environment and food		
issues – Greta, Monique		
Wanting to map food system to		
help people choose products closer		
to them - Jaqueline		
Giving tours to explain	Promoting education and	
environmental actions (schools,	climate action in society (8)	
peers, tourists, etc.) – Brad, Luke,		
Steven		

Giving talks and conferences on		
themes related to sustainability –		
Brad, Jacqueline, Greta, Steven,		
Maxime, Josée		
Creating a webpage to inform the		
community about chemistry -		
Catherine		
Adding and/or changing equipment	Optimizing the use of	Structural sustainable
to save energy - Steven	resources and energy (7)	initiatives (17)
Having recharging stations for		
electrical cars – Josée, Steven		
Customizing a pump to limit water		
consumption - Luke		
Serving water only if asked - Greta		
Installing LED lights – Gaël,		
Geroge		
Building energy efficient homes -		
Simon		
Retrofitting with geothermal -		
Monique		
Following strict rules on food sold	Choosing procurement based	
(local, no GMO, etc.) - Greta	on environmental criteria (3)	
Sourcing environmentally friendly		
material – Jenny, Cynthia		
Developing renewable energy	Developing renewable	
projects in communities - Brad	energy alternatives (3)	
Installing solar panel – Luke, Gaël		
Planting bug resistant varieties of	Fostering sustainable	
plants - Luke	agriculture (5)	
Putting beehives on roofs - Josée		
Using older varieties of wheat grain		
that are easier on the land – Monique		
Practicing a traditional sustainable		
harvest (with elders, taking only		
part of the resource) - Jacqueline		
Controlling pests with organic		
techniques - Luke		
Working with organic local farmers		
– Monique, Greta		
Minimizing steps in production to	Reducing carbon emissions	
reduce transport – Jacqueline, Monique	(14)	
Sourcing almost everything locally,		
reducing transport – Cynthia,		
Catherine, Monique, Luke, Greta		

Reviewing the menu to limit red		
meat - Vincent		
Participating in carbon lootprint		
reduction programs – George,		
Selling we gen food Erederic Coël		
Selling Vegan 1000 – Frederic, Gael		
working from nome unquery -		
François Engeging in P. Com movement		
Leigaging III B-Colp movement –		
Boducing transport weight by		
looking at the way they buy their		
food (dry for av.) Erodoria		
Door (dry for ex.) - Frederic		
the restaurant to reduce transport		
needed Vincent		
Aiming to be zero wester Jappy	\mathbf{P} advaing wasta (10)	
Anning to be zero waste - Jenny	Keducing waste (10)	
Buying second hand - Steven		
Carrying plant-based products -		
Developing a program to revise		
Developing a program to reuse		
Diverting construction wester		
Mayima Logác		
Civing discounts on food instead of		
westing it. Goöl		
Modifying packages to make them		
recyclable rouseble or		
compostable Catherine Monique		
Peducing packaging Cynthia		
Goal		
Retrieving raw materials to clean		
and reuse them - Catherine		
Installing a water fountain that		
calculates waste reduction - Josée		
Establishing compost - Vincent		
Reusing all fabrics' cuts in the		
manufacture - Jenny		
Buying good equipment that can be		
repaired - Monique		
Using ground apples to make		
brandy - Luke		

APPENDIX VI

Code book

Column	Code assigned	Explanation
Entrepreneur	Code of the entrepreneur	
Age	<35]
	35-44	
	45-54	
	55+	
	?	Unknown
Location	QC	Quebec
	ON	Ontario
	AB	Alberta
	MB	Manitoba
	INS DEI	Nova Scolla Prince Edouard Island
		Velen teritoria
	PC	Pritich Colombia
Number of		NA NA
employees	< <u>5</u> 6 to 20	
employees	21 to 50	-
	21 10 50	
	51 to 99	
	100 to 199	
	200+	
Bcorporation	yes	Is an official member
certified	no	Is not an official member
	in process to	Mentioned it is an objective in the near future
Pre-COVID	У	yes
interview exist?	n	no
Source of pre-	pilot phase	
COVID interview	Phase 1	
	NA	when no pre-COVID exist
Gender	W	The interviewee is a woman
	M	The interviewee is a man
Industry	Building	Includes construction as well as real estate
•	Datail	
	Manufactura	
	Manufacture	
	Food	Includes restaurants and agriculture
Being an activist	Yes	Mentions high implication for social and environmental issues on the public scene, as an individual, and sometimes even participate in politics
	No	Nothing points to activism
	Maybe	Lack information to decide clearly, which means the entrepreneur is most
	-	likely very engaged on the public scene, but hard to draw the line.
	externally oriented (EO)	Nature, society, community, offspring
	internally oriented (IO)	status, accomplishment, pride, ambition
	,	

Table 4: Code book for the comparative table

Motivators to act in environment as a business	economic (E)	profitability, business case, customer demand			
Vocality about sustainable actions	High	Sustainable message front and center; gives talks/conferences or tours; clear sustainability discourse on social media and website; engage with customers and supply chain			
	Medium	Clear sustainable engagement, people know about it organically, but no extra efforts to bring it to more people/nor influence them; social media posts and website about other aspects of the business			
	Low	They do sustainable actions internally clear way.	y, but don't display any of them in a		
Measures of progress/success	Qualitative	Use the fact that they are still open; people are happy, they have good feedback; they feel like they are showing sustainability can go hands in hands with money, etc. Less specific, more with the feeling			
	Quantitative	Calculate the impact of their actions in a quantitative approach, calculating GHG emissions, number of waste divergence, number of donations, number of suppliers, etc. more specific			
Network and	Very strong	5 points	Having a mentor = 1 point		
inspiration (Looking at the	Strong	4 points	Naming 3+ partners = 1 point		
network right	Moderate	2 to 3 points	Collaborates with a sustainability		
starting 20 years ago)	Weak	1 point	Feels connected to other SMEs = 1 point		
	Very weak	0 points	Gets recognition in his sector = 1 point		
			Feels isolated as a business = -1 point		
Impact of crisis on demand	Increase	Clear increase in demand that is mentioned by the SMEE leader.			
	Variable	Demand for certain aspects/products of the business increase and other decrease. Overall impact could be decrease or increase			
	None	The crisis does not affect demand			
	Decrease	Clear decrease in demand that is mentioned by the SMEE leader.			
Environmental actions during	New environmental initiatives in pivoting	When describing how the business is adapting to the crisis, the SME leader explains new environmental actions put forward.			
COVID	Continuity	Based on the pre-COVID information we have on environmental actions put forward and the COVID interview, there is a continuity of actions done, nothing suggesting a shift of priorities and SMEE leader is committed to the same values as before.			
	Mainly stopped due to closing	The business is closed or mainly closed, greatly limiting their capacity to pursue their actions in environment.	*Thought: Most of the time thought, a business that is closed is better for the environment than when it's running with environmental actions		
	Set back on previous environmental actions	Some previous environmental actions doesn't have to be all of them)	are stopped because of the crisis (it		
	Shift focus	The business is developing something new, past environmental actions may continue, but environment is not the main focus in the reorientation.			