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Sustainability Innovation in Canadian Small Businesses: What We Need to Know

Sarah Burch

Key Points

- Canada has pledged to reduce its greenhouse gas (GHG) emissions by 30 percent below 2005 levels by 2030, and has developed a Pan-Canadian Framework on Clean Growth and Climate Change.
- Canada must seek out every opportunity to reduce GHG emissions while enhancing economic and environmental resilience.
- Small and medium-sized enterprises (SMEs) offer an untapped opportunity to spur innovation, reduce emissions, create and retain jobs in the clean energy sector, and build local prosperity.
- Better data on the Canadian small business sector is required to provide a deeper understanding of the organizational culture, structure, leadership, and capacity gaps that must be filled to accelerate progress on sustainability.

Introduction

In light of ongoing international negotiations on climate change, the announcement of the United Nations' Sustainable Development Goals and controversial climate change policy proposals at multiple levels in Canada, it is crucial to understand (and accelerate) sustainability innovation. In many cases, these innovations may originate in the small business sector, which is responsible for the majority of commercial GHG emissions (Aragón-Correa et al. 2008; Martín-Tapia, Aragón-Correa and Rueda-Manzanares 2010), while also being a key source of job creation and local prosperity. Although some data exists that sheds light on small business demographics, employee retention, and growth, much less is known about the nature of (and barriers to) sustainability innovation and entrepreneurship (especially in Canada). This policy brief examines what is already known about sustainability entrepreneurship in the SME sector, and elaborates on the gaps in knowledge that have stymied effective policy making. This argument is situated within the context of Canada's intentions to create a nationwide price on carbon, and points to the futility of GHG reduction targets or climate change policies that are set in the absence of evidence-based strategies to enhance entrepreneurship and innovation.

About the Author

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Sarah is a Canada Research Chair (Tier 2) in Sustainability Governance and Innovation, and assistant professor in the Department of Geography and Environmental Management, University of Waterloo, Canada. Through her research, writing and teaching, she explores transformative responses to climate change at the community scale, and innovative strategies for governing sustainability.

She is a coordinating lead author of the Earth System Governance Project's New Directions Initiative, which is creating the Science and Implementation Plan that will inform the research of an international network of more than 3,000 environmental governance scholars over the next 10 years. She was a coordinating lead author of the Second Assessment Report of the Urban Climate Change Research Network, *Climate Change and Cities*, and was a contributing author to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (winner of the Nobel Peace Prize in 2007). Sarah holds a Ph.D. in resource management and environmental studies from the University of British Columbia (2009), was a visiting research associate at the University of Oxford's Environmental Change Institute (2010-2013) and was awarded a Banting Fellowship for her work on sustainability innovation. Her most recent book is entitled *Understanding Climate Change: Science, Policy and Practice* (University of Toronto Press, 2014).

Canada's Climate Change Commitments: How to Get There from Here

On December 9, 2016, Canada's first ministers met to discuss, among other issues, the proposed Pan-Canadian Framework on Clean Growth and Climate Change. A cornerstone of the action plan (introduced by the Trudeau government several weeks prior) was a price on carbon: starting at only \$10/tonne in 2018 and rising to \$50/tonne by 2022. The plan allows each province or territory to devise its own strategy for applying this price, ranging from the revenue neutral carbon tax in British Columbia to the cap-and-trade system in Ontario and Quebec. A price on carbon is not the plan's only pillar, despite the flurry of protest and punditry it has triggered: the plan also promises to wean the country off coal-based electricity, revise building codes and accelerate the uptake of electric vehicles. In a communiqué issued by the first ministers on the day that the Pan-Canadian Framework was adopted, it was clearly noted that clean technology and a focus on innovation are central to the success of the plan, including the creation of new and better jobs in a more resilient economy.

With the notable exception of the premiers of Saskatchewan and Manitoba, all first ministers in Canadian provinces and territories signed on to the plan. A week before, the federal government made historic decisions on the future of oil and gas pipeline infrastructure in Canada, approving the Kinder Morgan pipeline from Alberta to Burnaby on British Columbia's south coast, but denying the Northern Gateway pipeline that would deliver diluted bitumen from the Athabasca oil sands in Alberta to Kitimat on British Columbia's north coast. While a chorus of scholars, activists and First Nations communities roared in objection to the news of Kinder Morgan's approval, others argued that it was the only decision that would preserve some of Prime Minister Justin Trudeau's political capital and create near-term jobs while still nudging the country in the general direction of decarbonization.

Despite these diverging views, two issues are clear: first, the increase in emissions associated

with the approval of the Kinder Morgan pipeline (the need for these pipelines is justified on the basis of expanded oil sands operations) will exacerbate the challenges for Canada as it attempts to reach the GHG emissions reduction targets set in Paris in 2015 at the twenty-first session of the Conference of the Parties to the United Nations Framework Convention on Climate Change. Second, this nearly CDN\$6.8 billion investment in fossil fuel infrastructure will create additional pressure to remain on a carbon-intensive pathway lest these assets become stranded.¹ These additional challenges suggest that ambitious steps must be taken to reduce emissions through all other remaining avenues. Building retrofits, enhancing public transit infrastructure and shifting homes away from natural gas will be central to these efforts. If a parallel goal, however, is to create new and better jobs in a resilient, carbon-neutral economy, then it will become increasingly important to understand and engage with the small business sector.

What We Know about SMEs and Sustainability²

SMEs in Canada employ 90.3 percent of workers in the private sector, and play a proportionally large role in job creation (relative to their larger counterparts) (Innovation, Science and Economic Development Canada 2016). SMEs also play a significant role in Canada's export profile: in 2013, for instance, Canada exported goods totalling \$420 billion, and \$106 billion of that came from SMEs (ibid.). Despite promising stories of social innovation and sustainability leadership, recent research suggests that the majority of SMEs have little interest in facilitating accelerated transitions toward environmental sustainability. Despite significant room for improvement, the business case for the implementation of sustainability-oriented changes in business

operations remains a significant challenge (Côté, Booth and Louis 2006; Luken and Navratil 2004).

In SMEs with sparse human resources and little room for financial miscalculation, this reluctance may be viewed as a result of the reactive nature of SMEs and their overall hesitancy to collaborate with agents of change (Cohen and Winn 2007), as well as the perception that it falls outside their role as a firm (Revell and Blackburn 2007). Consequentially, most existing research suggests infrequent participation by SMEs in transitions toward more holistically sustainable (environmental, social and economic) development pathways (Bradford and Fraser 2008; Brammer, Hoejmosé and Marchant 2012; Burch et al., 2013; Côté, Booth and Louis 2006). Even so, some studies suggest that most SMEs are adopting sustainability practices — recycling, increasing efficiency, reducing inputs such as paper needs, and sustainable purchasing — at least to some degree (Revell, Stokes and Chen 2010; Theyel and Hofmann 2012).

Profit creation is the primary strategic intent of SME owner-managers (Zuraidah Raja Mohd Rasi, Abdekhodae and Nagarajah 2014), underscoring the importance of realizing that, save for a few exceptional cases, the incorporation of sustainability improvements will typically occur as a result of the incentive of increased profit rather than environmental merit (Brammer, Hoejmosé and Marchant 2012; Clement and Hansen 2003; Friedman, Miles and Adams 2000; Moffat and Auer 2006; Senge et al. 2007). Indeed, it is difficult to make any budgetary decision on merits not explicitly related to revenue (Suh, Lee and Ha 2005), and participant SMEs in environmental programs have identified increasing their bottom line — either immediately or safeguarding it against future financial risks — as the foremost rationale for participation (Halila 2007; Tsai and Chou 2009). This calls attention to the role of government: a price on carbon, incentives for reduced fossil fuel consumption (such as electrification of vehicle fleets and building retrofits) and the use of the spectacular buying power associated with government contracts hold the potential to trigger significant change in this sector.

1 Pipeline infrastructure would become a stranded asset if it has not yet reached the end of its useful life, but becomes underutilized or obsolete due to reduced demand for fossil fuels.

2 The author would like to acknowledge the excellent research and intellectual support provided by Dustin Carey, especially with regard to his analysis of recent small business scholarship.

What We Don't Know about SMEs

The caricature of the reactive, conservative SME misses a key opportunity for engagement: is it possible that when some SMEs tackle sustainability, they can do it with greater agility, ambition and creativity than is possible in a larger firm shackled by complex organizational hierarchy and shareholder demands? Rather than dwelling on the evidence that SMEs give short shrift to sustainability, municipal, provincial and federal policy makers would benefit from a better understanding of the tools at their disposal that might build a business case for sustainability among SMEs while increasing the resilience and prosperity of Canadian communities.

Established, tested solutions can be shared both within and among sectors to overcome the reactive nature of SMEs and the skepticism with which they may view voluntary action to improve environmental performance (Bradford and Fraser 2008; Cohen and Winn 2007; Revell and Blackburn 2007). A significant barrier to engaging SMEs in sustainable transitions is their fear of doing things wrong (Roberts, Lawson and Nicholls 2006), which may be explained by the precarious financial position SMEs often occupy (Suh, Lee and Ha 2005). SMEs tend to rely on relevant examples of best practices showcasing traditional and proven solutions (Könnölä and Unruh 2007; Loorbach et al. 2010). Management systems and tool kits that are familiar to SMEs and that are perceived as easy to implement have shown higher degrees of participation (Johnson 2015).

There is little Canadian evidence, however, to support the development and application of strategies to build capacity and share best practices in the SME sector. While a variety of initiatives and projects have taken place that forge multi-sector partnerships to make progress on sustainability (Burch et al. 2013),³ the potential for such experiments to scale up — to a greater

number of businesses and a broader geographical swath of Canada — remains untapped.

Scholars and practitioners have a relatively good understanding of the resource, capacity and motivational barriers faced by some small businesses, but little is known about the internal characteristics of SMEs that might yield transformative outcomes: dramatic reductions in GHG emissions (and other sustainability metrics such as waste production, water consumption and so on) through technical or social innovations. Organizational culture, structure, technical/human capacity and leadership models all give rise to innovation, but in the context of Canada's decarbonization ambitions, a particular style of innovation is sought. Sustainability presents a constellation of challenges: it often requires holistic, long-term thinking in order to consider the ripple effects of decisions. For example, how can incentives for active transportation reduce health care costs, increase employee productivity and even minimize the burden on urban infrastructure by getting cars off the road? How can a compelling vision of the role that a company plays in sustainability improve employee retention and build the company's brand to entice new customers? More nuanced data around the process that SMEs follow as they explore and transition toward fundamentally more sustainable business models (such as b-corp, or benefit corporation, status, for instance — which certifies that a for-profit company has met rigorous standards of social and environmental performance as well as transparency) would support efforts at all levels of government to build a low-carbon economy in Canada.

Deeper insights into the value of partnerships between government, civil society (including environmental non-governmental organizations) and small businesses can help to overcome barriers to accelerated innovation on sustainability and the enhanced uptake of existing low-carbon solutions. Without a more coordinated, nuanced approach to the SME sector, a carbon price alone will be insufficient to transform this part of the Canadian economy.

³ See also the efforts of Sustainable Waterloo Region (www.sustainablewaterlooregion.ca) to help member businesses measure and reduce their environmental impact, as well as Sustainability CoLab (<http://sustainabilitycolab.org>), which supports organizations that provide sustainability solutions to businesses, among other network-oriented activities.

Policy Recommendations

Develop and implement a large sample-size survey of Canadian SMEs to understand motivations, barriers and transformative potential. Current research into the responsibility that SMEs feel in relation to making progress on sustainability generally captures only a very small slice of existing Canadian small businesses. More robust data is needed to build evidence-based policy that appropriately targets the most significant barriers to change, and gain understanding of the transformative potential of this sector. Models to follow include the target-oriented approach of Sustainability CoLab and its members, and Sustainable Waterloo Region's business and sustainability survey.

A three-pronged strategy of pricing carbon, developing greater incentives for energy-efficient retrofits (or other sustainability-oriented changes) and using the purchasing power of the government to support Canadian businesses may be the most effective way forward for government in Canada. While not all SMEs take action on sustainability based purely on the prospect of increased profit (by increasing sales or reducing costs), the government can play a key role in building the business case for SMEs. Setting aside public procurement budgets for SMEs may spur innovation at particularly critical times in the growth of these companies, encouraging larger firms to establish agreements with the most innovative among them (Bak 2016).

Deepen and scale up efforts to share best practices with SMEs, including evidence for employee retention, enhanced worker productivity and minimal payback periods associated with GHG reductions. A provincial plan alone is insufficient to yield pervasive and accelerated decarbonization. Without explicitly considering the implications of federal decisions, and endowing municipalities with greater resources to address the emissions over which they have jurisdiction, it is unlikely that Ontario's long-term target of an 80 percent reduction in GHGs by 2050 will be reached. For example, Ontario's cap-and-trade system must be woven into any federal effort to price carbon, and transportation and infrastructure decisions must align with — and enhance — municipal land-use plans. SMEs may be able to pursue sustainability aims as well as profit growth by selling carbon offsets into the

cap. Furthermore, infrastructure procurement criteria must incorporate full life-cycle costs, which now include a rising price on carbon.

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