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Letter from the Editors

THIS ISSUE OF IJCAM features five papers. and a book review. The issue starts with a paper by Olive McCarthy, Centre for Co-operative Studies, University College Cork. McCarthy's paper focuses on social impact measurement and reporting for Irish credit unions. The second paper, by Peter Davis, University of Leicester, examines the original co-operative purpose from the perspective of co-operative and trade union organisational development for social and economic transformation. The next three papers were authored by graduates of Saint Mary's University's Masters of Management in Co-operatives and Credit Unions. The papers are based on their capstone research projects. Jennifer Tan, Senior Consultant with Vancity Investment Bank in Vancouver, Canada examines environmental sustainability implementation at Vancouver City Savings Credit Union. Ashley Grewal, Community Investment Portfolio Manager at Vancity Credit Union, analyzed how lessons from the San Francisco Bay Area and Finland could be applied to growing British Columbia's co-operative economy. The final paper by Andrew Gansenberg, Project Manager at New Frameworks, Waterbury, Vermont, evaluates the ability of co-operatives to facilitate a shift in the construction industry, changing it from a major source of climate change into a source of climate regeneration.

We are hoping to make our next issue a special issue devoted to the impact and lessons of the Covid pandemic on the poorest communities and the co-operative and credit union response during the pandemic and going forward, given that, for many parts of the world, there is, at the time of publication, no end in sight.

Upcoming Calls for Papers

Special Issue – Impact of Covid-19 on co-operatives and credit unions

- Submission deadline – April 30, 2022

General Call for papers on co-operative accounting and management topics

- Submission deadline – August 31, 2022

Papers related to management topics should be submitted to Peter Davis: pd8@leicester.ac.uk and those focusing on accounting and reporting should be submitted to Daphne Rixon: daphne.rixon@smu.ca.

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Social impact measurement and reporting for Irish credit unions

Olive McCarthy, Centre for Co-operative Studies, University College Cork, Ireland

Abstract: In a context of almost no formalised or systematic social impact reporting by credit unions in Ireland, the aim of this paper is to explore how credit unions in Ireland conceptualise social impact, as manifested by the views of 23 credit union managers and 11 other key informants. The extent to which Irish credit unions currently report on social activities and impact is also examined through a thematic analysis of credit union annual reports and websites. The paper also aims to examine the barriers to engagement in social impact measurement and reporting and the supports needed by credit unions to engage.

The research finds that there is scope for greater understanding of the concept of social impact, how it can be measured and the importance of reporting it to stakeholders. Despite a strong appetite for social impact measurement and reporting, it is not currently prioritised and credit unions are reticent about taking the first steps for reasons of time, resources, capacity, knowledge, and mindset. Many credit unions already report on activities with a social impact, but do not report on the outcomes or impact. Supports for a standardised approach to social impact measurement would be welcomed by the credit unions. The value in social impact measurement and reporting is seen mainly in helping credit unions to demonstrate the credit union difference.

Olive McCarthy is director of the Centre for Co-operative Studies at University College Cork, Ireland. She has conducted research on co-operatives across many different sectors and is particularly interested in credit unions. She is co-director of the MSc in Co-operative and Social Enterprise and the MSc in Co-operatives, Agri-Food and Sustainable Development.

Keywords: credit unions, social impact

Introduction

The Irish credit union landscape has changed almost beyond recognition in the past 10 years. The onset of economic recession, followed by wide-ranging changes to credit union legislation and regulation, have resulted in considerable consolidation in the numbers of credit unions and greatly expanded obligations on credit unions to meet prudential regulatory requirements. Many of these requirements are related to financial metrics modelled on those imposed on the banking sector, notwithstanding some modification to recognise the significant differences between how conventional banks and co-operative credit unions operate. In a recent move by the Central Bank of Ireland to increase levies payable by credit unions to fund the costs of regulation, credit union representative bodies lobbied strongly for special exemptions for credit unions on the basis of their social impact. While it is unquestionable that credit unions have significant social (and economic) impact, only one Irish credit union has ever measured and reported its social impact formally and systematically, despite the wide availability of social impact measurement tools. This makes it more difficult to evidence impact when arguing for preferential treatment by legislators, regulators and policy-makers or, indeed, to be fully accountable to the membership.

There are no obligations on Irish credit unions by regulators or other resource holders, such as representative bodies or credit union members, to measure social impact, leading to a seeming apathy or a lack of prioritisation around social impact measurement. Just as Rixon (2013a) found in her study of North American credit unions, the focus is primarily on financial measures of performance.

One credit union in Ireland has just recently (2020[1]) employed the services of an external consultant to undertake a social impact analysis using the Social Return on Investment (SROI) approach often used in the non-profit and social enterprise sectors. This is the first credit union to have openly acknowledged the importance of measuring its social

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impact and to have begun to measure it. Inspired by this credit union, one of the Irish credit union representative bodies is currently devising a strategy around social reporting for its member credit unions but this is embryonic.

In a context of almost no formalised or systematic social impact reporting by credit unions in Ireland, the aim of this paper is to explore how credit unions in Ireland conceptualise social impact, as manifested by the views of their managers and other key informants, and the extent to which Irish credit unions currently report on social activities and impact. It also aims to examine the barriers to engagement and the supports needed to engage[2].

Conceptualising social impact

Discussion on the measurement and reporting of social impact has become increasingly popular in academic studies (Grieco et al., 2015; Rawhouser et al., 2017; Ricciuti & Calo, 2018). A wide range of terms to describe the reporting of aspects of non-financial performance are evident in the relevant academic literature including, but not limited to, social responsibility, social impact, social value, sustainability reporting, social performance, social returns, social return on investment, social accounting, non-financial performance, corporate social responsibility (CSR), and environmental performance. For the purposes of this paper, the focus is on social impact. Drawing on Stephan et al. (2016), Rawhouser et al. (2017) define social impact as the *"beneficial outcomes resulting from prosocial behavior that are enjoyed by the intended targets of that behavior and/or by the broader community of individuals, organizations, and/or environments"* (p.83). Or put more simply, it is *"the social value and impact produced by the activities or operations of any for-profit or non-profit organisation"* (Noya, 2015, p. 6). Rawhouser et al. (2017) distinguish between the measurement of *activities* that lead to social impact outcomes and the measurement of the *outcomes* themselves. Interestingly, Barnett et al.'s (2020) review of the wide-ranging literature on CSR found that the focus of social impact studies has stopped short of measuring outcomes, focussing instead on activities. This is, perhaps, because activities are more measurable than outcomes.

There has also been significant growth in academic interest in social dimensions of impact measurement for co-operatives, including CSR reporting, sustainability reporting, social accounting and social impact reporting (for example Brown & Wing Wong, 2012; Rixon, 2013b; Bollas-Araya et al., 2014; Brown et al., 2015; Owen et al., 2015; Seguí-Mas et al., 2015; Bollas-Araya et al., 2016; Duguid & Balkan, 2016; Stocki & Hough, 2016; Tuominin et al., 2017 and Duguid, 2017). Academic interest in various forms of social reporting for credit unions is less evident, not least because so few credit unions, albeit with some very notable exceptions, engage in formalised and systematic non-financial or social reporting. McGrath (2008) examines social accounting for credit unions in Australia. Rixon (2013a) examines what credit unions in North America use as KPIs while Nembhard & Ketilson (2015) and Ketilson et al (2015) identify and test possible impact indicators for credit unions. Turley-McIntyre et al. (2016) include credit unions in their study of sustainability reporting in Canadian financial institutions, Methuva et al. (2017) examine social and environmental disclosures in credit unions in Kenya, Kleanthous et al. (2019) examine adherence to co-operative principles by credit unions in Cyprus and Armaza (2020) reports on impact through credit union giving in the US. McGinn et al. (2020) offer a detailed toolkit for social impact measurement by credit unions in the UK but practice in the UK, which has only begun to emerge, adopts differing approaches. What is clear is that there are many and varied approaches to the measurement of non-financial aspects of performance in credit unions and the concept of social impact has not been rigorously defined for credit unions nor agreed measures put in place.

Social impact reporting for legitimacy and accountability – the co-operative difference

Grieco et al. (2014) state that, while organisations might see and understand their own social impact, there is benefit in measuring that impact in more detail to facilitate continued access to resources and improved internal management. Studies show that the way some organisations behave in relation to social impact measurement is often strongly related to the power of those outside the organisation (Ebrahim, 2003; O'Dwyer & Unerman, 2007, as cited by Arvidson & Lyon, 2014). In countries such as Denmark, France, Norway, Sweden, Spain and Malaysia, large companies are mandated to report on corporate social responsibility (Pedersen, 2013). In the UK, social purpose organisations face more pressure under government social policies to engage in social auditing processes to improve legitimacy and transparency and to compete for resources (Arvidson & Lyon, 2014). Measurement of impact by organisations dependent on donor funding is extremely useful for funders (Grieco, 2015).

Legitimacy theory assumes that organisations are bound by social contracts and expected to espouse societal values to access resources, gain approval of their aims and place in society and be guaranteed of survival (for example, Suchman 1995; Schiopoiu & Popa, 2013; Mathuva, 2017). Organisations that are seen to have legitimacy are said to find it easier to access resources and gain collaboration from stakeholders and are therefore more likely to succeed (Stephan et al., 2016). As Stephan et al. (2016) state, different organisations face different legitimacy challenges such as demonstrating managerial competence (Kaufman et al., 2006) or social concerns (Plambeck & Denend, 2008). In measuring social impact, Gibbon and Dey (2011) urge organisations to be clear about the purpose, that is, to make an external business case to funders or investors or to enhance accountability to stakeholders.

Accountability to stakeholders is a key feature of co-ops and credit unions (Hicks et al., 2007; Costa et al., 2019). Accountability reporting can be used to explain why co-operatives have acted in a particular way and why it is legitimate to continue doing so (Rousselière & Vezona, 2009). It can also be used to "*reinforce the closeness"* between a co-operative and its members, building the relational and emotional aspects of membership (Costa et al., 2019, p. 242). Brown et al. (2015) state that "*the overarching need for a clear focus on, and measurement of, co-operative functioning and impact arises from its potential to effect change in the dominant economic model, address the root causes of socio-economic marginalization, and illustrate the social and ecological achievements of co-operative enterprises"* (p. 6). Tuominen et al. (2017) state that consumer co-operatives have the potential to be socially responsible organisations because of their co-operative purpose, values and principles. However, they also found that this co-operative purpose does not lead automatically to being socially responsible and that it often depends on the interest shown by management and board members in such issues. Pedersen (2013) posits that, even companies in Denmark that have a government-imposed obligation to report on corporate social responsibility, often fail to do so due to a lack of awareness, resource limitations, misinterpretations, and practical difficulties.

Barriers to and supports for social impact reporting

The challenges of measuring and valuing the social impact of organisations are widely recognised (Phillips & Johnson, 2021) but the barriers to engagement in social impact reporting do not appear to be widely documented. As alluded to earlier in the case of credit unions, there is a lack of a standardised approach to social impact measurement and reporting. More generally, standards are largely underdeveloped, both theoretically and empirically (Gibbon & Dey 2011; Costa & Pesci, 2016; Rawhouser et al., 2017). In their studies of non-profit organisations, including social enterprises and charities, Ní Ógáin et al. (2012) and Polonsky et al. (2016) cite the lack of measures and benchmarks as a fundamental barrier but the high costs involved, the lack of skills and expertise to engage, and the challenges in data gathering were also found to be significant barriers. Studying Italian foundations, Ricciuti & Calo (2018) found the lack of staff with relevant skills and capabilities to be a barrier while the time commitment involved in performing social impact measurement emerged in studies of social enterprises (Barraket & Yousefpour, 2013; Grieco et al., 2015). Ricciuti & Calo (2018) suggest that increased collaboration and co-operation between foundations as a learning network would support organisations to upskill in social impact measurement and reporting. In overcoming the barriers, Barraket and Yousefpour (2013) state that understanding the purpose of social impact measurement is important for organisations. This includes a focus on the intended beneficiaries and how the use of impact evidence translates into action, which is a function of an engaged management. They also highlight the importance of 'social impact measurement readiness' in organisations, '*if such activities are to add value to organisational practice*' (Barraket & Yousefpour, 2013, p. 456). Gibbon and Dey (2011), citing Pearce and Kay (2008), state that social impact reporting, in order to have greater potential, must emerge and be owned by the organisation itself and driven by its own internal reporting requirements. This paper seeks to understand the barriers facing credit unions which have not been documented and the supports needed to overcome those barriers.

Methodology

This is an inductive study, taking observations and seeking patterns in the data collected to draw conclusions (Woo et al., 2017). The research sought to gather views by managers and key informants involved with credit unions on social impact measurement and reporting, their views on the barriers facing credit unions in engaging and the supports they thought would help credit unions to get started. An unstructured conversational approach was used rather than a formal interview, allowing both the researcher and the participants to engage in open discussion of ideas and concepts as they were generated. Over late Spring and early Summer 2020, telephone conversations were conducted with personnel in a selection of 23 credit unions spread across the Republic of Ireland. Most (18) of these personnel were chief executives (CEOs). Credit unions were selected using existing contacts and snowballing. Credit unions were reasonably spread across asset sizes, with eight holding assets in excess of €100m (classed as large), nine holding €40-100m in assets (classed as medium-sized) and the remainder (six) holding less than €40m in assets (classed as small). Eleven of those who took part in the conversations were female and 12 were male. All participants were asked to provide a copy of their credit union's most recent (2019) annual report. Nineteen usable annual reports were provided and were used to identify and observe how credit unions currently report social aspects of their activities. The website of each of the 23 credit unions was also examined with a similar aim. In addition to the 23 credit unions, 11 key informants were also consulted for their views. These included social performance measurement experts, researchers, policy-makers and credit union representatives.

A thematic analysis of the contents of the conversations was conducted under three domains of enquiry: social impact concepts, barriers and supports. To maintain anonymity, neither the identities nor affiliated organisations of those who took part in the research are given although where relevant, a distinction is made between participants directly involved in different sized credit unions and other key informants. Thematic content analysis of the annual reports and websites was conducted to find evidence of the extent to which credit unions currently report on aspects of their social activities or impact.

Findings

Current reporting of social impact in annual reports

As referenced earlier, one credit union in the study had employed a consultant to conduct a Social Return on Investment assessment. None of the other 22 credit unions had engaged in any form of formal social impact measurement or reporting, reflective of the entire credit union sector in Ireland.

Nineteen credit unions provided their annual report which was examined to find evidence of the extent to which credit unions currently report on aspects of their social activities or impact (see Table One). The websites of all 23 credit unions were also perused. While this analysis is not intended to be exhaustive, it gives some indicative insights into the extent to which some activities with social impact are currently reported. The approach to the design and presentation of information in the annual reports varied greatly between credit unions. The depth of reporting also varied. The statutory financial statements (including statements of responsibility) and notes to the accounts dominated most annual reports, varying in length from 11 pages to 35 pages with an average length of 23 pages. For 13 of the 19 credit unions, the financial statements comprised half or more of the total number of pages in the report. Additional pages were devoted to the agenda of the AGM, standing orders and rule changes. Seven annual reports published clear graphics to give highlights of the credit union's performance during the year in terms of membership growth, loans issued, surplus, asset growth and so on. This was highly accessible for those who might not otherwise read or be able to interpret the financial statements. Three main thematic areas emerged in the reporting: sponsorship/donations, co-operative governance and member services.

Sponsorship/donations

Sixteen of 19 credit unions reported a figure for donations and/or sponsorship in their management expenses (two of the remaining three were industrial based rather than community-based credit unions). Only five credit unions reported this figure elsewhere in the report which meant that members of most credit unions would have to seek out the figure in the notes to the accounts. Three of the 16 that gave a figure added it with a figure for promotions and advertising so it wasn't clear how much was given in donations or sponsorship. Ten of the 16 credit unions devoted space to discussing this sponsorship and how it helped the community. One credit union listed 90 different organisations it had made donations to during the year and another mentioned a figure of 60 organisations. Only six of the ten reports that discussed sponsorship in detail published pictures of presentations and community groups, although an additional three reports published pictures with no discussion.

Co-operative governance

Eight of the 19 reports examined devoted space to a report from a committee engaged in activities with an obvious community impact. These included a Community Engagement Committee, a Community Development Committee, a Promotion and Development Committee, a Community Responsibility Report and a Member Communications

Report. All credit unions listed their board members, committee members and staff. One credit union included short profiles of the directors. Only nine of the 19 credit unions overtly mentioned their ethos, core values or concern for the community or the fact that they were co-operative or not for profit and only seven called out their voluntary governance or sought volunteers to get involved. This was despite the inclusion of the nomination committee reports, most of which made no mention of volunteerism. Two credit unions mentioned a youth committee but there was no report included from the committee. Two credit unions mentioned staff training.

Services

All credit unions mentioned the core business of lending but some gave considerably more detail than others and highlighted the different loan types, new loan offerings, numbers of loans issued, lending growth, numbers of loans written off and bad debts recovered. Three credit unions mentioned personal micro-credit loans (for those on social welfare payments) although more than three were currently offering these loans. Involvement with schools featured strongly. No report mentioned community loans although, in conversation, six credit unions said they currently had community loans on the books when asked. Only six credit unions mentioned the winning of the national award by credit unions for 'best customer experience' in Ireland. A listing of Key Performance Indicators (KPIs) was observed in some reports. These were wholly confined to financial indicators such as total assets and regulatory capital.

Table 1: Thematic Content Analysis of Annual Reports, n=19

Thematic area	**Credit union reporting**
Sponsorship/donations	16 gave a figure in the financial accounts 5 gave a figure elsewhere in the report 10 discussed how it helped the community 6 discussed and gave pictures 3 gave pictures but with no discussion
Co-operative governance	8 had reports from committees engaged in community activities 19 listed the board members, committee members and staff 1 gave a profile of the board members 2 mentioned a youth committee 2 mentioned staff training 7 mentioned voluntary governance or sought volunteers 9 mentioned ethos and core values
Services	19 mentioned saving 19 mentioned lending 3 mentioned personal micro-credit loans 0 mentioned community loans

With a small number of exceptions, the extent to which social impact was reported was found to be weak overall and somewhat haphazard, but what was reported well was hugely powerful and demonstrated the importance of the credit union to the community. It was clear that even small changes, even without a formal social impact measurement and reporting mechanism in place, would potentially make a significant difference to many credit unions' level of social reporting and might enable credit unions, over time, to begin to embed social impact measurement and reporting practice into their overall strategy.

Current reporting of social impact on websites

The websites of all 23 credit unions were of a very high quality All contained detailed information about the credit union services on offer and left an impression of a vibrant community-based organisation. Terms such as 'co-operative', 'member-owned', 'not for profit', 'community', 'local', 'financial well-being' were in abundance across all websites. The websites appeared to be excellent sources of information for members and non-members but did not seem to be used to report on impact to any noticeable extent other than the inclusion of the annual report, which was not contained on all sites and was sometimes difficult to find even when it was. Eight credit unions mentioned the availability of financial advice. Five credit unions had a distinct tab named 'community' which gave details of sponsorship opportunities, educational programmes, financial advice and so on. Eight credit unions had an online application for sponsorship but only three credit unions gave details of the organisations they had been supporting.

While this is not an exhaustive analysis of what might be deemed to be activities with a social impact, it does offer some insight on the extent to which there is room for improvement in the current levels of social reporting in annual reports and on websites. It also demonstrates that credit unions focus on activities rather than impacts.

Conceptualisations of social impact measurement and reporting

The conceptualisation by credit union managers of social impact was at a very early stage with many struggling to define what it meant. Answers to the question of how they defined social impact were broad-ranging but seemed to stem mainly from the ethos of credit unions, their local embeddedness and the kinds of services offered, all of which were seen to make a significant difference in their members' lives. However, there was a clear sense that participants felt their members and other stakeholders didn't always know the extent of their credit union's social activities or impact. This was not surprising given the level of reporting on such activities that was evident in the annual reports and websites.

> *There's a huge value in measuring social impact - people don't know what credit unions do on the ground. We are giving out substantial money locally. No local branch of a bank is doing that. CEO, medium sized credit union*

> *Credit unions have been doing things that have social impact without being told to do them, such as lending to the unemployed or to people on lower thresholds of income or those starting a small business that wouldn't generate income for a few months. Credit unions have always done it - that's what we do. We know it makes a difference - people tell us all the time. Overall, credit unions should be trying to focus on it. CEO, small credit union*

> *We haven't done anything on social impact measurement. We need to embed it into what we do. We need to be telling people what our social impact is. CEO, large credit union*

Twenty-two of 23 credit union participants were positive about social impact measurement and felt it was something credit unions needed to embed into their practice. Key stakeholders were also highly supportive. A clear consensus on what the social impact of credit unions is, however, didn't emerge. A sentiment that underlined much of the conversations was what the Central Bank of Ireland (Central Bank) required of credit unions and how, understandably, this took priority over everything else. In discussing the shape social impact reporting might take, many participants struggled to discuss it with any sense of freedom or autonomy, referring back again to what the Central Bank would be interested in over and above any other stakeholder. Some commented that if the Central Bank required credit unions to measure social impact, they would be more likely to engage, but they wouldn't otherwise have the capacity to prioritise social impact measurement and reporting. For these credit unions, the impetus to engage in social impact would have to come from actors outside the organisation.

Some participants made suggestions about what might be measured. The focus was very clearly on activities rather than outcomes. These included sponsorship and donations, lending including lending to distressed borrowers, personal micro-credit loans, numbers of small loans, community loans, education loans, office location, member benefits including savings accounts and insurance, volunteerism and opportunities to volunteer, member footfall and community loans.

Some possible misconceptions about social impact reporting were also evident. Some saw social impact measurement as being in the marketing domain, rather than an embedded part of strategy. There was also a misconception that it is difficult to measure or that no one would be interested in measures of social impact. Few saw it as an opportunity to revisit the credit unions' objectives and to contribute to improved behaviours, activities or outcomes.

> *We should do it but haven't cracked it. It's marketing activity really. It's really hard to measure. It's complex. We need to put metrics on it but it's difficult. We need to be creative. What's the return for it or is it simply something nice to do? It's not tangible so it gets pushed to one side. CEO, large credit union*

> *What separates us? Member service, authenticity, rootedness, ethical service. But how do you measure it? CEO, medium-sized credit union*

> *It is a hard thing to measure. It's not that we can't but no one is interested in our measurements. CEO, large credit union.*

There was a sense that social impact measurement was best done at a national level only or across a larger number of credit unions with value in being able to collate impact across a larger number of credit unions.

A growing appetite for social impact measurement by the majority of credit unions was palpable, both as a way of achieving legitimacy with members and non-members, but also as a way, for some, of improving impact. Demonstrating and building upon the credit union difference as an important asset and a way to rebalance the social and economic objectives was seen as important. Demonstrating how credit unions differ from conventional banks, as a competitive advantage, was a fundamental value that could be derived from social impact measurement and reporting.

> *We have impact and necessity in the community. We need to rebalance the conversation around credit unions and what they're all about. We are not banks. Credit unions are guilty of not providing evidence to back up their position. We need to redirect the narrative around credit unions. CEO, small credit union*

> *We are in an interesting position because the credit union difference is so tangible. Our interest rates aren't always as competitive as those of banks so we need to give people a reason to choose credit unions. We need to reach people with a different story. The credit union is there to deliver better solutions and is not in the service of commercial goals. Marketing officer, large credit union*

> *This is so fundamental that we have to do it for the survival of the movement. People are doing a rethink on globalisation. For survival, we have to think more locally. Nothing is more sustainable than credit unions circulating resources again and again. Credit union key informant*

For some credit union participants, measuring social impact was seen as an opportunity – or indeed, currently a missed opportunity – to prove how credit unions are different. This difference was viewed as an important competitive advantage and as a way to draw more young people to the concept of credit unions.

> *We use statements like 'we're different' all the time but we have no details to back it up. We're doing everything we can. This is about our competitive advantage and we need to be singing from the same hymn sheet. CEO, small credit union*

> *It might resonate with some young people. We could use it as a competitive advantage. CEO, medium-sized credit union*

> *We have our own niche and ethos and need to capitalise on this. Young people don't like the idea of the big pillar bank. We need to do more - we're not developing it enough. We're behind the door almost apologising. People are looking for alternatives. CEO, medium sized credit union*

Barriers to social impact measurement and reporting

Given the clear desire shown by participants for social impact measurement and reporting by their credit unions, and the fact that only one has measured its social impact formally, the barriers to engagement were then explored. Many saw the need for commercial viability, and more particularly, growing the loan book, as a greater priority for now. Measuring social impact was not on the current agenda and was not a feature of strategic planning. One credit union CEO described it as a *"nice to do"* but not as a strategic priority for his credit union currently.

> *Social impact measurement is not something I want to do. I am at the pin of my collar at the moment because our credit union is so tightly resourced. We are doing it, just not measuring it. CEO, small credit union*

> *In the current climate, sustainability and survival is the focus. Social impact is being swept under the rug for the time-being as we are looking at commercial viability. It's not no. 1 on our list of priorities. We hope there is social impact but we have no deliberate policy. CEO, medium-sized credit union*

A lack of time or resources was the most cited barrier with 9 participants referring to a lack of time to engage, a lack of personnel to take on the work involved, and the potentially high perceived costs of engagement.

> *At the moment we are running fast to stand still - there's so much pressure on credit unions. It's not on our radar, we're so tied up. CEO, small credit union*

> *It's a question of resources - so few hands to do so much. And it's a question of cost. CEO, medium-sized credit union*

> *Capacity is the main barrier. It's not seen as part of the core business. There is a lack of understanding that it could complement our core business and demonstrate value to stakeholders. CEO, large credit union*

Six participants cited a lack of knowledge or skills to engage in social impact measurement and reporting as a barrier. Despite feeling it would be useful to engage, there was a reluctance to get started as credit unions didn't know how to begin. Some credit union participants said they would be happy to provide the relevant data 'to someone else' if social impact measurement were being carried out across a larger number of credit unions. In fact, some pointed out that a local exercise might not be as beneficial as a regional or national social impact exercise. Only one participant suggested that they would need to consult their members on what should be measured.

> *We don't know where to start. We'd have to sit down and think it through - maybe ask our members. We haven't put our heads into it, but I'm not saying it's not very important. CEO, small credit union*

> *I wouldn't know where to begin so I wouldn't begin. If social impact measurement was identified as an action in the strategic plan, it would be the action that wouldn't be done. This is due to pressure of time and expertise. I don't know what is involved even though it's always seen as a good thing. CEO, medium sized credit union*

> *We don't know how to do it. We probably would do it if there was a template. CEO, large credit union*

Five participants said that their board or their management had simply not considered measuring the social impact of their credit unions either because they were busy with other priorities or it hadn't been raised or discussed.

> *Our directors are not business minded - they're not thinking that way. They are happy that the community knows enough even though they don't. CEO, small credit union*

> *It wouldn't have crossed my mind to measure social impact. It would be of strategic advantage for the credit union to do it as much as anything else. CEO, medium sized credit union*

Three participants suggested that it was not in the nature of credit unions to report on their positive social impact.

Supports needed

Finally, participants were asked what supports they would need to engage in social impact measurement and reporting. Eighteen of the 23 credit union participants made suggestions which mainly revolved around having a template or a set of agreed measures and receiving support or leadership from outside their credit union to help them engage. Sometimes, these two suggestions overlapped. Credit unions were clear that they needed a template or a list of qualitative and quantitative indicators that they could measure to help them to get started. One participant saw this as an investment that would support both financial and social performance. The focus was very much on having this provided to them rather than on developing it themselves or in conjunction with their members and other stakeholders. A sense that support or help from outside the individual credit union was needed emerged strongly. There was a clear focus on this being much more than an individual credit union initiative with a tangible reluctance by credit unions to develop their own approach. Credit unions were seeking leadership from outside to drive the process. One credit union was focussed on what would interest the Central Bank in terms of measures.

> *We need a template to do it and to know where to start - a step by step guide. Deputy CEO, medium sized credit union*

> *We need a template or something that doesn't take a huge amount of time - something simple that could evolve over time looking at the credit union difference. This stuff can help the bottom line - it's not necessarily a cost. CEO, medium sized credit union*

> *We need concrete measures that are easy to gather data on. These will be both qualitative and quantitative. There are plenty of anecdotal stories, that 'tear at the heart strings' but the Central Bank would find the quantitative measures more important. CEO large credit union*

> *We need outside support (from whoever that is) to undertake social impact measurement and to do it on our behalf. We are at the starting blocks on this. It also needs to be done consistently so we're all benchmarked. CEO, medium sized credit union*

> *We need leadership. We need someone nationally to drive on it. We don't have the time. CEO, large credit union*

These suggestions may certainly help to overcome the two main identified barriers of lack of time, resources and capacity and lack of knowledge of how to measure social impact. It is likely that, with the availability of such supports, the other identified barriers, which both centre around ‘how credit unions think’, may lessen over time. A very strong sense that measures that could be used and collated across a large number of credit unions emerged clearly. This was viewed as having far more relevance, efficiency and potential effectiveness than credit unions operating alone. However, while that might be easier, in one sense, for some credit unions, it moves away from the fundamental concept of social reporting and measurement being an embedded part of the credit union’s strategy and the need to strive for continuous improvement across agreed indicators of social impact.

Discussion and conclusions

A growing appetite for social impact measurement and reporting by credit unions in Ireland is evident and a strong appreciation of the need to articulate the credit union difference emerges in the research. We have seen from the literature that understanding the purpose of social impact measurement and reporting and having a board or managers interested in engaging and owning the process are fundamental prerequisites to ‘readiness’. Legitimacy challenges that emerged included a perceived need to demonstrate the credit union difference more clearly, particularly vis à-vis conventional banks, and a perceived need to rebalance the social and economic objectives of credit unions.

Credit unions see the value of measuring and reporting their social impact and are enthusiastic about the opportunities this presents to inform their stakeholders and improve the service to their members and wider community, in line with their ethos. There is scope for greater understanding of the concept of social impact, how it can be measured and the importance of reporting it to stakeholders. Despite strong positive feelings towards the need for social impact measurement and reporting by the credit union managers and key informants consulted in this research, it is not currently prioritised and credit unions are reticent about taking the first steps due to barriers posed by time, resources, capacity, knowledge, bashfulness and mindset. Most credit unions feel overwhelmed at the thought and don't know where to start. Most credit unions report aspects of their social activities and impact already but not in any systematic way and without clear benchmarks or measures. There is a significant and relatively straightforward opportunity to embed this existing social impact more formally as a part of credit union strategy and to enhance and formalise the way it is measured and reported to members and other key stakeholders.

A clear preference for a simplified approach to formal social impact measurement and reporting, possibly using standardised indicators that would work for all credit unions, at least initially, emerged. Guidance, support and engagement from those external to individual credit unions, but with a strong relationship to and understanding of credit unions, such as trade and representative bodies, policy bodies, regulators and social impact experts, would appear to be strongly welcome and would help to overcome many of the barriers preventing credit unions from engaging. A simple suggested template or suggested indicators would help to stimulate credit unions to begin to engage and to overcome the barriers. However, credit unions need to be wary of what Nicholls (2009) describes as a top down versus bottom up approach to social impact measurement, where the latter engages greater "stakeholder engagement in designing the reporting practices that affect them" (p. 757). Credit unions need to take some time themselves to tease out why they want to engage in social impact measurement and reporting. Why is it important to the credit union? Who are their stakeholders and why is social impact important to them? A clear understanding of who this is for will shape what the credit union wants to measure. Involving the various stakeholders, particularly the members, in this process will help to ensure the credit union is measuring and reporting on what is important to them. There is much to commend a co-ordinated approach across credit unions for reasons of easy collation and reporting of impact data at a macro level. However, credit unions must start at the level of their own credit union first in understanding the benefits.

This paper narrows the gap on our knowledge of social impact reporting and measurement for credit unions. We see that, for many credit unions, social impact measurement and reporting is viewed as a luxury that they cannot afford. However, it is likely over time that it will become a necessity as credit unions continue to seek legitimacy from their members and other stakeholders. Given the current lack of a standardised approach both nationally and internationally, it is possible that endeavours in Ireland to develop standardised indicators of credit union social impact could support efforts in other countries to measure credit union social impact. The wonderful possibilities posed by having global standardised measures for credit unions await.

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Notes

[1] https://www.donorecu.ie/images/library/documents/27022020-124054.pdf

[2] This paper is based on an earlier discussion document produced by the Centre for Community Finance Europe:

McCarthy O. (2020) Credit union social impact measurement and reporting: realising the potential https://cfcfe.eu/wp-content/uploads/2021/02/202011_CFCFE22_Social_Impact_Realising_Potential.pdf

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Recovering the Original Co-operative Purpose. Co-operative and Trade Union Organisational Development for Social and Economic Transformation

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Abstract: This paper contributes to *Applied Development Economics* and *Labour Market Theory* retrieving Adam Smith's Labour Theory of Value applied by the English Labour Economists of the 1820s to 1840s. The paper seeks to challenge the accepted *Economic and Social History* of the British Consumer Co-operative Movement as having its origin in the Rochdale Co-operative Society of 1844. The author argues that the emergence of Consumer Co-operation was a later development of the 1860s that was divisive at the time and distracted attention away from the original co-operative agenda. The paper brings out the conflicting approaches at these two stages in Co-operative history. Davis argues the Labour Theory of Value combined with incremental capital accumulation through gifting and co-operative ownership of businesses were originally seen as key tools for *capital accumulation* by the working classes but were replaced by an over-emphasis on the distribution of the surplus and a divisive argument as to whom the surplus rightfully belonged. He argues this was a mistaken wrong turn for the whole co-operative and wider labour movement - workers and consumers alike and develops a proposal for a modern version of the English Labour Economists approach to the challenges of the contemporary labour market.

Davis' challenge to the mainstream understanding of the UK co-operative story is not just a matter for historians. He suggests this subversion and reformulation of the co-operative project explains why today an obvious and tried strategy for labour market intervention is still being ignored by the overwhelming majority of trade unions and co-operatives who remain largely entrenched in their separate silos rather than acknowledging their common interests and governance models.

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Keywords: Co-operatives, Co-operative History, Development Economics, Employment, English Labour Economists, Globalisation, Labour Theory of Value, Inclusive Partnership, Sustainability, Trade Unions

1. Introduction. The creation of a 'reserve army' of dependent wage workers, then and now.

The modern era commenced with the Agricultural Revolution marked in Britain by the violent Highland Clearances and the taxation driven Enclosure Movement that drove the small holder into the labour market (Cole and Filson, 1951, p. 1). These or similar processes have, in one form or another, continued and are being replicated today in China and all over the world as people are driven by poverty or state violence into the cities. Without this class of wage dependent workers, the Industrial Revolution could not have happened. The early epoch of industrialisation was characterised by repressive legislation, the displacement of labour by technology, and the liberalisation of the labour market. By 1814 employment protection was virtually eliminated in the UK by the repeal of the clauses on wage and apprenticeship regulation in the Statute of Artificers (Cole and Filson, 1951, pp.84-85). This created a class of workers whose level of wages was determined by market forces at a time of chronic oversupply of labour thus creating conditions of great misery and oppression. Historians have characterised the 1840s as "The Hungry Forties" (Cole and Postgate, 1966, p. 291). In 1845 there were over 1.5 million paupers in the United Kingdom - around 5% of the total UK population (Cole and Postgate, p. 305). Today around 12% of the world population, 870 million people, are permanently hungry due to low incomes and 2.6 million deaths occur annually in children due to malnutrition (www.wfp.org/hunger/stats).

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The 'oversupply' of labour, from the perspective that views labour simply as a commodity, results in low or no incomes for those depending on wages. From the Labour Theory of Value perspective adopted by the radical co-operators and trades unionists of the 1820s to 1840s, however, labour 'oversupply' was merely a euphemism for the workers' *lack of access* to the means to apply their labour. It was unemployed weavers who in 1844 set up a co-operative using the incremental accumulation strategies of William King (Bonner, Arnold, 1961) to achieve the community ownership of the means of production that was Robert Owen's vision (Garnett, 1972). These ideas were first theorised by the English Labour Economists of which William Thompson (Pankhurst,1954), Thomas Hodgskin (Halevy, 1956) and John Francis Bray (Jolliffe, 1976) were the most important (Davis and Parker, 2009). Trade Unions, like the Engineers, adopted the aim of achieving co-operative ownership in their rule books and some invested funds to establish worker co-operative employment (Cole and Filson, 1965, pp. 471-482). Today's real crisis of capitalism is demonstrated by an ILO estimate suggesting 30% of the global work force is under or unemployed as a fairly constant metric for the last 30 years (Lee, 1998, ILO World Employment Outlook Trends (2020, Table 1.1, p. 27)). This combined with a massive population explosion has eclipsed the Keynesian-Monetarist debate about how to stimulate employment at the bottom of the business cycle. The European Commission publication reviewing the outcome of three anti-poverty programmes admitted that over the 15 to 20 years of the programmes "the battle for full employment was lost" (Andersen et al., 1994, p. 15).

The welfare state is dead – but not the state

Deregulation of labour standards, like minimum wages, restrictions of hours, employment of children etc. does not signify less government, on the contrary, it just means different more repressive government. In 1821 Britain was barely emerging from a police state following a succession of repressive legislation between 1795 and 1800 (Cole and Filson, 1965, pp. 74-75). Hanging and deportation were standard punishments for quite minor offences and for trade union organisation public flogging was a possibility although imprisonment was the more general remedy for actions deemed to be an illegal restraint of trade (Cole and Postgate, 1966, p. 178). The rights of assembly and publications were heavily restricted with taxes imposed making newspapers too expensive for workers even in cases where they were literate (Cole and Filson, 1965, p. 75). Today approximately one third of the labour market is controlled by China, a police state with one of the worst records of human rights abuses in the world including imprisonment and torture of trade union activists. However, repression of trade unions is operating on a global scale and is well documented (http://www.amrc.org.hk/taxonomy/term/93/all). Today, Western governments are no longer even pretending to regulate capitalism; rather there is a public and blatant *collaboration* by which central banks print money not to create employment but to enable private sector banks' balance sheets to be rebuilt at the expense of the people.

The multifaceted crisis of capitalism today and the threats and challenges this crisis presents are manifest at many levels, of which the political and governance crisis is perhaps the most serious of all. Climate change, and pollution, species depletion, and habitat degradation / deforestation, population explosion and resource depletion remain unaddressed. The focus for reform of employment must today be placed in the context of a return to the fundamental debate between Ricardo and Malthus in the 1800's over resource depletion. Today it's not just employment but sustainable employment that's the issue. The contemporary economic plutocracy still argues along the same lines that Ricardo used in his debate with Malthus. Technology will provide the answers. Some of these answers are being forced upon us with little transparency or independent evaluation of their impact. Research in bio-genetic engineering and its impact on monopoly in food production and the pollution of the natural food chain needs very serious independent scrutiny. So does research on the applications and development of artificial intelligence (AI), and the technology of surveillance.

Reform through legislation appears at best a very limited prospect whilst big business sees climate change and other aspects of the crisis more as business opportunities than warnings of the need to change. Certainly, the early associations of labour did not expect the state to respond positively to their demands. Robert Owen's submission to a Parliamentary Committee of Inquiry into the state of the working classes, which was chaired by David Ricardo, was completely ignored. As a result, Owen and other British reformers shifted from top-down dependence on philanthropy (whilst never rejecting it when offered), to a bottom-up self- help strategy. *Today we need to recognise that we must do the same*. The differences are not so much in the elements making up the challenges to labour as in their global nature and the damaging long lasting effects that continued capitalist style consumer driven growth threatens to realise. Had the co-operative and trade union movement not lost its way, this crisis could have been averted.

How the co-operative movement lost its way

By 1921, Britain achieved one person one vote and had a co-operative movement that dominated the high street, a mass trade union movement focused on collective bargaining and an independent Labour Party established bottom up by the Trade Union and Co-operative Movements. The functional divisions between trade unions and co-operatives and between different forms of co-operative had become the entrenched silos we recognise today. This loss of original purpose can be attributed to the rising prosperity of the skilled and semi-skilled workers and development of a new middle-class in Britain by the third quarter of the nineteenth century. It was also facilitated, however, by internal subversion of co-operative purpose by professional management and the challenging at the intellectual level by new models for explaining value that eliminated any reference to labour as a source of value added. In the institutions of knowledge production there had been an active seeking for an alternative to the threatening Classical Economics Supply-Side theory which placed Labour as a key variable in economic added value. This resulted in what we know today as the Neo-Classical demand side model explaining the source of value as arising in demand.

Consumer co-operation actively sought to deny labour the right to a share in the profits and for 30 years this became a major issue of debate and contention in the co-operative movement. Finally, in 1882 the advocates of profit sharing with the workers were forced to split and form the Co-operative Productive Federation under the able leadership of Thomas Blandford. The latter established over two hundred worker co-operatives in his short lifetime. The debate continued even after the split within the 'consumer' co-operative movement and there were still many papers being presented at Co-operative Congresses in the later 1880s advocating worker ownership of co-operative production and the rights of labour as the source of value. See for example, J.C. Gray, 'Co-operative Production', a paper submitted to the Co-operative Congress, Plymouth, 1886, which deals with the issue of whether consumers or workers should be the rightful owners of Co-operative Production. The beginnings of this conflict and the rise of consumer co-operation as a dominant expression of 'true co-operation' commenced in 1862, with the collapse of the Rochdale Co-operatives co-ownership with the mill workers' flour mill project. This venture had operated profit sharing with the workers and with its subversion by the introduction of private investors we can trace the beginning of the division between worker and consumer co-operation. The abolition of workers sharing in the profits of the mill arose from the subversion of the ownership structure by outside investors with the almost certain collaboration of local management hostile to the idea of worker profit sharing (Davis, 1996). Following this event, we see the co-operative movement start to fragment with the emergence of rival ideologies of consumer co-operation formulated by G.W.T. Mitchell (formerly the manager of the Flour Mill and later Manager of the CWS Ltd) and Beatrice Webb on the one side with that of Worker Co-operation whose chief protagonist was Vansittart Neal a leading Christian Socialist (Backstrom, 1974).

These internal debates, however, need to be understood in the context of the wider reactionary movement in the academy to find an alternative to the Labour Theory of Value. By the end of the 19th Century this had been formulated as the Neoclassical demand side view of value as being determined by the subjective desire of the consumer. Thus, it is that ideologies of right and left struggle for hegemony *within* the Co-operative Movement and wider Labour Movement are conducted in the context of a parallel debate in the wider intellectual community. Notwithstanding, the argument about whether workers or consumers should have the dividend *this was in fact an argument over the wrong question*. The power of independent small scale regular gifting was lost as an ideal and increasingly the ideas of consumer co-operation as providing a morally superior *distribution* to that of profit sharing to labour gained ground. In this debate over the right model for distributing profits co-operators lost site of the original principle, number four, established at the 3rd Co-operative Congress held in London 23rd April to 1st May in 1832, chaired by Robert Owen, *that none of the surplus should be distributed* (Catherine Webb, 1904, p. 59).

Let me be clear I am not arguing that consumers co-operating is a reactionary activity. Far from it, consumption is a part of the economic cycle and it's very important for consumers to co-operate, but I am arguing that the idea of consumer distribution of surplus arising from consumption *as morally superior* to distribution to labour based on productivity was a reactionary divisive movement. It diverted attention from the *accumulation of capital* in popular ownership to its distribution and gave a narrow individualistic and economistic vision of loyalty based on dividend. Consumption needs to be co-operative, but we need to recognise the unity not diversity of different models of co-operative business around the common aim of the popular ownership and realisation of wealth creation and access to the means of wealth creation – this being the common goal. Access to the co-operatively owned accumulated wealth was the strategy for liberating the capacity of sustainable wealth creation available to unemployed and under-employed labour, destroying forever the workers dependency on the capitalist labour market.

2. Defining co-operatives: different businesses but with a common purpose

Co-operation is defined as an autonomous association of persons united voluntarily to meet common economic and social needs through a jointly owned and democratically controlled enterprise (MacPherson, 1994, p. 12). The uniqueness of co-operation lies in its double nature. A co-operative enterprise pursues both the economic and welfare targets of the co-operative members. The original macro focus on accumulation and co-operative ownership to redress the issue of dependency on a capitalist labour market has all but been lost in the pursuit of a means become ends. An echo remains in the original purpose contained in the latest Identity Statement principle of 'Co-operation between co-operatives'. The fact that co-operatives differ substantially in their business structures has meant that academic interest has generally focused on specific sectors and overlooked the underlying objective of labour market regulation, job control and access to resources that underpinned the original co-operative purpose (Davis and Parker, 2007).

This is unfortunate because today it is precisely this original purpose that can give each separate co-operative business its *differentiation*. This differentiation also provides a realistic and necessary basis for inter-co-operative collaboration. The renewal of this original co-operative purpose will enable co-operatives to re-engage with community and membership in a social as well as an economic context. Thus, deepening customer loyalty and strengthening stakeholder relationships through the recognition of their wider socio-economic purpose. The management model for such a re-engagement has been theorised by Terry Thomas as the Inclusive Partnership Model with Sustainability. The development of this model as a co-operative value based management process utilizing the UK Co-operative Bank's achievements during Terry Thomas' leadership as a case study has been documented in its various aspects (Worthington and Davis, 1993, Davis and Donaldson, 1998, Davis, 1999, Davis, 2004 and Davis, 2014).

Co-operative purpose should be defined as follows. *Co-operative business provides specific sustainable goods and services and added value to all its stakeholders in order to meet member needs and to reinvest part of its surpluses to create sustainable co-operative employment and economic development in the community.* In pursuit of the objective of sustainable co-operative economic development and employment co-operation with other co-operatives and trades unions becomes an important added resource (co-operatives providing business expertise, trade unions identifying people needing employment, and both co-operatives and trade unions mobilising funds for investment).

The postscript to the Co-operative Bank Case Study is instructive of the possibility of conservative subversion as we read of in the case of the collapse of the 1862 joint venture. Terry Thomas whose vision created such a co-operative value driven success story (economically as well as in social terms) was turned down for the top job at Co-operatives UK and was not allowed to continue past formal retirement age at the Co-operative Bank. Since leaving the bank his replacements have been a CEO *who previously had led the privatisation of the Trustee Savings Bank to Lloyds TSB*. Lloyds TSB was implicated in the scandal of an unsuccessful senior management level led attempt to privatise the co-operative group. Under his 'stewardship' Terry's partnership model was diluted. Just before the collapse of the Bank, the appointed CEO was formerly CEO of a failing Building Society which was merged with the Co-operative Bank and whose losses brought down the Bank and much more of the UK Co-operative groups assets. He has presided over a number of failed business strategies at the Co-operative Bank which have all added up to almost the burial from the inside of the pioneering strategy that Terry Thomas had employed. (See for more data the recent accounts in *The Progressive Co-operator*, UK National Federation of Progressive Co-operators, Vol. 3 Issue 17, 2013, pp. 8-9 and 12-16 and the author's account of the collapse in Davis, 2013).

Without a management with a co-operative value base rooted in a clear understanding of the role and goals of Co-operation, we can expect management subversion to remain a major threat to the Co-operative project for economic and social transformation. The injection of a trade union perspective is therefore an important means to counter the failed business school aping of private sector-type business strategies in co-operatives. The current silos are largely maintained by managerial elites who define co-operation as a business model with little differentiation from the capital based business excepting for its social dimension. What is necessary is to develop managers who see co-operatives as part of a social movement operating a radically alternative business model. This is the chief barrier to real co-operation between co-operatives which the author believes is so necessary if the movement is to make a serious and relevant response to the current global crisis.

3. Trade Unions as a form of Worker Co-operative

The conditions of dependence on the capitalist labour market in the first half of the nineteenth century encouraged the organisation of both co-operative and trade union associations of labour in such a manner that both saw the other as an extension of their own activity which united them in their common goals to liberate the worker from exploitation and dependency. This point was recognised, in part at least, by the International Co-operative Alliance when it passed the following resolution at its 25th Congress: "...Recognises the importance of unity of action by the trade union and co-operative movements..." (Munkner, H., 1977, p. 29).

Modern conditions make this old and largely ignored resolution all the more relevant to both parties. Only a strategy that generates capital to absorb a significant proportion of the unemployed can alter the balance of market forces. Under these conditions collective bargaining still plays an important role but the focus ceases to be on wage income as an end in itself. For the unions to move away from a total fixation upon collective bargaining towards a reappraisal of other *additional* co-operative strategies for their members will be to open new doors for membership growth and participation. New forms of co-operation through associations can provide opportunities to directly influence the conditions of life for their members, without recourse to damaging strikes or impotently waiting for a sympathetic government to pass legislation.

Many will be sceptical as trade union sponsored worker co-operatives have in the UK certainly not had a very positive outcome so far. In part this is because the employers as a class moved agressively to nip the development in the bud - in the 1850s and again in the 1930s. In 1852, the ASE attempts at co-operative production failed as the Society faced a national lock-out of its members by the employers which drained its funds. In the 1930s the building trades workers' effort to form the Co-operative Builders Guild Movement was also attacked by employers conducting anti-union lockouts. It also failed due to the lack of financial support from the trade unions and the CWS Co-operative Bank (Cole, 1944, p. 291). In the 1970s the so called 'Ben Co-operatives' failed due to poor leadership/management, lack of marketing and insufficient funds for product development (Coates, ed., 1976). The common thread in all these failures is lack of financial support for investment in plant, machinery and R&D and to bring in the right people to plug the gap in human capital. All these attempts have found themselves isolated without the understanding of the movement or the support of the community.

However, when there is community backing and appropriate finance is available the results can be impressive. In the wake of catastrophic rises in unemployment due to Thatcherism in the 1980s the Industrial Common Ownership Movement established a revolving loan fund which has operated successfully for the last forty years. In addition, we have the example of the growth of the Mondragon Co-operative Group and their fantastic employment record and wider impact on their community in social and economic terms. More significant still is the Mondragon Co-operatives' ability to sustain these employment gains even in the face of difficult economic and market conditions (Sanchez Bajo and Roelants, 2011).

The Co-operative difference and the Co-operative advantage

The theoretical difference in the behaviour of the standard neo-classical firm from that of a worker co-operative is significant in that the former's behaviour is based on the assumption of, "...a demand for a factor of production which is based upon profit maximisation..." (Cartter, 1959, p. 173).

Co-operative firms (based on associations of workers), however, are investing capital not for profit maximisation but for job creation. Capital investment is to generate wages not profits. The Mondragon Co-operative has demonstrated just how successful the model can be in job creation and sustaining those jobs once created. The earlier British Co-operative Productive Federation co-operatives, although nowhere near as rooted in community nor as successful as the Mondragon experience, nevertheless lasted longer in the declining industries in which they erroneously located than any private sector firm of a comparable size in their sector (Jones, 1975). The mechanism by which worker co-operatives can become such a potentially effective strategy for trade unions is threefold.

Firstly, they provide an effective motivation in that workers can eventually own the means of production and distribution. It requires time, but by retaining as a capital share a proportion of their surplus product, their involvement in ownership grows. This enables the co-operative to pay off its loan finance. It was the lack of ownership of capital that was identified by the English Labour Economists as the root cause of the labourer's distress and exploitation. Bray's book, *Labour's Wrongs and Labour's Remedy* (1838) had a number of proposals by which workers could gain ownership of their means of employment, one of which was a system of *non-refundable gifts*. This proposal was operated for six years by local donations of one penny collected by the Leeds Redemption Society. This money supported the last Owenite style self-contained community in Wales which lasted six years, longer than any of the other Owenite communities. Unfortunately, Bray's warning that this type of project would be uneconomic in the prevailing new economy of mass production was ignored, along with his preference for investing the capital so gathered in manufacturing and operating specialised businesses.

The British experience of revolving loan funds since the 1980s has been very positive with 94% of Industrial Common Ownership Finance borrowers still trading after 3 years (see annual report of Industrial Common Ownership Finance Ltd – The first 40 years). If Britain's four million trade union members each *donated* £1 per year to a job fund for co-operative employment, that could raise approximately £60,000,000 over 10 years assuming a loss rate of 50% per year (a much higher rate of loss than the actual ICOF experience) and assuming no interest beyond covering costs of loaning the money. So this figure is a very conservative estimate of the potential based on *an average donation of less than 10p per month!* If trade union members and co-operators were persuaded of the benefits and gave £1 a month or even a week, the fund would soon be able to enable workers to establish funds for start-up and investment in Employee share ownership schemes and buy outs.

Secondly, there is an employment advantage. Co-operatives, when properly managed, being free of the need to compensate shareholders at market rates of return on their capital, *should be better able to retain labour* than capitalist firms operating at the margin of profitability who are forced to cut labour costs to maintain profitability levels acceptable to the market for capital. The Mondragon research cited above bears this out. The potential difficulty is securing initial finance. Current legislation in most countries makes it hard to divert savings into high risk job creation without massive liability on the investing institution. This ensures that savings schemes reduce still further the amount that could be given over to investment and makes for higher interest on the loans taken out by the co-operatives. A small gift, on the other hand, an act of solidarity, may be easier to administer and could mobilise effective sums on a regular basis if the idea is properly managed, marketed and promoted. But why should people give even small sums away to create jobs for others to occupy?

a) Altruism: there is already a growing ethical investment movement. There is widespread concern for the unemployed and people are looking for ways to help support practical solutions that do not appear to involve radical political postures. All opinion polls indicate a high level of public awareness and concern for this problem. Some of this concern is rightly based on self interest and concern for other members of the family. Employed workers have children whose employment is far from certain. The moral obligation to help the poor is recognised in all serious religions. The Catholic tradition is particularly consistent in its support for trade union and co-operative associations. John Paul 11 *Laborum Exercens* was written on the 90th anniversary of Leo X111 *Rerum Novarum* and the tradition was recently reaffirmed by Benedict XV1 in *Caritas in Veritate*. Christian Social Doctrine supports trade union and co-operative associations as critical tools for distributive justice and the dignity of the individual. Such doctrine is agreed across denominational lines and addresses men and women of goodwill both secular and religious. In addition Benedict XV1 has particularly reminded us of the economic importance of gifting (Benedict XV1, 2009, pp. 59-61).

b) Strengthening of Collective Bargaining: trade union members need to be impressed with the scheme's potential to reduce unemployment levels and help bring market forces to bear to support collective bargaining objectives. Such a plan of giving is both an act of solidarity with fellow workers on the dole and an additional leverage on the bargaining process which need cost the average trade unionist only the most marginal increment from their discretionary expenditure (say the equivalent to one pound sterling or one American dollar against average earnings measured in hundreds of pounds/dollars).

c) Insurance against future unemployment / the prospect of better alternative employment: although no guarantee of co-operative employment could be given, the promise of priority consideration for funding or employment will of itself make many workers feel that becoming a regular weekly contributor to the scheme carries a limited insurance against future unemployment. Also, the quality of working life in the cooperative context might in itself prove attractive to workers operating in the low involvement and poor information environments existing in many companies.

All the arguments combine to present a powerful incentive for employed workers to contribute to the co-operative/trade union loan fund to support worker co-operative development in all its variety of forms.

Thirdly, the strategy links co-operative and trade union objectives directly to the growing ethical consumer movement. Ethical consumer and suppliers will want to support businesses that develop their local economy and generate employment for local people whilst contributing to global sustainable development.

The popularity of the Fair Trade brand demonstrates the truth of this. The organisational and business development potential of a raised social relevance is clearly in evidence in the case of the UK Co-operative Bank during Terry Thomas' leadership. The Bank improved its overall performance across all indicators once it developed the social added values of its ethical banking model. Of key importance to any business is increased customer satisfaction, stakeholder added value and raised employee morale. All these were clearly evidenced in all the opinion surveys of staff and customers conducted by the UK Co-operative Bank as it implemented its Ethical Banking Programme (Davis, 1999 and 2004). Terry Thomas' model of Inclusive Partnership with Sustainability provided a framework that communicated mutual benefits and social responsibility in business. This model gave the British Co-operative Movement the greatest improvement in its brand equity the movement had experienced since before the Second World War. To recycle a proportion of the co-operative surplus into sustainable employment that is owned by the employees reducing poverty and inequality has an immediate contemporary relevance that will be recognised as real corporate social responsibility by the ethical consumer. At the global level today such a coordinated investment fund established by co-operative financial services institutions could help the most marginalised and threatened communities to build employment opportunities and community based resilience through local infrastructure projects against the existing and currently intensifying extreme climate events. The ICA needs to convene a conference of the International Trade Unions, the Raiffeisen Union and representatives from Co-operative Banking and Insurance sectors and a target sector of the poorest nation states together with some regional authorities representing the most depressed areas in more developed states to discuss a pilot of local projects with money raised by donations for their community with matching loan capital to build local employment and development. The challenge, apart from the obvious ones of credibility and gaining participation by the parties, will be identifying management and business development capacity to support the evolving projects.

4. Conclusion

This scheme of donation driven funding suggests one immediate and practical methodology of co-operation between trade union and co-operative associations. This is more than just a happy coincidence but arises out of the common ends for which both types of association were founded. Trade unions are just a specialised form of worker co-operative operating at the secondary rather than the primary level. Like other co-operatives they operate on the basis of mutuality, democracy, equity, and have voluntary, open membership. They exist solely for the benefit of their members and all their assets are non-divisible and collectively owned. They are rather like farmers' co-operatives in that they provide countervailing market power. Trade unions could just as easily be renamed "Multi-purpose Labour Supply Co-operatives". Once the name change is effected and with it the realisation that they are the result of worker co-operation at the macro level, then the commonality of purpose between the worker and other co-operatives and the trade unions becomes so obvious that one becomes shocked by all the controversy and mutual suspicion that has occurred. Beyond the economic and employment relations imperatives there is the chance for labour to hire capital, to reverse dependency and to offer a different people centred model of economy driven by values of solidarity, pride in labour and its products, and sustainability and harmony with nature. Actually a human centred co-operative economy rooted in a Labour Theory of Value will not just want to merely sustain the natural world but rather to celebrate it. This is the vision to reignite co-operative purpose driving co-operative business to successfully challenge the waste, greed, injustice and destructive concentrations and polarisations of power that characterise an unsustainable economic model crying out for reform. A truly co-operative international response to the leadership failure demonstrated globally by the worlds' power elites at COP 26 just concluded in Glasgow, Scotland.

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Environmental Sustainability Implementation at Vancouver City Savings Credit Union

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Abstract: Climate change is one of the defining issues of this time in world history. Organizations are seeing and beginning to understand how climate change is affecting their financially focused bottom line. Co-operatives, especially financial co-operatives, need to leverage their business model and values to remain connected to their community, especially to their younger members, many of whom are active in climate change initiatives. Vancouver City Savings Credit Union (Vancity) is a values-based financial co-operative operating in British Columbia (BC) and Canada's largest Credit Union (outside Quebec) based on assets under management. For many years, Vancity has been identified as a leader in environmental sustainability in Canada due to its environmental initiatives. The main objective of this research project was to answer the following question: What are the key themes from Vancity's experience of implementing environmental sustainability programs that can be of value to other credit unions? Understanding Vancity's learnings and challenges can provide critical insights for other credit unions and co-operatives contemplating instituting their own environmental programs. Interviews were conducted with current Vancity employees who have been involved in the development and implementation of Vancity's environmental sustainability programs. Three key themes were identified: leadership; engagement of employees; and metrics and reporting. Sub themes included the effect of values-alignment of leadership and employees. Additionally, the importance of partnerships was noted. The need for organizations, especially credit unions, to start implementing environmental sustainability programs is also discussed. By identifying key learnings from Vancity's successful implementation, the hope is more credit unions and co-operatives are inspired to broaden their social sustainability focus and start upon the environmental sustainability journey.

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Keywords: Financial co-operatives, credit unions, climate change, environmental sustainability programs, Vancity implementation lessons

"Climate Emergency"
Oxford Dictionary's 2019 Word of the Year

Introduction

The world is changing more rapidly than ever before and organizations are being shaped by technological disruption, societal changes and globalization. These complex challenges cannot be solved in traditional ways. As Kania and Kramer state, "no single organization is responsible for any major social problem, nor can any single organization cure it" and "complex problems can be solved only by cross-sector coalitions that engage those outside the non-profit sector" (2011, p. 38-39). There is an increased need for innovative and effective solutions to society's problems. In the current capitalistic economic system, the goal of Investor Owned Firms (IOFs) is to maximize profit for shareholders, with those who own the largest stocks having majority voting power. Consumer, societal and environmental needs are often secondary to this pursuit of profit. The "shareholder primacy" form of corporate governance, however, is increasingly outdated and at odds with shifting societal desires and norms (Denning, 2019).

In recent years, IOFs are realizing that there is a trend among consumers, especially in an era when consumers have increased access to information, to align their values with like-minded organizations; in other words, "increasing numbers of people will prefer to buy from companies that care" (Kotler, 2011, p. 133). There has been a rise in IOFs focused on social issues that are looking for innovative ways of tapping into markets for finance, in

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addition to seeking grants from donors and philanthropists. The most salient and urgent of these issues, arguably the most prominent for IOFs, is the environment.

The Oxford Dictionary Word of the Year for 2019 was "Climate Emergency". Indeed, climate change is one of the defining issues of this time in world history. Organizations are seeing and beginning to understand how climate change is affecting their financially focused bottom line. Their increasing awareness is starting to drive changes in traditional IOF governance and business practices. IOFs are adopting a broader perspective on shareholder value, including a triple bottom line approach, to include people and planet, together with profit. Triple bottom line reporting is a framework first introduced by John Elkington as "a form of corporate disclosure which integrates financial, environmental and social reporting" (Elkington, 1994, p.18).

Public awareness of organizations such as social enterprises or Benefit Corporations (B Corps), which "address the inadequate provision, or unequal distribution, of social and environmental goods" (Nicholls, 2009 p. 755), has recently grown. Like co-operatives, they are often founded to address the needs of the community due to failures in the free-market system. Consumer driven trends have created market forces that have translated into an increasing awareness and adoption of environmental, social and governance (ESG) factors in organizational and governmental investment processes and decision-making. A key difference between such ESG-aware enterprises and co-operatives, is the structure of the co-operative business model. For-profit social enterprises and B Corps may have a traditional business structure similar to an IOF with a social purpose, whereas the co-operative business model is member-owned and democratically controlled. Co-operatives have the potential to offer an alternative economic model, as the democratic business model has inherent advantages which include being: "effective in responding to market failures; regarded as more trustworthy; are unique to build the spirit of self-help, build social capital within the community, encourage participation and co-op values and generate positive externalities through their social benefits" (Spear 2000, p. 521-22). The co-operative vision is for sustainable development and "a journey towards a more ecologically oriented and socially equitable world" (Belz and Peattie, 2012, p. 13). With its focus on people rather than profit, the co-operative business model "creates greater economic, social and environmental sustainability… [and it] puts people at the heart of economic decision making and brings a greater sense of fair play to the global economy" (ICA Blueprint, 2013, p. 4).

To remain relevant in today's economy, co-operatives need to leverage their business model and values to remain connected to their community and respond to community needs, especially their younger members. Youth play a key role in climate activism, and recently, teenagers such as Greta Thunberg have become catalysts for others who are demanding climate action from governments and organizations. This is particularly true for financial co-operatives, also known as credit unions, as the financial services industry is being disrupted by technological advances. Credit unions can develop a value proposition by implementing an environmental sustainability strategy to demonstrate their commitment to their members and community and ensuring they are publicly accountable for their impact on the environment.

As one of Canada's largest Credit Unions based on assets under administration, Vancouver City Savings Credit Union (Vancity), is a values-based financial co-operative operating in British Columbia (BC) with 543,000 member-owners, 61 branches and $28.2 billion in assets plus assets under administration (Vancity, 2020). In a highly competitive and regulated financial industry, Vancity has recognized it must leverage the strengths of its co-operative business model to differentiate itself from traditional financial institutions. In 2000, in consultation with members, employees and the community, Vancity developed a Statement of Values and Commitments (SOVAC). The SOVAC details a framework based on "mission, purpose, values and commitments" ("Statement of Values", 2000). Since the SOVAC was publicized, Vancity has leaned into its co-operative principles and values as a source of competitive advantage for retaining and attracting members disenfranchised from the current business paradigm. In 2012, Vancity articulated three guiding principles: environmental sustainability, co-operative values, and social justice and financial inclusion.

Vancity has been identified as a leader in environmental sustainability in Canada due to key environmental initiatives, such as being "the first Canadian bank or credit union to join the UN's Collective Commitment to Climate Action and Responsible Banking" ("Vancity's leadership", 2020) and the "first North American-based financial institution to become carbon neutral in 2008" ("Vancity's leadership", 2020). Moreover, they have been recognized as a leader in the sustainability reporting field: "companies such as VanCity and TD Bank are leaders in the financial SR (sustainability reporting) field as they have robust, comprehensive and mature reports" (Turley-McIntyre et al., 2006, p. 36). , More recently, Vancity has ensured its reporting includes relevant Sustainable Development Goals (SDGs), in support of a recent focus for the co-operative sector and its contribution to the SDGs (International Labour Organization, 2014). Overall, Vancity's key achievements and successful environmental sustainability programs have been well documented and have received positive responses from the community. However, understanding their implementation challenges and learnings can provide critical insights for other credit unions and co-operatives contemplating instituting their own environmental programs.

The purpose of this paper is to answer the following research question: What are the key themes from Vancity's experience in implementing environmental sustainability programs that can be of value to other credit unions? The paper reviews literature that has identified key learnings from the implementation of sustainability programs. It then compares the learnings with three key themes that emerged through interviews with Vancity employees, who have been deeply involved in the development, implementation and reporting of the successful environmental sustainability program over the last 30 years. It also discusses the future research potential of new themes that emerged from the interviews.

Building the Context and Exploring the Literature

As this paper focuses on identifying the key learnings and challenges of implementing an environmental sustainability program, it is first important to define sustainability and other terms referenced within the paper. A discussion of business strategies for environmental sustainability follows and, finally, Bhattacharya and Polman's (2017) six 'pain points' are presented as key learnings for other organizations in implementing a sustainable business model.

The most accepted definition of sustainability is from Our Common Future, also known as the Brundtland Report, which states "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission, 1987, p. 15). It is widely known that sustainability encompasses three integrated pillars of social, environmental and economic sustainability. From a corporate business perspective, the pillars are consistent with the triple bottom line reporting framework of people, planet and profit (Elkington, 1994, p.18). With climate action emerging as a key issue, this research project is focused specifically on environmental sustainability. Environmental sustainability is focused primarily on the protection of natural resources and the planet for future generations.

Although individuals have an important role to play in protecting the environment, a more collective effort from organizations is also needed. In the business world, there is a plethora of research on how to define strategy for organizations through frameworks from Michael Porter's Five Forces Analysis (Porter, 2008), to mapping out strategy with Kaplan and Norton's strategy maps (Kaplan and Norton, 2000). Integrating sustainability into the business strategy is important to ensure that sustainability is a long-term priority for the organization. Surveying hundreds of CEOs from companies around the world, Lacy et al. found that 93% considered sustainability to be "important to their company's future success" (2010, p. 10). Having an overall environmental sustainability strategy is important, as there may be many initiatives throughout the organization that could become more effective if brought together. This includes internal initiatives to minimize the organization's operational impact on the environment and also external initiatives to minimize the environmental impact of its supply chain or its products and services. Forrester describes a system as "a grouping of parts that operate together for a common purpose" (1968, p. 1). A system dynamics approach can support bringing together seemingly fragmented initiatives and maintain a longer-term implementation as it "analyzes how feedback processes in a system generate or alter patterns of behavior" (Marshall et al. 2003, p. 101). Organizations embarking on a sustainability journey can build upon the knowledge and learnings from organizations with experience. The learnings can be leveraged to understand the challenges, avoid similar pitfalls and increase the potential for success in advancing the sustainability agenda.

In 2017, Bhattacharya and Polman observed a number of large multinational organizations and identified six 'pain points' that serve as key learnings for other organizations in implementing a sustainable business model. The six ‘pain points’ are: “sustainability is more than just a change initiative; look at the entire value chain; make sustainability a priority for the board; gain buy-in from the “undecideds”; make sustainability part of every employee’s job; and redefine the competitive space by collaborating” (Bhattacharya & Polman, 2017, p.71). The ‘pain points’ are reviewed below in more depth to understand if they are comparable to Vancity’s experience with environmental sustainability implementation.

Bhattacharya and Polman highlighted the first pain point as “sustainability is more than just a change initiative” and that “implementing a sustainability model is fundamentally different” than a change management model (2017, p. 71). In a traditional IOF, change management is a common tool for implementing strategy. However, sustainability requires consideration of the triple bottom line and needs to be integrated into the organization as it “runs deeper than most other change efforts” (Bhattacharya & Polman, 2017, p. 72). This is where strong leadership is key and Bhattacharya and Polman saw the CEO as a key leader in implementation. CEOs typically are able to utilize their formal authority to guide the organization’s strategies. This pain point is supported by a study conducted by Mross and Rothenberg, which reviewed environmental sustainability implementation in German and American printing firms. Within all the organizations studied, the CEO provided key leadership and it was noted that “without strong leadership, a proactive environmental strategy is not possible” (Mross & Rothenberg, 2007, p. 63). Leadership from the executive leadership team, especially from the CEO, appears to be a key theme in the research for sustainability implementation. However, Kashmanian et al. (2011) suggested top management leadership was important within the setting of strategic directions but did not specifically name the CEO role. Cocks also found the first driver in general strategy implementation is the “focused leadership of the right people” (2010, p. 263). These findings contrast with a study by Alamsjah, who investigated Indonesian middle-management perspectives on key success factors for implementing strategy. The results suggested that corporate culture was the most important factor of success, rather than leadership from the CEO (Alamsjah, 2011). This may have been due to the level of management targeted in the research and how included they felt in the implementation. Often if there is not appropriate buy-in, then leadership is difficult to cultivate. Overall, in three of the four studies (Alamsjah, 2011; Cocks, 2010; Kashmanian et al., 2011; Mross & Rothenberg, 2007), executive leadership appeared to be significant. This may be especially true in sustainability implementation due to the additional, more complex considerations brought by the triple bottom line.

The second pain point that Bhattacharya and Polman highlighted is to “look at the entire value chain”. They clarified that there are differences between a traditional change management program and implementing a sustainable business model (2017, p. 72). Often change management programs mainly affect the internal operations of an organization. However, if an organization is looking to truly embed sustainability, they must look at implementing programs within their supply chain and in their products and services to customers as “embedding a sustainable business model thus requires an integrated perspective” (Bhattacharya & Polman, 2017, p. 73). Sustainability initiatives are part of a larger goal to minimize the impact on the environment. Since the organization’s environmental footprint includes its value chain, implementation requires more than a regular change management program and more nuanced and purposeful integration of sustainability within all its business activities. Kashmanian et al. also supported the inclusion of “improving the value chain performance” for this reason (2011, p. 111).

Bhattacharya and Polman highlighted making “sustainability a priority for the board” (2017, p. 74) as the third pain point. If there is a lack of expertise in environmental sustainability at the board level, support and knowledge from the executive leadership team can help close the gap. In a traditional IOF, they may also look to appoint a board member with the specific expertise. In co-operatives, such as Vancity, where members vote for their board of directors, if environmental sustainability is a key concern for the members, they have the opportunity to support the nomination and appointment of such a board member to ensure the community needs are championed.

“Gain buy-in from the ‘undecideds’” (Bhattacharya & Polman, 2017, p. 72), the fourth pain point, focuses on the middle management layer. During environmental sustainability implementation, it is important to ensure communication is clear and appropriate to middle managers’ level of knowledge. The communication should be aligned with the organization and their own interests and clearly connect to how implementation provides value. Bhattacharya and Polman also suggested it is important to “establish clear targets and hold the organization accountable for them, as measurement builds accountability among employees” (2017, p. 75). Implementation metrics are needed to ensure that everyone in the organization is engaged. Metrics also help employees measure their progress. This is especially important in sustainability implementation which requires the embedding of sustainability practices within the organization. Embedding practices cannot happen through leadership alone, but by active engagement throughout the organization. Kashmanian et al. also agreed that "sustainability becomes everyone's responsibility within the company and is incorporated into the company's mission and core values" (2011, p. 110) and employees should be engaged to improve operational performance. Unfortunately, in sustainability reporting, there are many different metrics and reporting standards which provide a challenge globally in comparisons between organizations. , Turley-McIntyre, et al. (2016) found that this is indeed the case for financial institutions in Canada even though non-financial aspects of business performance and sustainability indicators are becoming increasingly important (Duguid and Balkan, 2016).

Similarly, the fifth pain point "make sustainability part of every employee's job" (Bhattacharya & Polman, 2017, p. 72) includes ensuring employees are engaged and that they are held accountable and "play their part" (Bhattacharya & Polman, 2017, p. 76) in contributing to the success of the program. Leadership does not have to be formalized at the executive leadership level, but also can be found at other levels of the organization as "leadership does not mean just having leaders at the top – rather it is about creating leaders throughout the organization" (Hubbard et al., 2007, as cited by Cocks, 2010, p. 263). With employees engaged in sustainability activities as part of their daily jobs, they can become leaders themselves, embedding the culture of sustainability within the organization.

Finally, "redefine the competitive space by collaborating" (Bhattacharya & Polman, 2017, p. 75) suggests collaborating as opposed to competing with other organizations. This pain point aligns with Co-operative Principle 6, Co-operation among Co-operatives, as "collaborations allow companies and people to access expertise and networks of relationships and to benefit from partners' political influence, standard-setting authority, and ability to impact public opinion" (Bhattacharya and Polman, 2017, p. 77).

The six pain points highlighted by Bhattacharya and Polman demonstrate sustainability implementation requires a multi-faceted approach and needs to be embedded within the organizational culture through employees' daily work. Due to the complex nature of sustainability initiatives, implementation can be done over multiple years, and leadership and commitment from the CEO and throughout the organization appear to be crucial to support the longevity of the program. Additionally, sustainability cannot be achieved in silos; it needs to be done in collaboration with other organizations in the value-chain. Environmental sustainability, as one of the three pillars of sustainability, may have similar pain points. This research project examined whether the key learnings from Vancity's successful environmental sustainability implementation were comparable to the six pain points.

Methodology

The focus of this paper is to identify key learnings from Vancity's development and implementation of a successful environmental sustainability program. Vancity has three guiding principles: environmental sustainability, co-operative values, and social justice and financial inclusion. Environmental sustainability encompasses internal and external minimization of Vancity's environmental footprint. Internally, the focus is on the reduction of Vancity's carbon footprint through tracking greenhouse gas (GHG) emissions from internal operations. Externally, Vancity focuses on supporting organizations that have positive environmental impacts and also providing a selection of products and services that help Vancity's members reduce their environmental impact within the community.

This research project utilized a primary and secondary data approach. Primary data was collected through interviews with current Vancity employees who had been or are currently involved in the development, implementation and reporting of the environmental sustainability programs since 2004. Initially potential interviewees were identified by the author of this paper, who was also a key contributor to the internal operations' environmental sustainability program between 2012 and 2016 (and worked closely with one of the interviewees during that time). In addition to the author's insider knowledge, potential interviewees were identified based on their knowledge and involvement in the implementation of the environmental sustainability program and the time of their involvement: prior to and/or after 2004; after 2004; or currently. To ensure all current Vancity employees who had been or were currently involved in the program were included in the research, at the end of every interview, the interviewee was asked if they could suggest other key people in the organization who were involved in the program. All interviewee suggestions were cross-referenced with the interview list, thus confirming a comprehensive list of significant contributors to environmental sustainability implementation at Vancity as of June 2020.

Eleven interviewees were selected based on the above criteria and were invited to a 45-minute interview. 10 interviewees accepted and 1 person declined as they were preparing to leave the organization within a few weeks of the proposed interview. Only current Vancity employees were interviewed, therefore no Research Ethics Board review was necessary.

Through gathering data around the type of involvement the interviewees had with the program, it was discovered that several were long time employees of Vancity They were able to provide historical knowledge of the environmental sustainability program for approximately 10 years prior to the official strategy development in 2004 and implementation of the initial formal program. The historical data was also collected within the interviews to provide context that assisted with the analysis of key drivers of the program's original development. Interviewees included Vancity employees who were involved in all environmental sustainability programs throughout the years and also the reporting, as often these programs are integrated. Since the interviewees were all key contributors to the implementation of past or current environmental sustainability programs, and in past or current roles that included strategic development and or direct implementation, the data gathered provided a well-rounded perspective.

The focus of the interviews was to gather employee perspectives on Vancity's implementation of environmental sustainability programs: what worked, what did not work, and what employees learned from the hands-on experience of design and implementation. The questions were formulated to understand the origins of the program, its development and implementation and how it was communicated to employees and to members and the community.

The interviewees were asked semi-structured, open ended interview questions, which were also open to conversational pieces to ensure other discoveries and allow insights to emerge. Interviews were conducted virtually. Prior to starting the questions, the interviewer provided context on the capstone paper including the purpose, use and confidentiality of the research. Throughout the paper, interview respondents are distinguished as management respondent (MR) or staff respondent (SR). The following questions were asked in the same order to each interviewee. Responses were captured during the interviews using note form.

1. Why did Vancity initially decide to focus on setting up an environmental sustainability program? Have these motivations changed over the years?
2. What are the most important initial pieces to put in place to start a program such as this?
3. What are the benefits of creating a formalized environmental sustainability program?
4. What are the risks of not creating an environmental sustainability program?
5. What environmental sustainability initiatives have had the most impact or been the most successful?
6. What key metrics do you see as most important for the success of the program? Have these changed over the years?
7. Do you think Vancity could increase/improve the reporting of their environmental sustainability initiatives to the public or internally to employees? How would this look?
8. How do you think more employees could be engaged in initiatives?

Research Methodology Limitations

The sample size was small since only 10 current Vancity employees had been involved with the environmental sustainability programs. The sample size could have been increased by including former Vancity employees. Within the current employees, the most senior executives interviewed were in Director leadership positions. If the research project had been expanded to former Vancity employees, former members of the board of directors, CEO's and other senior executives could have been interviewed and their learnings captured. However, time was a limiting factor as this research project was conducted between January and August 2020. As the author had previously been involved in the implementation of the environmental sustainability program, bias was mitigated by structuring the interview with open-ended questions, to allow other findings to emerge.

Analysis and Discussion

From the 10 interviews, three key themes emerged regarding the successful implementation of the environmental sustainability programs: leadership; employee engagement, and relevant metrics and reporting. Several employees who had worked for the organization for over 30 years and continue to contribute to the environmental sustainability program confirmed these themes had continued to be challenges throughout the years. These interviewees were also able to provide historical perspective on the period prior to Vancity's public commitment to environmental sustainability in 2004, and on the organizational conditions which allowed the environmental sustainability program to evolve and advance Vancity's leadership position. Their insights provided important context for the three key themes.

A brief review of the history of Vancity's sustainability programs is presented to provide context on how the environmental sustainability program was initiated. Then the three key themes included in all interviews are analyzed. A few interviewees also provided supplemental ideas for successful implementation depending on the type of initiative which are discussed below. The benefits of developing an environmental sustainability strategy and risks of not implementing a strategy are discussed from a credit union perspective.

Historical Context

Vancity was started in 1946 as an open-bond credit union by 14 Vancouver residents who wanted to enable any resident of the city, regardless of social affiliation, to access financial capital. The need for unrestricted access to financial services in the broader community. was a key driver for the co-operative inception. As a values-based financial co-operative Vancity was always responsive to needs in the community. In the early 1990s, as other traditional financial institutions grew, so did Vancity achieving over "$4 billion in assets in 1994" from "$2 billion in assets in 1989" (Highlights, n.d.) – unprecedented growth for the credit union. In 1990, Vancity introduced the enviroFund program, an annual program where a certain percentage of Vancity's Visa profits, was granted to local sustainability initiatives. This program continues today and Vancity enviroVisa cardmembers have "helped raise $8.6M" (Vancity enviroFund program, n.d.) for local sustainability initiatives. Several interviewees noted the introduction of the enviroFund program was the initial start of Vancity's public commitment to environmental sustainability.

Internally through its operations, in the 1990s, Vancity was starting to focus on incentives through the BC PowerSmart program run by BC Hydro to help with its energy management and also on reducing paper usage by engaging employees in printing double sided. These small activities were implemented as individual projects, not part of a cohesive plan, and were "not strung together in a strategic way" (MR).

Led by the Director of Facilities, the environmental impact of operations became more integrated in the decision-making process, and Vancity referred to the Coalition for Environmentally Responsible Economies (CERES) Principles (Smith, 1993) during the building of the new head office in 1995. The CERES Principles link environmental responsibility to the corporate bottom line. Vancity utilized these principles to select and consider the impact of products for its facilities, "before life cycle assessment was commonly discussed" (MR).

Driven by board leadership, Vancity established its Statement of Values and Commitment, which reflected a triple bottom line approach and included a commitment to "model and advocate social and environmentally responsible business practices" (Statement of Values, 2000). With global interest in climate change growing, the executive team had an increasing interest in environmental initiatives, which led Vancity to develop a cohesive environmental sustainability program in 2004 and in 2006 to set a goal of becoming carbon neutral by 2010. Vancity became the first Canadian financial institution to become carbon neutral in 2008 ("Vancity's leadership", 2020). Although some Vancity members were interested in environmental sustainability, one executive in particular championed the leadership approach whereby Vancity was to look at not only membership needs, but also the right thing for the organization as a whole to do. Vancity decided they wanted to be a leader in environmental sustainability as it was an important focus of the 2000s and continues to be now: "don't go to the masses to look for leadership, go to the bell curve. Leadership is not in the middle, but at the front end. We have to anticipate and look forward and take the risk, to pull others forward" (MR).

Environmental sustainability efforts started as several fragmented initiatives in different areas of the organization, which included employees taking on their own initiatives. For example, the Director of Facilities nurtured a sustainability mindset, and employees looked to reduce paper by printing double sided. This mindset, together with leadership at the board and executive level, brought together Vancity's environmental sustainability program. By setting goals, Vancity was able to demonstrate their commitment to being a leader in the community in the environmental sustainability arena.

Leadership

The first key theme discussed in all interviews was the importance of leadership from both the board and the executive team. As a co-operative, the board reflects the community member-owners. Board support was critical in ensuring the program has longevity, as environmental sustainability programs are long-term programs: "there are no magic bullets, just a lot of small wins" (MR). This is supported by Kashmanian who suggested that "it is important for a company to identify a 'true north' that guides its strategy as it makes short-term adjustments" (2011, p. 116). Although there may be some quick wins and small projects, ongoing support from the board and executive was vital to make significant contributions to reducing the operational environmental footprint. To start implementation of an environmental sustainability program, all 10 interviewees agreed that at least one senior leader who was able to understand and champion the program was critical to gain buy in. They also agreed that it was important to "have key people in positions of power to steer and lead in the right direction" (MR) and that "without the right people, you will always fight for attention and resources. The right executive sponsor is important as they can speak to what can get done" (MR). There have been occasions at Vancity when no leader or the wrong leader has been identified as a champion prior to the presentation of an environmental sustainability program and there was no support and "nothing was prioritized" (SR) and "if leaders don't understand the program, they will not commit funds" (SR).

A sub theme of leadership emerged around how much influence a leader may have, depending on their understanding and personal values alignment with the program. Environmental sustainability programs are not simple and require a systems approach (Marshall and Brown, 2003) as there may be many nuances and unintended consequences to the program. An executive who is mandated to support an environmental sustainability program by their superior, may understand the business case, but if their personal values are not aligned may be a weak champion. They may be unable to effectively communicate all sides of the program benefits and risks, especially for programs that do not make straightforward economic sense or are personal to the executive team, such as modifications to executive car allowances. They may still get buy-in from the other executives, but the program will not be a top priority. An executive who understands and whose personal values are aligned is an ideal champion as they can lead a deeper discussion on both the benefits and risks and be authentic when presenting the program for approval. Co-operative board members are also ideally positioned to understand the member-owners' needs, the growing interest in climate change and how organizations are addressing environmental sustainability.

Overall, the findings support the literature from Mross and Rothenberg (2007) and Kashmanian et al (2011) that leadership is critical in implementation. The findings also align with two of Bhattacharya and Polman's pain points, "Sustainability is more than just a change initiative" and "Make sustainability a priority for the board" (Bhattacharya & Polman, 2017, p.71). For Vancity, the board was a key driver and, together with an engaged executive team, it ensured that Vancity demonstrated leadership on sustainability and kept it as a priority. The board has continued its involvement over the years and has helped set strong strategic direction.

Engagement of employees

The second key theme to emerge was the engagement of employees in implementing the program. "It is so important to have executive level buy in, but this needs to be in combination with a grassroots movement with passionate people to help lead the charge; employees are key" (SR). Another interviewee concurred it should "not just be a top down approach, but also bottom up, as leaders need employees to do things and they need to be able to contribute" (SR). Once an environmental sustainability program has been formalized by the executive leadership team, how it is implemented and by whom is paramount. Employees are an important stakeholder. The employee community is not only a small reflection of the local community and deeply embedded within the communities they serve but employees are also a key point of contact for the co-operative members. If they understand and participate in implementing the environmental sustainability program, they then can pass this knowledge on. All too often, in some organizations, environmental sustainability is seen as something that a specific department does, such as Facility Management being responsible for energy management. In this example, although it is important that the correct energy efficient equipment is selected, employee behavior towards the energy efficient products is important. There are no gains in energy efficiency with automatic lighting if employees find the timing of the lights too short and as a result tape over the sensor to prevent the light turning off.

There was also consensus from the interviews that the formalized program supports engagement of employees by potentially ensuring it is more integrated into daily actions. A formal program ensures everyone is working towards the same goal, as it "helps to have everyone working together and not off the side of their desk" (MR), and as fragmented behaviour reduces the efficacy of the program and attainment of program goals. Engaging employees in implementing sustainability initiatives supports the literature from Bhattacharya and Polman and specifically the fifth pain point to "Make sustainability part of every employee's job" (Bhattacharya & Polman, 2017, p.71). Making it part of daily work can also help change the culture of the organization and alleviate the fourth pain point of "Gain buy-in from the 'undecideds'" (Bhattacharya & Polman, 2017, p.71). As the culture shifts towards embedded environmental sustainability, employees are enabled to learn about the environmental impact of their decision making and daily work.

Two sub themes around engagement of employees were also noted from the interviews: the education and values-alignment of employees. Education for the employees was raised as an important sub theme as Vancity has over 2500 employees working across 63 locations. The level of knowledge of environmental sustainability across the employee base is very broad. For those with less knowledge, it is important that part of the program is dedicated to educating and training and "meeting employees where they are at with their environmental sustainability knowledge" (SR). During the implementation of the program, those who are more passionate about Vancity's environmental sustainability programs may be able to provide authentic and empathetic education to their colleagues. However, there is also a need to support these passionate employees with specific training to help increase their understanding specifically of Vancity's environmental sustainability programs and the context in which these programs are implemented. For example, a program focused on transportation may provide incentives to non-drivers, but the reasons for this should be transparent and understood. Involving the employees in program implementation– in their daily actions – also provides them with experiences that they can share with colleagues and members. "It is important employees are able to experience and do these things" (SR) to enable them to have real life, authentic experiences to talk about, which in turn supports a culture shift within the organization to one that embeds environmental sustainability practices.

An additional sub theme is engaging those who are values-aligned and passionate about environmental sustainability. This helps the diffusion of the program as these employees, as noted above, have authentic experiences that help them meet people where they are at in terms of their knowledge. Vancity has had success with connecting like-minded employees across the company to form a small environmental sustainability 'team' who are able to collaborate and discuss learnings and potential new ideas.

Employee engagement is necessary to embed environmental sustainability within the organization. Although there may be strong leadership, it is the employees who will change the culture of the organization through their daily actions and "to effectively implement a sustainable business model, every employee must play his or her part" (Bhattacharya & Polman, 2017, p.76). Both sub themes of education and engaging with those who are already values-aligned or passionate about environmental sustainability, support the empowerment of employees and this can help "gain buy-in from the 'undecideds' (Bhattacharya & Polman, 2017, p.75).

Metrics and Reporting

The third key theme for implementing a successful environmental sustainability program that all interviewees agreed upon was the importance of having clear and relevant metrics and reporting these metrics to employees and also publicly. Metrics provided a link to the overall organizational strategy, provided clear communication on what the goals were and feedback on how they were doing. To achieve long-term outcomes internal metrics are important. Sub themes for metrics and reporting that surfaced included: goal-setting and the continuing challenge of choosing the best sustainability reporting tools.

When setting goals, it is important to have a baseline from which to start. With environmental sustainability, it is difficult to compare metrics from other organizations perfectly as other organizations may vary in size, type of operations and industry. Vancity does benchmark against other financial institutions for some of its environmental sustainability metrics; however, it is not a perfect comparison. As one interviewee described, “it doesn’t have to be sophisticated but start measuring and don’t stop measuring, this is key to also contributing to the longevity of the program. You can’t manage what you don’t measure” (MR). Pointedly, another interviewee stated, “Keep it Simple Stupid, so that the goals are more easily understood” (MR). Therefore, it is important for an organization to start measuring something, however small such as paper usage, to set its own baseline. There is no need for complicated metrics, simple goals that can be easily communicated are a good first step.

It is important that the goals align with the organizational goals, and ideally also with local community goals. In 2006 when Vancity set its own Big Hairy Audacious Goal (first coined by Collins and Porras (1997)) to reduce its carbon emissions and become carbon neutral by 2010, it aligned with the City of Vancouver’s goal to also become carbon neutral. Aligning with city and local goals provides some motivation and authenticity. Aligning with global goals and “tying in with global metrics is important” (MR) to show how the organization is contributing to larger environmental sustainability change. Indeed, one interviewee stated that the “metrics at Vancity should be clearly attached to broader targets like the SDGs and these in turn should also be tied to performance metrics and pay” (SR). Another interviewee noted that environmental sustainability metrics should be part of an employees’ job description and role to support their involvement in the program as “the employees are able to use the metrics and data to help communicate the success of the initiatives” (SR). , Similarly to the employee engagement theme, this data also supports the fourth and fifth pain points of Bhattacharya and Polman’s research, “Gain buy-in from the ‘undecideds’” and “Make sustainability part of every employee’s job” (Bhattacharya & Polman, 2017, p.751). Sustainability metrics and reporting are key for any environmental sustainability program but tying them to employees’ compensation or performance goals demonstrates to every employee that the program is a priority for the organization. Enabling employees to develop a connection between their work and the overall environmental sustainability strategy showing how it all contributes to larger global goals such as the SDGs may also provide them with a sense of pride.

Sustainability reporting has been key to the success of Vancity’s environmental sustainability program. Doing an environmental scan to understand where the organization is in relation to its peers in sustainability reporting is useful when first deciding on metrics and how to report, as there “are metrics which are hard numbers, such as greenhouse gas emissions, and then metrics which are harder to measure but important to track “(MR). For a financial institution these may include how many green buildings were financed in a year or how many loans were disbursed to impact businesses. One interviewee confirmed that “having proper tracking systems and mechanisms and processes, which supports formalized reporting to senior management is of vital importance. The information needs to be regularly reported to someone who has power to manage” (SR). This ties back to the need for a key sponsor or engaged leader who understands the metrics and can champion the program as a priority. Without reporting, the program may not have had the longevity it has had. Vancity realized early on it was important to build in the feedback loop employed in system dynamics (Marshall & Brown, 2003).

Supplemental ideas for successful implementation

An additional theme that emerged from some interviews was the importance of partnerships and collaboration. This aligns with Bhattacharya and Polman’s research, specifically with two of the pain points noted as “Redefine the competitive space by collaborating” and “Look at the entire value chain” (2017, p. 72).

Depending on the initiative, partnerships and collaboration may be an important way to gain efficiencies and leverage additional expertise. Initially, to develop its sustainability strategy and specifically the environmental focus, Vancity successfully collaborated with key partners who are well respected in the environmental sustainability space, such as the David Suzuki Foundation and Pembina Institute. Two interviewees acknowledged that Vancity was not familiar with how to start environmental sustainability implementation and approached the key partners “for advice as they were the experts in the environmental space. Their expertise is critical as it can help target your investments and resources" (SR). There are many environmental initiatives that can be identified by the organization, but initiatives that require the least resources and have the highest impact should be considered as the priorities.

Organizations with experience in identifying such priorities are good partners. Collaboration was also potentially easier for Vancity as a co-operative, as the Co-operative Principle 6 is co-operation among co-operatives. Although identifying co-operatives in the environmental space was initially difficult, Vancity has attracted co-operatives focused in this area by maintaining its environmental sustainability leadership. Other partners include most recently One Earth to help deliver the approved Lighter Living program that integrated the environmental sustainability programs from both internal operations and external member programs to reduce the carbon footprint. One interviewee supported this approach in that with this "two-pronged approach, we need internal operations to walk the talk and provide us (employees) the license to talk to people about the environment in an authentic and trusted way" (SR).

By looking at the entire value chain, the organizational environmental impact can be assessed more accurately, as the partnerships along the value chain need to be included. The idea of reviewing the value chain to be included in environmental sustainability programs was daunting but starting small and identifying key stakeholders can ultimately lead to a ripple effect - "including stakeholders was key in implementing our programs" (MR) - and many become key partners, especially if they are doing this for the first time also.

These themes were not determined to be key themes as not all interviewees mentioned them, possibly due to the perspective or direct experience of the interviewee. For example, those working closely with community members may have had more frequent involvement with a broader range of stakeholders and partners then those working on internal programs that are focused more on employees.

Benefits and Risks

The interviews provided some additional learnings and suggestions for other credit unions who are considering an environmental sustainability program. These insights are dependent on the sophistication of the environmental sustainability program being implemented and on the size of the organization. All interviewees noted that it was important to communicate the benefits of formalizing an environmental sustainability program and the risks in today's market environment.

Financial institutions are seeing increasing regulatory requirements and in future these may include environmental sustainability due to the impact and risk of climate change. It is important for credit unions to get ahead of these regulatory requirements to help with resource and potential financial constraints. Credit unions need to stay relevant and as youth are now more engaged in environmental sustainability due to the climate crisis, focusing and reporting on environmental sustainability can help the credit unions attract members and new employees and retain existing employees. As one interviewee reflected, "everyone is aware they cannot continue on the current trajectory for planetary boundaries so credit unions must do something to stay relevant" (MR). All interviewees mentioned a key benefit of implementing the environmental sustainability program over the years was that it provides a level of authenticity to its employees, members and community. Greenwashing in which environmental sustainability is not embedded within the organization but is more about marketing may alienate potential new members, especially youth.

The historical context provided insight into small environmental initiatives that were occurring before Vancity formalizied their environmental sustainability program. It demonstrated that small initiatives can help contribute to a bigger strategy by providing a starting point. Leadership from the board and executive was key in initiating a more formal program, setting it as one of the guiding principles and ensuring it continues to be a priority for the long-term. The three key themes demonstrated the importance of both a top down and bottom up approach, with leadership and engaged employees necessary for successful implementation and everyone working together towards a common goal. By inspiring employees to engage with a Big Hairy Audacious Goal, Vancity highlighted its leadership position in the environmental sustainability space when it achieved its goals. Metrics and reporting to internal and external stakeholders provided feedback for improving implementation. Additionally, the reporting provided authenticity to the organization and employees to talk genuinely about their experiences. When needed, Vancity did not hesitate to bring in knowledgeable partners to help them achieve their goals. Overall, the three themes align with Bhattacharya and Polman's six pain points. Together, the pain points and themes help provide insights into challenges organizations might face when implementing a sustainability strategy. The benefits and risks also highlighted the need for organizations, especially credit unions, to start implementation, so as not to have to become reactive to potential upcoming environmental regulations.

Conclusion

Through the interviews, three key themes emerged from learnings from the interviewees who had been directly involved in the implementation of the environmental sustainability: leadership; employee engagement, and the importance of metrics and reporting. The three themes are key to starting a successful program and also to maintaining the momentum. Although the three themes have been discussed separately, it is clear that they are intricately linked and all are needed for successful outcomes. Integration also supports longer-term success of the strategy. Embedding environmental practices within the organization helps drive a change in organizational culture from a single financial focus to a triple bottom line focus. The themes are congruent with the literature review and it is clear that there were several overlaps with Bhattacharya and Polman's research. The themes could be mapped to the six identified pain points. The learnings from Vancity provide more specific understanding of the potential challenges that other credit unions may face and areas of focus when starting environmental sustainability programs of this kind.

The supplemental theme of partnerships and collaboration also aligned with the literature but did not appear as a key theme throughout all interviews, perhaps due to the types of initiatives Vancity implemented as a credit union. Internal operational initiatives, such as reducing energy through new technology, may not require additional partnerships. This theme could be explored by future research.

The historical context and sub themes helped unearth some interesting nuances for Vancity that could also be explored by future research. An example is the importance of values-alignment in the board, executive and employees in successful implementation of environmental sustainability initiatives. At Vancity, prior to the development of the sustainability strategy, the board was motivated to explore where Vancity wanted to position itself in the environmental sustainability space. As a co-operative, Vancity's board members are chosen by its member-owners and therefore the types of board members and their expertise or interest may reflect some of the needs emerging in the community. The values-alignment of the board supports a leadership position and prioritization of a long-term program such as environmental sustainability. Due to the governance structure, co-operatives also are more likely to be more long term focused than IOFs.

Many of the interviewees noted that Vancity currently had many employees who are passionate about climate change. The employees were attracted by Vancity's reputation for environmental sustainability leadership and wanted to work for a values-aligned organization. At all levels of the organization, including executive leadership, many employees have an interest or passion in environmental sustainability. Further research could look at whether this passion translates into daily actions at work which contribute to minimizing the organization's impact on the environment. Are environmental sustainability practices embedded more quickly than in other organizations due to the values-alignment or passion for the topic at all levels ofthe organization? As the culture shifts to having environmental sustainability within Vancity's DNA, and as the implementation continues to succeed, Vancity can ensure that its environmental leadership position is authentic. One interviewee summed it up perfectly stating, "we absolutely have to walk the talk, what does it look like if we are asking others to do it?" (MR).

This research project suggests credit unions implementing environmental sustainability programs can focus on the three key themes identified here: leadership; engagement of employees; and metrics and reporting. It is important that credit unions look at leveraging their co-operative values to contribute more to the defining issue of our time, climate change. Hopefully by understanding some of the key themes learned from Vancity's successful implementation, more credit unions and co-operatives are inspired to broaden their social sustainability focus and start upon the environmental sustainability journey.

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Growing British Columbia's Co-operative Economy: Lessons from the San Francisco Bay Area and Finland

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Abstract: A global shift in the economic paradigm, from capitalist to co-operative, involves cross-cultural learning and collaboration. The co-operative sector in British Columbia (BC), Canada has made significant advances in the past two decades; yet to accelerate towards a local co-operative economy requires strategic planning, resourcing and awareness. Such a strategy can only be enabled through collective contributions to development of the provincial and national co-operative ecosystems, realigning the legislative and regulatory environment to create opportunity, and creating or acquiring adequate resources, both human and financial. Vancouver City Savings Credit Union (Vancity) and the British Columbia Co-operative Association (BCCA) are instrumental in planning, funding and realizing opportunities for co-operative advancement in BC.

This research examined two regions similar to BC in ideology and population size (the San Francisco Bay Area and Finland) to understand the tactics that catalyzed their respective co-operative ecosystems. The research was exploratory in nature, combining a secondary literature review with regional, key informant interviews. It revealed areas of opportunity for BC co-operative leaders and organizations to explore to create a more integrated co-operative network and bolster the number of co-operatives. Toward this goal, the paper proposes seven key functions for the BC co-operative sector: 1) implement a comprehensive co-operative ecosystem framework; 2) create a co-operative development strategy; 3) develop co-op specific resources and form a co-operative enterprise hub; 4) create an advocacy roadmap; 5) increase "co-operation among co-operatives"; 6) increase access to investment and financing; and 7) introduce indivisible reserves. Additionally, it articulates the role that Vancity and BCCA should play in enabling these outcomes.

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Keywords: BC co-operatives, co-operative sector, co-operative ecosystem, San Francisco Bay co-operative ecosystem, co-operative system in Finland

1. Introduction

Moving global and local markets towards a co-operative economy requires international collaboration and cross-cultural learning across the co-operative sector. While co-operatives permeate the global economy, there are certain regions in which formal co-operation is recognized and supported as a key driver in the local economy. Of particular note are the Emilia-Romagna region of Italy and the Basque region of Spain, through the Mondragón Corporation co-operative network. Both areas and their organizations have been studied at length by co-operatives, co-operative movements, and academics alike, including throughout Canada, in order to understand what could catalyze similar co-operation in other regions.

While it is important that the Canadian co-operative sector has a good understanding of Emilia-Romagna and Mondragón and the key elements of their co-operative ecosystems, lessons from the two regions have proven difficult to implement locally as some cultural and foundational elements are different. Specifically, co-operation is culturally and historically embedded within the local economic practices of the two regions whereas in Canada, the conditions of community understanding, national supports, practices of co-operation amongst co-operatives and legislative mandates are still uneven – more profoundly developed in Québec, less so in the rest of Canada. While further developing these crucial elements of a wider co-operative economy requires longer-term visioning and

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education, the BC co-operative sector lacks a full understanding of short-term wins that could build momentum toward their achievement.

The primary focus of this research was exploratory: to gain insights into the ecosystems and enabling environments that help foster co-operative economic development in two regions with like economic and social conditions to BC. An initial broad regional search of co-operative ecosystems was narrowed to a comparative analysis between the current co-operative economy in British Columbia and those of the San Francisco Bay Area in California, USA and Finland. Documentary research and key informant interviews were used to describe the conditions and contexts in the comparative co-operative economies and analyse the applicability to the local, BC context. The proposed outcome was to draw lessons for the expansion of the co-operative sector in BC. The following research questions guided the study:

1. What conditions exist within the co-operative ecosystems of Finland and the San Francisco Bay Area that have enabled co-operative and ecosystem development?
   a. Specifically, what policies and funding resources are in place that nurture and consolidate the co-op sector in Finland and the Bay Area?
2. How can these elements be replicated in the implementation of the Vancouver City Savings Credit Union's and British Columbia Co-operative Association's co-operative development plans in British Columbia?

2. Context

2.1 Co-operative Landscape in British Columbia

Formalized co-operation, by means of co-operative enterprises, has played a role in the Canadian economy since the settlement of European immigrants in the mid-nineteenth century (MacPherson, 2013). Since then, the co-operative economy has seen times of both flourishment and regression. In British Columbia, the westernmost province in Canada, the co-operative sector is currently growing yet it lacks some of the fundamental and innovative ecosystem players and components needed to more fully thrive and contribute to the provincial gross domestic product (GDP).

British Columbia is currently home to approximately 700 co-operatives, across many sectors of the economy – agriculture, housing, finance and insurance, and commercial and consumer products and services, to name a few (Small Business BC, 2019). While that number continues to grow, BC's vast geographic area, natural regional divisions (based on water and mountain boundaries) and economically differentiated regions make the creation of an ecosystem that supports the continual development of the co-operative sector challenging. Co-operatives represent less than one percent of BC's 508 000 small and medium sized business (SME), which account for 98 percent of businesses in the province (Province of British Columbia, 2019). There is a great opportunity to increase awareness of co-operatives and work to transition some SMEs to co-operative firms as the baby boomer generation retires (Co-opConvert, 2020).

Vancouver City Savings Credit Union's (Vancity), based in Vancouver, British Columbia, is Canada's largest community credit union outside Québec with approximately 543 000 members and over $28 billion in assets, plus assets under administration (Vancity, 2020). These robust resources, coupled with its leadership and reputation, cast Vancity as a significant player in the co-operative ecosystem in BC and Canada. It invests both financial and human resources directly in co-op development, raises awareness of the sector, and finances both co-op firms and federations. Yet there is significant opportunity to play a greater role in enhancing and expanding the local co-op ecosystem, in both the number of enterprises and the co-operative sector's engagement in the broader economy.

The British Columbia Co-operative Association (BCCA) is the primary industry organization for BC co-operatives, with direct monetary and advisory support from some of BC's larger co-operatives. In 2017, the BCCA's Board of Directors developed a strategic plan to increase the co-operative development and support capacity within BC, ensuring the key sectors and regions were represented in order to understand the needs of their respective communities. A new executive director was hired to deliver upon the plan. There are many challenges, however, because co-operative resources and expertise are concentrated within the urban core of the province.

2.2 Comparative Regions: San Francisco Bay Area (California) and Finland

There are 3 million co-operatives in the world that make significant economic contributions globally, by means of turnover and employment, in both developed and developing nations (International Co-operative Alliance, 2020). The fundamental virtue of economic self-reliance resonates with individuals and collectives across the planet, and the co-operative tradition is particularly steeped into many European nations, such as Italy, England, France and Germany, enabling an integrated co-operative ecosystem within their economies. Co-operation has been a means of rising from recession or counter-balancing the capitalist economic paradigm for countries and regions around the world. Given the COVID-19 pandemic, the resulting economic uncertainty and social inequities, it is important to understand how co-operatives create jobs, which is critical in recessionary periods, while encouraging local investment and growth.

The comparative regions of the San Francisco Bay Area in California, USA and Finland share similar characteristics with BC. In all three regions, co-operatives have existed for well over a hundred years, while in both Finland and the Bay Area the past two to three decades have seen an acceleration of co-operative development in both individual firms and support networks. Additionally, all three regions have populations in the 5 to 10 million range, have developed mixed economies, and share in many progressive values and practices (Province of British Columbia, 2020; Statistics Finland, 2020; United States Census Bureau, 2020). Based on the Organization for Economic Co-operation and Development's (OECD) Better Life Index, residents of the three countries (and, by extension, regions) also have a similarly high quality of life. In 2017, they all ranked within the top 10, scoring within 0.4 of each other on a scale of 10 (Canada – 7.9, Finland – 7.8, and USA – 7.5) (OECD, 2017).

Specific evaluation of each region below draws upon further, more direct commonalities that should enable recommendations for local (BC) replication or adaptation to draw similar results.

San Francisco Bay Area, California, United States of America

California has a rich history of co-operative ideas and practices, beginning with the mutually beneficial relationships of the Indigenous peoples of the San Francisco Bay Area and continuing through the mass immigration brought by the Gold Rush and agricultural settlement, the Great Depression, and the liberation movements of the1960s and 70s to the present day (Curl, 2010). The convergence of history and collectivist efforts has resulted in the area becoming home to leaders, researchers, and advocates with principles in common with the co-operative movement.

A strong co-operative identity, particularly that of worker co-operatives, continues to make substantial contributions to the Bay Area economy, due to its strong co-operative ecosystem and "progressive community, [with] diverse nonprofit and social enterprise sectors, and many values-driven capital providers" (Hoover & Abell, 2016, p. 29).

The many similarities of this region to British Columbia include relatively low unemployment rates (before COVID-19) and high housing prices, and their urban centres are increasingly characterized as "tech hubs." Additionally, BC and California share a "West Coast ideology" characterized by cultural diversity, environmental sustainability practices and social equality and well-being. Ley reflects that "an abiding cultural image has linked Vancouver [BC] with San Francisco more than with any other city and it is not difficult to find substantial lifestyle associations" (1980, p. 245). These characteristics align in some ways with the co-operative principles and likely contribute to the favourable attitude towards co-operatives in the Bay Area.

Finland

Finland boasts of being "the most cooperative country in the world" given the ratio of co-operative membership (4 million) to population (5.4 million) (Pellervo, 2017b). While co-operatives have been a part of the Finnish economy for well over a hundred years, a surge in co-operative development over the past 30 years followed a depression in the early 1990s due, in part, to the fall of the Soviet Union (Karhu, 2013). During this time, unemployment was near 20 percent; with the support of government and the co-op sector, awareness of the model as a countermeasure increased (Karhu, 2013). Since then, approximately 200 co-operatives per year have formed, totaling nearly 4500 operating co-operatives across Finland, of which 90 percent are small enterprises (Karhu, 2013). Thus, co-operatives operate across many sectors of the economy, although a large portion are "water co-ops" and "worker, service, and expert co-ops" (Karhu, 2013).

Similarities between Finland and Canada, specifically BC, include climate, social-democratic values, and immigrant ties. One of the most critical similarities between the two regions is that small business development provides the majority contribution to the economy. Small business (less than fifty employees) makes up 98 per cent of BC businesses and 99 per cent of Finnish companies (Small business profile, 2019; Yrittäjät, 2020). Additionally, both regions have both urban and rural settings and economies in which agricultural sectors have historical importance.

Given that Finland is a country, unlike the San Francisco Bay Area and British Columbia, it can provide some insights into legislative and regulatory amendments that could be proposed in Canada, and particularly in BC. While this research focuses on application to the BC region, it is imperative to provide some commentary at a national level, too, given the related need for strengthening co-operative development nationwide.

2.3 Literature Review

The challenges that currently exist in strengthening the co-operative core in BC reflect those in other sectors and can be classified into four main categories: (1) expertise and resources; (2) policy, law, and legislation; (3) capitalization and access to finance; and (4) the interconnectedness of the sector (i.e. its 'ecosystem') (Battilani & Zamagni, 2012; Sanchez Bajo & Roelants, 2011; Szabo and Baranyai, 2017; Kalmi, 2012). Internationally, the co-operative sector has recognized these broad categories as key challenges for some time. Novkovic and Webb (2014) show how the growth challenge for co-operatives is to scale up in a way that considers these four areas without degrading democratic control by using capitalist strategies (p. 295).

The 'units of analysis' within the conceptual framework (Section 3.1 below) are drawn from frequently identified growth dimensions for co-operative and non-co-operative businesses alike and correspond to the four key challenges categories above. The main elements of Project Equity's *Co-operative Growth Ecosystem* framework, for example, are framed as "the building blocks...key drivers for scal[ing] initiatives…and legitimize and create demand" (Hoover & Abell, 2016, p.3). Global research looks specifically at co-operative firms and economies, including the firm's needs and solutions, as articulated below.

Legislation & Regulation and Access to Finance & Capitalization

Public policy has played a significant role in the formation of new co-operatives in many countries, such as Italy, South Korea, and Japan. Kalmi's research into Finnish co-operatives did not find a direct correlation between specific public policy at a regional level and increased co-op firms but did recognize that it could be important in elevating awareness of the model for business development firms (Kalmi, 2012). Ji (2018) and Defourny and Kim (2011), however, more explicitly stated the pivotal role of the national South Korean government, including law creation and directed investments and contracts into the sector. Since 2002, multiple revisions to bankruptcy law in Argentina has enabled the worker co-operative movement to gain significant traction "favor[ing] worker administration of 'broken' factories" (Rossi, 2015, p. 103; also see Vieta, 2020). These are just a few examples of adaptations that have enabled increased awareness of the co-operative model and removed barriers to creation and/or operation.

Ecosystem Development and Expertise & Resources

A lack of awareness of the co-operative model is a key detriment to the uptake of co-operatives. Entrepreneurs and collective organizations will not be driven towards the model without a broad understanding of co-operatives, their benefits and potential, and access to expertise within the business sector. Kalmi's research points to a direct positive correlation between the number of "specialized [co-operative] advisory services" and the number of co-operatives (2012, p. 310).

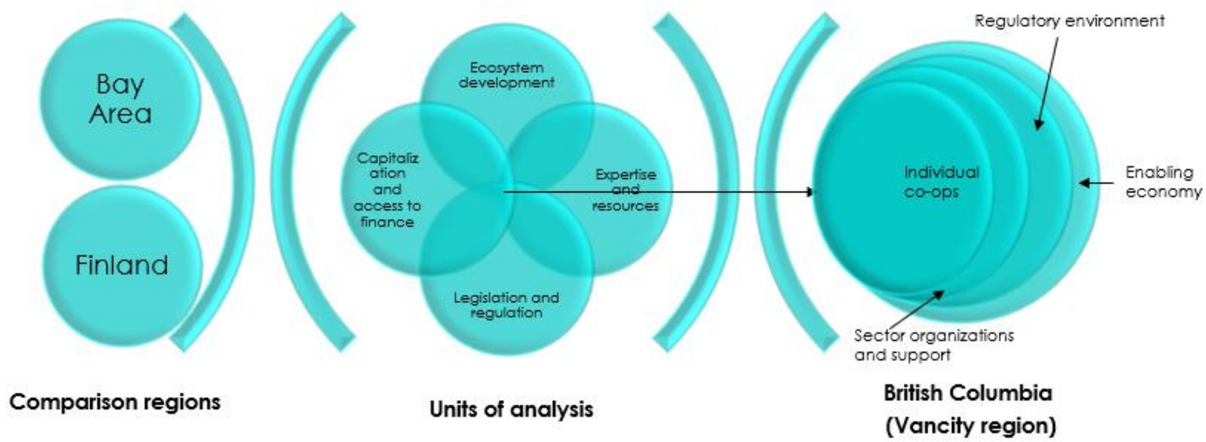
Multiple research sources present education as a key part of the solution regarding awareness of the model. In studying agricultural co-operatives in Hungary, for instance, Szabo and Baranyai (2017) discerned that policy changes to substantially increase education on collaborative models would be required for producer and consumer co-operative numbers to increase. In a comprehensive study of the Australian co-operative sector by Oczkowski et al., participants thought Co-operative Principle Five (education, training and information) the most important, citing, "…education is the most important, otherwise people forget why we have a co-operative in the first place" (2013, p. 61). Embedding the co-operative model within the education system would likely gain more favourable results than mass marketing and communication channels as the general public has little understanding of the basics of the co-operative model; introducing the concept of co-operatives along with other forms of enterprise at an early age would be advantageous (Miner, 2016, p. 4).

3. Methodology

3.1 Conceptual Framework

The concepts garnered in the literature review enabled the development of the conceptual framework (illustrated below) to aid in the strategic direction of the research and, coupled with regional commonalities, were used to determine the final comparative regions of Finland and the San Francisco Bay Area.

In the BC application portion of the framework, Vancity's community economic development model was used to ground possible solutions to ensure strategic relevance. The model lends itself well to co-operatives (Vancity internal framework document) and connects directly with the 'units of analysis' (i.e., Individual co-ops and Sector support link to Expertise and Capitalization; and the Regulatory environment and Enabling economy link to Legislation and Ecosystem development).



3.2 Research

> ***Research question 1 (RQ1): What conditions exist within the co-operative ecosystems of Finland and the San Francisco Bay Area that have enabled co-operative and ecosystem development?***

Exploratory, comparative case analysis was imperative to answer RQ1 (Yin, 2011). It enabled definition of specific criteria for assessing which economies have the most similar conditions to BC. Key themes across multiple economies and sub-themes based on specific conditions were identified for additional analysis in the RQ2 phase of the research.

The methodology for RQ1 primarily focused on qualitative research, i.e., secondary literature reviews of academic papers, journals, articles and grey literature to gain a fulsome understanding of co-operative economies. Once baseline breadth was achieved, a review framework enabled determination of the two comparative co-operative regions and guided the collection of key elements of their success. A depth of understanding was gained through key informant interviews with Elvezio Del Bianco from Vancity, Andrea Harris from BC Co-operative Association, E. Kim Coontz from California Center for Co-operative Development and John McNamara from Northwest Co-operative Development Center, who are all experts within the studied co-operative economies.

Research question 2 (RQ2): How can these elements be replicated for implementation for Vancity's and BCCA's co-operative development plans in British Columbia?

RQ2 focused on exploratory, comparative case analysis (Yin, 2011) within which a specific definition was given to the conditions, resources and tools that are most relevant for British Columbia. Furthermore, these factors were analysed, assessing replicability, proposing roles for Vancity, BCCA and other local players, and identifying expected benefits and challenges.

A focus was placed on qualitative research, specifically key informant interviews with Elvezio Del Bianco (Vancity) and Andrea Harris (BCCA), as well as local knowledge case study research to understand the effects of local implementation (Astalin, 2013, p. 122). Secondary literature reviews of small business statistics, regulatory requirements and legislative factors were essential in describing the current local economic ecosystems.

4. Analysis and Results

4.1 Ecosystem Development

The term ecosystem illustrates the need for an integrated network of players and elements to be able to tackle systemic challenges and create sustainable opportunities. According to Tanner (2013), Kanter (2012) "describes secondary institutions as 'more likely to contribute to shared prosperity when they're networked'" (Kanter, 2012, in Tanner, 2013, p. 31). Developing such an ecosystem for co-operatives requires players with deep knowledge of the economy and appropriate organizational forms and elements that create favourable conditions for co-operative development. Such elements may include sectoral organizations, such as provincial and federal co-operative associations, with funding that enables them to carry out high quality and timely work and invest in individuals who propel the system forward.

British Columbia

The current co-operative ecosystem in British Columbia is dominated by a few key larger players (i.e., BCCA, Vancity, Central 1 Credit Union, Modo Car Share Co-op, and Co-op Housing Federation of BC) and several smaller individual co-operatives. These groups provide the primary investment in and support of the sector, though some only operate in the urban centres of Metro Vancouver and the Capital Region District (Victoria). The BC Co-operative Association is the central organization but lacks much needed capacity, resources and funding to accelerate and deliver on its strategies and initiatives. While the ecosystem 'key players' sit on the board of BCCA, the association's limited operational capacity makes it difficult for other co-operatives to realize the benefits of their BCCA membership.

When BCCA developed a ten-year strategic plan in 2017, it provided a strong framework for growing the sector. The framework focuses on three strategies: co-op development; co-op "knowledge mobilization"; and, communications and advocacy, and outlines specific initiatives (BCCA, 2019, p. 12). However, several risk factors were identified related to membership value, organizational capacity, and the large geographical service region (all of BC). These have remained the greatest challenges to delivery, especially when coupled with "tight margins aggravated by the [COVID-19] pandemic," which can make it challenging for co-ops to pay membership dues, thus requiring BCCA to diversify its revenue streams (Elvezio Del Bianco, personal communication, 2020).

A slight glimmer in the geographical challenges is BCCA's "sister" organization, the Upper Columbia Cooperative Council (UCCC), whose mandate is to support co-operative development in the most south-eastern part of the province. Currently, UCCC has twenty-three members and there is growing and active interest in the region (Upper Columbia Cooperative Council, 2020). As their resources are limited, they rely heavily on BCCA for technical and monetary assistance.

So, while the opportunity is great, particularly given the economic and employment challenges likely to result from the pandemic, it is imperative that the co-operative ecosystem is strengthened in a way that includes the whole province and addresses the gaps in the ecosystem before moving forward.

San Francisco Bay Area

The co-operative ecosystem in the San Francisco Bay Area has been steadily strengthened over the past decade. In 2013, Project Equity, the East Bay Community Law Centre and the Sustainable Economies Law Centre set forth to understand the local co-operative ecosystem and articulate, for the first time, a shared multi-sectoral strategy to foster worker co-op development for low-income workers (Lingane, 2015). The primary focus of the resulting *Bay Area Blueprint* (the "Blueprint") was to "bring together cross-sectoral actors [business, academia, and nonprofits] to work on different parts of the problem to move the work forward…" with "a shared plan of action backed by solid, local, targeted research," creating an actionable plan but also working to strengthen relationships and identify gaps in technical and resource support (Lingane, 2015, p. 22).

An important element in the Bay Area ecosystem is the organizations focusing on actioning the Blueprint and working hands-on with co-operatives, such as the California Center for Cooperative Development, Sustainable Economies Law Center and The Network of Bay Area Cooperatives; congruently, there are organizations whose mandate is to research, monitor and iterate strategy, such as Project Equity. These entities work collaboratively to ensure the sector and potential and existing co-op firms have the information to adjust and respond to opportunities as they arise. For example, the Blueprint identified the conversion of small businesses to worker co-operatives (Lingane, 2015, p. 23) as an opportunity. Project Equity is leading work to develop this opportunity and attaining gradual success as Baby Boomers begin to retire (Project Equity, 2020a).

Much technical advice is also advanced by "established co-ops mentoring new ones, new co-ops spin off from old ones, and some co-ops provide loans or grants to others" (Hoover & Abell*,* 2016, p. 22*).* For example, the Cheeseboard Collective and Arizmendi Bakery are two co-operatives that fostered replication by supporting the start-up of new bakeries (Project Equity, 2020b). Today there are six, independent sister worker co-operatives (Arizmendi Bakery, 2020). E. Kim Coontz (2020), Executive Director of the California Center for Co-operative Development, suggests that in her experience, "co-ops beget co-ops; by working together they understand ways to strengthen each other and provide new opportunities" (personal communication, 2020). Their neighbours and other affiliates become curious about the model and reach out to learn more (E. Kim Coontz, personal communication, 2020).

The Bay Area ecosystem has integrated the work and outcomes of key players in a way that would meet all the requirements of the Vancity CED model. It looks for ways to support individual co-ops, names the sector supports and resources available and required, and allows for collective advocacy and increased awareness in consumer and capital markets. While the ecosystem is interconnected at a local level, various national players are feeding the network as well, such as the US Federation of Worker Cooperatives. It also stresses the importance of connections to the national associations for influencing federal policy changes that have a direct effect at the local level, such as providing access to funding for job creation and training, available to other business structures (E. Kim Coontz, personal communication, 2020).

Finland

Pellervo Society is a national co-operative federation at the heart of the Finnish co-operative ecosystem. Started by Hannes Gebhard, the "Father of Finnish Co-operation," the organization provides a myriad of support services to co-operatives across the country, and lobbies and advocates for legislative changes (Marshall, 1958, p. 228; Pellervo, 2017a). Pellervo keeps Finnish co-operatives tied to the international co-operative ecosystem, while it continually researches and advocates for co-operativism as the local economic engine across all sectors.

As co-operatives exist in most sectors of the Finnish economy, Pellervo is connected to the major sectorial affiliations, such as Valio Ltd owned by nine co-operative dairies and the two major consumer co-operatives, S Group and Tradeka (Pellervo, 2017b). Through Pellervo, these enterprises and co-operatives can leverage shared resources. Pellervo maintains several arms to provide value back into the ecosystem through research, data collection, training, advocacy, co-op services and funding (Pellervo, 2017c). This "networked approach" enables representative sector organizations ("centrals") to convene through Pellervo and seek resources, support and advocacy both individually and collectively (Pellervo, 2012, p. 13).

Pellervo has maintained a direct relationship with the Finnish government since its inception, beginning with the first Co-operative Societies Act in 1901 (Pellervo History, 1999). The government is an integral part of the ecosystem and is critical to change and enhance regulatory and legislative policies, as well as to raise awareness of the legitimacy and value of the model. Led by Pellervo, the sector is looking for ways to increase awareness of the model and to influence the global co-operative community. For example, *The Journal of Cooperative Organization and Management*, a well-known global academic journal for co-operative research, was founded in Finland and much of its leadership team are leading Finnish co-operators and researchers (Elsevier, 2020).

Throughout its tenure, Pellervo has been able to continually strengthen itself and the co-operative sector. The interconnectedness of the federation, its strong ties to government and academia, and collaboration across all industries in which co-operatives operate, should be a model for BC and Canada. This federated structure enables a coordinated approach for political advocacy, co-operative development and raising awareness of the sector.

4.2 Policy, Law, Regulations and Legislation

The regulatory and legislative environment play a dual role unique to co-operative firms; they operate within and guide both their economic sector (i.e., consumer goods, financial or insurance services, housing, construction, energy, etc.) and their particular co-operative sector (consumer, worker, producer, financial, etc.). A best-practices example is in Italy where the reflection of co-operatives within the Italian Constitution, as well as in the Civil Code and regional legislation, has legitimized the imperative economic and social impact of co-operatives.

British Columbia

The BC Co-operative Association Act ("the Act") is clearly laid out and incorporating as a co-operative firm is a viable option in the province. However, a gap exists in understanding the specific public policy that is required and at what levels (municipal, regional/provincial, national, etc.) to create the maximum enabling conditions for co-op sector growth. It is essential that legislators confer with the co-operative sector in developing policy as co-operatives require, "…a specific legal framework that adequately reflects their particular nature and function…and that preserve their distinct identity…" (Fici, 2013, p. 7). To enable expansion of the co-operative sector, Fici promotes a legal structure that has both overarching co-operative regulation and specialized regulation for differing structures of co-operatives; excluding credit unions and housing co-operatives, the BC legal framework does not make distinctions for different co-op models (Fici, 2013, p. 13). Additionally, the Act has not been updated since 1999 and thus does not reflect changing technological capabilities, nor new economic challenges or opportunities.

The BC Co-operative Association has made recent strides to actively build relationships with government, including contracting a government relations firm. Opening such channels can be an immense value to the membership (Andrea Harris, personal communication, 2020). In late 2019, BCCA proposed a series of amendments to the BC Co-operatives Act which included: simplifying and aligning it with the Societies Act (for not-for-profit organizations); modernizing and integrating technology for ease of use (incorporation and yearly filings); and ensuring alignment with the Securities Transfers Act to enable greater access to capital (BCCA internal document, 2019). BCCA has also requested access to provincial data on co-operatives, to have a better understanding of the current landscape.

San Francisco Bay Area

The California Cooperative Corporation Law articulates the specific laws related to co-operatives for the state (Sustainable Economies Law Center & Tuttle Law Group, 2016). This unique statute allows a co-operative to elect to be governed as a worker co-operative. The legislation clearly defines the dimensions of worker co-operatives and a unique set of laws providing taxation benefits, clarification on profit distribution, governance policies and the ability to raise capital through a securities law exemption (the intricacies of which will be addressed further in Section 4.4) (California Worker Cooperative Policy Coalition, 2015*).* Known as AB 816, the California Worker Cooperative Act, this law could provide insight into how to strengthen co-operative legislation to facilitate creation and operation in BC.

Most importantly for individual co-operatives, there are resources available for navigating the legislative environment. The Tuttle Law Group specializes in supporting co-operatives. Its lawyers provide tailored advice to individual co-ops of different types as well as publishing regular reports and making presentations to California co-operatives so that valuable legal information is available to all California co-ops.

Key ecosystem players, such as Tuttle Law Group, Democracy at Work, Project Equity, and the California Centre for Co-operative Development, work in a highly integrated fashion allowing them to consistently interpret the needs of the co-operative community and leverage government and other organizational relationships to create change. They work closely with the national network of co-ops, National Co-operative Business Association, which lobbies and engages federal agencies and works with the bipartisan Congressional Cooperative Business Caucus, "…providing greater visibility of cooperative economic impact before Congress and the Administration and driving a co-op-friendly legislative agenda" (National Cooperative Business Association, 2020).

Finland

The first version of Finland's Co-operative Societies Act was written in 1901. Over the past century, it has been updated several times to keep relevant to the changing economic conditions and the types of co-operatives being created; the most recent version was released in 2013 titled the Finnish Cooperatives Act ("FCA"). The revisions of 2001 provided perhaps the most significant changes. In a review of the FCA, Pönkä (2019) provides the following explanation of the changes:

> *The main objective of this law was to improve the operational and financial prerequisites of cooperatives by updating their legal framework to reflect the requirements of the modern business environment. In practice, this meant that legal provision concerning the incorporation and administration of cooperatives were lightened, new methods for securing sufficient capitalization were introduced, and many previously mandatory rules of law were transformed into non-mandatory provisions, i.e., provisions which could be altered in the bylaws of the cooperative. (p. 83)*

While such amendments are encouraging and illustrate the Finnish government's acknowledgement of the economic legitimacy of co-operatives, they also spur debate. There has been an international trend in co-operative law to give co-operatives the same advantages as "capital-centered entities". If the administrative requirements for forming a co-operative are significantly more difficult than for other types of firms, entrepreneurs will likely default to traditionally structured firms. Likewise, if they are unable to generate enough capital to start or scale up operations, they may have to close or shift to other business models. However, Henry argues that such amendments do not increase a co-operative's competitiveness and laws need to be centered around the co-op identity (2013, p. 84). From a critical perspective, the Act undermines the most fundamental principles of co-operativism by allowing a co-operative to be "formed" with only one member, disregarding mutuality. While such criticism may be warranted, the amendments have enabled greater co-operative development and awareness

Notwithstanding these issues, co-operatives have been a priority of the most recent Finnish governing party, elected in 2019, particularly for business continuity (conversion to worker co-operatives) and housing co-operatives. Specific legislation is set to be created (Karhu, 2019). The generalization of the commitment is to find ways the government, business community and regional associations can collaborate further to increase the local, regional and national benefits of co-operation across all industries.

A lesson from Finland is in the degree of importance the Act has within the country since co-operatives are regarded on equal footing with privately-owned and corporate entities.

4.3 Expertise and Resources

A key detriment to the uptake of the co-operative model is a lack of awareness of the co-operative model. Without broad understanding, as well as expertise, the business sector is not able to drive entrepreneurs and collaborative organizations towards the model and support them through development.

This section also discusses the complementary roles of business development supports and the formal education system in adequately supporting the development and sustainment of co-operatives. Kalmi's (2007) research into the *Disappearance of cooperatives from economics textbooks* found that as the global economic paradigm shifted from "local and institutionally sensitive solutions" to "top-down solutions," the mention of the co-operative organizational form diminished (p. 641). He surmised that this is detrimental to the future of co-operative development, as students are unlikely to come upon the model post-graduation if they do not encounter it during their undergraduate studies (Kalmi, 2007, p. 641).

British Columbia

Often, in British Columbia co-operatives are classified within the broader category of social enterprises or ventures. On the one hand, this is advantageous as it connects co-operatives with a broader community of like-minded individuals and organizations and enables greater advocacy around social investment. On the other hand, it overlooks the fact that co-operatives are a unique form of organization with their own legislation and policy parameters, democratic governance structure and share-ownership model. While for-profit social ventures and social enterprises owned by not-for-profit organizations can access expertise in the more traditional and available streams of legal, accounting and operational expertise, co-operatives do not have similar outlets and supports.

BCCA has done some important recent work to increase awareness of the co-op model through its collaborative *Co-operative Now* program, a co-operative bootcamp that teaches the fundamentals of starting and running a co-operative (British Columbia Cooperative Association, 2019). Additionally, the first post-secondary course teaching the co-operative model is under discussion with a local university and other partners (Elvezio Del Bianco, personal communication, 2020). More such initiatives need to be built and offered throughout the province and through post-secondary institutions. Moreover, business start-up and support agencies have low to moderate awareness of the model and their expertise needs to be further developed. Some recent progress has been made by making these agencies aware that any inquiries regarding co-operatives can be directed to Vancity and BCCA for advice and technical support.

The expansion of these offerings needs to be matched with more sectoral experts and co-operative developers. There are few co-operative developers in BC, most nearing retirement age, and much of the work is referred to Saskatchewan-based Co-operatives First, whose mandate is to support co-op development in rural and indigenous communities in Western Canada (Co-operatives First, 2020). Many entrepreneurs looking at starting or converting to co-operatives are thus left to navigate the complex system alone. Further, there are few sectoral experts within the province who understand the key players within the ecosystem and who can help set co-operative strategy. This exposes the sector to risk if experts (with their knowledge and institutional memory) leave or retire, which is beginning to occur, compromising the future development of the sector (Elvezio Del Bianco, personal communication, 2020; Andrea Harris, personal communication, 2020).

There are also few lawyers and accountants who are knowledgeable about the sector, and often professionals who focus on the broader social enterprise sector are called on to attend to co-operative issues when their knowledge of co-ops might not be up-to-date or complete. BC needs knowledgeable professionals and consultancy firms who can contribute to building a robust offering of research, advocacy and capacity building to strengthen the sector. The BC co-op sector is also in need of data and research specific to the region to support planning, strategizing and advocacy.

San Francisco Bay Area

Strategic co-operative development and readily available expertise and resources are core elements in the increased emergence of co-operative firms in the Bay Area. Technical expertise specifically supports co-operatives and contributes to the overall ecosystem. Tuttle Law Group and the Sustainable Economies Law Center are two entities that fully understand the co-op principles and culture and the intricacies of co-operative law. They provide sound technical advice to individual firms, and also invest in the sector by leading advocacy work, conducting research and publishing reports that enable a greater understanding of the sector and offer useful resources for strategic sector development. This expertise is deepened through national affiliations such as the National Society of Accountants for Cooperatives, enabling accountants who concentrate on the co-op sector to learn from each other and produce publications and insights into regulations, help propose solutions to challenges and issues and advocate for changes that enable co-operatives to thrive (National Society of Accountants for Cooperatives, 2020).

The ability to follow through on strategic co-operative development, as outlined in the *Bay Area Blueprint,* is in no small part due to a network of co-operative development firms which employ a multitude of co-op developers (Lingane, 2015). Some of these developers are generalists around the co-op model and navigating startup, administration and governance, while others specialize in sectors, such as agriculture or worker co-operative succession.

Much like the co-op specific professional service providers, while the co-op developers are working with individual co-ops, they and their firms are working collaboratively through shared-learning associations and think-tanks, such as Project Equity, Democracy at Work, US Federation of Worker Co-operatives, and the Network of Bay Area Worker Co-operatives. They partner to develop and share research and advocacy, and ultimately work towards the same strategic approach to enriching the sector and local economy.

The utilization of collective technical expertise and resources are a result of a both reactive and proactive approach. Increased awareness of and education on the co-operative model is enabling greater interest in co-ops, and individual and collective entrepreneurs are seeking technical assistance because they believe in the value of the model. Since information on the model is not obvious within the abundance of more general business information, co-op development organizations need to reach out to the sectors and regions identified within the *Blueprint*.

Finland

Pellervo Society has a co-operative development arm that provides support to the entirety of the sector. They collaborate with an array of business support organizations whose "efforts in strengthening [the] knowledge on co-operatives" extend to thirty-one start-up agencies across Finland (Pellervo, 2012, p. 34*).* There is, additionally, regional support and investment to advance the co-operative model, though it is often dependent on "co-operative activists…provid[ing] advisory services free of charge or for only a nominal fee" (Kalmi, 2012, p. 307). The proliferation of technical services across the country has enabled substantial growth of the sector. Since 1998, when these resource support structures became widely available, there has been a steady positive trajectory of co-operative development, year over year (Kalmi, 2012, p. 301).

Moreover, co-op education has vastly improved over the past two decades. Finland has made considerable investments during these years to integrate co-operatives into business and entrepreneurial post-secondary curricula. For instance, the Ruralia Institute's Co-op Network Studies out of the University of Helsinki works collaboratively with Pellervo to provide access to co-operative courses across ten universities in Finland. Students can take individual courses or specialize in co-operative studies (Ruralia Institute, 2020). Courses can be taken at both undergraduate and graduate levels and are offered online by industry experts and researchers, which enables the content to be accessed across many institutions. The program gives the co-operative model a (relatively) equal opportunity to appeal to future entrepreneurs who have the basic awareness, knowledge and skills to start a co-op. The courses give them access to co-op sector professionals and experts, from whom they may seek guidance.

4.4 Capitalization and Access to Finance

Accessing the appropriate financial tools has been a challenge to co-operatives world-wide as the current neoliberal paradigm promotes maximizing shareholder value above all other business outcomes. The principles and values of co-operatives thus do not align with the profit outcomes of "traditional" financiers and investors and, to effectively safeguard their principles, co-operatives need to seek and use capital instruments that do align with them. To do so, both directors and management should have a deep understanding of the co-operative model and, collectively, include a balanced representation of experience, and specific technical expertise, such as finance, legal or technology; this is critical in ensuring social capital remains at the core of the co-operative (Birchall, 2017).

The challenge for co-ops to access adequate and appropriate capital illustrates the imbalance driving our current financial system because the membership shares of the co-operative structure should provide ample security conditions for issuing credit. Unfortunately, as members can withdraw their shares upon leaving the co-operative, creditors and investors classify them as liabilities and not "as core equity capital," as is the case with "their commercial peers" (Chieh & Weber, 2015). Co-operatives are seen as risky because there is not one person to hold accountable (Bancel, 2015) and many providers of capital, including credit unions, find challenges in fitting co-operatives into their conventional risk and financing models. These challenges make it even more vital that co-operatives access capital that respects the co-operative principles and maintains member control.

British Columbia

Accessing financial resources has been a challenge for co-operatives in British Columbia, as the lack of understanding of the model has meant that lenders and granters alike do not fully understand the risks and benefits of co-ops. While Vancity has made efforts to increase its lending to all forms of co-operatives, including worker, consumer and housing co-ops (unlike many other credit unions), each opportunity is scrutinized carefully as, in general, co-operative entrepreneurs lack understanding of security and guarantees available to secure the lending. As for accessing grants, traditional foundations and other funders debate whether co-operatives are classified as for-profit or non-profit firms, a critical distinction given the ineligibility of for-profits to access granting funds. The debate is about whether because co-operatives, for-profit and not-for-profit alike, redistribute wealth locally and invest directly in local economies, they should be accounted for at the same level of positive community impact as not-for-profit firms (E. Kim Coontz, personal communication, 2020). This problem is experienced in California, as well.

Though there is room for greater understanding of the co-operative model in the debt-financing landscape, including by credit unions, Vancity has created access to debt solutions for co-operatives in the regions it serves. There is potential for Vancity to support other credit unions throughout the province to create similar debt-financing options. The greatest capitalization challenge, however, is the availability of more patient, equity-like capital (Elvezio Del Bianco, personal communication, 2020). Non-member investing in an equity stake of a co-operative is counter to the co-operative principles but, in other jurisdictions of the world such as Italy, it has been useful, with restrictions on the role played by such equity investors. Overall, co-op law in Canada restricts control over the co-op to members, and it would be valuable to explore further expanding equity capital investments that guarantee the entirety of control remains within the co-operative.

Vancity and other larger Canadian co-operatives, credit unions and federations have made significant investment in the Canadian Co-operative Investment Fund. The $25 million fund is investing in co-operatives across Canada in the form of "loans, equity and quasi equity… ranging from $50,000 to $1.25m" (Canadian Co-operative Investment Fund, 2018). An additional $50 million fund was introduced by the Canadian federal government in the Fall of 2010 available to social purpose organizations, including co-operatives, for the purpose of preparing for investment opportunities (Community Foundations of Canada, 2020). The Canadian Worker Co-operative Federation's Tenacity Works fund acts in a similar way while focusing on worker and multi-stakeholder co-ops (Canadian Worker Co-op Federation, 2020). Expanding on these models, via partnerships with provincial and federal governments and Canada's credit unions, or even creating a BC-only co-op fund with initial cash infusions from BC co-ops, credit unions, and the provincial government would go a long way in promoting patient and equity capital funds for new and emerging co-ops.

Provincially, community investment co-operatives have been explored as a way to fund other co-operatives, but regulations in the BC Securities Law mean that they must navigate loopholes to be able to raise adequate funds to invest and the legalities and navigation of the process are burdensome. While there are some local values-aligned investment firms that are willing to take a lesser return in exchange for the high social and community value being contributed, there is a lack of understanding about the co-operative structure and the position the investors would take in lieu of the equity position they would take in corporations. In addition, most of BC's co-operatives are not seeking to be deemed "investable," by the definition of accredited investors which is usually based on revenue generated (Elvezio Del Bianco, personal communication, 2020).

The Securities Commission provides certain exemptions to co-ops by, for instance, not requiring them to submit a prospectus if the potential investors have had membership in the co-op for at least 12 months, if the co-op has less than 150 members and if investors' cumulative investment in the co-op is less than $10 000 (British Columbia Securities Commission, 2020). It also provides an opportunity for co-operatives to gain investment through close affiliates, such as directors, senior officers, employees and family, and accredited investors (British Columbia Securities Commission, 2020, p. 5). These exemptions are not perfect, but they do create potential for many co-operatives across BC to scale up. Thus, perhaps the key challenges for BC co-ops are not that the tools are not available, but that local co-operatives lack the capacity, investment savvy or awareness of such opportunities and tools.

San Francisco Bay Area

As noted earlier, AB 816 the California Worker Cooperative Act, articulates important differences in the formation and governance of worker co-operatives. Perhaps more importantly it includes the "community investor provision" (Sustainable Economies Law Center & Tuttle Law Group, 2016), similar to Italian co-operative law's "financial member" (Vieta, Depedri, & Carrano, 2017). The ability for worker co-operatives to raise capital this way is based on an exemption in the state securities law. The "coop securities exemption" allows an increased "aggregate investment amount per member…to $1,000," as well as introduces the idea of a new classification of investors called "community investors" (Sustainable Economies Law Center & Tuttle Law Group, 2016). Community investors are not worker-members but have a vested financial and social interest in the well-being of the co-operative. The securities law requires that they be given voting rights; however, given the co-op principle of "one member, one vote," AB 816 clarifies that community investors are "limited to approval rights only over the following major decisions: merger, sale of major assets, reorganizations or dissolution", which must be articulated in the co-op's bylaws or articles of incorporation (Sustainable Economies Law Center & Tuttle Law Group, 2016). Federal securities law also applies but co-operatives seeking community investors can be exempt by making the offering only available to California residents.

Indivisible reserves are "…property owned by the co-operative/co-operative movement which can never be divided among members…they provide long-term investment capital that supports longevity of the co-op…" (California Worker Coop Policy Coalition, 2015). AB 816 gives co-operatives the option of creating an indivisible reserves account, using funds only from "non-patronage-sourced income" to meet taxation laws (FindLaw, 2020). The co-operative designates the recipient organization in their bylaws, should the co-op dissolve; if they do not, the funds are directed to a regional co-operative development organization (California Worker Coop Policy Coalition, 2015, p. 3). Although indivisible reserves are not a required element of co-operatives' financial holdings and currently offer no tax advantages, their mere mention elevates the importance of reserving funds for times of necessity and investing in the sector should the co-op dissolve (California Worker Coop Policy Coalition, 2015, p. 3).

The strength of the Bay Area co-operative ecosystem, together with California co-op legislation and financing mechanisms, has generated resources to help address challenges to financing co-operatives, specifically worker co-operative conversions. For instance, Cooperative Fund of New England, Project Equity and Democracy at Work Institute collaboratively developed a handbook for worker co-operatives and lenders to support conversions.

Cooperatives in California share many of the same financial capacity challenges as the co-op sector in BC. Overall, there is still a lack of awareness and understanding of the co-operative model; often co-ops are categorized as private businesses making them ineligible for job creation and training grants (E Kim Coontz, personal communication, 2020). The challenges also apply in working with the United States Small Business Administration and in the regulations for debt financing. Additionally, partnerships with credit unions are lacking, as they tend to focus on individuals versus enterprise and are therefore not evolving to find ways to support the financing of co-operatives.

Finland

Agricultural co-operatives were the first Finnish co-operatives and they still play a large role in the economy today. Agriculture is also a primary industry in both BC and Canada, yet many large agricultural co-operatives, established in the past half-century, have had to demutualize due to a lack of capital coinciding with power-dynamics within the highest levels of the co-operatives (Quarter et al., 2018, p. 53). In Finland this has not been an issue as key co-operative sectors, such as meat, forest and paper, and banking, have moved to a "hybrid approach," which enables co-operatives to create subsidiary corporations that can be listed on the stock exchange, but stipulates that the co-operative must maintain a majority share (Alho, 2016). In this way, they can adequately capitalize while retaining control. Atria is a large food and meat company operating in Finland, Russia, Sweden, Denmark and Estonia with sales of 1.45 billion Euro in 2019 and close to 4,500 employees and is one of Finland's most recognized brands (Atria Plc, 2020). Atria is a public company with both a board of directors and supervisory board in which most members are representatives of the majority shareholding co-operatives, Lihakunta and Itikka Co-operative, producer co-operatives of farmers and other agricultural entrepreneurs (Atria Plc, 2019). The co-operatives retain approximately 90 percent of the voting rights of Atria (Lihakunta, n.d.).

Smaller co-operative firms in Finland are self-funded and seek funding opportunities through business-support agencies. Business Finland was created in 2018 with the merger of Finpro, the national trade organization, and Tekes, the Finnish Funding Agency for Technology and Innovation (Business Finland, 2017). Tekes has made significant investment in co-operative firms; its "research, development and innovation funding is targeted to projects that create the greatest benefits for the economy and society in the long-term" and Business Finland continues the tradition with support for co-operatives and other firms committed to innovation and expansion (European Commission, 2020).

Vancity has invested considerable granting dollars in the start-up of co-operatives; business start-up agencies are directing co-ops to Vancity instead of being encouraged to support them directly. Learning from Finpro and Tekes, Vancity may consider granting to various small business support agencies, such as Small Business BC and Women's Enterprise Centre, to provide funding to start-up co-operatives – this would create the double benefits of capitalizing co-operatives and increasing awareness within business agencies.

5 Discussion and Recommendations

Learning from the strengthening and growing co-operative sectors in California and Finland, the co-operative sector in British Columbia should focus on the following seven functions to accelerate expansion:

1. Implement a comprehensive co-operative ecosystem framework

A commonly accessible, comprehensive, and well-articulated ecosystem framework needs to be developed, articulated, mapped out and archived within key institutional players of BC's co-operative sector. Both Vancity and BCCA could be institutional repositories and facilitators of BC's co-operative ecosystem. They could convene the appropriate actors and aggregate the needs of their respective co-operative memberships as well as contribute solutions to areas of opportunity, such as financing in the case of Vancity and advocacy for BCCA.

The framework needs to be developed collaboratively with both regional and multi-industry representation. Time is needed to learn, articulate, and illustrate the composition of local economic ecosystems and to identify gaps and strategically plan for the near and distant future. Having a framework will mitigate the risk of relying on the knowledge and social memory of a few influential individuals who may leave the region or soon retire. It is also essential so that co-operators across the province can see where they fit into the ecosystem and find ways to connect.

The *Co-operative Growth Ecosystem Framework* used in the Bay Area is a ready-made tool that could be leveraged in BC and the process could be expedited by inviting Democracy at Work and Project Equity to participate as partners or consultants. Though it is important that the ability and knowledge to utilize such a framework remains local, it is critical that the process move quickly to be able to capitalize and continue the momentum of informal co-operation that has resulted from the COVID-19 pandemic.

2. Develop a co-operative development strategy

A co-operative development strategy needs a dual purpose. First, it must identify the possibilities and paths to increasing co-operative numbers, including developing new worker co-operatives via business conversions, building co-operatives from the ground up, and/or establishing co-operatively owned subsidiaries. Second, once these pathways are defined and a reasonable timeline is set, the appropriate resources need to be understood and an inventory taken of what and who is available for co-op development and where there are capacity or knowledge gaps.

It is imperative to use such an approach to ensure that the development pathways are connected to the ecosystem so that they can both contribute to the sector and draw upon it for long-term sustainability. Given the limited resources and capacity of the BCCA and the lack of co-operative developers in the province, the strategy needs to prioritize and build resources along the way to be able to ramp up. For instance, current co-operative developers should be mentoring individuals interested in moving into the field to provide hands on experience.

Additionally, there needs to be more robust educational programming in co-operative development including both theoretical course work and practical application.A complementary solution would be to work directly with current 'traditional' business developers or succession specialists who have aligned values but lack understanding of the co-operative model. Applying the dual strategy would greatly increase the pool of future developers.

BC co-operatives that have received co-operative development support should be asked to give back to the sector – the Bay Area's "sourdough approach," as described by John McNamara, Senior Cooperative Development Specialist with the Northwest Cooperative Development Center (personal communication, 2020). This could include sitting on the board of directors of another co-operative, providing support to strategy development, or actively looking for ways to partner with new co-operatives.

3. Develop co-op specific resources and formation of a BC co-operative hub

A key strength in both Finland and the San Francisco Bay Area is that they have established themselves as leaders in the co-op arena by investing in the entire ecosystem, from individual firms to organizational and regional, state and federal networks. Organizations and individuals alike see the potential in founding co-operatives and understand that work in the co-operative sector is a meaningful way to support their livelihood. It is pivotal that the BC provincial government invest and engage in co-op sector development and name and acknowledge the benefits of working in the sector.

In other words, BC should be looking to achieve a similar standard and should consider some of the following initiatives to do so:

- **Partner with a provincial university to establish a new centre of co-op research excellence** that would allow the province to contribute to co-operative knowledge creation and mobilization, and act as a hub of local, national and international co-operative learning and promotion. Given other Canadian post-secondary co-operative programs (e.g., at Saint Mary's University and University of Saskatchewan) and courses, a broader university network like Finland's could be proposed in partnership with Simon Fraser University, who is in discussion with Vancity and other partners about piloting an online course of co-operatives – the first of its kind in BC. Such a network would allow experts from across the country to support BC students, as well as potentially encourage co-operative researchers, developers and practitioners to live and work in BC. The network would need to focus on gathering intelligence and knowledge towards the goal of growing the sector, in both the number of enterprises and the local, co-operative economy. This would also attract funding to support further research and implementation.
- **Increase the network of accountants, lawyers and other professional services** able to support co-operative firms. The not-for-profit Small Business BC, which provides small business support services, has begun building capacity and literacy around co-operatives, but similar work should be done with other partner start-up agencies, such as Futurpreneur and the Women's Enterprise Centre. Dedicated efforts should also be made to engage values-aligned law and accounting firms to upskill professionals on co-operative development to create a provincial network of professionals supporting co-operatives. This could resemble the National Society of Accountants for Cooperatives in the United States, initially starting out as a provincial body, with the potential to broaden nationally.
- **Build a relationship with the provincial government, mediated by BCCA**, including enabling greater access to business data pertaining to co-operatives and their contributions to the provincial economy. Continual collection through various data collection points can inform strategy development and regional and sectoral analysis and strengthen the sector's research capacity and advocacy initiatives.

4. *Create an advocacy roadmap*

The BCCA is doing important work in collaborating with the provincial government to revise the current BC Co-operative Act. However, an advocacy roadmap should be created so the sector can begin to understand the contributions needed to bolster the province's co-operative sector in the short and long term. Some immediate actions should be to revise some language used in the Act to align with similar terminology in the Business Corporations Act. Unlike Finland, the intention is not to make the two business structures similar, but to help professionals supporting co-operatives and those exploring starting a co-op to understand the requirements. Another immediate revision – discussed in more detail below – would be to make indivisible reserves an important way to capitalize new and established co-operatives.

Further advocacy initiatives should focus on increasing the availability of local community investment into co-operatives, such as via dedicated RRSP-related investments or community bonds (Quarter et al., 2018). The California Worker Co-operative Act, AB 816 Community Investor Provision provides a framework for replication; in BC, it could focus on co-operatives below a certain size, based either on revenue or membership, to ensure that smaller co-operatives have access to much needed patient capital. It should allow for taxation benefits and, like the California law, require that the investor has a vested interest in the co-operative, as a customer or consumer member or as other co-operatives, support agencies or social-values investors, businesses or individuals.

Federally, the BC co-operative sector should advocate for a co-operative-specific program within the Canadian Small Business Financing Program (CSBF). Drawing on the principles of the US Department of Agriculture loan guarantee program for farm worker-co-op conversions, CSBF could create a loan guarantee program for all or certain co-operative sectors (Cumberland, 2017). Given BC's number of small businesses, the retirement of Baby Boomers and the possibility to promote co-operative conversions locally, creating conversion pilot projects could create models and foster a business conversion to co-operative ecosystem for BC. For conversion to worker co-ops, financing provisions, such as loans that could be secured by the membership share or payroll deductions in advance of the conversion, could be made for workers to finance their share purchases and operating capital to ensure a stable transition. The guarantee could hinge on conditions, such as working with a co-operative developer, developing a sound business plan for the conversion, having an advisory board made up of conversion experts and other stakeholders and securing relevant documentation for the conversion. Co-operatives and other values-aligned organizations could explore co-op conversions for businesses that add value to the sector; for instance, perhaps a law firm could be converted into a multi-stakeholder co-operative.

5. *Increase "co-operation among co-operatives"*

Co-operatives need to lean further into Principle Six, "co-operation among co-operatives," to strengthen the ecosystem. Given Vancity's affiliation with many of BC's co-operatives, it can play a leadership role in strengthening the bonds among individual co-operatives to strengthen the entire sector. This could be accomplished through physical or virtual convening, though, given a need to deepen trust within the sector, physical interaction (once COVID-19 physical distancing edicts end), or direct connections would likely see greater success. The entire sector needs to be included not just co-operatives of like function. S Group, a large consumer co-operative in Finland, which has a loyalty card that applies to the services of "partner organizations" as well as their own, could serve as a convening model (Birchall, 2009, p. 20).

Such co-operation should be emphasized through greater regional and sectoral representation. While BCCA has limited resources to support the entirety of the province, regional organizations such as the Kootenay Cooperative Council, should be established throughout the province to complement and enable the work of BCCA. The unique needs of each region would be identified, relationships with professional firms could be made with resources to support their upskilling and local awareness campaigns could be activated. Most importantly, co-operatives within the regions would be enabled to connect and work together, share resources and look for unique ways to collaborate and support each other and the local economy.

Co-operation should extend to other values-aligned movements, too, in which the promotion of the co-operative structure should be supported in creating the highest level of community investment. In California, collaboration between Democracy at Work and B Corp has enabled the development of the B Impact Assessment, and B Corp provided seed investment to Project Equity, a co-operative development firm (Hoover & Abell, 2016, p. 23).

6. *Increase access to investment & financing*

In the short-term, Vancity, BCCA and other partners should collaborate on providing information and training on the BC Securities Commission co-op exemptions as well as resources such as online courses, templates and networks to support co-op managers and member-owners to leverage the investment funds as intended. Additionally, Vancity needs to work with credit unions and other values-aligned lenders across BC to get a solid grasp on lending to all forms of co-operatives, particularly assisting with securitization and the financial relationship between investment capital and debt.

In the long term, Vancity, the Canadian Co-operative Investment Fund, other funders, lenders, and apex organizations need to work collectively to define the changes required to provincial and national securities laws to allow for equal opportunities for investments in co-ops as in, at the very least, like-sized or similar non-co-operative firms. Concurrently, the sector needs to provide access to investment support services, such as experts, strategic planning and even seed funding to get co-operatives “investment ready”.

7. *Introduce indivisible reserves & taxation allowances*

BCCA should advocate for the inclusion of indivisible reserves in the next iteration of the BC Co-operative Act. The economic events resulting from the COVID-19 pandemic emphasize the importance of such a tool in ensuring financing stability of co-operative firms. In both Newfoundland and Labrador and Quebec indivisible reserves are mandatory, as they are in France, Italy, Finland, Spain, Uruguay, and other jurisdictions (Novkovic & Guillotte, 2020; Tortia, 2018*).*

There are two avenues in which the provincial co-operative sector could implement the concept of indivisible reserves: 1) advocate for indivisible reserves as an optional avenue to self-investment, as in the case of California co-operatives law; or, 2) lobby for indivisible reserves to be made mandatory to establish the generational ownership of the collective wealth of the co-operative (Novkovic & Guillotte, 2020). In the case of the latter, there would be the additional benefit of providing security or collateral to secure additional funding, such as loans (Tortia, 2018, p. 21).

6 Conclusion

British Columbia has a great deal to learn from the San Francisco Bay Area and Finland in accelerating the development of the regional co-operative economy. While significant gains have been made in BC’s co-operative sector in the past decade, to make larger strides moving forward requires a more connected, vocal and organized co-operative sector across all provincial regions and industries. The key to future success is for BC’s co-op sector to reframe its collective thinking so that success is measured and guided by moving towards a deeper and truer co-operative economy rather than simply increasing the number of co-ops.

Co-operatives are increasingly understood as the best enterprise form for a more inclusive, collaborative and co-operative economy, but working with other values-aligned organizations, businesses and movements can also realize many of the co-operative principles. To attain such goals, the entire local co-operative ecosystem needs to work cohesively; it needs to become the collective intellect of the BC co-operative sector. This requires collaborative development of a framework that connects co-ops and other values-driven organizations that can support and influence each other. It also requires a legislative and regulatory system that provides equal opportunity for co-operative firms to compete, including access to investment capital and operational efficiency. Individual leaders and organizations, like Vancity and BCCA, have a critical role in convening co-operators from across the province in what can be called the collective commons of co-operative intellect.

The co-operative sector and co-ops in the San Francisco Bay Area and Finland have been committed to raising awareness of the co-operative form as they recognize that the greater the knowledge of the sector, the more resources, investment and experts can be engaged in producing positive outcomes. Co-operatives have an opportunity to assert the social benefits of the model, particularly given increasing disdain for the capitalist system as of late, especially as the rising awareness of its defects is linked to ineffective responses to the COVID-19 pandemic. As Elvezio Del Bianco (2020), Vancity's co-operative portfolio manager, articulated: "If you build [the infrastructure] people will need, because there is a desperate need for an alternative model, people [will] want to do things differently" (personal communication). Ultimately, the goal in British Columbia should be to increase awareness of the co-operative model so that forming a co-operative becomes the normal solution, not the extraordinary one, thereby advancing and expanding the co-operative economy.

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Movement Building and Cooperation to Transform the Construction Industry

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Abstract: The intent of this paper is to assess the ability of cooperatives to facilitate a shift in the construction industry, changing it from a major source of climate change into a source of climate regeneration. The research question was whether cooperative business models can support a rapid increase in understanding and adoption of low embodied carbon and carbon storing materials and building techniques in residential and low-rise commercial construction. The research followed an emergent approach, allowing the findings to unfold and uncover a path forward. Secondary research was used to examine the greenhouse gas impacts coming from the built environment, the current state of the building industry and its supply chains, and strategies for supply chain management in the construction industry. These challenges were compared with various cooperative models and research on movement building. The secondary research was supplemented by informal conversational interviews with professionals in cooperatives, supply chains, and construction. The paper concludes that the industry needs to be transformed, which requires action throughout the supply chain and that cooperatives have the adaptability to be implemented at all levels of the supply chain and to bring stakeholders together under one umbrella. It recommends a broad cooperative strategy using a multi-pronged approach to increase the use of low embodied carbon and carbon storing materials. If this approach is to be realized, it will require industry participants coming together and refining the proposal into something that works for them all.

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Keywords: Construction industry, climate change, climate regeneration, cooperatives, supply chain management

Introduction

The intent of this paper is to assess the ability of cooperatives to facilitate a shift in the construction industry, changing it from a major source of climate change into a source of climate regeneration. While the arguments revolve around climate change, there are significant interdependent ecological and social challenges the industry faces. The paper concludes that the industry needs to be transformed, which requires action throughout the supply chain.

After describing the climatic impacts and potential of the construction industry, the paper looks at difficulties this industry in particular faces in integrating and collaborating throughout the supply chain. Understanding the shape of the industry and what kind of change is needed then informs a review of cooperatives to see if they could be appropriate vehicles for this change. The paper looks at cooperatives generally and argues that they are a better fit to address the challenges in the industry than other forms of business. Since cooperatives themselves come in many forms, it also looks for what type of cooperative or cooperative strategy is best suited to the current situation. A multi-pronged approach is recommended. If this approach is to be realized, it will require industry participants coming together and refining the proposal into something that works for them all.

The immediate significance of this research is its potential to address the climate crisis. It is important to recognize the crisis not only as an ecological issue, but as having deeper social impacts. It is also important to understand that climate impacts are not the only issue within the construction industry but are a symptom of oppression and a deeply entrenched extractive culture. The dominant demographics and culture in the industry are defined by heterosexual, able-bodied, white men. Even most attempts to implement diversity and equality practices in the industry expect minority groups to assimilate to a hegemonic image of masculinity. This culture can lead to significant harassment, oppression, and exploitation of minority groups encompassing gender, race, age, sexuality, and ability (Powell and

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Sang, 2013). These issues undoubtedly exacerbate challenges in hiring, retention, job satisfaction, and the topics of this study - inter-firm collaboration and socially and ecologically driven building practices. While this study focuses on the clear and direct links between supply chain, materials, and climate change, a cooperative strategy focused only on environmental or ecological symptoms cannot be transformative. It will be critical for success that industry stakeholders who take up this work approach it with an intersectional and inclusive perspective.

Methodology

With very clear goals for the outcome of the research, an inductive approach was taken, allowing the research to guide the shape of the final proposal. The research question was:

> *Can cooperative business models support a rapid increase in understanding and adoption of low embodied carbon and carbon storing materials and building techniques in residential and low-rise commercial construction?*

An exploratory approach was used to understand the impacts and issues in the industry and make the case that the industry needs transformation. An explanatory approach was then used to show how cooperatives can address those challenges.

Methods

The research relied heavily on secondary sources to understand the climate impact of the industry, supply chain management (SCM) - particularly as it relates to the construction industry - and potential cooperative solutions. The secondary research was supplemented with conversational interviews with cooperative experts and industry leaders, and the author's own experience. In total, seven interviews were conducted; all the interviewees are involved with cooperatives, five work within the construction industry, two are cooperative developers, and four are involved in supply chain and procurement including three who work with purchasing cooperatives.

Rationale

There is a significant amount of existing research in most of the areas relevant to this work but they have not been brought together, as they are here, with the topics of climate change, construction SCM, and cooperatives. The author's experience and networks within the cooperative movement and the construction industry provided strong leads on where to find less common secondary research such as that around embodied carbon in construction as well as access to extremely knowledgeable professionals with expertise in both the construction industry and cooperatives. The interviews were a valuable source of supplementary knowledge of cooperatives and the construction industry as well as feedback on the author's emerging thinking throughout the process. They were conducted intermittently throughout, helping identify subsequent areas of secondary research. Though similar ideas came from multiple interviews, these interviews were not intended for thematic or other analytical purposes. For this reason and due to the targeted expertise of the interviewees, a small sample size was sufficient.

Climate Change and the Built Environment

Recognizing that the industry has major effects on all areas of the natural environment, this paper will focus on the industry's greenhouse gas (GHG) emissions and sequestration due to the urgency of the climate crisis. Climate warming has wide-ranging effects including increased risks around "water scarcity, ill-health, food insecurity, flood and drought, extreme heat, tropical cyclones, biodiversity loss, and sea level rise" (Ivanovich, 2018). These impacts are disproportionately felt by disadvantaged groups within countries as well as between countries. This includes groups disadvantaged due to income, age, race, ethnicity, and gender (Islam & Winkel, 2017, p. 2).

The International Panel on Climate Change (IPCC) identifies the goal to slow and reverse the emissions of GHGs measured as carbon dioxide equivalents (CO2e) to avoid increasing warming above 1.5^{o}C from pre-industrial levels. They suggest that to do this, we must make "emissions decline by about 45% from 2010 levels by 2030 … reaching net zero around 2050" (IPCC, 2018, p. 12).

Operational and Embodied Carbon

Improving building energy performance and use of renewable energies have become well-developed areas of focus to reduce some of the impacts of a warming climate. The industry only recently has begun to look closely at the emissions of the materials used in the construction process. Operational emissions (oCO2e) can be reduced by improving building energy performance, while embodied emissions (eCO2e) come from the entire life cycle of the materials' resource management, extraction or harvest, manufacturing, transportation, construction, deconstruction, and degradation. Whole building life cycle assessment (WBLCA)[1] tools are quickly improving and should be able to be integrated into the operationalization of the proposed strategy.

Looking at global GHG emissions by sector, 28% come from oCO2e in the construction industry and 11% come from eCO2e in the construction industry (International Energy Agency, & United Nations Environment Programme, 2018, p. 11). At first glance, oCO2e seems like the bigger problem and the obvious place to focus our attention; however, eCO2e has a nearly immediate impact while oCO2e are slowly released over time. Only a small percentage of the emissions reductions from a performance retrofit today will be realized by the IPCC's 2030 and 2050 deadlines while all of a building's upfront eCO2e will be released by the time the building construction is complete. With the short timeline humanity has to reverse the climate crisis, it is imperative that there is a rapid improvement in the upfront eCO2e emissions from the construction industry and fortunately, this can be done while simultaneously building high-performance buildings that also reduce oCO2e.

Construction as Climate Regeneration

There are five natural carbon sinks which can store CO2e. These are the ocean, fossil fuels, pedologic (soils), atmospheric, and biotic (living things) (Lal, 2010, p. 709). While currently, "buildings generate nearly 40% of annual global GHG emissions" (Architecture 2030, 2019), the building industry has the potential to be a sixth major carbon sink - or maybe more accurately, to enhance the capacity of the pedologic and biotic sinks - actively reducing atmospheric CO2e.

Biogenic materials[2] can sequester atmospheric carbon during their lives and Guest et al. (2013) show that delaying the period between carbon capture in plant material and carbon-emissions at the plant's end of life can have significant climate impacts. The period in which this carbon would be stored in a building as structure, insulation, finishes, or other construction materials therefore can play a major role in climate change mitigation. Along with storing carbon in the plants, resource management practices during the growth of these biogenic materials can capture carbon by building soil.

For the construction industry to become a sixth major carbon sink, the amount of carbon sequestered in the soil and building materials needs to be greater than the amount released during the rest of the life-cycle processes. Recognizing the various stakeholders throughout the supply chain that play a role in determining materials' eCO2e highlights an obvious need to understand construction supply chains and supply chain management.

Supply Chains in the Construction Industry

In many industries, supply chain integration (SCI)[3] has proven to bring value to participants throughout the supply chain. Key benefits include organizational learning for all stakeholders, faster, more accurate, and reliable flows of products and information, better responsiveness to markets, improved customer service, and lower costs. Challenges to implementing SCI in the construction industry, specifically short-term relationships, a lack of transparent communication, and a lack of trust, have significantly hindered its adoption.

By looking at research on collaborative supply chains including Whipple and Russell's typology of collaborative approaches - "collaborative transaction management; collaborative event management; and collaborative process management" (2007) - and construction specific procurement strategies such as Khalfan et al. (2008) among other relevant literature, it is possible to identify widely agreed on keys to SCI. This literature has been reviewed here through a cooperative lens, to identify if and how cooperative models and collaborative approaches to SCI among ecologically and socially concerned partners can address the challenges the industry faces. This includes improving communication, building trust and long-term relationships, and allowing these companies and their clients to reap the benefits while simultaneously increasing the use of low embodied carbon (EC) and carbon storing materials.

Collaboration

SCI has been an extremely successful tool for firms in many industries, "noteably [*sic*] in vehicle manufacture and the retail trade" (Akintoye, 2000, p. 159). Despite calls for greater SCI in the construction industry, there has not been a significant move in that direction (Akintoye, 2000). Much of this can be attributed to the fragmented nature of the industry and short-term relationships that can breed distrust and opportunism (Briscoe and Dainty, 2005; Cheung et al., 2011).

The industry is fragmented largely due to the uniqueness and complexity of each building project as well as the unpredictability of work (Broft et al., 2016). Contractors often need different types of expertise from one project to the next, discouraging the internal development of expertise and instead they partner with specialist subcontractors for each project. These short-term relationships and specialized knowledge sets can result in a lack of transparent communication and distrust. Furthermore, specialists are generally looking to accomplish their portion of the work without concern for the outcome of the project as a whole.

Low Embodied Carbon and Carbon Storing Materials

The work of Chris Magwood (2019) illustrates the importance of changes in materials selection. He applies common construction approaches for North America to two types of low-rise residential buildings, a small single unit and a four story eight-unit building. He classifies four categories of materials selection and corresponding EC data as shown in Table 1. The data is all pulled from standardized Environmental Product Declarations (EPDs).

Table 1: Four Categories of EC Materials

Category	Description
High EC	"commonly used materials that are the highest emitters in each material category" (Magwood, 2019, p. 24)
Typical EC	the most commonly used materials
Best Conventional EC	materials with the best EC "that are commercially available through typical building supply chains" (Magwood, 2019, p. 25).
Best EC	the best EC materials including those that are either not commonly used or are not commonly available

Magwood's comparisons show that changes in materials selection and only minor changes in building practices (Best Conventional EC) can move the upfront EC impacts of the low-rise construction industry from a major source of emissions (when using High and Typical EC) to a small source of net carbon storage. More significant changes to building practices and availability of Best EC materials would result in these buildings becoming a major source of net carbon storage. This shows how working to change purchase behavior and building practices, as well as improving production and access to Best EC materials are all necessary to transform the industry from a major contributor to climate change to a big part of the solution.

Why a Cooperative Approach?

The above discussion shows the immensity of the challenge that needs to be addressed. Building practices need to change, meaning designers need to understand what materials are most appropriate in different circumstances and how to integrate embodied carbon calculations into their selections and design specifications. Builders need to understand how to work with these materials and where to source them from. Suppliers need to offer these materials. There needs to be a greater volume and localization of manufacturing. Finally, shifting to these materials will require an increase in production of the biogenic raw materials by resource managers using regenerative land-use management practices that build carbon-storing soil. The scale of this transformation is massive as should be expected when trying to change an industry from the world's largest contributor of CO_2e emissions to an industry that actively reduces atmospheric CO_2e. It calls for industry wide collaboration and the cooperative business model has characteristics to meet the challenge. Cooperatives have incredible variety in type, industry, and size offering an adaptable structure for the changes necessary at all levels of the construction supply chain.

While a structure can be a good fit for something, it is how that structure is used which truly matters. Novkovich describes two types of cooperatives; Type 1 are those used to address "economic injustice, or a lack of access to markets" (Novkovich, 2018, p. 37), Type 2 are inspired by social and environmental justice and "are entering the market to change the economic paradigm" (Novkovich, 2018, p. 37). The discussions in this paper presume an intent to combat climate change and therefore are squarely situated in Type 2 cooperatives.

The Adaptability of Cooperatives

The many forms of cooperatives are all based around shared principles and values[4], and have adapted their structures, processes, and business models to fit different market conditions and serve the needs of various types of members. Members - as users - own, control, and benefit from the organization (Frederick, 1997) and, depending on the kind of cooperative, their use takes the form of workers, consumers, suppliers, or residents.

While the ownership aspect can vary in terms of what democratic control processes are set up and how a surplus is distributed, the various types of cooperatives are often distinguished by who the members are and how they use the cooperative. An internet search of cooperative types will find many reputable sources all giving slightly different answers to the questions: how many types of cooperatives are there and what are the common forms? Adding to the complexity, within each category there are variations to fit particular industries or markets. A pretty inclusive, but not entirely comprehensive list of the types includes consumer cooperatives, worker cooperatives, producer/marketing cooperatives, purchasing/shared services cooperatives, financial cooperatives, and housing cooperatives. There are also multi-stakeholder cooperatives that include more than one type of member. Finally, in the spirit of the sixth cooperative principle - cooperation among cooperatives - the organizations themselves can become members of secondary, tertiary, or further levels of cooperatives, creating complex networks. Table 2 briefly describes each type of cooperative and gives an example of its potential applicability to this research.

Table 2: Cooperative Types

Cooperative Type	User-Owners	Applicability for Transforming the Construction Industry
Consumer Cooperative	Members buy from the cooperative.	Multi-project clients as member-owners could purchase project management services from a cooperative they collectively govern.
Worker Cooperative	Members have a job within the cooperative.	Worker cooperatives are extremely adaptable to various scenarios and especially common in labor intensive industries. Product development, manufacturing, and construction companies would all be natural fits for worker cooperatives.

Cooperative Type	User-Owners	Applicability for Transforming the Construction Industry
Producer Cooperative	Members sell their goods to the cooperative.	Farmers and foresters growing the biogenic materials for construction products could form a producer cooperative similar to the common farmer-owned producer cooperatives in the food industry.
Purchasing (or shared services) Cooperative	Members collectively buy products or support services through the cooperative.	Collectively purchasing carbon-storing materials and consulting on these materials are needs that designers and builders could meet by forming a purchasing cooperative.
Financial Cooperative	A financial cooperative can take various forms such as a cooperative bank, a credit union, or a cooperative development fund. They are most often a type of consumer cooperative.	Most construction projects and business growth require financing. Any cooperative project needing financing would be better served by a financial institution that understands their business structure. Cooperative banks and credit unions have in the past been key to the growth of the cooperative movement and could be again.
Housing Cooperative	Members live in the cooperative.	Housing cooperatives could be clients that create demand for building maintenance and construction done with carbon storing materials.
Multi-stakeholder	There are multiple types of members such as consumers and workers.	Resource managers selling their raw materials to a manufacturer and the workers in manufacturing could come together to form a multi-stakeholder cooperative.
Federations	Members are cooperative organizations and the federation can support them and coordinate among them in various ways.	Cooperatives throughout the supply chain may form a federation to serve any shared need such as advocating for policy change in building codes, financing the development of new complementary businesses and materials, or providing testing for those new materials.

Table 2 should clearly illustrate the ability of cooperatives to be used in all parts of the supply chain but the question remains, why should they be used?

Bringing People into the Economy

Businesses today are commonly thought of from the dominant neoclassical economics perspective. On one side, they provide jobs that exchange money for labor. On the other, they sell goods and services in exchange for money. Their goal is to create profit; in neoclassical economics "the social, health, and environmental impacts of markets are not regulated by markets but external to them" (Norcia, 2012). It is no wonder, then, that economic activities focusing so narrowly on profit have degraded social, health, and environmental conditions. It is in this realm outside of the view of neoclassical economics where communities exist. To address the destruction that has been caused by the short-sighted neoclassical approach, there is a need to reframe our thinking with more inclusive economic models. Humanistic economics prioritizes human well-being rather than financial gain (Lutz, 1999) and Kate Raworth's 'Doughnut Economics' provides a framework for meeting human needs without destroying environmental resources (Raworth, 2020). These approaches are more appropriate for organizations interested in going beyond the economic realm, looking at other bottom lines, and taking a holistic perspective on their impacts. Cooperatives integrate economic aspects as part of rather than apart from human concerns, prioritizing member needs and community wellbeing while relegating profit to a necessary tool rather than an ultimate goal.

Associative Practices and the Industry's Hurdles to SCI

In all cooperative forms, members benefit from their use as well as from sharing in the financial surplus (and loss) of the co-op. When cooperatives successfully follow the guidance of the cooperative principles, there are additional positive externalities such as individuals developing personally and professionally and communities strengthening through increased networks and civic engagement. Success in a cooperative requires engagement on both sides - as a user and owner - resulting in a unique relationship between members and the organization.

With their unique relationships, cooperatives can build long-term partnerships, transparency, trust, solidarity, and reciprocity. In practice, management, leadership, and the culture of an organization ultimately determine levels of transparency, trust, and communication. Cooperatives inherently create a platform that is easier to build these traits upon, but there must be organizational commitment to the guiding cooperative values and principles. Two of the seven cooperative principles - Democratic Member Control and Education, Training, and Information - point directly to associative practices. These associative practices can be broken down into four categories - Information, Education, Consultation, and Decision Making (Côté, 2019, p. 52). The first two flow from the cooperative to the members (and often beyond) while the other two flow from the membership or broader community into the cooperative.

Information directly addresses transparency, ensuring that the membership knows what is happening with their cooperative, and can take forms like open-book accounting and managers defending their decisions to the membership. Cooperatives are also expected to provide education and training for all members so that they can understand the information they are receiving as well as become qualified to serve in leadership positions such as on the board or in committees. Consultation is an invitation for members (and often extended to wider communities) to give input for managers, board members, and other leaders to consider when making decisions. With this consultation, transparency, and member oversight, cooperatives can still empower managers to make day-to-day operational decisions that would be inefficient to discuss among larger membership bodies. Other decisions, including policy, strategic direction, and overseeing management are commonly taken by the board who are democratically elected by and primarily from the membership. Some major decisions will even be put to a vote directly with the entire membership. These associative practices have a long history of strengthening and perpetuating the relationships among members and directly address the major hurdles the construction industry faces to implementing SCI strategies.

Cooperative Coherence

Embedding an inclusive and holistic perspective into their structure, cooperatives have broad-based ownership and democratic control among their users ensuring the voices of the members define the priorities of the organization. To successfully bring this human focus into a market context, cooperatives need to create alignment at three different levels, what Côté calls 'Cooperative Coherence' (2019, p. 47). This includes:

- Alignment of shared needs and values among the members.
- Alignment of the products and services of the cooperative with the needs and values of the members.
- Alignment of the business model with its market environment to be competitive.

With these concepts as a cooperative lens, it is informative to look at a definition of supply chain management. Stadtler defines it as "the task of integrating organizational units along a SC and coordinating materials, information and financial flows in order to fulfil (ultimate) customer demands with the aim of improving competitiveness of the SC as a whole" (2005). This definition clearly focuses on providing value to the organizations in the supply chain and making them more competitive in the market. If these organizations were members of a cooperative, this would only address the second and third levels of cohesion. Thus, to look at supply chain management from a cooperative perspective, one needs to expand the view to ensure there are shared needs and values amongst the members.

Working back from the mission of this research - to transform the construction industry from one of the greatest contributors to the climate crisis into a large source of climate regeneration and stabilization - and remembering the earlier discussion of the deeply intertwined social and ecological dynamics of climate change, a picture of potential members begins to form. They would have to value ecological and human wellbeing as equal to or greater than profit and understand the importance of climate action done in a way that considers the wellbeing of every client, worker, and other stakeholder engaged in or impacted by the transformation.

Cooperation in the Supply Chain

In the North American economy, designed for and dominated by capitalist businesses, cooperatives are subject to the pressures of institutional isomorphism[5], often moving away from their unique characteristics and conforming to the practices of the dominant business logic. As capitalist organizations are the dominant model, legislation is designed for them, business education programs teach managers how to work in them, and the majority of support service specialists like lawyers, accountants, and bankers are focused on them. Cooperatives are forced to respond to the competitive market forces of these businesses; they are often managed by people who do not fully understand the unique advantages of the model, and they take the advice of support service specialists who likely understand even less of the cooperative difference. It is easy to see how cooperatives end up trying to compete by mimicking the strategies of for-profit businesses such as incessant growth. Côté analyzes cooperatives that have struggled, sometimes to the point of demutualization[6] as well as cooperatives that have found prolonged success. He shows that cooperatives who denaturalized[7] were the most likely to struggle and fully or partially demutualize. Cooperatives who embrace the unique differences of the model can overcome market pressures and leverage their difference into competitive advantages. Côté refers to this cooperative character in increasingly competitive markets as The New Cooperative Paradigm (NCP) (2019, p. 30). While it is heartening to see that embracing the cooperative identity can lead to success, it still happens in spite of an environment designed for the cooperative's competitors.

A major feature of large successful cooperative economies is the previously mentioned Principle Six, Cooperation Among Cooperatives. Unlike the hyper-competitive individualism of profit-driven businesses, cooperatives are strongest when they work together. In an economy with a much greater density of cooperatives, and hence legislation written with an understanding of cooperatives, managers who appreciate the cooperative character, and financing and other support services appropriately designed for cooperatives, they can much more easily thrive. Naturally, cooperatives have developed uniquely appropriate growth models that can work to change the environment around them. Though some individual cooperatives do grow quite large, many grow through deeper integration with the cooperative movement. That can be through incubating and spinning off complementary cooperatives, partnering, associations, and federations of cooperatives.

Multi-Stakeholding

Not only do cooperatives encourage collaboration among one another but they can also bring various stakeholders together within a cooperative. Multi-stakeholder cooperatives are hybrids of other types. As the name suggests, they have more than one type of member. Voting rights, seats on the board, surplus allocation, and other ownership structures can be designed differently for the different member classes. They should of course be designed in alignment with cooperative values including equality. As all businesses have workers and the workers have an inherent stake in the success of their company, integrating a worker class of members with other types such as consumers is a logical approach to the growing movement of multi-stakeholder cooperatives. Giving multiple stakeholders an interest in one another's success can help to align their goals, strengthen collaboration, and bring more diverse sets of knowledge and perspectives to the table. This has its challenges, but with a strong shared mission, well designed governance, and an engaged membership, multi-stakeholding can offer incredible advantages.

Due to the importance of carbon-storing in soil and biogenic materials there is a necessary focus on farmers and foresters. Wood products from the forests are the most common materials used in low-rise construction and straw and other materials from farmers' fields will be increasingly important with the shift to carbon storing materials. A producer cooperative (as highlighted in Table 2) can give resource managers who otherwise have very little bargaining power the ability to set fair prices and have a more stable and predictable market for their goods.

Producer cooperatives can play an important role in a values-led supply chain and are often a core part of fair-trade arrangements. The producer cooperative generally purchases raw materials from the resource managers and offers some value-added process before reselling them. This points to the purchasing cooperative playing the role of manufacturer. Table 2 also shows that product development and manufacturing are appropriate areas for worker-ownership. This could lead to creation of a multi-stakeholder cooperative in which producers (farmers and foresters) supply raw materials and the product development and manufacturing workers lead innovation and processing of those materials into valuable products for the construction industry. Collaboration could result in significant business benefits such as guaranteed supply/purchasing and better communication for planning quantities and quality control. They may even be able to co-locate to reduce shipping, logistics, and overhead and increase social ties.

Spin-offs and Second Tier Cooperatives

There are differing opinions on the ability of individual cooperatives to function at larger scales. Cooperatives, as democratic organizations, truly thrive when their members engage with the cooperative. Engaging the membership and serving their needs becomes more challenging as the membership grows and diversifies. Despite these challenges, some cooperatives have successfully grown quite large and maintained their cooperative character but that is not the best approach for all cooperatives. Often, as a cooperative recognizes a need, whether in the market or their community, instead of expanding their company to fill this need, they incubate and spin off a new business. These businesses are generally complementary and become business partners with strong social and contractual ties.

Whether through spin-offs or independent development, when there is a significant density of cooperatives (generally in an industry or a region), they may recognize shared needs that could be most efficiently served by another business. At this point, the cooperatives themselves may form a second-tier cooperative (a federation) in which the cooperative businesses themselves are the members who own and democratically control the business.

The idea of federations as a SCI strategy has been around for a while and is "emerging as key to global competition" (Handfield, 2016). The federations' role has been as a central governing body that implements shared policies, procedures, and guidelines to create an integrated system of SCM for its participants. This all rings true for our study. However, the version of supply chain federation in mainstream literature is smaller supply firms integrated around a larger firm; Handfield uses the examples of Honda, John Deere, and Intel. These large businesses have integrated many small suppliers into a federated structure to support the primary business but they are not cooperative federations. Handfield describes the large firm as having "a strong, paternal relationship" (2016); the federations have hierarchical control with the large firm dictating the terms and reaping the benefits rather than democratic governance and shared surplus. In the fragmented construction industry, few individual contractors could play such a role highlighting the failure of traditional SCI strategies in the industry. In contrast, Lonngren et al. (2010) describe a case study of Baufairbund, a cooperative federation comprising 15 businesses which perform complementary trades. Together, these businesses are able to provide everything to a client "from the original consultation through to the planning and realisation of the building project up to and including subsequent services surrounding financing and facility management" (Lonngren et al., 2010, p. 408).

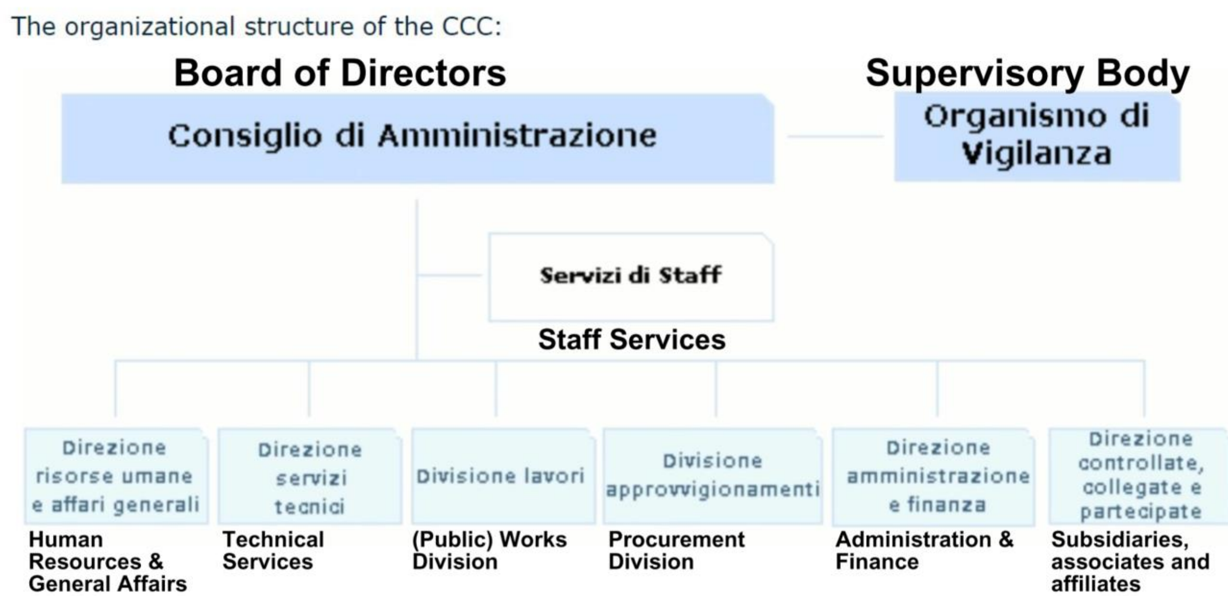
Table 2 noted that housing cooperatives could become clients that demand their projects be done with embodied carbon in mind. A small housing cooperative on its own may struggle to find the designers, builders, and materials to create a carbon storing building. An association of housing cooperatives that come together for maintenance, remodels, and new construction, on the other hand, may be able to leverage their buying power to incentivize the supply chain to provide these services.

Table 2 also suggested that a purchasing cooperative could support designers and builders in using more carbon storing materials. As the purchasing cooperative builds a strong foundation, it may find that suppliers are not providing the materials, information, timeliness, quality, or communication that they need and look to connect directly with manufacturers focused on producing carbon storing materials. The solution to this could be to create a new supply company to serve the members of the purchasing cooperative and other designers and builders looking for similar services. The new supplier could take many forms. Multiple regional purchasing cooperatives may expand vertically, incubating a second-tier consumer owned carbon focused supply company. Another path could be one or more purchasing cooperatives incubating and spinning off a worker owned supply company. Alternatively, multiple manufacturing cooperatives may be the ones to identify the need for a new supply company. Traditional suppliers may not be interested in selling their materials or the manufacturers may simply decide that a carbon-focused supplier that offers all their materials in one place will improve their visibility and make it easier to sell their products. They could create a supply company in the form of a producer cooperative owned by the manufacturers or a multi-stakeholder cooperative owned by the manufacturers and workers at the supply company.

A Cooperative Ecosystem

An association of housing cooperatives or a supply company owned by manufacturing cooperatives are examples of second-tier cooperatives but this same approach to creating federations to serve shared needs can continue. It is not hard to imagine the many forms of cooperatives briefly touched upon in this paper and similar movements in other regions coming together into regional and national federations. A well-developed example is in Italy where the Consorzio Cooperative Construzioni (CCC) has brought together the regional cooperative organizations in the construction industry. The process began in the early 20th century as regional consortia were set up for cooperatives in the construction industry. One of these was CCC which was "formed by eight cooperatives … to bid for public works" contracts (Ammirato, 2018). Over the 1900s CCC merged with other regional consortia and near the end of the century incorporated the National Consortium of Building Supplies Cooperatives (ACAM) to bring construction support service cooperatives together with builders, engineers, and designers (Zamagni, 2006). Figure 1 shows the organizational structure of CCC. The CCC in turn is a part of LegaCoop, one of Italy's three primary cooperative apex federations that bring together all industries and economic sectors.

Figure 1: The Structure of CCC



(Retrieved from: http://www.ccc-acam.it/azienda/organizzazione.php July 2020. English annotations added by the author with guidance from Google Translate)

At this point, it is clear how cooperative economies can grow through integration and development of multiple tiers of cooperatives that provide for the shared needs of stakeholders with shared values and goals. Each tier benefits and is controlled by its members, creating a complex bottom-up hierarchy. Eventually, the system can move towards a voluntary and democratic federated structure that develops strategy and services for its members on an industry scale or even for an entire cooperative economy or society. Within these apex federations, there are incubators, consultants, cooperative banks, development funds, and many cooperative businesses buying one another's products and services and sharing information. It is by taking a step back and looking beyond the individual cooperative to a cooperative ecosystem that one can see the fit of a cooperative approach to transforming an entire industry.

Movement Building

Transforming the construction industry in its essence is ecological and social activism. It will take political will and legislative change, it will take an increase in demand for this work from clients, and it will require growth and education among builders, suppliers, manufacturers, and all other industry stakeholders. The goal and the process of this transformation is not simply an entrepreneurial notion of success for an organization, it is the building and strengthening of a movement.

Like the construction industry, scholars looking at social movements highlight fragmentation as a major barrier or starting place of movements (Grassroots Policy Project, 2013; Funke, 2014; Pastor and Ortiz, 2009). While it is true that movements need "different kinds of groups that have different kinds of strengths [they also] need networks and alliances that are flexible, not rigid, in which roles, divisions of labor, approaches, tactics and strategies are regularly negotiated" (Grassroots Policy Project, 2013, p. 2). Cooperatives can offer these structures. They will not be the only players as there are non-cooperative organizations[8] doing this work and there will need to be legislation and political action as well. This work should also not be looked at in isolation but as part of a larger intersectional global movement of anti-oppression, empowerment, regeneration, and health. Cooperatives' ability to bring people together, create decision-making structures, bottom-up hierarchies, and extend across economic and social realms positions them as a structural nexus to work around.

The cooperative advantage can be boiled down to its strengths in bringing together, amplifying, and leveraging human capital in contrast to capitalist organizations that excel in leveraging financial capital. Cooperatives have been able to compete in the economic realm by developing systems, strategies, and processes that parallel movement building. Much like Côté's discussion leading to the NCP, many cooperative scholars argue that to meet modernity's challenges, cooperatives need to lean more deeply into their unique characteristics. Other scholars and practitioners have developed cooperative managerial and governance strategies to operationalize networking, partnerships, and movement building (Davis 2004; Novkovic & Miner, 2015).

Seeing innumerable potential ways cooperatives could play roles in transforming the supply chain is as exciting as it is daunting. Who are the people who are going to take on all this work, how can one expect so much to happen across the industry in such a short window and will individual businesses collaborate with one another? Here, the work of Funke (2014) who looks at movement building as a continuum is inspiring. Building on Fox' (2004) categorization of types of transnational cooperation, he draws the continuum from very loose collaboration that prioritizes autonomy and individuality to the development of shared identity, processes, and organizations that can displace current dominant systems. The focus of his work is describing how one type can lead to another and build through the continuum. A cooperative economy can follow a similar path with secondary and apex federations acting to bring actors together with a shared purpose and identity while allowing them to retain their autonomy and independence. To move through the continuum, "activists, groups or networks, as well as particular protests, forums or occupations, can be thought of as operating as a sort of catalyst or amplifier for generating group connections, linkages or cooperation that could spread across space and time" (Funke, 2014, p. 32). In order to transform the entire industry, this research has looked for a tangible step that can act as such a catalyst, one leverage point in the supply chain that when transformed can trigger autonomous nodes of change throughout. These nodes can then find their commonalities with one another and build coalitions, networks, and federations.

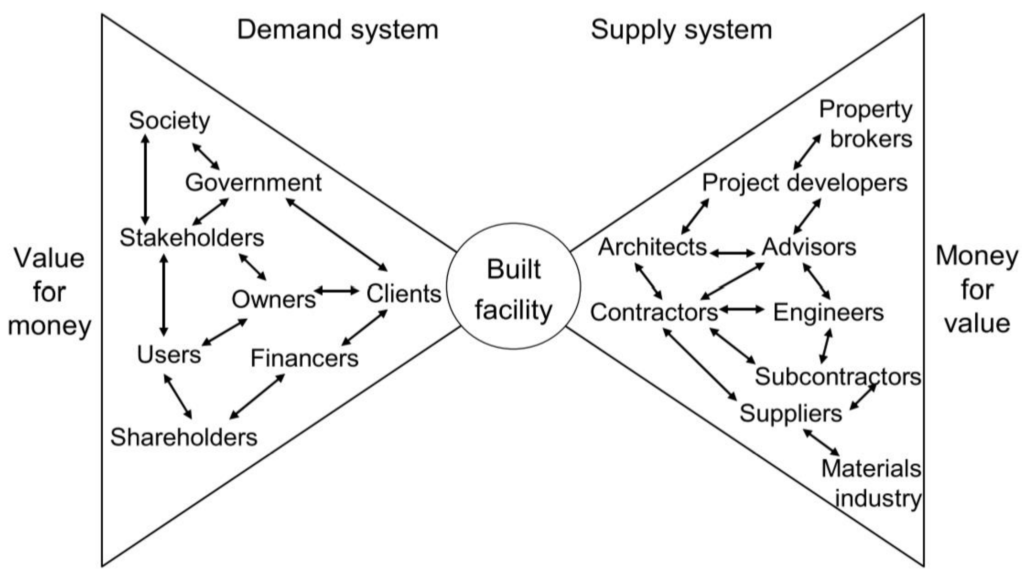
Identifying a Catalyst

Returning to the notion of movement building, real structural change will come not from one source but from multiple like-minded groups working on the same problem from many angles. Those various nodes can then come together to feed off and reinforce one another. Funke (2014) describes "a continuum of increasing movement building and thus describes higher stages of commonalities, shared understandings and identities, mobilizations and strategies" (p. 29). Recognizing the embryonic stage of transformation the construction industry is in, identifying a catalyst that can trigger the development of cooperative strategies throughout the supply chain is an important step in moving towards industry wide transformation.

Narrowing in on One Strategy

To narrow in on what could be an effective catalyst to spur transformation in the industry takes a return to industry research and what SCI strategies are being proposed. De Ridder and Vrijhoef have provided a useful graphic (Figure 2) showing the relationships among stakeholders in the industry. On one side there are the stakeholders creating demand for a building project. These stakeholders want the most value for their money. On the other side are all the stakeholders working to create the building and they would be expected to want the most money for the value they are providing.

Figure 2: Industry Stakeholders



De Ridder and Vrijhoef, 2005

This graphic helps us to understand the value chain including the demand for the building and the supply chain that creates the building. It is important to note how the demand side funnels to the clients while the supply side funnels to architects/designers and general contractors. These stakeholders are the final touchpoints that all other stakeholders directly or indirectly work through. Therefore, SCI strategies generally revolve around architects/designers and general contractors as the keystone stakeholders to coordinate all others.

Most literature on SCI in the construction industry focuses on the demand side (client driven strategies). In many ways this makes sense as clients are the ones specifying what they want built, paying for it, selecting who designs and builds it, and they can even specify who they want further into the supply side such as materials suppliers and subcontractors. This shows the importance of significant buying power to dictate the collaboration and communication of manufacturers, suppliers, and builders. It can increase the efficiency and accuracy of materials procurement as well as bring the materials expertise of manufacturers and suppliers into the design process (Khalfan et. al, 2008). However, building the relationships and communication structures among various stakeholders takes a lot of work up front. Client driven SCI is only worthwhile if the client has a huge project or is a multi-project client such as a government or developer. Returning to the focus of this study - low-rise construction - many clients creating the demand are going to be individuals, families, and small businesses looking to renovate or build specifically to their needs. These are not huge construction projects and the clients are generally not multi-project clients. An exception would be an organization like a housing developer. For the rest of the single project clients, a more natural fit is a supply side driven strategy revolving around designers and/or general contractors.

What Needs to Change?

Understanding what unmet services could be valuable to designers and/or general contractors while also triggering change elsewhere in the supply chain begins to shape more concretely who the target participants are and what form the organization should take. The work of Chris Magwood helps better understand this. As noted above, he describes 'Best Conventional EC' materials that are commonly available and that, when selected, can bring buildings just below carbon neutral (Magwood, 2019). It is clear, given the impacts that are attributed to the built environment that though these materials are available, they are not being used consistently. Reasons for this could include cost, a lack of understanding of their benefits or an inability to communicate those benefits to clients. If all these areas can be addressed, it seems likely that there would be a significant increase in the use of these common materials and the building industry may move closer to carbon neutrality. Even that is not the ultimate goal. The climate research discussed above shows the need to dramatically decrease atmospheric greenhouse gases and that buildings can be a sixth major carbon sink. To accomplish this, it is necessary to go beyond these commonly available materials. Magwood explains that these materials are either not readily available through most building suppliers, or not well enough understood to be adopted by the industry.

What are the Services and Who are the Members?

While construction is approached differently depending on the project, the local building codes, and many other factors, there is generally a designer who specifies construction details and the major categories of materials going into a project. This shows an immediate leverage point in which a service offered to designers could fill the knowledge gaps. Keeping in mind the earlier presumption that all participants would be aligned with the mission (to combat climate change), working with them in the design process to ensure that low embodied carbon and carbon storing materials are integrated into the design would be a valuable service. So long as the market also has clients that believe in combating climate change, providing the ability to measure and communicate the impacts of embodied carbon adds a business case for the value provided. While some of these materials are common, others are hard to find or contractors may not know how to build with them. This is where the services begin to shift from working with designers to working with the general contractor. Services could initially include:

- Holding expertise in cost, availability, and ecological impact of materials
    - Supporting design teams in materials specifications
    - Supporting the estimating process
    - Providing carbon calculations to guide the design and communicate with clients
- Coordinating materials purchasing
    - Negotiating discounts and rebates for members on common materials
    - Sourcing less common materials
    - Coordinating purchase and delivery logistics
- Facilitating member to member communication & education
    - Managing a member updated best practice database
    - Hosting workshops and other member events

Based on the author's personal experience in the industry, the interviews with industry stakeholders, and secondary research, these services address the primary gaps in skill and knowledge holding designers and builders back from further adoption of carbon storing materials. Members themselves will want to refine services as this work moves forward.

Having now identified the key leverage points on the supply side of the supply chain and the services that can be offered, it is clear that services should be targeted at both design companies and general contractors. However, the services and value propositions are significantly different for the two types of stakeholders. Fortunately, there has been a trend towards integration in the industry on many fronts, incidentally providing hope for more success in supply chain integration. This is exemplified by firms that offer both design and general contracting services - design/build companies - which are now “the most widely used project delivery method in the United States” (Brown, 2018). It is these companies that profile as the ideal members for this cooperative and could be joined by workers forming a multi-stakeholder cooperative.

Another Look at Purchasing Cooperatives

In the interviews with cooperative, supply chain, and industry experts the author framed the conversation based on an understanding of designers and contractors as the ideal leverage point in the supply chain and outlined the services identified. It became clear that offering these services to design/build companies aligned very well with a purchasing/shared services cooperative model.

Purchasing cooperatives generally negotiate discounts and rebates on primary products, i.e., construction materials or auxiliary services such as credit card processing fees. Along with negotiating for better prices, purchasing cooperatives commonly provide their members with training, networking, and shared marketing. A less common, but in this case important service purchasing cooperatives can provide is sourcing inputs that are hard to find or access.

The horizontal nature of purchasing and shared services cooperatives for design/build firms shows great promise. They are one link in the supply chain, but as seen in Figure 2, have immense leverage. With a large membership (or multiple purchasing cooperatives), it is possible to impact many projects broadly across the industry. Purchasing cooperatives are already reasonably common in the construction industry and that familiarity may make potential members more comfortable pursuing this strategy. An example is Blue Hawk Cooperative whose members are independent Heating, Ventilation, Air Conditioning and Refrigeration distributors. They formed a cooperative to stay competitive in the face of “the relentless expansion of manufacturer owned distributor networks and large corporation-owned distributor chains” (Blue Hawk).

With a purchasing cooperative identified as a potential catalyst, questions that naturally follow are, what is a viable scale at which to provide these services, are there enough companies that fit the member profile and are interested in participating in this strategy, and what suppliers could be appropriate partners? Design/build companies interested in these services and embodied carbon experts interested in offering them will need to ask those questions themselves while developing a purchasing cooperative or other solution. The following analysis is a starting point.

What is the Right Scale?

Having narrowed in on design/build firms as the ideal members, it is important to also decide the geographic boundaries. Should the scale be local, regional, national, or even international? Because building techniques and material characteristics vary in different climatic areas, and due to the ecological impacts of shipping, it is unlikely that a national or international strategy will be appropriate. The potential exception would be geographically and climatically similar areas such as Southeastern Canada and Northeastern United States. Focusing on local or regional scales as a starting point, a good next step will be to run some financial projections. The author is located in Vermont, United States and his networks and interviews primarily revolve around the Northeast of the United States so that is the initial focus. To assess the viability at these scales, the following data will help:

- Assessing the number of design/build firms in those markets and how many of them can be expected to join (looking at the Northeast Sustainable Energy Association’s member directory is a good starting point).
- Identifying what materials are commonly available and have enough suppliers to be able to negotiate discounts and rebates from.

- Understanding the annual dollar amount these companies spend on commonly available materials that could be purchased through the cooperative (conducting a further round of interviews with companies that fit the member profile will help to understand this amount).
- Estimating the percentage of those materials that the member would buy through the purchasing cooperative (based on interviews with professionals in construction industry purchasing cooperatives, 30% recommended).
- Multiplying that dollar amount by the expected percentage of rebates and discounts (based on the same interviews, 4-6% recommended).
- Considering how much of that revenue would be passed on to members to be valuable enough to encourage participation and how much can go towards the cooperative's expenses.
- Adding any additional revenue sources such as member dues or fee for service for services beyond purchasing commonly available materials.
- Assessing the annual expenses of the cooperative and if these sources of revenue can cover them.

Management and Governance

The leaders in purchasing cooperatives who were interviewed confirmed that purchasing cooperatives often do not strongly embrace cooperative values and have less participatory democratic processes. It will be important to ensure that is not the case here. Earlier in this paper, trust was identified as one of the major barriers to SCI in the construction industry. Trust can be built in multiple ways including through democracy, transparency, and consistent social interaction. Because cooperatives can provide these, Sabatini et al. show that "unlike any other type of enterprise, cooperatives have a particular ability to foster the development of social trust" (2013). In talking about a new partnership of companies interested in transforming an industry and the massive goal of combating climate change, there are undoubtedly significant risks. Trusting that the other members of the cooperative as well as supply chain partners are competent, well aligned, and looking out for one another allows members to recognize that the risk is not solely on their shoulders but spread across a strong community. The U.S. Overseas Cooperative Development Council reinforces this by explaining that "trust entails a willingness to take risks in a social context. Individuals act, based on confidence that others will respond as expected and will act in mutually supportive ways" (Cooperatives, 2007 p. 21).

In this research on SCI, it was clear that providing digital platforms for member-to-member communication is incredibly important. With a view to moving further along the continuum towards a deeply interconnected carbon-conscious supply chain, facilitating communication among the various stakeholders will be increasingly important both for business purposes, i.e., efficient supply chain logistics, and for movement building purposes and building social capital. In the interviews it also became clear that occasional in person events have a huge impact in building relationships and collaboration.

While the primary services and foci are around business processes, cooperative principle 4 - Education, Training, and Information – can extend to personal development and individual empowerment and responsibility. These are valuable processes in their own right but also have significant positive externalities in building stronger communities, improving societal communication and understanding, and taking care of shared resources among others. Without the development of the individuals, it is hard to imagine the successful growth of a movement.

Next Steps

The next steps need to be focused on developing some initial financial projections to confirm the viability of the cooperative and the appropriate scale at which to start it. With a better understanding of the geographical boundaries that are feasible, it will be important to engage potential members more deeply. The author hopes to conduct some of that work and identify a development team of leaders in design/build firms by distributing this paper, networking, and potentially through presentations. The team's insights and leadership will be crucial in many respects from refining the understanding of their needs, tailoring the organizational structure, management, and democratic processes to fit those needs, and building the social capital among members that allows for strong associative practices. Discussions on these topics will help the development team write the bylaws or operating agreement. One of the areas of member needs that should be a focus is identifying which materials and suppliers will be the best fit for the cooperative. This can be done by matching member needs to the cooperative's services as well as looking at how the cooperative's services position it in a competitive market. Additional outside support will likely be necessary in various areas depending on the skill sets, capacity, and level of engagement among the founding members and development team. Technical support may be necessary to identify the most effective digital platforms to both facilitate the members' business with the cooperative and mutual support among the members. Workers will need to be hired at some point and may start off as part of the development team. The number of workers will be dependent on the final scale but important roles will include general strategic management, member relations, and supplier relations.

Opportunities for Future Development

The purchasing cooperative described above with its focus on embodied carbon sets a scope that is manageable, impactful, and immediately needed. However, there are many opportunities for this cooperative to grow. With that in mind and knowing that the members are users who control, own, and benefit from the organization, below is a list of some of the areas the cooperative could move into once it has a stable footing:

- Policy and building code advocacy and development to create a more fertile environment for both cooperatives and carbon conscious construction.
- Tracking of other environmental and social metrics beyond embodied carbon and guidance to improve these impacts.
- Vertical integration with other areas of the supply chain.
- Incubation and spin-offs such as product and materials development, testing, manufacturing, and supply.
- Marketing, project management, contracts procurement and project financing.
- Federation, association, partnerships, or other increased connectivity with the cooperative movement.

Many of these services would benefit not only the members of the purchasing cooperative - design/build companies (and potentially workers) - but all industry participants. When shared needs and values are recognized throughout the supply chain, greater integration can happen and instead of the purchasing cooperative growing on its own, it may be appropriate to create an industry-wide federation such as Italy's CCC discussed above.

Conclusion and a Call to Action

The causes of, impacts from, and solutions to climate change are inextricably linked to other social inequities and any work on climate change should be considered as part of larger movements towards a more kind, just, and democratic society. The built environment is the largest contributor to global greenhouse gas emissions but through transformation at all levels of the supply chain, the industry can help the world change its trajectory and begin drawing down the levels of atmospheric CO_2e. To do so, the construction industry must continue improving on operational CO_2e emissions while simultaneously shifting the materials and building techniques used to address embodied CO_2e. This change will take efforts from every level of the supply chain.

Industry wide transformation can be looked at through the lens of movement building rather than changing business models and practices. The adaptability and characteristics of cooperatives can offer a structure for the individuals and organizations working independently towards shared goals and for them to come together as a movement. The leverage that designers and builders can have based on their position in the supply chain and the opportunity to provide valuable services to them suggests that a purchasing cooperative of design/build firms may be able to act as a catalyst for change throughout the supply chain.

This research is only a starting point upon which values and mission aligned individuals and companies can build. It has suggested some ways in which a cooperative approach could be used in different areas of the supply chain and which stakeholders could be members but those decisions will ultimately need to be made together by the parties interested in forming cooperatives and transforming the construction industry. Anyone interested in putting in the work to further develop or adapt what is outlined in this paper and bring this strategy to life in the Northeast or any other region are encouraged to reach out to the author or simply dive in.

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Notes

[1] WBLCA "is a tool that allows architects and other building professionals to understand the energy use and other environmental impacts associated with all life cycle phases of the building: raw material procurement, manufacturing, construction, operation and decommissioning" (Singh, A., 2017).

[2] Materials originating from living organisms such as plants or fungi.

[3] Collaboration among organizations throughout a supply chain leading to integrated systems and logistics.

[4] The most common expression of these comes from the International Cooperative Alliance's *Statement on the Cooperative Identity* (Macpherson, 1995). Some cooperative movements such as Mondragon have developed their own closely related set.

[5] Dimaggio and Powell (1983) define three types of institutional isomorphism. 1) "Coercive isomorphism results from both formal and informal pressures exerted on organizations by other organizations upon which they are dependent and by cultural expectations" (p. 150). This includes conforming to political legislation. 2) Mimetic isomorphism comes in situations of uncertainty when organizations look to model themselves after other organizations. 3) Normative isomorphism "stems primarily from professionalization" (p. 152) often shaped by university education, and professional networks and training.

[6] Demutualization is when a cooperative or other mutual organization transitions to another organizational structure (commonly by selling into an investor-owned firm) or liquidates.

[7] Denaturalization is when a cooperative drifts away from their cooperative identity (Côté, 2019).

[8] There are already organizations pushing to focus on embodied carbon in construction or more broadly focus on ecological impacts in construction that could be important partners such as the Northeast Sustainable Energy Association (NESEA), Builders for Climate Action, Architecture 2030 and the Carbon Leadership Forum.

Appendix: List of Abbreviations

Abbreviation	Full Name
ACAM	Consorzio Nazionale Cooperative Approvvigionamenti
CCC	Consorzio Cooperative Costruzioni
CO2e	Atmospheric Carbon Dioxide Equivalents
EC	Embodied Carbon
EC3	Embodied Carbon in Construction Calculator
eCO2e	Embodied Atmospheric Carbon Dioxide Equivalents
EPD	Environmental Product Declaration
GHG	GreenHouse Gases
IPCC	International Panel on Climate Change
NESEA	Northeast Sustainable Energy Association
NCP	New Cooperative Paradigm
oCO2e	Operational Atmospheric Carbon Dioxide Equivalents
SCI	Supply Chain Integration
SCM	Supply Chain Management
WBLCA	Whole Building Life-Cycle Assessment