

A Living Wage for Revelstoke, BC: Economic Impact Assessment Report

Kenneth Carlaw, Mike Evans, Lindsay Harris, and John Janmaat (Institute for
Community Engaged Research, UBC Okanagan), November 2016

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1 Executive Summary

This document reports on collaborative research involving stakeholders from the Revelstoke Community (in particular the Revelstoke Community Social Development Committee and Community Futures Corporation of Revelstoke) and researchers from the Institute for Community Engaged Research at the University of British Columbia Okanagan¹. We develop a methodology for assessing the potential impacts of the introduction of a “living wage” in Revelstoke, in the context of a poverty reduction strategy initiated by stakeholders from the community concerned about the impacts of recent economic changes on low-income earners in the area.

We begin with a description of the genesis and character of the living wage phenomenon as presented in the existing literature, and then discuss its emergence in the context the Revelstoke. Using the methodology provided by the Canadian Center for Policy Alternatives (CCPA), the living wage calculated for Revelstoke was (in 2015) \$18.87 per hour². The literature review details some of the recent assessments of the impact of increased minimum wage and living wage strategies for poverty reduction, with particular attention to Canada and the United States. Although the emerging (but not complete) consensus among analysts is that the increased costs of labour necessitated by the wage hike inherent in a living wage (or a significant increase in the minimum wage) can, and where relevant has been, absorbed into local economies *without significant negative stressors*, there are no particularly good analogues to the Revelstoke situation. Because prospective studies have not played a large role in Canadian living wage campaigns to date, the current study of the possible economic impacts of a living wage in Revelstoke provides an important contribution to both the decision making process for Revelstoke residents and the broader living wage movement emerging in Canada.

The project was conceived in the context of ongoing discussions in the Revelstoke community around the need for poverty reduction strategies, in part arising from a sharply rising cost of living associated with real estate and rental markets and the growth of tourism. Initial attempts to pilot a living wage initiative met with concern from the small business sector of the community, and as a result a partnership with UBC Okanagan was formed to develop a model to better understand the impacts on this sector. The development of a relevant economic model to assess the living wage for the area involved community and stakeholder feedback through two consultative meetings. At both meetings emerging research results (from the literature review and from the relevant data sets available locally or through Stats Canada) were presented and feedback sought. At these consultations, the potentials and limitations of existing data sets were discussed, and an emerging model was presented for critical examination. The model uses existing data and estimates from that data, but also identifies hard to measure (but nonetheless important) multiplier and spillover effects; some effects, like the benefits of increased social inclusion for higher wage earners are usually assumed to exist, but are very difficult to measure. Multiplier effects, a crucial issue for decision makers, are also a challenge. While benefits are very hard to measure, there was wide agreement that a living wage would be beneficial to low wage

¹ We would also like to acknowledge the contributions of Betty Brown (Community Health Facilitator for Interior Health’s *Healthy Communities Initiative*) in bringing this partnership together.

² The CCPA methodology can be found at <https://www.policyalternatives.ca/livingwage2016>; the calculation itself was undertaken by collaborators in the Revelstoke Community Social Development Committee (Zacharias and Lenzi 2015).

earners, and allow greater effective inclusion of currently marginalized people in the Revelstoke community.

The costs and consequences at the level of businesses are more amenable to quantitative analysis. We develop an analytical model to give approximate measures of the costs (and distribution of those costs between sectors) of implementing living wages in Revelstoke; the model includes a sector specific analytical frame, from which the potential impacts on businesses can be assessed. Although direct quantification of multipliers and spillovers is not possible, the assessment of business based costs provides a means of benchmarking, and thus thinking about offsetting benefits.

While the likely Revelstoke-wide impact of a living wage on total wage costs in Revelstoke are quite small, cross sector differences in the consequences for businesses implementing a living wage emerged as a key issue in consultations and indeed, in the data available. Businesses in the food and beverage, accommodation, and retail sector of the Revelstoke economy would face the most significant challenges. The research has involved the creation and use of a number of interactive tools. These can be used to help people assess the impact on a sector by sector, business by business basis by allowing stakeholders to more accurately calculate the consequences of a living wage on business conditions, and to include their own assessment of the potential impact of increased prices, customer loyalty, employee productivity, and other multiplier effects. These tools also allow for consideration of the social benefits of the poverty reduction in the context of their economic impact, and provide community stakeholders with a means for a more nuanced and detailed deliberative process³ . . .

2 A Living Wage for Revelstoke, BC

This report documents the outcome of a research partnership between the Revelstoke Community Social Development Committee and UBC Okanagan's Institute for Community Engaged Research. The purpose of the report is to provide analysis of the possible impacts of the implementation of a living wage program in Revelstoke, and help to assess whether or not a Revelstoke living wage program would be an effective strategy for poverty reduction by attempting to gauge what possible benefits or unintended negative effects might result.

While Revelstoke remains one of British Columbia's top places to live, the rising cost of living combined with increasing housing prices and property taxes have reduced the economic security of residents (Zacharias 2006; Zacharias and Brown 2012). As a result, a growing number of community members are experiencing social exclusion as they struggle to meet their own basic needs, negatively affecting community cohesion and stagnating the local economy (Zacharias and Brown 2012). In addition to threatening community stability and identity, Revelstoke's increasing unaffordability has made it more difficult to retain residents long-term and attract new ones (Zacharias 2006).

Reducing poverty has been identified as a high priority, and the community is one of the first of its size to adopt a poverty reduction strategy (Zacharias and Lenzi 2015; Zacharias and Brown 2012). The main goal for Revelstoke is to improve income security, allowing every resident to maintain a decent standard of living and to participate fully in the community with dignity (Zacharias and Lenzi 2015, 7). The strategy seeks to build relationships among businesses, the government, non-profit leaders, and residents while also forming a multi-sector poverty coalition to address issues and raise awareness (Zacharias and

³ These tools are shared in a technical appendix, and are available for stakeholders in Revelstoke and elsewhere.

Brown 2012, iii). Zacharias and Brown argued that a living wage initiative is a possible critical first step in achieving income security and social inclusion (2012).

As one of the direct impacts of a living wage are on wage earners in the lowest income brackets, it is helpful by way of context to understand the patterns of poverty the initiative is intended to address. As elsewhere in Canada, low income earners and low income households in Revelstoke have gendered characteristics. In Zacharias and Brown (2012) the Revelstoke Community Poverty Reduction Strategy reported median incomes by gender for Revelstoke residents from 2000-2009, observing that male incomes were consistently significantly higher than female incomes. In 2009, the median male income was \$39,020 while the median female income was \$22,340, a gap that has been reduced by 11% since 2000 (Zacharias and Brown 2012). The Revelstoke Labour Market Survey highlights some information about the gender profile of Revelstoke's workforce. Overall, male participation in the workforce has been greater than female participation, and male employees made up 55% of the workforce surveyed. Female participation was disproportionately higher in the part-time (78%) and casual (69%) employment categories, and made up just 36% of the full-time on-going and seasonal positions surveyed (GRP Educational Services and JL Insights 2015). Unfortunately, the labour market survey does not provide an analysis of sector participation or wage breakdown by gender. Statistics Canada does provide estimates of sector participation by gender at the national and provincial level. For British Columbia in 2015, this data indicates that females had higher participation rates in sectors with generally lower wages, such as retail trade (53%) and accommodation and food services (58%) (Statistics Canada 2016).

Using the low income measure the report identifies that in 2009, 610 taxfiler family units in Revelstoke (17%) were considered low income. This number rises to 1170 family units (32.4%) when local affordability measures (the Market Basket Measure - MBM) are taken into account (Zacharias and Brown 2012, 22). Within these overall totals, lone parent families are proportionately most likely to experience low income. 120 of 360 lone parent families (33.3%) were considered low income, while using the MBM, 220 of 360 lone parent families (61.1%) were considered low income (Zacharias and Brown 2012, 22, 47). Not only are lone parent families in Revelstoke disproportionately living with low incomes, female lone parent families are more likely to be impacted. The source data for the report shows that 280 of 360 total lone parent families (77.8%) were headed by female parents, and female lone parent families overall had a median income of \$36,240, significantly lower than the \$45,360 median income of male lone parent families (Statistics Canada, Income Statistics Division 2009). Although a breakdown of the 220 lone parent families below the MBM threshold by gender is not available, it is reasonable to assume that the significant majority are female lone parent families. These results, together with feedback received during the consultation process, suggest that women in Revelstoke have a higher representation in low wage work and greater risk for household poverty, and it is important to note that the impacts of a living wage are likely to have a differential and gendered effect.⁴

⁴ The model we develop below requires wage distribution data in order to track the magnitude of wage changes needed to bring the lowest wages in line with the living wage. While this data was available for Revelstoke, the data was not itself gendered, thus we were unable to incorporate gender explicitly into our model. The detail we offer here provides context. Please also note that the living wage calculation methodology is itself based on a two-income household, and can not therefore address the underlying gendered aspects of poverty completely.

3 Methodology

The Revelstoke living wage research presented in this report was carried out in three inter-connected parts.

The first and second parts of the project required analysis of living wage experiences in other locations and an examination of the ongoing history of Revelstoke's approach to poverty reduction. Specific research activities included:

- A review of relevant literature on living and minimum wages;
- A review of living wage campaigns at the municipal government level and analysis of municipal records (council and committee minutes and reports);
- Two consultation workshops including members of the Revelstoke Poverty Reduction Working Group, members of the business community, and representatives from UBC's Institute for Community Engaged Research. The purpose of the workshops was to a) identify community priorities and concerns that would inform the creation of a speculative economic model; and b) draw on community members' experience to validate the assumptions inherent in the initial draft of the model;
- In-depth interviews with key stakeholders, to better understand the history of poverty reduction initiatives in Revelstoke and to contextualize the living wage research within these ongoing efforts.

The third part of the project required the creation of an illustrative economic model to envision the possible effects of the living wage in the Revelstoke economy. As noted above, the model relied on an ongoing conversation with community partners to ensure the results addressed community priorities and were validated by the lived experience of community members.

Primary data sources for the economic modelling exercise included:

- A Living Wage for Revelstoke and Area (Zacharias and Lenzi 2015)
- Revelstoke Community Profile (City of Revelstoke 2012)
- Revelstoke Labour Market Survey (GRP Educational Services and JL Insights 2015)
- Financial Performance Data, Industries and Business (Statistics Canada 2013a).

4 Poverty Reduction in Revelstoke

The living wage research initiative was situated in the context of a number of poverty reduction efforts that have been ongoing in the Revelstoke community over the last decade. A timeline of these initiatives is provided below:

- July 2006: The Revelstoke Affordable Housing Strategy and Policy Options report was published. According to estimates made from Revelstoke's 2001 Census statistics, 39.4 per cent of tenants and 15 per cent of homeowners experienced "core housing need", paying 30 per cent or more of one's income on housing costs (Zacharias 2006, 10).⁵ More importantly, rental and homeownership prices have continued to rise since then, increasing the percentage of Revelstoke residents in "core housing need" (Zacharias 2006, 10). The report flagged that, similarly to many resort communities, Revelstoke was in danger of becoming a place where only the affluent could afford to reside, threatening the well-being of the community and its local economy.
- June 2008: The Revelstoke Community Social Development Committee hired a Social Development Coordinator (SDC). The role was intended to support capacity building the Revelstoke social sector and contribute to integrating social goals into high level community planning processes.
- 2011: The SDC received funding from the Columbia Basin Trust to initiate research for a poverty reduction strategy for the community.
- June 2012: The Revelstoke Poverty Reduction Strategy final report was published. The report used the Market Based Measure (MBM), to demonstrate that 32.4% of Revelstoke households were considered low-income (Zacharias and Brown 2012, iii). Factors of impoverishment included: increased food bank usage; 30% increase in housing prices after the development of the Revelstoke Mountain Resort; continued increase in property taxes; high rental housing prices; and social housing waitlists (Zacharias and Brown 2012, ii). The report also summarized personal interviews with residents to illustrate 'Voices of Experience' in the community. The experiences described include feelings of shame, keeping one's impoverishment hidden, not accessing services, making difficult choices, experiencing family breakdown, and an inability to participate in community life (Zacharias and Brown 2012, iii).
- October 2013: The Poverty Reduction Action Plan and the Poverty Reduction Working Group were established.
- 2014: The Revelstoke Credit Union (RCU) initiated an investigation into the living wage certification program to determine if it would be an effective program for socially responsible business practices for their organization. RCU contacted the Living Wage for Families campaign and was provided with information about calculating the living wage for the community. The RCU Controller and the SDC worked collaboratively to determine the Revelstoke living wage rate.

⁵ Although changes in the 2011 Census methodology make it problematic to compare, the 2011 National Household Survey data shows a slight worsening of the situation (to 40.6% and 18.9% respectively) over the last decade (Statistics Canada 2013b).

- 2014: Representatives from Revelstoke Community Futures joined the Poverty Reduction Working Group with the intention of facilitating the participation of the local business community in poverty reduction efforts.
- January 2015: A Living Wage for Revelstoke and Area report was published and the calculated living wage rate of \$18.87 was approved by the Living Wage for Families campaign. Shortly after the release of the report, the RCU Board declined to pursue certification at that time (Revelstoke Credit Union 2015). As a result, those involved in the process suggested that more information was needed to determine whether a living wage initiative would be effective or beneficial in Revelstoke.
- May 2015: A living wage research partnership was launched (UBC Okanagan and the Revelstoke Community Social Development Committee). A research proposal arose out of conversations between the Revelstoke Community Social Development Committee, members of the Institute for Community Engaged Research at UBC Okanagan, and the Interior Health Promotion & Prevention, Community Health Facilitator. Building on Revelstoke's considerable work in the area of poverty reduction, the aim was to facilitate continuation of poverty reduction efforts by working with community partners to develop additional knowledge and resources regarding living wages and other poverty reduction strategies.

5 What is a Living Wage?

A living wage is the hourly wage rate needed to provide a minimally decent quality of life, including basic expenses such as food, clothing, shelter and transportation. Unlike minimum wages, living wages typically provide a higher wage rate that reflects the true cost of living in a community. Although it is a bare bones budget that excludes many additional expenses such as debt payments, savings for retirement or children’s post-secondary education, or home ownership, a living wage aims to provide workers with the resources necessary for self-respect and social inclusion in the life of a community.

Although there is not always consensus regarding what should be included in the standard for a decent quality of life, there is substantial consensus regarding what a living wage is not:

A living wage stands opposed to a wage that requires a person to work more than one full-time job to support herself and her family. A living wage also stands, by definition, in contradistinction to a wage rate that entails food insecurity (or reliance on food banks), homelessness (or reliance on shelters), financial insecurity (or reliance on debt to finance consumption), material deprivation, and ultimately, shame. In other words, a basic starting point in defining a living wage is by contrasting it with its opposite, namely a subsistence or poverty wage. (Brennan 2012, 8)

5.1 The Living Wage Calculation

The living wage rate calculated for Revelstoke is \$18.87 (Zacharias and Lenzi 2015). Revelstoke’s calculation follows a standard methodology that has been widely accepted since the launch of the living wage movement in British Columbia in 2008. This movement was initiated by First Call: BC Child and Youth Advocacy Coalition via a joint publication with the Canadian Centre for Policy Alternatives identifying a living wage calculation for Vancouver and Victoria, BC (Richards et al. 2008). The principles of that calculation have been incorporated into a standard calculation guide (Ivanova and Weiler 2015) which has since been applied in many living wage campaigns across the country (“Living Wage Canada” 2015). The emergence of a standardized calculation methodology that is detailed and transparent has been instrumental in justifying and building support for living wage campaigns in Canada (Keddy 2015). Using a reference family (2 parents and 2 children, age 4 and 7), the methodology first calculates necessary annual family expenses based on local costs. Then, an hourly living wage rate is determined based on the following basic formula (Ivanova and Weiler 2015, 5):

$$\boxed{\text{Annual family expenses}} = \boxed{\text{Income from employment (living wage)}} + \boxed{\text{Income from government transfers}} - \boxed{\text{EI and CPP premiums, federal and provincial taxes}}$$

The methodology assumes that families need food, shelter, clothing, and the ability to participate in the social life of the community. Families that are not able to participate in the community are typically unable to raise themselves out of poverty. Poverty reduction efforts are fundamentally concerned with enabling families to meet basic needs. They differ in what they include as basic needs, and in how they propose to enable families to meet those needs. Living wage campaigns focus on providing families, through wage employment, with the ability to finance their needs, compared to other approaches such as a guaranteed annual income which provides the needed financial resources without requiring employment or social housing which reduces the financial costs for those in poverty.

5.2 Regulatory and Voluntary Living Wages

Living wage campaigns typically fall into one of two categories: regulatory and voluntary. Regulatory campaigns focus on trying to achieve living wage policies or ordinances at the municipal level. Most living wage campaigns in the United States fall into this category. Municipal ordinances vary significantly from city to city: often they mandate living wage coverage for municipal employees, workers hired by employers with municipal contracts, or workers hired by employers receiving some form of municipal assistance (e.g. lease holders on city-owned land; recipients of economic development subsidies). More rarely, they may also mandate living wages across all employers in a certain industry sector or geographical zone; while such broad-coverage ordinances are more accurately considered minimum wage regulations, the campaign may still be framed as a living wage.

Voluntary campaigns focus on recruiting firms as living wage employers, often by providing some form of certification program that a business can use to market itself to potential customers or employees.

5.3 Living Wage Certification Standards

In Canada, living wage certification is currently provided by a variety of organizations. Although the certification processes share core principles, a national standard is still in development. The Living Wage for Families Campaign hosted by First Call is the certification provider for British Columbia. Certification requirements include the following:

- The living wage is calculated annually in April;
- All employees (full-time, part-time, and casual) must be paid the living wage;
- The living wage may include relevant non-mandatory benefits;
- The living wage may include incentive-based pay (tips/commission) provided total earnings meet or exceed the living wage;
- All future contracts must stipulate that contracted or sub-contracted employees must be paid the living wage where the contracted employees provide services on a regular, on-going basis (at least 120 hours of labour per year);
- Trainee or student workers may be paid less than the living wage provided they do not make up more than 10% of employees (Living Wage for Families Campaign 2014).

5.4 Living Wages in Canadian Municipalities

Living Wage Canada identifies over 40 municipalities across the country that have calculated their living wage, many of which have local campaigns in progress. Several more communities are identified as having emerging living wage campaigns.

To date, only New Westminster, BC and Quesnel, BC have successfully implemented a living wage policy at the municipal level. However, four other municipalities have successfully passed motions in support of living wage policies, directing staff to take steps towards certification. Several other municipalities have had living wage proposals debated at council, and while these processes did not lead to successful implementation of living wage policies, their experience provides valuable information that will inform the ongoing campaign for living wages in Revelstoke and elsewhere across the country. A summary of municipal living wage policy actions is provided in Table 1.

Location	Municipal Living Wage Policy Campaign Status	Latest Date of Municipal Action
Quesnel, BC	Successful – municipal policy implemented	Sept 6, 2016
New Westminster, BC	Successful – municipal policy implemented	April 26, 2010
Parksville, BC	Successful – municipal vote in principle	June 6, 2016
Vancouver, BC	Successful – municipal vote in principle	Sept 21, 2016
Cambridge, ON	Successful – municipal vote in principle	Nov 17, 2015
Port Coquitlam, BC	Successful – municipal vote in principle	Dec 7, 2015
Pelham, ON	Unsuccessful	April 21, 2008
London, ON	Unsuccessful	April 6, 2009
Calgary, AB	Unsuccessful	April 7, 2009
Waterloo, ON	Unsuccessful	Jan 5, 2010
Esquimalt, BC	Unsuccessful	April 18, 2011
Ottawa, ON	Unsuccessful	June 23, 2011
Hamilton, ON	Unsuccessful	Sept 9, 2013
Kingston, ON	Unsuccessful	Sept 12, 2013
St. Catharines, ON	Unsuccessful	Sept 8, 2014
Owen Sound, ON	Unsuccessful	May 25, 2015

Table 1: Canadian Municipal Council Living Wage Policy Decisions

Many of the living wage campaigns across Canada are focused on voluntary participation by employers instead of or in addition to municipal policies. The Living Wage for Families Campaign identifies a growing number of certified living wage employers in British Columbia. Living Wage Canada also identifies several other organizations that are certifying living wage employers in Alberta and Ontario.

6 Literature Review

Because the living wage movement is in its nascence in Canada, very little research specific to the Canadian context has been done to date. This review will discuss many of the applicable findings from the United States experience, where living wage effects have been studied extensively, followed by an overview of other speculative research intended to support community decision making prior to implementation of a living wage.

6.1 Living and Minimum Wage Effects

The United States living wage literature includes a number of retrospective, longitudinal empirical analyses conducted with a variety of methodologies. In addition to studies on living wage effects, there are also several studies on minimum wage effects where more data is available. The empirical evidence is effectively summarized in several comprehensive reviews of the economic literature (Brennan 2012; Chapman and Thompson 2006; Kuehn 2014; Luce 2014; Pollin et al. 2008; Schmitt 2013).

Economists Chapman and Thompson analyze the body of living wage literature to report on the empirically determined effects of living wage policies, drawing several conclusions: living wage laws have small to moderate effects on municipal budgets; living wage laws benefit working families with few or no negative effects; and living wage laws have raised productivity and decreased turnover at affected firms (2006, 2–3). They conclude with a discussion of lessons for policy makers and researchers which highlights that the two main predictions about living wage effects (significant costs to municipalities and significant employment losses) are not borne out by the empirical evidence (Chapman and Thompson 2006, 19–21).

Although these conclusions regarding the benefits of living wages are largely shared by similar summative reviews (Pollin et al. 2008; Brennan 2012; Luce 2014), some economists have reported that living wage policies cause negative employment effects. A series of research studies conducted by Adams and Neumark (2005) found that living wage policies did ultimately reduce net urban poverty, though these improvements came at the cost of some disemployment. However, their methodology has been denounced by many other researchers in the field, who suggest, among other critiques, that their data source and methodological approach are more susceptible to measuring factors other than the effects of living wages (Chapman and Thompson 2006; Pollin et al. 2008; Luce 2014; also see Neumark, Thompson, and Koyle 2012 for a rebuttal). Similar methodological debates have occurred among researchers studying the possible employment effects of mandatory minimum wages (Neumark, Salas, and Wascher 2014; Allegretto et al. 2013). Kuehn highlights the important role that research study methodology plays when arbitrating between contentious results in the literature, arguing that the most robust designs consistently find that minimum wage increases have minimal to no negative employment effects (2014). However, he also highlights the importance of proceeding with caution when applying the empirical findings of the literature to proposals that occur under dramatically different circumstances; a caution that is certainly relevant to Revelstoke as its population is substantially smaller than other municipalities considered in the literature.

In an effort to understand why mandated wage increases have no discernible effect on employment, Schmitt (2013) identifies eleven possible adjustment mechanisms that work in concert to mitigate the cost to employers to implement minimum wage increases. His review indicates that the most important adjustment mechanisms are: “reductions in labor turnover; improvements in organizational efficiency;

reductions in wages of higher earners ('wage compression'); and small price increases" (Schmitt 2013, 1).

Luce (2014) notes that while there are few negative effects and demonstrable positive effects from living wage laws, the scope of coverage touches only a small fraction of low-wage workers. Luce's comments on the challenges for broadening the impact of living wage laws, and the use of the living wage as a stepping stone for other poverty reduction initiatives, are valuable considerations for communities considering implementing a living wage initiative.

6.2 Speculative Studies

Speculative or prospective studies (often commissioned by communities considering living wage policies) also make up a significant component of the living wage literature for the crucial role they play in formulating policy and supporting community decision making (Pollin et al. 2008, 8). Examples of these studies were reviewed for Santa Monica, CA, Phoenix, AZ, Nashville, TN, and New York, NY (Pollin and Brenner 2000; Pollin and Wicks-Lim 2006; Pollin and Wicks-Lim 2009; Charles River Associates 2011). In these studies, the authors review the expected costs and benefits of the proposal, the anticipated behaviour of affected businesses, and interaction with government policies and revenues.

Speculative studies in Canada are far less common even though many communities are or have been considering municipal living wage policies. Living wage reports published by the Canadian Centre for Policy Alternatives or other advocacy groups are available for several communities with active campaigns (e.g. Richards et al. 2008; Ivanova and Klein 2015; Bruijns and Butcher 2014; Peace and Justice Grey Bruce 2015; Mayo 2011). These reports generally provide an argument for the living wage as a poverty reduction tool based on evidence from the United States living wage literature, and a justification for the calculated living wage threshold for the community, but do not provide any detailed cost-benefit analysis of the expected economic impacts. In practice then, Canadian municipalities are likely to be in the interesting position of making collective decisions about living wage policies in the absence of a calculated bottom line regarding the potential impact of the living wage on the local economy.

In New Westminster, a living wage ordinance has been in effect since 2011. Municipal staff prepared a prospective report prior to the city council vote on the ordinance (Holowatiuk and Burgess 2010). The report provides some background to the concept of a living wage and analysis of other living wage policies but includes minimal reference to the possible economic impact. The authors suggest that a "worst case" scenario would see municipal contract costs for just seven of its vendors increase from \$329,000 to \$480,000, or 45% (Holowatiuk and Burgess 2010, 6). To obtain this figure, staff surveyed a small sample of contractors and requested an estimate of the percentage increase a living wage would have on the value of their contract (Holowatiuk and Burgess 2010; Luck 2016). Note however, this estimate contradicts the relevant literature, which is largely conclusive that municipal contract costs do not rise significantly following the implementation of living wage policies (Chapman and Thompson 2006, 20). The New Westminster municipal vote resulted in a successfully implemented policy, despite such a large cost estimate and little detail on other possible economic impacts. Although little follow-up research has been done on the effects of its living wage, New Westminster reports that there have been no negative impacts on the municipality, no tax increases were required to implement the policy, minimal changes occurred to contract bidding prices, and the bidding process did not become less competitive (Kieltyka 2015; Keddy 2015, 130–31; Luck 2016, 13).

The City of Calgary and the Region of Waterloo, both of which have had active living wage campaigns over the last decade, have several detailed reports available that have been part of the community politic on living wages (Cook 2008a; Cook 2008b; Cook 2009; Opportunities Waterloo Region 2008; Skillen 2003; Francoeur and Randall 2009; Francoeur and Randall 2010). While the analysis is not as broad in scope as the United States studies, the reports do draw on specific survey data and municipal payroll data to give an impact assessment of the proposal and the reports were generally favourable to the expected impacts of the living wage policy. In both cases, the campaigns did not result in a successful vote to adopt a living wage ordinance at the municipal level. Despite the failure to enact living wages in municipal policies, both Calgary and Waterloo now have active living wage campaigns targeted to voluntary employer certification.

6.3 Community Decision Making

In Canada, Keddy (2015) recently completed a qualitative study reviewing the effectiveness of Canadian living wage campaigns, comparing the experiences of the successful campaign in New Westminster with the then in-progress campaign in Kingston. Based on in-depth interviews with campaign organizers, city councillors and municipal employees, the findings indicate the following factors lead to successful living wage campaigns:

1. A detailed and transparent calculation for the living wage rate builds credibility and can be used to educate and build support among stakeholders;
2. Framing campaigns in terms of fairness and equality may resonate more than framing them in terms of poverty reduction, likely due to the complex and easily misunderstood nature of poverty;
3. Campaigns benefit from strong leadership by a single organization;
4. Political ideology is seen as the most significant barrier or opportunity for living wage campaigns. City councils with a political champion of the living wage or that have a record of socially progressive decisions are more likely to approve a living wage policy, as are communities that have a history of social activism. (Keddy 2015)

Economic impact data (or lack thereof) did not emerge as a theme for respondents, although municipal budget impacts were cited as a factor for respondents who opposed the living wage policy (Keddy 2015, 130). This is perhaps unsurprising given the current lack of relevant economic analysis in the Canadian context. Because prospective studies have not played a large role in Canadian living wage campaigns to date, the current study of the possible economic impacts of a living wage in Revelstoke provides an important contribution to both the decision making process for Revelstoke residents and the broader living wage movement emerging in Canada. The project proceeds in the context of several inter-related questions: What types of data are essential and helpful for decision makers? Which community members are essential to include in the decision making process? What type of speculative model is appropriate and possible for a small community like Revelstoke, and what type of model might be replicable in other small communities making similar decisions?

7 Revelstoke Community Consultation Results

“For me the biggest advantage in terms of framing the conversation is from a business perspective, what are the advantages to your business to paying a living wage? How is this going to impact your bottom line in terms of employee retention, what are the benefits to you as a business to become a living wage employer and I think that the social responsibility or kind of the consumer appreciation for social responsibility is really underestimated.”

“There’s really two sides to this, the business community needs to, if we are going to move forward, they need to move forward collectively or as big a group as possible and the consumers need to go forward and say ok, then we’re going to support the businesses that are supporting incomes.”

“There is an education process that we’re starting to take on, a fair and equitable way of dealing with staff and for [employers] to realize that we’ve been looking at some of these margins backwards for a long, long time when it comes to addressing wage. Everybody looks at ok, well can we afford to pay, not looking at what the true expense is and what you need to pay people for them to be able to participate in the community.”

“We have attended both [consultation] workshops and come away with the realization that this particular poverty reduction strategy may not be suited to Revelstoke in general. The industries most affected are the ones least financially able or willing to participate, but would have the greatest impact on poverty reduction.”

“The business community needs to take the lead, because it is not up to me in the social sector, as a social sector support person to be telling businesses what they should be paying their employees. That needs to come from the business community itself.”

“I’d like to see more targeting in the effort. Like if living wage is the thing that matters the most then... what do we need to do to lobby and who do we need to lobby and what’s the strategy for making this come alive at the federal and provincial levels?... The only other way to make it happen is moral authority...But you can’t have moral authority if you don’t have the bigger resources behind it.”

The comments above, drawn from interviews conducted with key stakeholders, highlight a number of the diverse perspectives that Revelstoke residents contributed during the research process. In addition to conducting interviews, the research team facilitated two consultation workshops. Each of the two workshops played an important role in the process of identifying community priorities and concerns that would inform and refine the creation of an economic model. The model was not intended to provide a final answer or bottom line to the community. Rather, the objective was to create an interactive tool that would facilitate discussion within the community, supporting stakeholders to generate their own questions and answers that would be rooted in the knowledge and expertise of community residents.

7.1 First Consultation Workshop

It was evident that the group was concerned with promoting a robust minimum standard of living for all members of the Revelstoke community, not just workers eligible for living wage increases. This value was emphasized in comments regarding a number of small businesses whose owners may not be able to provide an acceptable standard of living for their own families; the *“mom and pop operation that can’t*

afford to go to a living wage.” Participants noted that many businesses in Revelstoke are currently paying above minimum wage, with some already paying at the living wage level. As one participant observed, *“lots of employers could sign up tomorrow and won’t make any impact on poverty reduction.”* Participants also drew attention to the differences in wage distribution (and the corresponding differences in projected living wage impacts) by sector, particularly in sectors affected by seasonal variation in tourist revenue. Additionally, participants raised questions about the possible community-wide economic impacts that a living wage might have, such as changes to the rate of spending leakage to nearby communities, overall growth in the Revelstoke economy, or changes to the community’s sense of resiliency or connectivity.

Based on these themes, an initial model was developed that focused on business impacts, sector differences, and actual wage distributions. Further research into broader economic contexts and community resiliency is explored in the Economic Modeling and Measurement Challenges section below.

7.2 Second Consultation Workshop

One important purpose of the second workshop was to test the reasonableness of the assumptions that were made in the initial model. It was clear that if the model was going to function as a tool for people to think about their particular business situation, more flexibility was necessary. As a result, the next iteration of the model allowed stakeholders to make adjustments to key variables (described in detail in the Economic Model Development section below).

The initial model also raised a number of sector-specific questions among participants, as it demonstrated that the costs of implementing a living wage program would be substantially higher in particular sectors: food and beverage, retail, and accommodation. Participants wanted to know more in depth information about these impacted sectors. Participants also discussed the types of “buy-in” that would be necessary to successfully implement the living wage in the community, emphasizing that two types of buy-in would be required: businesses (both across and within sectors), but also consumers, whose spending behaviours would need to support living wage businesses. Following this discussion, we designed a quantitative survey tool that would collect more detailed information about businesses’ capacity to participate in a living wage program, however, the response rate to the survey was insufficient to allow analysis.

8 Economic Modeling and Measurement Challenges

Among the many economic modelling and measurement challenges in analyzing the implementation of living wages are those issues of aggregating from microeconomic impacts at the level of businesses, individuals and families to the overall community economic impact. Significant parts of these types of challenges exist because some effects neutralize others in the aggregate and the difficulty is assessing the “net” aggregate impact as well as identifying winners and losers in the community of those affected. This section outlines some of these issues and how they were (or were not) dealt with in the research into the Revelstoke living wage. The presentation of these issues is meant to provide some insight into the extent of these issues and to demonstrate how to get some sense of the potential magnitude of some of these offsetting effects.

Living wages are often justified on the grounds of the existence of unexploited benefits. But they are also criticized on the grounds of direct economic costs associated with paying wages above what the market is currently affording to some segments of the labour force. One of the most important issues in assessing living wages is the fact that many of the articulated benefits are either not easily measured or unmeasurable in a standard economic cost-benefits sense, whereas many of the proposed costs of living wages are directly measurable as dollar valued costs of economic transactions. We have already assessed some of the findings of the literature on the implementation of living wages in some communities. Below we articulate and discuss some of the categories of these perceived benefits and costs in the context of Revelstoke. This section articulates what could be the set of things that constitute the positive impact of implementing living wages in Revelstoke. However, the research reported here has not undertaken the measurement of these benefits. The economic model developed in the research instead gives approximate measures of the costs of implementing living wages in Revelstoke and gives stakeholders a basis for assessing how large the positive benefits, whose sources we identify next, must be in order to make the implementation of living wages in Revelstoke worthwhile.

8.1 Economic Multipliers and Spillovers

Among the potential benefits and costs of living wages are labour, production, market effects and some aggregate non-market spillovers.

8.1.1 Labour effects

Labour effects include direct income effects, increased access to credit and better connection of labour to its work, on the positive side and labour substitution, employment opportunity reduction and insiders and outsiders, on the negative side. The direct income effect is obvious. Labour that earns a living wage which is higher than what it could otherwise earn will experience increases in income which will enable more consumption opportunities (which also imply a wider community effect that we discuss subsequently). Higher and more secure income enables better access to credit and therefore to consumption and investment opportunities for labour. Being paid a wage that enables a decent living also satisfies a basic need to feel connected to one’s work in a worthwhile way that may have knock-on productivity and community belonging effects.

Much of the potentially negative impact of living wages are in direct costs to firms in terms of their wage bill, which will in turn be reflected in firms substituting away from labour to reduce their costs. The higher wages of living wage policy are argued to also cause an overall reduction in the demand for

labour and a situation of labour insiders and outsiders with outsiders having even bleaker prospects of earning a decent living.

The question for assessment of living wages is do the benefits at least offset the costs in terms of these direct labour effects. If yes, then on this point at least living wages seem to be beneficial. If no, then other benefits must exist to offset the direct labour costs of implementing living wages.

8.1.2 Production effects

The living wage literature identifies productivity and labour retention as key benefits. Strictly speaking productivity is a measure of output per appropriately measured⁶ unit of input. This measure has a number of limitations, not the least of which is what is deemed appropriate is restricted in many cases by what *can* be measured in a single dimension scalar. Typically, market transactions measured in price-quantity terms are the only measures available. Thus, any non-market transaction effects are excluded from the calculation. For example, quality changes (such as effort) in the behaviour of labour are typically missed by hours worked (and other scalar quantity measures of the labour input). Thus, to the extent that productivity measures show a positive impact of living wages, they will likely be a minimum estimate of the impact.

Labour retention is related to productivity in the sense that higher wages are presumed to induce lower rates of labour turnover within a firm. Part of the consequence of higher labour retention is lower training costs to the firm which will increase the value of output to costs of input ratio. But in addition to this directly measurable effect is the potential that labour learning by doing (and staying in the same place of employment) will increase the quality of labour over time within the firm. This latter effect is unlikely to be captured in a standard productivity calculation.

Again the perceived positive productivity and labour retention effects must be balanced against the direct wage bill costs of living wages.

8.1.3 Market demand effects

Wider market impacts of living wages must also be considered in their assessment. Two sources of positive impact from living wages are the re-spending multiplier effect of higher incomes for local residents and the demand value of living wage certification.

Re-spending multipliers may occur if the increased income realized by living wage earners is spent in the local economy and then re-spent by local merchants within the community and so on. This positive economic stimulus must be balanced against the spending leakage which may occur if living wage earners spend increases in income outside of the local economy. What this net effect might be balanced against the increased costs of paying a living wage is not clear.

The ability of firms to charge a higher price for their products without loss of demand, as a consequence of obtaining living wage certification, may also mitigate the costs of paying a living wage. If consumers perceive some intrinsic value and would be willing to pay a higher price knowing that living wages are being paid by the firm in question, then they could pass on at least some part of the costs of living wages to their consumers. In the context of Revelstoke this may be particularly relevant since many of the consumers of products in industrial categories such as food and beverage and accommodation are

⁶ There is a vast literature in economics on the issue of what is an appropriate measure of input. See Lipsey and Carlaw 2004 for examples.

tourists who may have relatively inelastic demand and who are spending income from outside the community.

8.1.4 Aggregate non-market spillovers

Aggregate non-market spillovers may also occur as a consequence of implementing living wages. As noted in our earlier discussion of productivity there may be economic effects that are not captured in the measurable output to inputs ratio. There may also be community productivity effects as a consequence of local wage earners having a living income. Community production activities such as volunteering, community committee participation and local political activity may be enabled as a consequence of being able to earn a living wage. Further community benefits may also occur in the form of social spillovers. These are discussed more fully in the following section.

Living wages may also reduce dependence on local social and health services. Higher incomes may imply healthier diet and other benefits which would alleviate demand on these services. These benefits must be balanced in Revelstoke, however, against the fact that most health and social services are provided provincially and so savings in this sector may accrue to the province rather than the local economy.

8.2 Social Multipliers and Spillovers

In addition to potential economic benefits there are also a number of potential social benefits and spillovers identified with the implementation of living wages. Community engagement, poverty and crime reduction are said to be induced by increases in quality of life facilitated through living wages. Also increases in tourism and external attraction (e.g., attraction of community minded immigrants) may increase as a consequence of living wages.

The Revelstoke poverty reduction strategy provides some insights into the perceived benefits of poverty reduction on such social services as crime prevention and social inclusion. To the extent that living wages can contribute to poverty reduction in vulnerable segments of a society these benefits may be realized by their implementation in Revelstoke.

Living wages also may contribute to the social attractiveness of a community. In the case of Revelstoke this may be particularly relevant to its tourism industry. One of the major problems with articulating social multipliers and spillovers is that they are notoriously difficult to measure in quantitative ways. These are almost always articulated in non-market value terms. This makes them no less socially valuable. It is, however, difficult to state their measured value in order to compare with the measurable costs of a social policy such as living wages.

8.3 Estimated Multiplier Effects in Other Municipalities

A number of studies (e.g. SiMPACT Strategy Group 2009; Pollin and Wicks-Lim 2006; Pollin and Wicks-Lim 2009) have attempted to articulate some measure of the net effect of the implementation of living wages. These are usually reported as multipliers or the dollars generated from each dollar of cost of implementation sometimes referred to as the social rate of return on investment (SROI). The measurement methodologies attempt to measure some combination of the above listed possible benefits of implementing living wages. In some cases, the studies limit themselves to spending multipliers while other attempt to measure some of the productivity effects. Table 2 provides a summary of some of the findings of studies on the implementation of living wages. Each of the numbers reported should be regarded as illustrative estimates of the potential impact of living wages. Each of the methodologies employed has advantages and limitations. In all cases one must keep in mind that these

are attempts to represent multi-dimensional, difficult and in some cases, impossible things to measure into a single scalar measure of net aggregate effect.

Municipality	Estimated Multiplier Effect
Phoenix, AZ	\$1.43 (Pollin and Wicks-Lim 2006)
Nashville, TN	\$1.40 (Pollin and Wicks-Lim 2009)
Waterloo, ON	\$1.24 (SiMPACT Strategy Group 2009)
Waterloo, ON (accounting for provincial and federal taxes and subsidies)	\$1.80 (SiMPACT Strategy Group 2009)

Table 2: Estimated Multiplier Effects

These multipliers should be thought of as the representative of what the implementation of living wages in Revelstoke might generate in terms of net social benefit. The estimates of costs of implementation provided in the next section on economic modelling should be regarded as the corollary to these potential multiplier effects or SROI. In other words, they provide an estimate of what the SROI would have to be in order for the implementation of living wages to be socially beneficial in Revelstoke.

9 Economic Model Development

To facilitate a more focussed dialog about the impacts of a living wage for Revelstoke, we combined information from the Revelstoke Labour Market Survey with data collected from Statistics Canada. The Revelstoke Labour Market Survey divided the labour market into a number of sectors. Employers indicated the sector they were active in, and reported the numbers of employees in each of the offered wage range categories. Table 3 shows the relative employment by sector, based on the results of the survey. Since the reported number of employees among survey respondents accounted for about 75% of the Revelstoke work force, as measured by Statistics Canada, we feel reasonably confident that the survey results present an adequate representation of the wage distribution in Revelstoke.

Sector	Share	Sector	Share	Sector	Share
Forestry	19.2	Transport	8.4	Business Services	3.5
Food & Beverages	13.1	Retail	6.8	Utilities	2.6
Tourism	11.4	Accommodation	5.9	Auto & Mechanical	1.3
Prof, Law & Government	9.4	Construction	4.4	Personal Services	0.9
Health and Social Services	9.0	Education	3.9	Agriculture	0.1

Table 3: Share of total employees reported in Revelstoke Labour Market Survey by sector

The most direct financial impact on an employer adopting a living wage would be the additional cost incurred by increasing the wage paid to those workers who are presently below the living wage threshold. Table 4 shows the share of the workforce by sector that falls into the lowest wage bracket, \$10.75 to \$15. In what follows, we assumed that it is the employees in this wage category will need to be paid more than they presently receive. This means we are assuming that all employees in the higher wage categories, starting with those reported as being paid between \$16 and \$20, are already being paid an amount that is consistent with the living wage. We also assume (for the baseline analysis) that the wage compression which results from raising the wages of those at the bottom will not have any impacts on productivity or retention for those earning higher wages.

Sector	Share	Sector	Share	Sector	Share
Forestry	11.0	Transport	3.7	Business Services	16.3
Food & Beverages	81.7	Retail	57.7	Utilities	2.6
Tourism	38.0	Accommodation	57.8	Auto & Mechanical	16.3
Prof, Law & Government	2.3	Construction	3.6	Personal Services	0.0
Health and Social Services	9.0	Education	0.0	Agriculture	

Table 4: Share of employees, as reported in Revelstoke Labour Market Survey, falling into the lowest wage category, \$10.75 - \$15 per hour

The size of this additional wage bill will depend on how far these particular employees are below the threshold. As noted above, there are a number of benefits which an employer may be providing to an employee which count towards the living wage threshold. Likewise, some aspects of the job, such as

whether the employee can earn gratuities, can also count towards the living wage threshold. Therefore, for many employers, the size of the wage increase necessary will be less than the simple difference between the present hourly wage paid and the living wage.

A fundamental aim of a business is to earn a profit sufficiently large that the owners can achieve their goals. For some, that is a return on investment. For others, it is the ability to cover the cost of living in Revelstoke and enjoying the local lifestyle. Regardless of what the profit will be used for, a business that does not earn a profit will not long be in business.

The financial profit of a business is that portion of revenues which remains after all costs have been paid. From an accounting perspective, profit is the return to owner's equity. Economists typically consider profit as the remainder after all factors of production, including invested capital and entrepreneurship, have been paid a fair rate of return. They may be doing better than breaking even, in financial terms, but the return being earned by the owner's financial and entrepreneurial investment is being paid less than it could earn elsewhere.

To get a sense of how a living wage will impact on the profits – financial or economic – being earned by Revelstoke employers, we need to know what the revenues and costs are, and how these costs and revenues will be impacted. This is information we do not have for Revelstoke. We therefore turn to Statistics Canada industry data. Statistics Canada conducts industry surveys, and provides breakdowns by industry of costs as shares of revenue. Unfortunately, the sectors used in the Revelstoke Labour Market Survey do not map cleanly onto the industry classifications used by Statistics Canada. We used the descriptions provided by Statistics Canada to find the closest match to the sectors used in the survey. Table 5 reports the mappings used to link the Labour Market Survey sectors and the Statistics Canada industries, as well as the total expenditures as a share of total revenues, and the share of total revenues that can be attributed to costs of labour. This last category combines wages and benefits that are reported as part of the cost of sales, and labour and commissions that are reported as part of operating expenses.

Labour Market Survey	Statistics Canada Industry Codes	Expenditure Share	Labour Share
Forestry	Forestry and Logging	83.10	23.40
Food & Beverages	Food Services and Drinking Places	97.30	30.60
Tourism	Arts, Entertainment and Recreation	85.10	25.40
Prof, Law & Government	Professional, Scientific and Technical Services	69.80	30.70
Health and Social Services	Health Care and Social Assistance	64.50	33.60
Transport	Transportation and Warehousing	85.60	20.60
Retail	Retail Trade	95.30	15.90
Accommodation	Accommodation Services	91.70	25.10
Construction	Construction	88.10	22.90
Education	Educational Services	84.20	36.20
Business Services	Administrative and Support Services	81.00	31.10
Utilities	Utilities	98.10	21.10
Auto & Mechanical	Repair and Maintenance	87.90	28.30
Personal Services	Personal and Laundry Services	83.20	32.40
Agriculture	Agriculture, Forestry, Fishing and Hunting	98.30	22.00

Table 5: Mappings from Revelstoke Labour Market Survey sectors to Statistics Canada Industry categories, with expenditures as a share of revenue and labour costs as a share of revenue

Assuming that the mappings from the Revelstoke sectors to the Statistics Canada sectors are reasonable, and that the national average cost shares for these industries are representative of Revelstoke, we can proceed to estimate the impacts on profits for each sector in Revelstoke. To do this, we work backwards from an estimate of the wage bill. Table 6 lists ten steps in calculating the impacts of increasing the wage bill on profits.

Step	Description	Result
1	Multiply employment share by total workforce.	Employees in sector
2	Multiply sector employees by sector share in wage categories	Employees by wage category for sector
3	Multiply employees by wage category by midpoint of category	Total wages paid by category by sector
4	Sum wages across wage categories for each sector	Total wage bill by sector
5	Divide by estimate of labour cost as share of revenue	Total revenue by sector
6	Multiply total revenue by costs as share of revenue and subtract from total revenue	Total profit by sector
6	Multiply bottom increment employees by wage increment needed to satisfy living wage.	Wage bill increment
7	Add to total wage bill for sector	Adjusted total wage bill
8	Deduct wage bill increment from total profit	Simple profit impact of living wage
9	Subtract labour cost share from expenditure share	Non-labour cost share
10	Multiply by fixed cost share of non-labour costs and subtract from non-labour costs	Fixed costs and variable costs

Table 6: Steps taken to calculate profit impact of changes in wage bill

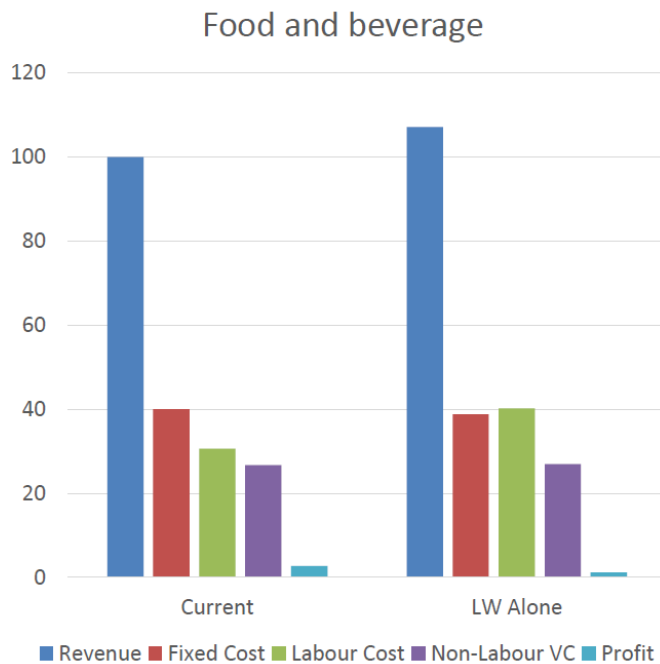
With the wage impacts on profits known, we can calculate the increase in revenue required to restore the original profit level. Increases in revenue can come from increases in price, increases in sales, or some combination thereof. Increasing prices directly increases revenues with no impact on costs. However, such price increases may reduce sales. This effect may be mitigated by the degree to which customers are willing to absorb a price increase because they know that the employer is paying a living wage.

Increasing sales will increase the other costs that change in response to the volume of sales. For a goods retailer, that will be the cost of goods sold and other incidental costs that are related to the level of sales. For a restaurant or similar business, the cost of the materials used to prepare meals increase with increased sales. To the extent that employees who work for a living wage employer are more productive than those not paid a living wage, sales can increase without necessarily requiring extra labour in terms of hours. How much sales need to increase to restore the original profit level depends on what share of the additional revenue is absorbed by the increase in variable costs.

The extent to which customers will be loyal or employees will be more productive is not known. The literature suggests these mechanisms, but doesn't quantify them. Further, the response is likely to be specific to the industry and to the community in which the living wage is implemented. Therefore, rather

than choosing values and trying to justify them, we developed a simple macro program in PowerPoint™ that can illustrate the impacts for sectors of interest.

Living wage impacts



• Ways of Adapting

1. Increase price



2. Increase quantity



3. Reduce FC



4. Reduce VC



Figure 1: Snapshot of living wage adjustment PowerPoint macro.

The macro was used to facilitate a dialog about how to adapt to a living wage. The presenter changed the price and quantity of sales in one percent increments: changes to these amounts showed up in the graphs; changes in price only showed up as an impact on profit; changes in quantity translated into changes in variable costs and changes in profits.

The presenter also changed the fixed costs or the variable costs. Changing the fixed costs is akin to negotiating a reduced rent or utility charge, as fixed costs are costs that are unrelated to the volume of sales. Changing variable costs changes the split between fixed and variable costs. For example, if employees of a living wage company are less likely to steal from the company or more likely to be careful to reduce waste in the production process, then variable costs may decline for a living wage company.

The process allowed participants to both reflect on possible impacts, and provide reflections on the model itself. Further the process made it plain that how the modelling worked, the model's assumptions, and what sorts of elements were included.

10 Economic Modeling Results

Multipliers are generally calculated for the entire economy of a region, as in the examples above. Before considering the value of the benefits that may be generated by adopting a living wage, the total cost that would be born by the Revelstoke economy assuming all employers adopt a living wage can be calculated. Figure 2 plots the cost for five different wage increments.

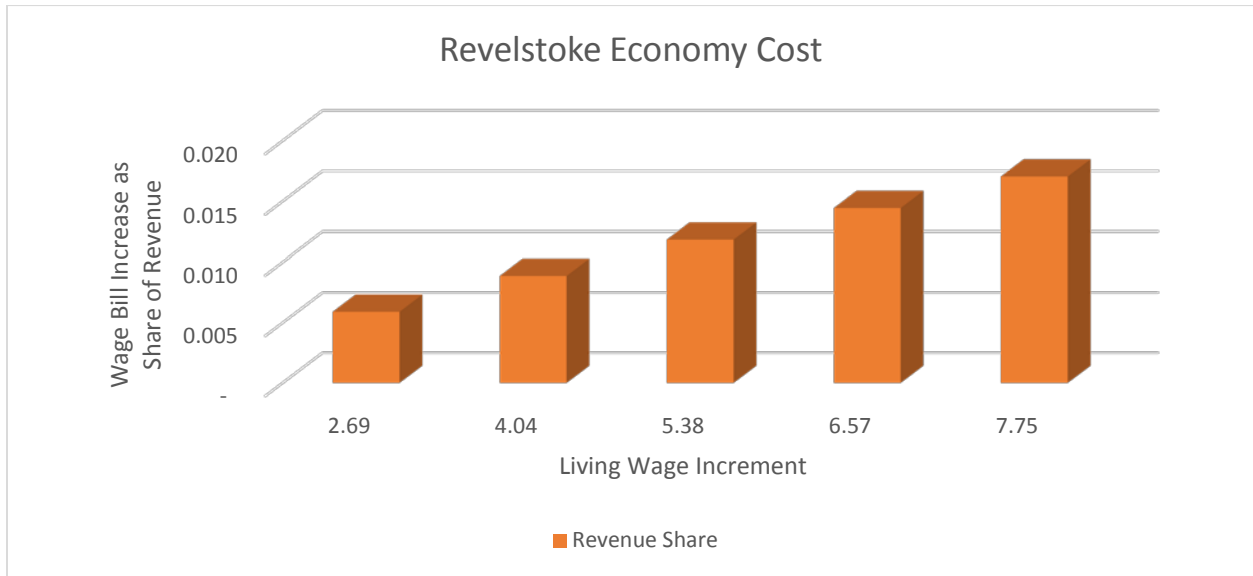


Figure 2: Total cost of adopting a living wage if all employers join the program, and if the increment to move to the living wage is the same for all sectors.

The highest wage increment, \$7.75 per hour, assumed employers were paying the minimum wage at the time of the labour market survey. The middle value, \$5.38, is the increment that would be necessary if the average employee in the low wage group was earning the midpoint of the increment. The smallest value is half of this. The other two values divided the intervals between the first and third, and between the third and the fifth.

For the Revelstoke economy as a whole, the worst case has an increase in costs as a share of revenue of 1.7%. The best case shown has a cost increase of 0.6%, as a share of revenue. Assuming that the multiplier effect does not involve any increase in costs, then if the multiplier for the Revelstoke economy is at least 1.017, the additional economic activity would be larger than the additional cost of paying the increase needed.

However, considering the Revelstoke economy as a single entity is of limited use for stakeholders. Individual businesses face different wage costs and will have to increase their total wage bill by different amounts. It is therefore important to consider the impacts by sector. Figure 3 shows the sector level impacts, expressed as the share by which profits would decline for a firm in the sector, should it adopt the living wage. These were calculated for the lowest and highest costs for adjusting to the living wage. On the scale used, 0 represents no change in profit, and -1 corresponds to a profit of zero.

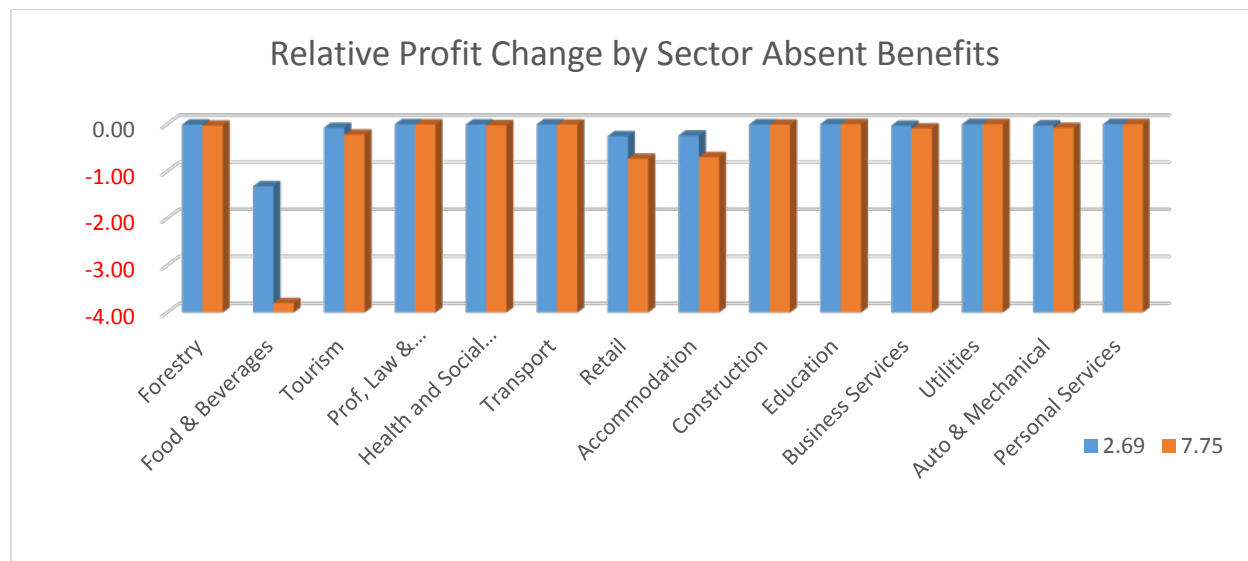


Figure 3: Sector breakdown of living wage impacts. No benefits are considered.

One sector clearly stands out, Food and Beverages. For this sector, profits become negative even if the adjustment cost is \$2.69 per hour. If the adjustment cost is \$7.75, then a firm in this sector would be losing an amount equal to almost three times what the profit was if a living wage was not paid.

Two other sectors show significant impacts, retail and accommodation. For these two sectors, profits continue to be positive even at the highest adjustment cost. However, they have fallen to 27% and 30% of what they were when a living wage was not paid. Tourism also sees a noticeable impact, with profit at 78% of the no living wage case when the adjustment cost is \$7.75. For the remaining sectors, the decline in profit is less than 10%.

These results assume all sectors face the same adjustment costs. The analysis to this point relied on matching the sectors in the Revelstoke Labour Market Survey with industry categories used by Statistics Canada, and relied on the revenue and cost information that Statistics Canada reports being representative of firms in Revelstoke. These are defensible assumptions, but even if these are acceptable, each individual firm will be different.

Moving beyond these results requires information that we do not have, information which it may not even be possible to collect. We have therefore developed a tool to enable community members to explore the issues for themselves. The foundation for this tool was developed as part of the presentation used to facilitate the second community dialog. This tool has been further developed to allow price, quantity, fixed cost and variable cost impacts to be explored for each sector. It can also be used to explore how the total impact on the Revelstoke economy depends on the size of the multiplier, and the cost structure and cost of adopting the living wage.

Figure 4 is a screen shot of the model tool to examine the economy wide impacts for different multiplier options and different options for how the multiplier is manifested. The user can choose the size of the multiplier. If the multiplier is equal to one, then the extra dollar is spent with no spillover effects. When the multiplier is one, then paying a worker the living wage simply means that the employer's own earnings go down by the extra amount that they are paying their worker. When the multiplier is greater

than one, such as the 1.03 show in the example, then the extra dollar paid to a low income worker causes a three percent overall increase in economic activity in Revelstoke.

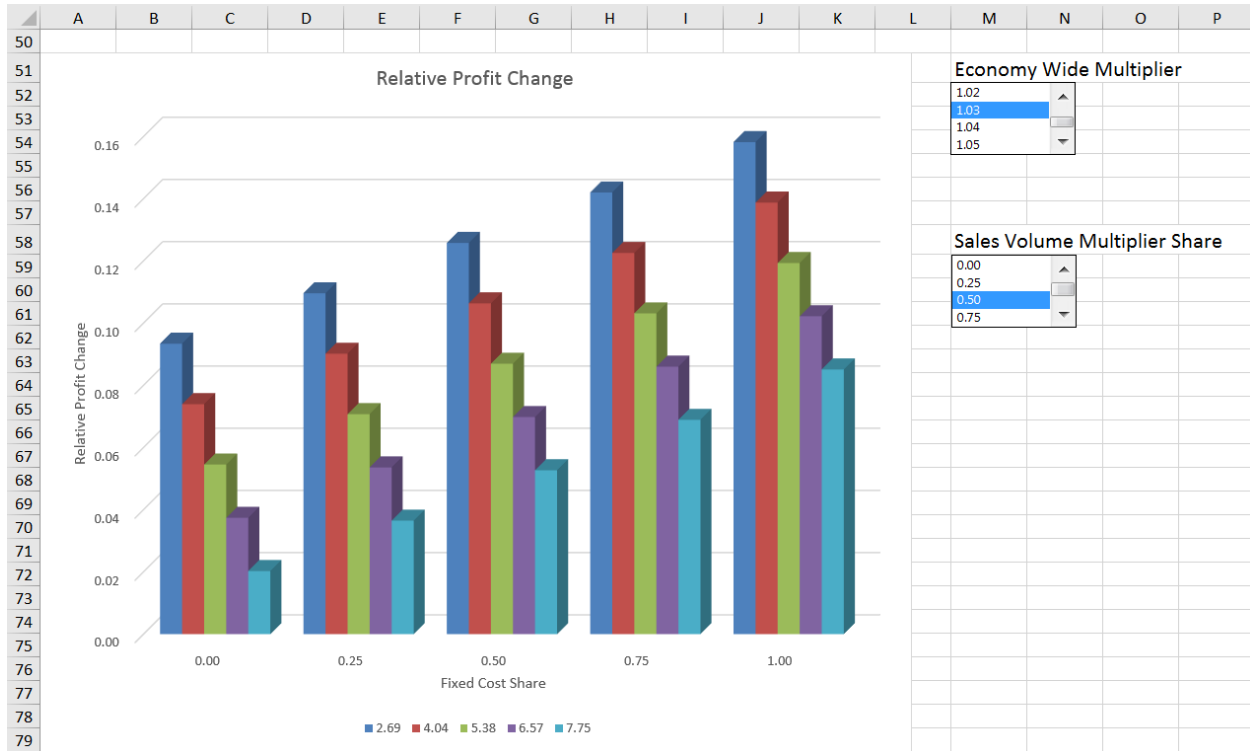


Figure 4: Economy wide impacts for variations in the multiplier and the sales volume change that makes up the multiplier.

The calculation of the multiplier impact is done by multiplying the total revenue for the Revelstoke economy by the multiplier value. Total economic activity is typically measured as GDP, which is the value of all final goods and services sold. Some of the goods sold are not final, but rather are used by other firms as inputs, and properly these costs of intermediate goods would be deducted. However, as we have no basis to determine what share of activity in each sector are intermediate goods used within Revelstoke, we use total revenue. (This should be considered an overestimate of the economic activity change resulting from the chosen multiplier level).

The profit impact of the extra economic activity depends on the cost structure of the firms, and the form that the increase takes. In nominal terms, increases in prices will increase GDP. Properly measured, prices used to calculate GDP are adjusted to remove the influence of price increases. However, since one of the suggested benefits of adopting a living wage is the ability to charge higher prices, we do not suppose that all of the impact occurs via sales volume increases. If the multiplier is manifest as an increase in prices, with no increase in the volume of sales, then there will not be any additional costs incurred. In contrast, if the increase in economic activity is at least partly in the form of increased sales, then the cost of the goods used to produce that which is sold also increases. This is the second adjuster in the tool. To the extent that a living wage certified firm is able to charge a higher price to customers from outside Revelstoke, the increase in price is an increase in economic activity in Revelstoke, which should be counted.

For the example shown, if the multiplier is 1.03 and if 50% of the multiplier effect occurs as an ability by the firms to increase their prices, then the outcome for all firms is positive. The positive profit impact is greatest when all firms in Revelstoke do not have any costs that increase in response to the increase in revenues – share of fixed cost at 100%. For the best case at this fixed cost level, profit increases by almost 16%. Of course, for the most impacted sectors, food and beverage and retail in particular, the largest share of costs are those related to the volume of sales. The benefit, when the multiplier is 1.03 and variable costs are high, is likely below, possibly well below, 10%. Reducing the multiplier will reduce the benefit, and the user can manipulate these controls to explore various cases.

Perhaps the main component of the tool is the ability to explore how firms in a particular sector might be impacted by adopting the living wage. A screen shot of the tool is in figure 5. The tool allows the user to choose the sector, the size of the living wage increment necessary and the share of the non-labour costs that are fixed. This establishes the baseline impact of adapting to the living wage.

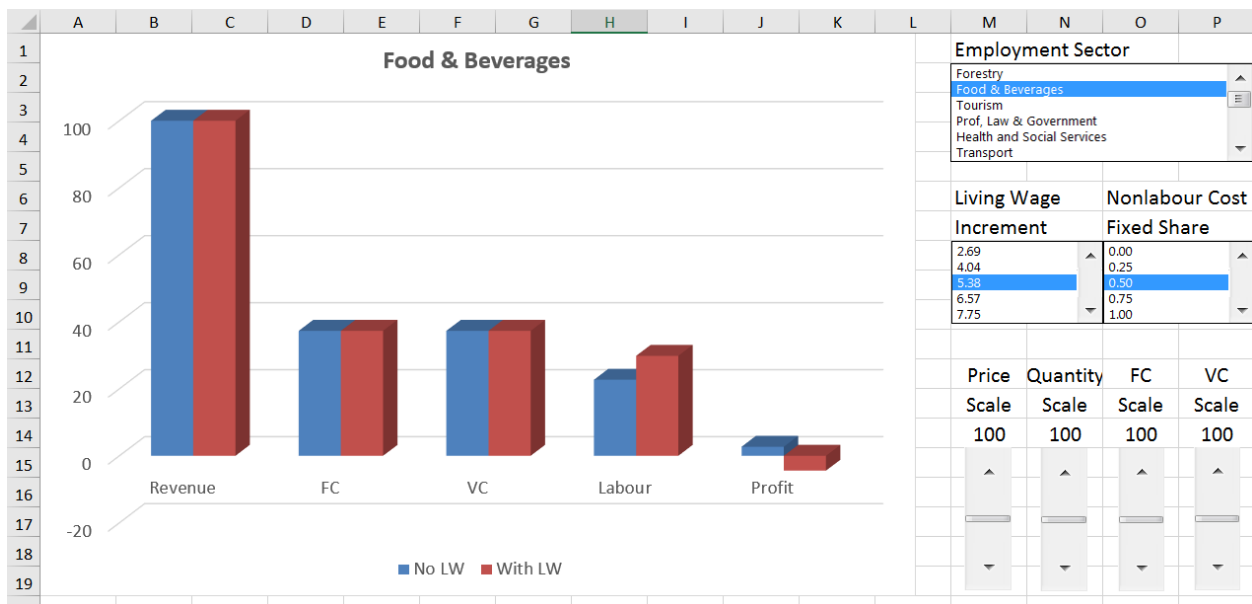


Figure 5 An Interactive Tool for Assessing living wage by Sector and Firm:

The tool also includes four sliders. These sliders allow the user to explore how they may be able to adapt to the living wage. Moving the price scale slider scales the price. This reflects how much firms in the sector can adapt to the living wage by increasing their price. The quantity scale reflects the impact of changing the volume of sales, the amount of extra business that might occur as a result of adopting the living wage. The FC slider captures the impact of any changes in fixed cost. Reduced training costs would be captured here. Finally, VC captures changes in variable costs, which is the efficiency of inputs used to produce those things the firm sells. The image shows the starting point for the food and beverages sector. Absent any of the benefits from a living wage, profit in this sector is likely to become negative.

11 Conclusion

Economic modelling of complex systems is difficult and complex, but vitally important for stakeholders trying to assess and develop policy. While the existing weight of opinion in the literature on increasing minimum wages or implementing a living wage is supportive, there are no good comparable examples for Revelstoke stakeholders to draw lessons from. Any adequate consideration of a living wage must consider a range of factors including direct fiscal impacts on employees and firms, more diffused economic impacts like price increases and multiplier effects, and even more difficult to measure social and political consequences like increased social inclusion and participation. Further, while there are clear gendered differences in wage rates, and thus the benefits of increased wages, there are also clear sector by sector, and firm by firm, differences in the likely impact of a living wage that should be considered. Future work requires incorporation of wage distribution data by gender as well as economic sector.

Using the existing data, calculations indicate the likely effect of a living wage on the total Revelstoke labour costs to be relatively minor overall, but potentially very disruptive to particular sectors and firms. These disruptions are potentially mitigated by increases in prices, productivity, and consumption, but the firm by firm or sector by sector calculation of the economic and social impacts require too many assumptions to be helpful. Nonetheless, the inclusion of stakeholders in an economic modelling process, and policy development past and present is helpful, in part because it supports the development of a critical mass of informed and engaged citizens. In the absence of a definitive “model”, we have developed modelling tools derived from existing data sets that allow stakeholders to assess the impact of a living wage of firms and sectors using their own knowledge to estimate key variables. This allows a more nuanced fiscal and economic basis from which individuals, sectors, and indeed the community at large can undertake deliberations regarding a living wage policy, the sorts of initiatives that would support the success of such a policy, and/or the usefulness of other poverty reductions strategies for Revelstoke.

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13 Technical Appendix

The tool is developed in Excel™. The tool was developed using Excel 2016. It has not been tested on older versions of the software.

The tool uses macros, and therefore macros must be enabled for the tool to work. If the version being used is able to run macros, then when the tool is loaded, it will likely ask for permission to run macros. This permission needs to be given.

Figure 6 links to the Excel workbook that contains the model. To use the model, this document must be viewed in a version of Word™ that is part of Microsoft™ Office 2016 or a more recent version. Activate the model by double clicking on the image. When Excel™ launches, it will ask if macros are to be enabled. For the interactive elements of the model to function, this must be true.

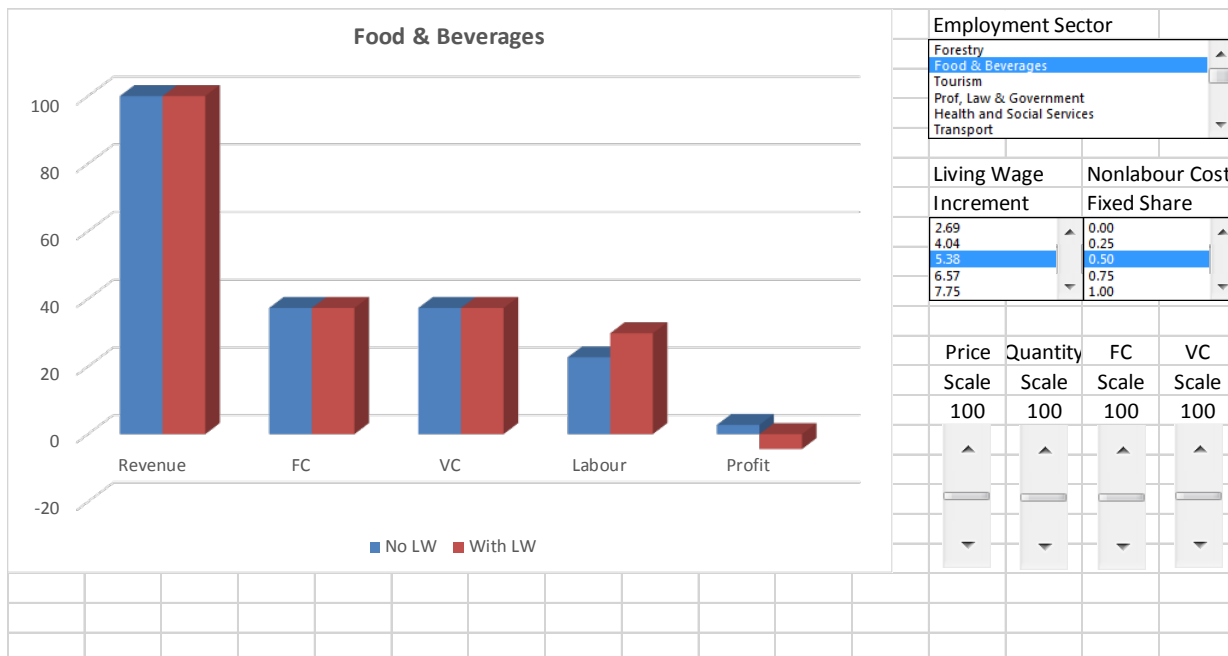


Figure 6: Embedded Excel workbook with model data and interactive graphics. Double click to activate, if this is being viewed in Microsoft Word 2016.

Within the model workbook, there are three worksheets. These are accessed using tabs on the bottom left. The “Sector Interactive” tab contains a graph that shows the sector impacts, with controllers to select the sector, size of the living wage adjustment, and the split between fixed and variable cost. Additional controllers allow one to explore the impact of changes in price and quantity of output, and in the size of the fixed and variable costs. The “Economy Interactive” tab contains a graph that shows estimates of the economy wide impacts, with controllers for the size of the multiplier and for the portion of the multiplier effect that is a price change. The third tab, “Calculation”, contains the data used to calibrate the model, and all the equations and connections that use this data to generate the graphs in the other two tabs.