

Journal of Rural and Community Development

Local Content and Mobile Labour: The Role of Senior Governments in Capturing Benefits for Local Communities

Authors: Sean Markey, Laura Ryser, & Greg Halseth

Citation:

Markey, S., Ryser, L., & Halseth, G. (2020). Local content and mobile labour: The role of senior governments in capturing benefits for local communities. *The Journal of Rural and Community Development*, 15(4), 1–23.



Publisher:

Rural Development Institute, Brandon University.

Editor:

Dr. Doug Ramsey

Open Access Policy:

This journal provides open access to all of its content on the principle that making research freely available to the public supports a greater global exchange of knowledge. Such access is associated with increased readership and increased citation of an author's work.



Local Content and Mobile Labour: The Role of Senior Governments in Capturing Benefits for Local Communities

Sean Markey

Simon Fraser University
Burnaby, British Columbia, Canada
spmarkey@sfu.ca

Laura Ryser

University of Northern British Columbia
Prince George, British Columbia, Canada
laura.ryser@unbc.ca

Greg Halseth

University of Northern British Columbia
Prince George, British Columbia, Canada
greg.halseth@unbc.ca

Abstract

Rural resource-based regions are increasingly accommodating large mobile workforces to support renewed industrial investments. As large-scale resource development projects are mobilized, however, industries' use of mobile work camps and outsourcing with established global supply chain networks may exclude rural businesses and communities from associated economic benefits, particularly in the absence of local content policies. To date, however, research has largely focused on supply chain opportunities pertaining to the construction or operations of resource development assets, with limited consideration of the issues that must be considered in order for local businesses to capture benefits from mobile workforces. Drawing upon interviews with businesses in Fort St. John, British Columbia, Canada, we use issues unfolding in the new institutionalism discourse to explore the roles of senior governments in strengthening local benefits related to mobile workforces, as well as some of the challenges that existing policy roles and debates present to better position rural businesses in these resource-based regions. Our findings suggest that underdeveloped and under-resourced senior government policies, regulations, and processes are entrenching the role of rural regions as resource banks instead of creating a competitive playing field for rural businesses to capture, and locally anchor, economic benefits.

Keywords: local content, rural businesses, mobile workforce

1.0 Introduction

Rural resource-based regions are undergoing significant change and restructuring. While many towns were designed to accommodate the workforces of local resource-

based industries, these regions now experience more fluid flows of capital and labour (Haslam McKenzie & Rowley, 2013). Globalization, labour shedding technologies, industry consolidation, labour shortages, competitive regional and global labour markets, and more cost effective transportation and communication have changed the nature of work and community relationships in these places (Rolfe & Kinnear, 2013; Storey, 2010; Tonts, 2010). Industries and senior levels of government have also been reducing their roles and investments in resource-based communities, all prompting an accelerating shift towards the use of mobile workforces since the 1980s (Measham, Haslam McKenzie, Moffat, & Franks, 2013; Peetz, Murray, & Muurlink, 2012; Ryser, Markey, Halseth, & Welch, 2019). Mobile workers often travel long distances, typically exceeding over 200 kms and remain away from their home at least overnight or longer depending on shift rotation schedules (Öhman & Lindgren, 2003).

The presence and continuity of large mobile workforces can present opportunities that influence local business conditions and decisions to invest in new or expanded operations. As large-scale resource development projects are mobilized, however, industries' use of mobile work camps and outsourcing with established global supply chain networks may exclude rural businesses and communities from associated economic benefits: particularly in the absence of benefit agreements and/or local content policies (Haslam McKenzie, 2010; Lawrie, Tonts, & Plummer, 2011; Measham et al., 2013; Rolfe & Kinnear, 2013; Tonts, Plummer, & Lawrie, 2012; Vodden & Hall, 2016). Often characterized as the 'fly-over' effect, local businesses in communities proximate to resources are excluded from the direct and indirect economic benefits associated with exploration and extraction (Heisler & Markey, 2013) under the justification that nearby businesses have limited capacity to meet the demand of large-scale mobile workforces or due to established relationships with external contractors. The outsourcing of business services (e.g., personal services, convenience stores, cafes-bars) within work camps, however, may further undermine local benefits by offering competing services with nearby local businesses (House of Representatives, 2013). As capital and labour are becoming more mobile, rural and remote communities are receiving fewer benefits in the form of jobs, local taxes, and related infrastructure investments (Haslam McKenzie, 2010). This has prompted communities to advocate for a greater use of local businesses in supply chains that support mobile workforces. To date, however, research has largely focused on supply chain opportunities pertaining to the construction or operations of resource development assets, with limited consideration of the opportunities or issues that must be considered in order for local businesses to capture benefits from mobile workforces.

The purpose of this paper is to investigate the role of senior governments in supporting local content provisions. We focus upon senior government intervention for two reasons. First, many mobile workforce accommodations are located outside of municipal boundaries in rural regions. Local governments therefore do not have the jurisdiction or authority to mobilize regulatory and program tools to strengthen opportunities for local content, although they may negotiate within the context of benefit agreements (Esteves, Coyne, & Moreno, 2013). Second, senior governments manage the various social or environmental assessment processes required of large construction or natural resource projects—and specify the conditions for approval that come out of those processes.

Local content policies (LCP) and programs attempt to increase community benefits in order to establish a more mutually beneficial relationship between industry and surrounding community/ies (Arthur & Arthur, 2014). In the following sections we expand upon local content practices and identify key themes in the literature. Drawing upon new institutionalism, we review the potential roles of senior governments concerning local content in supply chains for large-scale resource-based projects, as well as outline some of the challenges associated with existing policy and policy intervention. After reviewing the case study context and methodology for this research, we present our findings to better understand how senior government policies and practices may shape the context for rural businesses to engage in supply chains that service mobile workforces. These findings suggest that underdeveloped and under-resourced senior government policies, regulations, and processes contribute to entrenching the role of rural regions as resource banks, that is, places subject to resource withdrawals without accompanying reinvestments, instead of creating a competitive playing field for rural business stakeholders to capture a greater share of regional resource wealth.

2.0 Local Content

From a community perspective, the “integration of the regional economy into global production chains...[can only be achieved]...through the creation of linkages between local businesses and large multi-national corporations” (Pick, Dayaram, & Butler, 2008, p. 517). In rapidly changing economies, local content policies may support local economies by developing new local industries and related manufacturing capabilities through technology transfer, sharing of knowledge, training, and infrastructure investments (Nordas et al., 2003). Stimulated economic development can attract additional investments for businesses directly engaged with industry projects or indirectly as local spending increases and residents seek an improved quality-of-life through social infrastructure investments (Esteves & Barclay, 2011).

For industry, local content policies and strategies provide a tool to maintain a social license to operate in rural regions (Cheshire, 2010; Esteves & Barclay, 2011). Such community benefits may garner valuable support to reduce the risks of protests, stakeholder resistance, work stoppages, and project delays (IPIECA, 2011; Ngoasong, 2014). The proximity of local suppliers and contractors may also support greater reliability, more efficiency, and in some cases, cost effectiveness during construction, operation, and decommissioning phases. Private sector interests can also be protected with reduced labour costs by keeping the use of mobile labour to a minimum.

The term ‘local content’ has no definitive definition as it has been interpreted in a variety of ways by diverse communities, regulatory bodies, and stakeholders. This diversity is an asset in terms of scoping different forms of benefits but may also present a challenge in terms of the development, enforcement, and monitoring of local content strategies. In its simplest form, local content may be understood as initiatives that support workforce development through training and employment, as well as the development of local suppliers and contractors through supply chain¹ and

¹ “Supply chain management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers. In essence, supply chain management integrates supply and demand management within and across companies.” (Esteves & Barclay, 2011, p. 208)

procurement processes (IPIECA, 2011; Kazzazi & Nouri, 2012). Other researchers have extended the concept beyond the use of local suppliers and workers by exploring notions of ownership, technology transfer, and capacities to strengthen competitive engagement with broader economic sectors. Arthur and Arthur, for example, refer to local content policies as:

government measures, requirements, and regulations that ensure that a particular portion of a good or product is produced within a specific geographical area but serve to persuade businesses to use domestically produced, rather than imported, component parts or other inputs... These policies aim to help countries maximize and extend the massive benefits of their extractive industries to other sectors of the economy and the whole body of citizens by providing employment and effective intersectoral linkages...these policies are geared towards involving and enhancing the domestic knowledge base through arrangements that allow for dynamic industrial and technological development, which gradually expands domestic competences and capabilities to competitive levels. (2014, p. 58)

Local content policies have also been labelled as local procurement policies, productive development policies, or simply industrial policies to encompass any program or governance initiative designed to increase the value and capacity of local stakeholders in the supply chain (Acheampong, Ashong, & Svanikier, 2016; Arthur & Arthur, 2014). Local content debates are diverse, however, and may include the use of (a) businesses; (b) enterprise ownership; (c) employment—value-added by local staff, materials, services, and facilities; (d) social procurement, deliberate actions to build domestic capacity; and (e) investments in infrastructure (Kazzazi & Nouri, 2012; Monday, 2015; Tordo, Warner, Manzano, & Anouti, 2013).

2.1 New Institutionalism and Senior Government Roles in Supply Chains

New institutionalism provides a useful theoretical approach to explore how senior government policies and strategies can strengthen the competitiveness and capacity of rural businesses to engage in supply chains through policies, processes of change, negotiations, dissemination of information, and other norms guiding grants, procurement processes, and infrastructure assets. New institutionalism examines processes by which organizations become more homogenous over time through responding to similar policies and requirements (DiMaggio & Powell, 1983). As such, new institutionalism examines “relations that carry structure forward, and which agents interpret, and shape, authoritative structures (formal and informal rules), funding structures (the way material resources are distributed), and ideas (knowledge and cultural structures, which frame how actions are developed and legitimated)” (Healey, 1999, p. 114).

With our interest in rural businesses, senior government policy and funding structures may play an important supportive, top-down, policy role in facilitating opportunities for them to be competitive and engaged in supply chains for mobile work. The types of infrastructure support and access to capital that may be facilitated

through state policies and investments, for example, may strengthen the capacity, productivity, flexibility, learning culture, and hence competitiveness, of local businesses (Krakowiak-Bal, Ziemińczyk, & Wozniak, 2017). Investigations into institutional practices also examine how different stakeholders secure their positions in supply chains by conforming to rules that unfold through regulatory structures, policies, industry and related professional practices, and other aspects of the institutional environments (Glover, Champion, Daniels, & Dainty, 2014). Under new institutionalism, however, research has highlighted policy environments that produce (a) fragmented and uncoordinated relationships between local stakeholders and senior governments, (b) inadequate leadership and human resource capacity, (c) unclear rules and jurisdiction over issues, (d) inadequate or piecemeal funding that fails to support integration, (e) outdated or underdeveloped policies and programs that fail to support innovation, and (f) the presence of symbolic versus real investments needed to support transition (Glover et al., 2014; Halseth & Ryser, 2018). At issue, for our research, is the ability of senior governments to develop a coherent response and strategy to improve the benefits accrued to rural regions through local business engagement in supply chains. By exploring institutional structures, new institutionalism provides an opportunity to account for broader practices and processes that enable or inhibit supply chain engagement (Genus & Mafakheri, 2014).

In many OECD countries, however, national governments continue to rely on neo-liberal public policy approaches that emphasize the role of free market conditions with limited government interventions to facilitate business engagement in supply chains (Pick et al., 2008). Neo-liberalism refers to:

Political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade. The role of the state is to create and preserve an institutional framework appropriate to such practices (Harvey, 2005, p. 2).

Countries such as Canada and Norway, for example, do not have local content legislation; instead, the focus is on advocating for the use of competitive and competent local suppliers and contractors (Acheampong et al., 2016; Nordas et al., 2003). An exception is the provision of local content for Indigenous communities who have specific traditional territorial claims to project regions. In select OECD countries, state governments have legislative frameworks in place to guide industries as they negotiate community impact benefit agreements (IBAs) with Indigenous stakeholders prior to exploration and development (DPRA Canada Inc., 2013; OECD, 2019; Otto, 2018). IBAs generally include local content agreements to facilitate business opportunities and joint ventures with Indigenous partners (Ramdoo, 2018).

To maximize benefits there are examples of LCPs requiring government measures, requirements, and regulations that encourage companies to acquire a certain portion of goods and services domestically rather than through imported methods (Arthur & Arthur, 2014). These policies often require companies to choose national suppliers, especially when they are competitively competent in cost, quality, and timeliness. There are also efforts to monitor systemic issues that may shape the readiness and competitiveness of local businesses to engage in supply chains. Institutional and

regulatory capacity, however, is important when assessing the efficacy of policies and programs to strengthen local engagement (Ablo & Overå, 2015). Policy coordination and coherence across government agencies are also important factors. As Ramdoo (2018) states,

Ministries often operate in “silos” and do not necessarily coordinate their efforts across policy areas. For instance, industry ministries promote the development of local industries, without considering the shrinking policy space resulting from trade policy commitments taken by trade departments or advantageous fiscal incentives granted by finance departments to mining firms to import local inputs (p. 22).

There are a variety of interventionist mechanisms available to senior governments looking to facilitate greater levels of local content provision. First, senior governments may strengthen their legislative and regulatory capacity to facilitate private sector opportunities in supply chains. As noted, for example, senior governments have developed legislative frameworks to guide community IBAs (Esteves et al., 2013). Others have integrated LCPs into the permit and approval processes (Vodden & Hall, 2016). There are also efforts to establish clear regulatory and monitoring systems with local content frameworks (Tordo et al., 2013). Second, Esteves et al. (2013) have outlined actions needed to strengthen the strategic capacity of senior governments to support business engagement in supply chains. These actions include short, medium, and long-term national and regional plans that develop appropriate infrastructure and capacities to align LCPs with national and regional programs and investment strategies. With this foundation, senior governments may then mobilize cooperation across government sectors to share information and create strategic synergies between services and infrastructure investments (Esteves et al., 2013). Third, senior governments are developing the institutional capacity to connect local suppliers and contractors with opportunities by establishing on-line registries and databases of local suppliers, contractors, and services (Kazzazi & Nouri, 2012; Nordas et al., 2003). Fourth, senior governments may mobilize strategies to build the capacity of the business sector. For example, tax credits, funding programs, and agreements between senior governments and industries may facilitate the strategic location of training, research, and development facilities to transfer technologies and build local capacity (Ramdoo, 2018). There are also investments in research and development to support product development and a more sufficient supplier base (Nordas et al., 2003). Senior governments may also choose to create a variety of financial programs. Improved access to credit or capital for small and medium enterprises may be supported by investments in financing programs (Arthur & Arthur, 2014). Subsidies for local manufacturing industries (Kazzazi and Nouri 2012) have also been complemented with fiscal packages for small and medium enterprises or manufacturing facilities that fall within the scope of supply chains and local content policies (Ramdoo, 2018).

2.2 Barriers Impeding Support for LCPs

The literature outlines four key issues that may impede support for, or the efficacy of, local content policies. First, within local content debates, terms such as ‘local’ have varying interpretations. Local may refer to a specific geographic area and

population that surrounds a project site, a region, or even a nation (Arthur & Arthur, 2014; Olawuyi, 2017). Local may also be defined by the geographic area of company operations (Mayes, McDonald, & Pini, 2014). Debates about what constitutes ‘local’ become more complex with diverse business registration and ownership models (Ramdoo, 2018; Olawuyi, 2017). A specific share of equity may be required to be owned by national or Indigenous citizens (Tordo et al., 2013). Contractors and suppliers, however, may be registered and owned locally, while others are not owned locally but maintain an operational office in the region (Arthur & Arthur, 2014). There are also companies that are locally owned but located in other regions (Tordo et al., 2013). Esteves et al. (2013) suggest that the term ‘local’ can be used to define a company if the company is locally registered, has a specific percentage of being locally owned, employs workers that have local citizenship, or if a specific percentage of goods from that company is produced locally.

Second, international trade bodies and agreements have stifled the use of state policies as they pertain to local content arrangements. Notably, the World Trade Organization (WTO) opposes local content requirements due to their contradictions with certain agreements such as the Government Procurement Agreement, the General Agreement on Tariffs and Trade, Trade-Related Investment Measures Agreement, and the General Agreement on Trade in Services (Arthur & Arthur, 2014; Creed & Kordvani, 2013; Tordo et al., 2013). All members involved in the WTO are bound by the national treatment obligation clause (Esteves et al., 2013). This clause states that when alternative better suppliers are available, in terms of price or quality, foreign companies may not be forced to use local suppliers, thereby making the enforcement and implementation of local content requirements difficult. To further complicate matters, not only do WTO rules act as a barrier but international investment agreements make it difficult to legislate local content (Östensson, 2018). Some of these agreements are more restrictive than WTO rules as they completely prohibit all measures related to local content and performance requirements.

Third, local content requirements may be viewed as anti-competitive (Creed & Kordvani, 2013; IPIECA, 2011). Foreign companies fear that they may have a disadvantage when it comes to competing against local companies, and industries view local content as a form of tariff (Nordas et al., 2003). In addition, increased contract and supply costs may be incurred as industries switch from established global supply chain networks to local businesses to meet requirements, which may threaten project viability.

Fourth, industries may also argue that local content policies create unrealistic conditions that threaten a project’s viability. These arguments are grounded in concerns about the shortage of skilled workers and capacity of suppliers to meet international standards as industries seek ways to continue to use mobile labour and foreign supply chains (Ngoasong, 2014). Industries have further argued that inefficiencies created from more limited local capacities threaten to lower government revenues from taxes on lower profit margins (IPIECA, 2011; Nordas et al., 2003).

As industries implement their own local content policies, some researchers argue that they have been ineffective in providing meaningful benefits to local economies (Kelsey, Shields, Ladlee, & Ward, 2012). Companies and joint ventures may exhibit local ownership, but often the decisions and benefits are allocated to groups that are not targeted in local procurement policies (Esteves & Barclay, 2011; Frynas, 2005). Other research documents how local content policies have not been successful in terms of increasing the participation of vulnerable groups, technology transfer, the

award of contracts to local or Indigenous firms, or more joint ventures (Ihua, Ajayi, & Eloji, 2009; Monday, 2015). Other communities have failed to acquire a balance between immediate benefits and long-term economic development capable of strengthening and diversifying the economy of communities beyond the life of the industry project, which may exacerbate embedded economic dependencies (Arthur & Arthur, 2014; Esteves et al., 2013).

Our literature review reveals that much of the industrial, government, and academic literature focuses on how senior government policies shape supply chain opportunities with the construction, operations, and decommissioning of large-scale industrial project assets (i.e., pipelines, wells, etc.). There is limited attention on the opportunities associated with mobile workforces through work camps or through their stay in local communities. As noted earlier, while industries may express concerns about limited local capacity to engage in the complex components of large-scale industrial projects, jobs and supply chain contracts to support mobile workforces can help to alleviate fly-over effects and provide local businesses with opportunities that require fewer specialized skills, equipment, and technology. Such opportunities can be found in accommodations, catering, laundry services, cleaning, and transportation (DPRA Canada Inc., 2013). To what extent, however, do senior government institutional frameworks, such as policies, regulations, processes, and investments, weaken or strengthen local supply chain benefits pertaining to mobile workforces?

3.0 Case Context and Methods

To explore how senior government policies are shaping the context for rural businesses to engage in supply chains related to mobile workforces, we conducted research in and around the community of Fort St. John, located in the Northeast region of British Columbia, Canada (see Figure 1). With a population of 20,155 (2016) the city is surrounded by rural, unincorporated areas that are served by the Peace River Regional District. The local economy is strongly shaped by resource sectors, with the highest rates of employment in oil and gas and the construction sector respectively. These sectors are also supported by the labour force employed within (a) professional, scientific, and technical services; (b) transportation and warehousing; (c) manufacturing; as well as those engaged in (d) accommodation and food services (Community Development Institute, 2018) (see Figure 2).

With almost \$37 billion in estimated costs, there are many large-scale projects unfolding in the Northeast region of British Columbia (BC) that provide opportunities for mobile workers (Ministry of Advanced Education, Skills and Training, Quarterly Reports, 2012–2019). Two key projects unfolding in the region include BC Hydro's Site C Project² and the Coastal Gaslink natural gas pipeline project³. However, construction has also been in progress for (a) methanol plants, (b) biomass plants, (c) wind energy projects, (d) coal mines, (e) transmission line projects, (f) natural gas processing plants, and (g) other pipeline projects. Construction on these projects has accelerated since 2015; although, project delays and changes to

² BC Hydro's Site C Clean Energy Project proposes to develop a third dam and hydroelectric generating station on the Peace River, providing up to 1100 MW of capacity and 5100 GWh of energy annually. The estimated cost of the project is \$10.7 billion (Cdn).

³ The Coastal Gaslink natural gas pipeline project will be roughly 670 km in length to transport natural gas from the Peace River region in Northeast BC to a facility in Kitimat. The estimated cost of the project is \$6.2 billion (Cdn).

commodity prices has meant that a number of these projects have been put on hold during the last couple of years.

The City of Fort St. John does not have any work camps operating within its municipal boundaries; however, there are many work camps nearby in the surrounding rural areas that accommodate workers engaged in (a) hydro; (b) oil and gas—drilling rigs, compressor stations, pipeline construction; (c) mining; (d) rail; and (e) forestry activities—industrial plant maintenance, forest fire fighting, reforestation. This includes the Two Rivers Lodging Camp that provides lodging for mobile workers at BC Hydro’s Site C Project and is located adjacent to the municipality. Mobile workers are also accommodated in hotels, campgrounds, and various forms of rental properties throughout the community. As industries frequently book blocks of rooms at local hotels, some in local government perceive these hotel facilities to be a non-traditional form of work camp accommodations.

Figure 1: Study site.

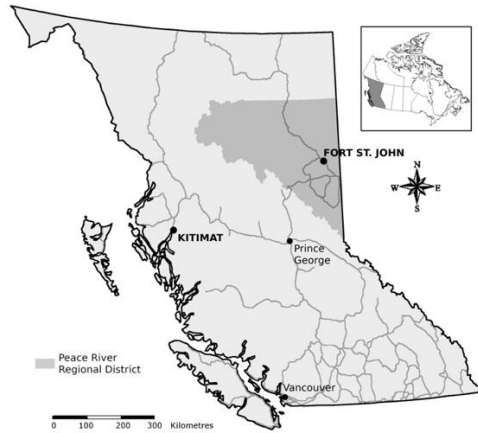
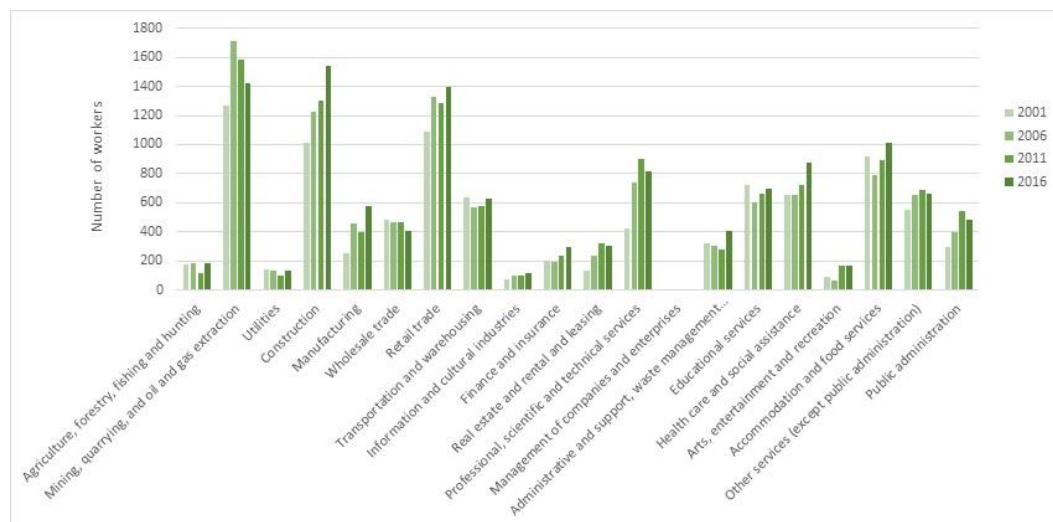


Figure 2: Labour force by industry, Fort St. John, 2001–2016.



Source: Statistics Canada. 2001–2016. Census Program.
 Community Development Institute. 2018. Community profile: Fort St. John, British Columbia. Prepared for the City of Fort St. John. Prince George, British Columbia: University of Northern BC.

A significant challenge exists in seeking information related to the scale of mobile labour in the region at different times. We expand upon this information failure below. In 2012, a one-time study estimated that 1,809 industry-related work camps were operating in northern BC (Beamish Consulting Ltd. & Heartwood Solutions Consulting, 2013; Northern Health, 2012). There is no specific agency that is responsible for approving and tracking all work camps that may be approved by different provincial or federal government agencies depending on the resource sector of a project or whether a project crosses provincial boundaries.

Using a qualitative interview methodology, our research team interviewed a total of 45 key informant participants representing businesses and business organizations in the Fort St. John area (see Table 1). Drawing upon contacts accessible through publicly available lists, these included businesses engaged in (a) food, beverage, and catering; (b) vehicle and equipment rental services; (c) hotels; (d) construction; (e) retail and personal services; (f) communications; (g) waste management; (h) safety; and (i) business services. As such, business stakeholders were selected for their potential to provide information that can help to better understand the issues shaping opportunities and challenges to capture benefits from mobile workforces.

Table 1: *Interviews by Sector*

	# of Participants	% of Participants
Business organizations	5	11.11
Food, beverage and catering	11	24.44
Rental companies	7	15.56
Hotels	5	11.11
Construction	3	6.67
Retail/ personal services	5	11.11
Communications	2	4.44
Waste management	2	4.44
Safety related companies	5	11.11
Total	45*	

*Note: 37 interviews with 45 people.

Following each interview, detailed summary notes were provided to participants for review; although, our research team also extracted quotes from recorded interviews. Once a final summary file was completed, latent and manifest content analysis was done to identify, code, and categorize patterns and themes that emerged from open-ended questions (Neuendorf, 2016). To improve reliability, members of the research team worked together to code and categorize themes in order to develop a common coding approach. As new themes emerged, they were evaluated across the team during the course of multiple rounds of coding. To complete the manifest content analysis, the research team consolidated information about business engagement with mobile workforces based on a range of topic areas. By highlighting key words, researchers were able to create a series of categories and sub-categories (Andersen & Svensson, 2012). To demonstrate this process, manifest content analysis allowed

the team to highlight emergent thematic categories, such as restructuring or changes to camp operations, that would create a series of sub-categories, such as less work for local construction companies, work camp decisions to provide infrastructure and services internally, or camp purchases of equipment from larger centres. Through latent content analysis, deeper meanings and connections across the themes were explored. To demonstrate latent content analysis, regulatory processes do not require industry to have a local presence to provide the conditions necessary for local businesses to develop networks, or to obtain current information about the location and size of work camps and mobile workforces through a central work camp registry, in order to be ready to engage in these types of supply chains.

4.0 Findings

Senior government policies, processes, and programs shape the context within which local businesses engage in supply chains to support mobile workforces in the region. To explore how businesses maneuvered the policies and strategies unfolding at the senior government level, we begin with a discussion of the local business opportunities related to mobile workforces. We then present findings structured under six key themes that emerged from the data, including (a) inadequate regulatory structures, (b) challenges resolving different taxation structures, (c) lack of personnel to enforce regulations, (d) communication and information management systems, (e) limited flexibility with temporary foreign worker programs to support local supply chain engagement, and (f) lack of senior government personnel in rural regions to guide rural businesses through regulatory and funding processes.

4.1 Local Business Opportunities

Our findings suggest that there are a variety of economic development opportunities for local businesses to service mobile workforces and camps. These supply chains can address the needs of mobile workers accommodated in (a) hotels, (b) crew houses, (c) construction camps, (d) oil and gas camps, (e) forest fire camps, (f) reforestation camps, and (g) camps that support the shutdown servicing of the oriented strand board (OSB) plant. These opportunities with mobile workforces in town and surrounding camps are not just concentrated in accommodations, but local suppliers and contractors are also finding opportunities with (a) food and water supplies, (b) construction, (c) maintenance, (d) transportation, (e) communications, (f) safety and security, (g) office needs, and (h) retail and recreation (see Table 2). There are also a variety of opportunities during the construction, operations, decommissioning, and re-opening of camp facilities.

Findings suggest that the potential economic benefits associated with mobile workforces are not being fully realized for several reasons. The restructuring of camp operations has provided fewer supply chain opportunities for local suppliers and contractors. For example, there is less work for local construction companies. Camp construction activities are now streamlined and largely prefabricated in large urban centres (DPR Canada Inc., 2013). Modular units are then transported to remote sites and assembled with minor adjustments. The prefabrication process has also streamlined decommissioning work as units are more easily disconnected and transported to other sites.

Table 2: *Local Business Opportunities Related to Mobile Workers and Camps*

Accommodations and Food	<ul style="list-style-type: none">▪ Camps, crew houses, hotels–motels▪ Provision of catering–catering equipment, alcoholic–non-alcoholic beverages, grocery supplies▪ Provision of water, portable fresh water supply
Construction	<ul style="list-style-type: none">▪ Setting camps and camp offices up, drywall, roofing, siding–weather proofing, coordinating set up with ramps and trailers, receiving modular units, concrete work, building access and sidewalk curbs, barriers–lock blocks, installing windows, interior finishes▪ Setting up super-temporary–extended camp units▪ Equipment: generators, lighting, equipment and vehicle rentals
Maintenance	<ul style="list-style-type: none">▪ Maintenance–camp repairs▪ Waste management; waste and recycling bins; domestic waste; storage tanks; dust control▪ Carpet cleaning for camps–crew houses▪ Laundry services
Communications	<ul style="list-style-type: none">▪ Wiring communications▪ Wi-Fi▪ Telephone–cell phone service
Safety and Security	<ul style="list-style-type: none">▪ Inspections (operations–re-opening of camps), fire extinguishers▪ Locksmithing for rentals–camps▪ Safety training–certification, drug and alcohol testing
Office	<ul style="list-style-type: none">▪ Printing: business cards, safety permits, laundry tickets, etc.▪ Provision of printers, scanners, and other office equipment▪ Meeting space for upper management meetings
Retail and Recreation	<ul style="list-style-type: none">▪ Retail–salon services▪ Events–tournaments for mobile workers▪ Recreational amenities
Decommissioning	<ul style="list-style-type: none">▪ Reclamation, hauling away debris–waste

Opportunities for local content are also challenged by work camp decisions to develop infrastructure and services internally in lieu of procurement with local contractors and suppliers. As explained by this business stakeholder:

I think a lot of it is where most of the camp companies already come prepared with their infrastructure in place. So they don't really need any outside services to do what they are doing. I think that's a pretty hard thing to change. I think that the only thing that could happen over time is to have larger projects to have more of a local presence into them. If you look at Site C...all the people coming to work at Site C are from out of town anyways. So it's a pretty tough deal to look at where you look that there are great opportunities, but you are secluded because you are not a part of that circle. I remember years ago when Site C was promised to be built, there was supposed to be more local inclusion and I don't think it's there. Some contractors can, but I don't think you get as much as was anticipated as to what the impact would be (Participant #27, 2019).

Camps are purchasing equipment from distant centres rather than renting or purchasing from local companies. Similar to broader industrial trends, mobile camps are also seeking to streamline the number of businesses and locations for supplies and contract work. Local businesses also struggle to reconcile the restructuring of opportunities as industries shift where mobile workers are accommodated. In some cases, local suppliers and contractors are able to gain business opportunities while camps are under development and project offices remain in town, only to lose that business once the camp opens. Hotel stakeholders, for example, feel their assets are underutilized by industry, contractors, and mobile workers. As this business stakeholder told us:

To be honest, I don't feel like we see a lot of benefits here as a hotel from a lot of mobile forces. A lot of the camps that are built are accommodating people that we feel could be staying at our hotel or at our establishment. Site C for example, we have only now seen, I think they are at capacity now...so we are seeing some overflow, which is great, but it's now been a couple years into the project and we haven't seen anything. (Participant #2, 2019).

Economic benefits may not be fully realized due to concerns about the limited capacity amongst local businesses. Some felt that local businesses are already too busy with the oil patch and are short-handed, leaving camps to be self-contained. Businesses may not be positioned to mobilize opportunities due to challenges competing against industry wages. There are also concerns that local businesses do not have the capacity to do the scale of work required by large mobile workforces and camps. Local food producers, for example, struggle to compete against larger warehousing facilities and global food systems where food can be processed and distributed cheaply. Furthermore, there is simply a lack of knowledge about the types and breadth of business opportunities that exist with mobile workforces that

are accommodated in town or in camps. Unfortunately, the community also has limited access to information to understand the extent to which benefits are being realized by the local business sector. Industries may disclose the names of their primary contractors, but those primary contractors are not required to disclose details about their sub-contractors.

4.2 Senior Government Roles in Shaping Supply Chains

As local businesses work to engage in supply chain opportunities related to mobile workforces, there are a number of ways in which senior government policies, processes, and investments are shaping private sector engagement. First, existing regulatory processes do not adequately support local supply chain engagement related to large mobile workforces. While industries claim to adopt local content policies during their environmental impact assessment hearings⁴, interviewees stated that local content policies and initiatives are not being sufficiently pursued and enforced at the provincial and federal level. This creates a considerable expectation gap, with implications related to the investment decisions of local businesses. With the downturn in the oil economy, interviewees noted an increase in a trend where large-scale industry developments in the region have attracted the presence of contractors based in larger centres in BC and the neighboring province of Alberta. As one business stakeholder stated:

I guess the hope is that the work that is happening here is going to local people which we currently don't see, especially since the slow down happening in Alberta, we see more and more work going to Alberta contractors. With a lot of Alberta plates coming into our area... I'm going to say probably $\frac{3}{4}$ quarters of the work in this area is being done, of the service work, by companies from [the Alberta centres of] Edmonton, Red Deer, and Calgary (Participant #13, 2019).

Senior government policies and regulatory processes do not provide clear requirements for a local industry presence in rural communities that would provide the conditions necessary to build networks, understand procurement requirements, and initiate engagement in supply chains. With a significant amount of work in the oil fields being based out of Calgary, there is a sense that contractors and suppliers from Calgary and Edmonton know oil and gas industry proponents better. Some felt that senior governments should develop requirements for companies working in the region to have an office in the community to help facilitate local relationships. Instead, stakeholders argue that some companies only maintain a post office box locally. As suggested by another local business proponent:

We hammered home that it's important to state whether that company is local or not. Not just that they have a local box number or phone number.

⁴ In Canada, federal assessment processes for natural resource projects highlight how they remain 'environmental' assessments with limited attention to socio-economic issues (Noble 2009; Noble, Skwaruk, & Patrick, 2013)—so much so that in the mid-2010s, the BC provincial government added requirements for the completion of Social Impact Management Plans by proponents of new liquified natural gas (LNG) proposals.

They have to actually be local. They have to hold an office here, pay taxes here, and register their vehicles with ICBC [the provincial automobile insurance company]. So if they are insuring their vehicles here and paying their taxes, they don't have to own an office; but if they rent, they are supporting the community. If they just have a box number or a phone number and dispatch everything out of Grand Prairie [Alberta], which still goes on a lot, then it still hurts this community because anytime they come up whether they live in hotels or whether they live in their RVs in a RV camp or whether they live in work camps, they still use the rest of our amenities. They use our hospital when they get hurt. They use our roads so there's a cost to the community...one of the greatest costs in Fort Nelson that they had... there was cleaning the streets from everything that gets dragged in and it's not all local vehicles that do that (Participant #3, 2019).

Second, challenges resolving different taxation structures between provincial jurisdictions was deemed to entrench fly-over impacts and deteriorate the competitiveness of local businesses. Often referred to as 'the Alberta Advantage' by business stakeholders, there is no Provincial Sales Tax (PST) in Alberta while there is a 7% PST in BC. As such, the immediate advantage to Alberta businesses is a 7% increase in revenues. Many companies are also purchasing and insuring vehicles and large pieces of equipment in Alberta at lower rates facilitating economic leakage at local and provincial levels in BC. As demonstrated by the following business stakeholder:

My biggest challenge is competing with Alberta believe it or not. You see the number of vehicles you see running around here with Alberta plates on them....a good portion of those are rental trucks and its less expensive and easier to register and insure a vehicle in Alberta than it is in BC. So a lot of rental companies tend to leave their vehicles plated in Alberta and just run them here. And if there was more consistency in how they were registered across the board, it would be a lot easier because I've got the policy where there's not a chance that I'm going to take that risk of running an Alberta plated vehicle. (Participant #31, 2019).

Third, even though business stakeholders acknowledged that requirements are in place for businesses to pay BC taxes on vehicles and equipment that cross provincial boundaries, enforcement is weak. There is only one inspector in the region that is working to ensure suppliers and contractors from Alberta are paying the PST. As argued by some business stakeholders:

People from out of province who are doing work here, companies that are doing work here, can choose not to pay all of the costs that BC people have

to pay like PST, fuel tax, BC labor laws, WorkSafe BC. All of that can add up to a 20% difference. They have a huge advantage. They can bring people over here and equipment and do the job.... underbid us by 20% and still make a bigger profit margin than we were going to. So that's an ongoing fight. It took me four years to get a tax inspector based here, which we have now so that's a big plus. We aren't putting a wall at the border and we welcome the competition, but they have to have the same costs that we do...all of the costs that are incurred cause we are in BC and if the work is happening in BC, then it should be a level playing field. (Participant #3, 2019).

Fourth, interviewees and regional regulators informed us that there is a lack of communication and information management systems, and capacity, in place to share information across government agencies and ensure that out-of-province contractors and suppliers are paying all applicable costs (i.e., WorkSafe BC [a workplace safety regulator], ICBC [the Insurance Corporation of BC], Oil and Gas Commission). These challenges effectively enable 'fly-over' impacts and collectively allow suppliers and contractors in Alberta to offer lower rates and bid proposals. In some cases, business stakeholders felt that the advantage not only enabled Alberta companies to outbid local suppliers and contractors, but to still have the revenues to cover hotel costs and living out expenses for their own mobile workforce. Furthermore, the Province of Alberta also has a personal tax advantage that affects the recruitment and retention of workers. These challenges are fostering resentment among local businesses as mobile workers from Alberta are not required to pay taxes in BC but continue to use the services and infrastructure assets that are in place throughout the Peace River region.

Fifth, business stakeholders we spoke with drew upon temporary foreign worker programs to address their staffing needs and be better positioned to take advantage of opportunities related to mobile workforces. Some business stakeholders, however, felt that temporary foreign worker programs have less flexibility than hiring students through their study permits. There have also been frequent changes to temporary foreign worker programs (i.e. type of work or hours permitted) in recent years as a result of political debates and ideologies. Maneuvering these processes as changes occur becomes difficult and confusing. These challenges have been exacerbated by reduced hours of operation for Service Canada locally, leaving businesses to connect with Service Canada staff by phone to work through the process.

On the positive side, interviewees felt that provincial and federal levels of government were facilitating opportunities for business stakeholders through business development and training programs. Some business stakeholders benefitted from the support they received from the Young Futurepreneur Program. Futurepreneur Canada is a federally and provincially funded organization established in the 1990s to provide support to potential young entrepreneurs (18–39 years of age) through business planning, financing, mentoring, marketing, and other support tools (<https://www.futurepreneur.ca/en/>). Stakeholders also noted that they drew upon provincially and federally funded government grants that reimbursed

businesses for addressing safety requirements through staff training (see: <https://www.workbc.ca/Employer-Resources/BC-Employer-Training-Grant.aspx>). As one stakeholder noted:

A lot of stuff that we do on our safety end of things, we can apply for grants and get 80% of that back. So that's something I just learned within the last month. I'm not exactly 100% sure on any specifics on it, but I know there's things with regarding to all the safety training that's needed in the oil field. I know there's funding that you can apply for and get quite a bit of the money you spent back because up here all the companies will pay for the training needed to get someone to be qualified and then a lot of times probably at least half of the time that person doesn't last 3 months especially in our industry. So that funding does help especially to compensate or reimburse or even when trying to break even with the money spent trying to get someone up to code (Participant #28, 2019).

Lastly, the effectiveness of these programs, though, is constrained by the difficulties that stakeholders encounter to access and obtain all the information related to programs. Funding requirements can also vary significantly (i.e., need for business plan, need to mix and match investments, etc.). Senior governments can assist by not only increasing the visibility of their various programs that support local businesses, but in making staff available to help those local businesses with the application processes.

5.0 Discussion

In a competitive global economy, local content strategies are increasingly difficult to pursue and enforce. These challenges are exacerbated by the demand for high skilled labour, technology, and capital required for engaging in supply chains with large-scale industrial projects. There are, however, still many ways in which senior government policies can create the conditions for local stakeholders to build capacity and be aware of emerging opportunities in order to be ready to compete in supply chains serving mobile workforces. These systemic conditions can be fostered through investments in better access to (a) capital, (b) education and training, (c) broadband infrastructure, (d) transportation infrastructure, as well as through the provision of (e) tax-credits, (f) streamlined supports to build local capacity, and (g) long-term regional plans to develop capacity in rural regions (Esteves & Barclay, 2011; Esteves et al., 2013; Nordas et al., 2003; Ramdoo, 2018). Senior governments must also provide the capacity to deliver supportive programs and enforce regulatory provisions. As rural regions seek more benefits from these large-scale resource extraction activities, opportunities to service the influx of mobile workforces are being pursued. Much of the academic and industry literature, however, focuses on supply chain opportunities associated with the construction and operations of resource development activities, with limited emphasis on the potential opportunities for local businesses to capture benefits from mobile workforces. Drawing upon our engagement with business stakeholders in the Fort St John, BC, area, our research draws upon new institutionalism to explore issues that senior

governments could address in order to better position local businesses in these supply chains moving forward.

New institutionalism makes a valuable contribution to framing the study. It shows that senior governments can play important roles in enhancing regional competitiveness. In contrast, the relative absence of senior government presence—or lack of well-coordinated government interventions—in terms of regulations and staff presence to either enforce what regulations do exist, or to help facilitate awareness and access to programs leads to economic leakage and the proliferation of unfair business practices across jurisdictions. New institutionalism also helps to frame the types of actions that may be possible to support a greater capture of local benefits, including (a) rules, (b) enforcement, (c) funding structures, and (d) information–communication regarding economic conditions and program supports.

In this study, local private sector actors have articulated that they are not able to capture the full range of benefits associated with the influx of mobile workforces. Despite global and industry pressures against local content policies, senior governments can, and should, play a role to strengthen the competitiveness, adaptability, and capacity of local businesses in rural regions that will better position them to engage in these supply chains (Krakowiak-Bal et al. 2017). Instead, the ‘fly-over effects’ that continue to be experienced in rural regions (Storey, 2010) have entrenched their position as resource banks in an underdeveloped and under-resourced state policy and regulatory environment. In this case, underdeveloped policies unfold through inadequate regulatory structures that fail to broker and nurture supply chain networks and opportunities, while under-resourced regulatory environments exist through a lack of inspectors and senior government staff to enforce regulatory expectations and work with rural businesses to improve their capacity, competitiveness, and position in supply chains related to mobile workforces. The provincial and federal levels of government in this case continue to largely rely on free market conditions with sporadic government interventions (Pick et al., 2008), bringing legitimacy to the business practices that are unfolding. Collectively, these deficiencies have created a policy and operational vacuum that has enabled contractors and suppliers in other jurisdictions to secure positions in these supply chains (Genus & Mafakheri, 2014). A more comprehensive and integrated strategy across senior government policies, regulations, processes, and resources would work to improve the benefits accrued in rural regions and reduce inter-provincial economic leakage.

Senior governments should consider a variety of policy, program, and governance enhancements to better leverage local content and enhance policy efficacy. First, they can work to ensure that adequate regulatory resources are in place to develop, monitor, and enforce requirements for primary and secondary contractors to promote supply chain opportunities in the local region. Second, the provincial government should designate a lead government agency to develop and maintain a central registry of mobile work camps that has current information about the location, size of mobile workforces, and contact information for the camp procurement team. The lack of information hinders both local and senior government capacity to understand the scale of mobile labour and its regional impacts. Third, both provincial and federal governments need to purposefully pursue policies and programs that create the conditions for local content and for local businesses to be agile and compete in these supply chains. This should involve ways to strengthen enforcement of taxation and other policies in order to level the competitive playing field inter-provincially, while

not undercutting the tax base required to support robust economic and social infrastructure. Fourth, there is a strong need for more coordination and sharing of information across provincial government agencies to ensure a level competitive playing field between local and inter-provincial contractors and suppliers. Finally, provincial and federal training program resources are needed to address training gaps that currently impede the ability for local businesses to build capacity locally and position these businesses to diversify the opportunities they pursue.

The labour landscape of rural economies is increasingly shaped by both local and mobile workforces. This can present more diversified opportunities for the local business sector. Many policies, processes, and supports, however, have not been retooled to support and improve the agility of businesses to compete in supply chains that serve mobile workforces. All stakeholders need to be prepared to invest adequate time, coordination, and resources to create constructive and competitive conditions for local businesses engaged in supply chains and obtain greater economic benefits from large-scale resource development projects unfolding in the region.

Acknowledgements

We wish to thank all of the participants for their interest in this work. We would also like to acknowledge funding from the Social Sciences and Humanities Research Council of Canada (430-2011-0475 and 895-2011-1019) and the Canada Research Chair Program (950-203491 and 950-222604).

References

- Ablo, A. D., & Overå, R. (2015). Networks, trust and capital mobilisation: Challenges of embedded local entrepreneurial strategies in Ghana's oil and gas industry. *The Journal of Modern African Studies*, 53(3), 391–413. <https://doi.org/10.1017/S0022278X15000385>
- Acheampong, T., Ashong, M., & Svanikier, V. C. (2016). An assessment of local-content policies in oil and gas producing countries. *The Journal of World Energy Law & Business*, 9(4), 282–302. <https://doi.org/10.1093/jwelb/jww019>
- Andersen, A. J. W., & Svensson, T. (2012). Struggles for recognition: A content analysis of messages posted on the Internet. *Journal of Multidisciplinary Healthcare*, 5, 153–162. <https://dx.doi.org/10.2147/JMDH.S33418>
- Arthur, P., & Arthur, E. (2014). Local content and private sector participation in Ghana's oil industry: An economic and strategic imperative. *Africa Today*, 61(2), 57–77. <https://doi.org/10.2979/africatoday.61.2.57>
- Beamish Consulting Ltd. and Heartwood Solutions Consulting. (2013). *Policy, communications, capacity: a time to lead. Scoping the impacts and benefits of work camps in the Peace region*. Prepared for the Peace River Regional District. Beamish Consulting Ltd. and Heartwood Solutions Consulting.
- Cheshire, L. (2010). A corporate responsibility? The constitution of fly-in, fly-out mining companies as governance partners in remote, mine-affected localities. *Journal of Rural Studies*, 26(1), 12–20. <https://doi.org/10.1016/j.jrurstud.2009.06.005>

- Community Development Institute. (2018). *Community profile: Fort St. John, British Columbia* (prepared for the City of Fort St. John). Prince George, BC: University of Northern BC.
- Creed, A., & Kordvani, A. (2013, February 27). *Canada: The WTO Report on Local Content Requirements for Canadian Renewables Programme–MENA Implication*. London, United Kingdom: Clyde & Co.
- DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2), 147–160. <https://doi.org/10.2307/2095101>
- DPRA Canada Inc. (2013). *Resource exploration in the Sahtu settlement area: Opportunities and challenges*. Toronto, Ontario, Canada: Author.
- Esteves, A. M., & Barclay, M. -A. (2011). Enhancing the benefits of local content: Integrating social and economic impact assessment into procurement strategies. *Impact Assessment and Project Appraisal*, 29(3), 205–215. <https://doi.org/10.3152/146155111X12959673796128>
- Esteves, A. M., Coyne, B., & Moreno, A. (2013, July). *Local content initiatives: Enhancing the subnational benefits of the oil, gas and mining sectors* (Briefing). New York, NY: Natural Resource Governance Institute.
- Frynas, J. G. (2005). The false developmental promise of corporate social responsibility: Evidence from multinational oil companies. *International Affairs*, 81(3), 581–598. <https://doi.org/10.1111/j.1468-2346.2005.00470.x>
- Genus, A., & Mafakheri, F. (2014). A neo-institutional perspective of supply chains and energy security: Bioenergy in the UK. *Applied Energy*, 123, 307–315. <https://doi.org/10.1016/j.apenergy.2014.01.084>
- Glover, J. L., Champion, D., Daniels, K. J., & Dainty, A. J. D. (2014). An institutional theory perspective on sustainable practices across the dairy supply chain. *International Journal of Production Economics*, 152, 102–111. <https://doi.org/10.1016/j.ijpe.2013.12.027>
- Halseth, G., & Ryser, L. (2018). *Towards a political economy of resource-dependent regions*. Abingdon, United Kingdom: Routledge.
- Harvey, D. (2005). *A brief history of neoliberalism*. Oxford, United Kingdom: Oxford University Press.
- Haslam McKenzie, F. (2010). Fly-in fly-out: The challenges of transient populations in rural landscapes. In G. W. Luck, D. Race, & R. Black (Eds.), *Demographic change in Australia's rural landscapes: Implications for society and the environment* (pp. 353–374). Dordrecht, The Netherlands: Springer.
- Haslam-McKenzie, F., & Rowley, S. (2013). Housing market failure in a booming economy. *Housing Studies*, 28(3), 373–388.
- Healey, P. (1999). Institutional analysis, communicative planning, and shaping places. *Journal of Planning Education and Research*, 19(2), 111–121. <https://doi.org/10.1177%2F0739456X9901900201>

- Heisler, K., & Markey, S. (2013). Scales of benefit: Political leverage in the negotiation of corporate social responsibility in mineral exploration and mining in rural British Columbia, Canada. *Society & Natural Resources* 26(4), 386–401. <https://doi.org/10.1080/08941920.2012.695858>
- House of Representatives, Standing Committee on Regional Australia. (2013). *Cancer of the bush or salvation for our cities? Fly-in, fly-out and drive-in, drive-out workforce practices in regional Australia*. Canberra, Australia: Parliament of the Commonwealth of Australia.
- Ihua, U. B., Ajayi, C., & Eloji, K. N. (2009, May). Nigerian content policy in the oil and gas industry: Implications for small and medium-sized oil service companies. In *Proceedings of the 10th Annual Conference, IAABD*. 163–170.
- International Petroleum Industry Environmental Conservation Association. (2011). *Local Content Strategy: A Guidance Document for the Oil and Gas Industry*. London, United Kingdom: IPIECA.
- Kazzazi, A., & Nouri, B. (2012). A conceptual model for local content development in petroleum industry. *Management Science Letters*, 2(6), 2165–2174. <http://dx.doi.org/10.5267/j.msl.2012.05.031>
- Kelsey, T. W., Shields, M., Ladlee, J. R., & Ward, M. (with Brundage, T. L., Michael, L. L., & Murphy, T. B.) (2012). *Economic impacts of Marcellus Shale in Bradford County: Employment and income in 2010*. Williamsport, PA: Marcellus Shale Education and Training Center, Pennsylvania College of Technology and Penn State Extension.
- Kraskowiak-Bal, A., Ziemianczyk, U., & Wozniak, A. (2017). Building entrepreneurial capacity in rural areas: The use of AHP analysis for infrastructure evaluation. *International Journal of Entrepreneurial Behaviour & Research* 23(6), 903–918. <https://doi.org/10.1108/IJEER-07-2017-0223>
- Lawrie, M., Tonts, M., & Plummer, P. (2011). Boomtowns, resource dependence and socio-economic well-being. *Australian Geographer*, 42(2), 139–164. <https://doi.org/10.1080/00049182.2011.569985>
- Mayes, R., McDonald, P., & Pini, B. (2014). ‘Our’ community: Corporate social responsibility, neoliberalisation, and mining industry community engagement in rural Australia. *Environment and Planning A: Economy and Space*, 46(2), 398–413. <https://doi.org/10.1068/a45676>
- Measham, T. G., Haslam McKenzie, F., Moffat, K., & Franks, D. M. (2013). An expanded role for the mining sector in Australian society? *Rural Society*, 22(2), 184–194. <https://doi.org/10.5172/rsj.2013.22.2.184>
- Ministry of Advanced Education, Skills and Training. (2012–2019). *British Columbia Major Projects Inventory*. Victoria, BC: Ministry of Advanced Education, Skills and Training, Province of British Columbia. Available at: <https://www2.gov.bc.ca/gov/content/employment-business/economic-development/industry/bc-major-projects-inventory/recent-reports>.
- Monday, J. U. (2015). Local content policy, human capital development and sustainable business performance in the Nigerian oil and gas industry. *Journal of Management & Sustainability*, 5(1), 75–83.
- Neuendorf, K. A. (2016). *The content analysis guidebook*. Los Angeles, CA: Sage.

- Ngoasong, M. Z. (2014). How international oil and gas companies respond to local content policies in petroleum-producing developing countries: A narrative enquiry. *Energy Policy*, 73, 471–479. <https://doi.org/10.1016/j.enpol.2014.05.048>
- Noble, B. F. (2009). Promise and dismay: The state of strategic environmental assessment systems and practices in Canada. *Environmental Impact Assessment Review* 29(10), 66–75. <https://doi.org/10.1016/j.eiar.2008.05.004>
- Noble, B. F., Skwaruk, J. S., & Patrick, R. J. (2013). Toward cumulative effects assessment and management in the Athabasca watershed, Alberta, Canada. *The Canadian Geographer*, 58(3), 315–328. <https://doi.org/10.1111/cag.12063>
- Nordås, H. K., Vatne, E., & Heum, P. (2003). SNF report no. 08/03: *The upstream petroleum industry and local industrial development: a comparative study*. Bergen: Institute for Research in Economics and Business Administration.
- Northern Health. (2012). *Part 1: Understanding the state of industrial camps in Northern BC*. Prince George, BC: Northern Health. Available on-line at: https://www.northernhealth.ca/sites/northern_health/files/about-us/leadership/documents/industrial-camps-bkgrd-p1v1.pdf.
- OECD (2019). *Linking Indigenous communities with regional development*, OECD Rural Policy Reviews. Paris, France: OECD. <https://doi.org/10.1787/3203c082-en>
- Öhman, M., & Lindgren, U. (2003). Who are the long-distance commuters? Patterns and driving forces in Sweden. *Cybergeo: European Journal of Geography*, 243, <https://doi.org/10.4000/cybergeo.4118>
- Olawuyi, D. S. (2017). *Local content and procurement requirements in oil and gas contracts: Regional trends in the Middle East and North Africa*. Oxford, United Kingdom: Oxford Institute for Energy Studies. <https://doi.org/10.26889/9781784670955>
- Östensson, O. (2018). Local content, supply chains and shared infrastructure. In T. Addison & A. Roe (Eds.), *Extractive industries: The management of resources as a driver of sustainable development* (pp. 505–526). Oxford, United Kingdom: Oxford University Press.
- Otto, J. M. (2018). How do we legislate for improved community development? In T. Addison & A. Roe (Eds.), *Extractive industries: The management of resources as a driver of sustainable development* (pp. 675–694). Oxford, United Kingdom: Oxford University Press.
- Peetz, D., Murray, G., & Muurlink, O. (2012). *Work and hours amongst mining and energy workers: Australian coal and energy survey first phase report*. Brisbane, Queensland, Australia: Centre for Work, Organisation and Well-being, Griffith University.
- Pick, D., Dayaram, K., & Butler, B. (2008). Neo-liberalism, risk and regional development in Western Australia: The case of the Pilbara. *International Journal of Sociology and Social Policy*, 28(11/12), 516–527. <https://doi.org/10.1108/01443330810915224>
- Ramdoo, I. (2018). *Designing local content policies in mineral-rich countries*. Winnipeg, Manitoba, Canada: The International Institute for Sustainable Development (IISD).

- Rolfe, J., & Kinnear, S. (2013). Populating regional Australia: What are the impacts of non-resident labour force practices on demographic growth in resource regions? *Rural Society*, 22(2), 125–137. <https://doi.org/10.5172/rsj.2013.22.2.125>
- Ryser, L., Markey, S., Halseth, G., & Welch, K. (2019). Moving from mobility to immobility in the political economy of resource-dependent regions. *Applied Mobilities*, 4(3), 307–328. <https://doi.org/10.1080/23800127.2017.1421290>
- Statistics Canada. (2001-2016). *Community profiles*. Ottawa: Statistics Canada.
- Storey, K. (2010). Fly-in/fly-out: Implications for community sustainability. *Sustainability*, 2(5), 1161–1181. <https://doi.org/10.3390/su2051161>
- Tonts, M. (2010). Labour market dynamics in resource dependent regions: An examination of the Western Australian goldfields. *Geographical Research*, 48(2), 148–165. <https://doi.org/10.1111/j.1745-5871.2009.00624.x>
- Tonts, M., Plummer, P., & Lawrie, M. (2012). Socio-economic wellbeing in Australian mining towns: A comparative analysis. *Journal of Rural Studies*, 28(3), 288–301. <https://doi.org/10.1016/j.jrurstud.2011.10.006>
- Tordo, S., Warner, M., Manzano, O. E., & Anouti, Y. (2013). *Local content policies in the oil and gas sector*. Washington, DC: International Bank for Reconstruction and Development/The World Bank.
- Vodden, K., & Hall, H. (2016). Long distance commuting in the mining and oil and gas sectors: Implications for rural regions. *The Extractive Industries and Society*, 3(3), 577–583. <https://doi.org/10.1016/j.exis.2016.07.001>