

**Implications of Changing Commuting Patterns
on Resource Town Sustainability:**

The Example of Mackenzie, British Columbia

Prepared for:

**Northern Lands Use Institute
3333 University Way
Prince George, BC
V2N 4Z9**

Prepared by:

Greg Halseth

and

Lana Sullivan

**Geography Program
University of Northern British Columbia
Prince George, BC
CANADA V2N 4Z9**

Tel: (250) 960-5320 Fax: (250) 960-5539 E-mail: halseth@unbc.ca

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Implications of Changing Commuting Patterns on Resource Town Sustainability:

Executive Summary

Introduction

Single-industry, resource-based towns remain a dominant feature in Canada's north. Many of these towns struggle with the dual pressures of single-industry dependence and resource sector restructuring. To move away from this position, attention is now being given to providing people with information about the kinds of changes occurring within their community so that they can deal with risk factors, ameliorate negative impacts, and plan for their town's future. This report looks at one issue facing many small resource towns - the loss of population to larger centres - and provides information which local decision-makers can use to build strategies suited to their community. In particular, this study looks at the phenomena of "extra-community" commuting in Mackenzie, British Columbia, among employees of the major forest product facilities.

Mackenzie

The town of Mackenzie is located about 200 kilometers north of Prince George in north-central British Columbia. It is a resource-based, single-industry, "instant town" founded in 1966 in conjunction with the massive hydroelectric project that created the Williston Lake reservoir. The Mackenzie townsite was developed to be the processing centre for a new regional forest industry. At present, two large sawmills (Abitibi-Consolidated and Slocan Forest Products), a pulp mill facility (Fletcher Challenge Canada Ltd.), and a pulp and paper plant (Abitibi-Consolidated) provide a large share of basic sector employment. There are also a number of small value-added forest industries and forest support industries in the town as well. With a 1996 population of approximately 6,000 people, a local service and administration economy has also developed.

The population of Mackenzie has remained relatively stable over time. This apparent stability belies that there has in fact been considerable turnover in local residents. Since the early 1970s, new firms and industrial plants have come on line, adding jobs and bringing people into town. At the same time, automation and other restructuring outcomes have meant job reductions in many of the major industrial operations. All of this means considerable in-migration and out-migration of workers and their families over time.

The 1976 population of Mackenzie resembled a pattern common in new resource-based communities in that there was a large proportion of young families. In a new town, these people had come to create careers in an expanding industry. By 1996, the population of Mackenzie was beginning to look quite different. The population was more evenly distributed across the age groups, and while there were still many young families, there were also growing shares of older residents.

Since its founding, Mackenzie has developed into a well-equipped town. It has all of the basic requirements of a small community including childcare centres, an impressive recreation centre, public internet at the local library, grocery stores, two local malls, several restaurants, a fire department, RCMP offices, and an active municipal government. There is also an active network of volunteer groups which provide a wide range of services, activities, and facilities to local residents. In addition, the community is situated in a wilderness area abundant in outdoor recreation opportunities. However, Mackenzie's location about two hours north of Prince George generates considerable retail sector leakage. Mackenzie residents are attracted to Prince George by the range of shopping and entertainment options which include large 'wholesale' and 'big-box' stores. Although there are six general practitioners working in Mackenzie, many residents travel to Prince George for specialist medical attention. In addition, while Mackenzie's hospital does handle emergencies, most cases are transferred to Prince George Regional Hospital. Thus, despite a wide range of services being available in Mackenzie, the need for higher order or more specialized services often necessitates regular travel to Prince George.

One factor affecting travel by Mackenzie residents to Prince George has been the condition of the road. Over time, the road connections have improved tremendously. In the early years, the road from Mackenzie to Mackenzie Junction was gravel, and then the Hart Highway to Prince George was narrow and winding, with many dangerous blind curves. Most of this route has been improved tremendously over the years through programs of widening, straightening, resurfacing, and seal coating. This has considerably shortened the average travel time and made winter travel much safer. One outcome has been that some mill employees have chosen to relocate to Prince George and to commute to Mackenzie for work. This report explores this issue of extra-community commuting in order to give local decision-makers information so they can be proactive in developing strategies to retain residents and improve local quality of life.

Literature Review

The story of extra-community commuting is not unique to Mackenzie. There are many towns across British Columbia and Canada where this phenomena occurs to some degree. For this report, our definition of "extra-community commuting" is travel daily, weekly, or monthly to and from a work place located in one community, and a living place located in a completely separate community.

Single-industry towns are very important to the geographic makeup of British Columbia and Canada. They serve as economic engines as well as homes and communities. Not only does a proportion of the Canadian population live in such places, but their resource-based industries provide the raw materials which sustain the economies of our urban centres. Yet, these single-industry resource-based communities are a particular type of small town. They serve as central places for processing raw materials and they function within both a local resource supply region and a global marketplace.

Porteous (1987) identifies four generic characteristics common to single-industry towns. First, the community is typically isolated. Second, it most often has a very small population. Third, a single company or industry provides at least 80 percent of basic employment. Lastly, the managers of companies are expected to provide the bulk of the employment, houses, and

services for residents. In general, Mackenzie fits with Porteous' characteristics. The town is located in north central BC and is 30 kilometers off the main highway through the region. Although the work force was provided with a shorter commuting route to the mills, the location off the highway made residents feel isolated, particularly in the early days when the road was not paved (Veemes, 1985). Second, with a 1996 population of approximately 6,000 people, Mackenzie has always been a small town. Third, the forest industry provides the foundation of basic sector employment. Finally, as an "instant town" the first large companies were responsible for providing amenities such as housing and basic services.

Why people move

Perceptions about a place can dictate the level of satisfaction residents have about their community. In turn, this plays a role in motivating people to move into or out of communities. While there is a considerable literature on household migration, some key themes include:

- migration decision-making is motivated by stresses in the household's environment. As a two stage process, there is first a decision on whether or not to move, then there is the decision about where to move,
- Peter Rossi (1980) identified life cycle stage and vital processes such as births, deaths, marriages, and divorces as critical to whether people move,
- Knox (1995) adds that people are affected by subjective factors such as the desire to improve their quality of life. In other words, emotional attachment to place, and to the people living in that place, are as important as a household's need for space.

In retaining residents, town planners have recognized the need to provide a diverse range of well designed housing, and to provide the amenities and community infrastructure to develop an attachment to place. These two factors have been argued to greatly reduce transiency in single-industry towns (IBI Group, 1980; Veit and Associates, 1978; Berry *et al.*, 1975; Barton, 1999).

Push and Pull Factors

Norton (1995) discusses the phenomena of "push-pull" migration factors. When people move from one location to another, it is because they consider the old location as less favorable in some crucial aspect compared to the new location. These aspects can be related to economic, political, and environmental issues. Taken together, they form 'push' and 'pull' factors which are all linked to community "satisfaction". Lewis (1979) argues that if an individual is happy within their community, despite the enticing 'pull' factors of another community, the individual will not migrate. Conversely, if an individual is unhappy then it will take only a relatively little 'push' before they decide to move. People's subjective interpretation of their quality of life is significant in the decision-making process (Bowles and Beesley, 1991). Perceptions of quality of life, housing choice, services, and employment opportunities underscore the kinds of push and pull factors influencing the concept of "extra-community commuting" as studied in the Mackenzie / Prince George case.

Who Moves

Although there may be general sets of push and pull factors which affect migration, some types of people are more likely to move than others. In towns such as Mackenzie the residents, especially during the early years, have been very mobile. The attraction of high wages, the concentration of 30 to 40 year old household heads, and the limited time to develop a deep attachment to place all played a role with in- and out-migration. Like residents of other single-industry towns, they were accustomed to moving, and they accepted a fluctuating economy dictated by market booms and busts. If residents are unable to adjust, and their quality of life is perceived to be affected, they will be more likely to move out of town. However, strong attachment to place can mitigate some of these 'push' effects.

Migration patterns in single-industry communities have some unique characteristics relative to other places. It has been argued that high rates of population turnover is common in single-industry towns as people arrive in response to lucrative opportunities, stay a few years, and then move on. In single-industry towns, the higher than average incomes, good fringe benefits, more employment security, and better jobs overall creates a 'pull' attraction. In contrast, 'push' factors include job related issues such as the regularity of strikes, lockouts, or work shortages, as well as community-related issues like lack of housing availability, limited services, isolation, climate and high costs of living. Field (1988) found that isolation, climate, and lack of services pushed people to leave while Parson (1991) argued that single-industry, resource-based, towns are particularly vulnerable to changing economic conditions.

Due to the unique nature of single-industry communities, most residents originate from different places and when they arrive, expectations are high. When needs are not met, perceived overall quality of life deteriorates. Once people perceive their satisfaction with living decreasing, the chances of them considering relocation become greater. Based on this, towns can become proactive in implementing services and amenities that will help retain residents and reduce economic leakage. Although there should be concern about why some residents are intent on leaving one town for another, more attention should be paid to the at-risk residents, those considering a move. Once the at-risk residents are retained, the community can become much more stable.

Methods

The research methodology involves 5 stages. First, a set of four site visits were undertaken. The preliminary visit was to meet with our research partners and establish local logistics. Trip two was for interviewing people to collect data needed to design the questionnaire. During the third trip, a search of historical newspapers and a local record check was completed. A fourth trip occurred after the research to present our results to our partners and share information with them.

A total of fourteen interviews were conducted in order to gather information to develop the questionnaire. Specifically, the purpose of the open-ended interviews was to gain an idea of some of the decision-making factors and advantages/disadvantages of 1) living and working in Mackenzie, and 2) commuting between Mackenzie and Prince George.

Once the analysis of the interviews was complete, the questionnaire was developed. A mail survey technique was applied due to its advantages in allowing for a large number of respondents to be surveyed in a relatively short period of time, being relatively inexpensive, and allowing respondents to answer the questions at a convenient time for them. In coordination with the Human Resources Managers, the questionnaires were distributed with paychecks to every mill employee. Locked drop boxes were placed in lunch rooms in order to collect completed questionnaires.

The response rate demonstrated interest on the part of many Mackenzie Mill employees. The 34 percent response rate is statistically valid and yields an error of between 2.1 and 3.5 percent (with 95 percent confidence) (Babbie, 1979).

Analysis

In the analysis, three separate groups were identified from the returned questionnaires. The **“movers”** were identified as those who continue to work in the Mackenzie mills but have already moved out of town and reside elsewhere. The **“at-risk”** population included those who continue to work and live in Mackenzie but who have seriously considered moving out of town. Finally, the **“stayers”** were identified as those who live and work in Mackenzie and have never thought seriously about leaving town.

Profile

The first task in any questionnaire analysis is to outline the general profile of respondents. This provides a foundation for readers to evaluate the degree to which the survey can be said to “represent” the broader community. In order to receive as many completed questionnaires as possible, either the mill employee or their spouse could fill out the questionnaire. Nearly all questionnaires were completed by the mill employees themselves. The majority of the respondents came from Fletcher Challenge (40 percent), while a further 32 percent worked at Abitibi-Consolidated, and 28 percent worked at Slocan Forest Products.

In terms of age, about 34 percent of respondents are aged 36-45 and a further 27 percent are aged 46-55. Traditionally, resource industry employment has been dominated by male workers. As most respondents were mill employees, it is not surprising that over 80 percent of respondents were male. As a reflection of the age pattern, it is also not surprising that just over 80 percent said they were in married or common law relationships. This is again quite typical for resource industry towns. Fitting with this pattern of middle age and married status is that 87 percent of respondents reported having children. Finally, nearly all respondents were employed full time (96 percent).

“Stayers”, “Movers”, and “At-risk”

One of the key purposes of the research was to identify the scale of extra-community commuting into Mackenzie. The “movers” population was defined as those who worked at the Mackenzie mills but who lived outside of the town. Approximately 9 percent of the 292 respondents who answered this question lived in Prince George or ‘other’ towns. Approximately 31 percent of

respondents were identified as “stayers”, that is, they lived in Mackenzie and had never considered moving away. Finally, approximately 69 percent of respondents were identified as the “at-risk” population as they stated they had seriously considered moving away. For both movers and the at-risk population, it was important to identify push and pull factors associated with out-migration decision-making.

“Movers ”

In this section, a series of issues connected with movers is explored. In the analysis we need to keep in mind that the number of movers is small and, therefore, only major trends should be highlighted.

More than half of movers had previous experience living in a small place. Most (approximately 63 percent) of the movers fit into the 36-55 year age categories. In general, this pattern fits with the age distribution of ALL questionnaire respondents. When we look at the distribution by males/females, we also see that the movers pattern fits with the sex distribution of ALL questionnaire respondents. Thus movers are not confined to a particular age or sex category.

Given that the profile of movers is not “unique”, it is important to consider some of the reasons they had for moving away from Mackenzie while they continued to work at local mills. Simply put, there is no single or dominant reason why movers have left Mackenzie. In fact, the majority (44 percent) of respondents chose ‘other’ as their answer; this included being attracted to a more rural lifestyle, moving in search of a greater number of social activities, or in pursuit of better services. Of the factors listed in the questionnaire, long winters, high cost of living, and lack of services (approximately 11 percent each) were common reasons for moving away.

Besides the push factors associated with people moving away from Mackenzie, it is important to consider the pull factors associated with people being attracted to another town. Many movers indicated that better housing investment pulled them into the towns where they presently live. When movers were asked to identify the types of services needed to retain residents in Mackenzie, more medical services and better shopping choices were the most common suggestions. In addition, more jobs for spouses and better customer services were identified as needing improvement.

“At-risk”

Approximately 70 percent of the questionnaire respondents who live in Mackenzie were identified as being “at-risk” of leaving the community. It is, therefore, important to understand how these at-risk residents feel about living and working in town. Although ‘at-risk’ respondents have seriously considered moving away from Mackenzie, they still found a great variety of benefits to both living and working in town. Although good paying jobs were seen as the main benefit, factors such as safe atmosphere, small town life, nature and outdoors, and recreation opportunities were also said to be key benefits of the town. When the at-risk residents were asked to identify difficult aspects of living and working in Mackenzie, they cited a lack of shopping services, isolation, and the amount of health services.

Continuing with questions about local conditions, the at-risk respondents were asked to identify how they felt about Mackenzie’s economic situation. While about half felt that it was declining, about one-quarter believed that it had remained relatively unchanged.

At-risk respondents were asked about their level of satisfaction with a range of services and features of Mackenzie. In terms of health services, most are generally dissatisfied (approximately 73 percent). This fits very well with much recent public debate across northern British Columbia. In terms of education services, at-risk respondents were divided. About half were dissatisfied while another quarter were neutral on the matter. For recreation, however, over 70 percent of at-risk respondents were satisfied (15 percent strongly satisfied). In terms of housing, the at-risk respondents were again divided. About half were dissatisfied while another quarter were satisfied with local housing. In terms of both shopping services and services for youth in Mackenzie, the at-risk respondents were dissatisfied. With respect to services for women, about 45 percent of at-risk respondents were dissatisfied. Finally, about 45 percent of at-risk respondents were dissatisfied with services for small businesses while about 37 percent were dissatisfied with employment services.

At-risk residents were asked to agree or disagree with five statements about general aspects of living in Mackenzie. In terms of Mackenzie being isolated, at-risk respondents overwhelmingly agreed with this statement, with 58.9 percent strongly agreeing. In terms of Mackenzie being too small to provide sufficient services, at-risk respondents again agreed with this statement. Almost all at-risk respondents agreed with the statement that Prince George will always have better shopping and entertainment services..

However, in terms of Mackenzie being a good place to live, the majority (65 percent) of at-risk respondents agreed with this statement. This is a very positive indicator for interpreting the extent to which the at-risk population may be committed to leaving for another town. In terms of Mackenzie being a good place to raise a family, at-risk respondents again overwhelmingly agree with this statement (55 percent agree and approximately 21 percent strongly agree). These are key characteristics for retaining residents, especially those with young families or who may be nearing retirement.

Discussion

A number of reasons are identified in the research literature as to why resource industry employees may remain in or leave their town. These are generically referred to as “push” factors. Some of the common ones identified are stress over the uncertainty or instability of economic conditions in resource industries. This links to a second concern over the vulnerability of employment in those industries and in associated support industries. Finally there is the generalized concern over a lack of services (shopping, entertainment, food, and health) in these small towns. Many of the survey respondents identified these types of issues as important in their dissatisfaction with living or working in Mackenzie. The mover population was much more adamant about things which pushed them to leave, while the at-risk population identified a combination of factors which collectively increased their thoughts of leaving. Improvements to the highway between Mackenzie and Prince George has played a role in reducing travel times, and this has had an influence upon shopping patterns and recreational visits outside of the town. Such improvements, and an increasingly routine need to travel outside the town for shopping or medical services, played a role in decisions to relocate. While some of these topics are clearly beyond the purview of local decision-makers, there are topics which can be addressed usefully to send a message that the community is working on things that matter to residents.

One of the perplexing issues identified by some movers was concern over the lack of security in their housing investment. While there have certainly been economic swings and fluctuations in housing prices, a recent study (Halseth and Sullivan, 2000) completed for Canada Mortgage and Housing Corporation identified that since 1976, property values in Mackenzie have increased at a rate exceeding that of inflation.

In contrast to the push factors identified by respondents, there were also a strong set of “pull” factors identified. These pull factors are attributes of Mackenzie which respondents (movers, stayers, and at-risk) liked and which attracted them to the town. Included among these was a perception of a very safe community and a good environment within which to raise children and a family. The abundance of recreation opportunities, both outdoor and indoor, and both formally and informally organized, also received very high praise. Given the strength of some of these pull factors, it may be useful for the town to ensure continued maintenance of these attributes and publicity of services or opportunities connected to them. As noted above, some particular attention may wish to be directed at youth opportunities (recreation and work) as a large share of the population is involved with raising young children.

At this point the research on extra-community commuting in Mackenzie identifies a number of topics for further consideration. The first is that improvements to local shopping, services, and access to health care will be important in keeping residents in town. It will also reduce the number of trips which they make out of the community for routine needs. When households feel that routine needs are no longer met they are more likely to move. Second, it is crucial that efforts to diversify the local economy continue. This will not only help to somewhat reduce vulnerability to forest industry cycles, but will provide a greater range of employment and activity opportunities for spouses and youth. Shift work was identified as an enabling element which allowed workers to commute for work from a more diverse and distant town. There exists a number of opportunities to build on the positive aspects of Mackenzie which were identified by

all three groups within our survey. This can initiate a positive trajectory of community improvements and community pride (which is already in place) which may reduce the likelihood that at-risk residents will decide to leave town. Steps taken now to be pro-active may have a long-term impact on this issue.

The purpose of this research was to examine the scale and extent of extra-community commuting within Mackenzie. At present, extra-community commuting reaches to an order of approximately 10 percent of our survey respondents. While this may not seem particularly high, it foreshadows a problem as the at-risk population is a significant component of our survey respondents. Issues identified by respondents as ones which might motivate them to leave Mackenzie are especially important and should be addressed wherever possible within the resources and abilities of the town.

Acknowledgments

In order to complete this research project, a great deal of assistance was both required. The Human Resources Managers at all three of the major mills in Mackenzie did a number of important tasks for this project and enabled us to conduct the questionnaire survey. Special thanks to Jim Hall at Fletcher Challenge, Scott Phillips at Slocan Forest Products, and Wayne LaGroix at Abitibi-Consolidated.

The union presidents and executive members provided help and support for this project. The connection with union members and leaders also helped provide more validity to this project. Thank you to President of Pulp and Paper Woodworker's of Canada Local 18 Dave Seright, Dave Forbes (President) and Dean Guthrie (Recording Secretary) of the Communications, Energy and Paperworker's Union of Canada Local 1092, and finally Pat Moore (President) and Pat Crooks (2nd Vice-President) with the Communications, Energy and Paperworker's Union of Canada Local 402.

The Chamber of Commerce is a key source of information in all small towns, and the staff at the Mackenzie Chamber of Commerce, under the direction of Rita Rewerts, were extremely helpful. As our partners, the Mackenzie Chamber of Commerce worked very hard to provide input and information whenever we needed it.

Alan Madrigga, the Economic Development Officer for Mackenzie, was interested in this project right from the beginning and provided us with assistance in finding appropriate people to talk with and in putting together our questionnaire. Deputy Mayor Tom Michaels and Counselor Stephanie Killam also provided us with insight into some of the issues faced by Mackenzie residents that would contribute to them staying or leaving the community.

Doyal Keller and Bruce Armstrong from the Ministry of Forests office in Mackenzie were interested in the project and assisted in identifying issues that affect Mackenzie residents. Phil Doddridge, John Bruce, Danny Morris, Ray Cox, Bill Rose, and Brad Rikley from the Ministry of Transportation and Highways provided us with information on when highway improvements occurred between Prince George and Mackenzie. They helped with the types of improvements and provided a basic understanding of the importance of the different improvements.

The authors would like to acknowledge the support of the UNBC Northern Land Use Institute which funded this study.

There were a number Mackenzie residents, as well as commuters living in Prince George and working in Mackenzie, who contributed significantly to this project. For reasons of confidentiality, these individuals cannot be named, however, we would like to acknowledge and recognize the importance of their participation and input.

We would like to thank and recognize all the workers at Mackenzie mills who completed the questionnaire. The response rate in our survey was tremendous, demonstrating that the issue of

extra-community commuting is important. As the majority of this report is based upon answers we received in the survey, the contribution of the mill employees was extremely important.

Finally, thank you to our families who, as always, were understanding with our need to travel to Mackenzie to complete field work and assisted us with many phases of writing this report. We could not do our work without your support.

Greg Halseth

Lana Sullivan

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Table of Contents

Executive Summary	ix
Acknowledgments	x
Table of Contents	xii
List of Figures	xiii
List of Tables	xiv
Introduction	1
Research Plan	2
Mackenzie	2
Literature Review	9
Introduction	9
Key Terms	9
Importance of single-industry towns	10
Characteristics of single-industry towns	11
Why people move	11
Push and Pull Factors	12
Who Moves	13
Historic Migration Patterns in Single-industry Towns	14
Methods	16
Site Visits	16
Interviews	16
Questionnaire	16
Analysis	17
Analysis/Findings	18
Introduction	18
Profile	18
“Stayers”, “Movers”, and “At-risk”	21
“Movers”	23
“At-risk”	27
Discussion	32
Conclusion	32
Bibliography	35
Appendices	38
1a Open Ended Interview Schedule - people living and working in Mackenzie	38
1b Open Ended Interview Schedule - people commuting from Prince George	40
Questionnaire	42

List of Figures

Figure 1	Map British Columbia	4
Figure 2	Mackenzie Population Pyramid 1976	5
Figure 3	Mackenzie Population Pyramid 1996	6
Figure 4	Highway Improvements	8
Figure 5	Quality of Life Indicators of Males/Females in Single Industry Towns	15

List of Tables

Table 1	Mackenzie Labour Force and Major Mill Employment	3
Table 2	Population Counts	5
Table 3	Questionnaire Summary	17
Table 4	Questionnaire Respondents	18
Table 5	Employment Location of Employee Respondents	19
Table 6	Residence of Respondents	19
Table 7	Age of Respondents	20
Table 8	Sex of Respondents	20
Table 9	Marital Status of Respondents	20
Table 10	Respondents Employment Status	21
Table 11	Spouse Employment	21
Table 12	Defining Movers	22
Table 13	Defining Stayers / At-risk	22
Table 14	Previous Community - Movers Only	23
Table 15	Age Group - Movers Only	23
Table 16	Reasons for Moving - Movers Only	24
Table 17	Significant Events - Movers Only	24
Table 18	Attraction to New Community - Movers Only	25
Table 19	Retention Factors - Movers Only	25
Table 20	Benefits to Living / Working in Mackenzie - At-risk Residents Only	27
Table 21	Difficult Aspects to Living / Working in Mackenzie - At-risk Residents	28
Table 22	Mackenzie's Economic Situation - At-risk Residents Only	28
Table 23	Satisfaction with Services - At-risk Residents Only	29
Table 24	Agreement with Statements - At-risk Residents Only	30

Implications of Changing Commuting Patterns on Resource Town Sustainability:

The Example of Mackenzie, British Columbia

Introduction

Single-industry, resource-based towns remain a dominant feature in Canada's north. Many of these towns struggle with the dual pressures of single-industry dependence and resource sector restructuring. In order to move away from this position, attention is being "given to local capacity building so that people and places can react to the pressures and opportunities arising from processes of 'change' or 'adjustment'" (Halseth and Lo, 1999:1). Equipping people with information about the kinds of changes occurring within their community will provide them with the opportunity to deal with risk factors, ameliorate negative community impacts, and plan ahead for the town's future. This report looks at one issue facing many small resource towns - the loss of population to larger centres - and provides information which local decision-makers can use to build strategies suited to their community.

Migration and mobility have been a fact of life in small, resource-dependent, towns (Hayter, 1979; Matthiasson, 1971). As industries developed, people moved to these often isolated locations for the work and to build a life for themselves and their families. Over time, improvements in transportation infrastructure and the development of regional urban centres created alternatives for workers. Commuting from a larger regional center, on a daily or weekly basis, becomes an option. In some places, townsites have closed down as workers and their families relocated to these adjacent urban centres. Even where a townsite does not close, the loss of large numbers of workers has an impact on community viability as services may no longer be available and such facilities as schools or medical clinics may close.

Thus, a study that identifies risk factors associated with increased out-migration of resource industry workers would be beneficial for many Canadian northern towns. This information could enable residents and decision-makers to mitigate such factors, and to provide the opportunity for their community to maintain and further develop a more diverse economic base. This study looks at the phenomena of "extra-community" commuting in Mackenzie, British Columbia among employees of the major forest product facilities. Ultimately, this research will contribute towards a better understanding of how community leakage through "extra-community" commuting affects resource town viability.

Research Plan

The research uses a case study approach by looking at the community of Mackenzie, British Columbia. The scope and objectives of the research are fourfold:

1. To examine the scale and extent of extra-community commuting by resource industry employees.
2. To explore the reasons why resource industry employees remain in or leave their community.
3. To pursue the question of timing and the connection to critical pressures that may increase the possibility of extra-community commuting by resource industry workers.
4. To identify groups of resource industry employees who are “at-risk” of leaving their base community to commute.

To accomplish these objectives, this report is organized in the following manner. It will begin with a brief introduction to the community of Mackenzie. This introduction will include reasons why the issue of extra-community commuting is of importance to community leaders and residents. This will be followed by a brief literature review identifying key definitions, the general issues of mobility and commuting, and how the phenomena of extra-community commuting fits into our understanding of resource-based towns. The methods used to collect information for this research will be covered in the next section, followed by an analysis of the questionnaire data. Final sections include a discussion of implications which can be drawn from the research.

Mackenzie

The town of Mackenzie is located about 200 kilometers north of Prince George in north-central British Columbia (Figure 1). It is a resource-based, single-industry, “instant town” founded in 1966 in conjunction with the massive hydroelectric project that created the Williston Lake reservoir. The Mackenzie townsite was developed to be the processing center for a new regional forest industry.

At present, two large sawmills (Abitibi-Consolidated and Slocan Forest Products), a pulp mill facility (Fletcher Challenge Canada Ltd.), and a pulp and paper plant (Abitibi-Consolidated) provide a large share of basic sector employment (Table 1). There are also a number of small value-added forest industries and forest support industries in the town as well. With a 1996 population of approximately 6,000 people, a local service and administration economy has also developed. Many of these service and support jobs depend directly on the major mills.

Table 1
Mackenzie Labour Force and Major Mill Employment

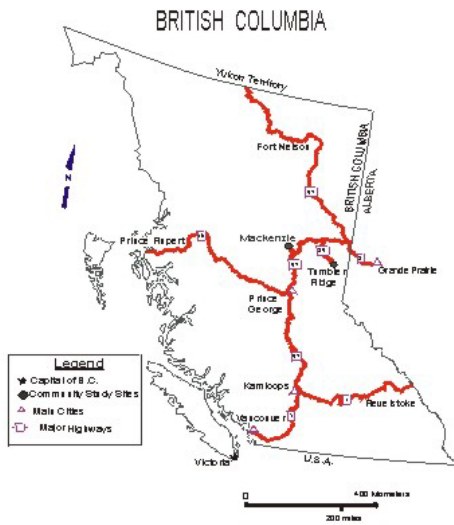
Mackenzie Labour Force	# in Labour Force ¹
Agriculture/Extraction	230
Manufacturing	1,735
Service	1,570
Total	3,535

Mackenzie Mills	# Employees ²
Fletcher Challenge	251
Abitibi-Consolidated	205
Slocan Forest Products	410
Total	866

Source: ¹1996 Canada Census
²Mill Human Resources offices, does not include management or office staff.

As shown in Table 2, the population of Mackenzie has remained relatively stable over time. This apparent stability belies that there has in fact been considerable change and turnover in local residents. Since the early 1970s, new firms and industrial plants have come on line. These have added to the local job base and brought people into town. At the same time, automation and other restructuring outcomes have meant job reductions in many of the major industrial operations. All of this means that there has been considerable in-migration and out-migration of workers and their families over time.

Figure 1



North Eastern Region

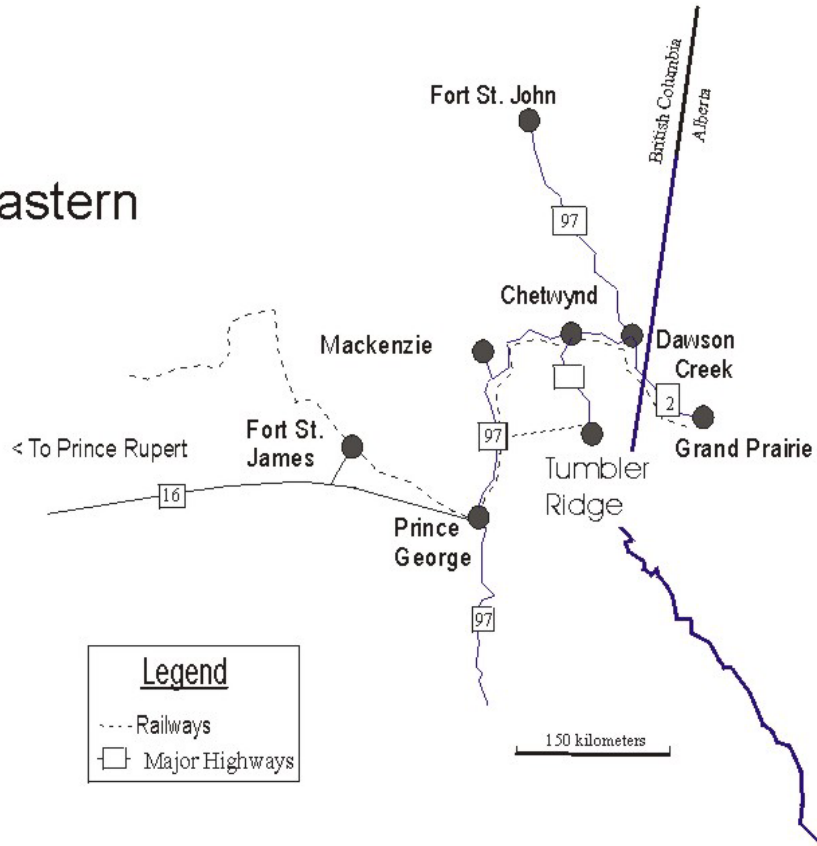


Table 2
Population Counts

Date	Mackenzie
1971	-----
1976	5,340
1981	5,890
1986	5,545
1991	5,796
1996	5,995

Source: Statistics Canada

An effective tool for examining the age structure of a local population is the “population pyramid” (Norton, 1998). A population pyramid involves disaggregating a population into males and females by age groups or “cohorts”. For each of these cohorts, the proportion of the local population that they comprise is then calculated. The standard pattern is to use 5 year age cohorts. The visual pattern created by stacking age cohorts allows ready comparison and interpretation. In the population pyramid figures for Mackenzie, 5 year age cohorts are used up to the “60 to 64” group. As a result of the very small proportion of residents over age 65, the final cohort is “aged 65 and over”.

The 1976 population pyramid for Mackenzie resembles a pattern common in new and expanding resource-based communities in that there is a large proportion of young families. As can be seen in Figure 2, there are “bulges”, or large shares of the population, in both the 20 to 35 year age groups and in the 0 to 8 year age groups. This type of pattern is typical of the early development phases in resource industry towns where young families are recruited and encouraged to settle and become part of the community. In these new towns, where people have come to create careers in the expanding workforce, it is not surprising to see a comparatively small percentage of older residents.

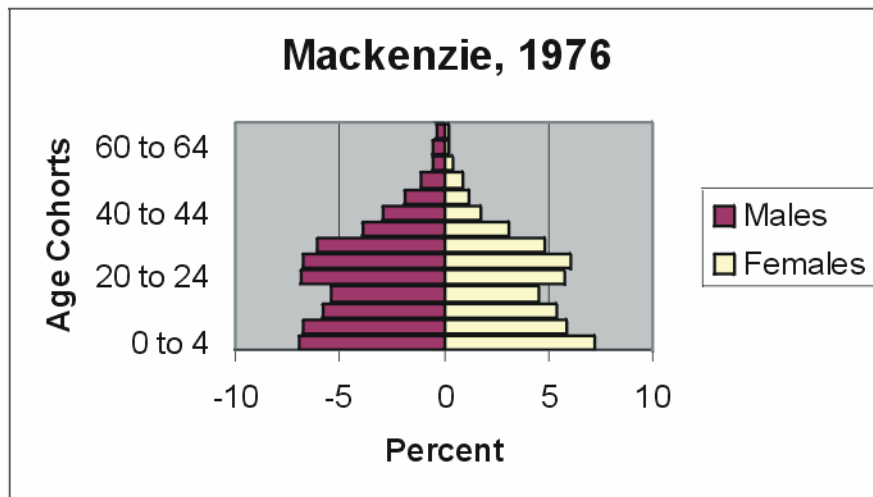


Figure 2 - Mackenzie Population Pyramid 1976

By 1996, the population pyramid for Mackenzie is beginning to look quite different (Figure 3). Most of the age cohorts are coming closer in size, a change which is generally characterized as moving towards a more “stable” population structure. There is still some skewing towards a larger share of the local population aged 40 - 44, with this feature being linked with local employment opportunities in the forestry sector. The small growth seen with the older age cohorts means that Mackenzie may soon be required to deal with the needs of an older population including different health care, support, and housing needs.

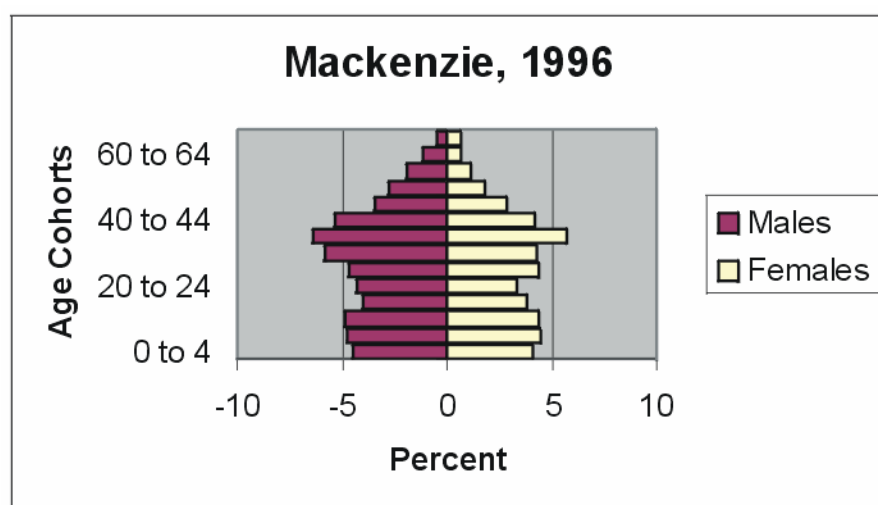


Figure 3 – Mackenzie Population Pyramid 1996

Mackenzie has developed into a well-equipped town. It has all of the basic requirements of a small community including childcare centres, an impressive recreation centre, public internet at the local library, grocery stores, two local malls, several restaurants, a fire department, RCMP offices, and an active municipal government. There is also an active network of volunteer groups. These provide a wide range of services, activities, and facilities to local residents (Bruce, *et al.*, 1999). In addition, the community is situated in a wilderness area abundant in outdoor recreation opportunities. However, Mackenzie’s location about two hours north of Prince George generates considerable retail sector leakage.

Mackenzie residents are attracted to Prince George by the range of shopping and entertainment options. This includes the large ‘wholesale’ and ‘big-box’ stores. Although there are six general practitioners working in Mackenzie, many residents must travel to Prince George for specialist medical attention. In addition, Mackenzie’s hospital only handles emergencies and most cases are transferred to Prince George Regional Hospital. The main campuses of the University of Northern British Columbia (UNBC) and the College of New Caledonia (CNC) are also located in Prince George. Although they are accessible to Mackenzie residents, the daily commute to and from Prince George – especially in winter driving conditions – would be very difficult. Students attending these institutions would most likely live in Prince George throughout the week and come home on the weekends, or simply spend their academic semester in Prince George. Legal services are accessible to Mackenzie residents once a week, but if additional legal services are required then they must travel to Prince George. Therefore, despite a wide range of services

being available in Mackenzie, the need for higher order or more specialized services often necessitates regular travel between Mackenzie and Prince George.

One of the factors affecting the frequency of travel by Mackenzie residents to Prince George has been the condition of the road. Over time, the road connections have improved tremendously. Veemes (1985:36) describes the 1966 road conditions in Mackenzie:

...the road from the Hart Highway into town was 29 kilometers of rutted gravel. When it rained, and it rained a lot that first summer, the road was muddy; during dry spells the dust clouds could be very dense. Moreover, it was so narrow that before the Department of Highways widened the new south road it was used one way for traffic going out of town only. Anyone coming into the town used the north road as the Parsnip River Forestry Development Road was called. It is hard to say which of the two roads was the worst.

For shopping or for medical help one had to travel the 190 kilometers to Prince George and after conquering the graveled Mackenzie road, had to contend with the Hart Highway which in those days was narrow, winding, and with many dangerous blind curves. During those earlier years there were many accidents, attributed more often than not to poor road conditions.

In 1970, the paving of the Mackenzie road to the Hart Highway has been said to have improved the quality of life for Mackenzie residents. Veemes (1985:71-72) stated that:

[t]he most significant development [in Mackenzie] was the rebuilding and paving of the Mackenzie Highway.... Everyone takes the road for granted now, but back then it made a great difference to the way the people in Mackenzie felt about their town and about themselves. ...'Civilization' was finally within reach and the sense of isolation largely vanished.

Over the years, the road from Mackenzie to Prince George has been steadily improved. Most of Hart Highway has been improved tremendously over the years through programs of widening, straightening, resurfacing, and seal coating. This has considerably shortened the average travel time and made winter travel much safer. Figure 4 contains a list of some of these improvements.

Figure 4 Highway Improvements

1980/81	<ul style="list-style-type: none"> - re-alignment of road near Summit Lake - repaving of road
1989/90	<ul style="list-style-type: none"> - from Mackenzie to Mackenzie Junction, paved over existing pavement to straighten road and smooth surface - road leveled out to fill in holes - widening and re-alignment to eliminate hairpin curves on a 20 km. stretch near Red Rocky Creek. This included widening of shoulders with 2 metres of paved and 1 metre of gravel for greater safety margins. This was the last major re-alignment.
summer 2000	<ul style="list-style-type: none"> - shoulder width increased to 2 metres paved south of Whiskers Park to Mackenzie Junction. - rumble strips on shoulder were added to warn drivers - excavations and ditching was undertaken to address water problems on road. This involved laying down perforated pipe, adding an asphalt-bound open graded base, and a course base so that the water drains directly to the shoulder.

Source: Ministry of Transportation and Highways, personal correspondence.

As the road conditions improved, and the driving time to Prince George shortened, Mackenzie residents took the opportunity to travel to Prince George not just for necessities, but also for recreation and regular family outings. In the late 1960s, it would sometimes take over three hours to travel between Mackenzie and Prince George. Today it only takes about two hours. Winter road conditions and wildlife on the highways at night still affect driving. Despite these hazards, some mill employees have chosen to relocate to Prince George and to commute to Mackenzie for work.

Typical of single-industry towns, the ebbs and flows of British Columbia's forest industry have had an impact upon Mackenzie's economy and families. More than 30 years after development, little economic diversification has occurred and there is still considerable dependence upon the forest industry. In recent years the town has endured several strikes, with one lasting just over nine months. Company restructuring and takeovers have become a common phenomenon, and technological improvements in the mills have reduced jobs. Mackenzie's economy, "being entirely dependent on the forest industry, is very vulnerable to strikes, lockouts and other disruptions and a total shutdown of the mills causes the town to soon feel the pinch" (Veemes, 1985, p.88). These types of pressures, and concerns about economic uncertainty, may lead families to consider moving away from town. For some who have moved, they clearly identify the lifestyle of living in the more diverse city of Prince George, while maintaining employment in the high wage earning mills of Mackenzie as a feasible alternative. This report explores this

issue of extra-community commuting in order to give community leaders and business owners information to become more pro-active in developing strategies to retain residents and improve local quality of life.

Literature Review

Introduction

The story of extra-community commuting is not unique to Mackenzie. There are many towns across northern British Columbia and Canada where this occurs to some degree. Recalling the impacts of extra-community commuting in a small sawmill town in the upper Fraser River region, a long time northern resident recalled:

Some people worked equipment, and others had various jobs within the sawmill. As they lived in an isolated town, it took them a long time to go to the city, but people still went. They went for shopping, for a treat, or to see a movie. Then the road was fixed up, then paved, and you could get to town much quicker. As there wasn't much to do in the sawmill town, not a lot of stores, and the schooling was just elementary, more and more people decided to live in a big town and sawmill workers would just commute. Eventually, the town disappeared (personal communication, 2000).

With such catastrophic consequences, it is worth looking at extra-community commuting before it comes to dominate a town's future.

This literature review will place into context the issue of commuting in Mackenzie. Key definitions are first identified, as are some basic characteristics of single-industry "instant" towns. The next part will examine reasons why people migrate and what type of person is more likely to engage in extra-community commuting.

Key Terms

Single-industry towns:

Communities where over 80 percent of the employed population works within one industry or its supporting industries. Most commonly associated with resource-based industries such as forestry, mining, or fishing.

Commuting:

Travel on a daily, weekly, or monthly basis to and from a work place and a living place.

Extra-community commuting:

Travel daily, weekly, or monthly to and from a work place located in one community, and a living place located in a completely separate community.

Population turnover:

Changes in population over time. These changes can be measured by comparing the number of people who come into the community to live (in-migrants) with people who leave the community (out-migrants).

Employment transition:

Changes in number people employed at a particular place over a specific period of time. These changes in the number of people employed can occur for a variety of reasons.

Economic leakage:

The gradual escape or loss of money from a community. For example, people choosing to spend their money outside their own community as opposed to spending money within their community.

Push/pull:

Factors associated with people deciding to leave particular places (push) and factors associated with drawing or attracting people to certain places (pull).

Migration:

The movement of people between different places.

Mobility:

The movement of people in and around a particular place.

Importance of single-industry towns

Single-industry towns are very important to the geographic makeup of British Columbia and Canada. They serve as economic engines as well as homes and communities. Not only does a large proportion of the Canadian population live in such places, but their resource-based industries provide the raw materials which sustain the economies of our urban centres. British Columbia is a clear example of resource “frontier” development directed from far-off metropolitan centers (Bradbury, 1987). With BC’s geography so dominated by forestry and mining companies in single-industry towns, it is known as “the company province” (Porteous, 1987).

Single-industry resource-based communities are a particular type of small town. They serve as central places for processing raw materials and they function within both a local resource supply region and a global marketplace. Mackenzie’s location along the Williston reservoir and its vast forested land base were key to its establishment. But “resource based communities [that] serve both renewable and non-renewable industries and are especially vulnerable to factors that affect this single function” (Everitt and Gill 1993:256). Mackenzie is a classic example of a single

industry town. While there are at least three major companies running mills with different functions (pulp, pulp and paper, paper, sawmill, and planer), the local economic base is still dependent upon forestry.

Characteristics of single-industry towns

Porteous (1987) identifies four main characteristics of single-industry towns. First, the community is typically isolated. Second, the community most often has a very small population. Third, a single company or industry must provide at least 80 percent of basic employment. Lastly, the managers of companies are expected to provide the bulk of the employment, houses, and services for residents.

In general, Mackenzie fits with Porteous' characteristics. The town is located in north central BC and is 30 kilometers off the main highway through the region. Although the work force was provided with a shorter commuting route to the mills, the location off the highway made residents feel isolated, particularly in the early days when the road was not paved (Veemes, 1985). Second, with a 1996 population of approximately 6,000 people, Mackenzie has always been a small town. Third, the forest industry supports nearly all basic sector employment. Finally, as an "instant town" the first large companies were responsible for providing amenities such as housing and basic services.

In more general terms, Lucas (1971), in his classic study *Minetown, Milltown, Railtown*, also identified some key characteristics of single-industry towns. These included "isolation", "economic restructuring", and an "unbalanced" labour force. Randall and Ironside (1996) suggest that these characteristics are not static. They argue that isolation cannot be viewed as a concrete characteristic, but rather must be interpreted depending on the community. In terms of economic restructuring, they suggest that "despite inevitable booms and busts facing these communities, the population and labour market are extremely resilient to change" (Randall and Ironside, 1996: 23). While labour forces in single-industry towns remain male dominated, Randall and Ironside (1996) argue that there are degrees of labour force differentiation by occupation and gender.

Although most single-industry towns may fit into the stereotypical characteristics described above, there are often significant differences between the perceptions people have and the reality of the particular town. How these characteristics (such as isolation) are received and perceived by residents often affects their level of satisfaction and commitment to the town.

Why people move

As perceptions about a place can dictate the level of satisfaction residents have about their community, it is important to gather information about certain attributes that motivate people to move into or out-of communities. There is a considerable literature on household mobility and migration decision-making. In this section some key themes are highlighted.

Yeates (1990) describes how the Brown-Moore model focuses on migration decision-making motivated by stresses in the household's environment. As a two stage process, there is first a decision on whether or not to move. Secondly, there is the decision about where to move. Two main types of stress, internal and external, prompt households to move. Internal stress is often more associated with life cycle changes and space or facility needs. For example, as a family grows so to does its space needs, and a household may choose to move to acquire more bedroom space for children. External stress occurs from changes within the local environment such as deterioration of the home, neighborhood, or town.

Causes of stress and factors which hold people in place have been well identified. Peter Rossi's (1980) classic work on "Why Families Move" identifies life cycle stage and vital processes such as births, deaths, marriages, and divorces as critical sources of stress. Rossi believes that residential mobility is mainly a product of households trying to meet their particular housing needs. Satisfaction with the size, choice, and quality of dwellings in a housing market is important. In terms of factors which would hold people in a town or neighbourhood, Knox (1995) argues that people are affected by subjective factors such as the desire to improve their quality of life. For Knox, emotional attachment to place, and to the people living in that place, are as important as a household's need for space. In retaining residents, town planners have recognized the need to provide a diverse range of quality and well designed housing and to provide the amenities and community infrastructure to develop an attachment to place. These two factors have been argued to greatly reduce transiency in single-industry towns (IBI Group, 1980; Veit and Associates, 1978; Berry *et al.*, 1975; Barton, 1999).

Push and Pull Factors

Norton (1995) discusses the phenomena of "push-pull" migration factors. He explains that people move from one location to another because they consider the old location as less favorable in some crucial aspect compared to the new location. These "push-pull" factors can be related to economic, political, and environmental issues. Focusing upon the economic argument, residents may be initially attracted to the high wages associated with working in the forestry industry and may be pulled into the community as a direct result.

Similarly, Lee (1966) argues that people choose to migrate based on sets of push and pull factors concerning their origin, their proposed destination, intervening obstacles, and personal circumstances. But it is not just a simple calculus of the pluses and minuses that decides migration. Instead, Lee argues it is rather how an individual or a household overcomes or adjusts to obstacles or changes in life cycle stages that dictates the decision to move.

Push and pull factors are thus linked to community satisfaction. Lewis (1979) argues that if an individual is happy within their town, despite the enticing 'pull' factors of another town, the individual will not migrate. Conversely, if an individual is unhappy then it will take only a relatively little 'push' before they decide to move. People's subjective interpretation of their quality of life plays a significant role in the decision-making process to stay in or move out of a town (Bowles and Beesley, 1991).

These subjective quality of life indicators are not stagnant. They change with time. One recent trend is for urban residents to migrate into rural areas to live. Because people are attracted to small, rural environments by the perception that such places will increase overall satisfaction of life, people are moving to rural places for subjective reasons alone (Brown and Wardwell, 1980). The stereotype of rural places being quiet, optimum family environments, with less pollution, and a more relaxed way of life are more than enough to draw significant numbers of people to relocate their family (Field, 1988; Marsden, *et al.*, 1990). Davies and Yeates (1991) further identify privacy, low house prices, size of home, amount of land, attractiveness of the landscape, and less crime as important factors influencing people's decision to move out of large cities.

Increased migration into rural and small town places raises the issue of resident retention. Brown and Wardwell (1980) defined residents who stay in a rural place for less than three years are considered to be short-term residents, whereas if residents stay longer they were considered long term residents. Longer term residents tend to be more satisfied with their general quality of life and are, therefore, able to contribute to a stable workforce and community environment. The attractiveness (or pull) of the rural community is stronger than any dissatisfaction (or push) with a more limited range of shopping or services.

Perceptions of quality of life, housing choice, services, and employment opportunities underscore the kinds of push and pull factors influencing the concept of "extra-community commuting" as studied in the Mackenzie / Prince George case. Mackenzie clearly has many attractive features in regard to these issues but must deal with some shortfalls, or perceptions of shortfalls, with others.

Who Moves

Although there may be general sets of push and pull factors which affect migration patterns, some types of people are more likely to migrate than others. The mobility of these different groups applies to the long term decision of changing residence locations versus the more short term issue of commuting for work, services, or other needs. For example, Everitt and Gfellner (1996) studied the mobility of elderly people in rural Manitoba. They found a preference to remain in their local communities regardless of how deficient these places were in terms of necessary services and amenities. This attachment to place is built over time and its bonds have a strong hold on these residents.

Tkocz and Kirstensen (1994) point out that women and men have very different migration and commuting patterns. Women typically adjust their commuting patterns depending on their life cycle. Once children are introduced it often becomes the female role to include them into her daily routine and commute. Green and Meyer (1997) suggest that it is not only a sex difference

that dictates who the movers will be. They add that people in their 30s and 40s are most likely to commute beyond their town. In addition, Green and Meyer suggest that demographic classification, employment type, and location in Canada are all variants in classifying what groups of people are most likely to migrate or commute.

In towns such as Mackenzie the residents, especially during the early years, have been very mobile. The attraction of high wages, the concentration of 30 to 40 year old household heads, and the limited time to develop a deep attachment to place all played a role in this in- and out-migration. Like residents of other single-industry towns, they were accustomed to moving (Lee, 1966). Residents of single-industry towns must be able to accept a fluctuating economy dictated by resource market booms and busts. If residents are unable to adjust, and their quality of life is perceived to be affected, they will be more likely to move out of town. However, strong attachment to place can mitigate some of these 'push' effects.

Historic Migration Patterns in Single-industry Towns

The reasons why, and types of, people who move in and out of single-industry communities differ from the general migration population. Field (1988) found that isolation, climate, and lack of services pushed people to migrate from rural to urban places. In addition, Parson (1991) argued that single-industry, resource-based, towns are particularly vulnerable to changing economic conditions and may decline quickly if resource extraction ceases (Bradbury and St-Martin, 1983). It is argued that high rates of population turnover is somewhat characteristic of single-industry resource towns as people arrive in response to lucrative opportunities, stay a few years, and then move on. But what are some of the reasons underlying this pattern.

Krahn and Gartrell (1981: 2) studied residential mobility in single-industry communities and argued that "the pull of migration is the prospect of upward social mobility, of being better off by moving elsewhere than by staying put". In single-industry towns, characteristics such as higher than average incomes, good fringe benefits, more employment security, and better jobs overall create a 'pull' attraction.

In contrast to such 'pull' factors are also sets of 'push' factors. Pinfield and Etherington (1982) investigated three coal mining towns in the East Kootenay region of British Columbia and identified three sets of push factors. Job related factors unique to single-industry towns include the likelihood of being laid off and the regularity of strikes, lockouts, or work shortages. Some community-related factors included lack of housing availability, isolation, and climate. Finally, residents in these mining towns felt their living costs were too high, and the housing quality, shopping places, entertainment, and public transportation were all inadequate, and as a result, left the community for more adequate facilities and services (See Matthiasson (1971) for a similar

study of quality of life among residents in Fort McMurray, Alberta) .

Figure 5
Quality of Life Indicators of Males / Females in Single-Industry Towns

Variable	Males	Females	Males / Females
Work	Work satisfaction / self satisfaction	No satisfaction link between self and work	Satisfaction with finances directly linked to retention in employment and within the community
Education	Higher education = higher satisfaction	No links with level of education and level of satisfaction	
Social Engagement	Introverted males stay longer	Higher amount of social involvement = higher degree of overall satisfaction	
General Life Satisfaction	Satisfaction at work most important	Level of anxiety felt on a daily basis highest quality of life indicator	

Source: Nickels *et al.* (1976)

Nickels *et al.* (1976) conducted a quality of life study in Lynn Lake, Manitoba, in an effort to examine such push factors as isolation (Figure 5). While all of the people included in the study initially came to the community to pursue employment opportunities, males and females demonstrated both different and common quality of life identifiers. For males, positive relationships between work satisfaction and satisfaction for oneself and one's outlook for the future was key. Education level predicted satisfaction for males as lower education level equated with a higher degree of satisfaction. Overall, life satisfaction for men was mostly determined by satisfaction in their working environment. For females, the life satisfaction measures were more diverse. For employed women (of whom very few were in the study), there were no linkages between satisfaction with work and satisfaction in the community nor were there linkages with education levels. However, a significant indicator of quality of life for women was the level of anxiety they felt on a daily basis. Higher amounts of social involvement within the community reduced the overall stress level women felt and improved their level of satisfaction. Relationships between family, friends, and the community were very important measures of quality of life for women.

Single-industry communities are very important and unique parts of the Canadian landscape. By understanding the characteristics of the towns, the challenges that residents face within these special communities become more clear. Due to the nature of these towns, where most residents originate from different places, expectations are high and when needs are not met, perceived overall quality of life deteriorates. Once people perceive their satisfaction with community life decreasing, the chances of them considering relocation become greater. Based on these issues,

towns can become proactive in implementing services and amenities that will help retain residents and reduce economic leakage. Although there should be concern about why some residents are intent on leaving one town for another, more attention should be paid to the at-risk residents - those considering a move. Once the at-risk residents are retained, the community can become much more stable.

Methods

The research methodology involves 5 stages:

Site Visits

Four site visits were part of the research design. The preliminary visit was to meet with our research partners and establish local logistics. Trip two was for interviewing people in order to collect data needed to design the questionnaire. During the third trip, a search of historical newspapers and a local record check was completed. A fourth trip occurred after the research to present our results to our partners and share information with them.

Interviews

A total of fourteen interviews were conducted in order to gather information to develop the questionnaire. Specifically, the purpose of the interviews was to gain an idea of some of the decision-making factors and advantages/disadvantages of 1) living and working in Mackenzie, and 2) commuting between Mackenzie and Prince George. There were eleven interviews conducted in Mackenzie and three interviews conducted in Prince George. The interviewees had a wide mix of experience in terms of place of residence, place of employment, and history with extra-community commuting. There were eight open ended questions used in a face-to-face interview format (Appendix 1a and 1b). This type of interview format was used as it did not structure the answer choices and allowed respondents to answer questions any way they wished (Li, 1981).

Questionnaire

Once the analysis of the interviews was complete, the questionnaire was developed. A mail survey technique was applied due to its advantages in allowing for a large number of respondents to be surveyed in a relatively short period of time, being relatively inexpensive, and allowing respondents to answer the questions at a convenient time for them (Mangione, 1995; Jackson, 1988). It was then sent to six volunteers to be pre-tested. Pre-testing is an important part of the questionnaire process. It provides feedback from the volunteer respondents about the clarity of the questions and how respondents will interpret instructions (Li, 1981).

The questionnaire, which like the open-ended interviews had UNBC Ethics Review Committee approval, was distributed to all employees of the three large forestry companies in Mackenzie via the Human Resources Managers and the union presidents. Mill employees were chosen to be the recipients of the questionnaire because their processing industry is central to Mackenzie's

economy and they have also been subjected to considerable job restructuring and change over the past few years and were, therefore, most affected by stresses within their living and working environment.

The distribution of the questionnaires within the mills was done in coordination with the Human Resources Managers. The questionnaires were sent to the managers who arranged to have one questionnaire attached to each paycheck (Appendix 2). Potential respondents were given three weeks to fill out the questionnaire from the payday when the questionnaires were distributed. Locked drop boxes were placed in lunch rooms by the Human Resources Managers in order to collect completed questionnaires.

Table 3
Questionnaire Summary

Mill	Questionnaires Sent	Valid Responses	Response Rate (%)
Slocan Forest Products	410	79	19
Abitibi-Consolidated Inc.	205	93	45
Fletcher Challenge Canada	251	120	48
Total	866	292	34

Source: Questionnaire

The response rate demonstrated that the questionnaire peaked the interest of many Mackenzie Mill employees (Table 3). The 34 percent response rate is statistically valid and yields an error of between 2.1 and 3.5 percent (with 95 percent confidence) (Babbie, 1979). The questionnaires were completed during the months of May and June. Due to this timing, summer students were involved in filling out some of the questionnaires. One reason for the lower response rate at Slocan Forest Products could be that the mill was in the process of contract negotiations at the time and employees may have been nervous about filling out any type of survey.

Analysis

Statistical summaries were developed from the questionnaire data. Three separate groups were identified from the returned questionnaires. The **“movers”** were identified as those who continue to work in the Mackenzie mills but have already moved out of town and reside elsewhere. The **“at-risk”** population included those who continue to work and live in Mackenzie but who have seriously considered moving out of town. Finally, the **“stayers”** were identified as those who live and work in Mackenzie and have never thought seriously about leaving town. The grouping of the questionnaires was to establish the scale of the extra-community commuting, or “at-risk”, problem. The raw data was transferred from the individual questionnaires into a SPSS database. Cross-tabulations and frequency counts were produced from the raw data and built into the analysis and discussion sections of this report.

Analysis / Findings

Introduction

The analysis includes four parts. The first involves a review of the general characteristics of the response group. The respondent profile is important in order to develop a sense of “representativeness” for our sample. The second part of the analysis undertakes to distinguish the “stayers”, “at-risk”, and “movers” within the respondent group. The third part of the analysis focusses upon movers and some of their main reasons for moving. The final part reviews the at-risk respondents. The focus here is upon their levels of satisfaction with services and the community.

Profile

The first task in any questionnaire analysis is to outline the general profile of respondents. This will provide a foundation for readers to evaluate the degree to which the survey can be said to “represent” the broader community.

Table 4
Questionnaire Respondents

Respondent Type	Valid Percent (%)
Employee	95.8
Spouse	4.2

n=288

Source: Questionnaire

In order to receive as many completed questionnaires as possible, either the mill employee or their spouse could fill out the questionnaire. Nearly all questionnaires were completed by the mill employees themselves (Table 4). The respondent group is very much the target population of mill workers.

Table 5
Employment Location of Employee Respondents

Mill Name	Valid Percent (%)
Slocan Forest Products	27.7
Fletcher Challenge Canada	40.1
Abitibi- Consolidated Inc.	32.2

n=292

Source: Questionnaire

As noted in Table 5, the majority of the respondents came from Fletcher Challenge Canada (40 percent). A further 32 percent worked at Abitibi-Consolidated (formerly Donohue Industries) while 28 percent worked at Slocan Forest Products. In addition to place of work, it was also important to learn where most of the respondents considered their permanent residence.

Table 6
Residence of Respondents

Residence	Valid Percent (%)
Mackenzie	91.1
Prince George	4.1
Prince George and Mackenzie	0.3
Other	4.5

n=292

Source: Questionnaire

In trying to assess the extent of extra-community commuting by Mackenzie mill employees, the place of permanent residence was a very important question. Most questionnaire respondents lived in Mackenzie (91 percent) and only 4.1 percent resided in Prince George (Table 6). In addition, there were 4.5 percent of respondents who lived in places other than Mackenzie or Prince George. Further review identified that some of these responses were from summer students back “home” in Mackenzie for the summer but who live elsewhere during the school year.

Beyond where people work and where they live, it is important to understand more about the age, sex, employment status, and marital status of the respondents. Again, the purpose is to give us a profile of the questionnaire respondents.

Table 7
Age of Respondents

Age Group (years)	Valid Percent (%)
<25	5.6
25-35	25.0
36-45	34.7
46-55	26.7
56-65	8.0
n=288	

Source: Questionnaire

The questionnaire responses for age (Table 7) follow the suggestions from the population pyramids for Mackenzie that there has been a change from young family residents to middle age residents. About 34 percent of respondents are aged 36-45 and a further 27 percent are aged 46-55.

Table 8
Sex of Respondent

	Valid Percent (%)
Male	84.3
Female	15.7
n=274	

Source: Questionnaire

Traditionally, resource industry employment has been dominated by male workers. As most respondents were mill employees, it is not surprising that over 80 percent of respondents are male (Table 8).

Table 9
Marital Status of Respondent

	Valid Percent (%)
Single	11.1
Married / Common Law	80.6
Separated / Divorced	6.9
Widowed	0.7
Other	0.7
n=289	

Source: Questionnaire

As a reflection of the age pattern, it is not surprising that most respondents reported that they were married (Table 9). Just over 80 percent said they were in married or common law relationships. This is a quite typical pattern for resource industry towns (Lucas, 1971; Halseth, 1999). Also, fitting with this pattern of middle age and married status is that 87 percent of respondents report that they have children.

Table 10
Respondent Employment Status

	Valid Percent (%)
Full Time	95.8
Part Time	1.4
Other	2.8

n=287

Source: Questionnaire

Table 11
Spouse Employment

Is Spouse Employed?	Valid Percent (%)	Valid Percent (%)
Full Time/Part Time		
Yes	73.5	
Full Time		64.0
Part Time		30.4
Other		5.6
n=178		
No	26.5	

n=245

Source: Questionnaire

In Table 10, nearly all respondents are employed full time (96 percent). When asked whether the spouse of the mill employee was employed, about 73.45 percent said yes (Table 11). For these employed spouses, however, only 64 percent were employed full time and about 30 percent were employed part time. Such differences, since they are associated with male/female differences, can reflect factors ranging from lack of job opportunities for women to choices about staying at home with children or working only when children are in school.

“Stayers”, “Movers”, and “At-risk”

The second part of the analysis is concerned with distinguishing between “stayers”, “movers”, and “at-risk” populations within the respondent group. As described above, “stayers” are identified as those who live and work in Mackenzie and have never thought seriously about leaving town. “Movers” are those who continue to work in the Mackenzie mills but have already moved out of town and reside elsewhere. The “at-risk” population includes those who continue to

work and live in Mackenzie but who have seriously considered moving out of town.

Table 12
Defining Movers

Place of Residence	Valid Percent (%)
Mackenzie	91.1
Prince George / Other	8.9

n= 292

Source: Questionnaire

One of the key purposes of the research was to identify the scale of extra-community commuting into Mackenzie. The questionnaire asked respondents to identify where they lived. The “movers” population was defined as those who worked at the Mackenzie mills but who lived outside of the town. As shown in Table 12, approximately 9 percent of the 292 respondents who answered this question lived in Prince George or ‘other’ towns. For issues related to confidentiality, the ‘other’ towns cannot be identified.

For the purposes of this report, respondents who identified Mackenzie as the place where they lived were then separated into two groups. This separation was based on the question “If you live in Mackenzie, have you ever seriously considered moving away” (Table 13).

Table 13
Defining Stayers / At-Risk

	Seriously Considered Moving Away	
	Yes (%)	No (%)
Mackenzie	68.8	31.2

n=263

Source: Questionnaire

For respondents who identified that they lived in Mackenzie, approximately 31 percent said “no” - they had never considered moving away from Mackenzie. For the purposes of this report, this group is identified as “stayers”. The approximately 69 percent of Mackenzie resident respondents who said “yes, they had seriously considered moving away”, have been identified as the “at-risk” population.

For both movers and the at-risk population, it was important to identify push and pull factors associated with out-migration decision-making. Local organizations need to know what issues are connected with residents moving away from Mackenzie in order to focus their attention.

“Movers”

In this section, a series of issues connected with movers is explored. In the analysis we need to keep in mind that the number of movers is small and, therefore, only major trends could be highlighted. The first of these is whether these people had previous experience living in small towns.

Table 14
Previous Community - Movers Only

Previous Community Lived In	Movers (%)
Always Mackenzie	14.3
Rural	7.1
Town (1,000-10,000)	14.3
Small City (10-30,000)	21.4
Medium City (30-100,000)	7.1
Large City (+100,000)	7.1
Other	28.6
n=14	

Source: Questionnaire

Of the movers who responded, about 28 percent had either grown up in Mackenzie or had come from a town similar in size to Mackenzie (Table 14). A further 21 percent reported they come from a small city of between 10 and 30 thousand people. Clearly, more than half of movers have previous experience and familiarity living in a small place.

Table 15
Age Group – Movers Only

Age (in years)	Movers (%)
<25	21.4
25-35	14.3
36-45	35.7
46-55	28.6

n=14

Source: Questionnaire

Most (approximately 63 percent) of the movers fit into the 36-55 year age categories (Table 15). In general, this pattern fits with the age distribution of ALL questionnaire respondents. When we look at the distribution by males/females, we also see that the general pattern fits with the sex distribution of ALL questionnaire respondents. Thus movers are not confined to a particular age or sex category.

Given that the profile of movers is not “unique”, it is important to consider some of the reasons they had for moving away from Mackenzie despite continuing to work at local mills.

Table 16
Reasons for Moving – Movers Only

Causes of Moving Away	Movers (%)
Long winters	11.7
Sense of Isolation	5.8
Jobs for Spouse	5.8
Spouse Unhappy	5.8
High cost of Living	11.7
Lack of Services	11.7
Social Problems in Town (drugs, alcohol)	2.9
Other	44.1

n=34

Source: Questionnaire

There is no single reason which dominates as to why movers have left Mackenzie (Table 16). In fact, the majority (44 percent) of respondents chose ‘other’ as their answer. In the commentary provided by respondents who selected ‘other’, several were attracted to a more rural lifestyle including farming activities and larger parcels of land on which to live. Others stated that they moved in search of a greater number of social activities or in pursuit of better services. Of the factors listed in the questionnaire, long winters, high cost of living, and lack of services (approximately 11 percent) were main reasons for moving away.

Table 17
Significant Events – Movers Only

Significant Events	Movers (%)
Uncertainty over Forest Tenure	33.3
Company Consolidation	16.6
Strikes	16.6
Layoffs	16.6
Other	16.6

n=6

Source: Questionnaire

In addition to the main reasons for moving, respondents were asked if some significant event(s) in town had caused them to move away from Mackenzie (Table 17). Approximately 33 percent of movers who indicated a significant event(s) as their cause for moving said it was uncertainty over forest tenure that pushed them out of town. Stresses over both general and specific issues has been shown to be major push factors in migration decision-making. However, very few movers answered this question.

Table 18
Attraction to New Community – Movers Only

Attraction to New Community	Movers (%)
Spouse got Job	10.5
Better Education	10.5
Better Medical	5.2
Better Housing Investment	26.3
Better Employment Security	5.2
Better Shopping	10.5
More Recreation Opportunities	21.0
Other	10.5

n=19

Source: Questionnaire

Besides some push factors associated with people moving away from Mackenzie, it is important to consider the pull factors associated with people being attracted to another town. Many movers (approximately 26 percent) indicated that better housing investment pulled them into the towns where they presently live (Table 18). In addition, several movers (21 percent) choose more recreation opportunities as pull factors into their new towns.

Table 19
Retention Factors – Movers Only

Services Needed to Retain Residents	Movers (%)
More Medical	20.0
More Jobs for Spouse	16.0
Better Customer Services	16.0
Better Shopping – more choices	20.0
Daycare linked to Shift Work	8.0
Other	20.0

n=25

Source: Questionnaire

When movers were asked to identify the types of services needed to retain residents in Mackenzie, several responses were popular (Table 19). More medical services and better shopping choices were suggestions for resident retention. In addition, more jobs for spouses and better customer services were identified as needing improvement.

Discussion of Movers

In reviewing this discussion of movers, several key points are worth noting. Because many movers had previous experience living in rural or small town locations, we cannot explain their motivation for moving based simply upon an unfamiliarity with living in places like Mackenzie. In addition, they also do not have any special demographic characteristics (such as age or sex variables) which distinguishes them from stayers. As such, we need to look at issues they identify as 'pushing' them out of Mackenzie or 'pulling' them to their new town. A second observation is that no single reason explains why movers left town. If we collect their reasons, at least three topic areas can be identified: the nature of single industry towns, shopping and services choices, and recreation facilities.

Many of the problems identified by movers as reasons which led them to leave are not unique to Mackenzie but rather reflect conditions common within single-industry towns. Some of these conditions include the limited economic and employment opportunities for spouses or children, the stresses associated with economic boom and bust cycles of natural resource commodities, and the negative consequences which stem from these first two attributes including the diversity of services, shopping, and other activities. Again, it is important to note that these are general characteristics often attributed to the nature of single-industry resource-dependent towns. The one item of note respecting motivations to move is that economic downswings (and commensurate loss of services and related economic opportunities) were identified as a main push factor for people leaving Mackenzie. Retention during these difficult economic times is an important matter.

A second key area identified by movers as something which either pushed them out of Mackenzie or pulled them towards their new town concerns a perceived lack of shopping choices in Mackenzie. Two issues were noted here. The first is the need to maintain as diversified a shopping and services base as possible within Mackenzie. As noted above, this is especially important, and difficult, during times of economic downturn. The second is that increased accessibility to "big box" stores in Prince George is beginning to set a pattern of routine shopping commutes. When such shopping commutes become a family or household routine, the likelihood that a household will seek to relocate and substitute commuting to work in Mackenzie increases. Finally, the issue of health services was noted especially by residents who had children. Perceived lack of services was regarded as a stress for parents. While local governments and groups may have limited power to ??? of modify this issue, different places across Canada have initiated successful 'shop-at-home' and services improvement campaigns, as well as visible lobby efforts to recruit and maintain local medical staff.

The third area in which movers described reasons behind their decision to leave is connected with recreation facilities. This issue may be one which the local government in Mackenzie has already addressed with the significant improvements and expansions to the recreation centre carried out in the summer of 2000. Our "mover" respondents had already relocated outside of Mackenzie prior to those improvements and additions.

“At-risk”

Approximately 70 percent of the questionnaire respondents who live in Mackenzie were identified as being “at-risk” of leaving the community. It is, therefore, important to understand how these at-risk residents feel about living and working in Mackenzie.

Table 20
Benefits to Living / Working in Mackenzie - At-risk Residents Only

	At-Risk (%)
Morfee Lake	7.4
Safe Atmosphere	10.8
Scenic	7.9
Nature and Outdoors	9.3
Quiet	5.3
Love of Winter	1.2
People / Friendly	9.2
Family Town	6.2
Small Town Atmosphere	10.3
Good Paying Job	17.7
Community Center	4.6
Recreation Opportunities	9.2
Other	0.3
n=941	

Source: Questionnaire

Although ‘at-risk’ Mackenzie residents have seriously considered moving away from Mackenzie, they still found a great variety and number of benefits to both living and working in town (Table 20). Although good paying jobs were seen as the main benefit (approximately 18 percent), factors such as safe atmosphere, small town atmosphere, nature and outdoors, and recreation opportunities were also said to be key benefits of the town. For this question, respondents were allowed to identify multiple answers.

Table 21
Difficult aspects of Living / Working in Mackenzie - At-risk Residents Only

	At-Risk (%)
Long Winter	12.8
Isolation	11.9
Closed Community – resistant to change	4.6
High Cost of Living	8.7
Notion of Nothing to Do	1.5
Gossip in Town	6.3
Uncertainty in Forest Industry	6.5
Lack of Shopping Services	19.6
Amount of Health Services	11.3
Quality of Education for Kids	7.6
Lack of Activities for Youth	5.3
Spouse Unhappy	2.2
Other	1.0

n=1140

Source: Questionnaire

At-risk Mackenzie residents were asked to identify difficult aspects of living and working in Mackenzie as they perceived them (Table 21). Lack of shopping services was identified as one of the most difficult aspects of living and working in Mackenzie (19.6 percent). In addition, isolation (11.9 percent), and the amount of health services (11.3 percent), were also identified as difficult aspects. As with Table 20, respondents were allowed to identify multiple answers.

Table 22
Mackenzie's Economic Situation - At-risk Residents Only

	At-Risk (%)
Improving Greatly	0.6
Improving	14.5
Unchanged	24.0
Declining	47.5
Declining Greatly	8.4
Don't Know	5.0

n=179

Source: Questionnaire

Continuing with questions about local conditions, the at-risk respondents were asked to identify how they felt about Mackenzie's economic situation (Table 22). The majority felt it was declining (56 percent). A further 24 percent, however, believe that the economic situation in Mackenzie had remained relatively unchanged over the past five year period. Only about 15 percent of at-risk respondents believed that Mackenzie's economic situation had improved over the past five years. As noted in the literature review, such a negative association with the local

economy creates the pre-requisites for resident out-migration.

Table 23
Satisfaction with Services - At-risk Residents Only

Services	V. Satisfied	Satisfied	Neutral	Dissatisfied	V. Dissatisfied	Don't Know
Health	0.6	8.9	16.2	43.0	30.2	1.0
Education	0.6	18.4	23.5	27.4	21.2	8.9
Recreation	15.1	55.9	19.0	6.1	3.9	-
Housing	2.8	22.3	27.9	29.1	15.6	2.2
Shopping	-	3.9	11.7	36.3	48.0	-
Youth	1.1	5.0	17.9	34.6	35.2	6.1
Women	2.2	11.7	30.7	25.7	19.0	10.6
Small Business	0.6	17.3	35.2	29.1	15.1	2.8
Employment	3.9	24.0	29.0	25.7	11.7	5.0
Rec. Orgs	5.6	50.8	27.7	6.8	5.6	3.4
Comm. Events	1.7	31.1	38.4	18.1	9.0	1.7
Comm. Pride	2.8	20.1	41.9	20.7	9.5	5.0
Vol. Orgs	4.5	36.0	41.0	2.2	5.1	11.2

Source: Questionnaire

At-risk respondents were asked about their level of satisfaction with a range of services and features of Mackenzie (Table 23). A standard five point scale ranging from “very satisfied” through to “very dissatisfied” was used.

In terms of health services, the at-risk respondents are generally dissatisfied (approximately 73 percent). Very few indicated that they were at all satisfied with the level of health services provided in Mackenzie. This fits very well with much recent public debate across northern British Columbia.

In terms of education services available in Mackenzie, at-risk respondents were divided. About half were dissatisfied while another quarter were neutral on the matter. In addition, it must also be noted that about 9 percent did not have an opinion on the education question.

A quite different response came from the recreation question. In this case, over 70 percent of at-risk respondents were satisfied (15 percent strongly satisfied). In terms of housing, the at-risk respondents were again divided. About half were dissatisfied while another quarter were satisfied with local housing. Most of the remainder were neutral on the matter.

In terms of both shopping services and services for youth in Mackenzie, the at-risk respondents were dissatisfied. For shopping services, approximately 84 percent were dissatisfied (48 percent

strongly dissatisfied). For youth services, approximately 70 percent were dissatisfied (35 percent strongly dissatisfied).

With respect to services for women, about 45 percent of the at-risk respondents were dissatisfied. It should be noted that an additional 30 percent were neutral on the matter. Given that most questionnaires were completed by men, the dissatisfaction with services for women must be strong enough to make a clear impression on these male respondents.

Levels of satisfaction with services for small businesses, or for employment, each had large shares of neutral responses. About 45 percent of the at-risk respondents were dissatisfied with services for small businesses while about 37 percent were dissatisfied with employment services.

In concert with the strong levels of support shown recreational services in general, there was also strong satisfaction with services and facilities for recreational organizations. Level of satisfaction among at-risk respondents with community events, community pride, and voluntary organizations is, however, difficult to discern. For all three, about 40 percent of respondents were neutral on these topics. Given the critical importance of these to building community attachment and resident satisfaction (both central to retaining residents) there is some room for optimism as there is at this time generally low levels of apparent dissatisfaction.

Table 24
Agreement with Statements - At-risk Residents Only

Statement	St. Agree	Agree	Neutral	Disagree	St. Disagree
Town of Mackenzie is isolated	58.9	33.3	5.0	2.8	-
Mackenzie too small to provide services	25.0	40.6	11.1	22.2	1.1
Prince George will always have better shopping and entertainment	68.3	28.9	0.6	2.2	-
Mackenzie is a good place to live	15.0	51.1	24.4	7.2	2.2
Mackenzie is a good place to raise a family	21.7	55.0	16.1	4.4	2.8

Source: Questionnaire

At-risk residents were asked to agree or disagree with five statements in order to gauge how they felt about general aspects of living in Mackenzie (Table 24). In terms of Mackenzie being isolated, at-risk respondents overwhelmingly agreed with this statement (58.9 percent strongly agreeing and another 33 percent agreeing).

In terms of Mackenzie being too small to provide sufficient services, at-risk respondents again agreed with this statement (approximately 25 percent strongly agreed, and approximately 40 percent agreed). However, approximately 22 percent disagreed with this statement which shows that a significant proportion of the at-risk population believes that Mackenzie has the potential to

provide sufficient services.

In comparing Prince George to Mackenzie, by the statement that Prince George will always have better shopping and entertainment, almost all the at-risk respondents agreed with this statement (approximately 70 percent strongly agreed and approximately 30 percent agreed). This is not surprising as the size and economic profiles of the two towns are so different.

In terms of Mackenzie being a good place to live, the majority of at-risk respondents agreed with this statement (approximately 51 percent agree and 15 percent strongly agree). This is a very positive indicator for interpreting the extent to which the at-risk population may be committed to leaving for another town.

In terms of Mackenzie being a good place to raise a family, at-risk respondents again overwhelmingly agree with this statement (55 percent agree and approximately 21 percent strongly agree). This characteristic of the town is beneficial for retaining residents, especially those with young families or who may be nearing retirement - two age groups shown to be conscious of community safety issues.

Discussion of At-risk respondents

This review of the at-risk population within our survey raises a number of important issues. Firstly, there are many attributes about Mackenzie that at-risk residents enjoy and are satisfied with. Wherever possible, these should remain priority topic areas for Mackenzie. Second, the natural and wilderness setting of the town fosters an atmosphere of safety and a positive family and child rearing environment. These issues are clearly important to people and they should be emphasized. Third, it is quite clear that at-risk residents enjoy the improvements and expansions recently completed in the recreation centre. Improvements, in other words, seem wisely targeted to enhancing residents' satisfaction with the town. While it is encouraging to note the great number of benefits at-risk residents identified about Mackenzie, it must also be noted that many of the factors at-risk residents do not like are the same 'push' factors that encouraged some of the movers to relocate. For some at-risk respondents, these factors are related to the lack of local economic diversity thereby forcing the town and its residents to be affected by the ever changing state of the forestry industry. Other factors such as long winters and a perceived sense of isolation create stress for at-risk respondents. Such factors are obviously beyond the ability of the town to change. The lack of shopping services and quantity of health services were also identified as problems for at-risk respondents. This is not too surprising since there are socio-economic and demographic similarities between movers and at-risk respondents.

Finally, one of the important topics identified by at-risk respondents concerned a sense of dissatisfaction with opportunities for youth living in Mackenzie. Several identified that "kids had nothing to do", while others were concerned with such broader issues as drugs and alcohol use which confront all communities. Concerns seem to include both opportunities for positive recreation and opportunities for local full- or part-time employment. These are important matters as most respondents had children and the population profile of Mackenzie still maintains a large proportion of young families. It is likely that if these potential push factors are not addressed, the at-risk respondent population may move and contribute to the problem of extra-community

commuting in Mackenzie.

Discussion

The purpose of this research was to examine the scale and extent of extra-community commuting within Mackenzie. This was done by focussing upon resource industry employees working in the mills of the three major forest products' firms in the town. Based upon questionnaire survey results from employees at Fletcher Challenge, Abitibi-Consolidated, and Slocan, issues connected with "mover", "stayer", and "at-risk" populations were explored. At present, the scale of extra-community commuting reaches to an order of approximately 10 percent of our survey respondents. While this may not seem particularly high, it foreshadows a problem as the at-risk population is a significant component of our survey respondents. Issues identified by respondents as ones which might motivate them to leave Mackenzie are especially important and should be addressed where possible within the resources and abilities of the town.

A number of reasons were identified in the literature as to why resource industry employees may remain in or leave their town. In the migration and mobility literature, these are generically referred to as "push" factors. Some of the common ones identified are stress over the uncertainty or instability of economic conditions in resource industries. This links to a second concern over the vulnerability of employment in those industries and in associated support industries. Finally there is the generalized concern over a lack of services (shopping, entertainment, food, and health) in these small towns. Many of the survey respondents identified these types of issues as important in their dissatisfaction with living or working in Mackenzie. The mover population was much more adamant about things which pushed them to leave, while the at-risk population identified a combination of factors which collectively increased their thoughts of leaving. As identified above, some of these stress areas are clearly beyond the purview of local decision-makers, but there are topics which can be addressed usefully to send a message that the town is working on things that matter to residents. Residential satisfaction is a complex issue linking work and family to the broader community-based issues discussed in this report. The key seems to be where an opportunity exists to intervene in a positive way, that opportunity should be taken and publicized.

Special attention was directed at the movers population in an effort to identify questions of timing and connections to critical pressures in the town which may increase the likelihood of extra-community commuting. Certainly, improvements to the highway between Mackenzie and Prince George have played a role in reducing travel times and increasing travel safety. This has had an influence upon shopping patterns and even recreational visits outside of the town. Such improvements, and an increasingly routine need to travel outside the town for shopping or medical services, played a role in movers deciding to relocate and simply commute to Mackenzie for work. Strikes and layoffs were identified as particular trigger events to moving, but they are also more generally connected with the stresses people identified from the economic boom and bust cycles of resource industries.

One of the perplexing issues identified by some movers was concern over the lack of security in their housing investment. Those who mentioned this issue often cited the economic swings

within the forest industry as having an effect upon housing prices. While there have certainly been economic swings and fluctuations in housing prices, a recent study (Halseth and Sullivan, 2000) completed for Canada Mortgage and Housing Corporation identified that since 1976 property values in Mackenzie have increased at a rate exceeding that of inflation. Perhaps the local real estate agents could make their knowledge of the local market more well known so as to avoid incorrect perceptions.

When the analysis was directed towards “at-risk” respondents, that is those respondents living and working in Mackenzie but who had seriously thought about moving away, the potential push factors turned out to be very similar to the actual push factors identified by movers. Clearly there are issues here upon which the town should concentrate effort.

In contrast to the push factors identified by respondents, there were also a strong set of “pull” factors identified. These pull factors are attributes of Mackenzie which respondents (movers, stayers, and at-risk) liked and which attracted them to the town. Included among these pull factors was a perception of a very safe community and a good environment within which to raise children and a family. The abundance of recreation opportunities, both outdoor and indoor, and both formally and informally organized, also received very high praise. Given the strength of some of these pull factors, it may be useful for the town to ensure continued maintenance of these attributes and publicity of services or opportunities connected to them. As noted above, some particular attention may wish to be directed at youth opportunities (recreation and work) as a large share of the population is involved with raising young children.

While movers have already left, and stayers seem firmly committed to the town, at present we have no idea what might constitute a “last straw” for the at-risk population. This report has identified a number of topics which local decision-makers can address that may reduce the likelihood of the at-risk population being pushed to relocate.

Conclusion

At this point the research on extra-community commuting in Mackenzie identifies a number of topics for further consideration. The first is that improvements to local shopping, services, and access to health care will be important in keeping residents in town. It will also reduce the number of trips which they make out of the community for routine needs. When households feel that routine needs are no longer met they are more likely to move. Second, it is crucial that efforts to diversify the local economy continue. This will not only help to somewhat reduce vulnerability to forest industry cycles, but will provide a greater range of employment and activity opportunities for spouses and youth. Shift work was identified as an enabling element which allowed workers to commute for work from a more diverse and distant town. There exist a number of opportunities to build on the positive aspects of Mackenzie which were identified by all three groups within our survey. This includes both enhancement of some facilities or services, as well as the need to promote those which may not be well known by local residents. This can initiate a positive trajectory of community improvements and community pride (which is already in place) which may reduce the likelihood that at-risk residents will decide to leave town. At this point, extra-community commuting is not a dominant issue for Mackenzie but there exists the

possibility that it could become such in the future. Steps taken now to be pro-active may have a long-term impact on this issue.

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Appendix 1a

**Open Ended Interview Schedule -
people living and working in Mackenzie**

INTERVIEW QUESTIONS

- 1.) What do you like most about Mackenzie?
- 2.) What do you like least about Mackenzie?
- 3.) What are some of the things / stresses that prompt people to move away from Mackenzie even though they still work there?
- 4.) What factors / stresses would you think would get people starting to think about moving away?
- 5.) Can you recall any significant events that occurred within the community that resulted in many people moving out of town?
- 6.) What are the benefits of living / working in Mackenzie?
- 7.) What are some difficult aspects of living / working in Mackenzie?
- 8.) What services are needed to sustain the people?
- 9.) Are there any other things that would help sustain the population in Mackenzie?

Appendix 1b

**Open Ended Interview Schedule -
people commuting from Prince George**

Interview Questions: Prince George Residents

- 1.) What do you like most about Mackenzie?
- 2.) What do you like least about Mackenzie?
- 3.) What are some of the things / stresses that prompt people to move away from Mackenzie even though they still work there?
- 4.) What factors / stresses would you think would get people starting thinking about moving away?
- 5.) Can you recall any significant events that occurred within the community that resulted in many people moving out of town?
- 6.) What are the benefits of working in Mackenzie and living in Prince George?
- 7.) What are some difficult aspects of working in Mackenzie and living in Prince George?
- 8.) What services are needed to sustain the people in Mackenzie?
- 9.) Are there any other things that would help sustain the population in Mackenzie?

Appendix 2

**Questionnaire Cover Letter
Questionnaire**

UNIVERSITY OF NORTHERN BRITISH COLUMBIA

Wednesday May 24, 2000

Dear _____ Employee,

Where people live and work is important to workers, their families, and their communities. The goal of this questionnaire is to discover reasons why people decide to remain living in Mackenzie, or perhaps, why people choose to move away and commute to work from places like Prince George. To better understand these patterns, we need your help in filling out this questionnaire.

Questionnaires are being given to all mill employees at Fletcher Challenge, Slocan Forest Products, and Donohue Inc. Because some of the questions may not apply to you, please simply skip to the next appropriate section.

This survey will be of value to the people of Mackenzie. The data will hopefully equip the community to be proactive in meeting the needs of community residents and workers. This survey is being carried out with the support of the Mackenzie Chamber of Commerce, all three forestry companies, and the unions.

To ensure anonymity and confidentiality, please do not put your name anywhere on the questionnaire. Only the research team will access the data files. The research results will be made available to the project partners and interested individuals by September 30, 2000. The general public may also obtain summary results at that time from our office.

Any questions about the project should be directed to Greg Halseth at (250) 960-5826 at the University of Northern British Columbia. Complaints about this project may be directed to UNBC's Office of Research and Graduate Studies at (250) 960-5668.

The success of the survey depends upon people completing and returning the questionnaires. It should take about 10minutes to complete. **Please complete the questionnaire and return it to the drop box provided in your lunchroom at work by Wednesday June 14th, 2000.** Your participation is voluntary, thank you for your help.

Sincerely,

Lana Sullivan
sullival@unbc.ca
(250) 960-5320

Greg Halseth
halseth@unbc.ca
(250) 960-5826

This questionnaire is about living and working in Mackenzie. It explores pressures that may lead families to move away yet still commute for work. The questionnaire should take about ten minutes to complete. All Mill employees at Fletcher Challenge, Slocan Forest Products and Donohue Inc. in Mackenzie received a copy. Please feel free to have your spouse or partner fill out this questionnaire.

All responses are confidential.

Your assistance is greatly appreciated.

Part A – The first part of the questionnaire asks about your local residency.

1.) Are you a Mill employee, or spouse / partner of a Mill employee? **(please check one)**

Employee [] Spouse / Partner []

2.) What operation does the Mill employee work at? **(please check one)**

Slocan Group – Mackenzie Operations _____

Fletcher Challenge Canada Ltd. _____

Donohue Forest Products Inc. _____

3.) Where do you live? **(please check one)**

Mackenzie _____

Prince George _____

Other _____

4.) If you previously lived in another community, what type of community did you live in most recently? **(please check one)**

Always Lived in Mackenzie []

Rural []

Village (<1,000) []

Town (1,000 – 10,000) []

Small City (10-30,000) []

Medium City (30-100,000) []

Large City (>100,000) []

Other (please specify) _____

5.) If you live in Mackenzie, have you ever seriously considered moving away from Mackenzie? **(please check one)**

Yes _____

No _____

If you presently live in another community, have you at any time previously lived in Mackenzie? **(please check one)**

Yes _____

No _____

6.) How long have you lived in your current community? (in years) _____

Part B –

The second part of the questionnaire asks about reasons why people would commute to work.

If you live in another town but work in Mackenzie, please complete this part.

IF YOU WORK AND LIVE IN MACKENZIE, PLEASE GO TO PART C.

8.) What caused you to move away from Mackenzie? **(please circle all that apply)**

a.) long winters

b.) sense of isolation

c.) spouse / partner was unhappy

d.) uncertainty about job

e.) high cost of living

f.) lack of services (ie: health, shopping)

g.) social problems (ie: drugs, alcohol)

h.) employment opportunities for spouse

i.) other (please specify)

9.) Which of the reasons given above would you say was your main reason?
(please circle one)

a----b----c----d----e----f----g----h----i----j

10.) In your opinion, did a significant event occur in town that made you think about, or make, the move away? **(please circle all that apply)**

a.) uncertainty over forest tenure / planning

b.) Williston Lake water levels

c.) Company consolidation

d.) Modernization of mills

e.) Strikes

f.) Layoffs

g.) Other (please specify) _____

What attracted you to move to your new community? **(please check all that apply)**

- a.) spouse / partner got job
- b.) perceived better educational opportunities
- c.) perceived better medical / health facilities
- d.) perceived better employment security
- e.) perceived better housing investment
- f.) perceived better shopping
- g.) perceived more recreational opportunities
- h.) Other (please specify) _____

11.) In your opinion, what services would be needed to keep workers and families living in Mackenzie? **(please circle all that apply)**

- a.) more medical services
- b.) services for older (retired) residents
- c.) better shopping / more choices
- d.) more jobs for spouse / partner
- e.) better customer services
- f.) daycare hours linked to shift work hours
- g.) services for exceptional / special needs children
- h.) other (please specify) _____

Part C -

The third part of the questionnaire asks about reasons why people choose to live and work in Mackenzie.

IF YOU NO LONGER LIVE IN MACKENZIE, PLEASE GO TO PART D.

12.) In your opinion, what are some of the benefits of living and working in Mackenzie? **(please circle all that apply)**

- a.) Morfee Lake
- b.) good paying job
- c.) safe atmosphere
- d.) Community Center
- e.) Recreation opportunities
- f.) small town atmosphere
- g.) people / friendly
- h.) scenic
- i.) family town
- j.) nature and outdoors
- k.) quiet
- l.) love of winter
- m.) services
- n.) other (specify) _____

13.) In your opinion what, if any, are some difficult aspects of living and working in Mackenzie? **(please circle all that apply)**

- a.) long winter
- b.) isolation
- c.) uncertainty in forest industry
- d.) lack of services (shopping)
- e.) gossip in town
- f.) amount of health services
- g.) quality of education for kids
- h.) closed community – resistant to change
- i.) spouse / partner unhappy
- j.) lack of activities for youth
- k.) high cost of living
- l.) notion of nothing to do
- m.) none
- n.) other (please specify) _____

14.) Have you ever thought about moving away from Mackenzie?
(please check one and explain)

Yes _____

No _____

Please explain:

Part D -

*The fourth part of the questionnaire asks about your general perceptions of Mackenzie.
PLEASE FILL OUT THIS PART REGARDLESS OF WHERE YOU LIVE.*

15.) How would you characterize Mackenzie's economic situation over the past 5 years?
(please check one)

Improving Greatly _____

Improving _____

Unchanged _____

Declining _____

Declining Greatly _____

Don't Know _____

16.) How would you rate your level of satisfaction with the community of Mackenzie?
(circle one number for each aspect)

	Very Satisfied	Satisfied	Neutral	Disatisfied	Very Dissatisfied	Don't Know
Health services	1	2	3	4	5	6
Education facilities	1	2	3	4	5	6
Recreation facilities	1	2	3	4	5	6
Small businesses	1	2	3	4	5	6
Community pride	1	2	3	4	5	6
Opportunities for youth	1	2	3	4	5	6
Employment opportunities	1	2	3	4	5	6
Opportunities for women	1	2	3	4	5	6
Housing	1	2	3	4	5	6
Shopping	1	2	3	4	5	6
Voluntary organizations	1	2	3	4	5	6
Recreational organizations	1	2	3	4	5	6
Community events	1	2	3	4	5	6
Other (please specify)	1	2	3	4	5	6

17.) How would you characterize the general availability of employment opportunities within Mackenzie over the past 5 years? **(please check one)**

- Improving Greatly _____
- Improving _____
- Unchanged _____
- Declining _____
- Declining Greatly _____
- Don't Know _____

18.) In this question, we would like you to indicate the extent to which you agree or disagree with the following statements. **(please circle one number for each statement).**

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
The community of Mackenzie is isolated.	1	2	3	4	5
Mackenzie is too small to provide adequate services.	1	2	3	4	5
Prince George will always have better shopping and entertainment.	1	2	3	4	5
Mackenzie is a good place to live.	1	2	3	4	5
Mackenzie is a good place to raise a family.	1	2	3	4	5

Part E - In this final part of the questionnaire, we would like to ask some questions about you and your family.

FOR MILL EMPLOYEES:

19.) How old are you?

- <25 years _____
- 25-35 years _____
- 36-45 years _____
- 46-55 years _____
- 56-65 years _____
- 66-75 years _____

21.) Are you

- Male _____
- Female _____

22.) What is your employment status? **(please check one in each category)**

- Full Time _____
- Part Time _____
- Other _____
- Year Round _____
- Seasonal _____
- Other _____

23.) What is your marital status **(please check one)**

- Single _____
- Married/Common Law _____
- Separated/Divorced _____
- Widowed _____
- Other _____

If applicable, please answer the following about your spouse or partner.

FOR SPOUSE / PARTNER

24.) Is your spouse or partner employed?

Yes _____

No _____

25.) If your spouse or partner is employed, is their employment status:
(please check one in each category)

Full Time _____

Part-Time _____

Other _____

Year Round _____

Seasonal _____

Other _____

26.) If your spouse or partner is employed, where do they work? **(please check one)**

Prince George _____

Mackenzie _____

Other _____

27.) Do you have children? **(please check one, and fill out ages if applicable)**

Yes _____ > If yes, what are their ages? _____

No _____

We value the time and effort you have taken to complete this questionnaire. We hope the results will contribute to a better understanding of the range of benefits and pressures felt by workers.

We would appreciate your comments on any of the issues raised here, or any issues you feel were missed. Use the space below or additional pages if necessary.

Thank you again.