THE CONSEQUENCES OF FOREST-DEPENDENCE FOR THE ECONOMIC GROWTH AND SOCIOECONOMIC DEVELOPMENT OF HOUSTON, BRITISH COLUMBIA

by

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Abstract

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This thesis examines whether forest harvesting and processing is a viable strategy for the continued economic growth and socioeconomic development in small forest-based places in British Columbia (BC). This strategy is widely employed despite the fact that BC's forest economy has struggled to manage the effects of economic, political, and resource related change for over three decades. Restructuring and change have now reduced the economic advantages originally associated with forest-dependence for many BC communities, and Houston, BC is one of many examples. In the 1970s, forest-dependence created substantial economic growth for Houston, but since that time, the community has experienced instability, uncertainty, and a limited range of economic and social benefits as a result of forest-dependence. The research indicates that forest-dependence has limited Houston's economic and socioeconomic development. Furthermore, this research found that the economic model used in Houston has failed to produce the economic benefits of the past and has not supported the socioeconomic development necessary to sustain the community into the future.

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CHAPTER 1:INTRODUCTION

1.1 Introduction

The District of Houston is one community in British Columbia (BC) that is dependent on the forest economy for prosperity and well-being. Houston has relied on the extraction and processing of forest resources for economic growth since the early part of twentieth century. The community represents a good example from which to assess the consequences of forest-dependence. In fact, Houston is, arguably, the most forest-dependent community in BC. It is home to two of BC's largest sawmills, one of which is termed the world's first 'supermill'. Unfortunately, the success of the local forest economy has not been transmitted to the town of Houston. In the past, forest-dependence was associated with substantial economic growth, but more recently, it has resulted in instability and uncertainty for the host community. The local economic and social implications of extractive resource-based growth and development now appear less favourable than expected for Houston.

This thesis explores the structure and organization of BC's forest economy in the local context of Houston. More specifically, it examines how the economic growth and socioeconomic development of one community, in close proximity to abundant natural resources, has been affected by dependence on an industrial model of forest production. It explores issues associated with the control and power necessary to create viable local economic development and how exogenous change associated with economic integration, firm restructuring, and impending resource depletion are impacting the community. It also investigates barriers to the continued economic growth and socioeconomic development of the community.

The literature argues that places with a high dependence on natural resources, particularly forest resources, often fare worse than places that are not dependent on their extraction and processing. This thesis links theory concerning forest-dependent communities to the lived reality of one such community to determine the consequences of forest-dependence first hand. The research objective is to examine the consequences of forest-dependence to determine how that dependence has impacted one community's economic growth and socioeconomic development. The research question guiding this thesis is: *"How has forest-dependence affected the economic growth and socioeconomic development of Houston, BC"?* The accompanying research hypothesis is that *forest dependence has truncated the economic growth and limited the socioeconomic development of Houston.*

1.2 Thesis Organization

This thesis is comprised of seven chapters. This first chapter introduces the research topic and frames the research question and hypothesis. The literature review in Chapter Two outlines the historic development of resource-based industries in Canada and BC, and the resulting political and economic structures. Next, the implications of these structures are reviewed for forest-dependent communities before outlining the contemporary effects of economic restructuring and change. The consequences of these recent changes within forest-dependent places are then evaluated. This is followed by a discussion of traditional concepts used to evaluate the wellbeing of such dependent places, such as sustained yield and community stability, before assessing the importance of new concepts such as community vulnerability, capacity, and resilience.

Chapter Three provides context and background information regarding the growth and development of Houston, BC. It outlines the geography and historical development of both the local forest industry and the host community before presenting a range of contemporary data that describes its current state. This chapter includes a chronology of key events that have shaped the town.

The fourth chapter outlines the methods used in the thesis research. A mixed method approach, using both quantitative and qualitative data, was used to evaluate the economic growth and socioeconomic development of Houston. The chapter begins with the research approach before describing how the study community was selected. It outlines the data sources and the methodology used to collect both primary and secondary data before describing the procedures used in the content analysis and subsequent data triangulation.

In Chapter Five, I present the data analysis. I first present a variety of quantitative data to illustrate the economic growth trajectories of the local forest industry and the host community. This is followed by the results of the content analysis which reveal the consequences of forest-dependence for the town's economic growth and socioeconomic development. I then present some implications of this growth and development for the community's ability to cope with, and adapt to, future change.

In Chapter Six, the research findings are compared to and discussed in concert with the literature from Chapter Two. The structure of Chapter Six is similar to that found in Chapter Five, in which the two main sections discuss the consequences of forest-dependence for Houston's

economic growth and implications for the community's socioeconomic development. These sections are followed by a discussion of the implications of these results for Houston's capacity and resilience.

Chapter Seven summarizes the information presented in this thesis before reviewing its implications for the community of Houston, the local forest industry, and the various levels of government involved in the community. Future research opportunities are then suggested.

1.3 Conclusion

This research explores the long-term consequences of forest-dependence for the economic growth and socioeconomic development of one forest-dependent place. It represents a broad overview of the external and internal processes and structures that control community development in Houston. It is my desire that the research findings are applicable to similar communities facing similar circumstances. Given the limitations associated with this two-year graduate research project, this may not be possible as the research findings are limited in scope and cannot explore all aspects of forest-dependence and their consequences. However, I hope to illuminate the consequences of forest-dependence for other communities, in northern BC, to emphasize the need for new approaches to the economic and social development of these small, peripheral places.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The relationship between the forest economy and the economic growth and socioeconomic development of forest-dependent communities is of strong interest in BC. Historically, BC's economic growth was the result of the successive exploitation of natural resource staples. In the post-World War II era, staples production created substantial comparative advantages for economic growth in BC. However, the economic model used to create this growth integrated small forest-based places only as peripheral staples producers. As a result, these places became dependent on the economic and social structures dominated by BC's forest economy. More recently, restructuring and change have reduced the economic advantages originally associated with forest-dependence. There is now evidence that continued forest-dependence has truncated the economic growth and limited the socioeconomic development of BC's forest-dependent communities.

To create context for this thesis, I will review and discuss four main themes. First, I review the literature describing the economic development of BC's forest economy to illustrate how its development has influenced small forest-based places. Second, I introduce theoretical concepts that help us to understand the nature of dependency. I discuss popular dependency theories before boiling their core propositions down to three common features. Third, I build a definition of forest-dependence before reviewing its impacts on the growth and development of other small industrialized places. I then discuss some recent consequences of forest-dependence to illustrate the effects of economic restructuring and change being experienced in BC. Fourth, I review some

old and introduce some new emerging concepts that are better suited to describing and assessing the realities of forest-dependent places.

2.2 Canada's Political Economy

Canada exhibits a staples-based economy having used the successive exploitation of natural resources as economic building blocks. Although staples have offered Canada substantial comparative advantages for export; collectively these advantages have been so great that staples became the leading edge of the Canadian economy, setting the pace for national economic growth (Watkins 1963). Innis (1933), in creating his uniquely Canadian 'Staples Thesis', outlines how the sequential extraction of resources for core industrial nations, such as the US, have resulted in patterns of development that have made the Canadian economy fully dependent on external markets and capital. As explained by Hayter (2000), the Innisian triad of geography, institutions, and technology, set Canada on the pathway to a predicament that Watkins (1963) refers to as the Staples Trap. This is a situation where the domination of the Canadian economy by external forces has resulted in a branch-plant economy that has limited domestic control over the functions necessary to relinquish dependency and fully develop the economy.

According to Levitt (1970), Canada has experienced economic growth but limited socioeconomic development. Watkins (1982) outlines how Canada's overdependence on staples production and export has blocked development activities. The characteristics of a staples-based economy; lack of reinvestment, limited diversification, external control, limited manufacturing, and lack of research and development typically inhibit socioeconomic development (Clapp 1998). This approach has programmed inherent flaws into local economies (Power 2006) that limit the economic growth and the socioeconomic development of forest-dependent communities (Lucas 1971; Marchak 1983; Ross 1999; Papyrakis and Gerlagh 2006).

2.3 British Columbia's Forest Economy

Historically, BC's entry into the production and trade of forest staples began in the late 19th century. It was not until nearly a century later that BC had a mature staples economy (Hutton 1994). Two notable features of the early stages of BC's economic development were first, the establishment of the coastal region, and in particular Vancouver, as the core region of the province and second, the dominance of the entrepreneurial model of development in the forest industry (Hayter 2000). The implications of these developments are explored below as they set the stage for the development of BC's forest economy.

Baldwin's (1956) classic study contrasts the plantation model with the entrepreneurial model of resource development as applicable to resource regions such as BC. In an entrepreneurial economy, immigrant settlers become an indigenous class of capitalist entrepreneurs that, over time, promote local diversification by increasing the demand for local goods and services. In this model, governance is decentralized and more egalitarian and the population is generally skilled, educated, and capable of self-directed change (Hayter 2000). Baldwin describes the entrepreneurial model as having a better potential for sustained economic growth and development because it is shaped by local abilities and diffused throughout a region.

In contrast, Baldwin's plantation, or branch-plant, model is usually foreign owned and operated through subsidiary networks that utilize imported capital, technology, and management. The only local inputs are land, raw resources, and generally unskilled labour (Hayter 2000). The branch-

plant model is capital and labour intensive and requires specialized infrastructure to ensure its viability. It offers employment and good wages, but any other economic benefits for dependent communities are likely to be small or nonexistent. In addition, the relatively low levels of skills and training required from the host community's workers limits their role and any economic benefits (Hayter 2000). In summary, the branch-plant model of development offers communities a limited potential for local control of resource development and a limited set of benefits. Any resulting revenues are generally exported, along with the commodity, to more industrialized regions. These consequences result in truncated economic growth and limited socioeconomic development for forest-dependent places.

After World War II, the entrepreneurial model of development that had come to dominate BC's forest economy was replaced wholesale by the branch-plant model. In 1945, the Sloan commission recommended the adoption of sustained-yield forest harvesting policies that paved the way for transformation of the BC forest economy. Sloan's (1945) goal was to replace a largely unregulated entrepreneurial system of forest exploitation with a system based on the perpetual yield of timber capable of generating long-term industrial development. Sloan believed that sustained-yield could be best realized by granting large-scale and long-term timber leases to firms, in exchange for capital input and industrial development. Large firms, with the appropriate financial and industrial capabilities, were granted tenures for extensive areas of crown forests. In this manner, Sloan connected provincial forest policy with industrial policy and created an externally controlled branch-plant forest economy for BC.

In 1945, Sloan's recommendations became the basis of BC's forest policy; ushering in one of the most "extreme" Fordist experiments ever conceived (Young and Matthews 2007:184). BC's forest economy became dominated by big business that, in concert with successive provincial governments, emphasized BC's forests as a perpetual supply of timber for the mass production of raw-export commodities. Labour unions were quick to acknowledge their role as the monopoly suppliers of labour thus completing the classic Fordist relationship between big business, labour, and government in what Wilson (1987:9) refers to as the "wood exploitation axis".

2.3.1 Fordism and the BC Forest Economy

The developmental period, between 1880 and the 1940s, can be characterized according to Baldwin's (1956) entrepreneurial model of development. But the next period, from the 1940s until the 1980s, was dominated by the Fordist paradigm of production. According to Hayter (2000), Fordism involves a particular production regime, dominated by large integrated corporations and characterized by mass production of standardized goods in a continuous flow process that emphasizes cost minimization and economies of scale. The goal of provincial policy during this time was to disperse the forest industries throughout the province to sustain regional and local economies. The provincial government facilitated the development of the forest industry through the provision of a 'suitable' business climate and massive 'province-building' investments in power production and transportation infrastructure (Williston and Keller 1997). New legislation helped to create instant resource towns in remote areas throughout the province (Halseth 2005) and foreign direct investment (FDI) was welcomed without restriction (Hayter 2000). For the BC forest economy, the Fordist period was a time of enormous economic growth. The production of forest-based commodities expanded faster than the national average with lumber growing at an annual average of 4.4 percent and kraft pulp at the impressive annual rate of 16 percent over the period from 1950 to 1970 (Hayter 2000). Significant growth also occurred in the plywood, newsprint, and paperboard sectors. Production occurred in large capital intensive facilities operated by unionized labour and controlled almost entirely by large integrated transnational corporations. Thus, Sloan's policies successfully led to the creation of a forest economy dominated by large firms with centralized facilities and justified by the supposed stability of these large-scale forest operations. Production and continual efficiencies that were not possible for smaller operators. This focus on large-scale forest enterprises continues, despite growing criticism since 1980, associated with its diseconomies of scale, abuses of power, production overcapacity, increased competition, and subsequent loss of industry competitiveness (Hayter 2000).

As the provincial government had hoped, Fordism spread industrial forestry to new regions radically altering the geography of BC. The Fordist boom created considerable new employment for communities with direct forestry employment increasing by 66 percent, in BC, between 1945 and 1970 (Hayter 2000). Employment growth was not limited to the core coastal areas but was spread to all regions of BC. By 1970, the size of the forest industry in the interior of the province rivaled that of the coast (Hayter 2000). With full provincial cooperation and intent; the industrialization of BC's forest economy was achieved using external corporations as the

dominant economic model of production and organization (Marchak 1983). BC became a dependent periphery supplying resource commodities for use by industrialized nations.

Despite BC's dependence on industrial forestry for economic growth and socioeconomic development there exists little research regarding the relationship between forestry-dependence and the well-being of forest-dependent communities. Given the rapid pace of change, there is a growing awareness that traditional forestry-dependence is increasing the vulnerability of BC's forest-dependent places. Therefore, it is important to determine whether this type of dependence has supported the socioeconomic development that will enable these forestry-dependent communities to survive and flourish in an era of rapid economic change.

2.4 Theories of Dependency

Various theories concerning dependency mesh well with Fordism and Staples Theory to describe the economic growth and socioeconomic development of BC. Dependency describes a situation where regions become dependent on external powers as a result of exploitation, trade, or development. It is a historical condition that shapes the structure of regional economies so that dominant regions are favoured to the detriment of dependent ones (Frank 1971). Dependent regions are dominated through a dynamic process that reinforces and intensifies the external and unequal nature of their relationships. In these relationships, dependent regions supply resources, commodities, and labour to the dominant economy in a process that continues to orient the dependent economy towards external economic and political control.

Dependency is an essential part of the global capitalist system. In this view, the capitalist system enforces a rigid international division of labor which is responsible for the underdevelopment of

many areas of the world. Dependent states supply low-cost resource commodities and labor, while serving as repositories for surplus capital, obsolete technologies, and manufactured goods. These functions orient the economies of the dependent states toward the outside. Capital, goods, and services that do flow into dependent states are allocated by the economic interests of the more dominant regions.

For dependency theorists, underdevelopment is a wholly negative condition which offers no possibility of sustained and autonomous socioeconomic development for the dependent state (Sunkel 1969; Dos Santos 1971). Underdevelopment is a condition fundamentally different from undevelopment. The latter term refers to a condition in which resources are not being used. For example, European colonists viewed North America as an empty and undeveloped land that was not active on a scale consistent with its potential. Underdevelopment, in contrast, is a situation where resources are being actively used, but used in a way which benefits the dominant state. This distinction, between underdevelopment and undevelopment, places the dependent regions of the world in a profoundly different historical context. They are not dependent because they lagged behind the scientific and economic transformations of more developed regions; they are dependent because they were coercively integrated into global economic systems only as producers of raw materials and cheap labor.

This analysis of dependency theory suggests that questions pertaining to the socioeconomic development of dependent regions should be different from those concerning traditional patterns of economic growth. It may be possible that developed industrial economies may not serve as an appropriate model for those underdeveloped economies in dependent regions. When economic

development became a focused area of study, the analytical strategy and ideological preference was clear; that underdeveloped nations should emulate the patterns used by developed countries. In the 1950s and 1960s, there was some consensus that common strategies of economic growth were universally applicable. This is articulated by neoclassical economists such as Rostow (1959), whose development model, *The Stages of Economic Growth*, described a linear process from which a mature economy would emerge. Dependency theories counter this argument and suggest that the market alone is not a sufficient enough distributive mechanism. Its primary concern is said to be the efficient production of export goods, and it assumes that the market will allocate the rewards of efficient production in a rational and unbiased manner. Dependency theorists do not deny that economic activity occurs within a dependent state, but they make a very important distinction between economic growth and socioeconomic development. For example, there is a greater concern within the dependency framework for how economic activity benefits the socioeconomic development of the region in question. Greater attention is paid to socioeconomic indicators far more than economic ones.

Dependency theory has been debated among liberal reformers (Prebisch 1959), Marxists (Frank 1971), and world systems theorists (Wallerstein 1974) and there are strong points of disagreement among the various strains of dependency theory. But, there are three core propositions which seem to underlie dependency theory analyses. These three features are introduced here and elaborated on in the following sections:

First, dependency characterizes economic structures as comprised of two sets of states, described as dominant/dependent, core/periphery, or metropolitan/satellite. The dominant regions are primarily the advanced industrial nations of Europe and North America (the global north). Generally, the dependent states are those states of Latin America, Asia, and Africa (the global south), which have low per capita Gross National Products (GNPs) and which rely heavily on the export of a single commodity for foreign exchange earnings. Second, dependency assumes that external forces are singularly important to the economic activities within dependent states. These external forces include transnational corporations, international commodity markets, foreign assistance, communications, and any other means by which dominant industrialized countries represent their economic interests. Third, dependency theory indicates that the relationships between dominant and dependent states are dynamic and tend to reinforce external control and intensify unequal patterns. Dependency is thus a process involving continual change.

To summarize, dependency theory attempts to explain the present underdeveloped state of many regions in the world by examining the patterns of interactions among them and by arguing that inequality is an intrinsic part of those interactions. Most dependency theorists regard international capitalism as the force behind dependency relationships. The consequences of dependency include underdevelopment, which is a historical product of external control, and unequal relationships between dependent and dominant regions.

2.4.1 The Core and the Periphery

The first feature common among dependency theorists is the division of geographic space into core and peripheral regions. This arrangement describes the organization of relationships between many regional economies (McCann and Simmons 2000). It is also an important

framework that describes the economic and political interactions between dominant regions and the dependent regions linked to them. The core is described as the dominant urban or industrial economic and political regions that hold influence and power over the economic, social and political decisions that influence other peripheral regions (McCann and Simmons 2000). The periphery is characterized as smaller dependent regions with restricted political power and narrowly focused economies that emphasize primary resource production. They often contain a dispersed rural population, have a limited capacity for innovation and change, possesses weakly integrated systems (McCann and Simmons 2000), and demonstrate restricted linkages between themselves.

The core-periphery model describes the fundamental spatial structure of the world economy and is a prominent feature of Friedman's (1966) development theory, Myrdal's (1957) cumulative causation of underdevelopment, Frank's (1971) dependency theory, and Wallerstein's (1974) world systems theory. It describes not only the economic development of a state in terms of the external influences on national development (Sunkel 1969), but it also explain the development of internal regional economies (McCann and Simmons 2000), such as those found in hinterland BC (Bradbury 1987). In these regions, capital and resources flow from the periphery to the core of wealthy regions in exchange for capital, technology, and manufactured goods. Interactions between the core and the periphery reinforce and intensify the unequal nature of these relationships as they enrich the former at the expense of the latter. When resources are actively used for the benefit of the dominant region, the consequence for dependent regions is underdevelopment.

In the Fordist period, BC's forest economy became dependent upon core economies such as the United States and Japan. Fordism also reinforced the contrast between the coastal and interior regions of the province by clearly delineating a core-periphery economic structure within BC (Nelson and Mackinnon 2004). Although the differences between the two regions began much earlier; under Fordism, the rise of corporate concentration in the forest industry, increasingly headquartered in Vancouver, reinforced core control. Decisions concerning resource use, production, and employment were increasingly made from the core. In the periphery, small dispersed forest communities became increasingly specialized and dependent on large integrated forest product companies for decisions concerning their socioeconomic development (Marchak 1983). Vancouver's core status was associated with diversification and autonomy, but remained closely related to the specialization and dependence of hinterland communities (Hayter 2000).

During Fordism, core-periphery relationships in BC's forest economy implied mutual benefits and stability. Traditional characterizations of resource communities as ephemeral places where economic instability was compounded by a variety of social problems (Lucas 1971) were tempered by the prosperity of the Fordist period (Marchak 1983). Stability became the code word of the Fordist period as outlined by Lucas's (1971) classic work on the evolution of community development in Canadian resource-based communities. In this model, the development of resource towns ultimately ended in the stage of maturity featuring stable populations, economic inputs, social relations, and connections with the outside world (Lucas 1971). Indeed by the 1980s, stability appeared to be the norm. Employment was widely available for individuals who wished to stay in their home communities as the local mill offered stable well-paid employment. Workers with low education or skills could afford relatively lavish

lifestyles with benefits often impossible in other employment sectors (Marshall and Tucker 1992). Wood and paper commodities were in demand and the associated revenues were stable; thus offering firms' opportunities for economic growth and communities a stable revenue base upon which socioeconomic development was possible.

2.4.2 External Control and Unequal Exchange

A second feature common in dependency theory describes the economic relationships between core and peripheral regions. It suggests that the limited growth and development of dependent regions is the result of external control and unequal exchange (Sunkel 1969). Love (1989) observed that in the course of economic development there is unequal exchange between core and peripheral regions. In this process, the factors of production and income flow from one or more geographically defined areas to another based on price mechanisms and other fiscal transfers. According to Peluso *et al.* (1994) this constitutes a colonial relationship that is most present in economic situations where external interests control the livelihoods of those in resource-dependent places. Local results of external ownership and control include the loss of control, revenue, and other resource necessary for continued growth and development. This means that local development is often limited to extractive infrastructure (Marchak 1983) because absentee owners have little incentive to invest in local development. The net effect of this relationship is the increasingly unequal distribution of employment, income, and revenue between core and peripheral regions.

Forest-dependent places vary in their degree of geographic isolation, product specialization, ownership structure, and population, but they have much in common in terms of their socioeconomic structures and relationships with external forces (Marchak 1983). In BC, forest-

based places are dependent on external institutions (e.g. BC government) and external MNC's for socioeconomic benefits. According to Selznick (1949), external ownership can lead to domination patterns that affect local socioeconomic development. This is particularly the case when the government resource-management bureaucracies are "captured" or "dominated" by large-scale corporate interests (Humphrey *et al.* 1993:148). The result is that powerful external stakeholders can exert considerable influence on the socioeconomic development of forest-dependent places.

The extra-local control of natural resource extraction and production by government and big business is an important cause of increasing dependency for BC's resource-based communities. The provincial government is the largest landowner and proprietor of natural resources and its development agenda often does not coincide with the needs of small rural places. For example, access to natural resources was awarded through arrangements which favoured large-scale externally controlled MNC's over local enterprises (Hayter 2000). As a result, external capital entered local places with long-term lease arrangements and the private ownership of production facilities. Benefits to forest-dependent places accrued mainly in the form of employment income from the skilled and unskilled jobs held by local community members. Other economic benefits from resource extraction and commodity production, in terms of revenue and profit, accrued to the BC provincial government and external MNC's.

During Fordism, the increasing concentration of foreign capital, vertical integration of resource firms, and use of segmented labour markets increased external control of local resource-based economies. In this process, control over the economic growth and socioeconomic development

of forest-dependent places was externalized as government policy and corporate management decisions. As previously mentioned, these relationships initially worked, but since the 1980s, natural resource firms have faced declining profits and a crisis in capital accumulation caused mainly by market declines. Freudenberg (1992) describes this predicament as the cost-price squeeze; a situation where producers are caught between rising extraction costs and declining commodity prices. During Fordism, large MNC's became capable of efficiently extracting and processing unprecedented volumes of raw materials (Bunker 1989), but the cost-price squeeze has significantly reduced the profitability associated with these large-scale enterprises.

As resource related profitability decreased, firms increasingly invest in advanced technologies to increase efficiency, productivity, and profitability. These investments almost always substituted capital for labour. The impacts of labour substitution differs between place, depending on the mobility of the labour force and the locus of control (Peluso *et al.* 1994), but the result for local places is the loss of employment and associated economic drivers. This is particularly the case when local resources are controlled by externally.

Control of the resource production by external MNC's has resulted in a forest economy that is vulnerable to industry rationalization and the export of primary and secondary processing activities to lower cost regions throughout the world. A secondary result of this rationalization is that forest-dependent places lose the economic multipliers that circulate and support socioeconomic development. This reinforces the dependency of peripheral places. In summary, dependency and socioeconomic development are consequences of the organization of the

economy; particularly with regard to the extent that external control dominates socioeconomic development (Humphrey *et al.* 1993).

2.4.3 Economic Restructuring and Change

The third feature common among dependency theories concerns the dynamic nature dependency and the continual process of change. It is recognized that 'change' is not just a local phenomena, but part of a wider global transformation. In the late 1970s, in the core regions of the industrialized world, a new era of global economic integration began with the advent of sharply increased energy prices, market liberalization, stagflation, and the 1982 recession (Hayter 2000). Since that time, BC's forest economy has struggled to cope with the effects of economic globalization. The BC industry experienced the 'creative destruction' necessary to reduce overcapacity and the cost structures inherited from post-war Fordist systems of production. Creative destruction is described as a process where new industries are created from the destruction of others that are struggling to adjust and stay relevant (Hayter 2000). In this process new products and processes create new opportunities for investment, consumption, and employment. Unfortunately these creative processes are destructive in the sense that they reinforce existing structures and industries at the expense of communities, workers, and the environment (Hayter 2000). Economies of scale and flexible production systems have been widely used to combat these destructive processes, but industry wide restructuring and consolidation have become the hallmarks of a globalizing forest industry and the subsequent rationalization of the BC forest economy.

Economic integration has revealed the structural weaknesses inherent in BC's development trajectory. Natural resource development has been viewed by successive BC provincial

governments as the key to provincial prosperity and economic growth (Halseth 2005). Instead, the sequential resource exploitation, instigated by an external dependency on markets and capital, has caused BC's economic growth to stagnate. It is this dependency that has subjected resource-based communities to the boom and bust nature of globalizing commodity markets. Resourcism, defined by Clapp (1998), as the political and industrial control of natural resources, has contributed to the foreign control, lack of reinvestment, low levels of innovation and diversification, and the loss of economic drivers in rural communities. It is the loss of these economic drivers that will continue to have serious socioeconomic repercussions for dependent places.

The stability and socioeconomic development of forest-dependent communities has become a function of the political economy governing natural resources (Force *et al.* 1993). Sloan (1945), realizing the interdependent nature of this relationship, assumed that if BC's forest economy was strong then the economies of forest-dependent communities would be prosperous. Sloan also assumed that if income and employment were high then communities would have a high level of socioeconomic development.

Since 1945, the notion that the role of government was to provide for the stability of both rural industry and resource-dependent communities has been replaced by the idea that distinct and separate corporate and community economies are both possible and desirable (Young 2008). Subsequent changes involve the liberalization of resource rights, market access, and the spatial obligations that disconnected corporate actors from local communities (Young and Matthews 2007). These reforms are also significantly altering the traditional Fordist model (Troughton

2005) that has served as the foundation for rural development in BC since the Second World War. These changes may be necessary to increase the flagging competitiveness of the BC forest economy, but they are taking place at the expense of the socioeconomic development of forestdependent communities.

2.5 Forest-Dependence

The term forest-dependent has come into common usage to denote conditions under which particular communities or regions are heavily reliant on this one type of economic activity. Forest-dependent communities have been defined as those with employment in forest industries far in excess of regional or national levels (Force *et al.* 2000). Howze *et al.* (1993) define timber dependent communities as those with more than 25 percent of total employment in the manufacturing of forest products. As such, the conceptualization and measurement of forest-dependence has traditionally focused on measures of employment and income to describe the relative state of dependence (Randall and Ironside 1996; Howze *et al.* 1993; Machlis and Force 1988). Kusel (1996) expands this definition to include communities that are adjacent to forest lands or those with a high economic dependence on forest-based industries, including both tourism and timber activities. Kusel (1996:367) also suggests that our conceptualization of dependency is too narrowly focused on economic measures and should include social elements such as a "sense of place" and "community identity".

Given the complexities associated with defining forest dependence, it is necessary to construct a more concise definition of forest dependence. The Canadian Council of Forest Ministers (CCFM) has identified the following definition of forest-dependent communities to update the traditional economic version with a more holistic one. The CCFM considers "a forest dependent

community as one that is reliant on the forest for employment, sustenance, and/or cultural and social activities that are essential to the socioeconomic development of the people living in them" (Parkins and White 2007:7).

Horne (2004) defines forest-dependence according to the proportional amount of employment income generated by the dominant industry. Horne breaks this dependency down into basic income (from the outside world) and non-basic income (from employment in the community that provide goods and services). Using an economic base perspective, Horne identified and quantified the sources of dependency for 63 different local areas in BC, using Statistics Canada 1991, 1996, and 2001 census data at the census subdivision level, to determine the effects of change on local dependency. Horne's work describes each community in terms of it dependence on various economic sectors, its diversity, and its vulnerability to downturns in the forest sector, with operational results that assist in the estimation of the local impacts of anticipated or proposed change.

Interest in forest-dependent communities is a well established tradition among rural sociologists, including the socioeconomic development of farming (Goldschmidt 1947) and forestry communities (Dana 1918). In the 1980s and 1990s, socioeconomic problems associated with timber dependency in BC were accorded provincial and national attention due to structural changes affecting forest-based industries and dependent communities. These changes underscore what rural sociologists and others have long known; that dependency creates vulnerability in the face of external policy, markets, and investment decisions (Peluso *et al.* 1994). Vulnerability takes on a spatial dimension in the context of physical isolation and the

absence of alternative employment prospects that characterize many, if not most, timber dependent communities (Carroll and Lee 1990; Machlis and Force 1988; Machlis *et al.*1990).

Forest-based communities are dependent on resource extraction as geographic and other structural realities have created a reliance on resources for economic benefits. The isolation, the increasing imbalance of scale, and the limited options for meaningful diversification make these communities more vulnerable and more dependent on resource extraction (Freudenberg 1992). Additionally, volatility encourages this singular economic addiction (Clapp 1998). Dramatic price swings and other market trends obscure the general downward trend of commodity prices. In volatile markets, instability aids in the exploitation of communities as the hope for renewed employment creates a false sense of optimism that good times are just ahead (Clapp 1998).

It has been established that communities with a greater degree of employment and income dependence on the extraction and processing of forest products tend to be worse off across a wide range of socioeconomic measures (Stedman *et al.* 2007; Beckley and Burkosky 1999; Parkins and Beckley 2001). In Canada, Stedman *et al.* (2005) found that forest-dependence in rural places is associated with lower educational attainment, unemployment, and high rates of family poverty. Leake *et al.* (2006) examined the development of the forest economy and its relationship to community socioeconomic development. They found that forest dependence was associated with lower levels of socioeconomic development due mainly to the instability of commodity prices. Price fluctuations were correlated to increased instability in resource-based employment and further reductions in local institutions and human capital.

Researchers in the United States (US) have identified negative outcomes of forest-dependence on indicators of socioeconomic development such as poverty (Bliss *et al.* 1992; Freudenberg 1992; Nord 1994; Ross 1999; Papyrakis and Gerlagh 2006), unemployment (Howze *et al.* 1993), and crime rates (Force *et al.* 1993). Drielsma (1984) found higher rates of social pathologies such as divorce. More importantly, he found that timber-dependence inhibits the general socioeconomic development as low wages, skill levels, and employment instability make it unlikely that timber production will lead to the development of stable, prosperous, and healthy communities.

Dowdle (1984) supports this view; stating that regardless of the stability of the resource base timber production destabilizes forest-dependent communities. Marchak (1983) found that forestdependent communities that remain specialized extractors of natural resources do not diversify and do not share in the equitable distribution of benefits from forest-based production. In this manner, an abundance of natural resources frustrates economic growth. Forest-dependence can have substantial negative impacts on the economic fundamentals of resource-dependent places as it tends to crowd out other growth promoting activities (Marchak 1983). Natural resource abundance creates a false sense of security that weakens the perceived need for investment, education, and economic development strategies at the community level (Papyrakis and Gerlagh 2006). Thus, resource related prosperity reinforces regional resource-dependence and hinders the development of alternative activities (Freudenberg 1992).

2.6 Forest-Dependence in British Columbia

Natural resources are seen as providing some of the highest incomes in rural areas. Extractive industries should be associated with economic prosperity and not the unintended negative socioeconomic effects presented above. Neoclassical economics suggests that development

should occur through activities that offer an economic advantage relative to other regions (Ricardo 1817; Ohlin 1933). In BC, this approach was effective during the post-war, province building, period which relied on the mass production of wood and mineral commodities as the economic development engine of the province. Unfortunately, most of the advantages associated with this type of development accrued to industrialized regions that inputted these resources into established industries. Economic advantages associated with province-wide resource extraction have been greatly reduced by both global and local pressures. BC now finds itself entrenched in a state of resource-based development that can be better viewed as dependency.

BC's continued dependence on forest resources for economic growth is also producing the negative effects predicted by staples theorists. Not only is it truncating the economic growth experienced by the province, it is also limiting the province's socioeconomic development. In 1999, BC went from a 'have' to a 'have-not' province, as indicated by the receipt of federal equalization payments. Markey *et al.* (2005) describes a myriad of factors, such as declines in long-term commodity prices, increased global competition, low return on capital, and reduction in primary industry employment, which contributed to BC's new 'have-not' status.

Despite the lack of a nationally-accepted definition and methodology to deduce the presence of poverty; government and civil society groups continue to use Statistics Canada's low income cut-offs as a poverty indicator (Statistics Canada 1997). The Canadian Council on Social Development found that in 2007, BC had an overall poverty rate of 17.6 percent and a child poverty rate of 20.9 percent, in comparison to the national average of 11.2 percent and 12.8 percent, respectively (CCSD 2008). The 2007 National Council of Welfare Report reinforces

these findings stating that BC has the highest poverty rates in Canada. The BC Progress Board's 2007 Interim Report shows that BC ranks ninth out of ten Canadian provinces in regards to social conditions. They also found that more than one in ten British Columbians live below acceptable low income thresholds. Although these statistics generally apply to both urban and rural BC and may be accounted for by a wide variety of political, economic, and social factors, they are indicative of the lack of socioeconomic development being experienced by one extremely forest-dependent region.

BC's forest economy has undergone widespread restructuring since the early 1980s. and new changes are escalating these restructuring processes. Since 2000, more than 20,000 forest sector jobs have been lost and almost 40 mills have closed in BC (Canadian Press 2008; NRC 2008). Canadian Forest Product's 2008 closure of their panel board plant in New Westminster marks the 46th mill to close in BC since 2000 (Forest Talk 2008). The primary impact of these mill closures is the loss of local employment. The impacts of local employment losses in small rural places are especially dramatic as resource-dependent communities possess few employment alternatives (Halseth 1999b). As such, the continuing volatility of the BC forest sector is increasing the already vulnerable position of BC's forest-dependent communities.

BC's economic growth, based on commodity production and export into global markets appears to be no longer capable of producing the robust economic prosperity that was once envisioned for the province. According to Clapp (1998), extractive resource industries, especially forestbased ones, are characteristic of an early phase of economic development to be abandoned rather than sustained (Clapp 1998). In BC's case, abundant forest resources, a peripheral position to the world's core economies, public and private sector institutions and attitudes, and the use of capital to fight rising production costs are increasing the province's dependence on resource exports. The BC economy now seems locked into a state of dependence from which it may be difficult to escape (Hayter 2000).

BC is increasing its dependence on resource-based economic growth and its vulnerability to continuing global economic fluctuations. Recently, dependence on US markets, which account for 70 percent of BC's export trade (BC Statistics 2008), led to increased trade barriers and reduced export profitability in concert with the slowdown of the US economy. BC is a price-taker in a saturated wood commodity market and increasing competition and decreasing commodity prices have reduced profitability. These conditions are symptoms of BC's overdependence on resource extraction and are exacerbated by the provinces geographic remoteness, export dependence and external control (Hayter 2003).

2.7 Forest-Dependent Communities

Past studies have defined community as a human settlement in a given geographic area (Byron 1978; Schallau 1989). Using this top-down, place-based definition, community studies have narrowly focused on the attributes of a geographic area, which offer researchers a limited conceptualization of community. Much earlier, Hillery (1955) reviewed various meanings of the term 'community' suggesting a bottom-up, interest-based definition that expands the concept beyond its geographic elements. Hillery included two forms of human interaction, the interrelationships between people and the shared values that create a sense of identity, to augment the narrow definition of the term. Machlis and Force (1988) simplify this version by
stating that a community results from the merger of a territorial presence, a structural organization, and a set of shared actions. Kusel (1996) similarly defines community in terms of a locality-based shared identity again including both a relational and a territorial component.

Regardless of the specific definition of community used, it is important not to characterize communities in a homogenous manner (Randall and Ironside 1996). One reason is that, despite the focus on place, horizontal linkages within communities have been overwhelmed by vertical linkages to organizations and institutions outside the community (Warren 1978). These linkages, or lack of, may affect a community and the opportunities that are available to them. For example, a small community that is a host to a mill owned by an external corporation may have additional employment and opportunities available to them. The local actions, in respect to resource access or rights, may also be restricted by resource bureaucracies located in distant locales. In this manner, socioeconomic relationships extend beyond the geographic space occupied by a community (Kusel 1996). Community members may also hold identities in multiple 'communities', such as professional associations and community organizations as a result of leisure activities or their interactions at work. Kusel (1996) points out that these overlapping sets of community identities are important to local socioeconomic development as they influence how communities cope with, and adapt to, exogenous forces.

2.7.1 Community Stability

Community stability is a desired condition for forest-dependent communities in BC. In the postwar period, BC forest policy endeavored to create this condition by linking policies of sustainedyield with community stability. In this context, timber supply was seen as the key determinant of community stability (Waggener 1980). The assumption was, and still is, that stable flows of timber resources would create a prosperous forest economy and stable forest communities. Stable flows of timber thus became the basis for stable employment and incomes for forest communities and stable revenues for both forestry firms and the provincial government. In this manner, community stability became a codeword for the maintenance of timber harvest levels and industrial forestry evolved into commodity markets using capital intensive means of harvesting and processing in the name of community stability and prosperity (Power 2006).

The original introduction of community stability in BC stems from the concept of sustained-yield introduced via the 1945 Sloan Commission. The commission's intention was to create a program that rationed the available forest resources, to prevent depletion, while ensuring the permanence of forest-dependent industries and communities. This relationship is summed by Byron (1978), as the even-flow of forest resources necessary to guarantee constant annual levels of production, employment, and incomes to the owners of the forest and those engaged in its extraction and processing sectors. By focusing on sustained production instead of the sustained-yield of forest resources, the concept was subtly co-opted to refer to an even-flow of commodity products. In this manner, community stability became secondary to industrial production and dependent on the concept of sustained-yield (Byron 1978).

Although the term 'community stability' is institutionalized in BC forest policy it has undergone considerable debate in the literature. Since Dana (1918) first linked the concept to forest management; community stability has been the subject of much debate in the literature (Arensberg 1942; Byron 1978; Lee *et al.* 1990; Schallau 1989; Wear *et al.* 1989). The connection between community stability and the status of natural resource systems has also been a strong

theme in rural sociology (Lee *et al.* 1990). Kaufman and Kaufman (1946) first defined the term as a process of orderly change in their seminal study of the relationship between forestry and community in two Montana towns. This study found that community stability was not just a function of economic considerations, such as the flow of forest resources, but also of social considerations such as community leadership and citizen participation.

Machlis and Force (1988) indicate that community stability is preoccupied with economic indicators such as harvest levels, forest production, prices, employment, and income. The emphasis on economic growth arose from the concept's origins in sustained-yield timber production and the belief that it was an effective means for ensuring the stability of forest communities. Lee *et al.* (1990) found that the structure of an industry will affect community stability and Force *et al.* (1993) state that community stability is not a function of the amount of timber yield or production. They concluded that social stability is a product of larger economic systems and that a need exists to study the relationship between timber production and the political economy.

The concept of community stability thus contains some inherent flaws from both a research and policy perspective. First, from a research perspective, stability is a highly variable concept. It may be simple to define, but operationally there is little consensus on what community stability is even after decades of research. Second, most research work on stability has focused on quantitative measures as the social elements of community stability were assumed to flow from its economic dimensions. Researchers have focused on the easily measurable economic indicators, such as employment and income and generally, have not considered the social aspects

of communities, with respect to their quality of life or ability to cope with change (Nadeau *et al.* 2003). Third, from a policy perspective, achieving community stability in an era of rapid change has proven difficult (Beckley and Korber 1995). It has been demonstrated that stable harvests cannot guarantee stable forestry employment and wages in the face of the cyclic demand for forest products and constant changes in technology and transportation (Berck *et al.* 2003). Change thus creates uncertainty for forest-dependent communities. This is particularly true in BC as policy makers have repeatedly interpreted community stability as the maintenance of status quo forest harvest levels, jobs, and incomes despite rapid and far reaching economic, political, ecological, and social change.

Numerous studies throughout the 1970's and 1980's adopted the early approach of Kaufman and Kaufman (1946) to explore the concept of community stability (Byron 1978; Lee *et al.* 1990; Schallau 1989; Wear *et al.* 1989). In particular, these works attempted to develop an understanding of the social effects of forest dependency on dependent communities. They relied largely on a rural sociological perspective while attempting to find new ways to conceptualize and explore the stability of forest communities (Nadeau *et al.* 2003). Despite the efforts of researchers to clarify and broaden the concept of community stability, the term remains confusing and ambiguous. In response, sociology has moved away from the concept towards the broader concepts of community capacity and resilience as more contemporary ways of understanding dependent places (Beckley and Korber 1995).

2.7.2 Community Capacity

The development of community capacity has become a central focus in the rural economic literature (Kenny 2002). Community capacity is one concept that explores the collective ability

of a community to respond to stress and to meet development needs by creating and taking advantage of new opportunities (Kusel 1996). It can be used to identify the specific community attributes that either facilitate or constrain its ability to react to both internal and external change (Nadeau *et al.* 2003). Capacity is important because it allows communities to identify, enhance, and mobilize its human potential, social relationships, economic potential, and physical resources for economic growth and socioeconomic development (McCall 2003). The three main elements of community capacity are social, human, and physical capital. An important theme in community capacity is the collective interaction between these elements, because it is this interaction between them that underlies the ability of communities to maintain, strengthen, or weaken capacity (Teitelbaum *et al.* 2003).

The physical capital of a place refers to its physical attributes and resources. This includes infrastructure (i.e. roads, water systems, business parks, housing developments, schools, and hospitals) and the natural resources and financial capital present in the community (Nadeau *et al.* 2003). These resources are important, but it is the intangible assets of human and social capital that are purported to be key in building community capacity (Ryser and Halseth, in press). Human capital refers to the skills, experience, education, and abilities of the residents in the community (Kusel 1996). Resource-dependence is said to reduce the development of human capital primarily because it produces disincentives to invest in the local mechanisms and institutions that create it (Papyrakis and Gerlagh 2007). For example, the need for human capital development is more pronounced in rural places as a result of the lower levels of education investment (Ryser and Halseth, in press).

the processes of economic and social restructuring which increase mobility and migration from communities, resulting in the routine loss of human capital (Halseth 1999a).

Social capital, also called civic responsiveness, refers to the ability and willingness of the community members to work together for common goals (Kusel 1996). Social capital is inherent in the social networks that produce trust, reciprocity, and cooperation and is essential to the mobilization of other resources (Korsching *et al.* 2001; Reimer 2006). It is also critical in empowering communities to use local resources to meet their own development needs (Nadeau *et al.* 2003). Terluin (2003) states that rural regions with good social capital are more likely to grow. Some factors that impede the development of social capital include the quality of the networks and the dynamics of local actor cooperation (Sharp *et al.* 2002), the unequal distribution of resources (Derkzen *et al.* 2008), and the quality of partnerships used to address local needs (Diamond 2004).

2.7.2.1 Social Cohesion

Social cohesion and social capital are important tools used to build and mobilize resources and assets for rural economic development (Ryser and Halseth, in press). In practical terms, social cohesion represents the ability of a geographical place to achieve 'community' in the sense that they share values and develop internal social relationships (Beckley 1995). Social cohesion is one way in which the processes of human capital work themselves out (Ryser and Halseth, in press). It supports increased opportunities for interaction and collective action (Shortall 2008) and involvement and participation in the community. Thus, it is through social cohesion that social relationships have positive consequences for socioeconomic development (Portes 1998; Putnam 1995; Fukuyama 1995; and Coleman 1990).

Forest-dependent places are said to be vulnerable to economic restructuring and change (Halseth 1999a). Engaging in the processes of building social capital, through activities that promote social cohesion, can assist vulnerable places to ready themselves to adapt to and cope with change. Continued economic growth and socioeconomic development depends on the creation of both internal and external social linkages (Walford 2010). Effort to maintain these social linkages must be made continually by the community. Miller (1997) states that social cohesion is a slow and repetitive process that needs artful application and that if it is unutilized it may deteriorate until non-existent. Warren (1978) observed that the internal horizontal networks traditional in small rural places have been overwhelmed by vertical linkages to organizations and institutions external to the community. This represents another reason why dependent and vulnerable places need to concentrate on the creation of social cohesion within their community.

2.7.3 Community Resilience

Community resilience is a similar concept to community capacity except that it expresses additional concern about the development and maintenance of a community's adaptability over time (Nadeau *et al.* 2003). Resilience is concerned with the ability of a place to adapt to change over time, while minimizing the negative consequences associated with change. It refers to a community's capacity to not only change their behaviour, but to redefine their economic relationships, and alter their social institutions to maintain their economic viability and minimize social stress (Machlis and Force 1988). As such, resilience also refers to the ability of a community to deal with adversity (Kulig 2000) by taking charge of local institutions and processes for the benefit of the community (Teitelbaum *et al.* 2003). Resilient communities are

places that possess a clear vision of desired future conditions that account for the processes of change (Kusel 1996).

Resilient communities are ones that depend on interaction as the foundation for the creation of resilience ((Lacy 2000; Kulig *et al.* 2008). Kusel (1996) provides a list of community characteristics and conditions that may also be indicative of a community's resilience. Among these are the aesthetic attractiveness, proximity of outdoor amenities, level of civic involvement, effectiveness of community leadership, economic diversity, and the social cohesion displayed by its residents. Resilient places that possess these characteristics are said to be empowered and more likely to temper the impacts of change. Thus resilient communities are more likely to experience sustained economic growth and socioeconomic development (Lacy 2000).

2.8 Conclusion

The *de facto* policy assumption in BC has long been that continual increases in forest harvesting and processing are a viable strategy for the continued economic growth and the socioeconomic development of forest-dependent places. This assumption contrasts with literature that suggests that this strategy is associated with negative outcomes. Despite BC's economic dependence on industrial forestry, there exists little research regarding the relationship between forestrydependence and the socioeconomic development of forest-dependent communities. With the increasing pace of global change there is a growing awareness that forest-dependence is increasing the vulnerability, truncating the economic growth, and limiting the socioeconomic development of forest-dependent places. It is then important to explore this topic to determine whether forest-dependence has supported the socioeconomic development that will enable forestry-dependent communities to survive and flourish in an era of widespread economic

change. Houston, BC is an ideal candidate for this exploration as it is heavily dependent on timber extraction and processing for its economic base.

CHAPTER 3: CONTEXT

3.1 Introduction

The purpose of this chapter is to outline the history and geography of Houston, BC to provide context for this study of forest-dependence and its effects on the growth and development the town. This chapter provides background information on Houston so that readers can compare it to other small resource-dependent towns with which they may be familiar. This is important because the results of this research may be applicable to other forest-dependent places.

In this chapter, Houston is introduced and its economic and social development is traced from the beginning of the 20th century to 2008. A brief history is offered which outlines local events that made Houston dependent on the harvesting and production of forest resources. A chronology of important events is included to illustrate this development (Appendix I). A variety of socioeconomic statistics are also provided which detail the trends and changes being experienced by Houston.

3.2 Geography

Houston is a young community, incorporated in 1957, located in northern BC on Highway #16, approximately 305 km west of Prince George and 410 km east of Prince Rupert. Its neighbours are the communities of Burns Lake, 79 km to the east, and Smithers, 65 km to the west (see Figure 3.1). Geographically, the town is situated in the Bulkley Valley on the western edge of the Nechako Plateau in the foothills of the Coast Mountains. The topography is rolling and gentle to the north and east, mountainous in the southwest, and is covered with an abundance of spruce, pine, and fir forests. The Houston area contains a number of important water bodies including

three major rivers, the Bulkley, Morice, and Nadina, and three major lakes, Babine Lake in the north and the Francois and Ootsa lakes in the south.

Houston is the largest community in the Morice Timber Supply Area (TSA) which extends from the northern tip of Babine Lake south to Ootsa and Whitesail lakes. Other communities in the TSA include Topley, Granisle, and a dispersed rural population along the Highway #16 corridor and in the area from Owen Lake to Francois Lake. The Morice TSA is approximately 1.5 million hectares in size of which 962,000 hectares are considered productive forest land. Seventy percent of this productive forest land is available for timber harvesting and is under Crown tenure (BCMoFR 2008a). The Morice TSA was formerly administered by the BC provincial government as the Morice Forest District, but in 2001 it was amalgamated with the Lakes TSA to form the new Nadina Forest District.

3.3 History

Houston was named after John Houston, a B.C. politician and newspaperman who never actually lived in the town, but had his name chosen in a contest in 1910 (Hols 1999). Until that time the town was known as "Pleasant Valley" and until the late 1800s, the area was primarily used by the Carrier aboriginal peoples to sustain a traditional lifestyle based on fishing, hunting, trapping, and gathering (BCMSRM 2003). The construction of the Collins Overland Telegraph Line in the 1860s initiated non-aboriginal settlement in the area with the first settlers arriving in 1865 (Hols 1999).



Map 3.1: Location of Houston, British Columbia

The construction of the Grand Trunk Pacific Railway in the early 1900s gave rise to further settlement and a regional forest industry (Patriquin *et al.* 2005). In 1914, the railway was completed and the main forest industry, the hand cutting of ties and bridge timbers, was replaced by the production of wood products suitable for housing construction. As the demand for structural lumber increased, particularly in the post-World War II boom period, numerous small sawmills became common in the Morice TSA. Over time these smaller logging and milling firms were consolidated by larger more efficient sawmills, until today only two primary sawmills remain. These two mills, operated respectively by Canadian Forest Products (Canfor) and West Fraser Timber Company (West Fraser), are the two largest employers in Houston.

High levels of mining activity also following the construction of the Grand Trunk Pacific Railway, and several mining operations thrived in the area during the 1900s. Around Houston, the Bell Copper, Granisle, Equity Silver, Dome Mountain, and Nadina Silver mines all operated during the last 20 years (Horn and Tamblyn 2000). Last to close, was the Bell Copper Mine, near Granisle, which operated from 1972-1992 and the Equity Silver Mine, near Houston, which operated from 1981-1994 (Patriquin *et al.* 2005). Today, there is only one active mining operation near Houston; the Huckleberry Copper Mine which is located 125 km southwest of town.

The Houston area offers numerous opportunities for an outdoor recreational lifestyle. Popular summer activities include fishing, camping, hiking, hunting, boating, wildlife viewing, and all-terrain vehicle use. Recreational use is as high in the winter with snowmobiling, ice fishing, and

cross-country and backcountry skiing as popular activities. Tourism and recreation offer significant development potential for the region. Houston has begun to recognize this potential by proclaiming itself as the "World Steelhead Capital" to promote and market the area's unique fishing experience.

3.4 The Forestry Economy in British Columbia's Interior

In the 1950s, economic forecasts indicated strong growth in worldwide pulp demand (Marchak 1983). To supply this demand the BC forest industry was transformed from a fragmented, dispersed, small-scale industry to a large-scale, highly centralized industry under the leadership of W.A.C. Bennett, premier of BC from 1952-1972, and Ray Williston, Minister of Lands and Forests from 1956-1972. Between 1966 and 1972, eight new pulp mills were built in the BC interior. Until then, the interior forest industry consisted of several hundred sawmills, mostly small and portable that followed the timber to the next location once the resources at the present site were depleted. These mills operated on a seasonal basis from 'freeze-up', in early winter, to 'break-up'¹, usually in late March. The yield of saleable lumber from these mills was relatively low and the amount of waste, which was usually piled or burned, was very high. Most of these small mills were powered by diesel fuel with a small number utilizing wood waste to produce either steam or electricity (Zimmerman 1997).

¹ Freeze-up and break-up are seasonal periods where forestry activities slow or stop in response to inoperable ground conditions. As the terms suggest, freeze-up is generally a period in early November where road conditions harden as temperatures decline and break-up is generally a period in late March when frozen roads thaw making travel for trucks and equipment difficult. These conditions are weather-dependent and usually dictate a slowing or temporary stoppage of forestry activities in the harvesting and hauling sectors, but can also slow sawmill operations.

Several public policy decisions by the BC provincial government during the 1960s and 1970s, converged with the growing market demand for pulp. First, the 1968 completion of the W.A.C. Bennett hydroelectric dam on Williston Lake and the establishment of a province-wide grid of power transmission lines made the potential for cheap hydroelectric power a reality. Attractive power rates were offered to those forest companies who converted their mills to electricity or built new ones that utilized the new electricity infrastructure. Second, the expansion of the Pacific Great Eastern (PGE) Railway, in the 1960s, to the towns of Mackenzie, Fort St. James, and Fort Nelson enhanced the vital transportation links necessary to ship forest products to their markets. Third, the BC Forest Service introduced better utilization standards for public timber. Those companies that complied with the new utilization standards by installing new 'waste' chippers qualified for additional volumes of timber. The intent of these new standards was both to reduce sawmilling waste and to create the necessary feedstock for the production of pulp.

As a result of these and other developments, including the construction of all-season logging roads, the BC interior forest economy was transformed into a year-round enterprise with fewer seasonal limitations. The capital costs associated with electrification and the installation of wood chippers required economies of scale and, as a result, hundreds of small mills were consolidated into large centralized operations. Sawmills no longer 'followed' the available timber as logs were now trucked to centralized locations for processing.

During this growth phase in the interior forest industry, strategic position, timber quality, and harvesting rights (timber quota) were the elements that prudent investors looked at before investing (Zimmerman 1997). This was the case with the local forest industry in Houston. The

Morice Public Sustained Yield Unit (PSYU) was known as an area with vast reserves of good quality timber (Bernsohn 1981). Prior to outside investment, the Bulkley Valley Group consolidated the small mills in the area to acquire control of the area's forest resources. A key acquisition, necessary to secure the timber quota needed to attract capital investment, was the 40,000 sq. mile Pulpwood Harvesting Agreement (PHA) granted to Buck River Timber in 1963. (Hols 1999). Similarly, in 1976, West Fraser and Weldwood partnered to build the new Houston Forest Products (HFP) sawmill, not only to take advantage of the timber reserves in the Morice TSA for lumber production, but also to supply West Fraser's Eurocan Pulp Mill in Kitimat with an additional source of wood chips (Marchak 1983).

3.5 Houston's Forestry Economy

Since its beginnings, Houston has been a forest-dependent place. Forestry began with the production of wood railway ties for the Grand Trunk Pacific Railway. This activity continued through the early part of the century until the tie-cutting industry expanded to produce dimensional lumber for the home construction market. Before WWII there were only two sawmills in the Houston area, but by 1958, there were 84 small sawmills producing rough-cut lumber (Hols 1999).

A new era of industrial forestry arrived in Houston with the introduction of the Swedish gang mill in 1947. Harry Hagman, a local timber baron, imported the technology and started a sawmilling outfit called the Buck River Lumber Company. Buck River Lumber bought many small sawmills until it controlled a large portion of the annual allowable cut (AAC), the amount of timber allocated for harvest per year by the provincial government, in the Morice TSA. In 1963, Harry Hagman partnered with other Houston and Smithers lumbermen to form another company called Bulkley Valley Pulp and Timber to pursue his dream of building a pulp mill in Houston. Although Bulkley Valley Pulp and Timber was successful in securing a Pulp Harvesting License they were unable to raise the necessary capital to build the pulp mill.

In 1965, a large British and Canadian resource conglomerate, Consolidated Bathhurst Bowaters Inc., acquired control of Bulkley Valley Pulp and Timber, including Buck River Timber Company and thirteen other small mills. This collection of sawmills was reorganized into one company called Bulkey Valley Forest Industries (BVFI) (Hols 1999). BVFI began to consolidate ownership of additional mills in the area to facilitate their vision of an integrated forest products company that would include a large sawmill, pulpmill, and plywood plant.

BVFI's vision included the operation of a large forest products complex and Houston as a company town. An excerpt from a poem, by Art Cantlon, reprinted with permission by Hols (1999), entitled "The Bulkley Valley Saga" details the company's intentions for the local forest industry and the town of Houston.

"To rid this valley of its ills We'll buy and close the smaller mills and build a complex that will be the greatest thing in all BC.

When our builders get all through There'll be a town that's bright and new With mills and shops, houses and schools Built in accord with new zoning rules". BVFI redesigned the town of Houston and created an upper and lower town, where the management and workers, respectively, would live, a new indoor shopping center which would house all of the existing downtown businesses, and new recreational facilities (pers. comm. 2009). During this period, from 1969-1971, the administration of Houston was led by the BVFI's general manager Claude Parish.

In 1970, BVFI finished the construction of the world's largest fully covered sawmill but, in 1972, they declared bankruptcy in an event described as the greatest disaster of that time, in the BC forest industry (Bernsohn 1981). They sold the completed mill to Northwood Pulp and Timber, of Prince George, then owned by Noranda Forest Inc. and the Mead Corporation. Northwood purchased the bankrupt forest products business from BVFI to develop the sawmill aspect of the business (Horn and Tamblyn 2000). They operated the mill for 27 years until ownership was transferred in 1999 to its present day operator Canfor. In 2005, after an extensive retrofit, it became the world's largest sawmill capable of producing 650 million board feet of commodity lumber per year (pers. comm. 2008). It should be mentioned that Northwood had no intention of running Houston as a company town, as its predecessor BVFI had done.

In 1978, Weldwood of Canada Ltd. and West Fraser Timber Company Ltd. opened a second major sawmill in Houston in a joint venture under the name of Houston Forest Products (HFP). This mill was operated by Weldwood until 2005, when further industry consolidation resulted in its purchase by West Fraser. Today, West Fraser's HFP is the fourth largest sawmill in B.C. capable of producing approximately 450 million board feet per year (pers. comm. 2008).

Currently, these two major sawmills directly control 74 percent of all the timber harvested in the Morice TSA (Table 3.1). The remainder is apportioned among several other forms of tenure including a new (2008) Community Forest Agreement for 20,000 m³ managed by the District of Houston. It should be noted that to meet current sawmill capacities, both Canfor and West Fraser are required to purchase more timber beyond what is available from the Morice TSA. According to one estimate, 10 percent of West Fraser's and 23 percent of Canfor's timber needs are purchased or transferred from outside of the Morice TSA (BCMSRM 2003). This timber comes from a variety of other licensees, such as the BC Timber Sales Program, from the neighbouring Lakes and Fort St. James TSA's.

Table 3.1: Annual Allowable Cut by Licence Type for the Morice TSA in 2009 (BCMoFR 2009a)

Licence Type	AAC m³/year	% of total AAC
Replaceable Forest Licences – Canfor & West Fraser	1,530,260	74.2
Non-replaceable Forest Licences	155,222	7.5
BC Timber Sales	339,410	16.5
Community Forest Agreement	20,000	1.0
Woodlot Licences	12,225	0.6
Forest Service Reserve	4,000	0.2
Totals	2,061,117	100

In the 1960s and 1970s, the production of lumber increased dramatically as new technology resulted in more efficient harvesting and production methods. Today, the forest industry is the dominant economic driver in Houston. Approximately half of the employment in Morice TSA is associated with the forest sector making it one of the most forest-dependent and least diversified local economies in BC (BCMoFR 2008a). In 2002, the forest industry provided 51 percent of all direct employment with 1,030 jobs in the harvesting, silviculture, and the processing sectors. It is important to note that this measure of dependency does not include the retail, transportation, and other indirect services that are also dependent on the forest industry. A more accurate measure of Houston's forest-dependence would include both indirect and direct employment measures. For

example, in 2002, an additional 311 jobs were indirectly dependent on the forest industry which increases Houston's forest-dependence to 61 percent (BCMoF 2002).

3.6 Census Information

3.6.1 Population and Demographics

The 1970s and 1980s were a period of growth for Houston. During the 1970s, demand for commodities, such as lumber, was high and Houston experienced a major boom in economic activity. The population grew and was expected to reach 6,000 persons in direct response to the construction of the new BVFI sawmill (Hols 1999). Although this expectation was not realized, the population did grow from 699 in 1966 to 2,232 by 1971 (Figure 3.2). This growth continued until the population of Houston almost reached 4,000 in1981.

Figure 3.1: Population Change in Houston, 1961-2006 (Statistics Canada 2007)



As in other BC resource-based communities, the population of Houston is closely linked to the health of the local forest economy and, as a result, it has followed the boom and bust cycles of the forest industry. The 1980s and 1990s witnessed the general deterioration of global commodity markets coupled with large increases in production costs in a condition Freudenberg (1992) refers to as the price-cost squeeze. The 1982 economic recession had severe implications for the BC forest economy, particularly along the coast (Hayter 2000). In Houston, these deteriorating economic conditions led to the closure of several mines in the area and severe cost pressures for the forest industry. It is these cost pressures that are related to the loss of local employment benefits and a steady decline in Houston's population. The opening of the Equity Silver Mine, in 1981, minimized local population loss as did a rally in commodity prices in the early 1990s. Since the 1990s, however, the population of Houston has decreased in concert with the downturn in the BC forest economy. Between 1996 and 2001 it declined 9.1 percent and by 2006 it declined a further 11.6 percent to its current level of 3,163 persons (Figure 3.1).

Table 3.2: Demographic Change in Houston, Age 20-34 Cohort (Statistics Canada 1976-2007)

Census Year	1976	1981	1986	1991	1996	2001	2006
Pop. Age 20-34	750	1,420	1,280	980	970	730	640
Total Population	2,670	3,921	3,905	3,628	3,934	3,575	3,163

One indicator of declining economic conditions and labour mobility in resource-dependent places is the absence of young people (Lucas 1971). The 20-34 age cohort² is considered to be highly mobile and more likely to travel for education and employment opportunities. In BC, the overall proportion of 20-34 year olds decreased from 27 percent in 1981 to 21 percent by 2001, due to an aging 'baby boom' cohort. In Houston, the proportion of 20-34 year olds was 36 percent in 1981 and 20 percent by 2006. This age cohort has markedly decreased since 1981 (Table 3.2) and this decrease is an indicator of the declining ability of the resource sector to

 $^{^{2}}$ The 20-34 age cohort is used here as a proxy for mobility status. Mobility status is an important indicator of stability and overall economic conditions.

support new job entries. This downturn has clearly resulted in a steady decline of the age 20-34 cohort as they migrated away other further education and employment opportunities.

Despite this overall decline, there has traditionally been a large number of jobs available in the local forest industry. Successive generations of young people, especially males, have entered the labour force at an early age because of the high wages and the lifestyle that those wages enabled. In the 1970s and 1980s, "it was very common to have young men leave in grade nine or ten to take good jobs at the mill or in the bush" (Hols 1999, p. 191). Unfortunately, the choice to enter the work force at an early age usually negated the opportunity for further post-secondary and sometimes even secondary education.

Today the results of these choices have become apparent. In 2006, 28.9 percent of Houston's population had not completed high school compared to the provincial average of 19.9 percent (Statistics Canada 2007). The majority of residents who did complete high school seemed to forego post-secondary education in favour of forest industry employment. In 2006, 12.6 percent of the population of Houston held a trades certificate, 13.4 percent held a college diploma, and 6.4 percent held a university degree compared to the BC averages of 10.9, 22.1, and 19.3 percent respectively (Table 3.3). Of particular note is the low share of Houston residents with a university degree; a statistic that is two-thirds less than the provincial average.

Table 3.3: Educational Attainment in Houston, 1996-2006 (Statistics Canada 1996-2007)

	1996		2001		2006	
Education level all	Houston	BC Average	Houston	BC Average	Houston	BC Average
persons age 15+	(%)	(%)	(%)	(%)	(%)	(%)
No high school	38.7	31.1	26.8	18.5	28.9	19.9
High school	14.6	12.9	30.8	27.3	38.5	27.9
Trades certificate	n/a	n/a	14.9	26.1	12.6	10.9
College diploma	n/a	n/a	15.3	18.2	13.4	22.1
University degree	7.9	16.1	12.2	23.0	6.4	19.3

3.6.2 Family Structure

Typical of resource-based communities (Lucas 1971), Houston is a family oriented community, and this is reflected in its age structure (Figure 3.3). In 2006, the majority of its residents were either under the age of 19 (28%) or between the ages of 30 and 65 (50%), with roughly an even gender split with 1,665 males and 1,500 females. Houston also has an aging workforce as 29 percent of its population is between the ages of 45 and 65. This population segment is made up of the 'baby-boomer' generation that experienced the boom times of the 1970s and the relative economic stability of the 1980s and 1990s. Only 8 percent of Houston's population are seniors (over the age of 65) which indicates that Houston's population generally does not age-in-place.

In 2006, there were 935 census families with an average of 3.0 persons per household of which the majority contained married couples (Statistics Canada 2007). In 2006, 79 percent of Houston's families owned their own homes, with single detached houses accounting for 68 percent of home types. The remaining 21 percent of Houston's residents rent a wide variety of housing including apartments, row houses, detached and semi-detached homes, and other dwellings.

3.6.3 Occupations and Earnings

Most families in Houston are supported directly by the two large sawmills and their associated logging and trucking contractors. In 2006, the top three industries were the manufacturing of wood products, resource-based extraction (ie. logging), and retail trade (Table 3.4). According to the BCMoF (2002), West Fraser and Canfor directly employed 445 and 580 persons, respectively, in 2002; which represents 47 percent of the total experienced labour force of

Houston. In addition to the major sawmills, 37 jobs also exist at Houston's small value-added producers, Corwood Whisper Timber Products and Pleasant Valley Remanufacturing.



Figure 3.2: Age Pyramid for Houston in 2006 (Statistics Canada 2007)

As is common in resource-based towns, males hold the majority of the full-time, high-paying, union jobs in the town's resource sectors while women generally hold the part-time, low-paying jobs in the retail and service sectors (Marchak 1989; Halseth 1999a). In 2006, women accounted for 10 percent of the jobs in manufacturing (lumber production) and 20 percent of other available resource-based jobs. As a result, men typically earn much higher wages than women; often more than twice the amount (Table 3.5). For example in 2006, men in Houston had an average income of \$50,464 per year while women averaged only \$19,634. Although the disparity in wages earned by men and women in Houston has improved slightly since 1996; men currently earn 2.6 times more than women.

Industry	Total Labour Force (#)	Male (#)	Female (#)
Manufacturing	525	465	55
Resource-based	265	210	55
Retail trade	235	90	140
Business services	160	85	75
Education	120	20	100
Health & social services	85	10	80
Finance & real estate	65	10	55
Wholesale trade	65	30	30
Construction	50	40	10
Other services	295	115	150
Total	1865	1070	765

Table 3.4: Labour Force by Industry in Houston in 2006 (Statistics Canada 2007)

The working residents of Houston make good wages. In 2005, the median before-tax family income in Houston was \$74,861; approximately 16.7 percent higher than the BC provincial average. Wages for individuals are also above the BC average. In 2005, the average individual income was 44 percent and the median income was 23 percent higher than the BC average and median incomes, respectively (Table 3.5). As a result, persons holding full-time employment positions in the local forest industry tend to make very good annual salaries.

Census Year	Income	BC Average & Median Income	Houston Average & Median Income	Houston Average & Median Income	Houston Average & Median Income
		Pop. 15+ (\$)	Pop. 15+ (\$)	Males 15+ (\$)	Females 15+ (\$)
2006	avg	25,722	37,121	50,464	19,634
2006	med	24,867	28,497	49,889	16,421
2001	avg	31,544	31,203	41,482	19,056
2001	med	22,095	27,051	43,085	13,611
1006	avg	26,295	28,394	38,032	17,120
1990	med	19,982	21,450	39,912	12,533

Table 3.5: Average and Median Incomes for Houston (Statistics Canada 1996-2007)

Unfortunately, full-time employment is a reality for only roughly half of the working-age population of Houston. Seasonal and temporary employment are regular features in the working life for many of Houston's residents. This is due, not only to the nature of the work, but also to the boom and bust economic conditions that govern wood commodity markets. In 2006, 58 percent of Houston's working-age population (persons 15 years plus with earnings) worked full-

time compared to 49 percent in 2001, and 47 percent in 1996 (Table 3.6). Due to the nature of forestry work, many workers are unemployed at various points in the year. This commonly happens during regular events like 'break-up' and other unforeseen events that result in mill shutdowns and layoffs. This is reflected in Houston's higher than average unemployment rates. For the past five Census periods, Houston has had, on average, 28 percent higher unemployment than the BC provincial average (Table 3.6).

Census Year	Total Labour Force	Participation Rate (%)	Worked Full- time (%)	Unemployme nt Rate (%)	BC's Unemployment Rate (%)
2006	1865	74.9	57.8	10.5	6.0
2001	2195	75.9	46.7	11.7	8.5
1996	2150	74.9	47.0	14.1	9.6
1991	1905	72.4	45.4	10.5	10.3
1986	1975	80.8	46.8	19.2	13.2
1981	1975	72.6	n/a	11.3	n/a

Table 3.6: Labour & Unemployment Rates for Houston and BC (Statistics Canada 1981-2007)

In general, Houston has experienced a relatively stable economic climate tempered by economic booms busts. Lately, there is evidence of an increasing trend towards more frequent sawmill layoffs, shutdowns, and employment loss in response to declines in the forest economy. Since 1996, Houston has experienced significant job loss in its primary industries. There has been a steady decline in the number of resource sector jobs over the last ten years from 400 in 1996, to 265 in 2006 (Table 3.7). The number of manufacturing jobs has fluctuated as well with a slight increase in 2001 to a loss of 175 jobs by 2006. There is also evidence that the loss of jobs in the primary resource sector are contributing towards the decline of other sectors. Job loss is also evident in the wholesale trade, construction, the accommodation and food industries, as well as the 'other' services sector. Overall, Houston's labour force has declined 13 percent between 1996 and 2006.

Industry	1996 (#)	2001(#)	2006 (#)
Manufacturing	605	700	525
Resource-based	400	305	265
Retail trade	230	250	235
Business services	20	145	160
Education	115	100	120
Health & social services	85	105	85
Finance & real estate	35	35	65
Wholesale trade	100	55	65
Construction	135	60	50
Accommodation & food	170	135	110
Government services	65	85	55
Other services	190	115	130
Total	2150	2090	1865

Table 3.7: Houston's Labour Force by Industry, 1996-2006 (Statistics Canada 1996-2007)

3.6.4 Culture

Although Houston is a young community, it is well established with 52 percent of the population being third generation or more. The population is largely Caucasian, but there are two distinct minorities. Twelve percent of Houston's population is First Nations and 4.1 percent are of south Asian (Sikh) ancestry (Statistics Canada 2007). Also of note is the presence of a large Dutch population. According to the Census, approximately 30 percent of the town's population is of Dutch origin (Statistics Canada 2007). Two waves of Dutch immigrants, one arriving before WWII and one after, came to Houston because of the availability of land and forest resources suitable economic activity. They became known for their work ethic, frugal lifestyles, and staunch Calvinistic religious convictions (Hols 1999).

Today, the Dutch community remains the economic backbone of Houston after establishing key institutions, such as the Houston Co-op, the Chamber of Commerce, the Credit Union, the Farmer's Institute, and other key businesses that continue to serve the local community (Hols 1999). The Dutch community also built the first fire department, school, and church. Today there are twelve churches in Houston that serve a population of 3,163. The two largest are the Houston

Christian Reformed Church and the Canadian Reformed Church; both offshoots of the Dutch Reformed Church (CRC 2009). Many local businesses as well as key government and business institutions in Houston are also dominated by members of the Dutch community. The Chamber of Commerce, the Downtown Merchants Association, and key positions in the District Municipality of Houston are controlled by persons of Dutch heritage. For example, seven of the ten past mayors of Houston were Dutch immigrants or descendents of them, including Houston's longest serving mayor, who served from 1986 to 2002.

3.7 Change

3.7.1 Industry Restructuring

During the past few decades, the forest industry in Houston has seen major change, including the consolidation of small-scale, dispersed sawmill operations into large-scale, centrally located wood-processing facilities. These consolidation activities are not limited to the major large integrated forest companies (MNCs) like Northwood, Canfor, or West Fraser. Consolidation also has occurred at other levels of the industry; from the major contractors that harvest, process, and haul timber to the equipment and service providers that supply the needs of the local forest industry. For example, the number of major contractors that harvest, process, and haul timber for Canfor has decreased from 7 in 2005 to 4 in 2008 (pers. comm. 2008). Similarly, the number of heavy equipment dealerships, retail tire outlets, and even gas stations has been reduced through consolidation.

Forest industry restructuring in Houston has had several other effects. Industry consolidation has increased the level of dependency on the forest industry for employment, incomes, and revenues

vital to the town and the families that live there. This is important because in an industry that is subject to frequent boom and bust conditions, there are now fewer employment alternatives for those who find themselves unemployed. As a result, Houston's economy is almost entirely dependent on two, externally owned and controlled forest companies.

There is evidence that economies of scale and monopolistic control of the local forest economy have significant advantages for the large companies that possess these features. Not only are they able to better control their production costs by extracting concessions from labour, retail, and other service providers, they are also able to control the local market for timber and other physical capital such as land, labour, infrastructure, and transportation. With increasing control comes a corresponding increase in the lack of control by those dependent on them. Control of land and infrastructure development is necessary to encourage investment in alternative industrial activities. Unfortunately, it does not appear that Houston is in control of the necessary features to market and promote a balanced economic development approach.

3.7.2 Government Restructuring

Historically, government services have been earmarked for Houston's neighbours, Smithers and Burns Lake, mainly because these communities were developed earlier than Houston. As a result Houston, has experienced very low levels of government service provision. One particular longstanding issue concerns the lack of adequate healthcare facilities, staff, and service levels. As a result, residents who seek medical attention have traditionally, and continue to, travel to Smithers or Burns Lake for medical services. Recent provincial government restructuring has reduced the already minimal service levels in Houston. In 2001, the BC government reduced or eliminated mostl government services in Houston believing that the community's needs could be adequately served from Smithers and Burns Lake. The local offices for the Ministry of Forests, the Ministry of Energy, Mines and Petroleum Resources, the Ministry of Children and Family Development, and the Ministry of Social Services were closed. Local opposition to these closures resulted in a maintained presence, but with reduced service levels for Court Services and Service BC.

3.7.3 Ecological Change

Houston is near the epicenter of the latest Mountain Pine Beetle (MPB) epidemic that has attacked pine leading stands throughout the central interior of BC. It is estimated that the MPB has killed approximately 40 percent of the total merchantable pine volume in the interior of BC (BCMoFR 2008b). This pine mortality is impacting the supply and quality of timber available for the production of lumber, as well as the economic and social values important to local communities in the area. In response to the MPB, the AAC's in the neighbouring Lakes and Prince George TSA's were dramatically raised, starting in 2001, to cope with large volumes of dead and dying timber. In contrast, the Morice TSA has seen a minor increase (approximately 10 percent) from the 2002 AAC of 1,961,117 m³ to the 2008 AAC of 2,165,000 m³.

One side effect of the increase in harvesting rates was a proportional increase in the production of lumber. In response to the increased availability of MPB damaged timber, the two major sawmills in Houston initially increased production by purchasing additional damaged timber from neighbouring TSA's and by adding a third shift at their mills. These activities in turn created a temporary mini-boom in Houston's secondary and tertiary supply and service sectors. This may explain the increase in manufacturing jobs from 605 in 1996 to 700 in 2001 before declining to 525 in 2006 (Table 3.7).

3.7.4 Economic Change

The improved economic conditions created by the MPB epidemic were largely nullified by a sharp reduction in market demand from the United States by 2007. The reduced demand and price for structural lumber have forced both Canfor and West Fraser to exercise a number of strategies in Houston. Primarily this has meant a reduction in the number of people employed in the sawmills and the loss of employment related benefits. Recent events include decreased production, the elimination of a third shift of workers, and the subsequent loss of jobs. Other cost reduction strategies include the reduction of work weeks, the extension of holidays, the increased frequency and duration of maintenance shutdowns, the loss of summer jobs for students, retirement bridging, and an increase in temporary and seasonal hiring (pers. comm. 2008).

While the forest industry has moved to reduce its cost structure, it has done so largely at the expense of the host community. Not only has the community lost employment and associated benefits, it finds itself in a situation where tax, wage, and other concessions are necessary to ensure the continued viability of the large sawmills. One example of this is the reduction in tax rates for major industry by the District of Houston at the request of Canfor (pers. comm. 2008). As a result, the annual tax rate for major industry was reduced 20 percent from the 2007 rate of \$84.99 per \$1000 of assessed property value, to the 2008 rate of \$67.73 (Civic Info BC 2009).

Similar too many other BC forest-dependent communities, Houston is entering a time of increased uncertainty as it copes with the effects of continued economic restructuring and the

latest global economic downturn. Although many residents believe in the viability/survivability of the local industry, there are many who are uncertain about its ability to sustain itself and the employment benefits necessary for Houston's long-term survival.

3.8 Conclusion

From this background, it is clear that Houston is dependent on the forest industry as its economic driver. While the geography and history of Houston have helped shape this dependence, in the past, it is this dependence on industrial forestry that is now shaping the town, its culture, and people. Houston now represents an extreme example from which to assess how the forest-dependence has influenced one small place. The following chapter details the methodology used to determine if forest-dependence has created economic growth or socioeconomic development in Houston, BC.

CHAPTER 4: METHODOLOGY

4.1 Introduction

Weber (1990) defines social science as the study of actions with subjective meaning in the real world. In social science, subjectivity is countered by the use of pre-defined methodologies to control the inherent bias present in both the researcher and the subject(s) being researched. The methods are important as they determine the type of research outcomes and provide validity to the findings. This chapter outlines the methodology employed in this research study and provides details on how the data used in this research were collected and analyzed.

This research was undertaken to describe and understand the relationships between forestdependence and the socioeconomic development of Houston, BC. There are three main parts to the thesis methodology. The first part involves the collection of primary and secondary quantitative data pertinent to the economic growth and socioeconomic development of Houston. The second part involves the design, collection, and analysis of the qualitative interview data, and the third involves triangulation between the different study components and data types.

4.2 Research Approach

A mixed methods approach was used to explore the socioeconomic development of Houston, BC. The goal of mixed methods research is to draw on the strengths of different methods while minimizing the weaknesses inherent in them at the same time (Tashakkori and Teddlie 1998). Brewer and Hunter (1989) call this the fundamental principle of mixed research. According to this principle, multiple types of data are collected, using different strategies, approaches, and methods, in such a way that the resulting combination, represents complementary strengths and non-overlapping weaknesses. Effective use of this principle makes mixed method studies superior to monomethod ones (Tashakkori and Teddlie 1998). The use of multiple research design strategies, methods, and theories can increase the depth of understanding of a particular investigation (Berg 2004). In this manner, differing research strategies and data types broaden the dimensions and scope of the project, hasten understanding, and result in a more complete picture while achieving the research goals (Morse 2003).

In mixed methods research, both quantitative and qualitative methods are used. Traditionally, the quantitative study component is conducted and completed before the qualitative component. This sequence is used so that any unexpected findings from the first phase of the study can be explored using qualitative methods in a separate and purposeful sample (Morse 2003). In this study, the qualitative phase represents the main body of work which is supported and validated by the quantitative data. Primary and secondary data was collected to create context for, and to assist in, the development of the qualitative research phase. The quantitative data was also used to validate and add clarity to the qualitative findings, through the process of triangulation, as the different study components were integrated in the analysis.

This research used both quantitative and qualitative indicators of economic growth and socioeconomic development. The quantitative data included statistics concerning a variety of socioeconomic development indicators. The qualitative data was comprised of key informant interviews and their subsequent analysis. Critiques of either method are available, but according to Beckley and Burkowski (1999) the best approach is to use both quantitative and qualitative

indicators; realizing that either method will perform better in respect to certain selection criteria such as validity or reliability.

Four sources of information were used for this study:

- 1. Academic literature provided background theory to develop a sense of the issues and markers that could assist with this inquiry.
- 2. A small local newspaper, "Houston Today", popular press articles, and government reports provided background information and other data to help build historical context.
- Time series quantitative socioeconomic statistics were gathered from Statistics Canada, BC Statistics, and other government sources, such as the BC Ministry of Forests and Range, to illustrate the range of socioeconomic development and economic growth that has occurred.
- 4. Local interviews with community representatives in Houston represent the main body of qualitative data that was collected.

4.2.1 The Study Place

Houston was chosen using broad selection criteria that included places that are: geographically northern (defined broadly as the region north of 100 Mile House), dependent on industrial forestry (based on proportional employment data), and peripheral (distant to the economic and political center of the province). Additional criteria includes that the selected place not be an instant town (incorporated under the Instant Town Act of 1965) or First Nations community (identified as an Indian Reserve by Statistics Canada) or be dependent upon a pulp mill for employment or income.

Using 2006 Census data from Statistics Canada, 52 northern forest-dependent places were initially examined as possible candidates. This field was narrowed to those with more than 25 percent forest-dependence as determined by proportional employment statistics. These forest-dependent places are presented in Table 4.1.

Place	2006 Forest-	Comments
	Dependence (%)	
Anaheim Lake	43.8	Indian Reserve, 1 sawmill
Decker Lake	36.8	1 sawmill
Fort St. James	41.4	3 sawmills
Fraser Lake	40.3	1 sawmill
Hixon	41.2	1 sawmill approximately 30 km to south
Houston	43.0	2 sawmills
Kitimat	43.7	Instant Town, 1 pulpmill
Mackenzie	52.6	Instant Town, 2 sawmills, 1 pulpmill, 1 pulp & paper mill
McBride	38.7	1 sawmill, 1 specialty sawmill
Moricetown	57.2	Indian Reserve, 1 fingerjoint mill
Quesnel	32.6	3 sawmills, 2 pulpmills, 1 plywood mill, 1 MDF plant
Vanderhoof	29.8	1 sawmill, 1 specialty mill
BC average	11.9	

Table 4.1: Northern BC communities with greater than 25 percent forest-dependence by proportional employment (Statistics Canada 2007)

Communities identified as Instant Towns, such as Mackenzie and Kitimat, or Indian Reserves such as Moricetown or Anaheim Lake, were removed as potential study communities. This is because the socioeconomic development and economic growth of these places is influenced by a variety of very different conditions when compared to the majority of BC's forestry-dependent places. Pulp mill-dependent communities, such as Quesnel or Mackenzie, were also not considered because the pulp and paper industry has been shown to behave as a core sector with far more positive socioeconomic outcomes when compared to the peripheral sawmilling sector (Stedman *et al.* 2005; Overdevest and Green 1995; Elo and Beale 1985). The revised list is presented below:

Table 4.2: Revised list of northern BC communities suitable for this study (Statistics Canada 2007)

Place	2006 Forest-Dependence (%)	Comments
Houston	43.0	2 sawmills
Fort St. James	41.4	3 sawmills
Fraser Lake	40.3	1 sawmill
-------------	------	-----------
Decker Lake	36.8	1 sawmill
Vanderhoof	29.8	1 sawmill

Houston was chosen as it is the most forestry-dependent place in northern BC that met the selection criteria. It is home to two large sawmills that currently produce approximately 3.3 million board feet per day of commodity lumber. These sawmills are externally controlled by large integrated forest corporations, namely Canfor and West Fraser. Houston is also suitable as it is a young community that has been dependent on traditional forestry activities since its beginnings in the early 1900s. In 1970, it became home to the world's first 'supermill' (the worlds largest covered sawmill); a position which was renewed in 2005 after an extensive refit (the first sawmill capable of producing over 500 mbf/year). Houston has also experienced a suite of changes including a large MPB epidemic, generally declining forest sector employment, and the withdrawal of a range of government services

4.3 Quantitative Data

Secondary data was used to help build historical context for this study. This context is critical to understanding the nature and characteristics of Houston and the role of forest dependence in its socioeconomic development. Archival research on the town newspaper, "Houston Today", was used to build a chronology of events concerning Houston's social and economic development. Weekly issues for the odd numbered years beginning in 1969 and ending in 2007 were reviewed for events pertinent to the economic growth and development of Houston.

Two town histories, "Marks on the Forest Floor: A Story of Houston, BC" by Elnora Smith (1971) and "Marks of a Century: A History of Houston, BC" by Grace Hols (1999) were reviewed to gather secondary data about Houston's growth and development. These histories are

written by residents of Houston and provide a local viewpoint of socioeconomic development in the area. They assisted in the creation of a community chronology while providing a local understanding of events that were important to residents during a specific time period.

Government reports were also reviewed for additional background information and historical data concerning events that have impacted the economic growth and socioeconomic development of Houston. Some examples include the annual reports of the Ministry of Forests, the Timber Supply Review and the Land and Resource Management Plan documents for the Morice TSA, and a variety of other forest harvesting and revenue reports from the Revenue Branch of the Ministry of Forests.

Socioeconomic data from BC Statistics and Statistics Canada's Census Subdivisions (CSD's) were used to assess indicators of economic growth and the socioeconomic development of Houston³. Time series data, from the 1976 through to the 2006 Canada Censuses, was collected to illustrate the effects of forest dependence on a variety of indicators.

In summary, quantitative data for the following indicators was collected:

- forest harvesting, processing, and related revenue data was drawn from reports to demonstrate the volume and amount of forest products produced and the associated revenue,
- employment, unemployment, and income data was gathered to illustrate the range of benefits derived from the local production of industrial forest products,
- education and skills training data demonstrate the level of human capital present in the area,

³ CSD's have been linked to municipal boundaries or rural municipal districts since the 1971 census.

- housing indicators illustrate the accessibility of housing for a diverse population in the community. Adequate and affordable housing is an indicator of socioeconomic development, and
- demographic data illustrate population shifts in response to growth, development, job loss, or other changes.

4.4 Qualitative Data

Key informant interviews were used to collect the qualitative data used in this study. Qualitative interview methods were chosen because they provide greater validity than other methods (Babbie 2001). The interviews were structured to ask specific questions pertaining to Houston's socioeconomic development and economic growth. The interview questions asked about 1.) the obstacles to local socioeconomic development processes, and 2.) the effects of change on local socioeconomic development. The interviews also explored other issues including:

- the presence of visioning and planning for Houston's socioeconomic development,
- the local capacity for socioeconomic development,
- the production of community benefits from industrial forestry,
- the implications of local versus external control of economic drivers and development processes,
- · conflicts over visioning, planning, and implementation of development goals, and
- the effects of traditional forestry production on the community's economic growth and socioeconomic development.

Twenty-eight interviews were conducted with knowledgeable government, business, and other social service and community leaders using a semi-structured question format. Two sampling frameworks were used to select these key informants. First, key informants were initially selected from secondary sources and publicly available lists. Second, subsequent informants were selected using a snowball sampling process which involved recommendations and referrals from other interviewees (McCall and Simmons 1969). Interviewees were chosen from a variety of backgrounds for their potential to provide information about issues relevant to the forest-dependence, socioeconomic development, and economic growth of Houston. An interviewee matrix was constructed to ensure a rough balance between interviewee perspectives (Roulston *et al.* 2003). This matrix is included in Appendix IV.

Sector	# Interviewees
Local government	5
Provincial government	1
Federal government	1
Municipal employees	2
Local businesses	6
Industry	3
Education	2
Social services	7
Economic development	1
Total	28

Table 4.3: Interviewee background by sector

Twenty eight interviews were conducted in Houston, with eight government, twelve business and industry, and eight social service representatives (Table 4.3). Most of the interviewees were long-term residents of Houston, but eight had lived in Houston for five years or less, having recently relocated to Houston to take advantage of employment opportunities (Table 4.4). Two of the relocatees were former life long residents of Smithers which gave them a unique perspective as both "insiders" and "outsiders" in Houston (Table 4.4). The average term of

residence for the interviewees was 18.8 years, with the shortest being 6 months and the longest 61 years. In total eighteen males and ten females were interviewed.

Time	# of Interviewees
< 1year	1
1-5 years	7
6-10 years	0
10-25 years	5
>25 years	13
Smithers residents	2
Total	28

Table 4.4: Interviewee length of residence in Houston

As suggested by (Gubrium and Holstein 2002), the interview questions were pre-tested prior to going into the field to ensure that they achieved their purpose. Three mock interviews were conducted with social science graduate students during which time the interview script was revised and condensed. The result was a more focused interview script (Appendix IV) of approximately one hour in length. Approval was sought and received from the UNBC Research Ethics Board before the interviews began.

The interviews were conducted over a four week period, starting on October 22, 2008 and finishing on November 14, 2008. Potential interviewees were initially contacted by phone at either their place of work or home residence. At this initial point of contact, the goals and purpose of the research were described and interviewees were asked if they would be interested in participating. Appointments were then made for interviews to be conducted in a mutually agreeable place in Houston. Local restaurants, coffee shops, places of business, and private homes were typical interview locations.

Before each interview began, the aim and purpose of the interview was reviewed and the interview format was discussed. Interview consent forms (Appendix IV) were signed by all

twenty-eight interviewees. The participants were reminded that the interview would take approximately one hour, it was being recorded, and once concluded it would be processed and they would receive a copy of the draft transcript for review.

Each interview followed a semi-structured format. This type of interview is a collaborative effort that is useful in helping the interviewer to gain insight into complex affairs that could not be accessed through other techniques (Babbie 2001). An interview script was used to guide and control the conversation, but the interview was intended to be a frank discussion about the social and economic development of Houston. Flexibility was an important component of each interview as some interviewees found particular questions difficult to understand or interpret and required clarification. It also allowed for probing questions necessary to draw out further information to understand complex issues.

The use of an interview guide allowed for a level of consistency among interviews that was necessary for later comparability (Babbie 2001). The interview script contained 30 questions in eight different sections (Appendix IV). Section A opened the interview with general questions about the interviewee's background, length of residence in Houston, and their level of involvement within the community. Section B solicited brief opinions about Houston's dependence on industrial forestry and its general effects upon the town. Sections C and D explored both the past and present economic and social development of the community while Section E asked questions about the level of local versus external control over the community's economic drivers. Section F explored the effects of economic and social change on Houston as a result of government and industry restructuring and Section G asked the capacity of the

community to cope with these changes. The last section was intended to allow the interviewee to 'speak their mind' about any other issues pertinent to the growth and development of Houston.

Each interview was unique in setting, length, and format. In some cases, the interview wording was modified to accommodate interviewee nuance, but the thrust of the question remained true to its original purpose. In other interviews, specific questions were not asked, either because the interviewee had no knowledge of the subject matter or they declined to speak to it. At the conclusion of each interview, field notes were made to document information about the interviewee, the setting, the interview process, major themes and issues, and general impressions for future use during the analysis.

All 28 interviews were recorded with an unobtrusive digital recorder and were fully transcribed using speech dictation software (Nuance Dragon Naturally Speaking 10.0) by the interviewer. Once transcribed, each interview was reviewed and edited for sentence structure, grammar, spelling, and punctuation. Once the transcriptions were complete, all interviewees were emailed a digital transcript of their interview and were asked to review it for errors, omissions, and any other revisions that they felt were necessary. This form of participant checking is perhaps the most important way of increasing the credibility of the interview data (Guba and Lincoln 1989). Two weeks later a hard copy of each interview transcript was mailed out to all interviewees. This was done in an attempt to increase the low response rate to the original digital emails. In total, 43% of the interviews were returned to the interviewer with suggested revisions. All revisions were made as suggested by the interviewees.

4.5 Data Analysis

Content analysis was used to explore and interpret the qualitative interviews. Content analysis refers to techniques used to make inferences by systematically identifying the special characteristics of the messages contained in the data (Holsti 1969). The purpose of the content analysis procedure is to gain a deep understanding and familiarity with the interview data while condensing complex information and making it systematically comparable through the use of an objective coding scheme (Berg 2004).

Manifest and latent content analysis was used to categorize, code, and count the interview data. Manifest analysis refers to the visible surface characteristics of the data that have been communicated while latent analysis refers to the intended or implied meaning behind the communication (Babbie 2001). Open coding is the process of grouping interviewee responses into categories (Rubin and Rubin 1995) and is concerned with, and motivated by, finding the intended meaning behind the words (Berg 2004). As Strauss (1987) suggests, I began by using naturally occurring classes of things, persons, events, and other important characteristics in a systematic coding scheme. A coding scheme helps to ensure the reliability and validity of the coding process (Weber 1990; Rubin and Rubin 1995; Babbie 2001).

After defining the units of analysis, three rounds of both manifest and latent open coding were conducted. The first round involved a preliminary read-through from which separate lists of latent and manifest themes (codes) were developed. The aim here was to produce codes that described the conditions, strategies, interactions, and consequences that occurred in the interview data (Berg 2004). In the second round, the codes were explicitly defined and grouped into larger coding categories. These categories were mutually exclusive and independent of each other as to

remove ambiguity about which category a code may belong to (Weber 1990). The data was then exhaustively coded both to test existing codes while creating new ones. As Strauss (1987) suggests, one difficulty in the coding process was to create genuine codes that fit the data. To counter this difficulty, new codes were continually created and the definitions associated with existing ones were frequently updated to better reflect the data (Strauss 1987). In the third round, the codes and their categories were revisited. Each time a new code was created or updated, all of the interview data was recoded. The goal in this round was to verify and substantiate the codes for consistency and accuracy (Babbie 2001).

4.5.1 Manifest Content Analysis

Words were the basic units analyzed during the manifest content analysis. During the initial read of the interview data, a running list of frequently occurring terms related to my research question was compiled. In round two, this list of terms grew substantially in response to a more comprehensive and exhaustive coding process. This list was ordered, repeated terms were eliminated, and codes with multiple words were shortened into a single word code. The result was 356 different manifest terms. Those terms with little relevance to the research question were eliminated (Berg 2004), which resulted in 302 manifest codes. In the third round of manifest coding, the frequency of occurrence for each of the 302 codes were counted (using NCH Software TexTally v. 1.08). The purpose of these frequency counts for the manifest codes was to assist in the creation of the latent codes (developed in the next step of the analysis) and to help verify their importance and relevance. Beyond this dual purpose, the manifest codes were not used further in the analysis.

4.5.2 Latent Content Analysis

Phrases were the analysis unit during the latent content analysis. During the initial read of the interview data the question "what is really going on?" was continually asked of the data to create an initial list of latent themes. In round two, this list of themes was expanded significantly through the latent coding process. In this process the interview data was examined minutely and the range of questions asked of it was more comprehensive to force the generation of new codes (Strauss 1987). Examples of these questions included: what is really going on? what is the basic problem? what is the main story? what accounts for this problem? and what category does this issue belong to? This coding process in round two resulted in the creation of 148 latent codes.

In round three, the definitions for each latent code were revised to better reflect the interview data. These latent codes were then integrated into core categories according to their more obvious and salient linkages. Similar codes were combined and codes that could not be verified or did not relate to the research question were eliminated (Berg 2004). The result was 98 individual latent codes grouped into 20 core categories under 5 meta themes. This new coding structure was used to test and verify each of the 98 latent codes against the interview data (Appendix III).

4.6 Triangulation

Data triangulation between the quantitative and qualitative study components was used to verify and increase the validity of the research results. Through triangulation the trustworthiness of the theoretical statement and the validity of the data can be increased (Erzberger and Kelle 2003). This is an important component of mixed methods research as the combination of observations from different vantage points results increases validity (Shera and Gill 1990).

Triangulation occurs when different data sources are combined to verify similar results for maximum theoretical advantage (Denzin 1989). In triangulation, the points of the triangle represent propositions or statements while the sides of the triangle stand for any logical relations between these statements (Erzberger and Kelle 2003). The quantitative and qualitative study components were converged in the analysis phase to obtain and verify the overall research findings. Perspectives that emerged from the qualitative research phase were correlated to quantitative data for verification.

4.7 Conclusion

A mixed method approach was used to investigate the consequences of forest-dependence for the economic growth and the socioeconomic development of Houston. Primary and secondary data was used to build the background information necessary to create context for this inquiry. Newspaper archives from *Houston Today* were used to create a chronology of key local events from 1969 to the 2008. Popular press articles, government reports, and other literature were used for additional context. Statistics from Census Canada (from 1976 to 2006), at the CSD level, provided more specific information concerning a range of growth and development indicators. Key informant interviews with the leaders of a variety of government, business, industry, and social service organizations provided the qualitative data necessary for this inquiry. Manifest and latent content analysis were used to analyze the qualitative interview data. The quantitative and qualitative data was converged together in the final phase of the analysis to compare and contrast the data types and their results. This process of triangulation assisted in the validation of analysis findings. The results are presented in the following chapter.

CHAPTER 5: ANALYSIS

5.1 Introduction

This thesis is interested in how forest-dependence has impacted the economic growth and socioeconomic development of Houston, BC. This chapter presents an analysis of the research findings using both quantitative and qualitative data. In this chapter, the core themes that emerged from the content analysis of the interviews are presented, together with other quantitative findings, to illustrate the consequences of forest-dependence for Houston. This analysis is broken into two main sections, the first concerning economic growth and the second concerning socioeconomic development.

5.2 Economic Growth

Economic growth is commonly considered to be the change in the size of an economy as measured by an increase in the volume and value of goods and services produced (Barro 1997). Studies of resource-related economic growth in small communities generally discuss economic growth in terms of common indicators such as population change, employment, income, and housing (Beckley and Burkowski 1999; Leake *et al.* 2006; Nadeau *et al.* 2003). Houston's economic growth will be detailed in the next section using these indicators as well as forest industry statistics including lumber production, timber harvest levels, timber revenue, and commodity lumber prices.

5.2.1 Economic Growth in Houston's Forest Industry

The forest industry in Houston has experienced substantial economic growth. The industry quickly grew from a collection of scattered bush and planer mills to a highly centralized and capital intensive industry processing an average of 2.11 million m³ of timber a year (BCMoFR 2009b). Large-scale economic growth began in the 1950's, with the proliferation of small bush mills throughout the area. Capital investment brought new milling technology to the local industry; namely, the Swedish gang mill and the stationary planer mill (Hols 1999), which resulted in increased lumber production. By 1958, 2,000 board feet was considered a 'good days' production from a small sawmill and 1 to 2 railway boxcars of lumber were being shipped daily from Houston (Hols 1999). Other early statistics estimate that 84 sawmills operated in the Houston area by 1958, producing approximately 6.75 million board feet (MMfbm⁴) per year.





*Northwood Pulp and Timber Ltd. was a privately owned company, held by Noranda Forest Co. and the Mead Corporation, throughout its existence. As a result, company records were not made public and are not entirely available.

⁴ In North America, boardfeet or fbm is used as a measure of lumber production. 1000 boardfeet is abbreviated as Mfbm and 1 million board feet to MMfbm.

Economic growth in the local forest industry accelerated with the arrival of Bulkley Valley Forest Industries (BVFI) in 1969. The firm invested \$24 million to build the largest sawmill under one roof in the world, which opened in 1970 and lost \$30 million in operating costs by 1972 (Bernsohn 1981). Initially, the BVFI sawmill employed 800 people and projections were that the work force would double in the next few years. Instead, the work force was reduced by 90 people when Northwood purchased the mill in 1972 (Hols 1999). After revamping the sawmill, Northwood produced 111 MMfbm of lumber in 1972 (Northwood 1972). Production increased steadily over the next three decades peaking in 2006 at 586.2 MMfbm (Canfor 2009) (Figure 5.1).

Economic growth in Houston's forest sector continued through the 1970s. A \$16 million joint venture between West Fraser and Weldwood of Canada Ltd. (Weldwood) resulted in the construction of the large Houston Forest Products (HFP) sawmill, which opened in 1978. In its first year of production the mill produced approximately 750,000 board feet (fbm) of lumber (Hols 1999). Production increased steadily, peaking in 2006 at 359 MMfbm. Average production between 1994 and 2008 was 280 million MMfbm per year (West Fraser 1994-2006).

Year	Volume Harvested (m [°])
1973	274,364
1974	86,060
1975	157,050
1976	258,272
1977	396,560
1979	1,987,625

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Table 5.1: Timber Volume Harvested in the Morice PSYU, 1973-1979 (BCFS 1975-1979)

With two large sawmills operating in Houston, there were corresponding increases in forest harvesting within the Morice TSA to supply the mills with timber. The availability of harvesting data through the 1970s is limited because of major administrative changes in the BC Forest

Service, in both 1979 and 2001⁵, and the frequent transfer of records between various district and regional headquarters. But, according to the 1977 Morice PSYU Annual Review, 396,560 m³ of timber was harvested just prior to the opening of the new HFP sawmill (Table 5.1). By 1979, the volume of timber harvested in the Morice TSA increased to 1,987,625 m³ (Figure 5.2) to meet the production capacities of both the Northwood and the West Fraser/Weldwood sawmills (BCFS 1979).

Figure 5.2: Timber Harvest in the Morice TSA , 1979-2008 (Ministry of Forests and Range, Revenue Branch 2009)



Timber harvesting data for the Morice TSA, available for the period between 1979 and 2008, illustrates the post-boom period with deep fluctuations through the 1980s, stable and fluctuating harvests during the 1990s, and declining harvests during the early part of the 21st century (Figure 5.2). There was little overall growth in the volume of timber harvested during this 30 year period. There was periodic growth, particularly through the 1990s, but in general there has been

⁵ Prior to 1979, the Morice TSA was the Morice Public Sustained Yield Unit (PSYU) which was managed as the Houston Forest Ranger District. After 1979, PSYUs became timber supply areas, ranger districts became forest districts, and forest districts became forest regions. The headquarters for the Prince Rupert Forest Region, of which the Morice PSYU was part of, was moved from Prince Rupert to Smithers. Additional government restructuring in 2001 resulted in amalgamation of the Morice and Lakes Forest District into the Nadina Forest District headquartered in Burns Lake. The Prince Rupert and Prince George Forest Regions were also amalgamated into the Northern Interior Forest Region now headquartered in Prince George.

a decline in the volume of timber harvested since the 1984 record harvest of 2.63 million m³. In particular, forest harvesting since 2002 has declined. Several factors have contributed to this decline but chief among these are the rise in value of the Canadian dollar, between 2002 and 2008, the decrease in housing sales and demand for lumber in and from the US, and the increase of inter-TSA transfers of Mountain Pine Beetle (MPB) attacked timber from the neighbouring the Lakes and Ft. St. James TSAs to sawmills in the Morice TSA.

Since 1979, the value of the timber harvests in the Morice TSA has increased. Two indicators of this change include the stumpage value and the market price for both harvested timber and commodity lumber, respectively. In BC, stumpage is the amount of revenue received by the provincial government in exchange for timber harvested from public lands. Stumpage revenue from the Morice TSA grew from \$13.3 million in 1979 to \$91.2 million by 1997 (Figure 5.3). The average stumpage revenue collected per year during this period was \$32.6 million. Stumpage increased 530 percent, from 1979 to 1997, with the average stumpage revenue per cubic meter of timber increasing from \$6.72 per m³ to \$42.31 per m³ by 1997. After this high point, stumpage values declined to \$6.12 per m³ in 2008.

In BC, stumpage revenues are closely tied to North American market values for commodity lumber which are largely determined by the Chicago Mercantile Exchange (CME). From 1977 to 2004, lumber prices for western spruce pine fir (WSPF) 2x4's, increased from approximately \$195 per Mfbm in 1977 to approximately \$400 per Mfbm by 2004 (Figure 5.4) (Madisons Lumber Reporter 2009). These lumber prices are an important component of stumpage rates and any increases (Figure 5.4) result in a corresponding increase in stumpage revenue (Figure 5.3)

for the BC provincial government.





In summary, the local forest industry experienced rapid industrial growth through the 1970s. Unfortunately, this period of economic growth was short-lived because it began at the tail end of a boom period in the BC interior forest sector (Bernsohn 1981) which was ended by the 1982 global recession. In contrast, the 1980s were a period of deep volatility for the industry with reoccurring, harvesting, production, and price fluctuations. Although this volatility continued into the 1990s, overall this decade was one of steady economic growth with record highs in both the price of and the revenue derived from the sale of local commodity lumber. Figure 5.4: Average Annual Price for North American Western Spruce Pine Fir 2x4's, grade 2 & better, 1977-2008 (Madisons Lumber Reporter 2009*)



*Used with permission from Madisons Lumber Reporter

Since the late 1990s, lumber production has continued to increase in response to the MPB epidemic and the completion of the new Canfor 'supermill'. Unfortunately, these harvesting and production increases were countered by plummeting demand and price for forest-based commodities as a result of decreased US housing starts, the US subprime mortgage crisis, and most recently, the onset of the current global recession.

5.2.2 Economic Growth in Houston

Houston's economic growth has closely paralleled the growth experienced by its forest industry. During the 1970s, economic growth in Houston's forestry sector resulted in economic growth for the town. During this time, a large portion of Houston's existing infrastructure was built, beginning with a temporary camp to house construction and mill workers. In 1969, work began on the 169 unit Mountain View Park subdivision and what later became the Baggerman Trailer Court (Hols 1999). A year later, construction on the new shopping centre began, which was intended to replace the downtown core as Houston's new commercial hub for retail and other services (Interview 12). In the early 1970s, civic facilities such as the new district office, an indoor ice arena, and later the curling rink were constructed, all of which are still in use today. The 1980s saw the construction of additional facilities such as the courthouse, health centre, and a seniors residence. In 1983, the local newspaper declared Houston as the "fastest growing town in BC" (Houston Today 1983).

Economic growth in Houston can be quantified using common indicators such as population, mobility, housing, labour, and income data. One simple indicator is population increase (Crabbe *et al.* 1995). Houston's population increased threefold, from 699 to 2,232 between 1966 and 1971. This growth continued until 1981 when the population of Houston climaxed at 3,921 people. Since then, with the exception of a slight increase of 306 persons between 1990 and 1996, the population has declined steadily to 3,163 people in 2006.



Figure 5.5: Population of Houston, 1951-2006 (Statistics Canada 1951-2007)

Mobility is another indicator of economic growth (Wollenberg and Colfer 1996). In the immediate post-World War II period, immigration was the primary source of this increase as 385

people immigrated to Houston between 1945 and 1969 (Statistics Canada 1981). However, migration, not immigration, provides an explanation for the population boom that followed in the 1970s. Mobility data from the census periods between 1971 and 1981 indicate there were record numbers of both movers and migrants⁶ (Table 5.2). During this period, 4,385 movers and 3,160 migrants moved within and to Houston, respectively. Mobility decreased during the 1980s, but increased again during the early 1990s as lumber prices peaked and related industrial activity increased after the 1982 global recession. Since 1996, the number of movers and migrants in Houston has decreased substantially with only 940 movers and 355 migrants between 2001 and 2006. Most of the migrants who moved to Houston originated from within the province of BC. One exception is the 1981 census period where 37.4 percent of migrants came from outside of both BC and Canada.

Category	1976	1981	1986	1991	1996	2001	2006
total pop. age 5 plus	2390	3490	3470	3245	3635	3325	2930
non-movers	665	830	1660	1535	1540	1930	1990
movers	1725	2660	1810	1710	2095	1395	940
non-migrants	475	750	1035	670	1010	830	585
migrants	1250	1910	775	1040	1085	565	355
from same province	980	1195	645	860	755	440	255
from different province	200	565	90	155	260	115	60
from outside country	70	150	40	25	70	10	40

Table 5.2: Mobility Status in Houston, 1976-2006 (Statistics Canada 1976-2007)

Housing starts and values are other common indicators of economic growth (Walter 1998; Crabbe *et al.* 1995; Beckley and Murray 1997). House construction increased through the 1960s, but during the 1970s Houston experienced a large housing boom with a total of 545 new homes constructed (Table 5.3). These houses were necessary to accommodate the influx of migrants

⁶ According to Statistics Canada (1983), movers are people who, on census day, were living in a different dwelling than the one occupied five years earlier while non-movers lived in the same dwelling five years earlier. Migrants are movers who, on census day, were residing in a different CSD within Canada or who were living outside Canada five years earlier while non-migrants are movers who were living in the same CSD they resided in five years earlier.

who came to work in the forest industry. Since the 1970s, housing starts have generally declined,

but a second smaller housing boom did occur in the 1990s, with 235 new houses built.

Table 5.3: Number and Period of House Construction in Houston, 1946-2005 (Statistics Canada 1981-2007)

Period	Houses
<1946	15
1946-1960	35
1961-1970	185
1971-1980	545
1981-1990	190
1991-2000	235
2001-2005	15

House values have increased in Houston since 1981. During the period from 1981 to 2006, the average house values more than doubled from \$62, 810 to \$147,875 (Table 5.4). The largest single increase, over a five-year period, occurred between 1991 and 1996 when average house values increased by \$46,988. This increase indicates a second boom period in Houston's economic history.

	Total	Avg.
Year	houses	Value (\$)
2006	1220	147,875
2001	1335	115,624
1996	1420	105,418
1991	1240	58,430
1986	1255	57,158
1981	1245	62,810

Table 5.4: Average Value of Houses in Houston, 1981-2006 (Statistics Canada 1981-2007)

Labour and occupation data are additional indicators of economic growth and dependence in resource-based communities (Walter 1998; Force and Machlis 1997). During the 1960s and 1970s, economic growth in the forest sector led to the creation of many new jobs in the manufacturing and other resource-based industries, and other indirect jobs in the town's retail and service sectors. Similar to other indicators of economic growth, Houston's total labour force fluctuated over time with large increases through the 1970s, declines during the late 1980s,

followed by another large increase of 265 people between 1991 and 1996 (Table 5.5). Since then, the overall labour force has declined to a total of 1,865 people in 2006.

Manufacturing related employment increased with the addition of a second large sawmill in 1978. Since that time, manufacturing related employment has fluctuated in response to price and demand signals for commodity lumber, increasing mechanization, and new technology. Manufacturing employment peaked in 1981 and again in 2001. The first peak signaled the end of the industry's growth period in response to the 1982 global recession. The second employment peak was the result of record new prices for commodity lumber and the initial onset of Mountain Pine Beetle (MPB) epidemic. In response to these two factors, increased harvesting and lumber production demanded corresponding increases in the local labour force. However, this second boom was short-lived. By 2006, 175 manufacturing jobs were lost returning the manufacturing labour force to near 1975 levels.

The overall trend in resource-based employment, which includes the agriculture, mining, and the forest-based sectors, has also fluctuated. Technological change is certainly a factor in these fluctuations, but this labour force category is also very responsive to mining employment in the area. Large-scale mining activity began in 1981 with the opening of the Equity Silver Mine.

Industry	1975*	1981	1986	1991	1996	2001	2006
Manufacturing	520	705	590	485	605	700	525
Resource-based	n/a	405	495	310	400	305	265
Retail trade	n/a	225	280	230	230	250	235
Wholesale trade	n/a	n/a	n/a	110	100	55	65
Business services	n/a	n/a	55	50	20	145	160
Education	n/a	n/a	50	70	115	100	120
Health & social services	n/a	n/a	40	80	85	105	85

Table 5.5: Houston's Labour Force by Industry, 1975-2008 (Statistics Canada 1981-2007)

Finance & real estate	n/a	90	55	20	35	35	65
Construction	n/a	70	45	40	135	60	50
Accommodation & food	n/a	n/a	n/a	80	170	135	110
Government service	n/a	n/a	70	140	65	85	55
Other services	n/a	n/a	295	270	190	115	130
Total labour force	n/a	1975	1975	1885	2150	2090	1865

*source: (Finnis 1975)

Initially, increased mining related employment offset the employment losses from a forestry sector hard hit by the recession, which helped to carry the town through this period. Mining employment peaked in 1986 but began to decrease as Equity Silver Mine ramped down its operations before its eventual closure in 1994. By 1996, employment in this sector increased to near 1981 levels as a result of the opening of the new Huckleberry Mine 123 km south of Houston, in 1997. Other sectors also show evidence of growth in response to the new mine. For example, the construction and accommodation and food industries both show large employment increases between 1991 and 1996, before declining to their present day levels.

Figure 5.6: Median Income in Houston, 1981-2006 (Statistics Canada 1983-2007)



Income data is also commonly used as an indicator of economic growth (Beckley and Burkowski 1999; Crabbe *et al.* 1995). Walter (1998) and Force and Machlis (1997) use median income to assess the economic profile of forest-dependent communities. Finnis (1975) reports the median income in Houston as \$2,890 in 1971 and \$3,560 in 1974. This is approximately 31 percent lower than the BC provincial average of \$5,170 in 1974. Today the median income for workers in Houston has surpassed the provincial average (Statistics Canada 2007). For the last three census periods, the median income for all people aged 15 plus has been, on average, 15 percent higher than the comparable BC median income. Since 1981, median employment income for individuals in Houston has increased an average of 6 percent per year. A slightly lower increase of 5 percent was observed for males 15 years plus compared to 6 percent for females. Between 1981 and 2006, the median income for families and households has also increased from \$45,405 and \$40,014 to \$74,861 and \$67,487, respectively.

5.2.3 Summary

Houston's economic growth initially corresponded to the economic growth experienced by the local forest industry. Houston boomed through the 1970s as demonstrated by a variety of economic indicators, such as population, mobility, housing, labour, and income. In the next decade, Houston's economic growth declined in response to increasing volatility in the forest sector and the world economy. During the early to mid 1990s, Houston experienced a second, but smaller, boom period, instigated by record prices for forest commodities and the opening of the new Huckleberry copper and molybdenum mine. This second boom is apparent in the indicators presented including population, migration, housing starts, housing values, and labour force statistics.

Economic growth has fluctuated since Houston's initial industrial forestry dependence. There have been short periods of stability, but overall, Houston's economic growth cannot be characterized as stable. Since 1996, economic growth in the community has decreased. Migration to the community for resource-based jobs and the total population of Houston has declined. One indicator, the amount of non-movers since 1981, includes the current long-term residents who have experienced good employment stability and increasing employment incomes and values for their properties and businesses. This demographic has experienced the boom times of the 1970s and 1990s and the subsequent economic decline of their community as they continue to work, directly or indirectly, in the local forest industry.

5.3 Forest-Dependence and Economic Growth

Fluctuating commodity prices generate increased employment instability in resource-dependent economies and reduce development in local places (Papyrakis and Gerlagh 2006). Since the 1970s, the main determinant of Houston's economic growth has not been the flow of available timber, the cost structure of the local sawmills, or the amount of spin-offs from the local forest sector. As evidenced by the previous indicators, the primary determinant of economic growth has been the market demand for, and the price of, commodity lumber. Other cost pressures have played a part, but because Houston is so resource industry-dependent, it is frequently affected by even small market and price pressures. These pressures have created a number of conditions that temper the town's economic growth. The following sections detail four conditions that interviewees overwhelmingly identified as impacting the economic growth and the socioeconomic development of Houston.

5.3.1 Single-Industry Dependence

In Houston, everything depends on forestry. When asked how dependent Houston is on forestry, interviewee answers included the words absolutely, entirely, extremely, mainly, mostly, totally, and very. Numeric answers to this question ranged from 75 to 100 percent dependence. Interviewees frequently spoke of having all their "eggs in one basket" and that "forestry is basically the only thing that is keeping this town going, because there is nothing else" (Interview 4). One industry spokesman acknowledged that "the biggest concern in town is always about us and Canfor running. It provides jobs for basically everybody in this town" and "if the mill goes down, everybody loses their job" (Interview 27). These statements agree with other quantitative assessments of Houston's forest dependency. For example Horne (2009) recently calculated Houston's local area forest dependency at 58 percent, based on employment income, using statistics from the 2006 census. This means that Houston is the most forest-dependent community in BC.

Interviewees stated that Houston's dependence on industrial forestry has caused the community to develop in an unbalanced manner. "Forestry has developed Houston on a bit of a slant" (Interview 19) where most of the town's infrastructure, services, and programs are geared towards servicing the local forest industry. This began in the 1970s when Houston's development was controlled by BVFI which "embraced everything like a one industry town. They were going to run not only the forestry, but the town as well, which I think was a really bad starting point" (Interview 12). Despite the dissolution of BVFI and the subsequent separation of industry and town operations by Northwood, this company town mentality has persisted. Twelve out of 28 interviewees suggested that Houston is still a company town; operated and managed as a support centre for the workers and the companies that employ them. Interviewees pointed out

that many in the town and the region still thought of Houston in this manner and that "the perception is that we are just a big logging camp" (Interview 12), "a glorified logging camp" (Interview 24). Senior municipal employees agreed stating that the District of Houston is "strictly a support service for the workers" (Interview 2) and that the District "definitely caters to the needs of the resources" (Interview 24).

Houston's singular focus on economic generation through resource extraction was identified by many of the interviewees as a limiting factor and an obstacle to Houston's future growth and development. Interviewees recognized that it was not "good for the community to rely on one industry. It tends to skew the decision making and tends to produce a certain amount of passiveness to those larger decisions. It's disempowering" (Interview 6). Dependence on a single industry was also limiting because "when you have the one industry, two mills in the one type of industrial setting, its very confining, especially when you end up with the way things are going today" (Interview 4).

One way that this singular dependence is confining is because there are very few, if any, local employment alternatives. Many interviewees spoke of how employment loss in Houston results in temporary or permanent migration to other locales for new opportunities. Continued employment loss, since the 1980s, has only recently resulted in recognition that economic diversification is needed to offset Houston's overt dependence on a single industry. This is because, "if you don't have all your eggs in one basket, that makes life a little better" (Interview 24).

Most interviewees spoke of Houston's dependence on forestry and the fear and uncertainty that is create in regard to their community's future. In recent years, this uncertainty has increased as a result of the increasing frequency and intensity of externally induced change. One interviewee described a sense of fear about the community's resilience: "It's scary, It's really scary. It's creating a climate of dependence. So, what happens when they drop out? This whole town will shut down. It will be intense around here" (Interview 15). Another effect of single industry dependence is that even small events that affect the local forest industry tend to antagonize the uncertainty that Houston's residents routinely experience. This is because many local events are intensified and made "so drastic because we are so dependent on that one industry" (Interview 19). For example, it is well recognized that industry market and cost pressures have drastic impacts on the community in the form of lost employment and other benefits. Larger events, such as the expiration of the Softwood Lumber Agreement in 1996, the 1997 Asian financial crisis and subsequent loss of Japanese lumber markets, or the rapid rise of the Canadian dollar in 2007 manifest themselves in the form of sawmill production curtailments, shutdowns, and worker layoffs. All of these changes reverberate throughout the community and as a result, since the early 1980s, Houston has experienced a loss of population, workers, and the retail, recreation, and other service amenities they support.

In summary, Houston has long been dependent on a single industry for economic growth. This dependence has created and perpetuated Houston's identity as a 'company town' while influencing the community's growth and development. One result is unbalanced economic growth. According to the interviewees, single industry dependence creates obstacles to continued economic growth because it limits the creation of new opportunities, skews decision making, and

creates a passiveness towards the community's future. Recent events have exposed the community's vulnerability and intensified the local effects of industry change.

5.3.2 Boom-and-Bust

Export focused economies are subject to market conditions that leave the dependent community vulnerable to cycles of boom and bust (Power 2006). A ten-year analysis of BC's forest industry, by Markey *et al.* (2005), found two complete cycles of boom-and-bust between 1988 and 1997 and Murray and Bartoszewski (1998), found another cycle between 1979 and 1982. In Houston, economic evidence supports the presence of these boom and bust cycles. The evidence indicates that there were two economic booms in Houston, peaking in the early 1980s and again in the mid 1990s. Houston's dependence on the forest industry (Horne 2009) means that the town will experience greater economic difficulties than other areas in the province⁷. The following analysis suggests that, over time, these boom-and-bust cycles have tempered Houston's economic growth and impacted its socioeconomic development.

Interviewees frequently spoke of the cyclical nature of forestry and the boom and bust conditions in Houston. In the past, the town has "seen a boom and bust, several of them. Even before Houston was incorporated we had a lot of railway tie mills, which did well when they were buying them and when they didn't buy them, they went broke" (Interview 16). Another interviewee implied that economic conditions have not been the same since the end of Houston's boom period by saying "we had this great big huge boom in the 1970s and 1980s when lumber was good and now the services are leaving" (Interview 24), with the result that "the town is

⁷ Horne (2009) computes a forest vulnerability index where Victoria, BC is given a value of 0 as the least vulnerable and Quesnel, BC is given a value of 100 as the most vulnerable community to fluctuations in BC's forest industry. When Houston is disaggregated from the combined Houston/Smithers local area, it's vulnerability increases from a value of 50 to 160.

probably in a worse state now than in the 1970s" (Interview 14). In general, interviewees acknowledged that the 'normal' economic condition for Houston, was instability. As one interviewee noted, economic conditions are "up and down. One year things go well and another year things do not go well. It all depends on what the forestry is doing. What the experts are doing. What the lumber prices are doing. One moment crews are laid off at the mills and three months later they are all hired on again. It's up and down" (Interview 17).

Interviewees recognized the reasons for these boom and bust cycles. The theme of single industry dependence and its effects emerged frequently during the interviews. One interviewee remarked "anytime you're tied to one industry, as the industry does well, the town does well, but when the industry goes down, the town goes down. So it's followed the cycles which has not allowed it to diversify the economy very much" (Interview 16). Interviewees recognize that "if the forest industries are doing well, then the town does well" (Interview 11). Another interviewee spoke of Houston's dependence on a single market; "as long as we sell our wood to one consumer, we're going to have a very up and down cyclical type of economy" (Interview 9).

Another effect of the boom-and-bust cycles on Houston is that they reinforce the belief that everything will soon get back to 'normal' and things will be 'all right' after a downturn in economic conditions. Clapp (1998) refers to this as the 'conspiracy of optimism' where frequent changes in economic conditions create the collective expectation that the next upturn is always around the next corner. One interviewee said, "You create these expectations and people get comfortable and even though you tell them that this is temporary, people don't hear that. It creates an atmosphere that I think is a bit destructive to the community. It's the boom or bust, there's no stability" (Interview 21). Markey *et al.* (2005) describes the destructive effects of boom and bust cycles as inhibiting future choices which lead to declining possibilities. This is because these cycles reinforce economic dependency which in turn limits proactive planning. One interviewee, referred to the lack of proactive action by saying, "if you looked at this community, it was always boom or bust. We were lucky. It was a transient population, money was just flowing. It was that time and mindset. I don't think we ever talked about the future" (Interview 4). Another interviewee stated that "when things are really good, they're really good, and then when you get into tough times and people start to look at other things, but then a year and a half down the road when things are good again and people forget again" (Interview 9).

To summarize, frequent boom and bust cycling has created instability and a general feeling of uncertainty regarding the future of the town, the local forest industry, and the employment benefits derived from it. One interviewee remarked, "I think people right now are concerned about going to be employed next month or next year and not necessarily thinking about future community plans" (Interview 23). Another said that "people really do fear for the future and there's a real unsettled feeling amongst a lot of the population, but I don't know if they can articulate it" (Interview 21). Prolonged periods of uncertainty also make development planning and implementation difficult because the residents are preoccupied with coping with the boom then bust conditions. One interviewee, in regards to the current economic downturn, remarked "now we're kind of in survival mode and we just have to keep this place running" (Interview 27).

5.3.3 Control

A third condition, embedded in Houston's dependence on industrial forestry is the lack of local control over the community's economic drivers. A central component of socioeconomic

development is the ability to maintain local control over decision-making so residents can address their own development needs (Wilkinson 1991). This happens when individuals and organizations work together in pursuit of their own interests and they begin to mutually understand the needs and wants that are common to the whole community (Luloff and Swanson 1995).

Lucas (1971) illustrates how resource-based companies controlled the economic and social aspects of the company towns they managed. Marchak (1989) and Hayter (2000) describe external control as an inherent feature of resource-dependent communities in a staples-based economy and Hutton (1994) explains how the dominance of the industrial core is expressed through a corporate 'command and control' atmosphere. In BC, non-local forces often dominate forestry-dependent communities and Houston is no exception. The lack of local control in the community was repeatedly identified by the interviewees as an important issue affecting the growth and development of Houston. There were two types of control identified by the interviewees: one concerning the amount of control exercised by the forest industry and the other concerning the control exercised by external organizations. Interviewee experiences regarding these two levels of control are detailed in the following two sections.

5.3.4 Industry Control

When asked who controlled Houston's main economic drivers, all the interviewee recognized that "the mill dictates what happens to the future of Houston" (Interview 21). When prompted to elaborate on the level of control exerted by industrial interests, the interviewees revealed many aspects of their control over Houston's growth and development.

Generally, control over Houston's affairs is simply a result of the forest industry's position as the dominant industry and their consolidation of timber harvesting and processing in the area. Some of this control comes through their control of formal timber harvesting arrangements with the BC provincial government, but also because Canfor and West Fraser are the only market for saleable timber in the area. Evidence of their dominance was found in interviewee statements such as, "one of the realities of working here is that Canfor controls it all. Canfor has the contracts and Canfor has got the control" (Interview 2) and "they have the biggest contracts and the biggest tenures. When they decide to shutdown, you have nowhere to sell your wood. So you're pretty dependent on what they want and if you do something to upset them they just won't use you anymore" (Interview 7). Another interviewee stated that "if you want to sell your wood, you only have two buyers in the community, so the small woodlot owners are somewhat restricted in their ability to get a fair market value" (Interview 8).

Many interviewees seemed to accept the high level of control by industry because of the interconnectedness between the town and the forest industry and their position as the dominant employer. One interviewee recognized that "you're tied to their whims. If you're going to open any sort of business in Houston, you're certainly going to be very aware what's happening with those mills" (Interview16). Another interviewee said, "when I say that they have control, there is a bottom line and it's their bottom line in terms of budgets and dollars, right. It's got to be economically feasible for them to run" (Interview 4). There was little resentment expressed by the interviewees towards industry forces in the community. In general, most interviewees were accepting and even accommodating towards the large sawmills because they were recognized as the largest provider of benefits to the community. There was also a general feeling of

complacency because "the corporation knows best" and "some people don't care and others won't do anything that will shake up their job" (Interview 18). Generally, it was recognized that "forestry calls the tune. You can attend Council meetings and if Canfor or HFP want to get on the agenda, they get on the agenda. If others want to get on the agenda, they wait to get on" (Interview 18).

From industry's point of view, control over various aspects of the community seemed to make sense simply as good business decisions. Statements such as the "corporation holds significant land around here at the mill...and we're not going to release any land around here that may be key for our growth" (Interview 5) revealed the level of self-interest that industry players have in regard to future opportunities for growth and development. Both protectionism and competition were evident as elements of industry control which emerged during the interview process. In reference to future opportunities, one industry spokesman stated that, "you'll see it get more cost competitive so when that crunch comes for that fiber we'll be able to out compete anybody for it" (Interview 5).

Control was also evident in the land planning and management processes that took place in the area. One such process, the 2002-2004 (formally approved in 2007) Morice Land and Resource Management Plan (LRMP) was an example of a public process that was controlled by industrial interests. Several interviewees spoke of the LRMP process, but one interviewee related that he had been involved in two LRMP processes, in Burns Lake and Houston, and found that "the one (LRMP) here in Houston, was dominated by forestry, as the agenda was dictated by the mills.

Some of my staff, who took part in it, were so thoroughly disillusioned that they became very bitter, extremely bitter" (Interview 18).

The level of control exerted by the large forest product companies also had ramifications for the development of other forest-based businesses because "smaller companies have a harder time developing under their control" (Interview 7). Interviewees related how the two secondary remanufacturing firms in Houston, Pleasant Valley Remanufacturing and DH Industries, struggle to acquire the necessary feedstock to remain operational. This is because the trim ends required as raw feedstock are allocated to Canfor's remanufacturing facility in Moricetown, BC and "they (Canfor) are only going to allow so much competition. It's not in their interest to allow much competition" (Interview 7). In addition "any of the spin-off industries that seem to be really starting to happen, they all seem to have to partner with either West Fraser or Canfor, or it doesn't happen" (Interview 9). Examples include Kyahwood, a secondary remanufacturer of lumber trim ends, and the new pellet plant and cogeneration facility, all of which are fully or partly owned by Canfor.

A more recent example of industry control over the town's economic processes arose in 2009 when the BC Ministry of Forests and Range awarded a new community forest tenure to the District of Houston. A District appointed board turned over the management and operation of the Houston Community Forest to Canfor. Most interviewees expressed concern over this decision but one said "what we were told is Canfor can do it and they'll do it for us and that's all we need. They'll do everything and they did. To me, it's been one of the most shameful processes that ever happened in this community" (Interview 18). Another acknowledged the reality of the local
timber market monopoly, in relation to the new community forest, by saying "it may be a community forest, but if Canfor doesn't buy the wood then you're pretty much done" (Interview 11).

5.3.5 External Control

Since the 1950s, Houston has hosted a succession of forest companies. According to the interviewees, local control meant that they were more connected and more responsive to local conditions than today's transnational forest product corporations. One interviewee stated that "most of the major forestry outfits...started off very connected to the community. As they've grown their connections have weakened. So decisions are made with less consideration in terms of what it means for impacts on the local people" (Interview 6). Initially, the management for BVFI and Northwood were required to live in Houston, which gave the local people some input into decisions affecting their community. Several interviewees related how, "before, they had their management that lived in Houston, now it's managed from afar" (Interview 21).

With each successive corporate buyout of Houston's sawmills, "what little local control there was, is now even further removed than it was before" (Interview 18). This process began in 1969, when BVFI became the first externally owned company to consolidate control of the smaller forest companies in Houston. Since that time Houston's sawmills have been owned by a succession of forest companies. The current owners are now publicly traded, large integrated forest companies controlled by shareholders both in Canada and the US.

The interviewees also commented on how difficult it is for the community to provide input into local forestry decisions because "the decision makers have all moved away, which makes it

harder for those companies to recognize any responsibility to the community" (Interview 18). Interviewees recognized that communication with these companies has decreased as a result and that "we don't always have their ear. We have the ear of the local managers, but we don't have the ear of the controlling bodies" (Interview 4). This is because the decision-makers for these firms are, increasingly, being headquartered in distant locales. As a result the interviewees generally felt that, with the exception of the local mill managers, "the people that are responsible for that major economic driver are not part of this community" (Interview 21).

In summary, forest industry restructuring and consolidation since the 1970s have increased corporate control of Houston's forest industry. One impact of the increasing control exerted by industrial and external interests is the loss of local control by its residents. This loss of local control has lead to a feeling of powerlessness in the community over their social and economic affairs. As a result, the residents "feel largely disenfranchised...I think they are realizing that there are many things now that they can't control and that's a really hard realization... they are used to dealing with issues at a personal level. Now they have no idea how to cope" (Interview 18).

5.3.6 Unequal exchange

The condition of unequal exchange offers an additional analytical context from which to examine the effects of forest-dependence on Houston. Love (1989) observed that during the course of economic growth and development in resource-dependent places, there is often unequal exchange between different regions. The net effect is an increasingly unequal distribution of income and revenue between "leading" core and "lagging" peripheral regions (Love 1989: 905). According to Peluso *et al.* (1994), this situation can be likened to a colonial

relationship that is common when outside interests and external owners control the economic drivers in resource-dependent communities. When external owners control local resource extraction and processing the profits usually leave the community. Absentee owners also have little incentive to invest in local development as companies generally prioritize the well-being of the firm over that of the community (Peluso *et al.* 1993). Similarily, centralized government structures prioritize the well-being of core metropole areas over local resource communities (Hayter 2000). As a result, local development is often limited to extractive infrastructure (Marchak 1983) which reduces the resources available to develop linkages and to create the diversification necessary for a more balanced approach to economic growth.

As a peripheral resource-extraction community controlled by external interests, Houston is subject to the condition of unequal exchange. All of the interviewees spoke of Houston as a community that contributes, in financial terms, more to the outside world than it receives. Interviewees commonly spoke of "outsiders as being really happy to take the revenue that we generate and really not put anything back in" (Interview 16). They also recognized that "the amount of money that's put back into Houston from the revenue that's derived from the Houston area is just totally ludicrous" (Interview 3) and that "lots of dollars go out of here and not much comes back. It doesn't even trickle back. So, there should be some proportional amount coming back for the community" (Interview 25).

One reason for this disparity is the increased presence of large integrated forest companies in the community. This is because continued forest industry restructuring and consolidation, since the 1970s, have created a situation where the economic drivers that the community is dependent

upon, are increasingly removed beyond local control. One interviewee stated that "before, the mills were part of the community, instead of just taking all the resources out and saying that we paid you a good wage" (Interview 21). The result of this increasing disconnect between the community and its economic drivers is the increasing loss of forestry related revenue. Another interviewee observed that "I think there is a major disconnect between the wealth that's happening at the supermill. None of it is really filtering into this community" (Interview 7). This disconnect, between the community and its economic drivers, was frequently acknowledged by many of the interviewees; "all the profit, where is that going? It's going to the owners that are not from Houston. There are owners and operators that aren't even Canadian. That's where the disconnect is. It's just not filtering down to the community level at all…and they're actively trying not to make it down to the community level. They're not doing their part at all" (Interview 15). One local politician bluntly stated that "they've used the resource here to make themselves rich. In my mind, anybody that does that owes the community something in return. Not just giving people a pay cheque, but what can you do to better the place that you took so much from" (Interview 20).

Another dimension to this condition of unequal exchange, in terms of the wealth that Houston creates for the outside world, involves the BC provincial government. In the past, provincial forest policies were designed to foster large-scale industrial growth on which communities were encouraged to become dependent (Power 2006). As a result, the forest industry and the BC government (Figure 5.3) have become the primary beneficiaries of the forestry revenue generated in the area. One interviewee expressed concern over this situation by saying that "the province has benefited enormously from the forestry tax base. If you look at the amount of

money that went out versus what comes in. It's actually pretty disgusting" (Interview 16). A local politician agreed saying that "those folks in Houston have a pretty good argument in that they contribute a considerable amount to the provincial coffers and receive relatively little back" (Interview 6).

Interviewees spoke of not only the outgoing revenue derived in the community, but also of the provincial government's ability to manage it appropriately on their behalf. One long time resident said, "the government is a poor steward of the money we've given them or that they take from us. I would love to see more happening" (Interview 23). One example of the lack of returning revenue, from the local perspective, concerns the lack of adequate healthcare facilities and services in the community. Interviewees spoke of the long-term need for better services and the hardships they have endured over the years as a result of their absence. Although these services have seen marginal improvements over the years, many residents were very unsatisfied with the BC government's lack of attention to the health and safety needs of their community. A local administrator related how community members have become militant about "Houston having second-class healthcare" and how it has become a "flashpoint" for continued conflict with the provincial government (Interview 2). This issue is a concern, not only from a health and safety standpoint, but also from community development perspective. A local economic developer related how the lack of adequate healthcare has impacted the attractiveness of the community to new residents, and how a shortage of "doctors in this town is an economic issue. I can point to dozens of examples of people who have come to Houston and found out they can't get their kids to a doctor. They go away. They don't move here" (Interview 18).

The BC provincial government's policies of regionalization have exacerbated the unequal exchange between Houston's outgoing revenue and the services the community receives. Since "Houston wasn't viewed as a community that needed these services" (Interview 21), healthcare and other social services have been centralized to the neighbouring communities of Smithers and Burns Lake. The interviewees agreed that the latest round of government service withdrawals has "exacerbated the situation" (Interview 16) in Houston and that "by losing these services, it has increased the revenue leakage and forced people to leave the community" (Interview 24). In particular, the removal of the Ministry of Forests and Range office was a significant loss to the forest-dependent community. One interviewee stated that "to take away the forestry office in Houston, with two of the world's largest mills here, it just indicates to me that there was very little thought put into these changes" (Interview 19).

To summarize, the unequal exchange between Houston and the industrial and government entities that control its economic drivers have created a situation where Houston now lacks the financial resources necessary to encourage additional economic growth. This lack of resources has increased Houston's dependence on its industrial drivers and the provincial government. One interviewee summarized this reality by saying, "I think our community is one that relies on things from outside of the community, so we don't have people living in our community that contribute to our community. We are dependent upon people outside of the region and outside of our community" (Interview 21).

5.3.7 Summary

Houston has experienced substantial economic growth as a result of forest-dependence. Unfortunately, the type of economic growth that Houston has engaged in has extracted significant costs from the community. First, long-term reliance on a single industry has created unbalanced economic growth which limits new opportunities, distorts decision making, and reduces the foresight needed by the community. Second, industry instability creates boom and bust conditions that reduce the economic stability in the community. Third, continued economic restructuring has removed local control of the community's economic drivers and fourth, this restructuring has increased the flow of economic resources to the outside. These costs have had serious consequences for the continued economic growth of Houston, but perhaps, the most important effect of these conditions has been to increase the dependence the community has on industrial forestry.

5.4 Forest-Dependence and Socioeconomic Development

This section demonstrates how forest-dependence has affected the socioeconomic development of Houston. The interviewees were asked if Houston had experienced economic growth or socioeconomic development as a result of forest-dependence. Eighty-eight percent of them said that Houston had experienced economic growth but not socioeconomic development. Many referred to Houston's development as "not well-rounded" (Interview 24), "stagnant" (Interview 11), and "unbalanced" (Interview 19). Others said forest-dependence has created "just economic growth" (Interview 12) and that "it's an economic engine and that's about it. It's definitely impaired the ability of this community to develop socially" (Interview 15). Many interviewees spoke of the development potential that exists in Houston, but they also spoke of the many barriers and obstacles that have limited the socioeconomic development of the community. The research interviews explored this apparent lack of socioeconomic development, the causes, and the obstacles or barriers to the continued development of the community. The following sections present the main social themes from the content analysis: stability, change, culture, attitude, complacency and apathy, civic engagement, and social cohesion.

5.4.1 Stability, Good Times, and Change

Stability has long been the desired condition for forest-dependent communities. In BC, the assumption is that stable flows of forest resources are the basis for a prosperous forest economy, steady revenues for forestry firms and the provincial government, and stability in forest-dependent communities (Byron 1978). As a result, community stability has become preoccupied with economic indicators such as harvest levels, production, employment, and income (Machlis and Force 1988) and is now interpreted as anything that increases employment or income for forest-dependent communities. In contrast, Kaufman and Kaufman (1946) and Power (2006) define community stability as a process of orderly change. This interpretation of stability considers other dimensions of the term with respect to a community's ability to adapt to change, their quality of life (Nadeau *et al.* 2003), citizen participation, and community leadership (Kaufman and Kaufman 1946). Community stability is not just a function of economic considerations, but also of social ones.

Houston is one forest-dependent community where the concept of stability continues to be viewed in terms of economic considerations. Despite recent forest industry volatility, the interviewees insisted that stable employment and good incomes are associated with the local forest industry and that it has provided Houston with a stable economic base. Most interviewees related how industry stability has allowed the community to grow over the years. In response to the question, how has forest-dependence affected Houston? One interviewee said, "well, stability for one thing. People can take out a mortgage and they can buy a house. They know that they are going to be employed and meet their bills. I think stability has been very important to Houston over the years" (Interview 19). Many interviewees related how important industry employment has been because it allowed the workers to purchase houses, vehicles, and the recreational items necessary to enjoy the outdoor life that Houston offers. They also spoke of the travel and shopping excursions to neighbouring towns and cities that are possible as a result of the good incomes made in logging and sawmilling.

Interviewees spoke of the 'good times' that this long period of relative stability has created in the community. One interviewee said, "if you look at Houston's history, there's been close to thirty years of bliss. There's been almost no labour strife. There have been very few shutdowns at the mill for anything other than repairs and minor hiccups in the markets". One long-time resident said that "for the most part the mills have treated their employees very good and the employees have been relatively happy" (Interview 18). Incomes have increased since 1981 (Figure 5.5) and as a result, workers in the community are dependent on the high incomes that enable their lifestyles.

As a result of the 'good times' experienced by the community, Houstonites have become comfortable and averse to any risk and change associated with further community development. As one interviewee said, 'in a sense, we are victims of our own success because things were quite good. While there's been some downturn, there's a fear of rocking the boat; of doing

anything that might jeopardize the good thing that we have" (Interview 6). Another interviewee added that, "we are comfortable somewhat, even looking to stifle economic development in some ways. We're not really willing to take that risk because we don't necessarily want to see growth" (Interview 16). In recent times, this aversion to risk has increased. A newer resident of the community said "risk aversion is probably part of it (lack of development) as well, because it's a one industry town and especially now, with the industry with what it is, that risk aversion has gotten worse".

The 'good times' experienced by the community and an aversion to risk have created obstacles to development in the community. A retiree said that "I think a lot of people don't mind it being the way it is. There are a lot of people that aren't very anxious about the town getting bigger. There are a lot of people that would like it to stay the same" (Interview 22). Approximately half of the interviewees spoke of this active resistance to change in the community. Interviewees related how different people and sectors of the community are opposed to change and further growth and development. An industry leader explained how "land is held by a lot of people who have lived here for quite a while and there is a certain component of the community that doesn't want to see the community grow. So they hang on to some key parcels of land. They don't want to free it up for development". Other community members also spoke of change saying "there are a number of reasons why change doesn't necessarily get implemented. Part of it is that they're making such good money at the mills" (Interview 12) and "we have a lot of business people that believe in change but aren't ready for it either. We talk about it a lot but we never really move forward with it" (Interview 10).

In summary, the 'good times' and the perceived stability of the forest industry in Houston are one factor that have stalled the socioeconomic development of the community. Generally, most of the workers in the local forest industry have experienced stable employment with rising incomes since the 1970s. This employment success has made the working population of Houston comfortable and somewhat averse to change. Much of the population also enjoys the lifestyle and the benefits that can be attributed to the good forest industry incomes. As a result, resistance to change is one obstacle to development in the community. This is because the community does not want to jeopardize the good jobs, high incomes, and other benefits that they receive through their relationship with the forest industry.

5.4.2 Culture

A community's culture plays a critical role in its socioeconomic development (Brennan 2005). In social science, culture is described as the 'way of life' (Braden and Mayo 1999), the overall social system, and the total of all learned attitudes and behaviours. Culture has also been described as the matrix of influences that shape the lives of groups and individuals (Corin 1994) and the social institutions (Williams 2004), beliefs, values, and patterns of behaviour (Hart 1998) that shape the context for community development. Culture has been shown to constrain or facilitate community development because it provides a sense of identity and shapes the debate and action necessary to address development needs (Sen 2000). People who have a direct connection to local development are more likely to take part, and remain committed, because they have the local linkages and the cultural basis necessary for successful development efforts (Brennan 2005).

Forest-dependence has had a significant role in shaping Houston's dominant culture. According to the interviewees, the high incomes and relatively stable employment in the local forest industry have fostered a sawmill culture that "sets a great deal of the social background, the cultural and intellectual background of Houston" (Interview 3). The residents in the community were described as "kind and down-to-earth. They're blue-collar workers. They go to work, they do a good job, and they work their eight hours" (Interview 19). The community was also described as a collection of "good Christian folk" (Interview 23) and a "redneck blue-collar town where everything really revolves around the mill. Everybody works at the mill and everybody makes their social connections at the mill" (Interview 15). A variety of other terms were used to describe Houston's culture, but interviewees agreed that Houston has a "fairly well-defined culture" (Interview 18) with a singular "rooting…and mindset" (Interview 23) because of its long association with the forest industry.

The dominance of forestry-based culture limits the perspective the community has towards alternative futures. All interviewees recognized that forestry is the 'lifeblood' of the community. However, in Houston this means that development activities have always been focused on supporting or creating new opportunities for that industry alone. Community leaders related how Houston is "an industrial community" (Interview 4) and how it's always been "let's go after more forest-based industries rather than other kinds of things" because "we're good at this so let's stick to it" (Interview 18). The difficulty with this mindset is that it allows for only one approach to community development. It "doesn't allow others to be heard in the community and I think that is probably a huge part of our problem of not being able to pull it together" (Interview 23).

Houston's culture has been perpetuated by successive generations of workers that have gone to work in the industry at an early age. As a result, Houston has "a culture that rarely even graduates high school. They finish maybe their Grade 11 and then they go to work at the mill. That's what they do and the whole culture is around the mill and the employment" (Interview 23). Again, this is one reason why Houston continues to have a "singular way of thinking, one kind of voice" (Interview 23), and one approach towards the community development.

Another reason why Houston continues to be dominated by a forestry culture concerns its tolerance of other people and different cultures. Houston was described as "a community that's not welcoming to immigrants. It's not a community that is welcoming of other lifestyles which would create a balanced community. It's pretty redneck, blue-collar, with a beer in one hand and football and hockey on the TV" (Interview 18). It was also said "if you're different it's very hard to live in this community. It's extremely hard" (Interview 21). As a result, Houston does not have the diversity of people necessary to create a balanced community. So "it's just the same people for years, with no outside people coming in and intervening" (Interview 23) which again, reinforces a singular forestry-based culture, way of thinking, and attitude towards development in the community. As a result, Houstonites are "not seeing the full picture. They're just going on what has always been…so the frame of reference in this community about development options is limited" (Interview 15).

In summary, dependence on the forest industry has shaped Houston's dominant culture. Since the 1960s, the resulting 'sawmill' and 'logging' culture has been heavily focused on forestry activities and forestry-based development for economic growth. This preoccupation with forestry has limited the frame of reference from which socioeconomic development has taken place. Recent employment loss and decreased migration have also contributed by reducing the potential for new cultural influences on the community. In a sense, Houston has become a more closed community, where a resistance to change and an aversion towards risk are now widespread cultural attributes.

5.4.3 Attitude

Attitude is often profoundly influenced by cultural norms and values (Throsby 2001). Attitude is the preference of individuals or organizations for things, events, or people. It can also be defined as the spirit and perspective from which an individual, group or organization approaches community development. This is because certain attitudes shape certain decisions and actions (Frank and Smith 1999). The dominant forestry culture in Houston has fostered some particular attitudes towards the socioeconomic development of the community. These attitudes were found to be a considerable obstacle to community socioeconomic development.

One dominant attitude among the interviewees was that "forestry is going to be here forever and we don't have to worry about forestry in this town" (Interview 18). When asked about the sustainability of the forest industry and the need for economic diversification in Houston, this view was communicated frequently by the majority of the interviewees. The majority of the interviewees also spoke of their faith in the plentiful supply of timber in the area and how it would sustain the local forest industry and the town in the future. Two prominent community members, a local politician and a business owner, said, "it's a sustainable resource so I can't see any negative impacts of it" and that "the forest industry is a renewable resource and is going to be coming back again. The areas they logged 40 years ago are now growing up and they are

going to be logging it again" (Interview 8 and 26, respectively). These community representatives seemed to take comfort in the belief that they were "blessed with our timber supply area" (Interview 11) because it was "better than a lot of places in BC" (Interview 27).

The community's belief in the sustainability of the forest resources in the area was echoed for the forest industry. The interviewees admitted that "yes, the forest industry is struggling a bit right now", but "it will get through this" (Interview 11). One important reason for this faith in the local forest industry was due to continued investment by Canfor and West Fraser in their Houston sawmills. In particular, the investment by Canfor in 2005, and the resulting construction of the new 'supermill', was found to have renewed the community's faith in the sustainability of the local industry. Interviewees said this was because "our mills are in such good shape" (Interview 26) and that it "gives us comfort that our two mills are updated. They've modernized and they're very efficient and we feel comfort in that" (Interview 4).

The new supermill is a source of pride for some members of the community. This is because it is the lowest-cost and highest production sawmill in the world and many people in the community believe that this mill will still be operating when all the other sawmills in BC have been shutdown. One respondent said that "both of our mills say that they will be the last to close and they have made that statement enough that people sort of believe them" (Interview 18). Another observed that that "I think we are pretty secure" because, "over the years, the two main mills in Houston have reinvested a lot of money into the mills to make sure they are extremely efficient" (Interview 26). Other respondents also made the connection between security and investment saying "there have been shutdowns in other communities and Houston has not shut down and I

think it has a lot to do with the money they are investing back into the plant to make sure it's efficient" Interview 19). This creates the perception that continued investment in mill efficiencies will result in continued employment and benefits for the community.

The attitude that forestry is secure in Houston has impacted the community's desire to pursue alternative development strategies. As a result, they have focused on attracting forest-based industries rather than other types of businesses. "We hear it all the time. We're good at this so let's stick to it" (Interview 18). These views were communicated by the majority of the interviewees, but some disagreed. They challenged the thinking that Houston's industrial base is secure and even sustainable in the long-term. Those who disagreed were younger interviewees and more recent migrants to the community. One of these said "what we get is denial about the real state of the forest industry and that impact on the community. They're trying to say that everything is okay. It's the supermill and it will go on forever and ever. But we hear ideas contrary to that everyday on the news" (Interview 16).

In summary, attitude creates expectations and hopes. The dominant attitude in Houston, that forestry is 'here to stay', is perpetuated by the belief that forest resources in the region are abundant and furthermore, that continued investment in the local forest industry has produced the efficiencies needed to offer continued employment benefits to the community. This attitude represents a significant obstacle to diversification and local socioeconomic development because people believe that 'things are good the way they are' and that 'we should stick with what we know'. This continues to encourage the community's singular focus on forestry, which in turn, limits its socioeconomic development.

5.4.4 Complacency and Apathy

Many of the interviewees viewed complacency and apathy as obstacles to the socioeconomic development of Houston. According to Kulig *et al.* (2008), Houston is not unique in this regard as complacency and apathy are common characteristics of mining and forest-dependent communities. Complacency is the self-satisfaction and non-vigilance based on an unjustified assumption of a satisfied state (Parasuraman *et al.* 1993). It refers to a blind trust and lack of awareness that, as a character trait, fails to detect warning signals and change behaviours accordingly (Moray and Inagaki 2000). In the context of single industry towns, apathy is referred to as the low level of interest in and, therefore, the lack of community support for local development. It is often a result of a shortage of time and resources to support extra activities beyond the core ones that the community is able to sustain (Lucas 1971).

Similar to other resource-based communities in northern BC (Halseth 1999a), many of Houston's residents are there for the work. Many interviewees related how people in the community are "just here for the job and when I'm done with the job I'm moving on somewhere else" (Interview 18). For those residents that are employed, which is 59 percent of Houston's population (Statistics Canada 2007), "things are good" (Interview 12). This is not only because of the availability of good employment in the forestry sector, but also because of the good incomes derived from this employment. Consequently, the population of Houston is "quite happy with the way it is. I'd say a sixty forty split. Sixty percent are happy with way it is" (Interview 24). One respondent, an employee of the town confirmed that most of the community is "pretty well-off as everybody here has a higher income. There are not a lot of people scrambling".

While work was often cited as an important reason for migrating to Houston, the lifestyle available in the community was often quoted as a reason to remain in the community. Similar to other small rural communities (Fitchen 1991), features such as the Houston's small size and natural amenities are lifestyle attributes that are valued by its residents. One respondent stated that many people who come to the community choose "lifestyle over vocation" as the main reason to remain in Houston (Interview 2). Many of the interviewees expressed an affinity for Houston's small size, comfortable atmosphere. They explained that the majority of the population is "not anxious about the town getting bigger and would like it to stay the same" (Interview 20), and that "a lot of people just like it the way it is because there are not so many people around" (Interview 14). Another respondent emphasized the community's satisfaction with the outdoor lifestyle while explaining its relationship to complacency by saying, "I came up here because the fishing is good, the hunting is good, and the snowmobiling is terrific. When people come up here for those reasons you can't fault them, but it leads to a lack of initiative and a lack of development when people are comfortable with the lifestyle that they have" (Interview 18).

The general satisfaction with conditions in Houston reduces the awareness of the need for change. Approximately half of the interviewees expressed the feeling that "we're ok" (Interview 26) with the way things are, but many others disagreed, saying that, "if you look around, we're not ok" (Interview 18). A long-term resident described the declining socioeconomic conditions in the community concluding that "many of Houston's problems have been exacerbated by what's happening in the wood industry in the last few years". This notion was supported by a prominent community organizer, who said, people "don't see the pieces that are squeezing and

squeezing and squeezing. Like four days off there, and two weeks off there, and the extra holidays" (Interview 21). Another advocate for social concerns in the community added that "people in the community have become complacent and they don't see what's really happening" (Interview 28). Such complacent attitudes belie the fact that there are significant problems regarding the supposedly stable nature of the local forest industry and the socioeconomic conditions in the community.

Complacency and apathy may be contributing to the lack of local demand for the services and amenities which commonly exist in other communities. Many interviewees spoke of the acute need for better government services, such as healthcare and social services. Retail services in Houston, particularly grocery stores, were also insufficient to support the needs of the local population. As a result, there is a widespread economic leakage problem, mainly to the neighbouring communities of Smithers, Burns Lake, and Prince George, which continues to undermine the community's social and economic service base. According to a report by the 2006 Houston Economic Leakage Task Force (HELTF), this problem exists because the local residents feel that the shopping experience is better in other communities. This included attributes that affect purchase decisions, such as selection, price, friendly and knowledgeable service, and a choice of alternative stores. One specific conclusion by the HELTF was that the buying habits of local residents are clearly affected by their need to obtain health related services in neighboring communities (HELTF 2006).

This economic and social leakage, for products and services not available in their community, are negatively affecting Houston's economic and social service (HELTF 2006). Economic

leakage in the retail, service, and health sectors has been a long-term problem. Unfortunately, there was little evidence that the community-at-large possessed the concern and motivation necessary to address this economic and social service leakage. A town employee explained this problem by saying that "in Houston there are a lot of people that are very laid back and happy with the status quo. They have a roof over their heads and they have food on their table and life is good" (Interview 24). A former resident of Houston, explained that "for the longest time it was just apathy on the part of most people. They were content to go to Smithers to do their shopping and content to go here and content to do that" (Interview 11). The interviewees explained that people in Houston view out of town travel for goods and services as a recreational activity. This has contributed to the mindset in Houston where the residents willingly travel for retail and other service needs. A former local politician summed the apathy in Houston to the retail situation by saying "we do complain a lot about things that we don't have, but we don't even stay local to try and support what's here" (Interview 4).

Several interviewees suggested that Houston's culture of apathy and complacency towards development began as a result of its early 'company town' status. In the early 1970s, Bulkey Valley Forest Industries' (BVFI) plan was to rebuild and operate both the sawmill and the town. According to one former locally elected official, the community embraced Houston's operation as a company town. In fact, the first town council was composed of two representatives of the company, two from the government, and three from the community at large (Interview 3). According to several other interviewees, company dominance of the community's social and economic affairs created a culture of complacency because Houstonites became used to "someone doing everything for them" (Interview 21). Another local politician described how

from "that point on (1970), it didn't give the locals any incentive to do their own thing because somebody was always doing it for them".

Similar to other industrial communities (Rosenfeld 1996), industry success in Houston has contributed to the culture of complacency. A common perception in the community is that when the local forest industry is performing well, the community is not viewed as having many socioeconomic problems. This is because as long as employment is plentiful in Houston, the community is complacent about the need for further socioeconomic development. The perception is that "Houston never has many issues because everybody's happy making the big bucks" was widely held by a number of the respondents. One interviewee added that this view was also common among outside interests, such as the various levels of government that deal with Houston on a regular basis. This interviewee explained this position by saying that "it's a matter of the squeaky wheel. Those folks in Houston have a culture of pride and hard work and those communities are easiest for the government not to pay much time to. They are victims of their success. Unemployment is relatively low, job prospects for young people are extremely good, so it's hard to compare that to the economic woes" (Interview 6) of other resource-based communities in northwest BC.

The preoccupation with the economic health of the forest industry has limited the social development of Houston. Many of the interviewees felt that there were significant social problems that the community was apathetic towards. In the past, these problems were masked by the economic growth and the boom times that the community experienced. More recently, declining economic conditions have increased in frequency and severity. Several interviewees,

representing various social organizations in the community, related how the increasing economic instability of the forest industry has affected the community. Interview 3, a former K-12 educator, related that "when there are problems at the mill, within 24 hours there would be problems at the school." The interviewee added that agitation, unrest, and depression in children were severe side effects of unemployment uncertainty in the community. One social worker described a different social dimension of instability saying that the "incidence of domestic violence has increased significantly since the whole real transmission that the forest industry is unstable" (Interview 16). Another added that "domestic assault is very much up. You can notice it as soon as there is a swing in the mills" (Interview 17). A front-line crisis counsellor explained that domestic violence is "cyclical in our community and it's very much because of our forest industry. There's a time of peace and tranquility in the home when the men are in the bush working, but I can tell you that this week, my case load is going to grow right off the rocket because all the men came home" (Interview 28).

Domestic violence, youth unrest, and drug and alcohol abuse are only a few symptoms of the need for socioeconomic development in the community. In the case of Houston, these social issues appear to have been exacerbated, not only by the declining economic conditions, but also by the withdrawal of a wide variety of social services from the community. Many interviewees spoke of the urgent need for women's, drug and alcohol, mental health, and other services that have been recently removed to neighbouring communities. There was also evidence that, in the past, the community was apathetic towards the growing needs of seniors. As a result many seniors have left the community preferring not to retire in Houston.

Many interviewees spoke of these social problems and the apathy towards an increasingly marginalized demographic in the community that is subject to them. A social worker in the community stated that "there hasn't been a lot of proactive concern for the marginalized of society and the people that we work with on a regular basis" (Interview 23). This interviewee added that this segment of Houston's population is growing in response to the economic uncertainty affecting the community and that "we have seen a huge increase of people coming to the food bank and needing our services since the mills have been laying people off or cutting down their hours. Normally we have low-income families that come in...now we see an influx of different families coming in, and even single people, but generally working people that don't have enough hours to make ends meet or that have been laid-off altogether. This happens a lot here with the forest industry" (Interview 23). The apathy that the community has towards their more marginalized members was summed by another respondent who said "that a community is only as strong as how it treats its marginalized population, the people living on the fringes" (Interview 21). The interviewee concluded that "we are not a very strong community" because of the apathy and the absence of the socioeconomic support mechanisms that the marginalized population of the community needs.

During Houston's main period of economic growth, the residents of Houston came for the work but stayed for the lifestyle. Satisfaction with the good employment and high incomes, and lifestyle attributes offered in Houston, have created a 'blind trust' in the forest industry and complacency towards the town's socioeconomic development. The result is a lack of awareness and a set of behaviours that risks detecting fewer signals that normally would attract attention. One signal, the recent decline of the local forest industry and the growing uncertainty in the community has signaled weakness in Houston socioeconomic development. This is evidenced by the persistence of service leakage from the community, growing social problems, and the presence of an increasingly marginalized population. The lack of concern and behavioural change to address these socioeconomic problems demonstrates the community's continuing complacency and apathy towards socioeconomic development.

5.4.5 A Sense of Community

Researchers describe how the level of community - community spirit, civic engagement, and a sense of trust - influences the ability of individuals to join together to address mutual needs and pursue common interests (Wilson 1997; Fukuyama 1995; Putnam 1995; Coleman 1990). These features, along with a community's organizational capability, are said to be critical to the success of their socioeconomic development. This is because they are important in the development of social networks which facilitate communication and coordination, encourage reciprocity, and allow for collective action. These social networks are key to community development because they broaden the individual sense of self and enhance the level of benefits potentially experienced by the collective group (Putnam 1995). In the same way these features are important to the development of community, the lack of, or a decline in these features, corresponds to limited social networking and diminished community development (Wilson 1997).

To explore civic engagement, I begin with evidence concerning the overall community spirit, then volunteerism and social cohesion. Many of the interviewees spoke favourably of Houston as a good place to live, not only because of the available employment and lifestyle, but also because of the community's ability to come together in times of crisis. On the surface, this ability to 'come together' was indicative of a collective identity and community spirit. On closer investigation it was apparent that this sense of community spirit was not as widespread as first indicated. One business community respondent noted that "Houston is like a family. Well, we are a family. We look out for each other. We just don't necessarily look out for our extended family". This statement speaks not only, to the presence of many different and separate communities in Houston, but also to the lack of a community spirit inclusive of everyone. Other interviewees were more blunt saying that "there is a lack of community spirit here that is pretty frightening at times" (Interview 18) and that "the biggest thing that is stopping Houston from taking that next step to becoming a full-time community is the lack of community spirit (Interview 11). This interviewee also explained why a sense of community spirit was important saying "when people don't support their own community, the community doesn't have a sense of pride. If you don't have a sense of pride, you don't have a sense of community".

According to several of the interviewees, one explanation for the low level of community spirit in Houston is because "a lot of people that live here associate their community spirit with their work spirit" (Interview 18). If this is true, then economic conditions in the forest industry directly affect the level of community spirit in Houston. According to many interviewees, worker morale in the local forest industry has declined significantly. They spoke of the deteriorating economic conditions in the industry and the widespread disillusionment among the local workers. One community leader said that "I think a lot of people just feel they work for wages now and they really don't have a lot of input into how things are handled" (Interview 9). Another felt that this "has to do with the skill level. The average skill level is so low that most of the people hate their work" (Interview 12). Clearly, there are many reasons why the working

population of Houston may be disillusioned about the work that they perform, but a thirty year sawmill veteran summed the situation by saying that "the morale at work is such that the company doesn't care and the people don't care anymore either. The atmosphere, I've never seen it as bad as it is right now" (Interview 25). As a result, community spirit and civic engagement have suffered because "people now go to work in the mill and they go home and do their stuff. They don't want to be involved anymore" (Interview 4).

Undoubtedly, there are many reasons for Houston's low community spirit and the relationship between work and community spirit is only one of many possible explanations. Another example of the low level of civic engagement in the community concerns the level of volunteerism. Voluntary associations are said to be the primary means for maintaining a healthy civil society. In particular, the nonprofit and voluntary sectors are the dominant locus for social interaction in the community (Onyx and Bullen 2000). At first glance, volunteerism appears to be high as there are a wide variety of community groups, service clubs, and sports and religious organizations common to many small communities. In Houston, there are approximately 24 community groups, 22 sports and recreation related organizations, and 12 religious groups that advocate for a wide variety of interests (Appendix II).

Despite this large number of volunteer organizations, many interviewees held the opinion that "volunteerism in Houston is critically low" (Interview 18). One explanation for this apparent contradiction is because there is only a small core group of citizens that volunteer on behalf of the entire community. One of these volunteers described this situation by saying "it's the old thing about ten percent of the population doing ninety percent of work. There are only a few

people that really see the issues that need to be dealt with and they work themselves to the bone trying to get those things to happen" (Interview 23). There was also evidence to suggest that local volunteer work is carried out by the same small group of people. One respondent compared it to being "stuck in a time capsule, because it was like meetings from years ago where it was the same people, with the same talk of the same problems, with no solutions" (Interview 21). Even a new community volunteer agreed stating that "no matter what you do, it is always the same group of people" (Interview 17). This interviewee added that "my sense is that there are a few people carrying the torch and a lot of people sitting back watching. They are happy to criticize, but they're not willing to throw down the risk to themselves to make things happen". As a result, the volunteer base in Houston continues to decline as the same, small group of volunteers becomes 'burnt out' from continually fighting the more persistent socioeconomic issues in the community.

5.4.6 Social Cohesion

Involvement and participation in groups can have positive consequences for community development (Putnam 1995; Fukuyama 1995; Coleman 1990). These researchers also describe the successful community as one that contains dense social networks. Unfortunately, these social networks are not always a natural occurrence and must be deliberately constructed (Portes 1998). In Houston, there was evidence to suggest that there was social cohesion within the many isolated community groups, but that the effort needed to construct social networks between them was largely absent. This became apparent when the lack of social cohesion, between different groups in the community, emerged as a prominent theme during the content analysis.

At first glance, Houston appears to possess good social cohesion. Houston was described by the interviewees as a tight-knit community in a blue-collar town where most everyone knows your name and your business. The usual community organizations, features, and amenities common to many small rural communities in northern BC exist, and there are a number of active volunteer sports, recreation, and religious organizations. Upon further examination, cohesion between many of these groups was found to be limited. All of the interviewees described how the level of social interaction between various community factions was low. In some cases, social relations between different community groups were described as segregated, divisive, discriminatory, and non-existent.

Religious affiliation was the most common associational membership among the citizens of Houston. Houston was found to have a high number of religious organizations with twelve different groups serving a population of just over 3,000 people. However, religious commonalities were not the basis for social interaction in the community. Instead, one interviewee remarked that "it's a really divisive community. There are lots of different groups and these groups don't interact. There are eight churches in town and each little church keeps to itself. Each church has its own social circle. They don't interact" (Interview 15). Other interviewees confirmed this lack of social interaction among the different religious organizations. For example, a retiree living in the community said that "there are several churches that are very strong here. Some of them, at least one of them, does not mix very well with others. They are good citizens and they're friendly and everything, but they keep separate" (Interview 22). Another source of divisiveness is related to the control exerted by the longer-term families and business people in the community. For many years, the leadership of the town consisted of a combination of the dominant business and land owners who were descendent from many of the original Dutch settlers in the area. According to several interviewees "they were very clear about not welcoming new business to town...they made it very difficult for new people to come in" (Interview 3). One result was a very strong level of local control on the development of the community. Today, this control, exercised by a small part of Houston's population has created "a really intense class system in this town. You have sort of the upper crust and they do their own thing and they support one another in their own businesses. But it's all very incestuous. It doesn't filter down to the working families" (Interview15). Other interviewees, those generally not involved in the business affairs of the community, also commented on issues of protectionism, nepotism, and control by a small minority. One interview participant bluntly stated that "they're not looking out for the community. They're looking out for their families or their friends" (Interview 7).

There was also evidence that the service organizations in Houston are not able to interact in a cohesive manner. As a result, there is a broad overlap between existing social service agencies and other large religious organizations. One organization in particular seemed ostracized by the community-at-large because they serviced a distinct clientele and were managed by a parent organization from outside of the community. Other organizations were not able to "see eye-to-eye" and "whatever the differences or discriminatory stuff, they just won't work to overcome those obstacles" (Interview 16). One result of this predicament was that each distinct cultural community, whether it was Sikh, Dutch, or First Nations, tended to utilize different support

services within the community. This tendency further limited the social interaction between them, to the point where one social worker remarked that "the community is segregated. I'm not talking about segregation like down south. It's not to that degree, but its underlying segregation that makes it so the resources aren't widely used and available for everybody" (Interview 23).

In summary, community spirit, volunteerism, and social cohesion in Houston are limited. These low levels of collective civic engagement cannot be solely attributed to forest-dependence as there are certainly many other factors that influence collective behaviour in the community. However, forest-dependence has fostered a variety of conditions that may not be conducive to the creation of social networks in Houston. For example, there is a relationship between the culture of complacency that exists in the community and the low levels of community spirit and volunteerism that are present. These linkages are affecting the ability of the community to create the social networks critical for continued socioeconomic development.

5.4.7 Summary

This section represented the prominent themes that emerged from the content analysis. The themes of stability and change, culture, attitude, complacency and apathy, and civic engagement and social cohesion, represent obstacles to socioeconomic development in Houston. It is important to note that these themes have not influenced socioeconomic development in isolation. There are many important linkages between them, of which, the common denominator is forestry-dependence.

In the past, forestry-dependence created substantial economic benefits for the community, allowing it to grow and prosper. This led to the dominance of a pro-forestry culture which

continues to believe in the sustainability of the local forest industry despite recent economic restructuring and employment decline. These attitudes have made the community-at-large complacent towards further development and apathetic to many of the socioeconomic issues created by the community's addiction to forestry and subsequent underdevelopment. This culture of complacency and apathy has in turn eroded the development of social networks critical for socioeconomic development in the community.

5.5 Implications for Socioeconomic Development

The cultural and attitudinal attributes described in the previous section have broad implications for the socioeconomic development of Houston. This is because the essential elements of successful socioeconomic development, namely a collective vision and a comprehensive planning process, have been directly impacted by these attributes. Other impacts are also apparent through the community's capacity for socioeconomic development and their resiliency to change. The following section examines the indirect impacts of long-term forest-dependence on the community visioning and planning processes.

5.5.1 Visioning and Planning

Socioeconomic development is defined as the planned evolution of all aspects (economic, social, environmental, and cultural) of a community that result in improved quality of life. Socioeconomic development, therefore, requires a proactive, futuristic, and visionary attitude to be successful (Frank and Smith 1999). In Houston, there was little evidence that these attitudes were present. As a result, the presence of a collective vision and comprehensive planning process designed to steer the community into the future was limited. During the interview process, interviewees were asked if there was a collective vision that guided Houston's socioeconomic development. Seventy-nine percent of the interviewees said there was not. For example, one long time community member stated that "I don't think we have a vision. This is one of the things I've discovered...I met with a lot of community people and I don't think we have a collective vision" (Interview 21). Another said that "everybody here is just job oriented and they are doing their thing. There is no vision" (Interview 25).

The remaining respondents spoke of various competing visions that involved either economic diversification or additional industrial development. Tourism, mining, and increased forestry activity were themes central to these visions. Despite the presence of isolated and competing visions, many interviewees also spoke of their preference for increased forestry development. A new community member confirmed this affinity for the status quo saying "I see that people are focused on forestry and they are still in that school of thought that this is what is going to take them into the next century. I don't see a lot of vision here" (Interview 23). This statement is indicative of not only a preoccupation with forestry as the sole economic driver, but also of the lack of foresight in the community. Although there was a growing awareness, in part due to the recent economic challenges, that forestry is increasingly unable to provide for the needs of the community, the community did not yet posses the collective ability to envision economic alternatives. One interview bluntly spoke to this lack of foresight saying "I think we don't look beyond forestry and that's pretty stupid" (Interview 11).

The interviewees were also asked about the presence of economic development planning initiatives, past and present, which the community had undergone to channel industrial economic

growth into benefits for the community. In regards to past planning, many respondents either said there was none or they deferred the question because they did not know. Two interviewees, one new to the community and one former resident, responded to the question by saying that "growth happened to Houston. They didn't necessarily go out and plan it" (Interview 16) and that "they didn't plan a whole lot here really. I don't think there's been a whole lot of planning" (Interview 27).

When asked if there were any recent or current planning activities in the community, the respondents either said there was none or they referred to the official community plan (OCP) as an example of a community planning exercise that had taken place. Only two interviewees (Interview 18 and 21) indicated that some planning exercises were conducted, beginning in the early 1990s. The result was four economic development strategies developed with the assistance of series of contract economic development officers (EDOs) from outside of the community. Many of the interviewees referred to these efforts as 'paper plans' that were not created by, communicated to, or supported by the community-at-large. These plans were also not updated regularly to deal with changing local economic and social conditions. As a result, many of the interviewees agreed that "they don't have what I would call a viable plan. There isn't a written and identified plan" (Interview 3).

The interviewees frequently talked about economic diversification and attracting new industry to the community, but they also admitted that there are no long-term plans to accomplish these goals. A very active community educator and volunteer said that "I don't know if they are taking Houston in any direction. I don't hear of any plans. I don't feel and I'm not aware of a plan and I

am fairly active in the community" (Interview 21). Another agreed saying "I don't see real clear concise plans at this point. I think it's been real short-term. I'm thinking they need to have a long-term plan" (Interview 11). This absence of any real long-term planning is indicative of the lack of awareness about the need for further socioeconomic development in the community.

5.5.2 Capacity

Socioeconomic development is concerned with increasing the capacity of a community (Williamson and Annamraju 1996). Community capacity is a concept that describes that ability of a community to cope with stress, take advantage of opportunities, and meet the needs of its residents (Kusel 1996). There are three main elements of community capacity; social, human, and physical capital. An important theme in community capacity is the collective interaction between these different elements, because it is this interaction that has the ability to either maintain, strengthen, or weaken community capacity (Teitelbaum *et al.* 2003).

Each of the interviewees was asked if they believed there was enough knowledge and experience in the community to deal with future challenges. Approximately half of the interviewees (57%) stated that the community possessed adequate stores of capacity. Evidence from other interviewees suggested that the current stores of knowledge and experience are limited and in rapid decline. There is little doubt that Houston's population possesses an abundance of technical expertise and experience related to the resource-based industries. Unfortunately, there was also evidence suggesting that the community was deficient in the supply of knowledge and experience related to many other professions and occupations critical to community development. One respondent said that "there's a lot of knowledge about resources, but not a lot

of knowledge on how to make this community work" (Interview 15). Another supported this assessment saying that:

"I think capacity is a huge issue. We are a resource-based community. We have all the obstacles. We have limited capacity, human capacity because people don't live in this community. We have so many people like the doctors that don't live here, the lawyers don't live here, many of the teachers don't live here, and many of the professionals don't live here. They're good people and they have good skills but we don't have a lot of capacity for leadership and community peace" (Interview 21).

There was also evidence to support the fact that community capacity has recently decreased. One reason for this decrease is the downturn in the resource industries and the subsequent loss of local employment and population since the mid to late 1990s. More recently, capacity has also been lost through centralization and reduction in services by the BC provincial government. These actions have affected many of the local service agencies dependent upon them for funding. Many critical services in Houston have now either been removed or are staffed by agencies and personnel from other communities. This speaks to the capacity of Houston to hold these critical jobs because for "most government jobs, you need post secondary education and that's just not the reality in this town" (Interview 15).

These job and service losses have reduced Houston's capacity for socioeconomic development. For example, this has meant the loss of many key community members that previously had been the backbone of Houston's non-profit and volunteer organizations. One result is that "we've lost all of our professionals. Our little non-profits used to have a really strong board of directors. We don't have them anymore because a lot of people who sat in those volunteer positions are no longer here" (Interview 28). The larger impact on the community from the loss of these individuals is that "we don't have enough groups, committees, and direction to pull together to move forward" (Interview 10).

5.5.3 Resilience

Community resilience is another important outcome of socioeconomic development (Williamson and Annamraju 1996). Resilience refers to the ability of the community to deal with adversity (Kulig 2000) by altering their behaviour and taking charge of local institutions and processes for the benefit of the community (Teitelbaum *et al.* 2003). Community cohesiveness is an important foundation for the creation of resilience because it generates the collective interactions that enhance a sense of belonging and a sense of community (Kulig *et al.* 2008).

Resilience is a nebulous concept and difficult to assess. Kusel (1996) provides a list of community characteristics and conditions that may be indicative of the community's resilience. Among these are the aesthetic attractiveness, proximity of outdoor amenities, level of civic involvement, effectiveness of community leadership, economic diversity, and social cohesion displayed by its residents. Houston is close to an abundance of outdoor amenities, but low aesthetic attractiveness, civic involvement, effective community leadership, economic diversity, and social cohesion diversity, and social cohesion diversity.

In Houston, there was little evidence that the community was resilient. As detailed previously, the community does not possess the foundation for community resiliency as demonstrated by the low levels of civic engagement, community spirit, and social cohesion. According to many interviewees, Houston is not a resilient community because it does not possess the ability to cope with and adapt to change. Many of the interviewees agreed and often stated that "without
forestry, we would not have a town. I see this town totally folding and becoming a ghost town" (Interview 23).

One interviewee compared the level of resilience in Houston to that possessed by another nearby community. This interviewee observed that:

"most communities keep on ticking, but in Houston, the minute you had them closing the mills or being shutdown for a few weeks, life came to a grinding halt. You saw changes in people's spending habits, there was lots of upheaval and people moving out of town that had been here a long time" (Interview 10).

Another interviewee made a similar observation explaining what local residents would do if they lost their job. Referring to a community adjacent to Houston, the interviewee explained how most residents "would try to find something else and would even take a lower paying job because they like living there". In another neighbouring community the expectation was that most residents would remain in the community after job loss because "it wasn't so much that they like to live there. It was more that their family was there and they don't want to leave". In Houston, the expectation was that most residents would leave the community immediately after employment loss. The interviewee explained that "they would be out of here" because "they "didn't like being in Houston, didn't like the community, and didn't want to stay here because they were only here for the job. People are here for the work. They come here for the work and they stay here for the work" (Interview 18).

5.5.4 Summary

This section introduced additional evidence to suggest that socioeconomic development in Houston is limited. The basic foundation for successful socioeconomic development, the ability to collectively envision and comprehensively plan for the future, has not been developed. This is because Houston is still preoccupied with industrial forestry as their sole economic driver. There are some signals that the community is considering other alternatives to augment their forestry base, but these efforts have not been communicated to and are not supported by the communityat-large. This lack of visioning and planning processes may be related to their ability to engage in processes not related to resource extraction. Community capacity was found to be low and in rapid decline as a result of a variety of external pressures. As a result, Houston's ability to cope with these pressures and adapt to change was also low.

5.6 Conclusion

The quantitative and qualitative analysis presented here provides the basis for answering the research question by describing how forestry-dependence has influenced the economic growth and socioeconomic development of Houston. During Houston's growth period, both the community and the local forest industry experienced abundant economic growth. While this economic growth allowed for substantial industrial success, conditions inherent in chosen economic model soon tempered the economic benefits experienced by the host community. In Houston, economic growth based solely on resource extraction and primary processing has resulted in unbalanced development, underdevelopment, and increased dependency. More recently, exogenous change has exposed the consequences of forest-dependence for socioeconomic development in Houston by creating a variety of cultural and attitudinal conditions which affect the ability of the community to undertake further socioeconomic development. These conditions have implications for even the basic tenets of development which further compromise the community's capacity and resilience to adapt to, and cope with, additional social and economic change.

CHAPTER 6: DISCUSSION

6.1 Introduction

This chapter discusses how forest-dependence has impacted the economic growth and the socioeconomic development of Houston. Drawing upon the findings from Chapter Five and literature concerning the growth and development of forest-dependent communities, I address the research question before evaluating its repercussions for Houston. The first section discusses the consequences and limitations of forest-dependence for the town's economic growth as dictated by the nature of the industry and its structure in Houston. The next section explores the consequences of forest-dependence for the town's socioeconomic development by focusing on a suite of social conditions that act as barriers. The final section discusses the implications of forest-dependence on Houston's capacity for future growth and development and its ability to adapt to an increasing suite of changes affecting the community.

6.2 Forest-Dependence and Economic Growth

The first part of the research question is concerned with how forest-dependence has affected economic growth in Houston. Since the community's inception, industrial forest activities have served as the community's economic backbone. This economic growth cannot, however, be characterized as either gradual or stable. Economic growth in Houston is better described as rapid, volatile, and punctuated by deep fluctuations between periods of economic growth and contraction. Today, Houston is deeply dependent on industrial forestry and although its role in BC's forest economy has evolved, it remains a specialized producer of a single forest-based commodity with a limited future potential for economic growth.

6.2.1 Portrait of Economic Growth

Stability has long been a desired economic condition in Houston. On a micro-scale Houston has achieved some semblance of stability, but an examination of longer term economic trends reveal that community economic growth is better characterized as volatile. This volatility increased in late 1960s and early 1970s, as Houston experienced waves of industry consolidation and restructuring instigated by forces external to the community. This resulted in a wholesale shift to a new economic regime characterized by the mass production of lumber in a process emphasizing cost minimization and economies of size and scale (Hayter 2000). This shift resulted in the rapid expansion of industrial operations and increased economic growth for both the local forest industry and the host community. It further pushed Houston's economy towards forces outside of the community increasing its dependency on external markets for economic growth and prosperity.

The term 'forest-dependence' obscures the relationship that many forest communities have with the industrial processes they are dependent upon. This is because the stability of the forest industry has little to do with the flow of forest resources or the production of forest-based goods. Stability is more responsive to macro-economic factors, public policy, trade restrictions, relations between capital and labour, building cycles, and other seasonal variations that influence the economic behaviour of the industry (Drielsma 1984; Luppold 1984; Daniels *et al.* 1991; Burton 1997). In this manner, the economic growth of the forest industry is a function of larger political and economic systems (Force *et al.* 1993).

Machlis and Force (1988) suggest that community stability is a theoretical construct and that the normal state for forest-dependent communities is a dynamic one. Houston's economic growth can certainly be characterized as dynamic. The community's macro economic indicators, such as population, mobility, and employment, have historically been in a state of flux, alternating between periods of growth and decline. Historical notions of community stability equate this volatility with the flow of timber resources (Waggener 1980), which are linked to favourable market conditions (Marchak 1990). Instability is caused primarily by dependency on external markets (Innis 1933). Byron (1978) confirms these notions in the context of the BC forest economy, stating that fluctuations in the demand for, and the price of, exported lumber are the chief cause of volatility in forest-dependent places.

Houston has always experienced fluctuating economic conditions, but since it became dependent on external markets for economic prosperity, these fluctuations have increased. According to Hayter (2000), record setting booms were experienced by the BC forest industry in the late 1970s and 1980s as well as in the early to mid 1990s. These periods of growth were punctuated with abrupt recessions in 1971 and 1975 and significant busts in the early 1980s and the late 1990s. These boom and bust events coincide with those experienced in Houston. In fact, the 1971 recession was said to have caused the failure of Bulkley Valley Forest Industries (BVFI) and its untimely exit from the community (Bersohn 1981).

Two distinct boom periods were noted in Houston, each of which was followed by a significant recession. The first boom, and larger of the two, coincides with the aforementioned shift to a new Fordist production regime in the early 1970s. Migration to the community increased in response

to the need for additional forestry workers and the Houston's economic growth increased dramatically, peaking during the 1976-1981 Canada census period. In 1982, economic growth declined sharply due to a severe global recession and the subsequent reduction in lumber demand. Economic growth returned with a second boom during the early to mid 1990s, peaking in 1996 with record prices for structural lumber. Again, this growth period ended with deteriorating global economic conditions instigated by the 1997 Asian financial crisis and reduced overseas markets for BC lumber. Since 1997, economic growth returned briefly in response to recovering lumber prices and increased forest harvesting as a result of the Mountain Pine Beetle (MPB) epidemic. However, this growth was again cut short by plummeting lumber prices in 2004 in reaction to decreased demand and the onset of the current global recession.

These cycles of boom and bust were found to be the chief cause of instability in Houston. According to Markey *et al.* (2005), cyclic instability created by boom and bust events is manifested primarily through employment and income fluctuations. In a single-industry town like Houston, instability is quickly made apparent through employment loss. One reason for the immediate loss of employment is because single-industry places have no buffers so the forces of instability are immediately felt (Marchak 1983). In Houston, instability has resulted in employment fluctuations but is not reflected in household income levels. Income levels remain high (Figure 5.6). According to Marchak, incomes are primarily a function of good relations between labour and capital. Since Houston has experienced a historical lack of labour unrest and a general satisfaction with good money that can be made in its resource industries, it can be assumed that these increasing incomes are a product of this relationship.

Uncertainty, another element of boom and bust cycles, was also found to be a barrier to economic growth in Houston. Uncertainty affects economic growth because it reduces investor confidence, limits economic opportunities, inhibits future choices, and leads to industry restructuring and the loss of benefits for communities. One way in which uncertainty tempers economic growth is by creating the expectation that conditions will always improve and that good times are 'just around the next bend' (Markey *et al.* 2005). Unfortunately, when resource related prosperity returns it often postpones the hard choices needed to diversify local economies and improve long-term economic conditions for the future. When employment benefits do decline, it is often too late to support economic diversification as remaining local efforts are directed at crisis management (Auty 1995). In turn, the lack of economic alternatives increases the vulnerability of the community to future instability and uncertainty while reinforcing dependency on a single economic engine (Freudenberg 1992).

6.2.2 The Implications of Economic Growth

Since Houston's initial boom in the 1970s, the community has matured. Since the 1990s, inmigration has declined and the number of non-movers has increased (Table 5.2). Further, the number of young adults in the community has decreased since 1981 (Table 3.2) and the population of Houston is now dominated by the presence of an aging workforce (Figure 3.3). According to Lucas (1971), single-industry towns undergo four stages of community development. Houston now displays features consistent with the fourth stage, 'maturity', which is characterized by the lack of mobility in the adult workforce, an increasing number of retirees, and the continued out-migration of youth.

Initially, Houston's economic growth was rapid and the town moved through the first two stages of Lucas's development model, 'construction' and 'recruitment', in quick succession. The third stage, 'transition', began simultaneously with and not consecutive to the previous stages, as identified by the shift of responsibility from the company to the community (Lucas 1971). In 1972, the company (Northwood Pulp and Timber Ltd.) became singularly concerned with the business of running an efficient industry and plans to create a 'company town' were abandoned. In this third development stage, community life, involvement, and commitment are supposed to grow (Lucas 1971). In Houston, however, the development of these features were overshadowed by the continued construction of new milling facilities and the recruitment of labour to operate them.

Lucas's model of community development does not entirely explain Houston's economic growth as these processes are more complex and less linear than the model suggests. However, the model does help us to understand the different phases of Houston's economic growth and identify any development shortcomings. For example, Houston residents originally embraced the idea of a company town and later, were reluctant to take control of their own affairs (pers. comm. 2008). According to Lucas (1971), this reluctance was a common experience among singleindustry towns during the transition phase and is an indicator of their conservative nature. In Houston, this conservative nature manifested itself in a local government that has aligned itself with local industrial interests. Since the 1970s, the local government's focus has been the continuation of industrial forestry growth. This focus has limited the town's economic growth and increased their dependence on a single industry. Although the forest industry only exercised direct control over Houston's affairs for a brief time, their role as the only economic driver implies a certain level of indirect control. This theme of control by industrial and external interests was a central feature of the research analysis. More specifically, the loss of local control since the 1970s, due to industry restructuring, was identified as an obstacle to the continued economic growth. According to Freudenberg (1992), restructuring always favours core regions at the expense of those in the periphery. Hence, increased local control of resources and production is an essential policy option that could counter these typical core-periphery relations (Frank 1971). The antithesis of control is powerlessness and in this case, without local control their economic affairs. Houston is caught in a situation Watkins (1963) refers to as the Staples Trap, where the domination of local economies by large transnational branch plants limits control over the functions necessary to diversify the local economy and move away from dependency.

This form of indirect control by industry over a host community can be referred to as paternalism. Although industry is well-meaning, their actions continue to have consequences on available opportunities. Hayter *et al.* (1997) describe the environment in forest-dependent places as paternalistic with an emphasis on taking orders and not giving them. Conversations with community leaders suggest that this is the case in Houston, especially when it comes to controlling the factors of production associated with efficiency and cost-competitiveness. A common perception in Houston was that industry acts as good corporate citizens and are also looking out for the best interests of the town. Various indicators over time, such as charitable acts, donations, and other contributions certainly sustain this perception (ie: the 2005 donation of

building-related funds to the new Houston Leisure Center). The façade of paternalism here is that, although industry has been well-meaning, their industrial structure and use of competitive market logic indicate that they must really look out for the interests of the firm and its shareholders. Naturally, these corporate interests do not always align with those of forestdependent communities.

Dependency theory suggests that the local implications of being single-industry economies are far less favourable than rural places have been led to believe (Freudenberg and Gramling 1994). Because a core feature of dependency is the flow of resources to the core, citizens of forest-based communities do not share in the equitable distribution of benefits (Frank 1971; Marchak 1983). This is because the form and type of benefits received by the local community are determined by the structure of the industry and the regime of natural-resource governance. When the structure of the industry is oriented to the outside, the advantages of extractive development accrue to already industrialized regions. Similarly, when natural resources are extracted from publiclyowned forests, the only types of benefits that accrue to local communities are in the form of employment wages (Nord 1994).

In Houston, the key advantage that accrues to local citizens as a result of their involvement in local industry is in the form of employment incomes. Although these incomes have gradually increased over time, the overall level of benefit to the community has decreased. This is because forestry-related employment continues to fluctuate in response to growing economic instability, but has generally declined since 1981 (despite dramatic increases in local lumber production). Indeed, lumber production in Houston peaked in 2006 at world-record levels, something

achieved through continued restructuring, and the substitution of capital intensive means of mechanization versus labour, so as to extract an increasingly low value per resource unit, in the name of efficiency and competitiveness. These trends are consistent with Nord (1994) who states that resource-related benefits decline in response to restructuring, increased external ownership, and the use of mechanization and technology. The long-term impacts of which, in Houston, include the loss of employment and employment-related benefits.

6.2.3 The Economic Model

The evolution of Houston's forest industry from a scattered collection of small 'bush' mills into a large-scale, centralized, and capital intensive model of forest harvesting and production had significant repercussions for local economic growth. In the early 1970s, the industrial model utilized since the community's inception, was transformed from an entrepreneurial model of economic growth to a Fordist branch-plant model. These changes were instigated by the injection of external capital and new technology (Hayter 2000) and supported by provincial policies that encouraged large-scale industrial development of BC's hinterland (Williston and Keller 1997). Under Fordism, this new industrial model allowed for considerable industrial success and economic growth due to the coalition that existed between the provincial government, industry, and labour (Hayter *et al.* 1997). The forest industry and their host communities grew substantially, but conditions inherent in the new model, along with the globalization of production and neoliberal policy shifts within government, led to the dissolution of this coalition and an increased separation between markets and places (Nadeau *et al.* 2003, Young and Matthews 2007). These changes led to increasing instability in the economic growth experienced by forest-dependent places.

The Fordist economic model has worked extremely well for Houston's forest industry. The pinnacle of its industrial success is embodied by the local 'supermill'. But the characteristics inherent in this model, namely the external control, dependence on volatile markets, unequal exchange of benefits, and focus on a narrow economic-base have tempered local economic growth. According to Markey *et al.* (2005), the singular focus of a growth-oriented approach neglects other economic values and risks their decline for the benefit of a single-industry. Clapp (1998) agrees saying that a staples-based economy programs obstacles into local economies that tend to limit economic growth.

Houston is no exception as it possesses a number of obstacles that have tempered local economic growth. Local barriers to growth, identified by the interview respondents, include an underinvestment in local infrastructure, a failure to diversify the local economy, local government ineffectiveness, and growing economic stagnation. In one sense, the abundance of local natural resources, although initially capable of creating substantial economic growth, crowds out other growth promoting activities discouraging additional economic growth (Papyrakis and Gerlagh 2007). This is one reason why researchers have suggested that rural places that depend on natural resources for a large portion of their economy, often perform worse than places that do not (Clapp 1998; Leake *et al.* 2006; Papyrakis and Gerlagh 2006). This is also why it has been suggested that resource-based industries, especially the forest industry, are characteristic of an early phase of economic growth that should be abandoned in favour of a more diversified economy (Rostow 1959; Clapp 1998).

6.3 Forest-Dependence and Socioeconomic Development

The second part of the research question is concerned with how forest-dependence has affected socioeconomic development in Houston. The term 'socioeconomic development' implies development in a positive direction (Bradbury and St. Martin 1983) and, therefore, it is necessary to assess whether forest-dependence is capable of fostering a community with the capacities to succeed (economically and socially) in the future. According to a variety of community leaders, Houston's socioeconomic development has not been positive. Instead it was described as unbalanced, stagnant, not well-rounded, and even non-existent. Although forest-dependence has resulted in economic growth, it has not contributed to Houston's socioeconomic development. That is not to say that socioeconomic development has not taken place, just that its development has been limited by the community's dependence on industrial forestry.

6.3.1 Portrait of Socioeconomic Development

A model forestry community with good socioeconomic development might be one that possesses stability, prosperity, health, and a wholesome community life coupled with large and small-scale industry and an abundance of opportunities for its citizens. Unfortunately, for many forest-dependent communities the reality is often the antithesis of the above image. Their family focus is high, but services, amenities, and employment options are low. They exhibit high seasonal unemployment, population turnover and instability, and are dominated by forces from outside of the community (Drielsma 1984). As explored previously, there are a number of political and structural factors that account for some of these conditions, but the lack of socioeconomic development, common in forest-dependent places, is another important reason. The relative shortage of these model-like qualities of well-being in Houston is the product of limited socioeconomic development, which has resulted from the town's association with industrial forestry.

Houston has had economic growth but very little socioeconomic development. The type of socioeconomic development Houston has experienced is more akin to overdevelopment or underdevelopment, which according to Freudenberg and Gramling (1994) can be collectively referred to as dependency. Resource abundance, such as Houston possesses, and any related prosperity is said to create an over adaptation to the resource which reinforces dependence and hinders the development of alternate activities (Freudenberg 1992). Marchak (1983) adds that as the resource industries come to dominate the local economy, their capital, infrastructure, and labour are entirely directed towards economic growth rather than the development necessary for a diversified and self-sufficient community.

Overdependence is the product of over adaptation to both the resource and the activities necessary to support the dominant industry. In the case of Houston, the community's dominant culture, attitude, and politics and its physical, social, and recreational infrastructure are heavily focused towards the continuation of industrial success. Hayter *et al.* (1997) suggest that the social structure of single-industry towns is organized in this manner to maintain the structure of the economy. Cox and Mair (1988) refer to this condition as the structural fundamentalism that ensures the success of industry through a web of local dependencies and social relations. For example, firms are dependent on capital, labour, and markets. The town is reliant on local power and a good tax base, while its residents are dependent on family, religion, ethnicity, and other social contracts with both the town and industry. Therefore, it is advantageous for the involved parties to support and maintain this structure. According to this theory, the community is

overdeveloped because it has chosen to focus on continued economic growth for industry at the expense of its own socioeconomic development.

Another central proposition of dependency is underdevelopment. Underdevelopment is a condition fundamentally different from undevelopment, which refers to a condition in which resources are not being used. Underdevelopment describes a situation in which resources are being actively used, but used in a way which benefits dominant and not dependent places. According to Frank (1971), underdevelopment is a historical process that results when resources are used for the benefit of more dominant places. In this sense, Houston is underdeveloped because it was integrated into external economic systems only as a peripheral producer of raw materials. Any benefits that were produced accrued largely to core regions. The lack of diversification, the concentration of resource control by external firms, and the presence of economic instability leads to underdevelopment (Watkins 1982; Peluso *et al.* 1994; Beckley 1995). These features are ones that Houston displays in abundance as a single-industry town.

Houston is overadapted towards industrial forestry and underdeveloped as a consequence of forest-dependence. The question that remains is how much socioeconomic development has Houston achieved as a forest-dependent community? Socioeconomic development is difficult to measure because indicators are subjective in terms of their local importance and relevance. According to Kusel and Doak (1996), high levels of home ownership, education, and employment indicate higher socioeconomic development. Home ownership is high in Houston, but post secondary-education is increasingly low, and employment in the forest sector has been falling. For example, the average unemployment rate in Houston has been twenty-eight percent higher than a comparable rate for BC for the past five Canada census periods (Table 3.6). Postsecondary education levels were also found to have decreased since 2001, with the exception of secondary school education levels which have increased since 1996 (Table 3.3).

A better indicator of socioeconomic development might be the level of local control that exists in the community. According to Frank (1971), the essence of socioeconomic development lies in the ability to be self-reliant and in control over decision-making processes (Levitt 1970). This is because local development depends on who controls the access to, and how the benefits from, resources are distributed (Fortmann 1991; Peluso 1992). Historically, Houston has had very little control over its local resource base because of the paternal nature of both the industry and the BC provincial government. Both the structure of the industry, and the use and allocation of local resources, have historically been controlled from the outside. The result is a community unable to access and control the distribution of resources necessary for its own developmental needs. While Houston has experienced some, although limited, socioeconomic development, a more appropriate way to describe Houston's developmental state is as underdeveloped as the town has not yet had the opportunity to control the local resources necessary for its own developmental needs.

6.3.2 The Façade of Paternalism

One barrier to the continued socioeconomic development of Houston concerns the benefits received as a consequence of forest-dependence. The continued employment opportunities and the high incomes have made the community comfortable with its current state of development. Similarly, the industrial tax-base created by the industry has sustained the town's essential services and made local government complacent towards additional development. Unfortunately,

satisfaction with the current state of development has made many in the community averse to anything that may jeopardize the benefits that they receive from their association with the forest industry. Markey *et al.* (2005) argues that staples dependence results in passive communities and as a whole, this makes the community averse to risk and change associated with further socioeconomic development.

The economic instability that has plagued Houston since it became dependent on large-scale industrial forestry has acted to increase the community's aversion to risk and change. Repeated booms and busts have contributed to the conservative nature of the community and created an experience that says we should 'stick with what we know' rather than incur the risks associated with new and unknown ventures. In Houston, change is associated with uncertainty, a quality which the community has actually experienced in large quantities because of its dependence on a single-industry. It is also the reason the community focuses on the continuation of the local forest economy because the associated incomes and taxes are imagined as creating a stable economic base.

Freudenberg (1992), states that excessive dependence on a single economic engine makes vulnerable communities addicted to resource extraction and that resource-related volatility and cyclical employment only act as future positive reinforcement for this collective addiction. As a result, the main focus of town and its citizens is with the continued operation of the local sawmills and the well-being of the local forest industry. Unfortunately, while the town's focus on the welfare of industry remains stable, the industry's focus on the welfare of the town has decreased. Since the 1970s, the industry's role in the community has been reduced from the

benevolent firm responsible for the interests of both local industry and the community to that simply of a supplier of taxes, jobs, and employment related wages. According to industry, their current role and largest benefit to the community is to keep the mills running and the workers employed (pers. comm. 2008). This transition away from support and involvement in the community leaves industry free to focus on efficiencies and other competitive measures that affect their bottom line. One effect of this focus is the continued extraction of concessions by the forest industry from the town, the workers, and industry suppliers and contractors, to ensure their bottom line (ie: the 2008 request by Canfor for a 10 percent reduction in municipal taxes). To remain competitive producers of commodity lumber, the local forest companies have intensified their efforts to be the lowest-cost and highest efficiency lumber producers. These efforts have created a steady erosion of forestry benefits from Houston. Mill upgrades have resulted in layoffs, early retirement packages, while wage, supply, and tax concessions are regularly used by the mills to reduce their cost structures. For the host community, these concessions represent a 'catch-22' because it is increasingly conflicted between the need to maintain tax, funding, and services levels in the community and their increasing role in the maintenance of employment and benefits through industry. According to Clapp (1998), the extraction of concessions from the host community may also be an early warning signal of a reduction of industry viability.

6.3.3 Perception, Belief, and Attitude as Barriers

Another barrier to socioeconomic development in Houston stems from the perception that the local forest industry will continue to experience success and provide benefits to the community. This perception is sustained by the continued input of capital to increase the efficiency of the local mills. Many community members took comfort in the fact that the local mills are among the most cost-efficient in the world and in particular, that the 'supermill' is attached to the

fortunes of their community. However, increased efficiencies often translate into a decreased need for local labour (Marchak 1983). This has played out in Houston, where forestry employment is frequently shed due to continued restructuring, industry consolidation, downturns in the market, mill upgrades, and increased mechanization..

Nadeau *et al.* (2003) suggests that forest-dependent communities are often preoccupied with the use of economic indicators, such as harvest and production levels. These indicators represent a limited way to measure the success of industry because they conceal its other impacts on the host community. The use of economic indicators is prevalent in Houston, where the predominant view is, if the mills are doing well then the town must be as well. Rising production levels and increased harvesting are viewed as good for the town, while falling production and harvesting are associated with negative impacts for the community. One result is that recent signals, such as the current economic recession, market downturn, and repeated news coverage that BC's forest economy is declining are being ignored in favour of the perception that the industry will experience continued success. This view persists despite the historical failure of single-industry places due to the depletion of the resource-base and falling commodity prices (Hayter *et al.* 1997).

Local belief in the success of the forest industry is augmented by the attitude that the forest resources in the area are sustainable. Many community and industry representatives spoke of the area's abundant timber supply and how it will sustain the local forest economy far into the future. This is despite evidence to the contrary, such as the recent 2008 Timber Supply Review (TSR) for the Morice Timber Supply Area (TSA) that states that the MPB infestation in the area

will continue to increase and is expected to affect 78 percent of the area's mature pine over the next decade (MOFR 2008). Patriquin *et al.* (2005) suggest that this acute loss of timber supply, due to the MPB epidemic, will lead to significant changes in the community. Other literature also states that Houston is one of two communities that will be hardest hit in a post-beetle forest economy, because they are the most dependent on forestry (Patriquin *et al.* 2005). Although MPB related declines in BC's timber supply may not yet be obvious, there is growing evidence that future declines will have profound effects on forest-dependent places (Stedman *et al.* 2007).

Clapp (1998), states that sustainability is merely an article of faith in forestry because the reality is often the opposite. This is because resource use, when defined by industrial scales and processes, is inherently unsustainable (Clapp 1998). Despite impending resource decline, increasing industry volatility, and the gradual loss of local benefits, the Houston community continues to believe in the sustainability of the forest industry. The trust, placed by the community in the forest industry obscures recognition of signals concerning the growing instability and weakness in the community's socioeconomic development.

Resource-dependent communities are said to exhibit a remarkable capacity for the denial of impending resource depletion (Lee *et al.* 1990; Marchak 1983). Halseth (1999b) found that the residents of three northern forest-dependent communities remained optimistic about conditions in their communities despite the negative impacts associated with fewer jobs and fewer local benefits. The same is true in Houston, where the residents are generally optimistic that the local forest economy will continue to provide a stable economic base and resource-related prosperity. Many community members spoke of how the next "boom could be just around the next corner"

in reference to the recent completion of Canfor's pellet plant and the growing BC bioenergy economy (pers. comm. 2008). Clapp (1998) calls this a 'conspiracy of optimism' where perception and attitude create the collective belief that conditions will always improve. These optimistic expectations reinforce local opposition to change, especially by those invested heavily in the current regime of dependency and who therefore stand to lose the most as as result of change. The persistence of this optimistic attitude creates a false sense of security which weakens the perceived need for additional development (Clapp 1998) and maintains the community's dependence on a waning resource and a declining industry.

6.3.4 Culture as a Barrier

Houston's society and economy are organized around the labour force, the physical infrastructure, and the economic model needed to perpetuate staples production. These factors influence the culture that shapes the debate and action necessary to produce locally-based development. Local culture provides a sense of community identity which facilitates common understandings, traditions, and values central to its socioeconomic development (Brennan 2005). Culture is rarely seen as playing a significant role in development outcomes, but in Houston, culture has been important in influencing not only in its industrial success, but also its socioeconomic development.

Cultural values have the ability to facilitate or constrain development (Williams 2004). Similar to the Houston's economic backbone, its social development is largely rooted in a single culture. To an outsider, the logging and milling culture that dominates Houston make it seem like a closed community with few sectors not preoccupied with forestry. The people who grow, work, or live here are acquainted with this culture and, over time, become used to the lifestyle and benefits it

offers. The problem with a singular, dominate, culture is that it often crowds out other influences while continuing old behaviours that may not be beneficial towards future development. In Houston, the analysis indicates that the presence of a dominant culture created a limited frame of reference and body of experience from which to evaluate future development activities. Brennan (2005) says that culture, and one's attachment to it, can be used as a motivating factor to either support or oppose development activities. This is the case in Houston where the dominant culture has chosen to operate the town as a support service for the work force that contributes to the well-being of the industry over that of the community.

Complacency refers to a state of blind trust and lack of awareness that contributes to a failure to detect warning signals and change any detrimental behaviours accordingly (Moray and Inagaki 2000). The attitudes and beliefs discussed above have made the community-at-large complacent towards further socioeconomic development and apathetic towards many of the conditions caused by past development practices. Satisfaction with the remaining good employment, incomes, and lifestyle possible in Houston has compounded this culture of complacency and continues to stall the community's socioeconomic development.

There is also a level of local apathy towards the socioeconomic development of Houston. Symptoms of this apathy include the low levels of community involvement, volunteerism, and support for development initiatives. One specific example concerns the 2008 municipal election, where all of the town councilors for the District of Houston were elected by acclamation. This apathy towards the development of the community may be explained by the prevalence of a cultural mentality common to forest-dependent places. Lucas (1971) describes how apathy

commonly results in low levels of interest in and a lack of support for development initiatives in single-industry towns. One reason is because residents often see themselves as only temporary residents who reside in the community because of the available, and often temporary, employment. Halseth (1999a) confirms that the residents of similar communities come for the available employment opportunities. As Bradbury and St. Martin (1983) suggest, many people do not see the point of building a community and developing attachment and commitment to it if they are only going to be there for a finite period of time. Further to this, they also state that possibility of developing attachment to a community is more remote if the community in question displays signs of instability and insecurity.

Ledworth (2005) states that apathy can also be an expression of the powerlessness and resentment of outside control, by forces external to a community. A common theme in the analysis was the overt level of control of the community's economic and social functions by forces outside of the Houston. The lack of local control represents a serious obstacle to the community's socioeconomic development. Without local control, the bottom-up development processes that the community does engage with may not be successful (Wilkinson 1991). In this sense, the apathy towards the community's socioeconomic development may be a symptom of their domination by the forest industry and the lack of local control over their own affairs.

6.4 Implications for the Future

In BC, traditional concepts such as community stability and sustained yield have proven limited in forest-dependent places. New measures are needed that reflect the broader range of political, economic, and social influences on the economic growth and socioeconomic development.

Community capacity and community resilience are two concepts that are better equipped to characterize the ability of forest-dependent communities to face and adapt to change.

Community capacity explores the collective ability of a community to respond to stress and to create and take advantage of new opportunities that meet their developmental needs (Kusel 1996). It can be used to identify the specific attributes of a community that either facilitates or constrains its ability to react to both internal and external change (Nadeau *et al.* 2003). These attributes include the physical, human, and social capitals that are present in the community. The assumption is that the interactions between these attributes determine the ability of the community to face change (Nadeau *et al.* 2003). One reason Houston is underdeveloped, in the socioeconomic sense, is because its capacity for further growth and development is limited. The analysis found that community capacity in Houston is low and in decline as a result of forest-dependence. Two specific attributes of community capacity, namely the stocks of human and social capital, were found to be especially low.

Human capital refers to the skills, experience, education, and abilities of the residents in the community (Kusel 1996). Resource-dependence reduces the development of human capital (Papyrakis and Gerlagh 2006) and is one explanation for a community's continued dependence (Freudenberg and Gramling 1994). In Houston, the community's stock of human capital is especially suited towards the extraction and production of forest-based goods, but not towards other activities that might create additional growth and development. The analysis suggests that the community has a deficit in the supply of knowledge and experience related to many other professions and occupations critical to community development. Not only was this stock of

human capital low, it was also found to be in decline as a result of a decreasing population, lack of outside influences, and the recent loss of many of the community's service professionals.

Most alarming were the low levels of educational attainment present in the community. Peluso *et al.* (1994) state that resource-abundant places under invest in education while Johnson and Stallman (1994) found that opportunities in extractive industries discouraged investment in education. In the case of Houston, there have been successive generations that have gone to work in the forest industry at an early age. This has led to a situation where approximately 30 percent of the adult population does not have a high school diploma and only 32 percent has post-secondary education compared to the BC average of approximately 20 percent and 52 percent, respectively (Table 3.3).

Social capital refers to the ability and willingness of the community members to work together for common goals (Kusel 1996) and is critical in empowering communities to use local resources to meet their own development needs (Nadeau *et al.* 2003). Various indicators of social capital, namely social cohesion, community spirit, and civic engagement were found to be low in Houston. The limited presence of these attributes suggests that Houston does not possess the social networks necessary for the continued social and economic development of the community.

Warren (1978) observed that the internal horizontal networks traditional in small rural places have been overwhelmed by vertical linkages to organizations and institutions external to the community. Since Houston is almost entirely dependent on the outside for its economic and social needs, it can be posited that the lack of social capital in the community is a result of the deterioration of its internal social networks. These networks have been replaced by an increase in linkages not only to industrial and governmental powers external to the community, but also to the retail interests and service providers found in neighbouring communities. Flora (1998) found that these horizontal networks facilitate the inclusion of different groups, values, and ideas while vertical networks reflect the interaction between the community and external organizations and institutions. These two different types of social networks perform different, but complementary, roles in the development of social capital, but the lack of horizontal linkages is affecting the ability of the community to create the internal social networks critical for continued socioeconomic development.

Community resilience is a similar concept to community capacity except that it expresses additional concern about the development and maintenance of a community's adaptability over time (Nadeau *et al.* 2003). Resilience refers to a community's capacity to change behaviour, redefine their economic relationships, and alter their social institutions to maintain their economic viability and minimize social stress (Machlis and Force 1988; Nadeau *et al.* 2003). The research analysis revealed that Houston displayed low levels of certain characteristics and conditions that are indicative of community resilience. This suggests that Houston is not a resilient community capable of adapting to change. Resilient communities are said to be those places with a clear vision of their future desired conditions (Nadeau *et al.* 2003), and again, the analysis found that Houston does not have a vision of its preferred future conditions, nor do they have any development plans in place to help achieve them.

The ability of forest-dependent communities to cope with, and adapt to, change is crucial to their sustainability (Kusel and Doak 1996). This discussion suggests that forest-dependence and the limited socioeconomic development in Houston have decreased both its capacity and resiliency. This, in turn, has affected the community's ability to seize future opportunities and cope with change. This is important, because, as the forest economy continues to change, in response to an ever growing suite of new economic and social conditions, forest-dependent communities such as Houston will need to seize opportunities to cope with the continued loss of forestry related benefits.

6.5 Conclusion

Industrial forestry has been the mainstay of Houston's economy since the community's beginnings. In the past, dependence on industrial forestry created substantial economic benefits, allowing it to grow and prosper. The vehicle for this economic growth was a Fordist production regime controlled by outside firms and supported by a complicit provincial government engaged in province building. This new arrangement changed the fundamental relationship between local industry and the host community. Where once they were co-dependent, now the linkages between them have been reduced to the financial benefits received by place in return for labour supplied to the firm. During Fordist boom times, this model created abundant economic growth and wealth for those involved. Recent global change and industry volatility have now tempered the supposed stability of this model, unleashing an array of change and exposing its economic and social development shortcomings.

The economic model responsible for Houston's growth was implemented at significant costs to the community. Local control over their economic drivers was reduced and the wealth and

resources created by the industry ceased to filter down to the community. The domination of Houston's economy by external forces has resulted in a branch-plant economy and limited local control over the functions necessary to fully develop the community. It created a very limited, and decreasing, set of benefits for Houston. Continued dependence on the extraction and processing of forest staples has truncated the economic growth of Houston.

Houston's overdependence on industrial forestry has blocked other development activities. It created a pro-forestry culture which continues to believe in the sustainability of the local forest industry despite recent economic restructuring and industry decline. This has made the community resistant to change and unwilling to explore development alternatives that do not involve the extraction and processing of resources. These attitudes have made the community-at-large complacent towards further development and apathetic to many of the socioeconomic issues created by the community's addiction to resource related revenues. This culture of complacency and apathy has in turn eroded the development of social networks critical for the continued socioeconomic development of the community.

Houston is underdeveloped because of forest-dependence and may not possess the capacity to engage in meaningful socioeconomic development. The foundation of the community is limited because the perception was, and still is, that the forest industry will continue forever and that future industrial growth will return prosperity to the community. One result is that local cultural and attitudinal beliefs supersede the desire of the community to build the capacity necessary for further socioeconomic development. Thus, Houston is not a community that is prepared for

future and does not yet possess the capacity that will allow it to remain resilient and flourish in an era of widespread economic and social change.

CHAPTER 7: CONCLUSIONS

7.1 Thesis Summary

I opened this research with a desire to understand the relationship between the forest economy and the growth and development of forest-dependent places. More specifically, I was interested in the apparent contradiction between the economic wealth generated by BC's resource abundance and the lack of resource-related prosperity in the communities most dependent upon forestry for their economic and social well-being. The research question that emerged from this interest was: *"How has forest-dependence affected the economic growth and socioeconomic development of Houston, BC"*?

To answer this two part question, I conducted a mixed-methods case study of, arguably, the most forest-dependent community in BC. I found that although forest-dependence initially created substantial economic growth for Houston, the conditions inherent in the economic model used to create this growth, soon resulted in instability, uncertainty, and truncated economic growth. In regards to the second part of the research question, I found that Houston's socioeconomic development has been limited and that the model of forest-dependence played a role in this limitation. This is largely because the town is overdeveloped in terms of the structures and processes related to forest extraction and processing, and underdeveloped in terms of the characteristics necessary for successful socioeconomic development.

This research also found that long-term forest-dependence in Houston has resulted in a number of barriers to the continued economic growth and socioeconomic development of the community. Chief among these barriers is the lack of local control over the resources and

functions necessary for continued growth and development. A number of other internal barriers also exist within Houston, including cultural and attitudinal attributes that have limited proactive efforts in the community.

7.2 Research Implications

One research implication is that governments have a large role to play in the development of healthy and prosperous communities. Federal and provincial governments have many policy channels and instruments through which they can encourage the growth and development of underdeveloped communities. In the past, such efforts in Houston have been uncoordinated and focused primarily on the maintenance of employment levels and the flow of timber resources. More recently, government services and programs have been withdrawn from Houston in favour of regional governance structures. New government policy approaches are needed to change existing political and economic structures and their implications for Houston.

The provincial government currently views Houston as a place that does not have many pressing economic or social issues. This view exists largely because Houston is seen as a community that has a successful forest industry that provides good employment and high wages. Although this may be true relative to other communities in the region, the reality is that Houston is increasingly vulnerable to forest industry-induced instability and uncertainty.

This research represents a broad overview of the long-term consequences of forest-dependence for Houston. Forest-dependent places are undergoing rapid change and as such, continued and regular evaluations of the effects of change are required. A recommended next step for Houston is an assessment of the community's capacity, with a particular focus on its assets and liabilities. Identifying these features would enable governments to identify developmental deficiencies and plan actions/initiatives to overcome them. The concepts of community capacity and resilience may be very useful in ascertaining these strengths and weaknesses; permitting policy makers, industry managers, and most importantly, the communities themselves to single out and address barriers that reduce their capacity for development and ability to adapt to change.

Dependency has created a broad range of growth and development issues for Houston. Some of these are overwhelming and require the active involvement of government agencies and other partners. One particular issue regards the lack of local control over the resources vital for continued economic growth and socioeconomic development. This issue is critical to counter the perceived mismanagement of resources by government and the steady reduction in local benefits being drawn from the surrounding resource endowment. Houston needs to be more proactive in this regard, through active lobbying of government resource management agencies, for increased access to, and control over, local resources.

The provincial government also needs to be more proactive through the creation of alternative resource tenure arrangements that return control of the region's resources to places like Houston. The creation of new resource tenures, such as the Houston's new community forest, is one example of a local and provincial government partnership that has enhanced local control and opportunities. Unfortunately, both the structure and the size of this new tenure limit the benefits for the host community. Any future resource tenure arrangements should be thoroughly examined before implementation, to ensure that the benefits derived from them accrue not only to the forest industry and provincial government, but also to the host community.

Many people in the community related how the provincial government has been happy to take local resources out, but not put any back into Houston. In particular, the unequal exchange of resource-related revenues is a concern. On average, the provincial government has received \$31.5 million per year, in stumpage revenue from the Morice Timber Supply Area, since 1979 (BCMoFR 2009b). In return, Houston has experienced the steady withdrawal of provincial government services and support, to the point where the community now lacks the essential services necessary to both hold and attract new businesses and residents. The creation of a local endowment, funded by a small royalty from the harvest and production of local forest-based products, would increase the resources available to the community for activities such as economic development and diversification.

It is well recognized that in order for a community to remain an attractive place to live and work, it must possess an array of services and amenities, with a particular focus on health and education. Houston is recognized as a community that does not possess good provincial government supported services. In particular, the absence of 'around-the-clock' healthcare and the lack of medical and health-related professionals in the community were found to be a barrier to both its economic growth and socioeconomic development. Besides the social implications, there are also implications for further economic investment in the community. This is especially the case in light of the fact that both of its neighbours, Smithers and Burns Lake, are argued to possess better services. As a result, Houston is often passed over by potential new businesses and residents who seek a more comprehensive and developed array of support services.

Houston requires active and consistent investment by the provincial government if it is to become a full-fledged community that is not dependent on outside for services and amenities. The recent \$3 million contribution for the Houston Leisure Centre (BCMoSBED 2005) and the \$2.8 million contribution for six new residential care beds in Houston (BCMoH 2010) are commendable, but they are also long overdue. Houston needs a host of social services, such as women's, mental health, child and youth, drug and alcohol, literacy, and counselling services to assist with the long-term social impacts of forest-dependency. Currently, these services are fragmented between a variety of local and out-of-town service providers that are critically underfunded and understaffed. One recommendation to the provincial government is to assist in the creation of an integrated health and social service centre for the community. This centre should have the funding and professional staff necessary for consistent and continued service.

The development of human capital in Houston should be a priority for all levels of government. At present, Houston is a community from which most of its younger population either foregoes continued education in favour of resource-based employment or leaves the community for education, training, and other opportunities. The community has also been unable to attract and hold a wide variety of professional people to meet its needs. New methods are required to increase the development of human capital in the community; in which the provincial government has a large role to play. For example, increased financial support for adult literacy programs such as "Houston Link to Learning" and post-secondary education and training at the local campus of Northwest Community College would increase the availability of local learning access and opportunities. Detailed assessments of the effects of government service withdrawal on the community could also be undertaken, with a focus not just on fiscal considerations, but also on their social ramifications. The recent loss of the BC Ministry of Forests District office had large impacts for Houston's human capital. Not only did the community lose the professional staff associated with supporting the community's main economic driver, they also lost recognized community leaders, volunteers, organizers, and activists.

The organization of Houston's forest economy is largely a partnership between industry and government. Due to new global influences and government policies, the forest industry has become increasingly mobile and less bound by formal requirements to be responsible for Houston's well-being. In the past, successive forest industry firms had taken a paternalistic interest in Houston's growth and development. Their legacy has contributed to local deficiencies in educational attainment, community involvement, volunteerism, entrepreneurship, and leadership. Since the forest industry continues to impact the growth and development of Houston, new industry-community relationships are needed that incorporate more socially progressive policies.

There are a number of research implications for the community of Houston. One implication is that Houston is vulnerable to change because it does not yet possess the capacity and resilience necessary to cope with sustained economic and social change. Given the continued withdrawal of government services and industry support, Houston must learn to take responsibility for its own well-being. To accomplish this, the community needs to overcome internal barriers. For example, a culture of complacency has serious consequences for the community's growth and development. A more proactive attitude, and an increased willingness to work together towards

common goals, is crucial. New attitudes that are open, aware, and better informed will go a long way in countering the community's 'addiction' to resource-related economic growth.

7.3 Future Research Questions

This thesis presents a broad analysis and understanding of the economic structures and socioeconomic processes in Houston. Its findings reveal a complex and nuanced web of interrelationships between the study community and the various formal institutions and organizations involved in its social and economic processes. The time required to fully understand the consequences of almost a century of forest-dependence on these relationships, is beyond the scope of this masters project. But this thesis has raised many practical questions that could be considered in future research efforts. The following considerations are recommended as future research endeavors.

Despite BC's dependence on industrial forestry, there exists little research regarding the relationship between forestry-dependence and the socioeconomic development of forest-dependent communities. No research in Canada has used continuous measures of dependency which permit analyzing its effects across a full range of socioeconomic conditions. Some studies have quantified forest-dependence using economic measure while others have evaluated the effects of different resource industries and sectors on dependent places. Comparative studies between similar communities with similar dependency issues are necessary to further explore the consequences of forest-dependence. This is especially urgent in places that are increasingly vulnerable to the effects of economic and social change.
One limitation of this thesis was its inability to draw out the contributions of other industries such as mining, agriculture, and tourism on the economic growth of Houston. For example, it is difficult to segregate employment attributable to the mining sector because statistical data is often lumped together with that of agriculture and other resource-based industries. Similarly, tourism related employment data is obscured by its division among a number of common occupation and industry categories such as retail trade and other service industries. A future research endeavor might quantify the contributions of these other industries on the economic growth of Houston.

It was also difficult to evaluate the contribution of other social aspects, such as culture, ethnicity, or religious beliefs, on the socioeconomic development of Houston. This thesis focused on the contributions of forest-dependence to Houston's socioeconomic development, but as the research progressed, the contributions of these other factors became more apparent and more difficult to evaluate. Future research could be used to determine the impacts of other societal and cultural factors on Houston's socioeconomic development.

It is widely recognized that economic diversification is critical to better prepare and enable dependent communities to deal with the effects of economic restructuring, downturns, and instability. While most communities realize this, many are heavily vested in traditional resource sectors which tend to limit their visions of an alternate future. As such, economic diversification strategies in these places are often limited to attracting industries and businesses that increase or support traditional commodity production. All levels of government have a responsibility in encouraging the growth of new economic opportunities, but the host community has a large role

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to play through the creation of an open and welcoming atmosphere conducive to the needs of industry, business, and residents alike. Unfortunately past efforts in Houston have been unfocused, uncoordinated, and implemented in a piecemeal manner. A future research task, therefore, involves discovering the elements of and creating a process that assists forestdependent places to develop economic development strategies that utilize a concerted and targeted approach to attract complementary economic activities.

One of the reasons why Houston has low community capacity and resilience relates to pressures on social and human capital in the community. For example, Houston needs increased levels of leadership, management, and entrepreneurial capacity to facilitate its movement towards growing economic sectors. In turn, the community requires additional education and skills training to increase its human capital and, therefore, its ability to capture new opportunities. A future research task might determine how forest-dependent communities can better develop the increase secondary, post-secondary, and continuing education opportunities.

In regards to the development of social capital; future research may be necessary to create a suite of tools the residents of dependent places could use to understand and create social capital in their communities. In Houston, community leaders need to engage, be inclusive of, and consider a wider range of community members and their needs. In turn, community members must learn to create the community interaction, cohesion, and trust necessary for successful social networks. This might require active investment by all parties in new social infrastructure conducive to community involvement. Government and industry also need to be more cognizant of the ways

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they can encourage and support the development of social capital in forest-dependent communities.

7.4 Conclusion

This thesis has argued that forest-dependence has limited Houston's economic growth and socioeconomic development. In the past, the town was developed using a Fordist, branch-plant economic model that emphasized staples production. This model initially created substantial economic growth for Houston, but since that time, the community has experienced instability, uncertainty, and a decreasing range of economic and social benefits. Today, a continued assumption is that socioeconomic development will flow from the economic benefits created by the local forest economy. Unfortunately, adherence to an outdated economic model has failed to produce the economic benefits of the past and has not supported the socioeconomic development necessary to sustain the community in the future. This economic model has allowed for continued industrial success, but continued adherence to this model has limited both the economic growth and the socioeconomic development of the host community.

These consequences have developed over time and represent a complex web of interrelationships that will take time to understand and overcome. To move Houston beyond powerlessness and dependency, gradual and continual effort will be required by a variety of governments, resource agencies, industries, and a more aware and engaged community. The goal should be a more diversified economy and balanced state of development. Given the increasing pace of globalization and resource depletion, and Houston's apparent vulnerability to future economic, environmental, and social change, new development options are urgently needed before Houston's capacity and resilience is drawn down further.

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Appendix 1: Chronology for Houston, British Columbia, 1865-2008*

- 1865 Early settlers arrive to work on the Collins Overland Telegraph Line.
- 1899 The Telegraph Trail and Line are reconstructed.
- 1903 First settlers remain in valley for agriculture and railway building activities.
- 1920 Pleasant Valley renamed Houston after newspaper editor John Houston.
- 1913 Northwest Coast Land Company advertises farm land for sale in area.
- 1914 Houston is listed in the BC Directory as having a population of 150 people.
- 1916 The first log school is built. Large bodies of silver-lead ore are discovered on Sweeney Mountain.
- 1918 The Interior News runs an advertisement calling for loggers to work in Houston's growing tie cutting industry.
- 1919 The Houston Community Club begins as The Houston Club.
- 1920 Work begins on new railway station after the previous one was destroyed by fire. Owen Lake mine is opened.
- 1927 Railway ties are first creosoted in the area affecting seasonal nature of work.
- 1930 Demand for railway ties and prices drop dramatically.
- 1931 A new school is built in Houston.
- 1933 The Great Depression ends.
- 1938 The first group of Dutch settlers arrive in the valley.
- 1939 Two sawmills (Hagman's and Lubber's) are in operation in Houston.
- 1942 Bellicini's new planing mill arrives in Houston.
- 1946 Houston Women's Institute established to improve health care in Houston.
- 1947 Buck River Lumber Company builds stationary mill on Wilkinson Farm site with two Swedish gang saws.
- 1948 Bellicini builds second planer mill.
- 1949 Community hall meeting is held to discuss power opportunity for Houston. Houston Coop is formed. The Women's Institute builds Institute Hall for community use and to house medical staff. Houston school burns.

Electricity arrives in Houston.

- 1952 Addition to the school is built. The Hagman Bros. sell planing mill to Broderick Anderson Company.
- 1954 Forest Service begins construction of Morice River Road.
- 1957 Houston incorporated as a village and gets telephone service.Work on new community hall gets started.Two doctors a week visit Houston.Buck Flats road is constructed to access timber in Parrot and Sam Goosly Lakes area.
- 1958 Houston area has approximately 84 small tie mills in operation.
- 1960 One hundred and sixty six telephones are in operation in Houston.
- 1961 Houston PTA presses for low voltage relay station in Houston.
 Houston gets full-time Royal Bank branch and street building program begins.
 Houston Chamber of Commerce starts up.
 Surfacing of Highway #16 between Smithers and Houston is completed.
- 1962 The new Christian School opens. The Houston Rod and Gun Club is reactivated after a period of inactivity.

The Buck River floods and damages town.

- 1963 Bulkley Valley Pulp and Timber is formed by local lumbermen.
- 1965 Bathhurst and Bowaters acquire control of Bulkley Valley Pulp and Timber and with partners they buy 13 sawmilling outfits in the area to form Bulkley Valley Forest Industries.

The Houston and District Association for Retarded Children is formed.

The Houston Chamber of Commerce raises \$2,000 for TV repeater station.

- 1966 The Broderick Anderson Company sells planer mill to Harry Hagman of the Buck River Lumber Company.
- 1967 A Royal Canadian Mounted Police detachment is stationed in Houston. Buck River floods town and highway.
- 1968 Tree planting begins at Goosly Lake using local labour and transportation. Buck River Lumber sawmill destroyed by fire.
- 1969 Houston skating arena opened and first ambulance arrives.

Buck River Lumber sawmill is rebuilt in 38 days.

Construction begins on new totally enclosed Bulkley Valley Forest Industries sawmill. The newspaper "Houston Today" opens in town with bimonthly issues.

Houston Ecumenical Church Committee discusses use of church facilities for community purposes to cope with the development of an instant town as a result of BVFI opening a new forest industry complex and expected population increase.

Houston becomes a District and expands town area to include sawmills. Town site coordinator, Fred Battison, hired to plan and develop town site.

Highway #16 overpass to the sawmill constructed

A trailer village is built by the Ambassador Corporation on Butler Ave. which becomes the Baggerman Trailer Court. Ground is broken for the 163 residential unit Mountain View Park.

Planning begins for BVFI pulpmill to be constructed by 1973 along with a plywood plant and stud mill.

Temporary construction worker camp gets go ahead from town council.

Houston library gets \$3,000 from the District of Houston.

The new fire hall is opened and construction on a sewer system begins. The Idlywild Motel opens.

1970 The Houston Hotel and Dining room opens.

A ground breaking ceremony for the Houston Shopping Centre takes place.

The Houston Hospital Society is formed and Houston gets natural gas pipeline service. Buck River Lumber closes operations.

The BVFI sawmill is officially opened and the first logs are milled.

The BVFI mill gets new on site doctor Dr. William Warwick.

A moratorium on new pulp mill tenures by Ray Williston is instituted.

Houston gets a second resident doctor.

Smithers citizens group SPEC raises opposition to possible Houston pulp mill. Houston gets a Finning franchise.

1971 The new Houston Diagnostic and Treatment Health Centre is opened. The town builds an industrial park on old mill site of Buck River Lumber.

A new indoor ice arena is built.

- 1972 Northwood buys Bowater Bathurst share of BVFI and begins to make mill viable by running it 'lean and mean'. Ninety local employees are laid off.
- 1975 Construction begins on Houston curling rink.

Pickets go up at Northwood sawmill by the Canadian Paperworkers Union from Prince George for one day.

The BC Forest Service spends a disputed \$1 million on a chipping facility in Barrett to control a pine beetle infestation around Houston.

Eurocan surveys Houston site for pulpmill complex but Northwood won't sell land for the proposed mill fearing competition for scarce labour resources in Houston.

Tom Euverman runs for council and Socred Jack Kempf wins election as the MLA in Omineca-Bulkley riding.

The Pleasant Valley Ski Hill opens.

Sex warfare is first used to combat bark beetle epidemic in the area.

1976 Canada Manpower reopens Houston office.

Eurocan continues to contemplate a pulp mill in Houston area

Finnish forest products company Kymmene acquires controlling share of Eurocan. Noranda's Granisle mine goes on strike.

Eurocan-Weldwood talk about the possibility for a new sawmill in Houston.

Houston housing units reach 100% occupancy rate

Plans are announced to build a new sawmill (Houston Forest Products) and a new mine (Equity Silver Mine). The community divided over where to build new sawmill. A public meeting brings out 350 residents to meet with the BC Land Commission. Northwood sells land to make room for HFP mill farther out of town. Houston council rezones the Lieuwin farm out of the agricultural land reserve for the new sawmill. Houston is projected to be the largest town between Prince George and Terrace.

A new Legion building is constructed in Houston.

- 1977 Houston Council meets for the first time in the new District office.
- 1978 Houston Forest Products is opened.
- 1979 Cottonwood Manor is built by the Houston Lions Association on land donated by the District.

Community planners oppose mine route from Equity Silver Mine through town. Labour unrest at Placer's Endako mine halts the construction of Equity Silver Mine. Burns Lake competes with Houston for access road to Equity Mine to capture service provision for workers.

Houston residents block rezoning for apartment unit complex.

Houston school trustees block pool project for Smithers by refusing to pay \$20,000 share of cost.

Houston Council moves to include Equity Silver mine in the District land base to capture tax revenue.

Improvements totaling \$600,000 to Houston water and sewer are proposed.

Northwood pays \$448,763 and Houston Forest Products pay \$350,906 in annual taxes.

- 1980 Mining begins at Equity Silver Mine.
- 1981 Northwood sells Houston apartment buildings to Prince George businessman. The District of Houston begins a new 50 to 75 unit subdivision division called Lot 333. Houston takes advantage of provincial downtown revitalization program to upgrade the downtown area.

A new health care facility is approved for Houston.

Northwood Company sells downtown parkland and ball diamond to the District of Houston

Expansion plans for the Houston library are shelved.

Northwood Company employees vote to strike.

Volunteers construct Houston airport.

Spruce bark beetle infestation reach epidemic proportions in Houston area.

Northwood cuts work week and shifts at Houston mill but expands Prince George operations.

The new Houston Health Care Service Society meets for the first time.

Northwood Company build wood kilns in Houston for \$1.6 million.

Public meeting takes places concerning new zoning bylaws.

Inaugural meeting for the Houston Swimming Pool Society takes place.

The Houston Snowmobile Association builds a cabin at 21 km. on Equity Silver Mine Rd.

1982 The new Houston court house is used for the first time.

One piece rails are installed on the CN rail line through northern BC.

Houston Community Services begins as Houston Link to People.

1983 The new Houston Health Centre and the Highway Infocentre are opened.

The Swiss Fire takes place south of Houston.

The District of Houston debates a \$65,000 computer system purchase.

The Houston Museum opens.

Houston is proclaimed to be the fastest growing town in BC.

Equity Silver Mine is fined \$12,000 for polluting Buck Creek.

Water main extensions and other upgrades are planned for Houston.

The new \$1.3 million Houston Health Centre is opened.

Houston continues to pursue the inclusion of Equity Silver Mine in the District of Houston. Northwood Company employees vote in favour of strike action.

A \$337,000 recreation complex, including pool, racquetball courts, and weight training area is contemplated for Houston.

1985 An Economic Development Committee is set up in Houston to promote Houston.

Northwood completes a \$22 million sawmill upgrade.

BC Hydro cuts back Houston service and centralizes operations in Smithers.

Houston is declared a "nuclear free zone".

Equity Silver Mine earnings slump making operation marginally unprofitable.

Property tax rates for Houston sawmills decrease while residential property taxes increase. 120 Northwood workers are laid off due to technological upgrades as part of \$22 million mill expansion and automation program.

The RCMP open new facility in Houston.

The town sewage lagoon spills into the Bulkley River.

Drug and alcohol counseling is made available to Houston residents.

Town development "Lot 333" depreciates in bad economic climate and incurs financial losses.

The Maclaren Forest Products Mine reopens.

A new swimming pool is proposed for Houston funded by the Expo '86 legacy fund. Construction on the new seniors activity centre begins. 1987 The Houston Nordic Ski Club pursues provincial grant money to develop ski trails and cabin.

The Guru Nanak Sikh Temple is built only to be moved and reopened in 1990.

The road to Equity Mine burdens taxpayers with increased maintenance and upgrading costs.

Sunday shopping bylaw rescinded and Houston returns to provincial shopping regulations. Ambulance dispatch services are centralized to Kamloops.

BC Forestry Association gives public presentation about the "fall-down" effect.

MSMA is used to kill beetles and infested trees.

BillVanderzalm's Social Credit government privatizes crown corporations such as the Department of Highways.

Tom Euverman is elected mayor of Houston.

- 1988 The Houston Nordic Ski Club opens ski trails on Morice Mountain.
- 1989 The province gives \$100,000 grant to Houston in lieu of taxes from Equity Silver Mine. Houston swimming pool remains a long-range project.

The District of Houston hires a full-time economic development officer and a manager for the Chamber of Commerce.

Houston gets \$25,000 from province for an economic development committee.

Equity Silver Mine lays off workers.

Million dollar CN grain car collision takes place in Houston.

1990 Work begins on Steelhead Park.

A summer only swimming pool opens next to the ice arena.

Learning, the Morice Community Skills Centre and the Houston Storefront School.

Houston is the forestry capital of BC.

The Bank of Montreal closes in Houston.

Houston receives \$96,000 to fund a business development program.

Wood residue power generation is discussed in Houston.

Houston votes against toll-free calling to Smithers.

Houston Link to People changes its name to Houston Community Services Association.

An outside swimming pool is approved and built in Houston.

A Vancouver investor pays \$2.2 million for 260 apartment units in Houston.

1991 The first service in the new Christian Reformed Church takes place.

The Houston Volunteer Fire Department gets a new \$200,000 fire truck.

Houston's Economic Development Office gets \$46,858 in provincial funding.

The Houston Health Centre reduces its operating hours from 8:30am to 4:30pm.

Houston is deteriorating according to the District's infrastructure report.

Work begins on a sewage treatment plant for Houston.

Houston's outdoor pool violates Ministry of Health regulations and needs \$119,000 in upgrades.

Answering service ends dispute over after hour's health care.

A study looks at Houston's economy without the Equity Silver Mine.

The District of Houston sinks another \$100,000 into the backyard swimming pool.

Cullen Detroit Diesel Allison closes doors in Houston.

Houston loses significant health care dollars.

The Softwood Lumber Deal is cancelled by the federal government in Canada.

The steelhead sculpture is installed in Steelhead Park.

A 4 day strike at Houston Forest Products by IWA members takes place. Equity Silver Mines posts a \$37.5 million bond to cover long-term acid mine drainage treatment and mine site reclamation.

1992 A new mine is first investigated at Huckleberry Mountain by New Canamin Resources. Equity Silver Mine and the proposed Windy Crag Mine talk about a possible refining facility in the Houston area.

1993 A third mayoral term begins for Tom Euverman. Houston grades lumber specifically for the Japanese market for the first time. Lumber prices set a new record at \$450 per thousand board feet. Extended weekend hours are proposed for Houston Health Centre. Houston has trouble collecting a grant of \$100,000 from the BC provincial government in lieu of taxes from the Equity Silver Mine for the first time in 15 years. Homestake kills Houston plan to build a milling facility in Houston. The Houston Health Centre receives \$30,000 to develop a master expansion plan. The Houston Interagency Group is formed to coordinate other agencies and services in Houston. Its goals include new services for women and youth. The manager of Equity Silver Mine, Brian Robertson, leaves town. 1994 Pleasant Valley Remanufacturing begins operations in Houston. Northwest Community College's new Houston campus opens. Houston District receives \$45,000 community project grant to be used to develop Steelhead Park and walking trails. The Equity Silver Mine closes after mining \$1 billion worth of ore. 1995 Northwood marks 25 years of operation in Houston. The new Learning Centre opens housing Northwest Community College, Houston Link The Salvation Army opens a thrift store in Houston. Northwood installs a whole log chipping plant in its Houston sawmill. A path is built to connect the Senior's Centre to the Houston Mall. Softwood lumber prices drop to a record low of \$170 US per 1000 board feet. Facilities at the Equity Silver Mine are dismantled. The Learning Centre officially opens. The Bulkley Valley Credit Union opens new Houston offices. The new Houston Christian School is constructed. 1996 Human Resources Development Canada Houston office is closed. 1997 The closure of the Houston courthouse is announced. Kyahwood opens Moricetown finger-joint plant in partnership with Northwood. A new Mountain Pine Beetle epidemic is observed in Tweedsmuir Park. Northern Mountain Helicopters shuts down Houston base. The BC provincial government postpones decision to close Houston courthouse after protest by Houston council and residents. The Huckleberry Mine is opened by Premier Glen Clark with an expected 16 year life span. The Bulkley River floods Houston. 1998 Northwood supports 400 direct and 500 indirect jobs in the production of 380 mmbf/yr of structural lumber.

Houston loses control of health care to the Bulkley Valley Health Council.

The first service in the new Canadian Reformed Church takes place.

- 1999 Forest Renewal BC sponsors the Community Investment Tool to discover how community copes with economic development and change.
 A new shopping mall is proposed for Houston.
 Houston applies to include Huckleberry Mine inside its town boundaries.
 Increasing tourism activity in Houston becomes a priority.
 Canadian Forest Products purchases Northwood.
 Pleasant Valley Remanufacturing expands operations.
 The Houston Farmers Institute is split into the Topley and Houston 4-H Clubs and the Seniors Activity Centre after 70 years as a local organization.
- 2002 Houston loses its Ministry of Forests District office.
- 2005 A new leisure centre with a swimming pool is opened after 33 years of debate.
- 2008 Controversial geothermal heating project gets underway in Houston. Houston receives funding for 6 additional care beds at the health centre.

Compiled, with permission, from the *Houston Today* newspaper archives located at 3232 Hwy. #16, Houston, BC, *Marks on the Forest Floor: A Story of Houston, BC* by Elnora Smith (1971), and *Marks of a Century: A History of Houston, BC* by Grace Hols (1999).

Appendix II: Community Groups and Other Organizations in Houston*

Community Groups

H.O.P.E. Healthy Options for People and the Earth
Houston Cares
Houston Connects
Houston Friendship Center
Houston Hospice Society
Houston Library Association
Houston Link to Learning
Houston Pro-Life Society
Houston Youth Drop-in Centre
Houston Youth Support Program
Northern Society for Domestic Peace
Steelhead Multicultural Society

Educational Organizations

Houston Public Library Houston Secondary School Northwest Community College

Economic Development Organizations

Community Futures Development Corporation Nadina Downtown Business Association Houston & District Chamber of Commerce

Health Organizations

Houston Health Centre Houston Health Committee

Service Clubs

BC Lions Society Senior Citizens Association Elks Association Lodge Royal Canadian Legion

Sports Groups Bulkley Valley Soccer Society Dart Club

Houston Aquatic Club Houston BV Otters Swim Club Houston Minor Hockey Association Houston Minor Softball Houston Motorsports Association Houston Oldtimers Hockey League Houston Snowmobile Club Houston TaeKwondo Club Houston & District Curling Club Houston Figure Skating Club Houston Minor Hockey Houston Minor Softball Houston Pool Development Society Houston Ringette Association Houston Slo-Pitch Mixed Houston Snowmobile Club Luckies Hockey Team Morice Mountain Nordic Ski Club Pleasant Valley Horse Club Senior Exercise Club

Religious Groups

Anglican Church of St. Clements Guru Nanak Sihk Temple Houston Canadian Reformed Church Houston Christian Reformed Church Houston Fellowship Baptist Church Houston Pentecostal Church Houston United Church Jehovah's Witnesses New Beginning Christian Center St. Anthony's Catholic Church The Salvation Army Topley Victory Church

Other Organizations

Alcoholics Anonymous Canadian Cancer Society Heart & Stroke Foundation Royal Canadian Army Cadet Corp

*Compiled from the *Houston Today* newspaper archives located at 3232 Hwy. #16, Houston, BC, the District of Houston website located at www.houston.ca, and the Houston Chamber of Commerce website at www.houstonchamber.ca

Appendix III: Content Analysis Latent Codes

I. FORESTRY-DEPENDENCE

<u>Development</u>

- 1. Mill/mine planning of town company instigating and implementing planning and construction of facilities and housing.
- 2. **Company town** refers to Houston's brush with becoming a company town and evidence that it is really nothing more than a support/service centre for the company.
- 3. **Single industry dependence** refers to both direct and indirect dependence on a single economic engine.
- 4. **Boom and bust mentality** –creates the expectation where good times around the next bend and everything will get back to 'normal'.
- 5. Unequal exchange refers to the disparity between the revenue going out to the core versus what comes back to the periphery (C-P).
- 6. **Community stability** a huge focus where somehow commodity production has the ability to create stable employment and incomes to support the town. This is mostly viewed as the product of big business and the ultra-efficiency that comes with it by both the province and the town.
- 7. **Town identity -** lack of identity as anything but a forestry town which creates a limited frame of reference which limits the development of other activities.
- 8. **Industry connectedness** very little actual industry connectedness to the community and their needs. Industry is connected to the outside world but not the local one.

<u>Control</u>

- 9. **Industry control** permeates everything in the town. Refers to control by the forest industry of timber, access, production, spin-offs, transportation, expertise etc. that is increasingly being consolidated by the two large forest corporations in the community. Also refers to industry control of town affairs involving land and infrastructure development.
- 10. **External control** the domination of local interests by corporate concerns that are located outside the community, province, and country.
- 11. Lack of local control complete lack of control over the economic drivers in the area leads to powerlessness which impedes development.

<u>Culture</u>

12. **Mill culture** – the dominant culture in Houston that generally surrounds large groups of workers in resource intensive jobs. Creates and fosters some of the attitudes that are present towards development and growth.

- 13. Good times refers to the past 40 years of relatively good times the community has experienced that has created the apathy & complacency towards community development as it is believed everything is going to be ok for some time yet.
- 14. Good incomes the forest industry is essentially good because the incomes from it are steady and above average.
- 15. Apathy & Complacency the lack of impetus, motivation, and perceived need to explore economic alternatives.

Opportunity

- 16. Lack of opportunity (employment) especially for women. But more a general lack other opportunities in town leading to acceptance of the current model or migration to another place.
- 17. **Tenure issues** wood locked up by the majors so lack of opportunity for smaller operators. Extends control of industry by big mills and limits opportunities for other enterprises.

<u>Work</u>

- 18. Skilled labour shortage trade people and their propensity to follow the work. There is a shortage of skilled trades people at the mills and employers are using a variety of tactics to encourage them to stay in Houston.
- 19. Here for the work refers to the motivation for existence in Houston and the apathy that exists towards the affairs of the community. Also refers to the transient nature of the town.
- 20. **Transient work force** effects on the town due to a transient and seasonal group of forestry workers.
- 21. Worker morale refers to low work satisfaction as wage earners and may be a 1st step along with disillusionment about the decline of forestry.

Recent Change

- 22. **Restructuring and consolidation** how global conditions are affecting local industry structure. Examples include the reduction in the number of local contractors and the consolidation of work in the hands of fewer and fewer local employers.
- 23. **Technology vs. labour** the steady erosion of employment through the substitution of technology and mechanization in the ongoing effort to increase efficiency and lower production costs.
- 24. **Cost-price squeeze** how global conditions concerning commodity prices, rising production costs, and increasing market competition have affected the viability of local industry and eroded the local benefits that are produced.
- 25. Economic downturn the affects of the recent economic downturn on production, employment, wages, spin-offs etc.

- 26. **Income disparity** Concentration of wealth in fewer hands with reduced trickle down is growing the disparity between those who have financial resources and the growing proportion of residents who do not.
- 27. Erosion of benefits cost cutting due to reduced industry profitability has led to the slow reduction of forestry related benefits in the form of layoffs, reduced shifts, extended holidays, more temporary and seasonal work as per economic shifts, reduction of local purchasing and service supply etc. While industry moves to cut costs the burden is generally offloaded to the community.
- 28. **Concessions** by industry on town tax, worker wage, supplier pricing to reduce cost structure in marginal economic times in exchange for continuity of economic benefits. Indication of maturity to decline stage in the resource cycle.
- 29. Uncertainty a code to capture the growing uncertainty about the ability of the forest industry to sustain itself and related benefits for the Houston. Uncertainty in this case translates into wallet tightening, financial stress, and hardship for affected businesses and families.
- 30. **Instability** growing realization and concern over the instability of the industry and its effects on the town. Ie. Stress, hardship, lack of personal investment etc.
- 31. **MPB** generic code for the effects of the MPB epidemic on the forest industry and local communities.

<u>Attitude</u>

- 32. Last mill standing the wide spread belief that Houston is okay because it has the lowestcost highest production sawmill that will still be operating when all the others have shutdown.
- 33. **Renewed faith** investment in physical infrastructure at the sawmills seems to renew the faith in the local forest industry and add stability to the community.
- 34. **Perception that efficiency equals stability** rhetoric where continued investment, costcutting, mill upgrades etc. will increase the sustainability of the local forest industry and result in continued employment and benefits for the community.
- 35. **Timber supply** –belief that there is enough timber in the TSA to support the local forest economy and associated benefits in perpetuity.
- 36. **Big is better** belief that only the big forest corporations are able to provide for the employment and benefit needs of the town.
- 37. **Resource addiction** addiction to resource development as the be all and end all. This is what we know so this is what we should do.

<u>Social</u>

38. **Company community relations** – a code to cover off the apparent lack of any industry support for local charities and other organizations. Some contradiction here but the general

perception is that they are benevolent in good times, but not in bad times that are presently impacting the community.

- 39. Marginalization of poor the growing hardship experienced by that population segment that does not have secure employment.
- 40. **Negative social effects** a category to code the more extreme effects of dependence such as the ebb and flow of domestic violence, youth unrest, seniors needs, divorce, crime and other social problems that takes place in response to mill layoffs, industry uncertainty, and other related economic stress.

<u>Other</u>

- 41. **Community resiliency** ability of the community to survive post forest industry. Am coding the frequently stated belief that Houston would not be around without it.
- 42. Community vulnerability increasing because of the times and its single industry dependence.

II. GOVERNMENT

<u>Dependence</u>

- 43. **Dependence on government services and funding** a large theme where all economic and social services are completely dependent on the government. Has fostered the attitude where nothing can be done without government support and the belief it is the responsibility of government to take care of all service needs.
- 44. **Role as a revenue generator** the view that Houston is nothing but a revenue generator for outside interests (particularly the province). This has fostered resentment in the community and an active resistance to development instigated from the outside.

Lack of Essential Services

- 45. **Essential services** refers to the lack of and poor quality of healthcare and other essential services that seem to be a standard for most other northern communities.
- 46. **Healthcare** the lack of adequate healthcare as viewed by the community, the long fight for better healthcare, and nickel and dime approach to healthcare by the government, and the perception that healthcare is a vital cornerstone that the community will not survive without.

Service Loss

- 47. Effects of government service loss increased hardship, the further marginalization of the poor, loss of economic drivers, loss of professionals etc. that have resulted from the withdrawal of provincial and federal services that used to be located in the community.
- 48. Service offloading by governments to those less capable at regional or local organizations.
- 49. **Smithers/Burns Lake footnote** a large theme to capture the growing dependence on neighboring communities that are favored for government services. Reliance on these outside services increases economic leakage from the community.

Obstacles created by Current Service Provision Model

- 50. **Regional vs. local service model** government trend towards regionalization of services and the effects upon the local from this trend.
- 51. Gov't red tape barrier to development, slow action inhibits investment.
- 52. Core vs. project based funding funding models created by governments where project funding is short-term, requires constant applications annually, and is generally to unstable to get any real work done. Core funding is longer term, more stable and better to build programming that meets the community's needs.
- 53. Government funding models the hardship posed by government requirements to quantitatively prove need before the receipt of program funding.
- 54. **Continuity in government** Short-term political systems that don't allow for foresight and long-term policies.
- 55. **Intercommunity competition** the competition between neighboring and other regional communities for government and corporate resources, funding, or investment.

III. CAPACITY

- 56. **Community capacity** huge issue involving the lack of expertise and knowledge to move forward. A definite obstacle to development. Capacity has been eroded by single industry focus, loss of services and professionals, and lack of educational incentives etc.
- 57. **Dependence on the Outside** a catch-all theme portrays the community's dependence on the outside for everything including knowledge, expertise, money, investment. Related to capacity

Social Capital

- 58. **Community cohesiveness** obvious fragmentation among different community groups, lack of ability to work together, and general divisiveness created by differing priorities, values, and issues. Result is a 'silo effect' where people stay in their group and don't interact with others.
- 59. **Community involvement** lack of involvement in community affairs which affects the support needed to create a mandate to focus on change.
- 60. **Inclusivity** a code to capture the complete lack of effort to include the residents of Houston in the management of District affairs.
- 61. **Consultation** local decision makers are not consulting the community to see what their needs and priorities are.
- 62. **Communication** a theme hand in hand with consultation, refers to a shortage of it in the community between different organization etc.

- 63. Community spirit lack of community spirit among community members.
- 64. Value differences cultural, ethnic, religious or other which prevents different groups from working together and creating common goals.
- 65. Local infighting a code to capture the competition between social service agencies for funding, programming, and support which lowers the overall effectiveness of service provision. Ie. The friendship centre.
- 66. Volunteerism & participation a critical measure of community capacity. Indications are that volunteerism is critically low in Houston which impairs its capacity for development.

Human Capital

- 67. Educational attainment an obstacle that severely limits the towns capacity for development, but refers more to the critically low rates of post-secondary education as a result of successive generations choosing big mill bucks over education.
- 68. Head in sand complete ignorance of the issues and realities that are affecting Houston.
- 69. Narrow world view lack of the knowledge about the outside world and its influences on the community perpetuated by low education, singular focus, complacency, apathy, and a general head in the sand attitude.

IV. INTERNAL OBSTACLES

Visioning & Planning

- 70. **Visioning** complete lack of or a very fragmented vision that will help guide the community and focus their development efforts.
- 71. **Foresight** lack of any which fosters a reactionary approach to government and inhibits planning and development.
- 72. **Planning** complete lack of. A severe impediment to development and effective sue of resources.

Town Leadership & Management

- 73. Leadership issues the lack of effective leadership to unite the community and create support for individual projects and a focused approach to planning and development.
- 74. **Municipal mismanagement** refers to poor decisions by municipal government that have created obstacles, increased hardship, reduced viability, and ignored the real needs of the community.
- 75. **Easy road** specifically refers to the local government choices to farm things out so they don't have to do it themselves. Ie. Community forest.
- 76. Lip service to change and diversification. There is talk of the problems and the realities that are faced by the community but no real plans or any action towards it. Ie. No gas for tourists and no real plan to provide it.

- 77. **Responsibility** –a 'passing the buck' approach by local government that explains the lack of action on issues because historically it has been the responsibility of the provincial government.
- 78. **Mega-project focus** takes away from dealing with smaller more complicated issues. The belief that emphasis on the large well publicized constitute development. Ie. The pool, park and amphitheatre.
- 79. **Staff retention and turnover** the inability of local government to attract and retain quality staff at the municipal level. This impedes progress and development.
- 80. Lack of resources a reason why the town depends on the outside for development and why there is ad hoc planning and action taking place.
- 81. **Fight for resources** have to be extremely proactive and competitive to receive gov't funding and other resources. A problem due to the reduced capacity of local organization.
- 82. Catch 22- situation the town finds itself in where they have to support industry with concessions due to their dependence on it for jobs and economic benefits.

<u>Culture</u>

- 83. **Cultural obstacles** how local cultural and religious views have created obstacles and barriers to development. ie. The conservative nature of Dutch settlers and an aversion to Sunday activity.
- 84. Lifestyle small town, recreation oriented, casual, affordable. All reasons why Houstonites are there or why they come to stay.
- 85. Local attitude I can stand on my own feet, I did it with my own hands and so should you. A code for the independent nature of residents here.
- 86. **Resistance to change** active and subversive resistance to any change in the community because they like it the way it is. Need a catalyst in form of crisis or incentive to instigate change.
- 87. Personal pride a statement of character that prevents or inhibits some sort of activity.

Core Control

- 88. **Core group** the same small of group of citizens that is doing all the work for the community and is overloaded with much of the burden of fighting an uphill battle to provide for the needs of the community. Also codes the lack of motivation and growing burn-out of local organizations as a result of work loads and long-term fights for funding and services.
- 89. Elite control of town the high level of control on the town's development activities by small groups of business people and long-time families. There is evidence that they actively control and resist certain initiatives to protect their interests.

Economic Leakage

90. Economic leakage – Substantial loss of service and retail dollars to the outside that were generated in the local forest industry. Reduce economic multipliers, employment diversity while increasing dependence. Inhibits local business development and investor confidence in the community.

V. OTHER CODES

- 91. **Retail & Amenities** lack of and loss of retail, recreation, and service amenities. Relates to the unattractiveness of the community to employees, services, business, and industry.
- 92. Infrastructure needs land development and other things needed to attract new industry and business.
- 93. **Geography** the creation of development obstacles and hardship posed by the physical location of the community and especially the close proximity of two better developed neighboring ones.
- 94. **Demographics** evidence where shifting demographics have created differing values and service needs in the community that compete for limited resources.
- 95. **Community size** development issues arising from the small size of the Houston and area market. Inability to attract new business because of the small size of the market.
- 96. **Positive things** code for any miscellaneous positive things or outcomes that have bearing towards my thesis question.
- 97. **Cancer relay** reference to the very successful Canadian Cancer Relay in 2008 that may contradict other evidence of limited social capital in community.
- 98. **Grassroots service provision** refers to the essential services performed by small local organization that are attempting to fill the void after government service loss in the community.

Appendix IV: Interview Consent Form, Interview Script, Interview Matrix, and Ethics Approval

Interview Consent Form

PROJECT: The consequences of forestry-dependence for the socioeconomic development of peripheral forest communities in northern British Columbia.

PURPOSE: The purpose of this research is to explore forest-dependence and community development in Houston and to provide decision-makers and local community leaders with information relevant to the effects of forestry-dependence. This research will involve interviews with key informants from Houston, BC.

HOW INTERVIEWEES WERE CHOSEN: The interview participants were selected from publicly available lists and from suggestions made from other interviewees. The interviewees were selected for their potential to provide information about issues relevant to the forestdependence, socioeconomic development and economic growth of Houston, BC.

ANONYMITY and CONFIDENTIALITY: The names of interview participants will not be used in reporting, nor will any information which may be used to identify them. All information shared in this interview will be held in the strictest confidence by the researcher. All records will be kept in a locked office at UNBC and will be accessible only to the researcher. These records will be kept until the final research thesis is complete and then destroyed.

RISKS and BENEFITS: This research project has been assessed by the UNBC Research Ethics Board. The researcher does not consider there to be any risks to your participation. I hope that by participating you will have a chance to provide input into this examination of the relationship between forestry-dependence and community development.

VOLUNTARY PARTICIPATION: Your participation in this research study is entirely voluntary and you may choose to either participate or not. If you decide to participate, you may choose not to answer any questions that make you feel uncomfortable. You also have the right to end the interview at any time and have the information you have provided withdrawn from the study.

RESEARCH RESULTS: Interviewees will receive a summary of the interview notes and will be asked to review them for errors, omissions, or any additions they wish to make. All key informants will receive a summary of the key research findings

MORE INFORMATION: Please contact Marc Steynen at <u>steynenm@unbc.ca</u>, (250) 960-5297 or the research supervisor Greg Halseth at <u>halseth@unbc.ca</u>, (250) 960-5826.

COMPLAINTS: Any complaints about this project should be directed to the UNBC Office of Research (250) 960-5820 or to <u>reb@unbc.ca</u>

My signature indicates that I have read the above project description, I understand the conditions of my participation, and I agree to participate in this research study.

Interview Script

Project: The consequences of forestry-dependence for the socioeconomic development of peripheral forest communities in northern British Columbia.

Interviewer: Marc Steynen, UNBC

Interview Length: suggested time is 1 hour

Section A: Introduction & Background Information

This first section asks questions to establish the interviewees' background, experience and knowledge level and acts as an introduction section for the interview.

How long have you lived in/near the Town of Houston? What was/is your main employment or occupation? How long were/have you been in this position? Can you briefly tell me about your involvement with any other community organizations (in Houston)?

Section B: Community Overview

This section asks general questions to solicit brief opinions about Houston's dependence on industrial forestry.

In your view, how dependent is Houston on (industrial) forestry? *Prompt: extremely, very, or somewhat dependent*Generally, how has forest-dependence shaped the development and growth in Houston? How does forestry benefit the community of Houston? What are some other impacts of forestry on the community? *Prompt: for either positive or negative depending on previous answer.*

Section C: Economic Development

This section asks questions about the economic development of Houston to determine if the economic growth and development experienced by the community was/is planned for and controlled in a manner that benefited the general community of Houston.

C1: Historic Development

Historically (post-war to 1970's), do you know if the town of Houston planned for or controlled economic growth?

Prompt: Can you give me any examples?

Are you aware of any economic development plans that existed in the past? *If yes*,

How successfully were they implemented?

What were some of the obstacles that prevented their implementation?

C2: Current Development
Is there a community derived vision that guides economic development in Houston today? Are you familiar with the current economic development or official community plan for Houston?

If yes,

Do you know if it includes elements that would diversify the local economy away from forestry? *Prompt: What are these elements?*

In your view, what are some of the obstacles to local economic development?

Section D: Social Development

This section asks questions about the social aspects of the community of Houston. It also explores some of the social development challenges and issues being faced by the community.

D1: Historic Development In the past, did Houston plan for its social development or were social concerns taken care of in a reactive manner? *Prompt: youth services, health services or recreation facilities etc.*

D2: Current Development

In your opinion what social programs or facilities are needed in Houston? Are you aware of any plans by local government to provide these services? Do you know of any persistent obstacles to social development faced by the community? *Prompt: Can you give me any examples?* Are there any other local initiatives underway that will contribute towards Houston's social development?

Section E: Community Control

This section inquires about local control over the processes that impact community development in Houston and the impacts of local control versus the external control exercised by various agencies and organizations.

Who controls the economic drivers in the community?
Prompt: Do you think there is any local control of these economic drivers?
Do you feel that the control of local forest industry by large companies is good for the community? (good, somewhat good, not good)
Prompt: Can you tell me why?
How does the presence of large forest companies impact the growth and development of Houston?
Prompt: How do they impact its social/economic (ask opposite of previous answer) development?
What is the role of the provincial government in local community development?

Section F: Economic and Social Change

This section explores the effects of economic and social change in the community of Houston as a result of industry restructuring and other resource related change.

F1: Government Change

Are you aware of any recent loss of the government services in the community? *Prompt: how about the closure of the Ministry of Forests District office* How has the loss of these services impacted the community (in general)? How is the community adjusting to this loss of service?

F2: Industry Change

I understand that the local sawmills here have been part of recent forest industry consolidation (such as West Fraser and HFP 2005, Canfor and Northwood 1999, or Northwood and BVFI 1972). Have these changes impacted Houston? How?

How has reduced demand for structural lumber and the decreased profitability of lumber producers affected the community of Houston?

Prompt: How are forestry, business, or other communities coping? Generally speaking, how has the operation of the new Canfor 'supermill' affected Houston?

F3: Resource Related Change
Can you briefly describe how Houston has been impacted by the Mountain Pine Beetle epidemic?
Prompt: Have you noticed any other economic/ social impacts besides the gain/loss of employment and wages?
Would you say that Houston has benefited from the large increases in the harvesting of beetle-killed timber?
Prompt: How has Houston benefited?

Section G: Community Capacity

This section asks questions about Houston's capacity to undertake social and economic developmental activities and acts as a wind-down or exit section to the interview.

Are you satisfied with the leadership this community has displayed in response to recent change? Are there any issues that are dividing the community?

Prompt: explore specific issue or example given

Do you think there is enough knowledge and experience in the community to deal with these issues and future challenges?

Section H: Concluding Questions

Is there anything you would like to add regarding Houston's socioeconomic development that we haven't already touched on?

Thank you for you time and assistance with this research project!

Interviewee Matrix

Government Economic Social Interviewee Municipal Provincial Federal District Business Industry Minorities Education Services Other Х 1 2 Х X X 3 4 5 Х 6 X Х 7 Х 8 9 Χ X X 10 11 Х 12 13 Х Х 14 15 Х 16 Х 17 Х Х 18 Х 19 20 X Х 21 Х 22 Х 23 X 24 X 25 Х 26 27 Х X 28

Houston Interviewee Matrix - 2008

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UNIVERSITY OF NORTHERN BRITISH COLUMBIA

RESEARCH ETHICS BOARD

MEMORANDUM

To: Marc Steynen

CC: Greg Halseth

- From: Henry Harder, Chair Research Ethics Board
- Date: September 30, 2008
- Re: **E2008.0918.161**

The consequences of forestry-dependency for the socioeconomic development of Houston, BC

Thank you for submitting the above-noted research proposal o the Research Ethics Board. Your proposal has been approved. Please ensure that you clarify on the information sheet how long the interview is expected to take.

We are pleased to issue approval for the above named study for a period of 12 months from the date of this letter. Continuation beyond that date will require further review and renewal of REB approval. Any changes or amendments to the protocol or consent form must be approved by the Research Ethics Board.

Good luck with your research.

Sincerely,

Henry Harder