The Weakest Link: Northern British Columbian Local Communities in the Global Forest Products Chain

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The Weakest Link: Northern British Columbian

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1. Introduction

Many communities across British Columbia owe their origins to the extraction of natural resources, a statement that rings especially true for communities in the northern part of the province. These communities epitomise the classic description of Canadian economic development as one based on staples, that is, an economy based on the export of natural resources.[1] While this description may be less relevant for the industrial (and increasingly knowledge-based) economy of Canada in the 21st century, this should not hide the fact that the staple economy remains an accurate descriptor for many of Canada's rural, resource-based communities.

Characteristics of staple economies include their reliance on volatile external markets. It has long been recognized that commodity prices experience greater volatility

[1] See, for example, D. Drache (ed), Staples, Markets and Cultural Change: Selected Essays of Harold Innis, Montreal: McGill-Queen's University Press, 1995.

on international markets than prices of industrial goods. This translates into economic volatility being more pronounced in resource based regions. For local communities, this volatility can be potentially destabilizing and induce boom and bust cycles. For local communities, therefore, a major objective has been to support policies which would reduce such instability.

However, the ability of local communities in Canada to insulate themselves from the vagaries of international market forces are reliant, for the most part, on the decisions taken by provincial governments under whose jurisdiction natural resources fall and by the corporations directly engaged in the resource extraction. In this Report, we analyse the challenges facing forestry dependent communities in northern British Columbia, focussing on those in the Prince George Timber Supply Area (PGTSA)[2], in an era of corporate restructuring, changing provincial government policy and globalisation.

The dependence of these communities on external markets is abundantly clear at present as forestry dependent communities across B.C. struggle in the face of punitive duties imposed by the U.S. in the latest phase of the on-going softwood lumber dispute. While this dispute has rightly been seen as the major factor affecting B.C.'s forestry industry at present, it would nevertheless be a mistake to view this as the only factor or to ignore other trends, such as corporate restructuring and changing provincial government policy, which are having profound effects on the sustainability of forestry dependent communities. It is these latter trends which are the focus of this Report. As a result, the

[2] The PGTSA is comprised of the Prince George, Vanderhoof and Fort St. James Forest Districts. See Appendix Figure 1 for their locations.

softwood lumber dispute receives relatively little attention here, not because it is unimportant, but because the Report seeks to highlight other structural changes.[3]

As an introduction to the topic, in the next section we provide a brief overview of the importance of forestry to the province of B.C. and to northern communities in particular. In Section 3, we introduce the concept of a global value chain and provide an illustrative example of the forest products value chain. Value chain analysis provides both an overview of the main actors and processes which constitute the forest products industry and also serves to highlight the critical roles of government and corporations in governing the value chain. This provides the basis for our discussion, in section 4, of the dynamics of forest products value chain governance over the past decade and how decisions relating to the management and operation of this chain have changed. We argue that local communities are the weakest links in this chain and that their interests have been marginalized in the face of the interests of the major forest companies and, more recently, of the provincial government. That is, local communities are being re-exposed to the forces of global market volatility as a variety of institutional insulating mechanisms, built up over decades, are being dismantled We conclude, in section 5, by theorizing the relationships between the interests of major forest companies, the provincial government and local communities and tracing the implications of these for forms of governance of the forest products value chain.

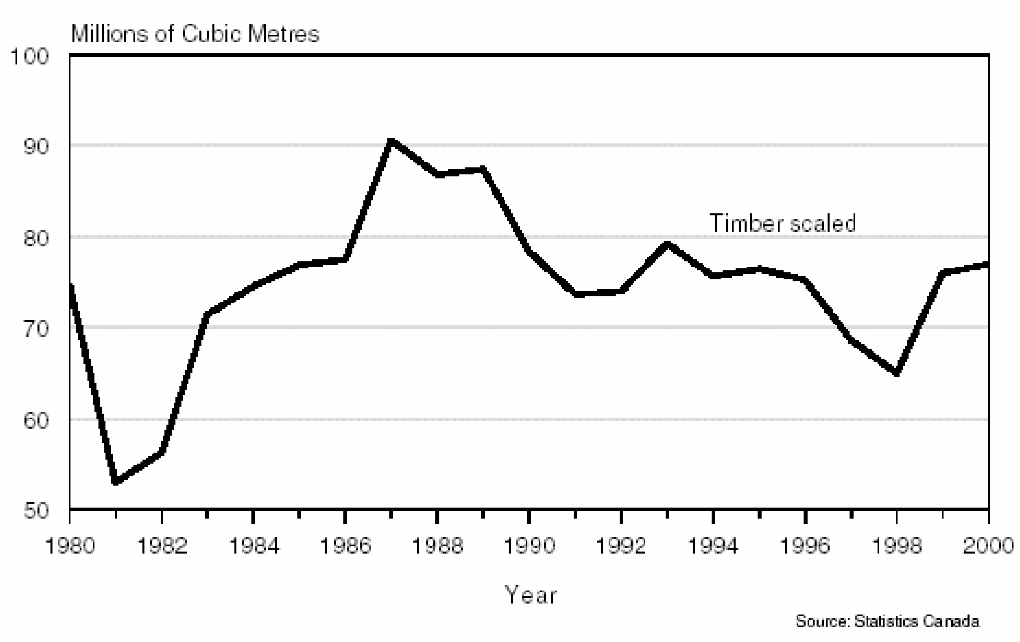
2. Overview of the Importance of Forestry in B.C. and northern communities

[3] For details on the softwood lumber dispute, and its effects on B.C., see the BC Ministry of Forests website (www.for.gov.bc.ca)

Recent estimates have confirmed that the forestry extraction and associated manufacturing sectors are fundamental and defining features of B.C.'s provincial income and export flows. For example, it is estimated that in 2000, forest industry exports accounted for 48 per cent of the province's total manufactured exports.[1] Furthermore, input-output models have identified industrial forestry production as the largest sectoral contributor to GDP accounting for approximately 25 per cent of the province's transactions of goods and services.[2] These estimates and models do, however, obscure a number of trends that have been occurring over the last decade. Data on employment, export share, and GDP ratios indicate a downward trend between 1990 and 1999. Direct and indirect forest sector employment declined by approximately 25,000 between 1990 and 1999[3]. Export figures for this period also indicate that the total share of wood and pulp/paper products declined from approximately 64 per cent of total exports in 1990 to just over 51 per cent in 1999.

These trends have not been smooth, however, and provincial GDP figures indicate that forestry and associated production fluctuated considerably over the 1990s. Between 1990 and 1999 the nominal share of productive forest related activity has ranged between 6.5 per cent and 10 per cent of total GDP[4]. Recent, sales based estimates have identified significantly higher values associated with industrial forestry for the period 1995 – 2000. These sales based accounts reveal that forestry production operated within a range 14-17 percent of total provincial GDP.[5] The fluctuations in employment and GDP shares reflect in part the cyclical as well as the secular trends in the forestry industry. Figure 1 illustrates the variations in BC timber harvest levels during the past two decades.

Figure 1: BC Timber Harvest 1980-2000



Source: British Columbia Ministry of Finance, British Columbia Financial and Economic Review 2001, p.17 available at http://www.fin.gov.bc.ca/tbs/F&Ereview01.pdf

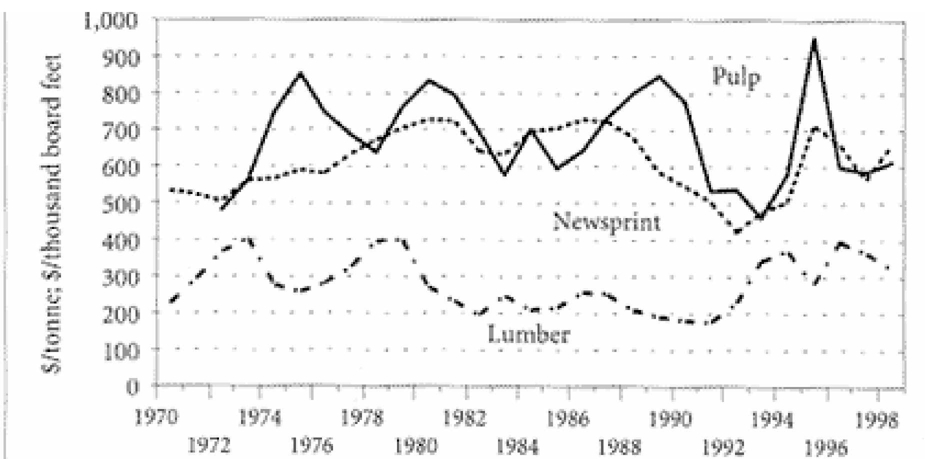
The variability in prices for forest products (lumber, pulp and newsprint) is illustrated in Table 1, which shows nominal prices for the 1990s, and Figure 2 which shows prices in real terms since 1970.

Table 1: Forest Products Prices (US$), 1991-2001

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Lumber (Madison's Lumber Reporter; WSPF, $/1000 bd ft)	189	227	337	343	251	352	353	286	341	255	248
Pulp (Northern Europe; $/tonne; transaction price)	572	554	427	513	883	590	566	514	522	681	541
Newsprint (Pulp and Paper Week $/tonne)	543	429	442	465	674	652	560	595	514	564	589
Hemlock baby squares											

Source: British Columbia Ministry of Finance, British Columbia Financial and Economic Review 2002, p. 33 available at http://www.fin.gov.bc.ca/tbs/F&Ereview02.pdf

Figure 2: Real Prices of Forest Products (Cdn$) 1970-1998



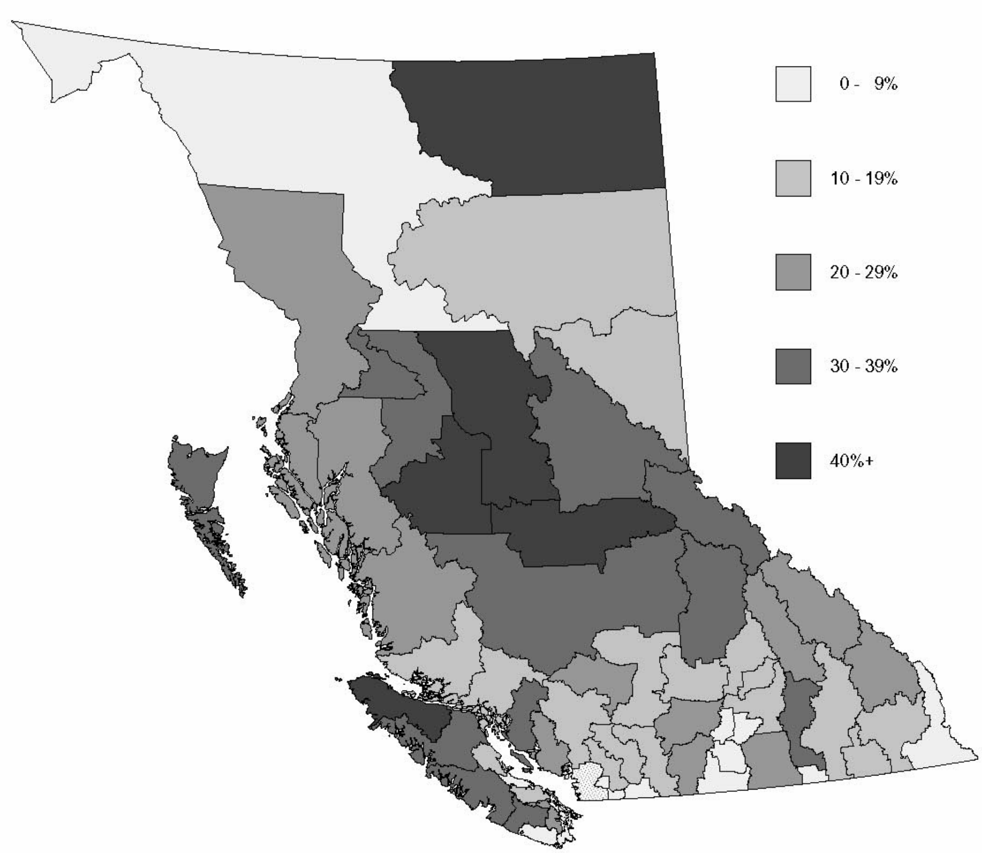
Source: All prices 1970-1993 from *Compendium of Canadian Forestry Statistics* ; 1994-98 lumber, *Random Lengths*; Pulp, *RISI*; Newsprint, *RISI*.
Lumber is SPF, random length 2x4; Pulp is NBSK (Northern or Needle Bleached Softwood Kraft, delivered into Northern Europe); Newsprint is contract price into Eastern US except for RISI, which is price to Western buyers.
Prices are deflated using the GDP deflator.

Source: H. Nelson, Seeing the Forest as well as the Trees, Fraser Forum, December 1998, available at http://oldfraser.lexi.net/publications/forum/1998/december/forest_fig1.gif

Regardless of the figures used, and recognizing the relative decline in the importance of forestry to the provincial economy over the past decade, it is nevertheless apparent that (a) forestry production is a major component of British Columbia's provincial economy and (b) the industry continues to be characterized by significant cycles and fluctuations.

At the sub-provincial level, forestry has traditionally been divided on the basis of geographical segmentation with forestry strategies loosely determined on the basis of a coastal/interior divide. High reliance on forestry can therefore be found in both the coastal and interior parts of the province. Figure 3 below shows regional reliance on forestry.

Figure 3: Regional Dependence on Forestry



Source: G. Horne, British Columbia Local Area Economic Dependencies and Impact Ratios-1996, Victoria: BCSTATS, 1999, Map 3.1.2

This Report focuses on the industrial forestry value chain in the interior and, more specifically, in the northern interior of British Columbia. To provide examples of the importance of forestry as the economic driver in northern interior communities, Table 2, shows the percentage of basic income derived from forestry in a number of northern communities.[4]

Table 2: Income Dependencies of Selected Communities in British Columbia's Central Interior (per cent)

	Forestry	**Public sector**	**Transfer Payments**	**All others**
Williams Lake	31	22	14	33
Quesnel	45	17	15	23
Prince George	33	24	12	31
McBride – Valemount	39	18	16	27
Smithers – Houston	36	22	12	30
Burns Lake	41	23	12	24
Vanderhoof	46	19	12	23

[4] Basic income is defined as "flow[s] into the community from the outside world, usually in response to goods and services produced in the community and exported from it." (G. Horne, British Columbia Local Area Economic Dependencies and Impact Ratios-1996, Victoria: BCSTATS, 1999, p. 8). There are 11 basic sectors identified: forestry, mining, fishing and trapping, agriculture, tourism, high tech industries, public sector, construction, other basic, transfer payments, and other non-employment income. See Horne, pp 22-23 for further details.

Source: G. Horne, British Columbia Local Area Economic Dependencies and Impact Ratios-1996, Victoria: BCSTATS, 1999, p. 25

In each of these seven northern interior communities, forestry is the largest component of basic income accounting for between 31 and 46 per cent of local income. The second and third largest components of basic income are the public sector and transfer payments respectively, with the largest three categories combined accounting for between two-thirds and three quarters of community basic income.

Having demonstrated the importance of, and reliance upon, forestry for northern interior communities, we now proceed to construct a representation of forestry production using a value chain approach.

3. The Forest Products Value Chain

A value (or commodity) chain describes the process of production, highlighting the agents (and places) responsible for the extraction of raw materials, the processing and/or production of the commodity, research and development, exporting and marketing.[5] Each chain is characterized by an input-output structure (describing what is produced), a governance structure (describing who make decisions and power relations between agents in the chain) and a territoriality structure (describing where activities take place). In this section, we focus on detailing the input-output structure. In section 4, we examine the dynamics of the governance structure over the past decade and point to some of the implications of these dynamics for the territoriality structure.

[5] The value or commodity chain approach has recently been promoted in a series of works by Gary Gereffi. See, for example, G. Gereffi and M. Korzeniewicz (eds.), Commodity Chains and Global Capitalism, Westport, CT: Greenwood Press, 1994.

Typically, a distinction is made between buyer driven and producer driven chains based on the different characteristics of these chains as indicated in Figure 4 below.

Figure 4: Two Types of Value Chain: Producer-Driven and Buyer Driven Chains

	Producer-Driven Commodity Chains	Buyer-Driven Commodity Chains
Drivers of Global Commodity Chains	Industrial Capital	Commercial Capital
Core Competencies	Research & Development; Production	Design; Marketing
Barriers to Entry	Economies of Scale	Economies of Scope
Economic Sectors	Consumer Durables Intermediate Goods Capital Goods	Consumer Non-durables
Typical Industries	Automobiles; Computers; Aircraft	Apparel; Footwear; Toys
Ownership of Manufacturing Firms	Transnational Firms	Local Firms, predominantly in developing countries
Main Network Links	Investment-based	Trade-based
Predominant Network Structure	Vertical	Horizontal

Source: Gereffi, 1999b

Source: R. Kaplinsky and M. Morris, A Handbook for Value Chain Research, 2001, p. 34 available at www.ids.ac.uk/ids/global/pdfs/VchNov01.pdf

In terms of the characteristics identified in Figure 4, forestry most closely resembles a producer driven chain. Production is relatively capital intensive and this serves as a barrier to entry to new competitors. The forest products chain tends to be vertically integrated and requires close links with suppliers. The major forest companies are the key nodes in the production chain and they are the drivers of the chain and dominate relations with other agents. The public ownership of forest land in B.C.

provides, however, the basis for a significant role for government in the governance of the production chain.

To examine the forest products value chain in more detail, we start by constructing a simplified input/output structure for industrial forest products. There are a number of features to the forest products chain that are integral to examining the structure of production, namely, the land tenure regime, resource input selection processes, and the output production network. These features are embedded in the forest products chain and are the sites where competitive pressures are shifted and/or contained. Furthermore, these pressures help to shape the production process and are the key sites/nodes where management conflicts and resolution strategies can be identified. Management strategies are oriented towards exerting or increasing technical and allocative efficiency or extracting favorable conditions for cost minimizing and profitability. However, the depth that the industrial forestry chain penetrates local communities also opens up areas for contestation that tend to fall outside more traditional and determinist accounts associated with capital/labour conflict.

A description of the production links and their associated characteristics follows.

3.1 Land Tenure and Wood/Fiber Supply

Land tenure in the province of British Columbia is a complex set of arrangements between the provincial government, local communities, and private interests. Anchoring this tenure system is public ownership of the forested land base with 96 per cent of forests in public ownership. There are a number of mechanisms that governments employ to secure short and long term commercial forestry utilization patterns. These utilization regimes underscore the land tenure system in the province. Typically, the land tenure system is organized in very specific ways. These tenure regimes are Tree Farm Licences, Replaceable Forest Licences, Non-replaceable Forest Licences, Small Business Forest Enterprise Program Licences and Woodlot Licences.

Tree Farm, Forest and Woodlot licences are organized on the basis of sustainable yield management units. Sustainable yield management units underscore forest management objectives that seek to establish or approximate a balance between net growth and harvested values within an unencumbered or self-contained Crown land base. Tree Farm Licences dictate, to the Licensee, that the management of Crown-granted forested lands must conform to the stipulated requirements of the provincial forest service. These requirements typically specify the requirement of a fixed duration development plan and other restrictions that are attached to particular cutting permits approved by the Ministry of Forests. Similarly, Forest Licences allow the Licensee to harvest timber in an unencumbered area based upon sustainability and resource management objectives that are associated with particular Timber Supply Areas. These Forest Licences have a fixed term of 15 to 20 years and are replaceable every 5 years. A small component of Forest Licences is non-replaceable. In the case of the Tree Farm Licences, the provincial forest service requires Licensees to indicate the harvesting levels, operational, and management strategies. Woodlot Licences are similar to Tree Farm Licences except that the scale of operational activities is significantly smaller. These licences allow for the implementation of small-scale harvesting, stand management and reforestation practices to be performed on a sustainable yield basis over a describable and demarcated area. Woodlot Licences have historically accounted for a small percentage of the annual timber supply. The last tenure system of interest is the short-term contractual agreements that occur within the Small Business Forest Enterprise Program (SBFEP). Generally, the SBFEP allows the Ministry of Forests to set aside a certain percentage of the provincial annual allowable cut (AAC). Presently, the SBFEP comprises approximately 6 per cent of the AAC. The program allows for individuals and corporations, registered within the SBFEP, to competitively bid for standing timber on a block-by-block basis.

3.2 The Resource Input Selection Process

The forest products value chain is comprised of multiple backward and forward linkages. These linkages draw in physical, technological, labour input, and other factors/resources that ultimately have a substantial effect upon local communities in northern British Columbia. The structure of the forest products chain not only links value-adding activities in production but also can be the source for the establishment of interdependencies between nodes in the chain network. This process can be clearly identified in the forest products chain in the Prince George TSA as thematically represented in Figure 5.

Figure 5: The Input-Output Structure of the Forest Products Chain

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The forest products chain is comprised of multiple 'inbound logistics'. These include wood/fiber supply, operations and manufacturing, sub-contractors/suppliers, financial and insurance services, transportation and infrastructure maintenance, etc. In most cases, these activities/inputs require the support and services of more micro supply chains. These micro chains are important in reducing costs and/or increasing efficiencies in the larger forest products chain. Figure 5 provides a useful representation of the forest products chain although the true complexity of the chain requires us to 'fill in the gaps' left by Figure 5's reductionist representation.

3.3 Filling in the Gaps in the Input-Output Structure of the Forest Products Chain

Figure 5 indicates that sawlogs and fiber inputs are allocated on the basis of a management strategy controlled by corporate operations. The simplicity of this 'flow' masks the substantial resources and services that corporate operations 'pulls in' to make possible the harvesting of standing timber. A more detailed account of the actual process will help to illustrate the multiple links/activities in the forest products chain that support industrial forestry extraction and production.

Prior to the harvesting of standing timber corporate forestry operations must identify economical timber inventory site(s). These sites may be identified as a result of forest pathology concerns, short-term timber supply requirements, or are part of a larger longer-term forest development plan. Once these areas have been identified it is typically the case that the Licensees apply to the Ministry of Forests for a Cutting Permit in the identified area. Upon approval, the Licensee then contracts out the reconnaissance of the cutting permit(s) on the basis of a preferred or competitively based system with a variety of forest consultants. Generally, Licensees do not perform these activities themselves and rely on the services and expertise of a fairly dense network of sub-contractors. Licensees may enter into a contractual arrangement with a forest consultant to carry out particular operational components within a cutting permit or contract out to a 'full cycle' contractor who will manage the entire pre-harvest phase of the particular cutting permit.

There are a variety of different silviculture systems that have been applied in the province and in northern British Columbia. These systems are: clear cutting, shelterwood, selective, and seed tree. Different silviculture systems are associated with varying degrees of operational and management intensity. As a result, intensive harvesting operations and alternative forest management strategies will draw in expertise, resources, and other in-bound factors that reflect these various intensive management strategies. For example, the simplest and most economical silvicultural system is clear-cutting. This system entails the harvesting of cut blocks of 40-60 *ha* in size based upon favorable site conditions and harvesting constraints. Conversely, the most costly and technically difficult system is based upon a selective cut where varying numbers of trees are cut based upon diameter and height requirements and/or other prescribed silvicultural obligations. Furthermore, silviculture systems can also become more complicated and costly due to the different harvesting systems used to extract the standing timber. Generally these harvesting systems are conventional (ground-based), cable (yarding), and helicopter logging.

The parameters of the pre-harvest planning phase dictate the scope of these activities and it is the responsibility of the contracted forestry consultants to confirm the appropriateness of the planning parameters. These prescribed activities, indicated in the pre-harvest planning phases, require that forest consultants confirm or locate possible block boundaries, mainline and in-block road access, possible terrain stability constraints, approximate age and tree classes, and identify other land resource features (streams, wildlife, and archeological). The results of the sub-contracted field reconnaissance then are submitted to the Licensee for approval. Upon approval the Licensee directs the contracted forestry consultant to begin work with 'laying-out' the agreed upon block, stream, management zones, and road location boundaries. Furthermore, Licensees will also contract out the timber-cruising (tree height, class, and volume compilations). These activities will help to establish the block volumes and derived costs associated with extracting the timber. Once block, roads, other resource features, and initial block volumes have been identified and located the blocks are mapped.

The mapping of blocks has changed dramatically in the last decade as a result of the emergence of new technologies. Previous methods of block mapping included 'tight-chain' traversing (manual establishments of feature distance, bearing, and slope measurements). This method involved two person crews, 50 meter measuring chain, slope clinometer, and a compass. This traditional method was gradually replaced by laser technology that calculated distances, bearing and slopes, automatically. However, the process of laser traversing still required a two-person crew. This method became obsolete and was replaced with the introduction and dissemination of technology supported by the Global Positioning System (GPS). GPS technology has been instrumental in lowering labour costs and achieving high levels of accuracy. GPS traversing requires one field technician and almost all features of interest can be captured to sub-meter accuracy. GPS technology has become integral to forest mapping and resource identification in the forestry chain. The mapping of resource features in the field are then linked to a Geographical Information System (GIS) and can be linked to a variety of databases to build a whole series of thematic representations of a geographical and operational areas. These thematic representations afford Licensees the ability to manage their operations in a manner that is accurate, efficient, and economical. These maps will also prove to be highly valuable in harvesting the timber since they will provide valuable reference points to logging contractors during the harvesting phase.

Different silvicultural and harvesting systems draw in a variety of resources. Higher levels of intensity in forest management and logging operations involve higher levels of capital and labour inputs. Capital requirements associated with differing silvicultural and harvesting systems can change considerably. Different systems may require or force contractors to implement differing harvesting strategies, sometimes within the same cutting block. In addition, geography can also dictate that road and bridge construction meet certain government and environmental standards. Changing capital costs are fundamentally site dependent. Conventional ground based systems may have soil degradation constraints that necessitate the use of equipment that minimizes soil disturbance or may only be accomplished in during particular seasons (winter or summer). These requirements may substantially increase the costs associated with logging a particular block. Cable harvesting systems may have to utilize different equipment designs to minimize adverse effects due to poor deflection or drop line carriages may be required where circumstances become unfavorable to more traditional cable yarding techniques. Furthermore, modifications may need to be made to road systems to more efficiently yard fallen timber where the road system hinders operations. These modifications will tend to put upward pressure on costs associated with this harvesting system. Helicopter logging systems are extremely costly and require high levels of expertise in supervision and management to achieve optimal harvesting outcomes. In addition, helicopter logging may require a variety of helicopters with differing load capacities and failure to recognize these requirements can quickly turn marginally profitable harvests into significantly costly endeavors. Transportation between cutting permits, blocks, and mills are also important considerations. Licensees typically attempt to establish a variety of log haul rates and seek out potential efficiencies through consolidating harvesting operations, entering into preferential contracts and/or exerting pressure on trucking contractors to supply transportation services at favorable and/or agreed upon prices. These trends have tended to minimize the number of transportation contractors and are a significant factor in shaping the forest products chain.

Prior to logs entering the manufacturing circuit, Licensees are required to commit to a variety of post-harvesting obligations that are fundamental features of land tenure management. Furthermore, post-harvesting operations are an important component of the overall forest products chain. These activities are: site preparation, reforestation, brush control, juvenile spacing, fertilization, and protection. These activities link a variety of sub-contractors to the larger forest products chain. The density of enterprises engaged in these activities is significant and Licensees have a great deal of flexibility in establishing favorable conditions for implementing certain post-harvest forestry practices. Site preparation contractors are contracted to create favorable sites for reforestation activities. Depending upon the silvicultural and/or harvesting system site preparation may involve excavation, burning, piling of forest debris, and other forms of scarification. The site requirements will have a dramatic effect upon the costs associated with restocking/reforestation initiatives. Licensees are required under provincial legislation to satisfactorily restock harvested areas. Planting strategies are highly labour intensive; however, seedling stocks are also a large component of the overall reforestation costs. As a result, Licensees have directed a great deal of resources into meeting these silvicultural obligations in a cost efficient manner. Licensees have invested substantial resources in the development of a variety of seedling stocks that are robust and economical. Furthermore, Licensees have been highly successful in establishing relations with preferred reforestation contractors who are able to minimize the costs associated with their own operations and are instrumental in adding value to the Licensees operations.

The care and maintenance of reforested areas is an ongoing concern for Licensees. Under provincial guidelines, Licensees are responsible to maintain a reforested stand until it meets free-growing or 'green-up' criteria. To achieve this goal Licensees contract with silvicultural contractors to perform surveys of reforested areas and identify sites that will require stand tending activities (fill plants, brushing, herbicide/pesticide treatments, etc). Stand tending management pulls in and consumes a wide variety of resources and inputs. These activities are generally labour intensive; however, activities like herbicide and pesticide applications can involve high cost factors like helicopter aerial spraying and labour intensive application layout. Stand tending contractors are highly competitive and generally are divisions of larger reforestation enterprises. Further to these requirements and obligations, Licensees engage in a number of value adding activities that occur outside the obligations established through provincial legislation. These activities include but are not limited to: juvenile spacing, stand thinning, girdling, and pruning. Licensees typically engage in these activities to ensure higher wood quality levels in future timber and fiber sources. Through spacing, thinning and pruning stands, Licensees are able to dramatically affect future stand volumes and wood quality that is recoverable at the end of the rotation period. Licensees sub-contract out these highly labour intensive functions to silvicultural contractors and these activities and agents are important components in the larger forest products chain. The activities of forestry consultants, logging, road building, silvicultural and stand tending contractors are key nodes in the chain. However, these contractors share an inter-dependency not only with major forest companies but also with the service providers that are integral to their own respective supply chains. As a result, there is a very pronounced hierarchy in the supply of inbound factors.

In the pre and post-harvest activities, engaged in by Licensees, the acquisition and consumption of production factors can be differentiated. Factors in the forestry chains' network can be either basic or advanced factors. Basic factors tend to be wood/fiber sources, unskilled and semi-skilled labour, and leveraged capital (non-investment). Advanced factors tend to be highly capital-intensive equipment, advanced technological, cartographic, and communication systems, investment capital, highly educated engineers and forest planners/managers, university research graduates, institutes, and other associated disciplines. The unhindered access and availability of basic factors in the pre and post-harvest components of the forestry chain has tended to undermine the competitive advantage that many firms once enjoyed in the industrial forest products chain. As a result, the significance attached to the competitive advantage derived from the acquisition and consumption of advanced and higher-order factors has increased. The discussion on post-harvest linkages would be incomplete without presenting the manufacturing dimensions of the forestry production chain.

Licensees are actively engaged in linking the value adding activities preformed in pre and post-harvesting forestry operations with the activities of industrial forestry production. Timber and fiber inputs are acquired to become log exports, dimensional lumber, plywood, pulp, and paper. Furthermore, secondary markets exist to remanufacture lumber, plywood, pulp and paper products into more valuable commodities. The importance of remanufacturing and value added activities have been identified as a major policy and research area. However, the largest component in the production of value occurs in the primary production of lumber, plywood, pulp and paper.

Driving industrial forestry production is the successful integration of wood and fiber resources to the most appropriate manufacturing site. Pre-harvest timber compilations, volume and timber class estimates are only one component of the larger management concern to direct timber and fiber sources to the right mill or processing site. Scaling activities, in the field or at sort yards, are also fundamental to achieving this goal. Log Scaling serves a variety of purposes, these include; the establishment of government stumpage payments, industry-contractor payments, and help in the administration of annual cut levels. Log Scalers are responsible for species identification, volumes, defects (natural and mechanical) calculations, and conventional end use potential. As a result, scaling activities and the associated expertise have important implications for the larger project of managing the forestry production chain. Once scalers have scaled and graded timber and fiber resources these logs become inbound factors in the production process.

Typically primary forestry production involves the manufacturing of dimensional lumber, plywood/panel board, pulp and paper. Sawlogs can further be differentiated to become non-manufactured wood exports or semi-finished products for remanufacturing. However, most sawlogs in the province of British Columbia, as a result of appurtenancy, are destined for manufacturing facilities to be milled into dimensional lumber. Sawmills are highly capital intensive and pull into production a wide variety of resources and suppliers. These include: unskilled, semi-skilled and skilled labour, equipment suppliers, computer and communication infrastructures, electrical power, accounting/payroll, financial services, sales and marketing services. Changing demand conditions have facilitated the development of more dynamic production systems. These pressures have necessitated the introduction of a more flexible lumber production system and, as a result, lumber producers have invested significant levels of capital to innovate and maintain these flexible production systems. To meet these changing requirements the forestry chain associated with the manufacturing of dimensional lumber has developed an equally flexible and responsive supply chain. Suppliers are encouraged to innovate and direct resources into the dimensional lumber chain with a favorable cost structure and ability to respond quickly to changing demand or commodity prices.

Plywood and pulp and paper operations acquire and consume similar resources of production to those consumed in the dimensional lumber chain; however, the production of these outputs also involves a variety of synth-chemical suppliers and water requirements. These factors are important components in the production of end products. The requirement to access quickly the availability of machinery and other inputs in this production system has created important relationships and facilitated close proximity supplier facilities. Coordination of inputs in this chain has created important advantages for suppliers who work in close proximity to producers. As a result, producers have the ability to encourage in preferential supplier networks and have quick access to information with associated supply firms.

4. The Dynamics of the Governance of the Forest Products Chain, 1989-2002

The discussion of the input-output structure of the forest products value chain presented above indicates the complexity and density of the chain. The discussion has also drawn attention to issues of governance (i.e. who makes decisions and power relations between agents) and the changing nature of the input-output structure. In this section, we examine these two issues in greater detail and highlight some of the main changes in the governance of the chain over the past decade. We analyse in turn the two key players in the governance of the chain, namely, the major forest companies and the provincial government. We also explore the implications of changing governance for the territoriality structure of the chain focusing more sharply on the PGTSA.

4.1 Corporate Chain Governance

There are a number of trends over the last decade that have significantly affected industrial forestry production in northern British Columbia. These trends include, but are not limited to, consolidation and centralization of production, changes in mill technology, the changing cost structure of inputs, the stagnation of the Asian market, and the on-going softwood lumber dispute with the U.S. Together these forces have impacted income and revenue flows in and from local communities and have resulted in a dramatic reorganization of provincial and local economies.

In terms of corporate changes, there have been two periods of consolidation periods in the Prince George TSA in the last twenty years. These occurred in the late 1980s and subsequently in the mid to late 1990s. The initial period of consolidation occurred as a result of Canadian Forest Products (Canfor) purchasing all the shares of Belfour Guthrie's four operations in northern British Columbia. This period was followed by an acquisition and consolidation period by Northwood Pulp and Timber, in which it was restructured itself as Northwood Inc. prior to its acquisition by Canfor in 1999. Furthermore, in the PGTSA, twenty years of increasing centralization and concentration of the industrial forest tenure system has been strengthened through contractual provisions and the legislated timber processing requirements of appurtenance. The outcome of these complementary forces has been a high level of corporate concentration in the PGTSA where fifteen corporate enterprises produce manufactured dimensional lumber, plywood, and/or pulp and paper. As in most of the central interior, Canfor dominates industrial forestry production in the PGTSA. The following table illustrates the degree of corporate concentration in the PGTSA[6] through an analysis of tenure dominance.

Table 3 – Tenure Dominance in the Prince George TSA

Licensee	Approved AAC m^3	Percentage of Total PGTSA AAC
Canadian Forest Products	4475028 m^3	60.24
Plateau Forest Products	619233 m^3	8.34
The Pas Lumber	581926 m^3	7.83
L and M Lumber Ltd.	299514 m^3	4.03
Takla Dev Corporation	272856 m^3	3.67

Source: Prince George Regional Licensee Information, Ministry of Forests, 2000.

Tenure dominance is only one measure that indicates the density of corporate concentration in the PGTSA. An analysis of industrial forestry production and manufacturing in the Prince George TSA exhibits similar trends in centralization and concentration. In 1989 there were 22 medium to large sawmills, 3 pulp and paper operations, and 1 plywood plant in the Prince George TSA[7]. By 1995 the number of medium to large sawmills had dropped to 17, there were still 3 pulp and paper operations and 1 plywood plant in the Prince George TSA[8]. In 2000 the number of sawmills operating in the Prince George TSA were 16, with 3 pulp and paper operations and 1 plywood plant. Over the last 11 years, therefore, the Prince George TSA has lost 6

[6] The high level of concentration in land tenure in the Prince George TSA can also be found on a Forest District basis.
[7] British Columbia Economic Regional Index, 1989, pages 350 and 417.
[8] British Columbia Regional Index, 1995, pages 270 and 324.

medium to large sawmills (or 27 per cent of the 1989 figure) with most of those closures occurring in the city of Prince George.

The trend in corporate concentration is not unique to the PGTSA or to British Columbia. While in BC the top 20 forest companies account for approximately 80 per cent of forest output, the trend towards takeovers has been observed elsewhere. In fact, there has been a round of global corporate mergers in the forest industry as competition has increased with new forest products suppliers, especially Indonesia and Brazil, entering the market, the opening up of Russia, as well as intensified competition from other parts of Canada and Europe.[9]

Intensified global competition has been accompanied by increasing price fluctuations. For example, writing in 1998, the Fraser Institute noted that "the introduction of new products and new competitors has meant that product prices change more rapidly than they have in the past (for example, prices for lumber changed 10 percent on average and, at times, up to 30 percent over a three month period in the last two and a half years)."[10]

Increased global competition has been accompanied at the local level by decreased levels of competition as a result of industry mergers and acquisitions. The increasing industry concentration in local areas has led to increases in the governance powers of the major forest companies over local forest products chains, especially on the input side. Furthermore, the increased concentration of the B.C. forest industry has been accompanied by a regional specialisation of forest companies. For example, in the

[9] See B.C. Ministry of Forests Annual Report 2001/02 for predictions of further "increased competition in world forest products markets" (p. 13) over the coming decades as more countries enter the global market for wood fibre on the supply side.
[10] H. Nelson, Seeing the Forest as well as the Trees, Forum, The Fraser Institute, December, 1998, p. 3.

northern interior Canfor has become the dominant company with Weyerhauser occupying a similar position in the southern part of the province. Thus, not only has the degree of competition decreased as the market has become more concentrated but, in local communities, there has been a trend towards the re-emergence of the ‘single company town’ in terms of the forest industry. These trends have significantly strengthened the major forest companies in their dealings with suppliers and contractors in other parts of the value chain.

For example, loggers have seen a steady reduction of their bargaining powers and an erosion of their profitability. In addition, the dominant role played by the major forest companies is illustrated by the way in which they have consolidated logging contractors. The forest companies decided that larger contractors, using specific types of logging equipment, would be better suppliers to their mills. Forest companies therefore reorganized the logging contractor market on the supply side by dictating which firms would be offered contracts. Forest companies then allocated logging contracts to their favoured larger firms and thereby effectively reduced the number of contractors; in the Prince George area this is estimated to have resulted in a reduction in the number of logging contractors from about 50 to around 20 over the past decade.[11] It is perceived by the logging community that these changes have been forced upon them by the dominant forest company and that the latter has pursued a policy of shifting to larger contractors but still keeping a sufficient number in the market to prevent a monopsony occurring on the supply side. This pattern has been repeated throughout local communities in the north. All of which has left logging contractors with higher costs (since forest companies have required that more expensive equipment be purchased), little ability to bargain over

[11] Personal interview.

contract rates because of a lack of competition between forest companies in local areas, and lower profits.

Many of the same trends are observed in the contracting suppliers of other forest services (such as silviculture, spatial mapping etc). In this sector, competition is very high as company consolidation has led many ex-forest company employees to start up their own small consulting companies. In addition, an artificial boom in consulting was created by the FRBC program. Combined with this is the weak state of the forest economy and the abilities of the large companies to carry out much of their own services requirements. The core work force in service consultancy companies has shrunk and seasonal and short-term contract work has become the flexible labour norm. The result is that suppliers and consultancy firms have found their margins squeezed considerably.[12]

An observation common to both groups is that major forest company behaviour has changed over the business cycle. In the past, it was argued, rent sharing would occur within the industry with all participants in the chain enjoying some rent appropriation in the upswing and sharing the burden in the downswings; it is now perceived that the forest companies are using their dominant local market positions to maintain cost pressures in all phases of the cycle.

The dynamics of the forest products chain have had mixed implications for the forest dependent communities over the past decade. Corporate mergers and restructuring has brought with it inevitable job losses; in the 1998 Canfor/Northwood merger in Prince George, approximately 175 relatively well-paid middle management jobs (around 30 per cent of the total) were lost to the community. However, at least partially offsetting this was the effect of corporate geographical concentration with Canfor's increased focus on

[12] Personal interview

the northern interior leading to a slow drift of management functions (and jobs) from Vancouver to Prince George. The low entry costs into segments of the independent consulting business ("a business card and a pick-up truck" as one interviewee put it) has also enabled some displaced corporate workers to find new employment relatively easily.

While the number of consultants may therefore have increased, as a result of both corporate lay-offs and the availability of government contracts (especially related to FRBC), the increased competition and the dominant market position of the leading forest company has driven rates down and redistributed income from local residents to corporate shareholders. This latter phenomenon has also been observed in the logging industry.

Exogenous shocks have also been central to determining local communities' employment; the pine beetle epidemic in north-western BC, while an environmental disaster, has provided some short-term relief to a depressed local forest industry by providing work for consultants and for forest companies as the AAC has been increased. However, while the pine beetle epidemic provides an example of the vulnerability of local forestry operations to the exogenous forces of nature, the vulnerability which they face from external market pressures has been reinforced by the (short-term?) reductions in employment levels resulting from the duties on softwood lumber imposed by the U.S.

4.2 Provincial Government Chain Governance

Government forest management has been a constant concern given the importance of the forestry industry to the provincial economy as indicated in section 2. It is no surprise to find therefore that there were no less than four Royal Commissions appointed in the last century to map out provincial forest policy: in 1910, 1945, 1956 and 1976. The last Royal Commission included the recommendation that there be a major forest policy review every 10 years. Whilst this has not occurred, there has nevertheless been no shortage of forest policy initiatives and changes. Furthermore, competing uses for forest lands together with heightened environmental concerns have challenged governments to come to grips with changing demands on the forests.

As noted, the central role of provincial governments in the governance of the forest products chain arises from their control of timber licences which has enabled them to influence not only how much timber is harvested but also where it is processed. That is, public ownership of forest land has enabled provincial governments to influence both the input-output and territoriality structures of the forestry value chain. Prominent examples here are the export ban on raw logs, cut control and appurtenance policies. Cut control requires that licencees harvest at least 50 percent of the licence quota in any one year and at least 90 per cent over a five year period. The appurtenancy clause links harvesting to processing and stipulates that wood harvested in particular areas must be taken to sawmills in that same area. These two policies have, until very recently, been at the forefront of provincial government policy aimed at providing greater stability to local economies.

More recently, environmental concerns have led to a further expansion in the areas of provincial government governance of the forest products chain. As examples of major initiatives in BC forest policy over the past decade or so, combining both the traditional employment and revenue concerns with newer environmental concerns, consider the policies identified in Figure 6.

Figure 6: Major B.C. Government Forest Policy Initiatives, 1987-2001

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As a number of the policies, such as the Timber Harvesting Contracts and Subcontracts Regulation, indicate the provincial government has attempted to regulate the relations between private sector agents in the forest products chain, essentially intervening to limit the bargaining powers of the major forest companies in their dealings with service contract providers. The Forest Practices Code sought to regulate the industry by giving explicit instructions of environmental practices while the Forest Renewal Act and the Jobs and Timber Accord sought to regulate employment levels in the industry.

Regulations on stumpage – the fees paid by Licencees for the trees removed from public land – have been continually revised to satisfy provincial government revenue needs as well as being prompted by the softwood lumber dispute. The latter has focused attention on the desirability of introducing more "market based" policies into provincial government forest policy.

All of these policies have implications for local economies by influencing, directly or indirectly, the level and types of employment in the industry. For example, the repeal of the Motor Carriers districts, which restricted who could operate haul logs within forest district boundaries, has resulted in more competition between haulers. In Prince George, this has meant that approximately 20 per cent of haulers are now "non-local" haulers.[13] However, this situation is asymmetric in that in the north the logging season is shorter with the result that high volumes need to be moved quickly giving outside haulers an incentive to work in peak demand periods in the north; in the south, with a longer

[13] Personal interview

season and less peak time demand, outside haulers find it more difficult to break into hauling markets.[14]

The policies summarized in Figure 6 were mostly introduced under the auspices of the NDP governments in 1991-2001. However, since then the Liberal government has indicated that more major policy changes are to be introduced. Some of these changes are summarized in Figure 7 below.

Figure 7: Proposed Changes to British Columbia’s Forest Policy

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With respect to the introduction of a market-based pricing system, largely in response to the softwood lumber dispute with the U.S., the new government recently tabled a Discussion Paper that has identified the competitive timber pricing mechanism, associated with SBFEP timber auctions, as a fundamental feature in the new price determination process. As a result, the competitive timber auctions of the SBFEP will determine standing timber prices for all other land tenure forms. The acquisition of timber by various licensees will be determined by this process and will result in the termination of a variety of alternative pricing methods (Upset Stumpage Rate, Comparative Value Pricing, the Coast Hemlock Pilot Pricing Project, etc.) that currently operate in the province. Furthermore, this competitive market will increase substantially from 6 per cent to approximately 13 per cent of total annual timber harvests. In addition, new long-term tenures will be awarded on the basis of highest bid price; however, the

[14] Personal interview

government does retain the right to preferentially award long-term tenures to First Nations.

The current and new proposed land tenure systems will continue to be the vehicle for timber and fiber supply to industrial forestry operations in northern British Columbia. However, it is not yet clear how this new pricing mechanism will change the fundamental input logistics and input selection process that characterizes forestry production in the Prince George TSA. Industrial forestry production in the Prince George TSA is, as indicated earlier, dominated by a few forest companies and one would expect that the historical trajectory of centralization and consolidation of forestry production in Northern British Columbia to continue, an issue which we discuss further in the next section.

The appurtenancy and cut control regulations have been part of provincial government policy for half a century and their aim has been to control the level and location of forestry production in order to provide stability to local economies. Faced with increasing market fluctuations, major forest companies have argued for greater operational flexibility and for the ability to rationalize production with less government restrictions. The case for a greater role for the market has been made by the Fraser Institute, which argues that "firms need to be able to respond quickly to changes in demand; however, the administrative approach followed in BC requires them to follow long-term harvesting plans laid out two to five years in advance with little flexibility to adapt to changing markets."[15] This type of argument appears to have won the support of

[15] H. Nelson, Seeing the Forest as well as the Trees, Fraser Forum, December 1998. Ironically, just as 'free market' institutes such as the Fraser Institute regard two to five years as too long for planning horizons in an increasingly volatile global market, environmentalists are suggesting that forest management horizons should be extended from 80 to 320 year planning horizons! See J. Cartwright, "The Price of Compromise: Why We Should Wind Down Our Forest Industry", Canadian Public Policy, XXV, 2, 1999, pp.233-245.

the new Liberal government and the proposed changes to the cut control and appurtenancy regulations reflect this.

These changes are likely to have significant negative implications for local communities and it is no surprise that they have been forcefully opposed by both the Union of British Columbia Municipalities (UBCM) and the North Central Municipal Association (NCMA). The NCMA, for example, has argued that “a strong legislated link between local resources and adjacent communities is key to maintaining the viability of rural BC communities.”[16] Furthermore, the NCMA argues that the existing AAC provisions, which stipulate that licencees must harvest between 50 per cent and 150 per cent of their AAC in any one year, “is more than sufficient to allow companies to adjust cut to meet market cycles, and … the annual requirement should be maintained.”[17]

Local economic policy in the past has been premised on the need to diversify away from the forestry industry. To this end, local communities over the past decade or so have entered the race to secure call centres, casinos, and conferences and to attract tourist dollars to their communities. But all the while, their forestry base has been subject to some degree of security in the sense that appurtenancy and cut control regulations limited the ability of forest companies to move production and close facilities. Of course, fluctuations, often large ones, have occurred but government legislation provided some containment of the fallout from them. However, with the relaxation and/or removal of cut control and appurtenancy clauses, local communities are faced with the prospect of not only competing for their preferred industries for diversification but also to keep their

[16] North Central Municipal Association, Response to BC Government White Paper on Forest Practices – June 2002.
[17] Ibid. For the UBCM’s response see Sustaining Communities Through Forest Policy Change, February, 2002.

forestry base. If forest companies are free to process lumber wherever they wish, local communities will have to compete for these processing facilities. Their ability to compete will based on such historical factors as transportation facilities and the quality of the workforce and existing production facilities as well as geographic factors such as the availability of the timber supply. With respect to this latter factor, in the PGTSA this means an advantage to western parts of the area. These factors are largely beyond the control of local municipalities whose only direct competitive factor is likely to be taxes and regulations. In an era in which municipal governments have already been stretched by limited tax bases and increased expenditure demands as a result of downloading by higher levels of government, added pressures arising from competing for forest companies is likely to have major negative impacts on local communities.

The dynamics of the forest products chain, emanating from both the changes in corporate governance and the changes in government policy, point to increased vulnerability for, and strains on, local communities. Faced with the power of the major forest companies and the provincial government, these local communities are the weakest link in the forest products chain. In short, forestry-dependent communities are being squeezed by the interests of more powerful players, as the forestry industry moves to a new form of governance. To expand further on this, we conclude by providing, in the next section, a conceptual overview of these actors' interests and their interactions as they relate to the governance of the forest products chain.

5. Conclusion: Conceptualising the Interests and Interactions of the Major Forest Companies, the Provincial Government and Local Communities

The past half century or more of government involvement in the governance of the forest products value chain has been aimed at securing a steady flow of provincial revenue and, to a significant degree, has aimed at limiting the destabilizing impacts of the global commodity market for forest products on the local communities which supply these markets. This has been accepted as a legitimate and necessary function of government in a staple producing economy such as Canada for the past century. However, there has always existed a tension in this policy as it, of necessity, involves restricting the activities of private, profit-seeking forest companies. The institutional arrangement of publicly owned forest land and privately owned forest companies has led to inevitable clashes of interests at various points in forest industry history. Perhaps this was at no point more evident than in the 1990s when the social democratic- oriented NDP government clashed frequently with the major, increasingly concentrated, multi-billion, forest companies.

To explore this further, we present here a simplified conceptualization of the competing interests of the major forestry companies, the provincial government and local communities. The interests of the major forestry companies can be simplified as being the maximization of profits. Therefore, the greater control of the market that they have and the greater the degree of operational flexibility, the more their interests are likely to be served. The provincial government has interests in a high and stable flow of revenue from the forest products sector as well as secondary goals of economic prosperity throughout the province and protection of the environment. Local communities interests are complex (since local communities are themselves heterogeneous both internally and as a group) but are simplified here to be the maintenance of stable and sustainable levels of employment and income. Thus, while all three of these actors have shared interests in the general prosperity of the forest products industry, they also have divergent interests and objectives which have the potential to lead to areas of contestation in the regulation and governance of the forest products chain. These differences of interest and the institutional arrangements which correspond to different configurations of these interests are summarized in Figure 8[18].

Figure 8: Community Interests, Major Forest Company Interests, Provincial Government Interests and the Degree of Regulation

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Perhaps the best way of explaining the ideas behind Figure 8 is to start with the concrete example of forest policy in the 1990s under the NDP. These policies, summarized in Figure 6, can be seen as attempting to shift institutional arrangements towards the 'Co-management Utopia' range in Figure 8.[19] Here, provincial government's interests are met through a robust forest products industry which contributes to provincial coffers and a higher degree of community stability is achieved through policies such as the Jobs and Timber Accord and FRBC. Corporate interests (profits) were seen as being better served by the pursuit of a 'high cost-high quality' path which would require creating a virtuous circle of high investment, high standards of environmental stewardship (based on the Forest Practices Code) and, as a result, high levels of market success. In short, the NDP saw forestry in BC as becoming equivalent to Volvo in

[18] This figure is inspired by Erik Ohlin Wright's figure mapping the interests of capital and labour and the various institutional arrangements which are associated with particular realizations of those interests. See his "Working Class Power, Capitalist Class Interests, and Class Compromise", mimeograph, April 1997.

[19] These outcomes are referred to as 'utopias' to indicate that none may be actually realized in practice but represent idealized or 'pure' scenarios which abstract from the reality of blurred institutional forms and continual contestation.

Sweden. This analogy is revealing in a more general sense in that the NDP wished to establish an institutional structure in which government was seen as a partner in the governance of the forest products chain in much the same way as Scandinavian social democracy has been built on a corporatist model of industrial relations in which the state is seen as a partner in, and arbitrator of, the running of industry.

This attempt to shift the institutional context for forest chain governance was resisted, however, by major forest companies which had become increasingly powerful as a result of merger activity and this, together with the fact that there was little history of corporatism in B.C., led to continual antagonisms between government and industry over the direction of forestry policy. For many in the industry, the NDP was viewed, in the words of several interviewees for this study, as pursuing a policy of "social engineering" which was at odds with the requirements of private industry. Investment levels dropped.[20] Local communities were caught in the middle of the dispute, favouring the prospect of increased employment and stability offered by the NDP's promises but fearing the consequences of high cost environmental measures and influenced by corporate predictions of disaster. In short, the forestry industry was caught in the Regulation Trap range in Figure 8. There was too much regulation for corporate interests and a resentment at the 'socialising' mission of the government; at the same time, low investment levels and market instabilities adversely affected provincial revenue flows and local communities were subject to a spate of mill closures.[21]

[20] See Dale Marshall, Follow the Money: Understanding the Crisis in BC's Resource Sector, Vancouver: Canadian Centre for Policy Alternatives, July 2000, p.18

[21] For a list of mill closures in 1998, see Fred Wilson, Cutting Costs: The Politics of Trees and Fees in BC, Vancouver: Canadian Centre for Policy Alternatives, February 1999, pp. 2-3.

The institutional impasse was broken by the election in 2001 of the Liberal Party following the neoliberal policies outlined in Figure 7. Not only have some of the NDP's policies such as FRBC been cancelled and others, such as the Forest Practices Code undergone major overhauls to become 'results-based', but some of the long-standing government policies introduced to enhance community stability, such as the cut control provisions and appurtanancy, are now under serious review. Conceptually, this can be seen as shifting towards the 'Monopoly Capitalist Utopia' range in Figure 8. Under this set of institutional arrangements, the major forest companies face significantly less regulation and enjoy greater operational flexibility in responding to market demands. Under the current proposals of moving to a more market-based pricing system, which increases timber sales to 13 per cent (although figures as high as 20 per cent have also been mooted), the major forestry companies can be expected to dominate the timber market and maintain their control of the timber supply. However, the increased flexibility on the part of the forestry companies comes at the expence of local community's stability objectives and they face being forced to increase their 'competitiveness' to maintain and attract forest company facilities. In short, the post-war (and longer) path of provincial government using their powers to mediate global market forces and provide some degree of insulation to local communities is being reversed as government policy removes these protections and subjects local communities to a process of re-peripheralisation in which they become more exposed to the vagaries of the increasingly volatile global market.

This policy implies a change in the role of the provincial state from an activist, mediating state to one which takes on more of the characteristics of a rentier state, using public ownership as a means of deriving revenue flows but removing itself from the more direct regulation and governance of the forest products chain. Indeed, the movement towards a 'results based code' has also been accompanied by a move towards the self-regulation of the industry and a large reduction in the functions and staffing levels of the Ministry of Forests. This shift towards the 'Monopoly Capitalist Utopia' is supported by provincial government interests which hope that giving major forest companies more operational flexibility will increase their profitability and generate higher revenues for the government than the current revenues obtained in a Regulation Trap.

This shift in provincial government policy has not been greeted with universal acceptance. Although, as one interviewee noted, it is no longer possible to argue for "economic security" because of the changed ideology of the new government and that the language of "opportunities" must now be used, it is clear that some local community interests are resisting the changes and calling for alternative measures. The position of the UCBM and the NCMA in opposing changes to the cut control and appurtenancy regulations have already been noted. In addition, there is considerable opposition to the limited marketisation of timber sales. Small producers and contractors have argued, with the support of both the UCBM and the NCMA, that a higher percentage of timber sales should be placed on the market replacing the current licencing system. In their view, the limited marketisation of timber sales (i.e. approximately 13 per cent of the total harvest) will favour the major companies and again lead to small producers and the value-added sector having an inadequate access to the timber supply. The Central Interior Wood Processor's Association has already withdrawn from negotiations with the Minister of Forests over the new forest policy in protest.[22] The smaller producers would like to see at least 40 per cent of timber sold through auction as a way, they argue, of enabling small

[22] See "Players Urged to Stay Course on Forest Reform", Prince George Citizen, June 26, 2002, p.1

scale and local producers to break the monopoly of timber supply currently held by the major forest companies. Whether such a system would effectively reduce the market dominance of the major forest companies is open to doubt although many of the arguments being made by associations representing small, independent producers and contractors and by municipalities assume that it will make a difference and that an increased role for the market will move towards a 'Competitive Capitalist Utopia' in which local producers have greater access to local timber. This would, if realized, negatively affect the interests of the major forest companies and also the provincial government since it too would be likely to lose some control of revenue flows. The NCMA, in pushing for greater marketisation, argues that if "pricing reform is going to work, the Province must be prepared to accept that they too will be governed by the free market system, and can no longer pre-set the revenue that they expect to attain from the industry during a given year."[23] The unwillingness of the provincial government to accept this explains why the 'Monopoly Capitalist Utopia' is the more likely outcome.

Not all reforms have been in this direction. In an interesting example in the Queen Charlotte Islands, it appears that the Haida First Nation, environmentalists and mill workers have combined to demand greater local control of resources and a 50 per cent reduction in the AAC in order to enable longer term sustainable communities.[24] This move, which directly threatens the interest of the major forest company licencee (Weyerhauser) and the provincial government by reducing the AAC and hence government stumpage revenues, provides an example of the movement towards the community (activist) utopia.

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[23] See NCMA, ibid.

[24] See Gordon Hamilton, "There's a Mutiny on Haida Gwai", Vancouver Sun, 25 July 2002, pp. C8-9.

Each of these utopias and degrees of regulation is therefore associated with different characterizations of the governance of the forest products chain and are summarized below in Figure 9.

Figure 9. Forestry Industry Characteristics and the Degree of Regulation

Competitive Capitalist Utopia	**Monopoly Capitalist Utopia**	**Regulation Trap**	**Co-Management Utopia**	**Community (Activist) Utopia**
Public and/or private land	Public and/or private land	Public land	Public land	Public land
Competitive, open bidding for access to all timber	Major companies control most licences to harvest timber or dominate competitive timber sales	Too much regulation for forest companies Communities still subject to significant economic shocks	Extensive regulation creating environment for high quality forest products	Community control / community forests
Many small, local firms primarily private (some collective)	Operational flexibility for major companies 'Competitive' communities	Major companies dominant with small firm fringe	Mix of firms all subject to high degree of regulation	Local collectively owned firms, private firms with public representation
Rentier, pro-competitive state	Rentier state	Activist state	Partnership state	Collectivist, decentralizing state

To date, local communities have been the weakest link in the clash of interests with the more powerful major forest companies and the provincial government. It is clear that current policies are leading to a trend towards the Monopoly Capitalist Utopia. However, how far this trend is allowed to go and what type of institutional governance of the forest products chain emerges remains contested. How this contestation plays out will be key to determining what type of future forestry dependent communities in northern British Columbia face.

Appendix

Figure 1: BC Forest Region and District Boundaries

Source: BC Ministry of Forests available at
http://www.for.gov.bc/pab/publctns/getintch/provmap.htm