

**ENGAGING SUCCESS:
A QUALITATIVE ANALYSIS OF THE PROSPECTIVE BENEFITS
OF IMPLEMENTING GAINSHARING IN BRITISH COLUMBIA'S
PULP AND PAPER INDUSTRY**

by

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Abstract

This qualitative analysis examines the effects of gainsharing on both productivity and employee engagement in the British Columbia pulp and paper industry. The pulp and paper industry plays an important role in the provincial economy by contributing four billion dollars annually and employing over 10,000 workers in high-pay unionized jobs. However, the industry has seen a significant decline in the past ten years in the number of facilities operating, which has reduced employment and ultimately tax revenue in the province. The economic importance of the pulp and paper industry highlights the need for unions and management to work together. Management must engage the human capital of its employees in order to achieve a competitive advantage in the global market.

Gainsharing is a means to increase productivity; more importantly, it is a method of facilitating a cooperative relationship between unions and management. This cooperative relationship not only increases productivity, but also significantly reduces labour relations costs while promoting a sense of satisfaction, loyalty and commitment within the employees.

In this project, I develop a model explicitly outlining the impact of gainsharing within the pulp and paper industry. I test the model by reviewing and summarizing existing literature. The results are strongly supportive of the positive impact of gainsharing on productivity, reduced labour relations costs, employee engagement and profitability. I present recommendations for the application for government involvement, which can contribute to the success of this process, thus contributing to the success of the pulp and paper industry.

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Chapter One: Introduction

The decline in the forestry industry in Canada has been dramatic. It seems like the news media is continually reporting another casualty within the forestry sector, which includes the pulp and paper industry. Unfortunately, some of the current factors influencing the viability of the pulp and paper industry in British Columbia are beyond the industry's control. These factors range from the future impact of the pine beetle epidemic, which has affected a significant portion of British Columbia's forests, to the economic collapse of the US housing market. Whatever the cause, the forestry sector must do something significantly different than the status quo in order to continue to compete in the global market.

The implementation of a gainsharing model, which has statistically proven benefits in diverse sectors, can provide the necessary changes to the industry. Gainsharing attaches a monetary value on productivity improvements generated by employee suggestions. These employee suggestions include ideas on how to increase production, as well as ideas on how to increase the efficiencies of the process in order to reduce the costs to produce. In other words, productivity gains are achieved either by impacting the inputs (costs) or the outputs (volumes). Most gainsharing models rely on management being able to engage employees in the employee suggestion process.

Early research into gainsharing models identified productivity improvements as being the primary benefit for companies implementing these programs. However, as studies

continued, it became apparent that the improved labour relations resulting from gainsharing could have equal or greater long term benefits for companies.

Gainsharing research shows that the employee engagement process provides employees with “increased intrinsic rewards from having a greater say in how work gets accomplished, heightened self-esteem and pride, improved working conditions, better employee-supervisor relationships, reduced grievances, quicker resolution of problems, greater employment security and enhanced financial rewards” (Cooke, 1989). In other words, greater employee satisfaction leads to greater employee involvement: a happy employee is a productive employee.

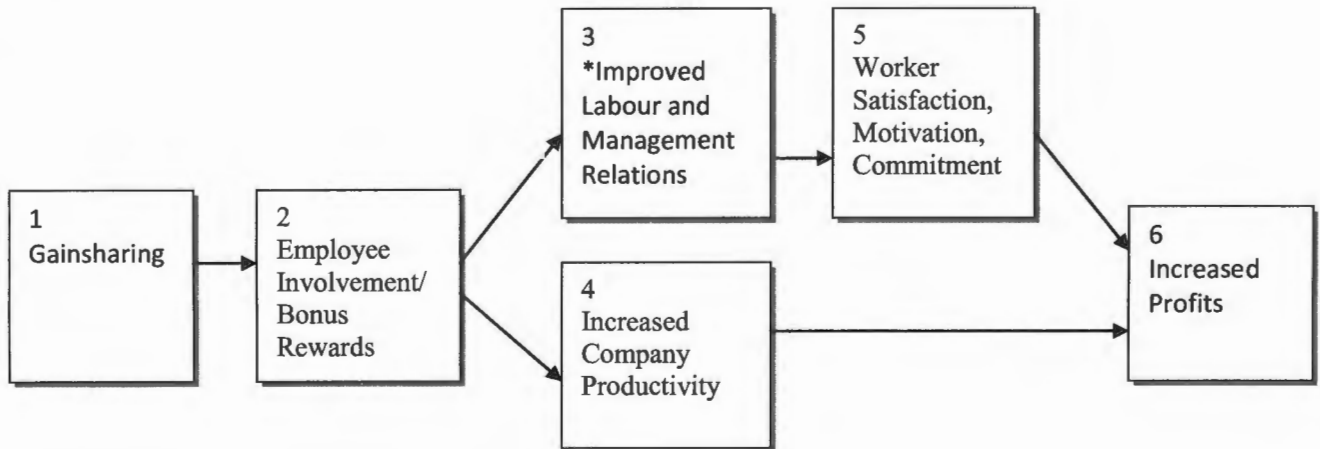
Research Question

British Columbia's pulp and paper mills are generally older facilities that require significant capital improvements in order to compete in the global market. It is necessary to make changes to the current operating practices in order to reduce operating costs to remain a viable sector in British Columbia. Many small communities throughout British Columbia rely on some division of the forestry sector to sustain them. These municipalities, as well as the provincial and federal government, rely heavily on the forestry sector for the tax dollars it generates. I hypothesize that the implementation of gainsharing will have a positive effect on the success of British Columbia's pulp and paper industry. Additionally, I hypothesize that there is a direct link between gainsharing

and productivity improvements, as well as a link between gainsharing and employee engagement which leads to employee satisfaction and reduced labour relations costs.

Below is a diagrammatic representation of the effects of gainsharing.

Figure 1. A Diagrammatic Representation of Gainsharing Effects and Outcomes



*The reduced labour costs include reduced absenteeism, improved safety record and reduced number of grievances.

I propose that tables six through eight test the links identified below:

- Table 6 tests links between boxes 1, 2, 4 and 6
- Table 7 tests links between boxes 1, 2, 3 and 6
- Table 8 tests the link between boxes 1, 2, 3, 5, 6

I report the results of this research later in a way that tests the links in this model.

Chapter Two: Methodology

This report employs a qualitative analysis research methodology. This method involves reviewing existing research relevant to the subject matter, and compiling and interpreting the information. A fundamental principal of utilizing a qualitative analysis is more of understanding rather than to explanation. The process of conducting qualitative research involves finding the appropriate information through “the collection of detailed descriptive material and then codification, categorization and interpretation of the data” (Woolfe et. al., 2003).

There were many sources used for the analysis of this paper. One book in particular, *Gainsharing and Goalsharing: Aligning Pay and Strategic Goals* proved invaluable as this book identified a number of articles focusing on each of the criteria that was identified for my research. I used the original sources identified in the book for my research and summarized the conclusions. The book contains summary tables of articles to structure the information however I used the original sources from the tables to develop my own summary tables as identified below.

The qualitative analysis methodology does have limitations. For example, some argue that without hard numbers, or a quantitative portion of analysis, it is difficult to prove or disprove a hypothesis and the interpretations of the data may not be valid or reliable.

Another limitation of utilizing a qualitative analysis is it may be difficult to summarize the findings of some authors who may have biases and prejudices towards a topic. Articles are written by the author who may have some slant towards the subject he or she is writing about, which may be reflected in their work therefore compromising their findings.

Notwithstanding these limitations, qualitative analysis methodology can be very useful as its objective is to gather the most important findings from existing research in order to understand the subject matter from a broad perspective.

In the case of this report, the methodology allows me to apply the key findings from existing research on gainsharing in a new context; the pulp and paper industry which I hope may lead to further support my hypothesis. While the report discusses gainsharing extensively, outside the context of pulp and paper industry, I conclude the findings can be applied to the pulp and paper industry.

Chapter Three: Context

Implementing gainsharing in today's primarily unionized pulp and paper industry is not easily achieved. The unions bargain collectively province wide, in a format called "target bargaining", where all Communication Energy Paperworkers Union of Canada (CEP) locals, the primary union in forestry, negotiate one contract that each local must obtain. Negotiating differences in the benefits between the various mills is not acceptable and would signify a break from the national organization. Understanding the history of how and why unions developed in British Columbia's pulp and paper industry is important because it directly affects the implementation of gainsharing in the unionized sector.

History of Union Development in British Columbia

The Canadian labour movement dates back to the early 19th century. Union development was initially influenced by British tradesmen who had immigrated to Canada and brought their union ideals to the colony. The first reported organized union arose in what is now the Maritime Region of Canada in 1812 (Maple Leaf Web, 2007).

Like unions today, the primary goal of early unions in Canada was to improve wages and working conditions for employees. It was not uncommon during the 19th century for companies to require that employees work excessive hours and to dismiss workers without a fair process (McCrostie, 1996). Company owners profited from the workers

Table 1: Union Density in Canada

Year	Union Memb.	Civilian Labour Force	Non Agr. Paid Workers	Union Memb. % of Civilian Labour Force	Union Memb. % Non Agr. Paid Workers
	(000s)	(000s)	(000s)	%	%
1997	4,074	14,854	11,758	27.4	34.6
1998	3,938	15,079	11,964	26.1	32.9
1999	4,010	15,316	12,212	26.2	32.8
2000	4,058	15,588	12,603	26	32.2
2001	4,111	15,847	13,027	25.9	31.6
2002	4,174	16,110	13,304	25.9	31.4
2003	4,178	16,579	13,650	25.2	30.6
2004	4,261	16,959	13,965	25.1	30.5
2005	4,381	17,182	14,265	25.5	30.7
2006	4,441	17,343	14,464	25.6	30.7
2007	4,480	17,593	14,782	25.5	30.3

Reference: Reproduced from BC Stats

In British Columbia, 34.8% of the approximately 502,000 non-agricultural paid workers are union members which is higher than the Canadian average. British Columbia has the third highest unionization rate among Canadian provinces, ranking after Newfoundland and Quebec.

Although union membership has declined somewhat over the past decade, unions continue to be a powerful force advocating for the rights of their members through the collective bargaining process and play a vital role in the Canadian economy.

Unionization in BC's pulp and paper industry also has a long history. In the 1890's, the International Brotherhood of Paper Makers (IBPM), which was initially an American union, agreed to represent highly skilled paper machine operators in BC and later expanded to include the unskilled workforce in the papermills. The relationship between Canadian papermill workers and American unions continued until 1974, at which time on-going tensions led to the Canadian workers making a final break and forming the Canadian Paperworkers Union (CPU).

The CPU quickly gained a reputation for fighting aggressively for fair compensation for their members. Their first strike, in 1975, lasted over six months and resulted in significant pay increase for the workers. In 1992, the CPU joined two other unions, the Communications Workers of Canada, (CWC) and the Energy and Chemical Workers Union, (ECWU) to form the Communication, Energy and Paperworkers Union (CEP) which became and remains the largest union in the pulp and paper sector in BC. Appendix 1 illustrates the emergence of the CEP from its parent unions.

According to the Forestry Products Association of Canada, the pulp and paper sector of Canada employs approximately 300,000 workers, of which 10,000 are employed in BC. The 10,000 workers are represented by either the CEP or the Pulp and Paper workers (PPWC) which is the other union representing pulp and paper workers in BC.

The relationship between the pulp and paper industry's management and its significantly unionized employees may generally be characterized as acrimonious. Although the incidents of work stoppages have decreased in B.C., the relationship between management and unions still consist of a top down approach, with management making all of the decisions for the company without involving employees in the decision making process. The confrontational union-management relationship of the past involving frequent and protracted strikes needs to change to a more cooperative labour management culture and environment, in order to compete in the global market (Horner, 2006). There are a large number of factors adversely impacting the pulp and paper industry as described below therefore both unions and management need to work together in order to overcome the detrimental impact of these factors.

Economic Impact of the Pulp and Paper Industry

The pulp and paper industry in Canada has experienced a significant decline in the past 10 years, which has created a ripple effect throughout Canada, causing hardship for workers, their families, their communities and ultimately impacting the entire Canadian economy.

The following factors have been identified as contributing to the decline of the pulp and paper sector in BC:

- Poor market conditions.
- Low capital reinvestments and aging assets compared to the global competition.
- The Return on Capital Employed (ROCE) is well below an industry minimum of 12%
- The current pine beetle epidemic, which is threatening B.C.'s large supply of high quality fibre.
- A potential for using the current form of power generation, the biomass, in an independent power industry.
- The high Canadian dollar compared against the American dollar

(PriceWaterHouseCooper, 2007)

The pulp and paper industry contributes significantly to the Canadian economy. Forest products, which are categorized in the manufacturing sector, contribute to \$66 billion in export sales, which represents 11% of Canada's manufacturing GDP (Forest Product Association of Canada, 2009). Canada is the second largest producer of pulp and paper in the world and first in pulp and paper exports (Minnes, 2008). Approximately 23 million tons of paper product shipments are exported every year, consisting of newsprint, paper and paperboard and packing paper and board (Stats Canada, 2009). Currently, there is a pulp and paper mill in every province in Canada except for Prince Edward Island.

Approximately 80,000 people are employed in the forestry industry in British Columbia. In addition, for every forestry job, there are a number of corresponding indirect jobs.

The common industry multiplier of indirect jobs to direct jobs is 2:1, therefore the total number of jobs related directly or indirectly to the forestry industry in BC is approximately 240,000.

Fourteen percent of forestry workers in BC are employed in pulp and paper and the remainders work in the solid wood sector as seen in Table 3. As is noted above, there are 10,000 direct jobs in the pulp and paper sector, and accordingly, a total of 30,000 direct and indirect jobs. The pulp and paper industry contributes over four billion annually to the provincial economy. The direct jobs are typically high paying, second only to mining and oil and gas. The average earnings of a pulp and paper employee are \$96,000 per year which includes wages and benefits.

Unfortunately, this number of forestry jobs in BC is declining as a result of the downturn in the industry. In the pulp and paper sector, the decline in jobs stems from mill closures, improvements in technology causing lower labour requirements and consolidation of organizations to increase economies of scale.

Table 2. Average Number of Full Time Positions in the BC Forestry Industry

	1986	1996	2001	2005
Market Pulp	6,900	7,500	6,100	5,000
Newsprint	4,100	3,700	3,300	3,500
Other Pulp and Paper (estimate)	n/a	n/a	2,400	2,000
Pulp and Paper sector total	n/a	n/a	11,800	10,500
Lumber	29,300	23,700	19,200	16,800
Plywood and Veneer	5,100	3,300	3,600	3,600
Logging (company and contractor)	27,000	30,500	26,800	23,500
All other sectors (value added, provincial government, silviculture)	n/a	n/a	24,200	23,000
Total direct employees in BC Forest Industry	94,600	99,100	85,600	77,400

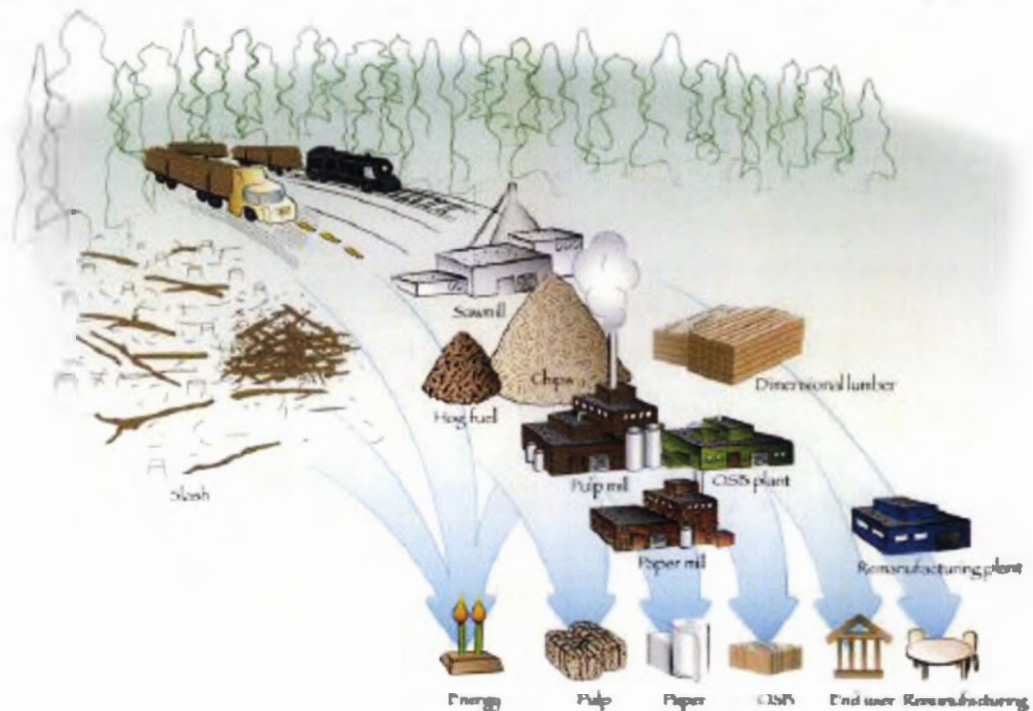
Source: PricewaterhouseCoopers

The forestry industry is a very integrated process commencing with logging and extending to various end products. The pulp and paper industry uses chips, a byproduct of logging, as a raw input to manufacture their products. The sawmills, whose end product is lumber, benefit economically from selling residual chips to the pulp and paper industry. In return, the purchase of chips supports continued employment for logging and sawmill workers. The value of the residual chips is estimated at \$1.5 billion for the solid wood sector in British Columbia (Natural Resource Canada, 2009). The pulp and paper mills not only support the sawmills but also provide tax revenue for the government.

This interdependency between pulp and paper mills and sawmills is significant. The lumber and logging industries rely on the pulp and paper industry to use their residual chips and the pulp and paper industry relies heavily on the logging and lumber industry to provide their fibre supply. When one sector is depressed, such as reduced exports of lumber to the US due to the depressed housing market, as seen today in the global recession, the impact on the other sectors is substantial.

Figure 2. Illustration of the Flow of Fibre within the BC Forest Industry

The following diagram illustrates the flow of fibre within the BC forest industry:



Reference: PricewaterhouseCooper, 2007

Within communities outside of the greater Vancouver area, the forestry industry provides employment to an average of 27% of the workforce (PriceWaterHouseCoopers, 2007). Pulp and paper mills are typically located in small towns, near logging operations. These small communities rely heavily on both tax revenue and employment. These mills also provide support to the municipal infrastructure thereby increasing dependence on the industry by the small communities. Communities impacted recently by mill closures include: Prince Rupert, Elk Falls, McKenzie and most recently Kitimat.

BC's pulp and paper industry contributes approximately \$600 million annually in revenues to all levels of government - municipal, provincial and federal - through taxes, including employee income taxes. This is a substantial amount which is used for the various services all British Columbians have grown to expect. The recent decline in the forestry sector has a pervasive impact, well beyond the scope of the forestry industry.

An important factor that measures the viability of the pulp and paper industry in BC is the Return on Capital Employed (ROCE). This ratio helps to quantify the profitability of an industry by calculating the net earnings or losses as a percent of year end capital employed. The minimal acceptable ROCE for a manufacturing industry is 12%. The pulp and paper industry has consistently performed below this number for many years. According to the *Report on the Economic Impact of the BC Pulp and Paper Industry*, the ROCE has not exceeded 12% over the past 10 years and in the last 20 years, the

ROCE averaged 4.7%. One of the factors contributing to this low ROCE is that the pulp and paper industry requires intensive capital investment before a high return can be realized to increase the ROCE.

Another factor that impacts ROCE is that the pulp and paper industry in BC competes within a global market. Although the companies in BC are large, they do not impact the selling price of pulp or paper in the global marketplace. The price of paper is set by three large American paper producers - International Paper, Smurfit and Temple Inland - who set the price based on their price structure and market demand. The BC industry is in fact a price follower. The net profits realized are dependent on the price of the product sold which is beyond the control of Canadian manufacturers. The price of pulp is similar to other commodity products in that its price is determined as a function of the market as a whole. The pulp prices fluctuate depending on market forces and therefore the profits are cyclical.

It is very important for pulp and paper mills to minimize their costs and increase their earnings in order to compete globally. The earnings from pulp and paper over the last 20 years have been well below industry expectations, leading to difficulty in attracting new investments. It is imperative that pulp and paper mills reduce the cost per ton of production if they are to survive this deep economic downturn.

Factors Impacting the Pulp and Paper Sector of British Columbia.

Pulp and Paper union members and management need to work together for the same goal, the success of the companies that employ them. Both union members and management need to understand the imperative of increasing productivity for the survival of the industry. The current adversarial relationship between union members and management needs to change so that the two groups can work together, both contributing ideas to improve productivity. Both management and union members must recognize that the basic premise of a capitalist society is in order for any organization to remain viable it must make a profit that represents a high rate of return. If a company is losing money or providing an inadequate rate of return, then it is only a matter of time before all workers, both management and union, are out of work. It is important for all employees to understand that the relationship must be a “we” and not an “us and them”. Unfortunately the typical top down form of management that exists in the pulp and paper industry in BC encourages management to direct the workforce and the role of unions is to resist management’s attempts at worker control. Typically unions make voluntary concessions only if the mill is facing imminent closure, however the working relationship should be cooperative long before a mill is on the brink of closure.

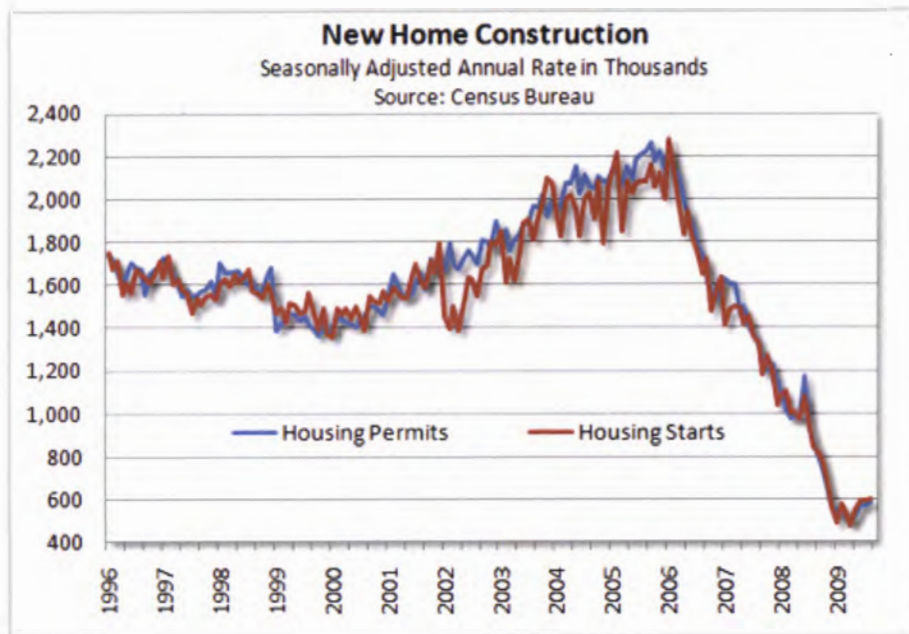
There are several factors affecting the BC pulp and paper industry today that have contributed to the need for a cooperative working relationship. These factors are significant and can cause potential harm to the BC pulp and paper industry. Some

factors listed below are beyond the control of companies but they also might create more of an incentive for unions and management to work together to increase efficiencies and productivity.

- The large decline in the US Housing Market starts
- New emerging low cost foreign competition
- Old equipment that requires significant capital investment to replace
- A wage premium to unionized workers compared to their non-union counterparts
- Pine Beetle Epidemic that has ravished the BC Forests
- High Canadian Dollar

US housing starts have moved from an all time high in 2006 to a massive decline of 600,000 units per month in 2009. As a result, the solid wood sector in BC, which represents 39 percent of BC's exports, experienced back to back declines in exports, both in 2007 and 2008.

Figure 3. U.S.A. Housing Starts



Reference: Google Images USA Housing Stats

Housing starts in the US are a leading indicator of the strength of the US's economy. The significant decline in US housing starts beginning in 2006 has slowed down the world's economy and contributed to pushing the global market into a deep recession. The direct impact on BC was first felt by the many sawmills that export their wood to the US for newly constructed homes. Export Development Canada's, Vice President of Economics and Deputy Chief Economist, Peter Hill, has stated that "British Columbia is the province that has been hardest hit by the housing-centered slowdown in the US". The resulting ripple effect has impacted the pulp and paper sector as well. As discussed earlier, the forestry sector is very highly integrated; therefore, a slowdown in sawmill production negatively impacts the downstream businesses that rely on the chips

for their process. As for pulp and paper, the residual chips the industry relies on are now in short supply and pulp mills must resort to the expensive process of whole log chipping to obtain their fibre supply.

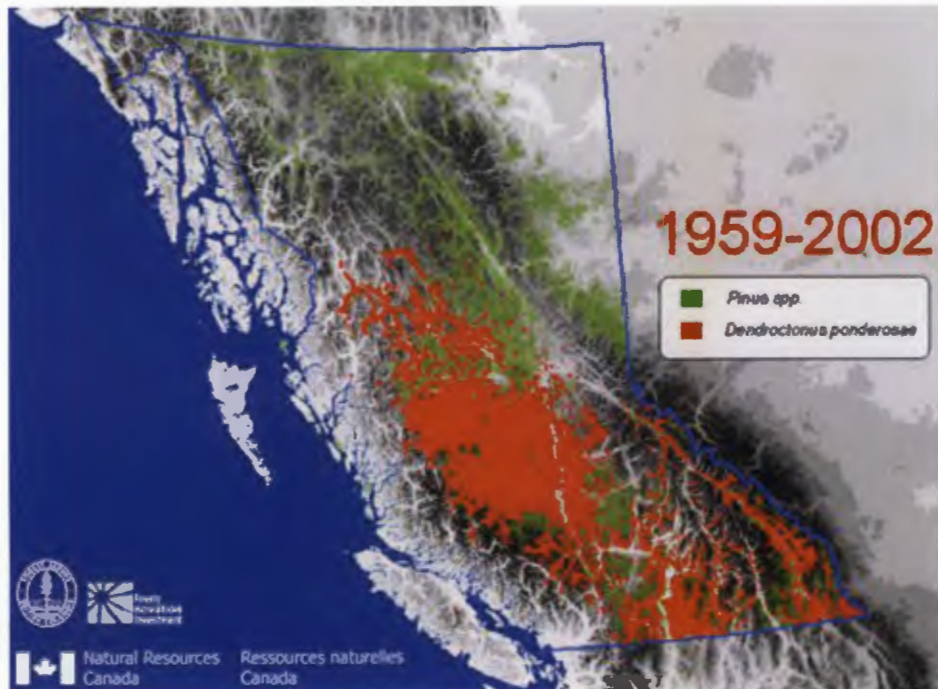
Another factor negatively impacting the health of the pulp and paper industry in BC is the entrance of foreign competition from countries such as Brazil and China. Brazil is becoming a direct competitor to BC because they are able to draw on a renewable fibre supply of the fast growing eucalyptus trees, which is now considered a top quality pulping fibre due to its high yield. Many new papermills are opening in Brazil due to this renewable fibre supply with the added advantage of cheap labour. China has also emerged as a competitor with the construction of several new pulp and papermills. China is developing deals with Laos and other neighbouring countries to establish eucalyptus monocultures in order to continually supply fibre for paper production (Lang, 2009). These new competitors have newer and more efficient mills, where the costs to produce are less than those in BC.

BC's pulp and papermills are older and much more capital intensive therefore they are less efficient than their foreign competitors. Management has not re-invested into the mills due to the low return on capital expenses of such investments.

The wage differentials between union and non-unionized workers also impact the cost per ton in BC mills. For pulp and paper mills, labour costs are a substantial expense along with raw material and energy cost. BC's pulp and paper mills are predominantly unionized and pay higher wages than non-union organizations. According to the Business Council of BC, the wage differential between union and non union workers in BC is 19.5% with the average wage of a union employee at \$24.13 and the average wage of a non union employee at \$19.43. This 19.5% increase in cost associated with labour impacts the potential returns (Business Council of British Columbia, 2007).

Another factor affecting the BC industry is the current pine beetle epidemic which has ravaged BC's supply of high quality fibre and created an increase in cost due to decline in supply. The pine beetle has wiped out 40% or 35,000 square miles of BC's marketable pine trees, which are a key soft wood construction material (Western Canada Pine Beetle Spreads, 2007). If left unabated, the pine beetle will continue to severely impact the forestry industry in BC. Figure 4 identifies in red the areas in BC which are affected by the pine beetle epidemic.

Figure 4. Pine Beetle Infestations in BC



Reference: Natural Resource Canada

Finally, the high exchange rate of the Canadian dollar has a large impact on the forestry sector which is Canada's greatest exporter. In most manufacturing sectors that export, including forestry, their products are sold in US dollars while expenses remain in Canadian dollars. The high Canadian dollar minimizes the profits as companies get fewer Canadian dollars per American dollar which in turn reduces revenue and profits. Table 3 describes the top three Canadian exports which are all related to the forestry sector.

Table 3. Exports of Canadian Manufacturing Industry



Reference: Stats Canada

BC's forestry industry is facing significant challenges and companies must optimize efficiencies in order to minimize the factors beyond their control. Union members and management must work together to reduce costs to ensure that the pulp and paper industry remains viable and continues to employ a large number of workers in BC.

Chapter Four: Literature Review

What Needs to be Done

In summary, the pulp and paper sector has been dramatically affected by the changes in the current global economy. Many pulp and paper mills have been forced to close, impacting not only the communities in which the mills are located but the entire provincial economy. Although there are many factors outside of the control of individual companies, the purpose of this paper is to identify a strategy that the industry can implement which, if successful, will lead to increased productivity, satisfied workers, reduced costs and increased profits. The strategy involves management and unions working together in a cooperative relationship to maximize the efficiency of individual mills. This cooperative employee-management relationship arises through the structure or process assigned to bring the two sides together with a common stated goal of increased productivity.

In order to succeed, the cooperative structure or process has to be deliberate and formal and not *ad hoc*. For unions and management to truly cooperate in a deliberate structure, each has to have the willingness to see the opposing point of view and to accommodate each other's concerns. The relationship cannot be forced and must be voluntary, otherwise each group will continue with separate identities and separate goals. Michael Schuster states that "merely creating a structure for cooperation without first bringing about a change of attitude will not result in meaningful union-management

cooperation. Cooperation is a fragile creature – difficult to build and easily destroyed” (Schuster, 1983).

Robert Dubin (1949) writes that the basis of a stable union-management relationship lies in the development of a joint consultation process. This process facilitates a relationship of compromise which stems from the ability of one group to see the point of view of the other group. Consultation stems from the union taking the initiative in operating and participating in a suggestion system that improves efficiency. Additionally, that management is willing to admit workers to a partnership in making key decisions affecting production.

Gainsharing is a system that achieves the type of consultation that Dubin describes where both management and unions bring forward ideas on how to improve efficiencies in an organization. Management must be willing to listen to the union and to make decisions based on their ideas. Unions must be willing to bring forward their ideas, contribute to decisions determining if the ideas are viable and aid in implementing them.

What is Gainsharing

Gainsharing is a productivity based payment system which provides financial incentives to employees based on some pre-defined measure of productivity. Gainsharing should not be confused with profit sharing system where bonuses are paid to employees based

on the profits of a company. Gainsharing is based on the assumption that organizational performance can be improved by paying employees bonuses based on measureable gains in key performance indicators and by empowering employees to contribute, directly and indirectly, to these performance improvements. The first step in this process involves determining how to measure organizational performance; the second step involves determining how employees will be empowered to participate.

Gainsharing is a model that if successful, can provide contingent financial bonuses to employees by the company, but a more significant outcome is that it may modify employee's behavior and improve labor relations. In the U.S. General Accounting Office 1981 report evaluating gainsharing, it was found that gainsharing resulted in a 17% savings in labor costs, improved work relations, reduced absenteeism, reduced turnover and fewer grievances.

There are several models of gainsharing. I will briefly discuss each one in order to illustrate how gainsharing works and how it impacts the workforce. There is an employee involvement component with two of the models however the level of employee involvement differs between the models identified. Bullock and Lawler (1984) indicate that the basic principle of gainsharing is to establish effective structures and processes of employee involvement and a fair means of rewarding system wide performance improvements. This high level of cooperation will lead to information

sharing which also increases employee involvement. The models I describe include the very popular Scanlon Plan, the Rucker Plan and the Improshare Plan.

Scanlon Plan

The Scanlon plan was one of the earliest gainsharing models. The plan was developed in the 1930s by Joseph Scanlon, a union member, who understood that the workers in a plant had ideas on how to increase productivity however were unwilling to contribute those ideas to improve productivity in the mill. Along with Clinton Golden, a regional director of Scanlon's union, they interviewed employees on how to improve productivity in the current workplace and with the information, were able to help the workplace improve productivity. Through the years, the model has evolved and added a component of employee bonus plan to financially reward all employees on a measureable variable. A key component of the Scanlon plan is the formalization of a suggestion system. Early Scanlon plans invited employees to record their productivity-enhancing idea on a form and submitted it anonymously. However subsequent plans emphasized face to face meetings and allowed employees to maintain ownership of their ideas by being part of the decision making unit. This further facilitated the improved labor relationship.

The results achieved from Scanlon plan are relatively simple and easy to explain and understand through the measurement of the cost of hourly employees divided by the sales value of production.

Cost of hourly employees/ (Sales \pm Inventory Change) – Returns

Rucker Plan

The Rucker plan is similar to the Scanlon plan, using two committees, a Production Committee and a Screening Committee. The committees are responsible to review all suggestions made and to discuss problem areas in the plan. The committees consist of both management and union employees.

The Rucker plan is a modification of the Scanlon plan in the calculation of the bonus. The Rucker plan tries to present a solution to the issue with the Scanlon plan of how to measure outputs. Rucker plan is similar to Scanlon by using the cost of hourly employees (inputs); however it refines the measurement of productivity improvements by assessing the sales value of production to reflect a more accurate picture of how the outputs are measured.

Cost of hourly employees/ (Sales \pm Inventory Change – Returns) – Outside Purchases

The bonus available can be achieved not only by reducing the payroll costs, but also by reducing the outside purchase costs. This allows employees to reduce efforts by achieving reductions in the inventories used for a certain level of production. The only disadvantage of the Rucker plan is it is a more complicated formula and it may be more difficult for the employees to comprehend.

Improshare Plan

The Improshare plan differs from both the Scanlon and Rucker plans in two key components, employee participation and the calculation of the bonus. Mitchell Fein, founder of the Improshare plan stated that “if the money is there, people will find a way to participate” (Fein, 1976). Since making this statement, the Improshare plan has been modified and Fein took a slightly different approach and suggested that the plan should “work with whatever participatory structure the organization had in place” (Fein, 1976).

The Improshare plan is considerably more complicated than either the Scanlon or the Rucker’s plan. Once again the input remains the same as both other plans described however the difference resides with the measurement of the outputs. This plan tries to more accurately measure outputs by using “cost accounting and industrial engineering concepts of a standard hour of direct labor time to establish the value of outputs” (Mericle and Kim, 2004). This type of plan works best in types of organizations that have a very detailed cost structure and its information is very reliable. The advantage to this plan is that it does not respond to price movements of the product, however, the main disadvantage is that its measurements are very complex making it difficult for employees to make the connection between their improvement efforts, bonuses and productivity. The Improshare plan is not concerned about the benefits of employee involvement and potential improvements in labor relations by engaging in employee participation but is strictly concerned with the increase in productivity.

The essential features in the three gainsharing models are summarized in Table 4.

Table 4: Summary of the Identified Gainsharing Plans

Summary of Gainsharing Plans					
Type of Gainsharing Plan	Theory	Primary Goal	Secondary Goal	Type of Participation	Suggestion Making
Scanlon	Org. single unit; share improvements; people capable and willing to make suggestions	Productivity Improvement	Attitudes, communication, work behavior, quality, cost reduction	Two committees: Screening and production	Formalized system
Rucker	Primary economic incentive; some reliance on employee participation	Productivity Improvement	Attitudes, communication, work behavior, quality, cost reduction	Two committees: Screening and production	Formalized system
Improshare	Economic incentive, increase performance	Productivity Improvement	Attitude, work behavior	Bonus committee	None

Reference: This table was reproduced from Schuster, 1984

While each of these three models is well known, there are many different variations of them in existence. Each model can be used as a template to work from so that the plan used in the organization is specific to the industry. For example, in the pulp and paper industry, the measurement of inputs and outputs is fairly straightforward. The measurement for inputs would be the cost to produce a ton of product and the outputs would be the tonnage of product produced.

Chapter Five: Results

Impact of Gainsharing on Productivity – Tests links 1, 2, 4 and 6

Does gainsharing actually work to increase productivity? Can increases in productivity be realized by providing a financial incentive to the employees based on a measurable rate? The literature indicates that indeed there is a correlation between gainsharing plans and increases in productivity. Below is a summary of studies that describe the impact of gainsharing on various types of organizations. While pulp and paper is not directly referred to, manufacturing firms are a similar type of industry and I will relate the findings to pulp and paper in my discussion and conclusion sections.

For the purposes of this analysis, a number of gainsharing studies were reviewed. There has been a dramatic increase in the number of studies on the impact of gainsharing over the last 10 years. Forty studies were published since 1970 on the impact of gainsharing whereas in the last 10 years, 25 or 62.5% of the studies have been conducted (Mericle and Kim, 2004). This escalated increase in interest has to do with the new management style which utilizes the knowledge of the employees as a company strategy for improvement. In addition to an increase in the number of studies conducted, the type of research that has been initiated has also changed. Empirical studies which are based on experiments and observations have replaced the previous emphasis on theoretical studies which base the results on theories. Between 1970 and 1979, the types of studies conducted were equal however between 1990 and 2001, over 80% of the studies conducted were empirical.

Table 5: Summary of Gainsharing Studies by Period and by Type

Period	Total number of Studies	Number of Theoretical Studies	Number of Empirical Studies
1970-1979	6	3 (50%)	3 (50%)
1980-1989	9	4 (44%)	5 (56%)
1990-2001	25	5 (20%)	20 (80%)

Reference: Table reproduced from Mericle and Kim, 2004

Numerous studies have been conducted with results that demonstrate a positive relationship between the two variables, gainsharing and productivity. The summary in Table 6 identifies the studies that describe the impact of gainsharing on productivity. Much of the research summarized in Table 6 occurs within the manufacturing industry. Applying gainsharing and measuring the impact on productivity within the manufacturing industry is simpler because the inputs and outputs are typically known. As identified in Figure 1, the link from gainsharing to employee bonus rewards, leads to increase in productivity and improved profits.

Table 6 Studies Summarizing Impact of Gainsharing on Productivity

Author	Year	Type of Research	# in study	Type of Plant studied	Union	Type of Plan Used	Productivity Increase
Schuster	1980	Empirical: Longitudinal	2 plants	Manufacturing	Yes	Ruckers	Yes
Schuster	1983 a	Empirical: Longitudinal	6 plants	Manufacturing	Yes	Scanlon(2) Ruckers(4)	Yes, 5 of 6 plants
Schuster	1983	Empirical: Longitudinal	9 plants	Various manufacturing	Yes	Scanlon(4) Ruckers(2) Other(3)	Yes, 6 of 9 plants
Schuster	1984	Empirical: Longitudinal	1 plant	Manufacturing	Info. NA	Scanlon	Yes
Miller and Schuster	1987	Empirical: Longitudinal	1 plant	Nickel Alloy Production	Yes	Scanlon	Yes
Wagner et al.	1988	Empirical: Longitudinal	1 plant	Iron Foundry	Yes	NA	Yes
Doherty et al.	1989	Empirical: Archival	4 plants	2 Manufacturing, 2 Service	No	NA	Yes
Kaufman	1992	Empirical: Survey	104 org.	Various manufacturing	some	Improshare	Yes
Bowie-McCoy et al.	1993	Empirical: Longitudinal	1 plant	Public Acct. Firm	No	NA	Yes

Reference: Table adapted from Mericle and Kim, 2004. Columns one, two and three taken directly from Mericle and Kim.

Comments on Table 6 - Impact of Gainsharing on Productivity

The group of studies in Table 6 link gainsharing to productivity. Some of the studies do not indicate the quantitative results as the focus was more on success or failures of the models.

Michael Schuster, a leading researcher on the topic of gainsharing, found in his 1980 study a statistically significant positive change in productivity after the implementation of gainsharing. Additionally in Schuster's 1983 and 1984 studies there was a positive impact on productivity in plants where the gainsharing models were applied. In addition to productivity improvements, the studies also identify the positive impact the implementation of the gainsharing model had on employment and employee turnover.

In Schuster 1983 study there were three plants that did not experience productivity improvements. The failure was a result from one plant not willing to provide the data, one plant failed to set up the program and the third plant failed due to improperly setting up the program. As described above, both union and management need to cooperatively work together to implement the plan in order to achieve success.

In Wagner et al. (1988), the authors conducted a study from February 1975 to July 1984 which examined the long term effects of gainsharing and found that there was a steady

increase in productivity over the period without corresponding increases in labour costs or employee grievances.

Doherty et. al. (1989) conclude in their study using qualitative data from interviews and archival records that “gainsharing led to improved productivity, quality, supply costs, safety, attendance and development of cost saving ideas”. Four industries were analyzed, two service and two manufacturing and the financial savings average \$4.95 M within the first year. The study also found that there were various factors that play a significant role in the success of the program which include support from management and high levels of employee involvement.

Kaufman (1992) focuses his research on the Improshare plan, which is a newer gainsharing plan. Kaufman found that the Improshare plan led to an increase in productivity within the first year of 8% and a cumulative increase of 17.5% over the first three years. The study also concluded that success is easier in smaller plants than larger organizations.

Bowie-McCoy et al. (1993) conduct a study on a service industry, an accounting firm over a 10 year period. This study found that productivity increased significantly and employees worked more efficiently by implementing work practices that were developed through the gainsharing suggestion system.

The studies concluded that gainsharing did positively impact productivity in each of the organizations. While there were incidents that gainsharing failed, it typically was a result of poor implementation of the model. The summary tables identify manufacturing industries in general, pulp and paper is categorized as a manufacturing industry therefore the principles should be transferable to pulp and paper.

Gainsharing and Improved Labour Relations – Tests links 1, 2, 3 and 6

The pulp and paper sector in British Columbia is typically unionized. As seen in the various studies summarized in Table 7, the additional benefits of implementing gainsharing is the improved labour relations that result when both union and management work together for the betterment of the mill.

Table 7. Studies Summarizing Impact of Gainsharing on Labour Relations

Author	Year of Study	Type of Research conducted	Number involved in study	Type of Plant studied	Unionized	Other identified findings
Schuster	1983a	Empirical: Longitudinal	6 plants	Manufacturing	Yes	stable employment
Schuster	1983	Empirical: Longitudinal	9 plants	Manufacturing	Yes	stable employment
Schuster	1984	Empirical: Longitudinal	1 plant	Manufacturing	Info. N/A	stable employment
Miller and Schuster	1987	Empirical: Longitudinal	1 plant	Manufacturing	Yes	stable employment and improved union-management relationship
Wagner et al.	1988	Empirical: Longitudinal	1 plant	Manufacturing	Yes	no increase in labour costs or grievances
Doherty et al.	1989	Empirical: Archival	4 plants	2 Manufacturing 2 Service	Info. N/A	improved quality, costs, safety, attendance
Hatchert and Ross	1991	Empirical: Survey	1 plant	Manufacturing	Info. N/A	Improved teamwork, decrease in grievances and increase in quality
Kaufman	1992	Empirical: Survey	112 organizations	various	some	firm size matters
Bowie-McCoy et al.	1993	Empirical: Longitudinal	1 plant	Service	No	Increased efficiencies
Hanlon and Meyer	1994	Empirical: Quasi-experimental	2 groups in one plant	N/A	Info. N/A	Improved employee behaviour and attitudes
Arthur and Jelf	1999	Empirical: Longitudinal	1 plant	Auto Parts	Yes	Improved labour relations

Reference: Table adapted from Mericle and Kim, 2004. Columns one, two and three taken directly from Mericle and Kim

Comments on Table 7 – Gainsharing and Improved Labour Relations

The improved labour relations contribute to savings for the company. The US General Accounting Office (1981) attributed a 17% reduction in labour relations costs due to the improved relationship between unions and management. Engaging the workforce and encouraging a sense of working together, will ultimately lead to improvements throughout the organization.

These studies identify the positive impact of gainsharing on labour relations. While the incentive to work together may be driven by financial reasons, the improved relationship between management and unions is a consequence of structural changes resulting from gainsharing. Lower labour relations expenses from the reduction in absenteeism and grievances as well as improved employee attitudes and behavior may actually be more significant effect of gainsharing than the improved productivity.

In the four studies conducted in 1983, 1984 and 1987, by Schuster and one with Miller, stable employment was identified among all the plants that were studied. The impact on the cost to the company due to reduced turnover and recruiting costs was significant. Employee retention is beneficial to organizations because the knowledge of highly experienced employees increases the success of their efficiency improvement suggestions.

Wagner et al. (1988) found with the increase in productivity due to gainsharing there were no associated increases in labour costs or employee grievances. This might suggest that employees were working together in a cooperative relationship while minimizing costs and maintaining good labour relations.

As described above, Doherty et al (1989) found many other benefits from gainsharing such as improved quality, supply costs, safety, attendance and improved cost saving ideas. Productivity improvement was also identified as an outcome however the other benefits may prove to be more significant.

Hatcher and Ross (1991) found that after the implementation of gainsharing, there was a significant decrease in grievances and a significant increase in product quality. Improvements in these two areas suggest that a relationship develops between management and employees who contribute to a better working relationship as well; employees take more ownership of the end result which in turn, increases product quality.

The Hanlon and Meyer (1994) study is very important as it identifies that gainsharing programs produce a change in employee attitudes and commitment to the company so that even if the gainsharing program is removed, the attitudes have been reinforced resulting in continued support by employees for productivity improvement. This result is

important as it identifies that gainsharing is not just about added bonuses, but also has long term impact on employee attitudes toward the work environment.

Arthur and Jelf (1999) analyzed "two indicators of workplace union-management relations: grievance rates and employee absenteeism". The study was over a very long period, seven years, and found that the implementation of the Scanlon plan resulted in a steady decrease in both grievances and absenteeism.

Gainsharing and Employee Engagement– Tests links 1, 2, 3, 5 and 6

There is a significant relationship between gainsharing and worker's attitudes and motivation. Table 8 describes these benefits to the employees when they are engaged as decision makers in a company.

Table 8. Studies Summarizing Impact of Gainsharing on Employees Engagement

Author	Year of Study	Unionized	Identified findings
Ruh et al.	1974	Yes	Intrinsic value of participation. Three conditions for success; identify goals, participation and equity. Increased participation reinforces individual commitment to the firm
Cummings and Molloy	1977	Yes	Principals of gainsharing are consistent with aspects of motivational theory.
Rosenberg and Rosenstein	1980	Yes	An increase in the level of participative activity was associated with an increase in productivity and participation was more important in improving productivity than was the money.
Gowen and Jennings	1991	Yes	Employee participation is a significant factor in productivity improvements
Hanlon and Meyer	1994	Info. N/A	Three months past the removal of the gainsharing plan, there were higher levels of commitment and there was still a residual effect on employee's behavior and attitudes.
Hatcher et al	1989	Yes	Employees want to contribute to improve performance, make work easier and be decision makers. Desire to influence more influential that the desire for bonuses.

Reference: Table adapted from Mericle and Kim, 2004. Columns one and two taken directly from Mericle and Kim

Comments on Table 8 – Gainsharing and Employee Engagement

The studies in Table 8 summarize the impact that gainsharing has on employee engagement. The authors identify the positive impact that employee engagement and inclusion has on the workforce. This relationship can elevate employee's intrinsic feelings of accomplishment thus impacting employee motivation.

Frost, Wakely, and Ruh (1974) explain that the increase in worker efforts and the intrinsic value of participation were reinforced by the bonus payment achieved through the plan. They argue that the increase of participation of employees allow employees to identify with the firm and reinforces commitment to the organization.

Cummings and Molloy (1977) see the implementation of gainsharing as a method involving many factors identified in various motivational theories where the focus is on factors that promote a method of motivating employees. The authors identify seven motivational aspects of the Scanlon plan ranging from intrinsic to monetary.

The Rosenberg and Rosenstein (1980) study is very useful in understanding the human component of gainsharing and has a relationship to operant conditioning. The authors conclude that "participation, by employee influence and self direction, will result in improved productivity, which in turn, will reinforce their willingness and capacity to participate." (Rosenberg and Rosenstein, 1980) Employees receive a positive reward for their contributions thus reinforcing the desire to continue to participate. The study

draws a conclusion that improved productivity results from an improved attitude of the workers and not due to the monetary gains achieved.

Gown and Jennings (1991) study is particularly important in this analysis as it uses hierarchical regression analysis to study the impact of gainsharing on productivity. The study found that when the model changed from financial benefits only to employee participation with financial benefits, the employee participation was a significant factor in the success.

In Hanlon and Meyers (1994) study, the authors found using a longitudinal study, that gainsharing contributed to continued commitment from employees even after the plan was discontinued. The changes in employee's behaviour continued indicating a change in employee attitudes.

Hatcher, Ross and Collins (1989) study is very important in understanding employee's attitudes. Employees wanted to participate to improve performance and be part of the decision making process. One determinant identified that would inhibit this relationship was if there was a negative attitude towards the plan, management and the company.

The summary of these articles indicate an additional benefit of gainsharing that would create an atmosphere of involvement and commitment.

Benefits to Employee Involvement

An important and significant benefit of implementing a gainsharing model is the improvement in labor relations. Employee participation and the additional benefits can be achieved through an improved relationship between union and management. Because the pulp and paper industry is primarily unionized, the benefit of an improved relationship is significant. In Rosenberg and Rosenstein 1980 study described above summarized that the increased level of productivity had more to do with the increase in participative activity than the group bonus plan. The authors measured the relationship between several independent variables such as participation activity and monetary rewards to the dependent variable of productivity. These criteria were used to determine how the percentage of change in productivity was associated with the independent variables. A hierarchical regression was used and the conclusion revealed that the monetary rewards were not the primary reason that productivity improved; rather, the benefit of employee involvement was a greater factor.

There are several factors that employees must understand in order to engage with management. Employees need to realize that they can impact organizational performance by performing their individual job effectively. Employees must also have access to company information and be able to analyze it to facilitate an understanding of the company position. Management must be willing to provide company information and share the details of the organization to facilitate a relationship of trust.

Employee involvement has grown in popularity as organizations feel that it positively contributes to increases in productivity. Employees, who are doing the work, have the greatest knowledge of the tasks they perform. Engaging their ideas and suggestions, empowering the employees can contribute to increased productivity. Getting employees involved can boost morale by allowing employees to get involved with their own future. Research by the Gallup Organization shows that engaged employees are more productive, however, only 29% of employees are engaged.

According to William Cooke's research, the added benefits of engaging the workforce and including employees in decision making include "heightened self-esteem and pride, improved working conditions, better employee-supervisor relationships, reduced grievances and quicker resolution of problems, greater employment security and enhanced financial rewards (Cooke, 1990).

It has been established that gainsharing does have a positive impact on improving profits through both increased productivity and reduced labour relations costs. The model appears to be well supported with the extensive literature presented. Gainsharing positively impacts productivity and is illustrated in the data through the many studies identified in Table 6. The model continues to be supported with the results from Table 7, which identifies the positive impact of gainsharing on labour relations. The improved profits from this application contribute to the company's success. Most importantly, the impact gainsharing has on employee engagement. The

value of this may be difficult to quantify however the impact on utilizing human capital can only be beneficial not only economically but motivationally.

Chapter Six: Discussion

So what does this all mean for the pulp and paper industry in BC? Union-management relationships in the pulp and paper industry are typically adversarial. Gainsharing is a method to achieve a cooperative relationship between unions and management. It is proven that gainsharing, if implemented properly will increase productivity, which will increase revenues. The additional advantage of implementing a gainsharing model is the relationship that develops between unions and management. This new cooperative relationship allows the parties to work together and impart change to the organization.

Gainsharing can be implemented in an attempt to engage the workforce in order to improve productivity and thereby increase the viability of the industry. The industry needs to create an atmosphere of trust between union and management and an avenue for employees to contribute. The structure of gainsharing model provides these opportunities. Employees have the knowledge and ability to identify potential efficiency improvement opportunities and this knowledge is very valuable to the organization. Pulp and paper companies need to capture this human knowledge and utilize it.

Various studies identify the benefits realized when both parties work together. Engaging the workers and utilizing the human resource will encourage involvement and change the culture of the organization. The employees will contribute to the success of the organization by participating in decision making. The new model of working

together in a co-operative rather than an adversarial manner will reinforce the employees' desire to continue to contribute and a feeling of loyalty to the company.

Engaging the workforce and ensuring a sense of loyalty from the workers does impact the organization. The Harmac Pulp and Paper mill outside of Nanaimo is an excellent example of how working together impacts the bottom line. The mill saw a series of owners take over but the end result was bankruptcy. The union employees made an unprecedented decision to invest their own finances in the operation as part of their attempt to save the mill. The union employees secured three partners and were able to come up with \$13.2 million to buy the mill. Remarkably this mill is making profits, and is one of the only pulp mills to expand its process to open another pulp line in the midst of an economic crisis for pulp and paper. The union signed an eleven year contract, and former union executive members serve on the board of directors. The employee-owners have "a direct line of communication with management and a vested interest in contributing cost saving ideas" (Clarke, 2009). Each employee has the ability to effect change and impact results on a daily basis. Harmac is successful, according to Quinn, a forestry analyst with RBC, because of the low overhead, flexible management practices and motivated workforce. Quinn states that "if you can get everyone moving in the same direction, it is a pretty powerful thing" (Clarke, 2009). While this success story is not a result of gainsharing models described, it reflects the benefits of motivating the workforce and creating an atmosphere which all employees work together for the betterment of the organization

Listed below in Table 9 are the opportunities associated with a cooperative union management relationship.

Table 9. Summary of Opportunities

Summary of Opportunities created by Cooperative Union-Management Program		
Performance Indicators	Employee Outcomes	Relationship changes
Productivity Improvements Reduced Labour costs Quality Improvements Reduced absenteeism Reduced turnover Reduce tardiness Reduce accidents Improved manpower utilization.	Increased Job satisfaction Job Influence and involvement Information about job and company Commitment to company Improved conditions of work Improved supervision Reduced job frustration Improved earnings Upgraded job characteristics Increased trust Increased job security	Attitude change among key actors Union influence on key decisions Reduced likelihood of future strikes Reduced grievances Understanding of Labour/Man. issues Examine outdated contract language Continuous study of on-going problems Facilitate technological change

Reference: Table reproduced from Schuster, 1984

Factors that Contribute to the Failure of Gainsharing Plans

The results of my qualitative review show that not all gainsharing plans succeed. There are various causes of the failures, some of which are within the control of the company and others which are not.

In BC's pulp and paper industry, unions bargain through a patterned collective agreement. This agreement identifies the wages, job evaluations and benefit packages that are negotiated by the two parties (Allnut, 2000). The introduction of a gainsharing system, which may result in differences in compensation between the local unions, may be a road block for success. The system of pattern bargaining requires that all locals receive the same compensation package or risk being segregated from the national union. Therefore, the gainsharing plan must be tied closely to the collective bargaining process and incorporated into the collective agreements across the local unions.

Kim and Voos (1997) tested a monopoly model which views unions as a monopoly, and claims that unions may hinder the performance of a gainsharing model because unions try to force firms to use more labor than necessary which reduces operational performance. Union executives are always concerned about labour reductions; therefore, management must be sensitive to the fact that if the proposed gainsharing arrangement will result in a reduced workforce then it may not be accepted by the union as this would violate the fundamental union principle of job security.

One leading factor in the failure of gainsharing plans is the inaccurate measurement of the variables used in calculating the formulas. If the employees feel that the measurements are inaccurate, they will not buy into the program and the program will fail. Woodruff Imberman states in his article, Gainsharing: A Lemon or Lemonade? that

in two-thirds of the 83 companies where gainsharing failed, it was a result of a faulty payout formula under which gains and bonuses were inaccurately calculated.

Woodruff conducted a follow up study of 147 companies between from 1990 and 1993. In this study he found that 43% of the plans failed. As with the 1989 study, the main reason for failure was a failure to properly calculate the bonus payments. Woodruff found that the formulas used resulted in either minuscule payments or none at all.

In order to address the two issues described above, it is important that the development of the gainsharing plan be a joint effort between unions and management. The union employees must provide input and approval prior to the commencement of the program and should fully understand how the bonus will be calculated. There should be no uncertainty regarding these matters after the program is implemented.

Supervisory support is an important component for the success of gainsharing plans. Supervisors play an important role because they are the primary everyday contact with the employees. These programs rely on the cooperation of supervisor's and at times this could be problematic. There could be a power struggle between supervisor and employee due to their differing roles.

Gainsharing success rests on improved productivity, through suggestions from employees. Studies have found a decrease in the number of suggestions within a short period after inception of the program. Initially, employees have many ideas however, as time passes and suggestions are implemented; there are just not as many ideas. A number of organizations report a plateau affect with an initial dramatic increase in suggestions within the first several years then a subsequent stagnation of suggestions stalling the continuous improvement ability (McKersie 1990). Once this occurs, it is more difficult to earn bonuses resulting in little financial rewards which could derail the plan very quickly when benefits are not realized.

Each cause of the failure can be overcome. Involvement by unions in the implementation will help increase the success rate. Management must encourage union participation from the inception to increase the potential for positive outcomes.

Challenges and Solutions

Two significant challenges that will impact the implementation of gainsharing in BC's pulp and paper industry are the union culture and the top down form of management. Both these factors require special attention when implementing organizational change.

Implementing gainsharing within the highly unionized pulp and paper industry will face challenges, more specifically, the current form of province wide bargaining. As

discussed previously, in BC's pulp and paper industry, both CEP and PPWC unions bargain through a patterned collective agreement. This system requires one mill, the "target" mill, to negotiate a contract with their employer and all other locals within the province obtain the identical terms of that contract. If a local negotiates items that are in addition to this province wide contract, the local has signalled a break from the national union and will not receive financial support if a labour disruption occurs. Management within the industry is well aware of this type of negotiation, as such, work with the "target" mill's management team to identify a list of agenda items that are acceptable for management throughout the province.

The bargaining process is separated into two distinct agreements; the main contract which is negotiated through the target mill, and a more localized agreement called "bull sessions". Bull sessions are in addition to the main contract and address local concerns which are specific to the individual organizations.

Wages are negotiated through the target mill to ensure compensation within the industry is consistent. The introduction of a gainsharing model and productivity reward bonuses will create differences in compensation between the local unions. To address this challenge, gainsharing should be negotiated through the "bull session" process which is done at a local level and wages remain within the provincial negotiations. Productivity improvements are measured using specific mill variables, as such, must remain specific to each mill. Measures of productivity improvements must be related to the variables

within a mill, and cannot be measured industry wide. The bonuses that are paid, will reflect the efficiency increases of the specific variables being measured. Bonuses will be paid accordingly and will be separated from the main wage.

Another concern that will create a challenge to implementing gainsharing is the potential for job reductions. Reduction in the workforce, unless the mill is facing imminent closure, will certainly cause huge resistance among the union workforce. Without the employee engagement component to gainsharing, the model will not be successful. In Schuster's 1983 study, gainsharing failed due to the employees concern about its potential implications to job security.

Gainsharing focuses on identifying variables which can be measured to improve productivity and not job reductions. While reductions in the workforce is a common focus among management when trying to reduce expenses, management must change their focus to productivity improvements and efficiencies and not job reductions in order to get support from the employees. The success of gainsharing includes improved productivity, decreased labour relations costs and improved employee engagement and will only be successful if the union employees do not feel their jobs are threatened. In Schuster 1984 study which covered a five year period, the management in one mill had to commit to no job reductions due to the implementation of the gainsharing model, prior to the union agreeing to participate. Once implemented, the increased profits exceed potential savings from job reductions.

Another challenge to the implementation of the gainsharing model is the current top down management structure. This hierarchical structure does not facilitate a joint effort among employees and management to work together. A different leadership approach that empowers employees and “moves away from leader dominance and expert problem solving to a system where organizational members, as the new experts, are continuously involved in organizational decisions process” (Bowditch, et. al., 2008) will be required to improve the likelihood of success of implementation.

A change from an authoritarian to a motivational approach may be difficult for management. Relinquishing authority and decision making to employees, changes the balance of power within the industry. While this shift can be difficult, informing management of the success of gainsharing may help management's understanding on why change must occur. Management must take a planned change approach within the company. Planned change seeks involvement in and commitment to the change from various levels of the organization (Bowditch, et. al., 2008). Change must be mandated from the top of the organization to increase the likelihood of acceptance. In the case of pulp and paper, the requirement to implement change must be made at the senior level and gain support from the union members. Planned change encourages all employees to become more involved in the change process. Effectively engaging employees during the “planning process will ameliorate implementation problems and generate acceptance of the change” (Bowditch, et. al., 2008).

The direction for change must come from the top however supervisors or middle managers must have the support required as they are an important component for the success of gainsharing plans. Supervisors play an important role because they are the primary everyday contact with the employees. These programs rely on the cooperation of supervisor's and at times this could be problematic due to the differing role that must be played, one of supervisor and one of collaborator. Additional training for the supervisor on the purpose and the benefits of gainsharing will assist in providing understanding of the change. Supervisors will see positive consequences after the implementation as the relationship with employees will improve. As stated previous, gainsharing improves employee's attitudes and commitment towards the company resulting in an improved relationship with supervisors.

Gainsharing signifies a change in the current operating structure in BC's pulp and paper industry, the changes will only improve the current situation by increasing profits. Change must be driven by the leaders of both the union and management. The driving factor is to increase the viability of the industry which is to the best interest of all parties. There are many methods for implementing organizational change which should be reviewed and the best fit should be initiated within each specific mill.

Chapter Seven: Recommendations

Canada's forestry sector is in a dramatic decline. The once thriving industry, an important component of the Canada economy, is shrinking at a steady pace. If the decline continues, it will have a devastating impact on the Canadian economy. Canada still remains the second largest producer of pulp and paper and the world's largest exporter (Minnes, 2008) but this could change as emerging competitors develop.

The management in the pulp and paper industry must change the current top down approach to business to a more proactive approach that uses the benefits of human capital. Gainsharing is a means of engaging the current workforce and using the employees as a resource for improvement. Too often, employees are not included as decision makers even though they often know the most about the operations as they are doing the job on a regular basis. The knowledge base of our employees gives Canadian industries a competitive advantage in the global market.

There are several recommendations that emerge from the research that may be applied in pulp and paper mills in order to increase their likelihood of success. These recommendations are as follows:

1. Companies in British Columbia's pulp and paper sector should strongly consider the implementation of gainsharing plans.
2. The gainsharing plan most likely to succeed in the British Columbia pulp and paper sector is the Scanlon Plan as it is very easy to implement and easy to understand. Both pulp and paper exports are measured in tons so the model should work well.
3. The British Columbia government should encourage the industry to adopt gainsharing by offering tax incentives to companies and workers who implement gainsharing plans within the pulp and paper industry.

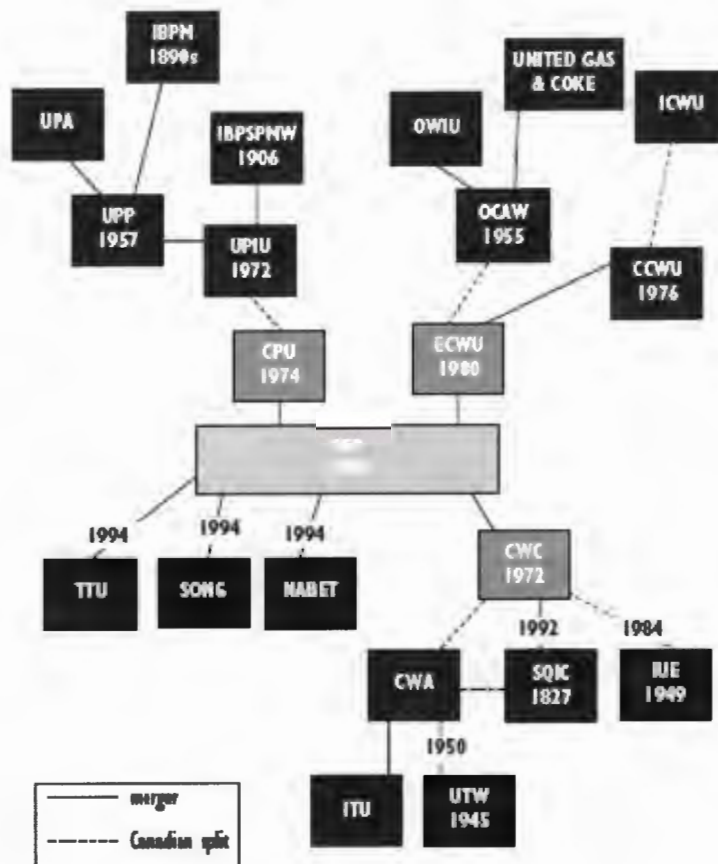
Government involvement may be a necessity in order to provide incentives to the pulp and paper industry to assist the organizations in implementation of this type of strategy. It is beneficial for the government to have reduced mill closures, continued employment and consistent tax revenues that are generated with a successful industry.

Chapter Eight: Conclusion

What does gainsharing mean for the pulp and paper industry? There are currently many factors influencing the success of the pulp and paper industry in BC which are outside the control of the industry. Specifically, the pulp and paper industry cannot control the crisis in the US housing market, foreign competition, old capital intensive equipment, wage differentials between union and non union workplaces, the pine beetle epidemic or the high Canadian dollar. However, individual companies can control their operations and take steps to improve productivity, reduce costs and thereby increase profits. These areas require focus and attention in order to change the outcome of forestry operations in BC. Gainsharing is a proven method of facilitating a cooperative relationship between unions and management so parties are engaged in addressing productivity issues and the industry is utilizing its human capital to its competitive advantage.

Appendix 1

**Growth of the CEP
and its parent unions**



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