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## **“Shifting Markets, Shifting Standards?”**

### **The Implications of the British Columbia Forest Products Sector’s China Shift”**

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#### **Abstract**

Over the past decade British Columbia’s exports have increasingly been focused on Asia with the share of exports going to the U.S. decreasing. This trend can be seen as part a broader pattern occurring as the global economic restructuring in which Asian countries, especially Asian developing countries, play a larger role in global economic growth. The impact of the new ‘Asian Drivers’ (Kaplinsky 2005), or of a ‘Global Asian Era’ as Henderson (2008) has preferred to call it, on other economies requires analysis on several levels. In this paper, we consider impacts on a resource exporting sector in a Northern country. We report findings from the British Columbia forest products sector based on interviews with senior company executives. In this sector, trade with China has increased dramatically over the past decade. We examine the impact of this on product and process standards, widely regarded as being higher in the sector’s traditional northern export markets than in China. However, despite the shift in exports towards China, we find little evidence that standards in the industry have been lowered. We identify the industry conditions which we believe have led to this outcome and analyse whether they are likely to persist in the future.

#### **1.0 Introduction**

A process of global economic restructuring in which Asian countries, especially Asian developing countries, play a larger role in global economic growth has attracted much attention. The impacts of the new ‘Asian Drivers’ (Kaplinsky, 2005), or of the ‘Global Asian Era’ as Henderson (2008) prefers to call it, on economies elsewhere, including those of the north, is in need of analysis. This is certainly evident in British Columbia where the traditional export market, the U.S., is increasingly being replaced by exports to Asia. In fact, in 2011, for the first time in British Columbia history, exports to Pacific Rim countries surpassed those to the U.S.

The growing importance of Asia’s markets for many resource exporting countries from Latin America and Africa as well as Australia and Canada is evident and this has also

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been the case for resource rich British Columbia. This paper considers the qualitative impacts of this shift in the direction of trade flows for BC. The increasing importance of Asian markets, especially the Chinese market, raises questions about how product and process standards adapt. The focus is on the BC forest products sector and we investigate whether increasing exports to China threatens to weaken process standards in the forest products industry.

In the next section, we provide an overview of the shifts in B.C.'s export destinations over the past decade with a focus on the forest products sector where a clear "China shift" can be seen. In section 3, we provide an analysis of the impact of this shift on process standards based on interviews with senior managers of leading firms in the sector. Our analysis finds that, because of the characteristics of the forest product sector, to date there has been no shift to lower standards as a result of the shift in the trade direction towards China. In the concluding section, we analyse whether this is likely to continue in the future.

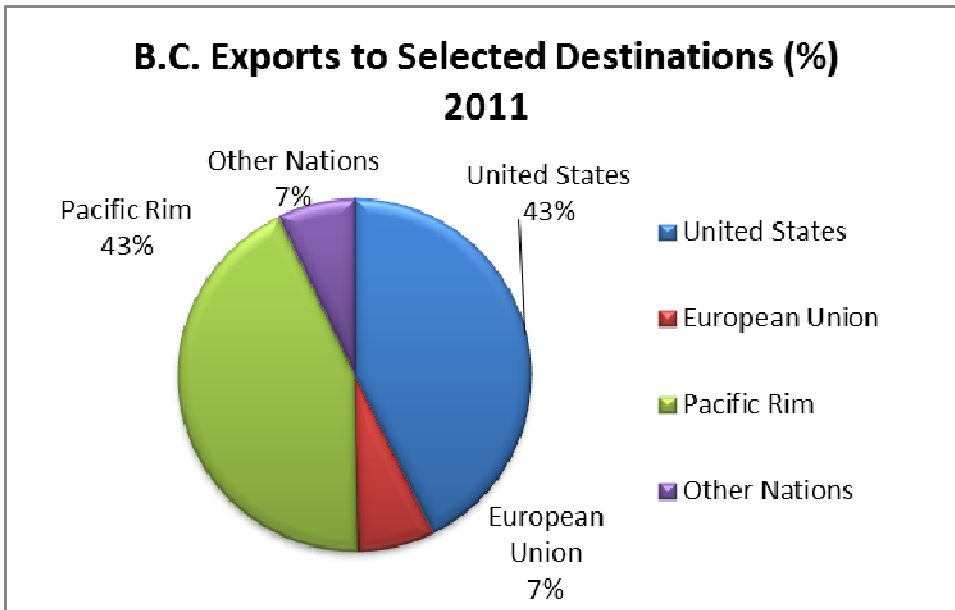
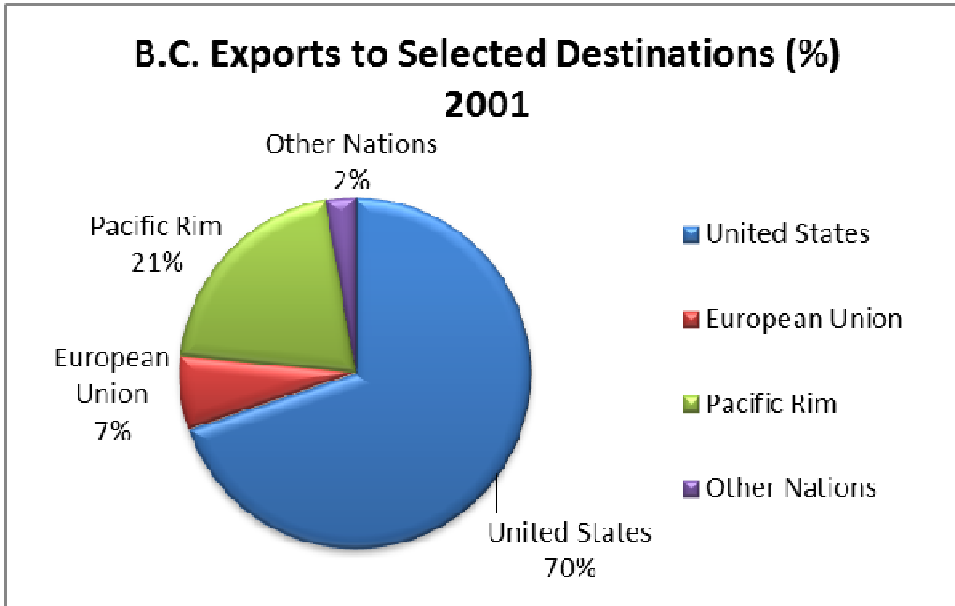
## **2.0 B.C.'s Asian export shift**

In 2001, 69.8% of B.C.'s total exports went to the U.S. with 20.8% going to Pacific Rim countries.<sup>2</sup> Just a decade later, in 2011, the U.S. share of B.C.'s exports had fallen to 42.6% and the Pacific Rim share had surpassed it at 43.2%. The main country destinations in the latter were China, Japan and South Korea which combined took 37.3% of B.C.'s exports. See Figures 1a, 1b and 2 below.

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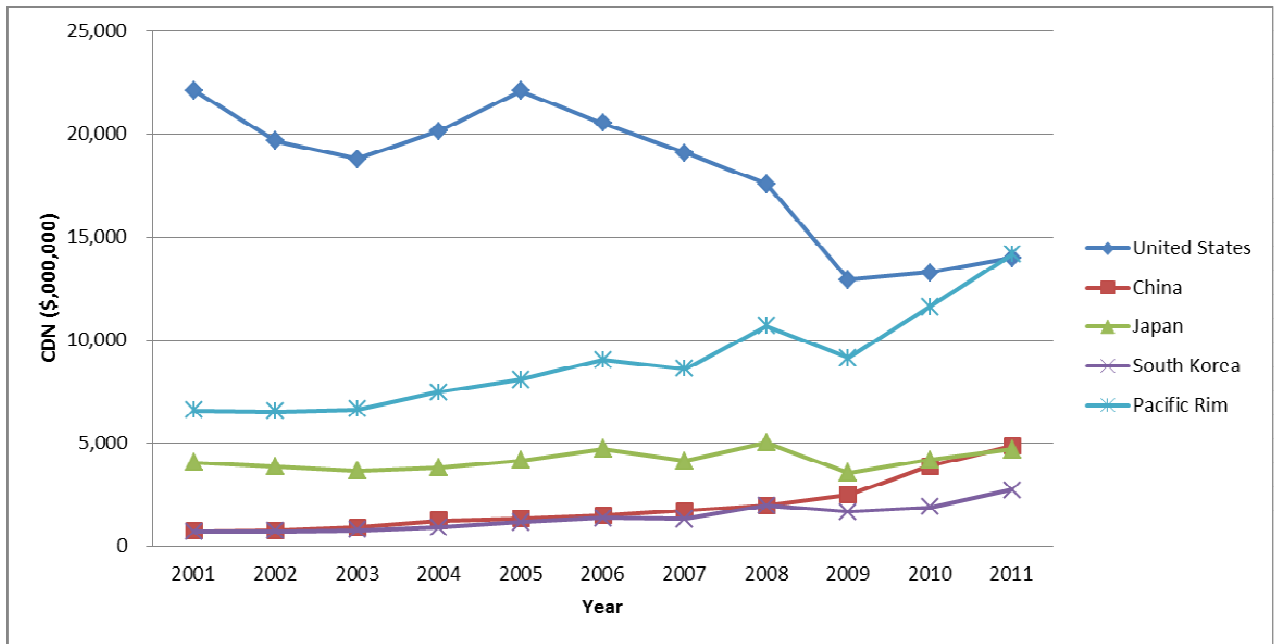
<sup>2</sup> Pacific Rim countries are: Japan, Hong Kong, Malaysia, Brunei Darussalam, Singapore, Laos, Mongolia, China, Indonesia, North Korea, South Korea, Philippines, Macau, Taiwan, Thailand, Vietnam, Australia, Fiji and New Zealand.

**Figure 1a and 1b:**  
**Value of B.C. Exports by destination 2001 and 2011 (percent)**



Source: derived from BCStats.

**Figure 2:  
Value of B.C. Exports to the U.S. and to the Pacific Rim, 2001-2011 (value in C\$ millions)**

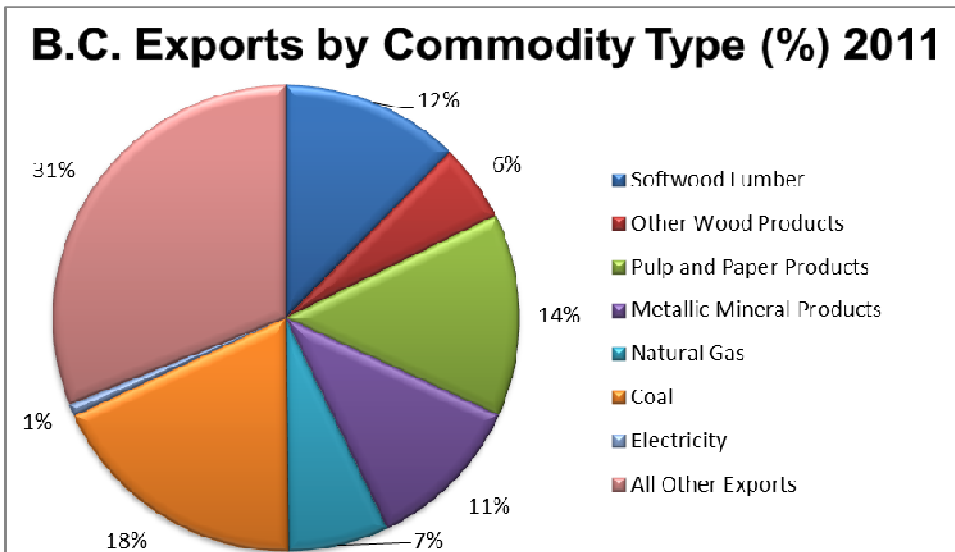
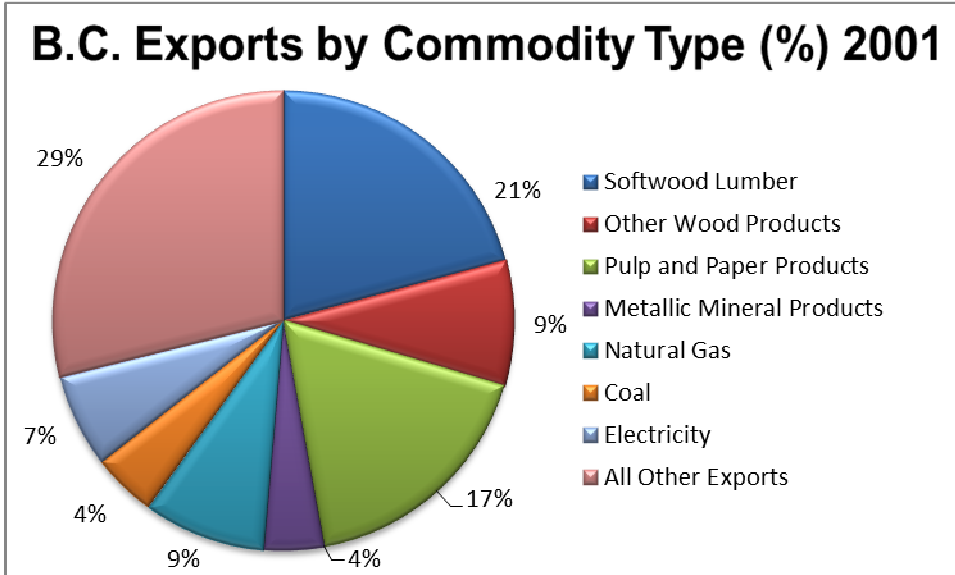


Source: derived from BCStats

This dramatic decade long shift in direction of trade away from the U.S, and towards Asia, documented above for total exports, is even more pronounced when considering the forest products sector. This sector consists of three parts: softwood lumber, pulp and paper products and other wood products (with the most important being, in order of importance in 2011, raw logs exports, panel products and selected value added wood products).

These forest product exports have traditionally been B.C.'s single largest export product. In 2001, this sector accounted for 47.2% of B.C.'s total exports although falling to 30.3% in 2011. See Figures 3a and 3b below.

**Figures 3a and 3b:  
Value of B.C. Exports by Commodity Type 2001 and 2011 (per cent)**



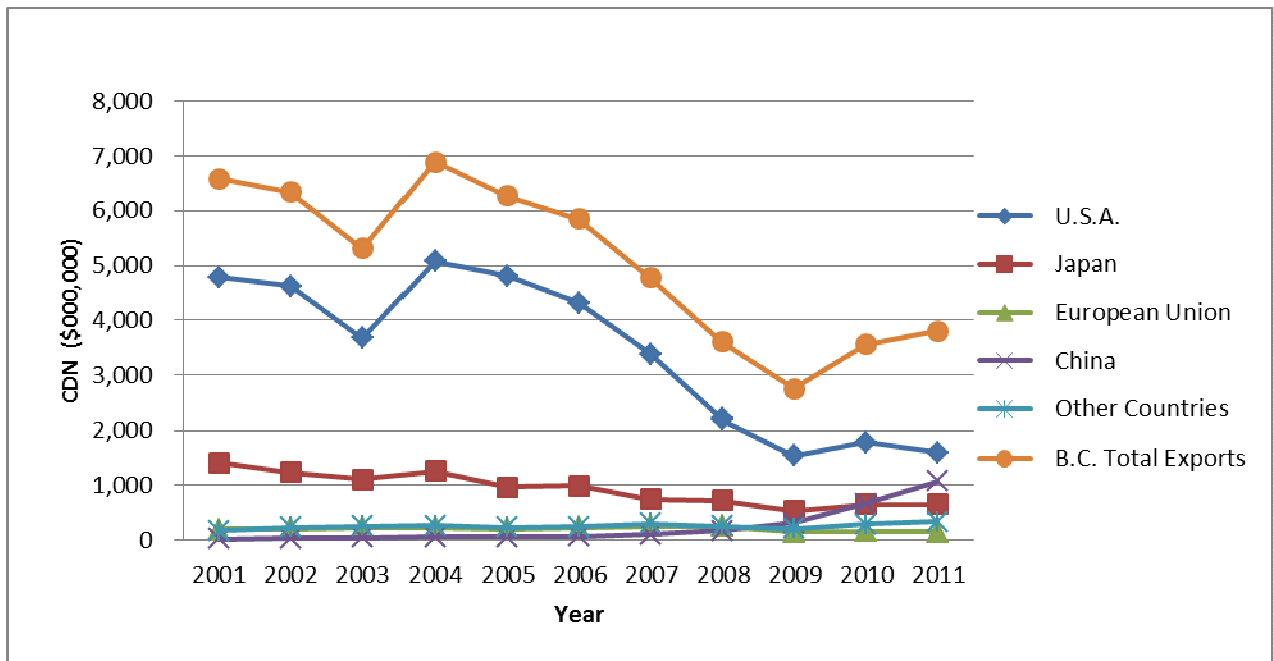
Source: Derived from BCStats

The falling percentage of forest products in B.C.'s total exports is the result of both an increase in the absolute value of some other export categories (especially coal and metals) but also an absolute decline in the value of some forest products, especially softwood lumber. Even so, the forest products sector remains a major component of B.C.'s exports. However, the focus of this paper is not on the changes in total exports but on the changes in the destination for forest product exports. This is documented for each of the three forest product categories identified above.

## 2.1 Softwood lumber

Figure 4 below shows the total value of softwood lumber exports over the past decade and the main export markets. As can be seen, since 2004 softwood lumber exports have fallen closely tracking the decline in exports to the U.S. between 2004 and 2009. Since 2009, however, exports to the U.S. have remained flat but total exports have been rising as a result of increased exports to China.

**Figure 4:**  
**B.C.'s softwood lumber exports by country, 2001-11 (C\$ millions)**



Source: BCStats

The dramatic rise in exports to China is reflected by the fact that in 2001, China accounted for only 0.3% of B.C.'s softwood lumber exports. This grew steadily to reach 2.1% in 2007, 4.9% in 2008 and an astonishing 28.2% in 2011. See Table 1 below.

**Table 1:  
B.C.'s Softwood Lumber Exports by Country 2001-11 (per cent share)**

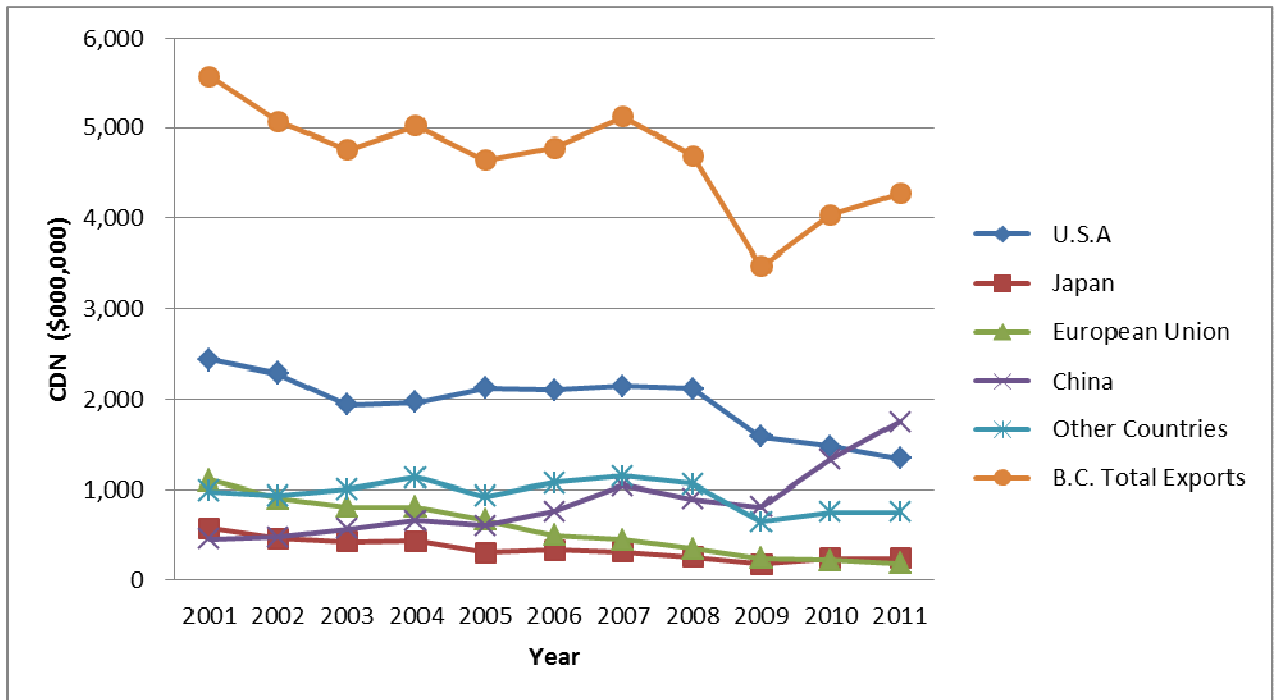
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
U.S.A.	72.7%	72.8%	69.2%	73.7%	76.6%	73.9%	70.7%	60.8%	56.1%	50.3%	42.0%
Japan	21.4%	19.6%	20.8%	18.3%	15.4%	16.9%	15.5%	19.9%	19.3%	18.2%	17.1%
EU	3.0%	3.4%	4.4%	3.3%	3.4%	4.0%	5.2%	7.1%	5.5%	4.4%	3.9%
China	0.3%	0.5%	0.9%	0.8%	0.9%	1.1%	2.1%	4.9%	11.5%	18.8%	28.2%
Other	2.7%	3.7%	4.7%	3.9%	3.7%	4.1%	6.4%	7.2%	7.6%	8.3%	8.8%
Total Exports	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: BCStats

### 2.2 Pulp and paper products

China now surpasses the U.S. as the most important export market for B.C.'s pulp and paper products as shown in Figure 5 below.

**Figure 5:  
B.C.'s Exports of Pulp and Paper products by Country 2001-11 (C\$ millions)**



Source: derived from BCStats

Over the 2001-2011 period, the U.S. share of B.C.'s exports in this product category has fallen from 43.8% to 31.3% while that of China has risen from 8.2% to 41.0% as shown below in Table 2.

**Table 2:  
B.C. Exports of Pulp and Paper Products by Country 2001-11 (per cent share)**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
U.S.A	43.8%	45.1%	40.9%	39.2%	45.8%	44.1%	42.0%	45.1%	45.6%	36.7%	31.3%
Japan	10.4%	9.1%	8.9%	8.7%	6.6%	7.0%	6.1%	5.5%	5.2%	6.0%	5.7%
EU	19.9%	17.8%	17.2%	16.2%	14.5%	10.5%	8.8%	7.5%	6.9%	5.5%	4.3%
China	8.2%	9.5%	11.9%	13.3%	13.1%	16.0%	20.5%	19.2%	23.5%	33.0%	41.0%
Other	17.7%	18.5%	21.1%	22.6%	20.0%	22.5%	22.5%	22.7%	18.8%	18.8%	17.7%
Total Exports	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: BCStats

### *2.3 Other wood products*

As noted above, “other wood products”, include in order of importance in 2011, raw logs exports, panel products and selected value added wood products.

At the beginning of the 2000s, the U.S. accounted for over 80% of B.C.'s exports of other woods products with Japan taking a further 16.8 %. China took only 0.1% in 2001. By 2011, however, China had replaced Japan as the second most important market accounting for 17.2%. Japan's share had fallen to 14.2% meaning that these two Asian markets accounted for close to one third of the export. Meanwhile, the U.S. share fell to under a half at 47.4%. See below Table 3.



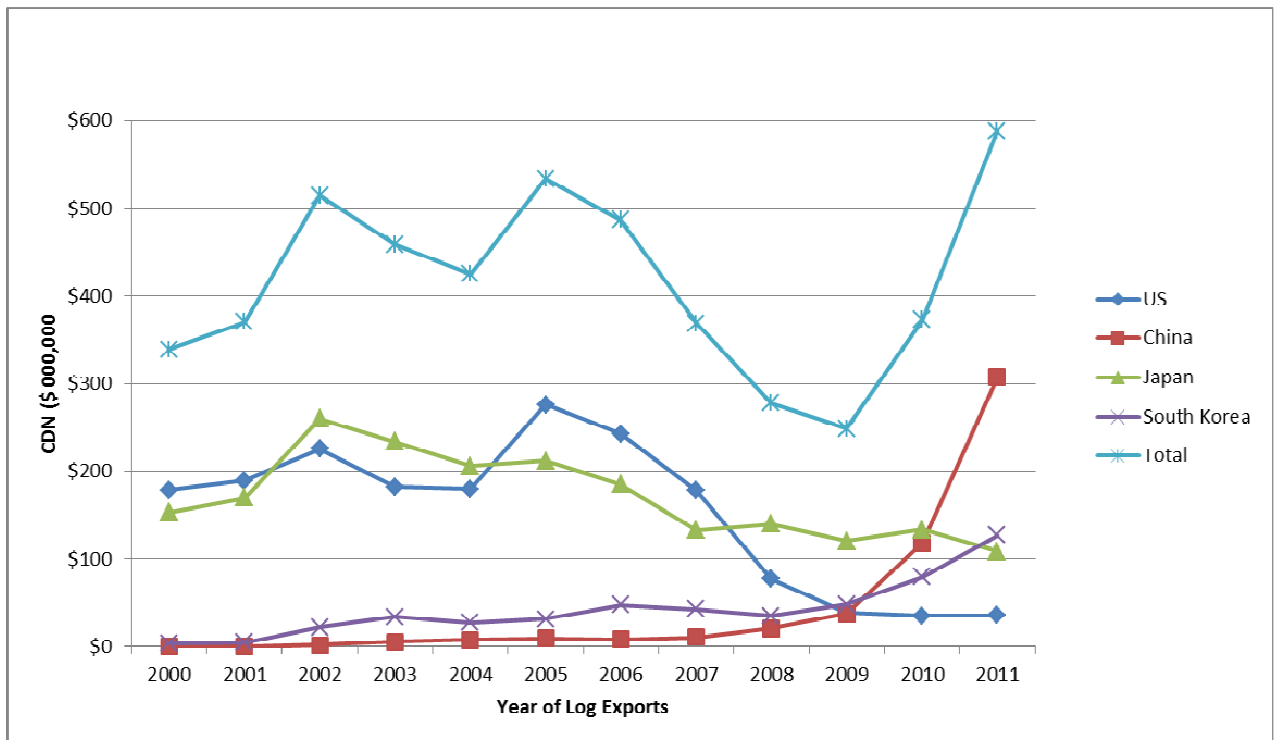
**Table 3:**  
**B.C. Exports of Other Wood Products by Country 2001-2011 (per cent share)**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
U.S.A.	80.6%	79.6%	81.8%	82.5%	82.0%	81.4%	77.2%	72.1%	64.5%	55.2%	47.4%
Japan	16.8%	17.4%	14.9%	13.5%	12.4%	12.2%	12.4%	14.6%	16.1%	15.7%	14.2%
EU	1.1%	0.7%	0.6%	1.4%	2.2%	2.4%	4.5%	6.7%	10.0%	12.2%	11.2%
China	0.1%	0.2%	0.4%	0.5%	0.7%	0.8%	1.5%	1.6%	3.4%	8.4%	17.2%
Other	1.3%	2.1%	2.3%	2.0%	2.6%	3.1%	4.4%	5.0%	6.0%	8.4%	10.0%
Total Exports	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: BCStats

The shift towards China is particularly pronounced at the end of decade in the export market for raw logs, the largest value export item in this category in 2011, as shown below in Figure 6.

**Figure 6:**  
**B.C.'s Exports of Raw Logs, 2000-11 (C\$ millions)**



Source: Derived from BCStats

### **3.0 Implications of B.C.'s Forest Product Sector's China Shift**

As the data presented in Section 2 show, over the past decade there has been a dramatic shift in B.C.'s trade patterns with the importance of the U.S. declining and the importance of Asia increasing. This shift is clear for the forest products sector, historically the province's most important export earner. In this case, though, the shift is a more narrowly focused on one country, namely, China. In all three sub-categories the importance of China as an export destination has grown dramatically over the past decade. From low, often very low, levels China has now become the largest single export market for pulp and paper products and the second largest for softwood lumber and other wood products. The China shift is evident.

The impacts of this shift can be analysed both quantitatively and qualitatively. Quantitatively, the impact of the China shift is quite straightforward. In the face of declining demand from the U.S., the increase in the demand from China has saved a significant part of the industry from shutdowns, layoffs and, in all probability, bankruptcies. This point was recently made by Bill Kordyban, President of Carrier Lumber, which operates in B.C.'s heavily forest-dependent central interior, when he said that "China saved the entire BC forest industry" (as quoted in F. Peebles, "Mills Look Abroad for Lumber Sales", Prince George Citizen, July 20, 2012). Frank Everitt, President of the United Steel Workers which represents workers in the sawmills, agreed with these sentiments arguing that the China market was "a saving grace for the industry" (personal interview).

Certainly, some mills in the province now exclusively produce for the China market and it is implausible to think that they would still be in operation if it were not for the export market to China. As well as these direct employment and production benefits, the quantitative importance of the China market also benefits the province and the federal government in their negotiations with the U.S. over the softwood lumber agreement. This dispute, running since 1981, has been a constant source of frustration for Canadian forest companies which have been hit with a variety of quotas, export taxes, countervailing duties and other trade measures over the past 30 years and has constrained export growth into the U.S. market. (See, for example, Rahman and Devadoss 2002 and Zhang 2007 for overviews). The growth in the China market provides welcome relief for exporting firms from these restraints and provides Canadian negotiators (the current softwood lumber agreement, signed in 2006, has been extended to 2015) with increased bargaining power as the industry is no longer so reliant on the U.S market.

While the quantitative effects may be reasonably straightforward and positive, the qualitative impact is more difficult to gauge and raises a number of issues concerning the long term trajectory of the industry. These issues arise within the broader context of the increasing importance of southern or developing country markets in the global economy.

This trend has been recognized by many and variously characterized as a “multi-speed world” (Spence 2011), a Global- Asian era (Henderson, 2008), or the Pacific/Asian/China Century (see Scott, 2008, for critical review). The Global Financial Crisis and its aftermath have reinforced this trend with Kaplinsky and Farooki (2010: 12), for example, writing that “it is our judgment that just as growth is likely to be reduced or stagnate in the northern economies in the future, so growth in Asia in general, and China and India in particular, is likely to be sustained. If nothing else, the relativities in growth paths between these two worlds in the past two decades is likely to be sustained, and even to increase.” The implications of the importance of Asian developing country markets in the global economy need to be assessed. This has begun for the impacts on other developing countries; less has been done, however, on the implications for northern exporters. The B.C. forest products’ sector’s China shift represents a good testing ground for considering the implications of such a shift from exporting from northern to southern markets given the large shift in B.C.’s forest products from the U.S to China over the past decade.

In providing an analysis of the implications of the rising importance of demand from the relatively low per capita income countries, China and India, Kaplinsky and Farooki (2010) make two key points. The first is that, for southern importers, imported inputs will not be standards intensive (2010: 18) and the second is that there will be a growth in imports of relatively unprocessed products (2010: 19). While this may provide some opportunities for southern exporters, it raises the question of whether northern exporters will experience a tendency to reduce standards and whether their product lines will move down the value chain as they export more to low income countries. We concentrate on the first issue here but also discuss the second in section 4 below. We now move to a discussion of types of standards.

### *3.1 Standards*

As Kaplinsky and Farooki (2010) note, standards cover two dimensions, product and process, and arise from three sources, firms, governments and civil society. Products standards refer to those designed to ensure that the product is of uniform standard while process standards refer to range of technical and ethical concerns for the way in which the product is produced. Firms themselves may be the leaders in some of these initiatives in order to obtain and enhance their competitive advantage in the marketplace, governments may set regulatory standards to protect consumer health for example, and civil society organizations may be a standards driver in areas such as environmental protection for example.

Both product and process standards are likely to be much higher for products sold in northern markets than they are in, for example, China and India. Each of the three sources of standards are likely to be much weaker in the latter countries than in northern countries. As Kaplinsky and Farooki (2010: 18) explain, in China and India, “firms are

less concerned with product variety, so that the imperatives to achieve flexibility through just-in-time production ... are weak. Governments may either have poorly developed safety standards, or fail to implement them effectively. ... Finally, NGOs which have driven public opinion on issues such as FairTrade, labour standards and the environment are muted in low-income countries and are likely to have little significance with regard to the incorporation of ethical and environmental standards in value chains”.

These differences are summarized by Kaplinsky and Farooki (2010: 18) in Figure 7 below.

**Figure 7:  
Taxonomy of Standards in High Income countries, China and India**

		<b>Firm Driven Standards</b>	<b>Government Driven Standards</b>	<b>Civil Society Driven Standards</b>
<i>Product</i>	<i>High-Income Countries</i>	Quality standards such as permitted parts per million defects	Food hygiene standards; Lead content in toys	Organic products
	<i>China, India</i>	Low emphasis and weak enforcement	Low emphasis and weak enforcement	None, or very weak
<i>Process</i>	<i>High-Income Countries</i>	Quality control procedures – such as ISO9000	Hygiene standards – such as Hazard Analysis and Critical Control Point conformance (HACCP)	Sustainability standards – such as FSC (Forest Stewardship Council) (timber)
		Frequency of on-time delivery	Traceability of pesticide content	Child labor standards
	<i>China, India</i>	Low emphasis and weak enforcement	None, or very weak	Low emphasis and weak enforcement

Source: Kaplinsky and Farooki (2010: 18)

It has long been recognized that northern firms investing and producing in developing Asian and other southern countries are less standard intensive than those same firms investing and producing in northern countries; indeed, this is much of the rationale for investing overseas in the first place and results in the so-called ‘race to the bottom’ in standards. What is much less clear, and has received much less attention, is the affect on standards when northern firms increase the share of the exports going to developing countries. That is, when northern firms increasingly sell to southern markets, where standards are lower, do they adapt their northern process and product standards to the new less standard intensive southern market?

It is these trade effects which the study of B.C.’s forest products sector can illuminate. As an example of the implications for southern forest products producers of increased reliance on China as an export market consider the case of the Gabon timber industry analysed by Kaplinsky, Terheggen and Tijaja (2010). In Gabon, the largest African

exporter of timber to China, and where China has become the major importer by volume, replacing France, and on a par with France in value terms. The result, according to Kaplinsky, Terheggen and Tijaja (2010: 24), has been that “bluntly- speaking, the transition in market destination has led to a collapse in the standards required of producers.”

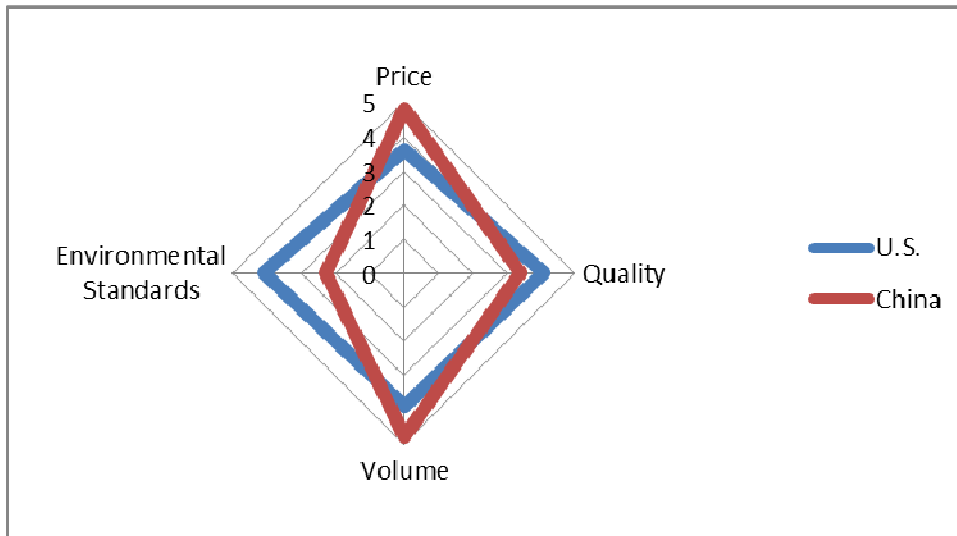
Such a collapse would not be possible in B.C. since the forest industry is subject to various provincial government regulations which provide a floor to standards in many areas including environmental standards and silviculture requirements. These standards, embodied in the 1995 Forest Practices Codes and other legislation, have been the subject of debate with critics arguing that they have been weakened by the increasing reliance on company self-monitoring as a result of current neoliberal policies which has seen a retrenchment in forest inspection capabilities. Nevertheless, they do provide a relatively high floor. Even so, it is clear that regulations in importing countries as well as civil society organization certification continues to play an important role in influencing the standards compliance of forest companies. We focus here, not on provincial regulations, but on these international factors – as set by importing country governments and by international NGOs – and the importance of which may change as the direction of trade changes. Furthermore, it is not our purpose here to examine whether certification processes, whether by non-state actors or by governments, are adequate and appropriate (see, for example, McDermott 2012 for criticism of the Forest Stewardship Certification process) but to examine whether shifting to the China market affects the application of the certification standards.

To address this issue we interviewed key representatives in the industry. Specifically, we interviewed senior executives from six firms engaged in all three parts of the forest products sector identified earlier; two from leading lumber companies, 1 from a leading pulp and paper producer and 3 from leading firms in the other wood products category. In addition, we interviewed a senior labour leader representing workers in one part of the industry. The forest products sector in B.C. is highly concentrated and the firms in our sample include all of the major companies operating in the three parts of this sector in B.C.

As a preliminary investigation into whether the change in trade direction might potentially affect firm behaviour and standards we asked senior executives to score the importance of various factors for their customers in different countries. These scores were obtained from four firms selling to both China and the U.S. Respondents were asked to rate the importance of four factors to their customers on a five point scale. The average scores are shown below in Figure 8.

**Figure 8:  
U.S. and China Buyers’ Requirements for B.C. Forest Products**

(5 = very important; 1 = not important)



As can be seen, for China the most important factors are price and the ability to provide large volumes. For the U.S. buyers, quality and compliance with environmental standards were the two most important factors. There would seem, therefore, to be significant market differences between the two markets with further analysis warranted of whether these differences result in changes in industry standards. This further analysis is based on in-depth interviews with the senior managers.

We analyse each part of the forest products sector but it should be noted that all three – lumber, pulp and paper, and other wood products such as panel boards – all come from the same resource: the tree. And any single tree can, and typically does, provide products for all three sectors. This is important to bear in mind in the analysis that follows.

### 3.2 Lumber

The lumber sector produces five main grades which, in order of quality are J grade, Select, Number 2 and better, Number 3 and Economy. Each grade is approved by an industry standards authority and stamped accordingly. In terms of product standards, the highest grades have the lowest defect rates with respect to lumber straightness, warping, knots etc. The growing and harvesting process is therefore the same for all grades of lumber as they can all derive from the same tree. The grade differences arise in the milling process. The production process is designed to maximize the amount of the high grade lumber from a tree by a computerized production process which adjusts the cutting of each tree.

In general, the highest grade lumber is used in high-end construction/housing in Japan and the U.S., the mid grades for the construction/housing and retail sectors in the U.S. and the lowest end lumber for construction in China. In the China market much of the lumber is used for pouring concrete and, as such, requires only low quality product. This

explains, in part, the observations above about customer requirements in the Chinese and U.S. markets, with Chinese buyers being more concerned with price than quality. From B.C.'s forest companies' perspective, this demand represents an important market for the large supply of pine beetle damaged wood being milled.

While this is a reasonable first approximation, it is noteworthy that the Chinese market has changed rapidly and that somewhat higher grades of lumber are also being demanded for use in furniture production and in housing construction, for example, in door construction where wood stripping is replacing some concrete construction. This demand has arisen in part because of the efforts of the provincial government to change building codes in China. Changing process standards in construction in China is therefore changing product standards for its lumber imports and this has benefitted B.C. exporters in both quantity and quality terms.

Even though Chinese buyers are not as concerned with the process standards concerning environmental stewardship, for example, nevertheless all product meets the same (high) process standards because all grades come from the same tree and so the tree must be processed in a way that meets the standards set in the highest standards market. Forest certification has expanded significantly over the past two decades or more and has become a major influence on the forestry industry (see Cashmore et al 2011). There are a number of competing and overlapping standards set by different certification organizations such as International Organization for Standardization (ISO), the Forest Stewardship Council (FSC), the Sustainable Forestry Initiative (SFI), the Canadian Standards Association Sustainable Forest Management Standards (CSA), and the world's largest forest certification body the Programme for the Endorsement of Forest (PEFC) Certification which endorses both SFI and CSA standards based on international criteria.<sup>3</sup>

For BC lumber firms the two most relevant for their exports to the U.S. are the process standards required for Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification (PEFC) approvals in order to sell in the U.S. Major retailers, such as Home Depot for example, require that lumber meets one or both of these certification standards and if these are to be met for one part of the tree then they are met for all parts regardless of final export destination. BC lumber does not (typically) meet FSC standards because of on-going land claims involving First Nations in the province but does meet the (lower) PEFC standards and hence gain market acceptance. The pressure brought by U.S. environmental groups on requiring their large retailers to ensure that their national and international suppliers responsibly harvest lumber therefore

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<sup>3</sup> For an example of how one major forest company producing in BC states that it meets these standards see <http://www.canfor.com/responsibility/environmental/certification>

determines that the PEFC compliant process standards which B.C. exports to the U.S. must meet also applies their to exports to China as well.

This general conclusion might be challenged by the fact that there are now mills which produce timber exclusively for the China market with no production going to the U.S. This is particularly the case for pine beetle damaged wood found in some timber supply areas in the central interior. There is some evidence that product standards have changed in some (but not all) of the large companies operating designated China only-mills and in some of the smaller mills operated by smaller, typically family-owned or First Nations owned, firms. This arises because the lumber grades described above are particular to the North American market and have no general significance beyond the continent. Furthermore, the grade standards set in North America are primarily concerned with the strength of the lumber and therefore its suitability for particular construction purposes. This grading system does not correspond exactly with the appearance of the lumber, a factor which has more weight in other countries where lumber is used for many different purposes beyond the (housing) construction trade. As a result, some of the China-only mills have introduced variants of the North American grading system especially for the Chinese market. This is not necessarily a lowering of product standards and might best be seen as an adaptation of standards to different market conditions, differences which are captured by the use of the term 'custom lumber' to describe this adaptation. Because of the different uses of lumber in China, however, there are some changes in the production process. For example, lumber destined for China might not be kiln-dried or put through a planer mill meaning that its quality is lower than that sold to the North American market. This would represent a lowering of quality and a shift to the lower end of the product market, a point to which we return later.

In general though, B.C. companies see their high process standards as a comparative advantage in selling to the Chinese market. As noted above, Chinese buyers now include furniture manufacturers (although typically not directly but through a Chinese import agent). Since much of the furniture is for re-export to the U.S. it must meet the conditions of the 2008 Lacey Act in the U.S. which stipulates that all imported wood products must conform to (own country) regulations regarding legal sourcing.<sup>4</sup> B.C. companies can prove this and this gives them a significant advantage over Russian lumber (China's largest supplier) where illegal logging is prevalent. B.C. lumber is therefore preferred by Chinese buyers and they a premium for it over other supply sources which cannot provide legal harvesting certification. Thus, B.C. lumber exported to the U.S. but via a Chinese furniture manufacturer is again subject to process standards established in the U.S.

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<sup>4</sup> For details see <http://www.eia-global.org/lacey/P6.EIA.LaceyReport.pdf>



### 3.3 Pulp and Paper

With respect to pulp and paper products, there are no independent industry product standards. The quality of pulp is determined by its tensile (or tear free run length) with companies monitoring this and pricing according to tensile strength. Company grading standards do exist although there is no industry-wide classification of grades. The quality of the pulp depends primarily on the quality of the wood chips which are used and this varies between source of supply; northern BC has generally high tensile strength, European softwood has lower and U.S. softwood still lower tensile strength.

Even so, pulp is used for different purposes in part depending on its quality and so the pulp and paper sector in B.C. produces three main products. These are publication quality paper (for magazines and newspapers), bulk consumer paper products (such as tissues and napkins) and specialty products (such as wallpaper, vaneer board, fibre cement board and cigarette tips). The most profitable product type is publications followed by specialty products and then bulk consumer products (especially out of home products used in gas stations, restaurants etc). According to one of the province's major pulp and paper producers, there have been significant changes in its product mix over the past decade in part due to the impact of the internet on the publication industry. A decade ago, approximately 70% of the product was in the form of publication materials, 15% was bulk consumer products and 15% was specialty products. This has now changed to 25% publications, 25% consumer and 50% specialty.

As well as these changes, there have also been market shifts, as shown in section 2, and each of the major export markets - the U.S., Europe and China – which the company supplies has a different product mix. This is shown below in Table 4:

**Table 4:  
Percentage of Pulp Exports to each Market by Product Mix (One firm)**

Export market	Publication	Consumer	Specialty
U.S.	40	20	40
China	0	40	60
Europe	30	0	70

While there are significant differences in the product mix supplied to each of the major markets, production is still organized by product group rather than by end market. That is, pulp is not produced separately for each market, and not sourced from separate timber

supply areas for each market, but subject to joint and integrated production. As a result, the process standards set in the highest standard export market are again the ones that set the standard for all export markets.

While there are no independent (or industry) product standards, there are independent process standards as set by the FSC and PEFC. PEFC standards are widely required for export to the U.S., Europe and Japan and FSC preferred in some cases. For example, major tissue manufacturers such as Kimberly Clark request FSC certified product if it is available and are willing to pay a premium for it; Proctor and Gamble does not require FSC certification but prefers it if it can be supplied at no additional cost. Consumer groups targeting these companies with campaigns such “Clearcut for Kleenex” have pressured them into demanding compliance from their suppliers with some process standards certification. As noted above, forest products from BC do not typically meet FSC conditions but are PEFC compliant. Thus while lower quality bulk consumer products may be exported to China, for example, the process standards followed are those set by the higher quality product destined for the U.S. market.

### *3.4 Other wood products*

While wood chips are used in the production of pulp and paper products, they are also used MDF, OSB and in particle board production (used for cabinets for example) as well as a new market, bioenergy wood pellets.

One destination for wood left over from milling operations is particle boards which have a variety of uses, one of the main ones being for the production of household cabinets (mostly kitchen cabinets). These are manufactured in BC with the traditional market being the U.S. However, limited diversification into the China market has also taken place especially in the wake of the U.S. housing slump and there is also use in Canada. Canada has some regulations on process standards and China fewer but the highest process standards are set by the California Area Resources (CAR) Board. Any wood products sold in California must meet Environmentally Preferred Product (EPP) certification as well as process standards on formaldehyde levels and be stamped as compliant. The B.C. company producing the particle board has no certainty where its products end up; they could, for example, be used by a cabinet manufacturer in Vancouver which then exports to California. Or it could be used in a product which is then carried by a major retailer such as The Brick which also sells in California. So the company is 100% CAR compliant even though it is unsure how much of its product ends up in that market but it must meet the standards in order to be able to enter into the selling chain and to protect itself against possible lawsuits. All of its products meet this standard. Again the highest standard jurisdiction sets the standard for all because of integrated production.

This provides a literal example of the global ‘California effect’ (see Cashmore et al 2007: 159) where higher standards in one coveted market have driven up standards by other producers also wanting access to it. However, it should be noted that while these process standards should be applicable to all producers, the BC company believed that they were facing a degree of unfair competition because other firms, especially from China, did not adhere to the regulations. The reduction in inspections as a result of the California fiscal crisis as well as the difficulty of prosecuting Chinese firms put the latter in a better market position. This reinforces a point that the regulations described in Figure 6 above require enforcement to be effective.

#### **4.0 Concluding Reflections: Looking Forward**

The discussion above has suggested that, in general, product and process standards have not been affected by the industry’s rapidly expanding trade with China. Particularly interesting here is how integrated production technology produces products for all export markets and so the standards which are required in the highest standard export market set the standard for the product destined for all export markets. This has not only meant that process standards demanded by international civil society organizations for export to the U.S. are also applied for export to China but also that these, and government regulatory standards, have actually been seen as a competitive advantage when exporting to China as product may then be re-exported back to northern markets. At a time when China first emerged a major economic actor on the global level, Freeman asked whether the lower wages in China would push down wages elsewhere in a provocatively entitled article ‘are your wages set in Beijing?’. His answer was no. In analyzing China’s emergence as a major export destination for a northern product we reach the same answer to the question of whether our standards are set in Beijing. Our discussion also demonstrates that standards set by governments and non state actors can both play a role, as the Lacey Act and PEFC standards show. As such they should be seen as complementary rather than alternative standard setting strategies (see also Cashmore et al 2007 on this point).

The, perhaps reassuring, conclusion for northern countries that their standards are not set in Beijing is subject to two caveats. The first concerns whether the other implication of increasing southern markets identified by Kaplinsky and Farooki above in section 3.1, namely a shift to lower processed products will occur and whether the intensity of standards will fall over time if a ‘tipping point’ is reached in trade with China. We discuss each in turn.

As noted above, China imports all grades of lumber. However, there has been a predominance of the lower grades especially the low quality pine beetle killed wood. This has not been a particular problem for the industry or the economy of the province given the vast supply of the wood which would have difficulty finding other outlets. The use of custom orders which omit certain processes (kiln drying and planing, for example) does,

however, point to a general lowering of value-added steps in exports to China. The rapid increase in raw log exports to China is also an indicator of this although, since the provincial government's Timber Export Advisory Committee has the power and authority to make recommendations on the volume of raw log exports, this is a regulatory rather than a market led trend. Raw log exports have long been viewed as 'job killers' in the province but it is the case that manufacturing of wood products has been an aim for governments for over a century and little progress has been made in this respect. Thus, when top J grade lumber is sold to China where it is laminated and then re-exported to Japan, this represents another example of the failure of the BC forest sector to add greater value in Canada rather than a qualitative shift from previous periods.

The longer term impact of China's preference for lower grade forest products and lesser concern with process standards depends, in large part, on how large China's market becomes for BC forest products. At present the integrated production for all export markets provides an effective check on standards intensity but it is possible to conceive of a situation where a tipping point is reached where the China market becomes so much more important than other export markets (including the U.S.) that the requirements of the China market will more likely dominate.

Our assessment is that such a 'tipping point' is extremely unlikely, notwithstanding the greater global role of the China market as a result of the 'multi-speed, global economy discussed above. While China's market for lumber is likely to grow (Sun and Canby 2011) it is still unlikely that the growth of the China market for B.C. forest products will grow at anything like the same rate as it has in the 2000s. This has more to do with what is likely to happen to demand in the U.S. than in China. Many B.C. industry actors believe that the industry is poised for a 'super cycle'. This describes the situation in which demand is maintained from China but demand from the U.S. increases as the U.S. housing market starts to rebound from the sub-prime crisis. As one interviewee stated "before 2006 there was no China, then until 2012 there was no U.S. In the future we will have both". This will mean that the China market will remain significant as producers seek to continue diversification away from reliance on the U.S. market but the latter will remain a core market given its proximity and preference for higher quality (and hence higher priced) product. At the same time as demand is likely to increase, the supply of lumber will fall as the remaining supplies of beetle killed wood is used. The province has already signaled significant reductions in the Annual Allowable Cut in the future. All of which means higher prices and profits for firms although fewer jobs for employees. It also means that a further shift towards China is unlikely given the increased demand from the U.S. and the greater price sensitivity of the Chinese export market.

The increasing competition for lumber is already a reality for the residual wood used in "other wood products". Firms engaged in particle board production, for example, are already facing higher input costs as the prices rise for what used to be a free product – the

sawdust and fibre leftover after lumber milling. There is a new demand for this for use in wood pellets. These pellets have domestic use as forest firms use them as in co-generating processes to provide them with electricity. There is also a growing export market as a result of changing process standards for electricity generation, especially in Europe. Here, requirements that power providers meet standards for the production of “green energy” has created a large market for B.C. bioenergy firms since wood pellets are classified as a renewable resource. This rapidly growing markets, created by government-led process standards in other countries, has resulted in greater competition for the residual product from B.C.’s lumber mills.

The combined effect of the demand changes outlined above for the B.C. forest products sector is that it the major part of its ‘China shift’ has likely already occurred. As long as the export market remains diversified and integrated production continues, then the shift that has occurred will have little impact on standards.

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