Province specific impacts of the 2006 United States-Canada Softwood Lumber Agreement: A seemingly unrelated regression approach

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**A B S T R A C T**

In this paper, we evaluate effects of the 2006 U.S.-Canada Softwood Lumber Agreement (SLA 2006) in U.S. lumber imports from Canadian provinces. Based on monthly data from January 1988 to October 2015, we estimate a system of U.S. softwood lumber import equations by using Seemingly Unrelated Regression approach. The results reveal that SLA 2006 had a negative impact on softwood lumber shipments to the U.S. from British Columbia, Ontario, Quebec, and Saskatchewan, and no effect on those from SLA-exempted provinces. Thus, SLA 2006 did not provide an opportunity for trade diversion from SLA covered provinces to exempted provinces.

1. Introduction

Bilateral trade in softwood lumber is the subject of a long standing and ongoing dispute between Canada and the United States. The modern version of the dispute started in 1982 when a group of U.S. softwood lumber producers alleged that Canadian lumber was subsidized through low stumpage fees under Canadian provincial stumpage systems and when the U.S. Department of Commerce officially launched a countervailing duty investigation. Despite the fact that no subsidy was confirmed in this investigation, U.S. lumber producers were not deterred. Repeated efforts by U.S. lumber producers using political pressures—along with help from U.S. lawmakers and administration, the inability of U.S. lumber consumers to defend their interests, and the untimely concessions by Canadian federal and provincial governments to advance other objectives—have led to trade restrictions on Canadian softwood lumber to the U.S. in 24 of the last 30 years. These restrictions are in the forms of Memorandum of Understanding (MOU) from 1987 to 1991, Softwood Lumber Agreement of 1996 (SLA 1996) from 1996 to 2001, and SLA 2006 from 2006 to 2015, as well as the litigation period of 2001 and 2006 which left an approximately 5% tariff, collected on Canadian lumber, in the U.S.

Canadian provinces have been divided in their positions and defenses regarding to this dispute (Zhang, 2007). British Columbia (BC), Quebec (QC), Ontario (ON), and Alberta (AB), the largest four softwood lumber producers of Canada, were subject to all trade restrictions, and Saskatchewan (SK) and Manitoba (MB) were also included in the last trade agreement. BC, QC, and AB are in large part primary lumber manufacturing provinces, while ON has a higher proportion of secondary lumber manufacturing, or ‘remanufacturing’. Typically ON secondary processing sawmills source wood from QC primary sawmills to work into higher value product. By far, QC is a timber supplier to QC and ON primary sawmills, and QC primary sawmills also supply processed wood to ON secondary remanufacturers. The maritime provinces of New Brunswick, Nova Scotia, Newfoundland and Labrador, and Prince Edward Island were exempted from all restrictions under the 2006 SLA, because a significant proportion of those timber harvests occur on private land and because those regions are predominantly hardwood species. Thus, it is possible that there may be trade diversion from restricted provinces to non-restricted provinces in Canada when trade restrictions are in place. Trade diversion reduces the benefits to U.S. producers from trade restrictions, and consequently, U.S. producers considered trade diversion to non-restricted provinces to be a serious threat, especially under SLA 1996 (Zhang, 2007). In the latest call for a quota scheme, the U.S. Lumber Coalition (hereafter referred to as the Coalition) which represents U.S. producers, simply demands that all of Canada should be under a single quota system (U.S. Lumber Coalition, 2016). The justification for this demand is that maritime provinces have had a significant increase in timber harvest on public lands since 2014. In reality, however, it is because the Coalition wanted to avoid trade diversion from restricted provinces to non-restricted provinces. Yet, it is unclear if there was such a trade diversion at all. More importantly, it is unclear if trade restrictions have different impacts on various provinces in Canada. These took different positions in the previous rounds of litigation and negotiations; presumably due to differences in their
resource endowments, policy regimes, and possible impacts on their provincial economy under different trade schemes.

The purpose of this paper is to estimate the impact of SLA 2006 on softwood lumber exports from various Canadian provinces and regions to the U.S. Specifically, we test the following hypotheses. Firstly, did SLA 2006 cause differential impacts on softwood lumber exports from SLA-covered Canadian provinces? If it did, what was the relative magnitude of this reduction, and why? Secondly, did SLA 2006 promote softwood lumber exports to the U.S. from non-SLA covered provinces? If it did, what was the magnitude of this promotion? The next section starts with a brief review of literature on the trade dispute, followed by our estimation model and data. The remaining sections present our empirical results and conclusions and discussion.

2. Literature review

Since this dispute is the longest and largest trade dispute between the two countries and is the largest forest products trade dispute in the world, there are many studies on it. Studies relevant to this paper include the structures of various trade restrictions and their impacts on Canadian lumber exports to the U.S. Zhang (2007), among others, provided a summary of four trade restriction measures.

The first was a 15% export tax or a permanent stumpage replacement measure under MOU. British Columbia and Quebec implemented the stumpage replacement measures and, by September 1991, were allowed to reduce its export tax to 0% and 3.1% respectively. Ontario and Alberta were not big exporters of softwood lumber to the U.S. at the time.

The second was a tariff-rate quota under SLA 1996. A tax-free quota of 14.7 billion board feet (bbf) was allocated to the 4 Canadian provinces. The next 650 million board feet (mbf) exports are subject to a U.S. $50 per thousand board feet (mbf) export fee. Additionally covered exports are subject to a $100/mbf fee. The fee level is adjusted annually for the difference in inflation rate between the two countries. SLA 1996 covers in a period when lumber prices were highest in the U.S. history, and the four provinces collectively surpassed the second tier quota in the five years under SLA 1996.

The third was a combination of countervailing and anti-dumping duties imposed on Canadian lumber imports between August 2001 and October 2006. Although some 80% of the duties collected have been returned to Canadian producers under SLA 2006, US$1 billion was retained in the U.S., including US$ 500 million that were given to U.S. producers. This US$1 billion represented a 4–5% tariff on all Canadian lumber exports to the U.S. in the same period.

The fourth was a price specific export tax rated quota system under SLA 2006 (SLA, 2006). Using Option A as an example, a 15% export tax is levied on Canadian lumber exports to the U.S. when the prevailing monthly softwood lumber composite price in the U.S. is below $315 per thousand board feet (mbf); a 10% export tax is applied when the composite lumber price is between $316 and 335/mbf, a 5% export tax is applied when the composite lumber price is between $336/mbf and $355/mbf, and 0% is applied if the prevailing monthly price is above $355/mbf and if a region does not go above its allocated share (triggering volume). Therefore, free trade was possible under SLA 2006. Indeed, in the 9 years — or 108 months — under SLA 2006, a 15% tax was applied in 66 months, a 10% tax was applied in 9 months, and a 5% tax was applied in 8 months, and a 0% tax (free trade) was applied in 25 months. The weighted average tax rate is 10.37% for the whole 108 months, or 13.49% in the 83 months when export tax rate was greater than 0%. Again, unlike MOU and SLA 1996, Manitoba and Saskatchewan were included in SLA 2006.


3. Empirical model and estimation method

Two distinct theoretical models are typically used to study the U.S. import model for Canadian lumber. A few studies derived a model for Canadian lumber exports to the U.S. with an assumption of homogenous softwood lumber in both countries (Myneni et al., 1994; Zhang, 2001, 2006; Baek and Yin, 2006; Song et al., 2011; Parajuli et al., 2015). Buongiorno et al. (1979), however, formulated several import demand models considering the assumption of imperfect substitutes or heterogeneity between the U.S. and Canadian lumber. Nagubadi et al. (2004) later revealed empirical evidence that Canadian lumber is not a perfect substitute for domestic lumber in the U.S. Recent studies in the Canadian lumber exports model followed the concept of Buongiorno et al. (1979), and developed the U.S. lumber imports model based on a derived import demand function (Baek, 2012; Nagubadi and Zhang, 2013; Parajuli and Zhang, 2016). Following Buongiorno et al. (1979) and Baek (2012), we also formulate the model of U.S. imports for softwood lumber from various Canadian provinces as:

\[
q_{ct} = f \left( \sum_{i=1}^{12} \sum_{k=1}^{11} M_i \right)
\]

where, \( q_{ct} \) represents U.S. lumber imports from a Canadian province \( i \) in month \( t \); \( p_{us} \) denotes the domestic lumber price in the U.S. and \( p_{ca} \) denotes the import price of softwood lumber from a Canadian province \( i \) in month \( t \); \( h_i \) represents the housing starts in the U.S.; \( xct \) is the real exchange rate between Canadian and U.S. dollars in month \( t \). We incorporate dummy variables: \( mou, sla96, cvdad, \) and sla06 in the model to measure the effects of past trade agreements and policies: MOU, SLA 1996, countervailing duties and antidumping tariffs, and SLA 2006 respectively. Monthly seasonal and up to 12-lag dummy variables are also included to account for any systematic seasonal variation and autocorrelation in lumber imports. Buongiorno et al. (1979) and Parajuli and Zhang (2016) explained expected effects of each variable on the quantity of softwood lumber imported from Canada. The effects of the ratio of domestic to import price of softwood lumber (\( p_d = \frac{p_{us}}{p_{ca}} \)) and U.S. housing starts are expected to be positive. The real exchange rate between the Canadian and U.S. dollars should have a positive sign. According to the trade theories, effects of all four trade policy agreements should have a negative influence on lumber shipments from every Canadian province to the U.S.

As an econometric estimation method, we use the Seemingly Unrelated Regression (SUR) approach to estimate the province-specific lumber import model together. Even though Canadian provinces selected different trade policy regimes under SLA 2006 and might operate somewhat independently, the overall trade policy and market events
might influence all provincial markets contemporaneously. The residual terms in lumber import equations, therefore, should be highly correlated, and the SUR approach (Zellner, 1962) is a better econometric method of estimating a system of equations than the individual Ordinary Least Square (OLS) method. Several studies in the forest economics literature have applied the SUR approach in various modeling frameworks (e.g., Alig, 1986; Nagubadi et al., 2004; Nquisted, 2008; Majumdar et al., 2011; Parajuli et al., 2016). A system of U.S. lumber import equations from Canadian provinces can be presented as:

$$Q_{Ci} = X_i^\prime \beta_i + \varepsilon_i, \quad i = 1, \ldots, K$$

(2)

where, $\varepsilon = [\varepsilon_1, \varepsilon_2, \ldots, \varepsilon_K]$ and errors are assumed to have strict exogeneity and homoscedasticity.

$$E[\varepsilon \mid X_1, X_2, \ldots, X_i] = 0 \quad \text{and} \quad E[\varepsilon \varepsilon^\prime \mid X_1, X_2, \ldots, X_i] = \Omega$$

(3)

where $Q_{Ci}$ is a vector of U.S. lumber import quantities from Canadian provinces, and $X_i$ is a matrix of explanatory variables from Eq. (1). Each equation in the system has its own parameter vector $\beta_i$ making them unrelated, but the contemporaneous correlation across the error terms exists as shown in Eq. (3).

4. Data

Table 1 presents the variables used in this paper, their descriptions, and respective data sources. The historical monthly data for all variables from January 1988 to October 2015 are collected from various sources. The monthly data on province-level monthly lumber exports quantity can only be traced back to January 1988. We only include data through October 2015, the final month under SLA 2006 because Zhang and Parajuli (2016) concluded that policy impacts are data sensitive and data should be included up to the time when the policy is terminated. BC Stats (2016) reports the monthly lumber imports to the U.S. by Canadian provinces ($q_{Cu}$). The monthly data on producer price index for softwood lumber ($p_{pu}$), a proxy of the softwood lumber price ($p_{pu}$) in the U.S. are obtained from U.S. Bureau of Labor Statistics (US BLS, 2016). Further, import prices for softwood lumber ($p_{ca}$) are computed by dividing the total value of lumber imports by the quantity of imports and converted to U.S. dollars by using U.S.-Canada dollar exchange rate. Data on total value and quantity of lumber imports from Canadian provinces are obtained from BC Stats (2016). Nagubadi and Zhang (2013) and Parajuli and Zhang (2016) also used the similar method to obtain the lumber import price series. The monthly housing starts data in the U.S. are collected from the U.S. Census Bureau (US Census Bureau, 2016), and the U.S.-Canada real exchange rate data are obtained from the USDA Economic Research Service (US ERS, 2016). All the price series are deflated to real 1982 dollars using the U.S. producer price index for all commodities (WPU00000000). Moreover, binary dummy variables mou, sla96, and sla06 are constructed in line with the past trade agreements: MOU, SLA 1996, and SLA 2006, respectively. Similarly, the dummy variable, cvdad, captures the effects of U.S. countervailing duties and anti-dumping tariffs during the period from 2001 to 2006. Fig. 1 presents the historical trends of U.S. lumber imports from several Canadian provinces and their relation with the U.S. housing starts. It appears that U.S. lumber imports closely follow housing starts in the U.S., specifically right after 2005.

5. Results and discussion

The SUR parameter estimates for U.S. lumber imports from Canadian provinces are reported in Table 2. Lumber imports from six Canadian provinces included in SLA 2006 are estimated separately, and lumber imports from Maritime Provinces are combined in the rest-of-Canada (ROC) equation. All data series but dummy variables are log-transformed, hence estimated coefficients are elasticity values. Among the 12 lags, only statistically significant lags are included in the final model. In terms of model specification, the hypothesis of no autocorrelation cannot be rejected as shown by the Portmanteau (Q) test for white noise of residuals in each individual equation. Moreover, the Breusch-Pagan test of independence substantiates our choice of the SUR approach as an estimation method, as the test reveals that error terms associated with lumber imports equations are highly correlated. In other words, the SUR estimates are more efficient than the single-equation OLS method.

The SUR results show that the coefficient of the domestic-import price ratio is positive and statistically significant in most provinces, suggesting that lumber imports from AB, BC, QC and SK tend to increase as U.S. domestic lumber price relative to import price increases. Buongiorno et al. (1979) and Baek (2012) also reported a positive impact of the domestic to import price ratio on U.S. lumber imports. As expected, the coefficient estimate of U.S. housing starts is found to be positive and significant. The level of U.S. housing starts is a main

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Table 1

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Unit</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>$q_{Cu}$</td>
<td>Lumber exports to the U.S. from Canadian provinces</td>
<td>Million board feet (mmbf)</td>
<td>BC Stats (2016)</td>
</tr>
<tr>
<td>$p_{pu}$</td>
<td>PPI for lumber and wood products (WPU0811)</td>
<td></td>
<td>US Bureau of Labor Statistics</td>
</tr>
<tr>
<td>$p_{ca}$</td>
<td>Province-specific lumber import price in U.S. dollars</td>
<td>$/1982/mbf</td>
<td>Total value/quantity of imported lumber</td>
</tr>
<tr>
<td>$h_i$</td>
<td>Housing starts in the U.S.-seasonally adjusted annual rate</td>
<td>1000s</td>
<td>U.S. Census Bureau</td>
</tr>
<tr>
<td>$x_c$</td>
<td>Real Canada/U.S. foreign exchange rate</td>
<td>C$/US$</td>
<td>USDA ERS</td>
</tr>
<tr>
<td>mou</td>
<td>Memorandum of Understanding</td>
<td>0 or 1</td>
<td>1 for 1987:01-1991:09</td>
</tr>
<tr>
<td>sla96</td>
<td>Softwood Lumber Agreement 1996</td>
<td>0 or 1</td>
<td>1 for 1996:01-2000:09</td>
</tr>
<tr>
<td>cvdad</td>
<td>Countervailing duties and anti-dumping tariffs</td>
<td>0 or 1</td>
<td>1 for 2003:08-2006:09</td>
</tr>
<tr>
<td>sla06</td>
<td>Softwood Lumber Agreement 2006</td>
<td>0 or 1</td>
<td>1 for 2006:10-2015:06</td>
</tr>
</tbody>
</table>

* 0 for months in which prevailing monthly price was above $355/mbf or when free trade prevailed during SLA 2006.
Past studies have also reported a mixed effect in lumber imports from Canada. Song et al. (2011) and Parajuli and Zhang (2016) showed a statistically insignificant positive effect of the exchange rate, Buongiorno et al. (1988), Jennings et al. (1991), Parajuli et al. (2015) reported a statistically insignificant effect on lumber imports from Canada. Table 2 also reports the effects of each past trade protection measures on lumber shipments to the U.S. from Canadian provinces. MOU (mou) is found to have significant negative impacts on lumber shipments from BC and QC. However, the effects of mou, sla96 and cvdad, in most of the provincial lumber export equations, are found to be statistically insignificant. In a few cases, the effects have even significant positive signs which are contrary to the expectation. For instance, sla96 is found to have a significant positive effect in lumber exports from AB and QC. Recent studies, Nagubadi and Zhang (2013) and Parajuli and Zhang (2016) also reported similar results while employing long time-series data samples. This is primarily due to the fact that the small impacts of the trade policies in the early periods are outweighed by the larger variations in the later periods (Parajuli and Zhang, 2016). In other words, there might be some kind of masking or dilution effects in a long time-series dataset, hence policy impacts should only be judged by using data up to the policy termination period (Zhang and Parajuli, 2016). Therefore, these results should be seen as an illustrative and comparison of impacts among provinces only, not as the total impact of SLA 2006 to Canada which is estimated by Parajuli and Zhang (2016).

The dummy variable covering the period of SLA 2006 (sla06), is found to have a significant negative impact in lumber shipments from BC, QC, ON, and SK. The largest percentage impact is reported in SK, the largest exporting province to the U.S., saw its exports to the U.S. drop by 14% during the period of SLA 2006. Yet, SK only accounted 1.4% of the total impact of SLA 2006 to Canada which is estimated by Parajuli and Zhang, 2016. In other words, there might be some kind of masking or dilution effects in a long time-series dataset, hence policy impacts should only be judged by using data up to the policy termination period (Zhang and Parajuli, 2016). Therefore, these results should be seen as an illustrative and comparison of impacts among provinces only, not as the total impact of SLA 2006 to Canada which is estimated by Parajuli and Zhang (2016).

Table 2
SUR regression estimates of the U.S. lumber imports from Canadian Provinces.

<table>
<thead>
<tr>
<th>Variable</th>
<th>QC</th>
<th>ON</th>
<th>MB</th>
<th>SK</th>
<th>AB</th>
<th>BC</th>
<th>ROC</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\text{LP}_t)</td>
<td>0.28</td>
<td>0.09</td>
<td>0.27</td>
<td>0.22</td>
<td>0.22</td>
<td>0.21</td>
<td>0.01</td>
</tr>
<tr>
<td>(\text{Lhstarts}_{lt})</td>
<td>0.14</td>
<td>0.12</td>
<td>0.49</td>
<td>0.31</td>
<td>0.07</td>
<td>0.23</td>
<td>0.04</td>
</tr>
<tr>
<td>(\text{lxcit})</td>
<td>(0.04)</td>
<td>(0.05)</td>
<td>(0.11)</td>
<td>(0.09)</td>
<td>(0.04)</td>
<td>(0.04)</td>
<td>(0.03)</td>
</tr>
<tr>
<td>(\text{lhstartsit})</td>
<td>0.18</td>
<td>-0.15</td>
<td>-0.03</td>
<td>0.35</td>
<td>0.24</td>
<td>-0.03</td>
<td>0.08</td>
</tr>
<tr>
<td>(\text{mou})</td>
<td>-0.11</td>
<td>-0.001</td>
<td>-0.04</td>
<td>-0.13</td>
<td>0.14</td>
<td>-0.06</td>
<td>-0.04</td>
</tr>
<tr>
<td>(\text{sla96})</td>
<td>0.06</td>
<td>0.02</td>
<td>-0.03</td>
<td>0.11</td>
<td>0.13</td>
<td>-0.001</td>
<td>0.11</td>
</tr>
<tr>
<td>(\text{cvdad})</td>
<td>(0.03)</td>
<td>(0.04)</td>
<td>(0.09)</td>
<td>(0.08)</td>
<td>(0.04)</td>
<td>(0.02)</td>
<td>(0.03)</td>
</tr>
<tr>
<td>(\text{sla06})</td>
<td>(0.02)</td>
<td>(0.03)</td>
<td>(0.08)</td>
<td>(0.07)</td>
<td>(0.04)</td>
<td>(0.02)</td>
<td>(0.02)</td>
</tr>
<tr>
<td>(\text{Time trend})</td>
<td>-0.01</td>
<td>-0.001</td>
<td>-0.002</td>
<td>-0.001</td>
<td>0.001</td>
<td>-0.0004</td>
<td>0.001</td>
</tr>
<tr>
<td>(\text{Constant})</td>
<td>1.89</td>
<td>0.83</td>
<td>-1.68</td>
<td>-0.13</td>
<td>0.58</td>
<td>3.73</td>
<td>0.82</td>
</tr>
<tr>
<td>(\text{Lag 1 (q}_{t-1})</td>
<td>0.57</td>
<td>0.54</td>
<td>0.50</td>
<td>0.66</td>
<td>0.53</td>
<td>0.28</td>
<td>0.53</td>
</tr>
<tr>
<td>(\text{Lag 2 (q}_{t-2})</td>
<td>0.15</td>
<td>0.21</td>
<td>0.10</td>
<td>0.12</td>
<td>0.10</td>
<td>0.20</td>
<td></td>
</tr>
<tr>
<td>(\text{Lag 3 (q}_{t-3})</td>
<td>0.12</td>
<td>0.17</td>
<td>(0.05)</td>
<td>(0.06)</td>
<td>(0.06)</td>
<td>(0.05)</td>
<td>(0.05)</td>
</tr>
<tr>
<td>(\text{Lag 4 (q}_{t-4})</td>
<td>0.13</td>
<td>-0.12</td>
<td>-0.09</td>
<td>0.07</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(\text{Lag 5 (q}_{t-5})</td>
<td>0.20</td>
<td>(0.05)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(\text{Lag 8 (q}_{t-8})</td>
<td>0.12</td>
<td>(0.05)</td>
<td>0.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(\text{Lag 9 (q}_{t-9})</td>
<td>-0.13</td>
<td>(0.05)</td>
<td>0.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(\text{Lag 10 (q}_{t-10})</td>
<td>0.07</td>
<td>(0.03)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(\text{Lag 11 (q}_{t-11})</td>
<td>-0.07</td>
<td>(0.03)</td>
<td>0.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(\text{Lag 12 (q}_{t-12})</td>
<td>0.11</td>
<td>(0.04)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(\text{Q-test for white noise at 12 lags})</td>
<td>17.08</td>
<td>11.99</td>
<td>9.23</td>
<td>17.61</td>
<td>11.82</td>
<td>7.35</td>
<td>12.27</td>
</tr>
<tr>
<td>(\text{R}^2)</td>
<td>0.95</td>
<td>0.95</td>
<td>0.95</td>
<td>0.91</td>
<td>0.94</td>
<td>0.91</td>
<td>0.97</td>
</tr>
</tbody>
</table>

Breusch-Pagan test of independence: \(\chi^2(6)\): 270.84, \(P\)-value = 0.0000.

Values in parentheses represent standard errors, and values in brackets refer to \(P\)-values.

\(^a\) Significant at 5%.
\(^b\) Significant at 10%.
in the sense that they impose restrictions only on the exports of covered provinces and give a free ride to exporters from other provinces. This feature provides us an opportunity to estimate trade diversion within a country. Furthermore, SLA 2006 had two options, and we could estimate the results of provinces choosing different options.

In this paper we use the SUR econometric approach to estimate U.S. lumber import equations for all Canadian lumber exporting provinces separately and to quantify the effects of SLA 2006 on lumber shipments from Canadian provinces to the U.S. We find that while SLA 2006 is able to limit softwood lumber flows to the U.S. from BC, ON, QC, and SK, the SLA 2006 excluded provinces are unable to take advantage of the SLA 2006 restrictions on major lumber exporting provinces. Thus, SLA 2006 did not cause any significant trade diversion from SLA-covered provinces to non-covered provinces. Furthermore, the different export performance from various SLA-covered provinces could be related to their export opportunities to other countries, their timber resource endowment and supply, and their choice of different options under SLA 2006.

Thus, the Coalition’s call for one single quota for Canada which includes maritime provinces that have been excluded from all trade restrictions is not warranted. These provinces did not increase their exports to the U.S. under SLA 2006. This, in addition to the fact that private landowners supply a significant amount of softwood stumpage in these provinces, will give more credence that these provinces should be left out in any future trade investigations and possible restrictions. As for litigation and negotiations between the U.S. and Canada with respect to Canadian provinces that are covered under SLA 2006, one should understand that compared to 2006, the current dynamics of softwood lumber trade between the U.S. and Canada are different. First, the U.S. is no longer only a single customer for Canadian softwood lumber. The overseas export market of Canadian lumber has been flourishing in recent years. China is a customer for 15% of Canadian lumber, almost all of which comes from BC. Second, in early 2000s, there were significant US holdings of Canadian sawmill operations. In 2016, that situation more than reversed; the three largest North American producers, all based in BC, now own as much or more capacity in the US than they do in Canada. Having their operations in both countries, these could be less actively engaged in the trade negotiation process.

6. Conclusions

The U.S. and Canada have a rich history of softwood lumber trade dispute, and various trade measures have been put in place restricting Canadian softwood lumber to the U.S. These trade measures are unique

being reduced by 4% under SLA 2006. Similarly, SLA 2006 was able to restrict lumber shipments to the U.S. from QC by about 7%, and from ON by about 6%. However, SLA 2006 is found to be ineffective to serve its purpose in the lumber shipments from AB and MB, as the SUR coefficient estimates associated with sla06 are statistically insignificant. Similarly, lumber shipments from Maritime Provinces are also found to be unaffected by SLA 2006, which suggests that SLA 2006 does not cause trade diversion from SLA-covered provinces to non-covered provinces. Note also that MB only has 0.1% of Canadian exports to the U.S. in 2015.

The lowest impact of SLA 2006 on BC may be explained by the rapidly surging overseas market in the last decade. This new flourishing lumber market, particularly China, significantly changed the ratio of BC lumber exports; from 85% or more going to the US down to 60%, while new customers in China now (2016) account for 30% of BC exports (BC Stats, 2016). In addition, BC chose Option A of SLA 2006, which allows efficient producers to pay the export tax without repercussion on their future export volume.

The provinces in Central Canada (ON, QC), on the other hand, were not able to take advantage of this new export market, mostly due to distance and the low value of the purchases (low grade lumber). Furthermore, QB and ON selected Option B of SLA 2006, which means that exporters from these provinces had a volume constraint that well-to-do producers could not overcome. QC lumber producers did benefit from BC companies shipping more wood offshore, as US customers accustomed to low-cost, lower-quality wood from BC turned to QC when China was buying from BC in large volumes. SK and MB, which are the small SLA-covered provinces, also chose Option B. Combined with the largest negative results on SK, it appears that SLA 2006 has a larger impact in Provinces which selected Option B of SLA 2006. In other words, Option B of SLA 2006 was more damaging to Canadian exporters. The insignificant result on AB may be related to its overall supply of lumber due to the mountain pine beetle infestation and oil boom in certain years under SLA 2006 (Johnston and van Kooten, 2017). In fact, AB surpassed its regional trigger volume to the U.S. in multiple months during SLA 2006, which means its exports to the U.S. beyond the defined regional trigger volume was charged at 50% additional tax on top of the basic export tax rate.

References


