Subnational Carbon Pricing Policies in British Columbia, Ontario, and Québec:

Economic and Political Factors Influencing the Choice of Instruments to Abate Emissions

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Abstract

While climate change is widely considered to be one of the major challenges facing the planet today, the Government of Canada has yet to apply market-based instruments to abate greenhouse gas emissions. Canadian federalism, however, allows subnational governments to take action on climate policy. The purpose of this research is to understand why Canada's three most populous provinces – British Columbia, Ontario, and Québec – implemented different carbon pricing policies after committing to a unified policy route under the Western Climate Initiative (WCI) in 2008. Since then, BC adopted a carbon tax; Québec followed through with their WCI commitment and now trades emissions permits with California; and, to date, Ontario has yet to price carbon. This study seeks to explain the carbon pricing instrument of choice (dependent variable) as a function of the political systems and economic structures (independent variables). The first hypothesis is that differences in provincial party systems determined different carbon pricing policies. A two-party system, for example, tends to allow right-of-centre parties to implement carbon pricing more easily, as the BC Liberals maintained support from the business community and limited the hemorrhage of disaffected conservative voters while implementing a robust carbon tax. Right-wing parties in three or multi-party systems pose a greater threat to preventing governing parties from implementing aggressive carbon pricing mechanisms, as observed in Ontario and Québec. Québec's multi-party system permitted less aggressive action, while Ontario's three-party situation may have played a role in preventing the ability to implement carbon pricing to date. The second hypothesis considers carbon pricing as a function of the differences in the structures of the provincial economies. BC avoided capital outflow by not trading emissions with jurisdictions that have superior potential to reduce emissions. In Ontario, the previously promised coal phase-out and a unique economic structure, including economic dependence on competitive, trade-exposed, and fragile carbon-intensive industries during a recession, and a shifting taxation landscape, prevented carbon pricing to date. In Québec, the recognized risk of capital outflow did not prevent the selection of cap-and-trade. The economic structures of each province interacted with the party systems to help determine instrument choice.

Preface

This dissertation is an original intellectual product of the author, Tim Krupa. The UBC Behavioural Research Ethics Board approved this study, "Carbon pricing in British Columbia, Ontario, and Québec: Determining instrument choice to control emissions." The UBC Ethics Certificate number was H14-01613.

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Dedication

For my role models: Baba, Grandma, Mom, and Dad. Let’s build a better planet.

Introduction

"Climate change represents a 'tragedy of the commons' on a global scale, requiring the cooperation of nations that do not necessarily put the Earth's well-being above their own national interests" (Harrison & Sundstrom, 2010). China and the United States, by far the world's highest emitting countries, announced a historic climate agreement in November 2014. The United States intends to reduce emissions by 26% to 28% below 2005 levels by 2025, while China will peak carbon dioxide (CO_2) emissions and increase non-fossil fuel generation by approximately 2030. As Canada's largest trading partner, the United States' position is relevant because the Government of Canada has consistently stated that it will follow the US lead when considering the implementation of climate change policy (Canadian Press, 2009). Meanwhile, the European Union, the world's third largest emitting jurisdiction, previously set targets to limit greenhouse gas emissions (GHGs) with the help of market-based instruments. In 2014, EU leaders agreed to reduce EU domestic GHGs to at least 40% below the 1990 level by 2030 (European Commission, 2015). Canada, a nation heavily reliant on the extraction, distribution, and combustion of fossil fuels, ranks among the most emissions-intensive nations in the Organization for Economic Co-operation and Development (OECD) (Harrison, 2013b).

Although the Government of Canada has failed to apply market-based instruments to abate emissions, federalism has allowed subnational governments to take action. Canadian provinces possess constitutional authority over natural resources and energy production, as well as the authority to pass laws and regulations to control emissions. In a federation as decentralized as Canada's, "a critical question is to what degree federalism can facilitate or deter policy innovation and diffusion" (Harrison, 2013a), especially given the current climate policy vacuum at the federal level of government. Leaders in North American subnational climate policy tend to

have the least carbon-intensive economies, as they strategically deploy market-based instruments on specific sectors through carefully selected instruments (Harrison, 2013a).

Taxation and other methods of regulation offer interesting public policy comparisons as they illuminate the heart of ideological debate between left and right: who gets what and who pays for it in society (Steinmo, 1989)? In 2007 and 2008, British Columbia (BC), Ontario, and Québec committed to addressing climate change through emissions trading by joining the Western Climate Initiative (WCI), a sign that at least some provincial governments were eager to act on climate policy (D. Gagnier, personal communication, October 24, 2014). Since then, BC adopted a carbon tax; Québec followed through with their WCI commitment and now trades emissions permits with California; and Ontario has yet to formally price carbon, though after a delayed period of several years, Ontario recently recommitted to providing details of its emissions trading plans by the end of 2015. The analysis will therefore consider Ontario's failure to follow through on its WCI commitment to date. Liberal premiers from a similar era in Canadian provincial politics were involved in the decision-making of the carbon pricing policies of interest: BC Premier Gordon Campbell (2001 – 2011), Québec Premier Jean Charest (2003 – 2012), and Ontario Premier Dalton McGuinty (2003 – 2013).

The purpose of this research is to enhance our understanding of the subnational movement to price carbon. More specifically, why did Canada's three most populous provinces – BC, Ontario, and Québec – implement different carbon pricing policies after committing to a unified policy route under the WCI in 2008? This knowledge will improve understanding of government decisions to inform policy making in Canada, and beyond, by investigating the relationship between party systems and economic structures as independent variables, and each jurisdiction's choice of policy instrument as dependent variables. Moving forward, the following

hypotheses and analyses assume that carbon pricing represents normative "good public policy" motives, as all three premiers – Campbell, Charest, and McGuinty – have demonstrated personal commitments to meaningful climate change policy. However, the politics of cost imposition have made the political enactment of carbon pricing policies difficult (Lachapelle, Borick, & Rabe, 2012).

The two hypotheses focus on party systems and economic structures because several typical democratic determinants of public policy are alike in BC, Ontario, and Québec: democratic institutions and structures; electoral systems; political culture; the federal constitution and Charter of Rights and Freedoms; federal policies pertaining to pollution and energy such as trade tariffs, international treaties and agreements; the distribution of population centres; and the national trends in public opinion.

Regarding the similarities in the distribution of population centres in each province, British Columbia is 86% urban and 14% rural, Ontario is 86% urban and 14% rural, and Québec is 81% urban and 14% rural (Statistics Canada, 2011). Each province has major urban population centres – BC's Lower Mainland, Québec's Montreal area, and Ontario's Greater Toronto Area – that represent approximately half of their total population. The remaining population in each of the provinces is distributed similarly. Thus, the distribution of population centres is not considered as a major determining factor.

Regarding the national public opinion trends, "environment / pollution / climate change / Kyoto" surged in salience from December 2005 to January 2007 and overtook "war / conflict / terrorism / security" and "health care" as the issue most frequently cited by poll respondents as the most important problem facing Canadians (Environics Institute, 2010). The environment was firmly positioned well above the "economy" and "unemployment" (Environics Institute, 2010).

The economy overtook all other issues in June 2008 by an unprecedented margin (Environics Institute, 2010). These trends were evident in all three provinces and thus do not appear to account for the different policy outcomes. Although the environment has enjoyed periods of high salience, voters remain skeptical of carbon pricing policies, especially carbon taxes, which Canadians are more likely to oppose than cap-and-trade (Lachapelle, Borrick, & Rabe, 2012). However, public opinion may have an impact on the outcome through interactions with imposed costs and party systems, to which we now turn.

The first hypothesis is that the different party systems of each province facilitated carbon pricing and determined the choice of instrument. This hypothesis assumes that carbon taxes are more challenging politically than cap-and-trade due to the visibility of costs. The question is thus – how did the party systems of the three provinces influence the ability of decision makers to expend political capital and pursue carbon pricing with varying degrees of flexibility? BC, Ontario, and Québec offer meaningful variation in party systems with two parties in BC, three in Ontario, and several in Québec. The threat from the political right was the least in British Columbia and the most in Ontario, but questions remain regarding the role of party systems. For instance, why did BC go above and beyond its WCI commitment by implementing the most aggressive carbon pricing scheme, and why was Québec more successful in fulfilling its WCI commitment than Ontario? The second hypothesis is that carbon pricing policy outcomes are a function of the differences in the structure of each of the provincial economies. This includes an examination of policy incentives through market realities, industry demands, emissions profiles by sector, and energy sources. This hypothesis is tested using expert interviews complemented by data from emissions by economic sector.

Emissions Pricing

Environmental degradation is a classic example of a negative economic externality because the marginal public cost is greater than the marginal private cost, creating looming market failure. Carbon fees force companies and individuals to internalize the cost of their pollution, thus offering incentives to pollute less. However, governments confront a stark tradeoff between practical policy and political feasibility in their attempts to reduce GHGs (Jaccard, 2012).

Although popular and free of political risk, non-compulsory or voluntary environmental policies such as information programs and incentive subsidies are largely ineffective (Jaccard, 2012). In contrast, compulsory policies such as carbon taxes or cap-and-trade instruments are more effective, but often come at a cost to the policy maker's political capital. For example, large compulsory fees may motivate industry to relocate operations outside of a jurisdiction, especially considering the relative ease of moving across Canadian provincial borders compared to international borders. This tradeoff has caused the majority of industrialized jurisdictions to pursue non-compulsory policies over the past two decades (Simpson, Jaccard, & Rivers, 2007). Canadian policy makers have shown distinct preferences for subsidies over regulatory approaches despite clear recommendations from environmental policy experts that encourage governments to implement market-based instruments to reduce emissions (Harrison, 2012).

More detailed and applied policy analyses and comparisons of advantages and disadvantages of the carbon tax and cap-and-trade are available (e.g., DiPeso, 2009; Harrison, 2012). However, the following outline will serve as a sufficient baseline for understanding the decision-making context.

Carbon taxes seek to force polluters to internalize the cost of the negative externality by putting a monetary price on the real costs imposed on the economy (David Suzuki Foundation, 2008). This provides incentives for businesses, industry, and households to conserve energy or use cleaner technologies, therefore increasing demand and spurring innovation in greener technologies, which may enhance the affordability of sustainable technologies in the long-run. Carbon taxes may apply to only CO_2, the main GHG produced from human activity, or to all GHGs. The tax rate determines the incentive to invest in energy-efficient solutions (i.e., the strength of this economic signal). The carbon tax is the more transparent of the two instruments, as citizens may easily observe a connection between the implementation of the tax and the rise in energy prices (Jaccard, 2012). Carbon taxes are currently most commonly employed in northern European countries (David Suzuki Foundation, 2008).

Cap-and-trade involves a central authority (e.g., the Québec Government) limiting the amount of pollution that firms may emit by only making a certain number of emission permits available. Firms may then trade emissions permits – also known as emissions units, unit allowances, or carbon credits. This creates a market that determines the price of emitting carbon and provides incentives for companies to invest in lower-emitting technologies. The cap is less cost-effective and efficient in terms of administrative expenses compared to the tax (Jaccard, 2012). The cap also involves commission spending on brokers and traders in the market and thus imposes a greater cost on society (Jaccard, 2012). The cap makes it difficult for citizens to infer a connection between the implementation of the cap and the rise in energy prices (Jaccard, 2012); therefore, politicians may favour the cap when trading off between economic efficiency and political acceptability (Baldwin, 2008; Harrison, 2010). The cap may also offer governments more control in establishing a pollution limit.

The tax is relatively cost-effective and efficient in terms of administrative and regulatory costs and may be implemented quickly (Jaccard, 2012), whereas cap-and-trade systems require time to design trading regulations and may encounter difficulty in the initial allocation of permits based on competitive bidding or historical emissions levels. In summary, the design of the two instruments may differ in several areas, including transparency, scope, ease of administration, and speed of implementation. The key issues with the carbon tax are determining the rate, scope, and destination of the revenues. The key issues with the cap-and-trade are determining the cap, scope, allocation mechanism, whether to use free distribution or auctions, and, if the latter, how to allocate the revenues.

The Western Climate Initiative

The WCI is a collaboration of states and provinces attempting to implement emissions trading (WCI, 2013). The program aims for meaningful subnational action on climate change after years of frustration due to an absence of federal climate policies (Jaccard & Dowlatabadi, 2011). BC became the first Canadian province to join the WCI making the partnership international in April 2007. Québec became an official partner in April 2008 after previously signing on as an observer. Ontario became an official partner in July 2008 after previously signing on as an observer, but, like BC, has failed to uphold its commitment to emissions trading to date. Ontario and BC currently maintain nominal membership. In addition to BC, Ontario, and Québec, the WCI formerly included one other province, Manitoba, and seven U.S. states. All states withdrew in 2011 except California. Québec and California are the only jurisdictions currently engaged in emissions trading.

Aside from the discussed initiatives, subnational compulsory policies in Canada also include small amounts of credit-based emissions trading in Alberta and a small carbon tax on coal in Manitoba (Houle, 2013). Alberta was never involved in the WCI, whereas Manitoba became the second Canadian province to sign-on to WCI in June 2007. The Government of Manitoba undertook a public cap-and-trade consultation in 2010 (Government of Manitoba, 2011), but did not pass legislation to implement the instrument. Only the three largest provinces to join WCI are considered in the analysis below.

British Columbia Context

In April 2007, BC became the first province to join the WCI. In 2008, both major political parties – the BC Liberal Party and the BC NDP – committed to a cap-and-trade to cover the remaining industrial emissions in accordance with this WCI commitment (Harrison, 2012). In July 2008, however, BC became the first government in North America to introduce a revenue-neutral carbon tax (Government of BC, 2013). The inaugural tax rate was \$10/tonne CO_2 equivalent (CO_{2eq}) before being increased by \$5/tonne per year to the current rate of \$30/tonne in 2012 (Government of BC, 2013). The tax charges businesses and consumers the same rate, which is now fixed for the foreseeable future. It applies to all fossil fuels (gasoline, diesel, jet fuel, natural gas, propane, and coal) burned for transportation, home heating, industrial production, and electricity (Government of BC, 2013).

Revenues gained from this tax are offset by reductions in corporate and income taxes, a shift that, in theory, should stimulate growth (Jaccard & Dowlatabadi, 2011). BC has since been applauded for introducing "some of the best climate policies in the world" and the "most economically efficient [carbon tax] in the world" (Jaccard & Dowlatabadi, 2011). In 2014,

World Bank president Jim Yong Kim called BC's carbon tax, "one of the most powerful examples of carbon pricing" (Hume, 2014). The OECD also praised BC's carbon tax by highlighting it as a leading example of carbon pricing (OECD, 2013). Angel Gurría, Secretary-General of the OECD, said, "the implementation of British Columbia's carbon tax is as near as we have to a textbook case [of carbon pricing], with wide coverage across sectors and a steady increase in the rate, from $5 to $30 per tonne over a period of five years" (Gurría, 2013).

In 2007, the BC Government adopted ambitious reduction targets, a clean energy standard, a low-carbon fuel standard, and a commitment to carbon-neutral government operations. Premier Gordon Campbell acknowledged that he was affected by his recent observations of the environmental repercussions of economic growth in China, which prompted him to shift his attention to the risks of GHG emissions (Harrison, 2010). He also had recently become a new grandfather, which may have instilled a stronger sense of compassion for future generations (Harrison, 2010).

In 2013, BC joined the Pacific Coast Action Plan on Climate and Energy (PCAPCE), which includes California, Oregon, and Washington (PCAPCE, 2013). The plan promises to "harmonize" strategies to support climate change research, incentivize energy-efficient buildings, and expand use of zero-emission vehicles (Steinmetz, 2013). This initiative may involve Oregon and Washington moving towards BC's carbon tax model and appeared to reaffirm BC's commitment to the tax as Environment Minister Mary Polak indicated that BC has shown that the carbon tax "can be good for business and good for the economy" (Meissner, 2013). Premier Christy Clark stated that, "it's important to be a leader, but you also want to have some followers." BC appears to be seeking followers of the carbon tax, rather than following the WCI cap-and-trade model.

Ontario Context

Ontario transitioned from observer to partner status in the WCI in July 2008, but did not act on its commitment to price carbon from 2008 to 2014. Ontario's major climate change policy was the coal phase-out, which, to date, is the single most effective policy to reduce GHGs in Canada (Environment Canada, 2013) and the continent (Morrow, 2014). Ontario Liberal Premier Dalton McGuinty initially promised in 2003 (five years before WCI negotiations) to end coal-fired power in the province by 2007 (Morrow, 2014). Although delayed, Ontario eventually closed all coal-fired power plants from 2007 to 2014 (Morrow, 2014).

Ontario announced a plan to price carbon in 2015, acknowledging the 2008 emissions trading deal with BC, California, Québec (Morrow, 2015). Premier Kathleen Wynne stated, "it is high time Ontario made good on that deal" (Morrow, 2015). However, this development occurred after interviews were conducted, and the province had not released details or implemented emissions trading when this thesis was written. Therefore, the following analysis seeks to explain Ontario's inability to price carbon to date in comparison to policies already implemented by BC and Québec.

Québec Context

In October 2007, prior to joining the WCI, Québec became the first subnational government in North America to implement a $3.50/tonne CO_{2eq} carbon tax on petroleum, natural gas, and coal (Government of Québec, 2013a). The government requested that companies avoid passing the tax along to consumers, a notion that is inconsistent with the purpose of a carbon tax and not enforceable. Unlike BC, Québec's revenues are directed to energy efficiency programs such as public transit. Québec never increased the initial tax rate, which was too low to meaningfully reduce emissions and is not considered in the following analysis.

However, Québec transitioned from observer to partner status in the WCI in April 2008, and launched a cap-and-trade system in accordance with their commitment to the WCI carbon market on January 1, 2013 (Government of Québec, 2013b). This carbon market merged trading with California in January 2014. The cap-and-trade implementation is striking given that Québec started with such a small carbon tax, but then shifted to a different approach to pursue their emissions targets. The tax remained intact to collect 200 million in annual revenue, but is being phased out during the second compliance period of the cap-and-trade (Houle, 2013). Proceeds from the permits that are auctioned off in the cap-and-trade system are directed to the Québec Green Fund and earmarked to finance initiatives in the province's 2013 – 2020 Climate Change Action Plan. The holding limit for a given year is the sum of a) 10% of their baseline number of permits, and b) 2.5% of the amount that the annual cap of emission units exceeds their baseline (Government of Québec, 2015).

The first compliance period (2013 – 2014) included only the industrial and electricity sectors. Only businesses that emit 25,000 metric tonnes of CO_{2eq} per year or more were subject to the instrument (Government of Québec, 2013b). The second compliance period (January 2015 –

2017) includes distributors of transportation and home heating fuels, and also includes the phase-out of the carbon tax (Government of Québec, 2013b). The third compliance period (2018 – 2020) will include the same fuel sources and procedures as the second compliance period, but with a continuing decrease in the number of available permits (Government of Québec, 2013c). At the end of each compliance period (i.e., November 1, 2015, November 1, 2018 and November 1, 2021), "emitters subject to the system must have a number of emission allowances in their compliance accounts that is at least equivalent to the verified GHG emissions for all their establishments subject to the cap-and-trade during the compliance period in question" (Government of Québec, 2013c). That is, at the end of every compliance period, emitters must give the provincial government one emission unit for every tonne of GHGs emitted (Government of Québec, 2013c).

On December 3, 2013, companies from the industrial and electricity sectors – Transcanada Energy, Clencore Canada, ArcelorMittal Montreal, and Hydro-Québec – participated in the province's first auction, which resulted in an emitting price of $10.75/tonne CO_{2eq} (Reuters, 2013). This was the price floor set when the policy was announced. This minimum price per emission unit is scheduled to increase at a rate of 5% in addition to inflation every year until 2020 (Government of Québec, 2013b).

Methods

This analysis considers the adoption and survival of the policies in the provinces through two methods. First, the examination of primary data sources, secondary literature, election platforms, and recent mainstream media coverage. Second, four senior government officials and one advocacy group representative – all of whom were directly involved in provincial carbon pricing decision-making – were purposively selected, interviewed, and asked to communicate their understanding and rationales behind their respective province's policy decisions. The author conducted open-ended, original interviews, which focused on Québec and Ontario given that Kathryn Harrison had recently conducted interviews and detailed BC's case (Harrison 2012; Harrison, 2013b; Peet & Harrison, 2012). Participants were limited to actors who played critical roles at the times the decisions were made.

Participants who consented to being interviewed on the record for the purposes of this academic research included: Jean Charest (Premier of Québec from 2003 – 2012 and Canada's Minister of the Environment from 1991 – 1993), Daniel Gagnier (Chief of Staff to Québec Premier Charest from 2007 – 2009 and in 2012, Chief of Staff to Ontario Premier David Peterson from 1989 – 1990, President of the Energy Policy Institute of Canada in 2012, and Chairman of the International Institute for Sustainable Development from 2005 – present), and Gerald Butts (Director of Policy and Research in the Ontario's Opposition Leader's Office from 2000 – 2003, Principal Secretary to Premier Dalton McGuinty from 2003 – 2008, and President and CEO of World Wildlife Fund Canada from 2008 – 2012).

Two participants chose not to be referred to by name, including a current senior policy advisor to the Premier of Ontario, referred to as "Participant A," and a former Executive Director of the Pembina Institute, a Canadian non-profit think tank whose mission is to advance clean

energy solutions through innovative research, education, consulting, and advocacy (Pembina Institute, 2014), referred to as "Participant B." This former Pembina representative was "highly involved" in advocating for provincial carbon pricing policies (Participant B, personal communication, December 19, 2014). The majority of participants consented to the being recorded during the interview. Both the digital recordings and the interviewer's handwritten notes were reviewed only by the author and supervisor.

Hypothesis One: Party Systems

This section tests the first hypothesis that the carbon pricing policy outcomes vary due to the party systems and the campaign landscapes they produce. This hypothesis is tested by comparing the political flexibility in BC, Ontario, and Québec during the time period of policy implementation and survival, or inaction, by considering the various party stances and voting history on relevant bills. The underlying assumption when considering political flexibility and political risk is that compulsory regulation policies directly or indirectly increase consumer costs and are therefore unpopular. Although the carbon tax and cap-and-trade are both examples of compulsory regulation, cap-and-trade offers several political advantages over the less popular carbon tax (Baldwin, 2008). The carbon tax is more visible to consumers and more challenging politically, and can only be adopted by committed political leaders with political flexibility. Threats from the political right are relevant in the politics of carbon pricing because the implementation and survival of such policies are often dependent on maintaining, or establishing, support from the business community and limiting the hemorrhage of disaffected conservative voters. The party systems in BC, Ontario, and Québec are summarized in Table 1.

Table 1

Summary of Party Systems in BC, Ontario, and Québec

Province	Election	Victorious party result	Second party result	Third party result
BC	2005	Lib (46%, 46 s)	NDP (42%, 33 s)	Green (9%, 0 s)
(85 seats)	2009	Lib (46%, 49 s)	NDP (42%, 36 s)	Green (8%, 0 s)
	2013	Lib (44%, 50 s)	NDP (39%, 33 s)	Green (8%, 1 s)
Québec	2007	Lib (33%, 48 s)	ADQ (31%, 31 s)	PQ (28%, 36 s)
(125 seats)	2008	Lib (42%, 66 s)	PQ (35%, 51 s)	ADQ (16%, 7 s)
	2012	PQ (32%, 54 s)	Lib (31%, 50 s)	CAQ (27%, 19 s)
	2014	Lib (42%, 70 s)	PQ (25%, 30 s)	CAQ (23%, 22 s)
Ontario	2007	Lib (42%, 71 s)	PC (32%, 26 s)	NDP (17%, 10 s)
(107 seats)	2011	Lib (38%, 53 s)	PC (35%, 37 s)	NDP (23%, 17 s)
	2014	Lib (39%, 58 s)	PC (31%, 28 s)	NDP (24%, 23%)

Note. Summary includes the governing, opposition, and third parties in elections during the period of instrument implementation and survival. The results show percentage of popular votes and number of seats won. Parties denoted as ADQ (Action democratique du Québec), CAQ (Coalition Avenir de Québec), Lib (BC Liberal Party, Québec Liberal Party, or Ontario Liberal Party), NDP (BC New Democratic Party or Ontario New Democratic Party), PC (Ontario Progressive Conservative Party), and PQ (Parti Québécois). Table inspired by Houle (2013).

To analyze the political parties, respective political alignment relative to the others using social and economic indicators must be considered. The alignment of the three major federal parties is used as a marker for the comparison of provincial parties. Vote Compass data demonstrate almost perfect alignment between the three major parties in Canada and Ontario on the social-economic axis (Vote Compass, 2014). Ontario's robust three-party system mirrors the federal model more closely than do the party systems of BC and Québec. However, there is skew between the provincial and federal party systems in Québec and BC (Vote Compass, 2014). In BC, the federal versus provincial alignments demonstrate that a voter who aligns with the BC Liberals may be as likely to support the Conservative Party of Canada as the Liberal Party of Canada. Meanwhile, Québec's party system is complicated by the addition of a nationalist-federalist axis, which contorts the traditional social-economic ideological spectrum. Nonetheless, the Action democratique du Québec (ADQ) or Coalition Avenir de Québec (CAQ) remained to the right of the governing Québec Liberal Party (QLP) on the economic axis. Vote Compass algorithms are considered valid and accurate measures of party placement on the ideological spectrum (Vote Compass, 2012).

Consider the implementation of BC's carbon tax. Harrison (2012 & 2013b) analyzed the politics behind the implementation and survival of BC's tax in detail through the use of expert interviews. The right-of-centre BC Liberal Party is crucial to understanding BC's party system as the provincial Liberals represent an informal coalition between federal Liberals and federal Conservatives. Only the BC NDP and BC Liberals held seats in the Legislative Assembly at the time the carbon tax was implemented. The BC NDP had served as the Official Opposition since 2001. They represented a progressive, left-of-centre party that embraced socialist traditions (BC NDP, 2013b). The NDP caucus voted against the carbon tax legislation in May 2008, and, one

month later, launched a populist "Axe the Tax" campaign with online petitions and public rallies (Harrison, 2012). The NDP's longstanding environmental supporters were shocked, including some members of its own caucus (Harrison, 2012). Their stance against the carbon tax contradicted the unanimous support of the academic and environmental community (Green et al., 2008; David Suzuki Foundation, 2008). Environmental activist David Suzuki indicated that he was "ashamed of [NDP Leader] Carole James" for attempting to gain political points on the issue (Walker, 2008).

The BC Liberals were reelected with additional seats one year later in May 2009. Though the carbon tax was unpopular at the time, the onset of a recession before the 2009 provincial election shifted voters' attention from the carbon tax to the economy, a development that advantaged the BC Liberals (Harrison, 2012). The narrow opportunity for policy leadership prevailed despite opportunism from the Official Opposition. The unique two-party system with a right-of-centre party acting without opposition to its right (the BC Conservatives have never held a seat in the Legislative Assembly) allowed the BC government to take advantage of its majority government and the centralized power structure of the Westminster parliamentary system and single member plurality electoral system. The lack of competition from the political right strengthened ties between the Liberals and the business community, and limited the hemorrhage of disaffected conservative voters. Nonetheless, the survival of BC's carbon tax cannot be attributed solely to the party system, but rather to an interaction between party system and the timing of public opinion.

Shifting focus to the survival of the instrument, the BC NDP no longer oppose the carbon tax in principle and disagree only at the margins. They proposed two amendments during the 2013 general election. First, expand the base of the carbon tax to include vented emissions from

oil and gas operations, an initiative they predicted would generate $205 million in revenue over the next three fiscal years (BC NDP, 2013a). Second, eliminate the revenue-neutrality of the tax and instead invest a portion of the carbon tax revenues in transit services, green infrastructure, and other climate solutions (BC NDP, 2013a). The Conservatives "pledged to repeal the unfair Carbon Tax" altogether in the 2013 general election, but received less than five percent of the popular vote (BC Conservatives, 2013). The BC Green Party favoured carbon taxation and proposed increasing the rate to $50/tonne CO_{2eq} (BC Green Party, 2013). The parties took stances, but carbon pricing was not a key electoral issue in the 2013 general election because, once again, there was no threat from the political right, allowing the BC Liberals to retain support from both the business community and any disaffected conservative voters. These results were fruitful in explaining how the BC government capitalized on a unique party system and implemented the "best climate policy in the world" (Bauman & Hsu, 2012).

In Québec, the analysis considers whether the presence of an established party to the right of the governing party hindered the Québec Liberals' capacity to implement a more politically challenging carbon tax. Unlike in BC, the Québec Liberal Party's strategy had to consider opposition parties on the economic right (ADQ or CAQ) who would be expected to criticize more aggressive carbon taxation (J. Charest, personal communication, November 12, 2014). Québec's political posturing is complicated by the unavoidable nationalism-federalism debate and language issues, which contort the ideological spectrum and render environmental stances less predictable. The right-of-centre QLP applied a small carbon tax and a more substantial cap-and-trade policy, and escaped unscathed politically. The ADQ positioned itself to the right of the QLP on economic and social issues, and played a significant role in the 2007 election, as they

formed the official opposition. The ADQ was later replaced with the conservative separatist CAQ, which was founded in 2011.

In Québec, there are no major differences between the parties on climate change policy, possibly because voters traditionally tend to be especially concerned about climate change (Environics Institute, 2012; D. Gagnier, personal communication, October 24, 2014). Broad-based consensus and convergence of the parties was observed even when the issue received minor media coverage. In 2007, the right-wing ADQ supported Liberal Premier Charest by encouraging the Québec government to create a carbon exchange with California (Dougherty, 2007; J. Charest, personal communication, November 12, 2014). Stephane Le Bouyonnec, president of the ADQ's political commission, argued that the Liberals' climate policy proposals would not allow Québec to meet its Kyoto targets and called the environment "the most important issue" (Dougherty, 2007).

In June 2009, Members of Québec's National Assembly, under a QLP majority, voted unanimously to amend the Environment Quality Act to allow for the implementation of a GHG cap-and-trade system (Government of Québec, 2013d). As expected with any compulsory environmental regulation, there was resistance from the business community, but it was minor. The Conseil du patronat, representing Québec's largest business group supported the idea of an eventual carbon market, but felt it was hasty and risky for Québec and California to jump into a cap-and-trade policy without any other jurisdictions involved. The business community warned of the disadvantages for business in Québec that would result from the government's go-it-alone approach and indicated that they already faced fierce competition (Teisceira-Lessard, 2011). However, despite mild business opposition, public opposition did not follow like it did in BC,

primarily because the instrument was less visible and the price was lower than BC's carbon tax (J. Charest, personal communication, November 12, 2014).

Climate was a salient electoral issue in BC during the 2009 provincial election, whereas virtually no attention was devoted to climate change policy in Québec's recent elections (Houle, 2013). Electoral support helped permit Québec to implement regulations without controversy. Belief in the science of climate change is more widespread in Québec (70%) than in BC (61%) and Ontario (51%) (Environics Institute, 2012). Furthermore, "a preference for acting [on climate change] now is more prevalent among Quebecers" and Canadian support for a BC-style carbon tax is strongest in Québec (67%) (Environics Institute, 2012). Carbon pricing policies have not surfaced in the public debate in a significant way since their implementation either. The PQ, QLP, or CAQ did not mention carbon pricing policies in their 2012 election platforms. However, public opinion alone cannot account for the difference in policy outcomes because BC went beyond its WCI commitment to pursue a more aggressive policy, despite stronger public support for climate policy in Québec. Although compulsory carbon pricing has never been a key electoral issue in Québec, the Liberals felt limited in their political ability to pursue an aggressive carbon tax similar to BC's (J. Charest, personal communication, November 12, 2014).

In Ontario, the analysis considers whether the presence of an established party to the right of the governing party hindered the Ontario government's political flexibility in pricing carbon. Ontario's robust three-party system emulates the federal party system model most closely compared to any other province (Vote Compass, 2014). This difference in party systems is important because the Progressive Conservative Party of Ontario (similar to the policy of the Conservative Party of Canada) has always opposed carbon pricing, presenting a challenge for the

Ontario Liberals to gain support from the business community and limit the hemorrhage of disaffected conservative voters when attempting to price carbon.

Premier Gordon Campbell announced BC's carbon tax in February 2008, Premier Dalton McGuinty publicly opposed a carbon tax for Ontario in May 2008, and Stéphane Dion, Leader of the Liberal Party of Canada and the Official Opposition, introduced a "green shift" proposal in June 2008, but lost 18 seats in the October 2008 federal election. McGuinty's opposition to the carbon tax and preference for cap-and-trade (Babbage, 2008) was primarily based on the economic structure of Ontario as opposed to an effort to put political distance between the respective carbon pricing policy positions of the Ontario Liberal Party and the Liberal Party of Canada (G. Butts, personal communication, September 25, 2014). Butts also acknowledged that the presence of an established party to the right of the Ontario Liberal Party restricted their ability to expend political capital on pricing carbon, whereas there was no political party to the right of the BC Liberal to pose the same threat (personal communication, September 25, 2014). Participant B identified Tim Hudak, former leader of the Ontario Progressive Conservative Party, as "a core threat who made carbon pricing pretty much impossible."

In summary, governments with no established or threatening party to their political right possess a considerable advantage in terms of political flexibility if they choose to pursue carbon pricing. Charest noted that BC's party system permitted the BC Liberals to tax carbon more aggressively compared to Québec's less aggressive approach (personal communication, November 12, 2014), Butts acknowledged the three-party system landscape as a barrier to Ontario applying a carbon tax or cap-and-trade (personal communication, September 25, 2014), and BC's carbon tax did face public opposition from rural communities and the NDP, but the opposition did not prompt the government to retreat (Harrison, 2013b). Based on circumstances

in the other provinces, one may predict that if BC had a threatening and well-established conservative party with support from the business community during the implementation and survival period of its carbon tax, the resistance to carbon pricing may have been stronger and led to a different outcome.

Hypothesis Two: Economic Structures

This section is an analysis of data relevant to the second hypothesis: carbon pricing policy outcomes are a function of the differences in the structure of each of the provincial economies. One of the strengths of market system approaches is their ability to promote investments in sectors where the cost of reducing GHGs is lower (Jaccard & Dowlatabadi, 2011). The different economic structures of each province result in different marginal abatement costs. Provinces with the potential to reduce emissions cheaply can be expected to favour cap-and-trade instruments because of the potential for capital inflow, as capital will flow from the more efficient to the less efficient jurisdiction, whereas provinces with higher abatement costs can be expected to favour a carbon tax or have difficulty implementing a price on carbon. The critical factors of this analysis are therefore economic competitiveness and relative marginal abatement costs.

Due to the differences in the economic structures of Québec and California, the WCI (2013) macroeconomic model predicted that $200 - 300 million in compliance investments would flow from Québec to California. Industry spokesmen from Québec also warned that the system could result in capital outflow to California "where allowances [were] expected to be cheaper to create due to the size and complexity of the economy" (McCarthy, 2014). WCI (2013) also predicted that offsets in California would be in extremely high demand compared to Québec. This is important given two competing hypotheses. First, as supported by WCI's macroeconomic model, a jurisdiction that is already efficient will have high abatement costs, potentially resulting in capital outflow. Second, a jurisdiction with available hydro generation potential will have lower abatement costs, resulting in capital inflow.

Table 2 provides a detailed breakdown of emissions by economic sector in each province, while Figure 1 illustrates Ontario's significantly greater proportion of emissions stemming from stationary combustion sources and smaller proportion of emissions from transport, the inverse of the emissions profiles in BC and Québec.

Table 2

Total Megatonnes and Proportion of GHGs by Economic Sector in BC, Ontario, and Québec

	2005		2008		2009		2010		2011		2012	
BC total	62.3	100%	62.9	100%	59.8	100%	59.7	100%	60.1	100%	60.1	100%
Energy	51.6	83%	52.5	83%	49.7	83%	49.9	84%	50.6	84%	50.5	84%
Stationary	21.3	34%	20.8	33%	20.5	34%	19.9	33%	21.4	36%	20.4	34%
Transport	24.8	40%	25.3	40%	23.2	39%	23.7	40%	22.3	37%	23.3	39%
Fugitive	5.4	9%	6.4	10%	6.1	10%	6.2	10%	6.9	11%	6.8	11%
Industrial	4.1	7%	4.0	6%	3.9	6%	3.7	6%	3.5	6%	3.6	6%
Agriculture	2.6	4%	2.3	4%	2.1	4%	2.1	4%	2	3%	2	3%
Ontario total	207	100%	192	100%	168	100%	175	100%	171	100%	167	100%
Energy	161	78%	148	77%	129	77%	135	77%	133	78%	127	76%
Stationary	95.3	46%	87	45%	69	41%	72.7	42%	70.9	41%	67.6	40%
Transport	64.2	31%	59	31%	58.4	35%	60.7	35%	60.4	35%	57.4	34%
Fugitive	1.6	1%	1.6	1%	1.6	1%	1.5	1%	1.5	1%	1.5	1%
Industrial	28.1	14%	27.6	14%	21	13%	22.6	13%	21.5	13%	23.3	14%
Agriculture	9.7	5%	9.7	5%	10	6%	10	6%	9.5	6%	9.4	6%
Québec total	85.6	100%	84.6	100%	83.6	100%	79.2	100%	80.6	100%	78.3	100%
Energy	60.8	71%	61.4	73%	61.1	73%	57.4	72%	58.2	72%	56.2	72%
Stationary	26.5	31%	24.9	29%	24.7	30%	21.6	27%	21.8	27%	20.7	26%
Transport	33.6	39%	35.7	42%	35.6	43%	35.1	44%	35.7	44%	34.8	44%
Fugitive	0.7	1%	0.7	1%	0.7	1%	0.7	1%	0.6	1%	0.7	1%
Industrial	11.8	14%	10.4	12%	9.8	12%	9.8	12%	11	14%	10.4	13%
Agriculture	7.3	9%	7.5	9%	7.3	9%	7.3	9%	7	9%	7.4	9%

Note. Figures include emissions values in megatonnes of CO_{2eq} and the percentage that each category or subcategory contributes to the total emissions of the province. "Stationary" represents "stationary combustion sources", "fugitive" represents "fugitive sources", and "industrial" represents "industrial processes" (e.g., metal production and cement production). Total emissions figures also include emissions from two minor categories that are not displayed: waste, and solvent and other product use. Source: National Inventory Report 1990-2012: Greenhouse Gas Sources and Sinks (Environment Canada, 2014b).

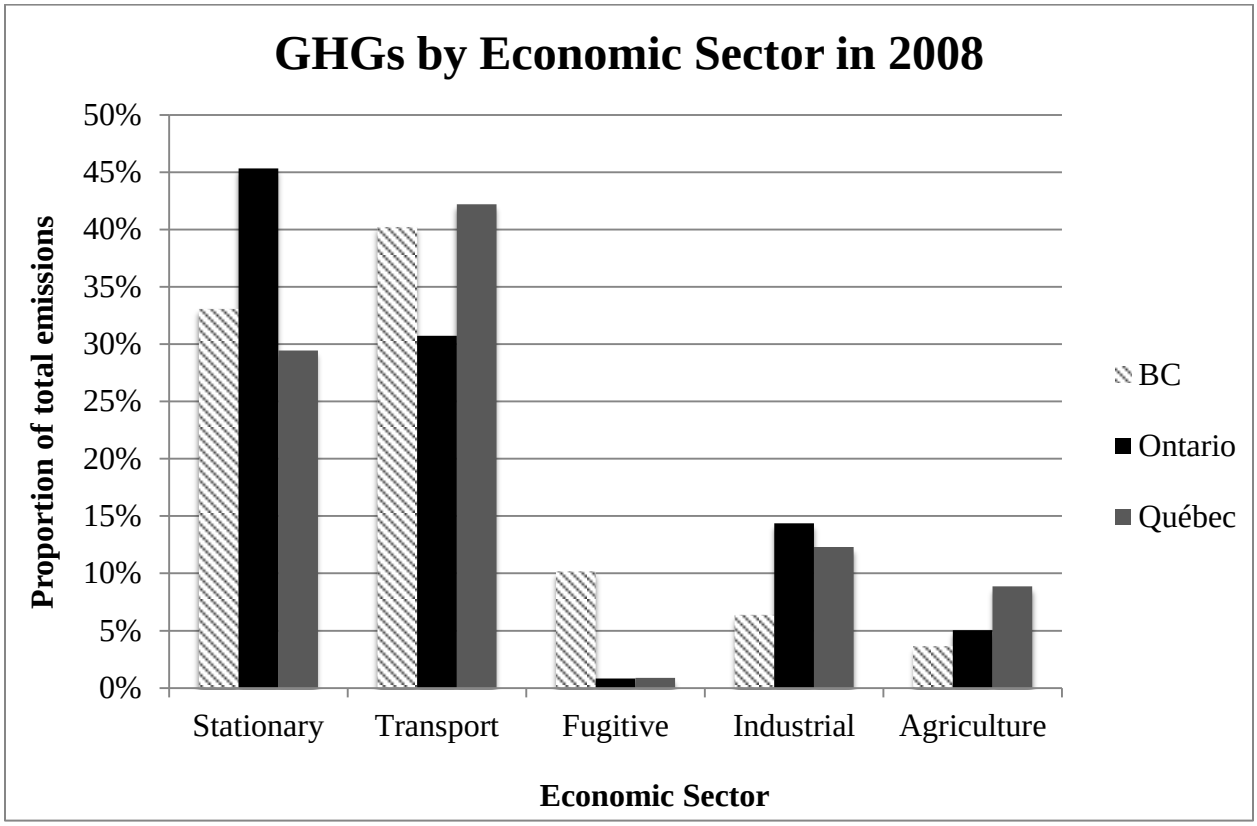

Figure 1. Greenhouse gas emissions data from 2008 sorted by economic sector as a proportion of total greenhouse gas emissions in British Columbia, Ontario, and Québec. Energy emissions are divided into stationary combustion sources, transport, and fugitive sources. Industrial represents industrial processes. Source: National Inventory Report 1990-2012: Greenhouse Gas Sources and Sinks (Environment Canada, 2014b).

Ontario is the largest producer of greenhouse gas emissions with the highest emissions per capita from industrial energy processes, and the greatest dependence on carbon-intensive economic sectors such as manufacturing and the accompanying industrial processes, as seen in Table 2 (Environment Canada, 2014b). Emissions per capita stemming from stationary combustion sources were considerably greater in Ontario, especially during the instrument deliberations and WCI negotiations in 2008, as seen in Figure 2, in large part because BC and Québec are both endowed with greater hydroelectric generation potential than Ontario. One solution to the imbalance of renewable energy potential between Québec and Ontario is for Québec to sell hydro-power to Ontario. However, Premier Charest noted that such trade agreements could hurt domestic employment statistics and therefore be politically unpopular (personal communication, November 12, 2014).

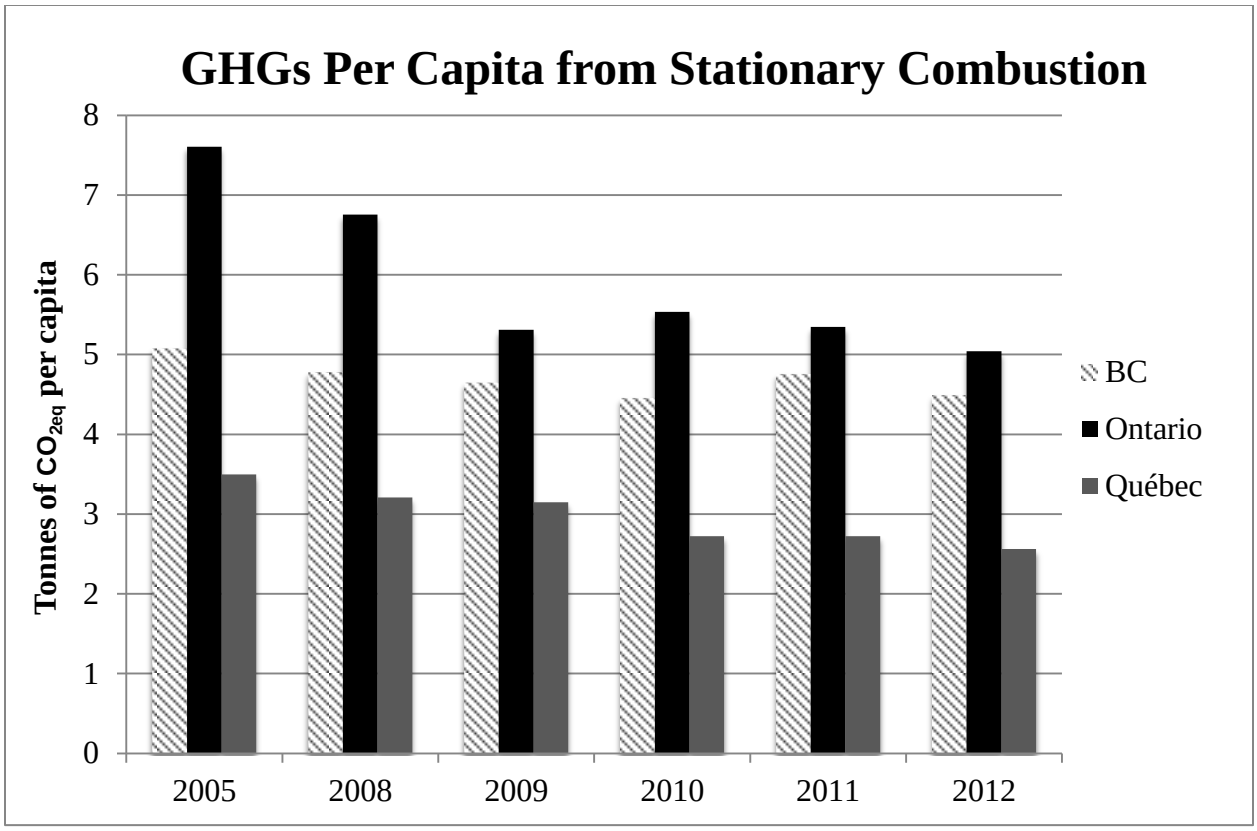

Figure 2. Stationary combustion sources include emissions from electricity and heat generation, fossil fuel production and refining, mining & oil and gas extraction, manufacturing industries, construction, commercial & institutional, residential, and agriculture and forestry (Environment Canada, 2014b). Per capita calculations based on Statistics Canada (2015) estimates.

The emissions profiles of BC and Québec share more similarities with each other than with Ontario (Environment Canada, 2014a) because of the structure of their economies (D. Gagnier, personal communication, October 24, 2014). Ontario's economy is structured around manufacturing and automobile parts, and is more exposed to trade than the economic structures of BC and Québec (D. Gagnier, personal communication, October 24, 2014). This assertion is supported by Ontario's comparably large industrial emissions profile, which was especially greater during the instrument deliberations and WCI negotiations in 2008, as seen in Figure 3 (Environment Canada, 2014b). The auto part sector, in particular, would have suffered under a

carbon price, making the decision politically difficult. Gagnier argued that Québec's economy has been forced to diversify to compete with Ontario's larger economy and consumer base (personal communication, October 24, 2014). Although Ontario has developed several of the following sectors as well, Québec has made a specific effort to innovate in aerospace, biotechnology, genome science, information technology, and other research and development fields while Ontario's largest economic driver remains manufacturing (D. Gagnier, personal communication, October 24, 2014).

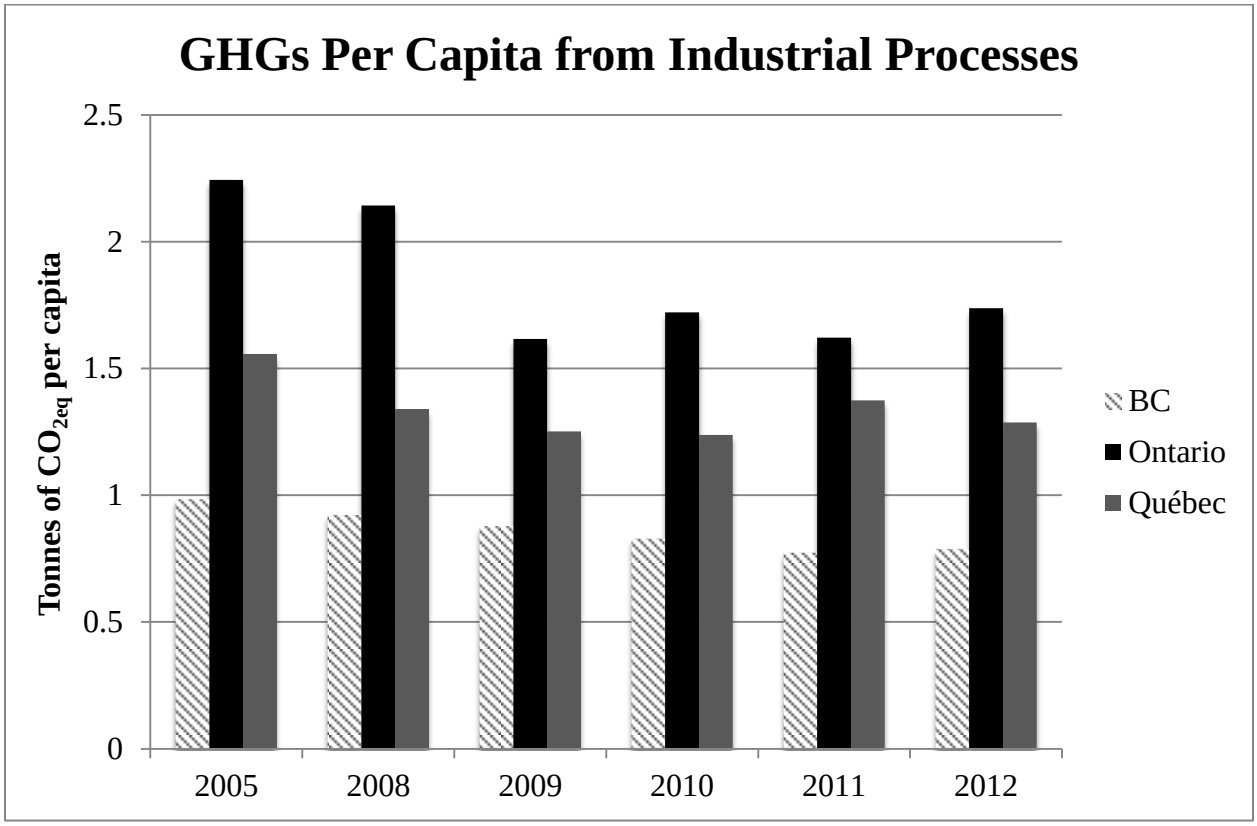

Figure 3. Industrial processes include emissions from chemical industry, mineral products (cement production, lime production, and mineral products use. Chemical industry includes emissions from adipic acid production), metal production (iron and steel production, aluminum production, and SF6 Used in Magnesium Smelters and Casters), production and consumption of halocarbons and SF6, and other and undifferentiated production (Environment Canada, 2014b). Per capita calculations based on Statistics Canada (2015) estimates.

The Québec government was careful to phase-in the instrument to avoid penalizing local industry in favour of foreign industry. In the first compliance period, industrial emitters "facing foreign competition" received most of the emission units they needed free of charge in order to prevent offshoring of companies and operations to jurisdictions that do not have a cap-and-trade system (Government of Québec, 2013b). The policy explicitly notes that electricity producers and fossil fuel distributors will not receive free allocations, as they do not face foreign competition.

The sizes of the economies are relevant for jurisdictions entering harmonized emissions trading schemes due to the vast differences in economic scale, which affect output and efficiency (D. Gagnier, personal communication, October 24, 2014). The State of California is the eighth largest economy in the world. California's output is roughly equal to Canada's entire GDP (Marshall, 2011). California's 2012 population (40.2 million) is expected to grow to 44.1 million by 2020, whereas Québec's 2012 population (8.0 million) is only expected to grow to 8.5 million by 2020 (WCI, 2013). The implication for the agreement between California and Québec is that the market price would be more sensitive to trading and changes made in California due to its larger size, thus placing Québec at the mercy of the market forces in California. The actions of firms in Québec would have a minor impact on California; however, the risk of capital outflow in Québec would remain high.

Recall that the WCI (2013) macroeconomic model predicted that $200 - 300 million in compliance investments would flow from Québec to California. Gagnier stated that this was not a risk because "[Firstly,] Québec is a very small market in terms of carbon trading. Secondly, there's a macroeconomic model that the [Québec] Ministry of Finance maintains that indicates that there could be hundreds of millions of dollars of leakage (capital outflow). However, this

[capital outflow] was more than offset by the largely hydroelectric energy profile of the province" (personal communication, October 24, 2014). Premier Charest also acknowledged the potential for capital outflow, but felt "it [cap-and-trade] was an investment in the future" (personal communication, November 12, 2014). There was a clear understanding that carbon markets would become a reality in Canada, and Québec had an opportunity to be a leader in this domain (J. Charest, personal communication, November 12, 2014; D. Gagnier, personal communication, October 24, 2014). Cap-and-trade was the prevailing instrument of choice in Québec as Bloc Québecois leader Gilles Duceppe also supported a carbon market during the 2008 federal election campaign (Goldstein, 2008). It appears as though Québec expected capital outflow and the decision to maintain their commitment to WCI contradicted its economic interests. The loss may have been only expected in the short term, as Québec expected other jurisdictions adopt a carbon market. However, Québec would only benefit if jurisdictions with higher abatement costs joined or if Québec were able to export hydro-power to another geographically proximate jurisdiction.

It is tempting to advance cultural explanations for Québec's willingness to price carbon, as the province has a history of advancing self-determination through government. In terms of taking action on climate change, "government is the most widely looked-to sector across the country, but especially so in Québec" (Environics Institute, 2012). Quebecers generally acknowledge the costs associated with government programs and are willing to pay in order to receive superior services (D. Gagnier, personal communication, October 24, 2014). In comparison, some western provinces tend to favour lower taxes. For instance, provincial personal income taxes for those who earn $70,000 per year are lowest in BC and highest in Québec out of the ten Canadian provinces. Québec also has the highest provincial sales tax of

any province and has the lowest prices on post-secondary tuition, electricity, drugs, and daycare (Chung, 2010). However, while the Québec public possesses a certain tolerance for overall taxation (J. Charest, personal communication, November 12, 2014), the increased provincial taxation is primarily palatable through reductions in federal taxation (D. Gagnier, personal communication, October 24, 2014). Québec's willingness to pursue emissions trading despite knowledge of significant capital outflow remains a puzzle.

Regarding Ontario, recall that from December 2005 to January 2007, climate change policy surged in salience and became the most important problem facing Canadians, polling well above the economy and unemployment (Environics Institute, 2010). However, during the financial crisis of 2007 to 2008, the economy overtook all other issues in January 2008 by an unprecedented margin (Environics Institute, 2010). Of the three provinces under consideration, not only did the global recession have the greatest impact on Ontario's output, but the timing of the recession had the greatest impact on the outcome of Ontario's inability to price carbon from 2008 to 2014. The Government of Ontario was pulling three other major policy levers from 2008 to 2011, including the ongoing coal phase-out, a harmonized sales tax (HST), and, in an effort to recover from the recession, reductions in corporate taxes (Participant A, personal communication, September 24, 2014).

First, former and current senior advisors to the Ontario Premier argued that "the HST was a form of carbon tax," as it taxed consumption on home heating fuels and other energy (G. Butts, personal communication, September 25, 2014; Participant A, personal communication, September 24, 2014). Ontario residents absorbed an increase in the cost of home heating fuels, electricity, and natural gas due to the HST. In contrast, BC maintained its "exemption for the provincial sales tax portion of the HST on gas and diesel, and [did] not apply the HST to

electricity or home heating fuels" in 2010 (Leslie, 2010). However, the Ontario HST did not differentiate between fuels with different carbon-intensities and therefore cannot be considered a form of carbon taxation, though it is true that taxes on the same fuels that would be affected by a carbon price were already being increased through other means.

Second, senior government advisors argued that Ontario's coal-phase out could be viewed as an alternative mechanism of carbon pricing and therefore a source-specific price on carbon (G. Butts, personal communication, September 25, 2014; Participant A, personal communication, September 24, 2014). Participant A noted that Ontarians paid through rate-based changes in the transition from coal to alternative sources of power (natural gas, biomass, nuclear, hydro, and other, more costly, renewables), resulting in higher consumer costs through non-baseload, dispatchable, and renewable power (personal communication, September 24, 2014). The coal-phase out was ultimately prioritized over carbon pricing, as the project represented the most ambitious and aggressive subnational climate change policy in Canadian history. GHGs from overall stationary combustion sources decrease from 95.3 to 67.6 megatonnes of CO_{2eq} from 2005 to 2012, as seen in Table 2. More specifically, emissions from electricity and heat generation decreased from 34.1 to 14.5 megatonnes of CO_{2eq} from 2005 to 2012, as seen in Figure 4, while other categories remained relatively more constant (Environment Canada, 2014b). This measure forced the government to expend political capital and contributed to the notion that Ontarians were doing their part to reduce emissions (G. Butts, personal communication, September 25, 2014).

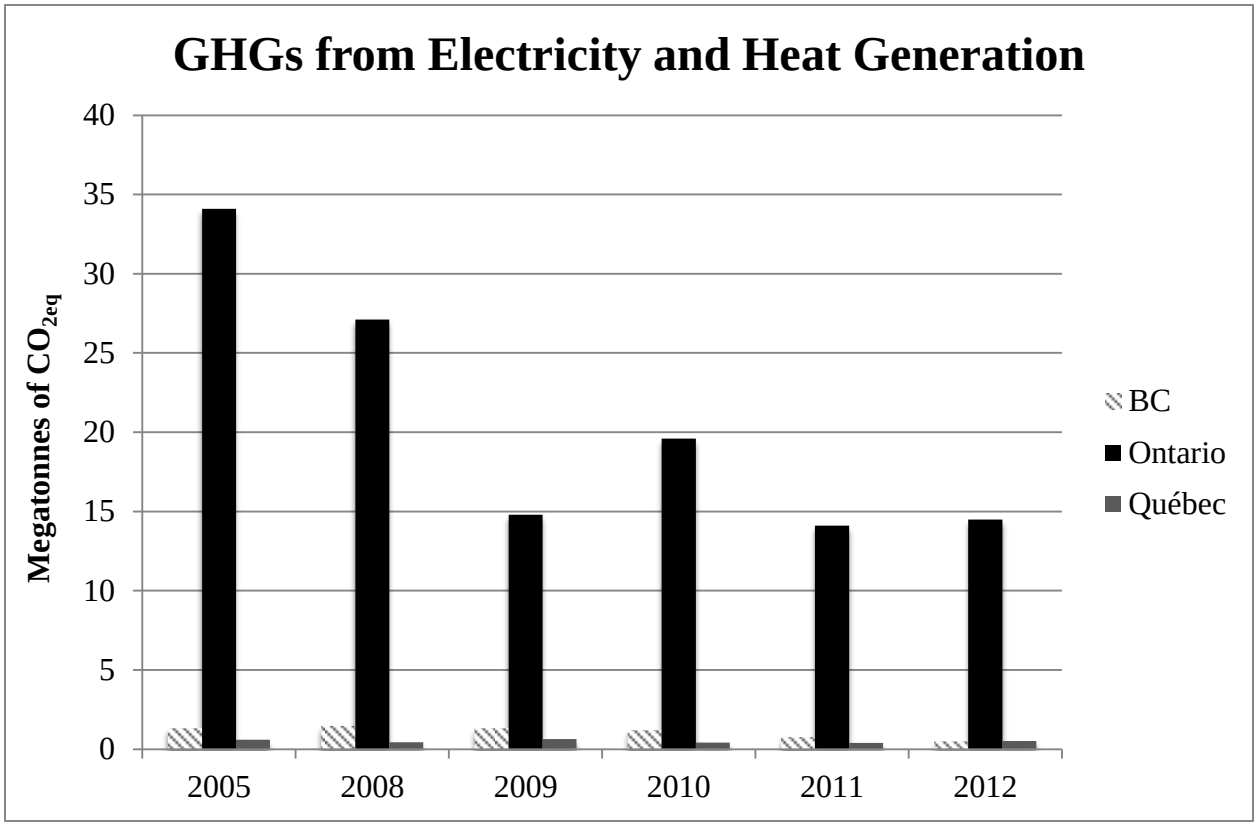

Figure 4. Electricity and heat generation is a subcategory of "stationary combustion sources" listed in Table 2 (Environment Canada, 2014b).

Importantly, prior to the coal phase-out project, Ontario had tremendous potential for rapid emissions reductions. This may have resulted in capital inflow if the baseline were to be established prior to the phase-out, which began in 2007. Although senior officials from the Government of Ontario were unsure whether partner jurisdictions would permit establishing the baseline prior to the coal phase-out (Participant A, personal communication, September 24, 2014), the WCI offset protocol is restrictive and any changes to the establishment of the baseline would have to be agreed upon by both California and Québec (D. Gagnier, personal communication, October 24, 2014). The specific offset protocol of the WCI is critical to understanding the multilateral agreement between Québec and California. As discussed, the coal

phase-out initiative was promised in 2003, five years before WCI negotiations and long before climate change policy was polling as an important issue facing Canadians (Environics Institute, 2010). In terms of establishing the baseline emissions in the WCI negotiations, if Ontario were considered to have already committed to the coal phase-out, then any remaining emissions reductions would likely be relatively costly with the implication that Ontario may experience capital outflow.

Third, Ontario was preoccupied with reducing corporate tax rates to spur investment during stagnant growth and a recession that began one year after Ontario signed on as a WCI partner (Participant A, personal communication, September 24, 2014). This was a strong priority due to Ontario's greater economic dependence on manufacturing exports and competitiveness compared to the BC and Québec economies (Participant A, personal communication, September 24, 2014). Participant A also claimed that while the structure of BC's economy permitted flexibility to pursue a major tax reform, Ontario's economic structure posed significant concerns regarding the fundamental competitiveness of goods-producing and export-oriented sectors (personal communication, September 24, 2014). The structure of Ontario's economy required action to support the manufacturing sector, which was battered by the recession. In light of these three policy changes, some Ontario policy makers felt that a carbon tax or cap-and-trade regulation may have imposed a greater shock on an already shifting system, leading to a sense of economic uncertainty and risk (Participant A, personal communication, September 24, 2014).

Although provincial governments possess authority over energy production and GHG regulation, the federal government can play a useful role in protecting carbon-intensive manufacturing export sectors, particularly in Ontario, by applying tariffs on imports that may not be subject to the same carbon levy (Participant B, personal communication, December 19, 2014).

BC and Québec are not as economically dependent on manufacturing exports and are therefore less dependent on sector protection policies from the federal government. Ontario may have been preoccupied with implementing several related policy levers at once: stimulus spending, a value-added HST, lower corporate tax rates, capital tax phase-out, and coal phase-out.

In summary, the different economic structures and party systems played roles in varying significance. BC avoided capital outflow by not engaging in emissions trading with jurisdictions that have superior potential to reduce emissions. Québec's decision to pursue an emissions credit-trading program with California as the only partner remains odd given the acknowledged risk of capital outflow to California. The economic structure was not influential in the selection of a cap-and-trade route over BC's substantial carbon tax model, though it is possible that Québec is motivated by a longer game that would entail hydro exports to neighbouring jurisdictions as emissions trading expands. Ontario's failure to price carbon to date has been influenced by its economic structure and historical energy sources. Ontario is unique among the three provinces in possessing the least hydroelectric potential, the most carbon-intensive economy, a manufacturing sector battered by recession, and other tax levers being pulled simultaneously. The puzzle is that based on competitiveness, one would expect Ontario to do the least, but by phasing out coal-fired electricity, they arguably did the most. Although electricity generation is not trade-exposed, the manufacturing sector, which faced increased electricity costs, is trade-exposed.

Conclusion

Recent provincial experiences suggest that there are opportunities for climate change policies within certain party systems and economic structures. These findings challenge the notion that a three-party system, as opposed to a two-party system, is better suited to federal political systems and leads to superior policy outcomes. The findings also assert significant barriers to multi-state cooperative carbon pricing agreements where some jurisdictions bear significantly greater marginal abatement costs.

For the first hypothesis, party systems influenced instrument selection and the ability to implement carbon pricing policies in all three provinces. Ontario's three-party system played a role in preventing carbon pricing due to the political threat from a right-wing opposition that was absent in BC. Québec's multi-party system and potential threats from fiscally conservative opposition limited instrument selection and aggression. This influenced the instrument choice because Premier Charest indicated that they could not pursue the robust carbon tax model found in BC due to the potential political vulnerability. Nonetheless, Québec's policy instrument of choice received unanimous support from parties and leaders across the political spectrum in part due to the interaction between the party system and positive public opinion towards the need for climate change policy. BC's two-party system, with a right-of-centre party in power, permitted increased political flexibility. This system can prevent left-of-centre parties from successfully reversing such policies typically considered to be "progressive." However, when a right-wing party in a three-party system opposed carbon pricing, there was significantly greater impact in preventing other parties from acting on carbon pricing. The BC government seized an opportunity in a unique party system to implement Premier Gordon Campbell's ambitious vision.

The party system permitted BC to pursue a variety of climate change policies and apply the most transparent instrument with the largest impact and greatest cost in terms of political capital.

For the second hypothesis, carbon pricing policy outcomes were a function of the differences in the structure of each of the provincial economies in BC and Ontario, but not Québec. Specifically, the economic differences helped to determine the difficulty in pricing carbon in Ontario, but not the instrument selection in Québec. BC avoided capital outflow by not trading emissions permits with jurisdictions that had superior potential to reduce emissions, such as Ontario and California. In Ontario, carbon pricing was prevented by a shifting taxation landscape and a unique economic structure with fragile economic dependence on specific carbon-intensive industries. However, economic structure did not explain Québec's instrument selection, primarily due to the potential for capital outflow.

Overall, although neither party systems nor economic structures alone account for the different policy outcomes, the interactions between party systems and economic structures combined with public opinion and leadership commitments determined instrument choice and ability to price carbon. Party systems and economic structures alone are not sufficient to realize "good public policy" motives in the absence of positive public opinion and commitment to leadership in climate policy. In the future, overcoming political challenges and economic barriers to implement these instruments in other jurisdictions will continue to be challenging, but essential.

Addendum

In April 2015, Premier Kathleen Wynne formally announced that Ontario will launch a cap-and-trade program linked to the current system in place between Québec and California. This recent development was not considered in the analysis because it was announced after the study's interviews were conducted and after the thesis was submitted for examination. Although the policy outcome may change, the analysis above remains fruitful in explaining how it has been relatively more difficult to implement carbon pricing in a jurisdiction with Ontario's party system and economic structure, as evidenced by the province's prolonged period of inaction from 2008 to 2015 and preference for the less politically challenging instrument. Several factors may have led to this new commitment. Ontario has a new premier with a renewed mandate and several years to govern before facing a campaign and a threat from the political right. The economic recovery is also well underway and the carbon-intensive sectors are not as fragile as they were during or immediately following the recession. Other policy changes involving HST and corporate taxes have had time to take effect, reducing the economic uncertainty of pulling an additional policy lever such as carbon pricing. Finally, the government survived negative public opinion consequences from rising energy prices that resulted from the successful coal phase-out and may thus now be prepared to expend more political capital on carbon pricing.

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