Risk and Advantage in a Changing Climate: Business Preferences for Climate Change Policy Instruments in Canada

by

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ABSTRACT

How do major business associations and firms determine their preferences for public policy instruments? This dissertation examines the puzzling case of business preferences for climate change policy instruments in Canada in which businesses supported a carbon price over cheaper voluntary policy instruments. It presents the findings of a qualitative study that included 13 major industrial associations (representing chemicals, gas refiners, petroleum producers, natural gas, forestry, mining, steel, vehicle manufacturers, electricity, aluminum, cement, railways and the chief executives) and 17 firms in the cement, oil and gas, and forestry industries. The study found that, in 2008 and 2009, participating firms and associations were strongly in favour of a carbon price – either a cap-and-trade program or carbon tax – despite the higher costs entailed by these policy instruments for industry when compared to voluntary programs. Moreover, Canadian corporations and business associations shifted their policy instrument preferences almost *en masse* away from voluntary agreements and subsidies to carbon pricing around the same time in 2006-2007.

What explains variation in business preferences for climate change policy instruments in Canada over time and between organizations? This dissertation creates a model of business preferences for climate change policy instruments based on the findings of interviews with firm and association executives, as well as government and environmental NGO officials and consultants working in the environmental policy field. In particular, the model suggests that business officials determine climate change policy preferences by weighing risks to capital investments and external investor concern against the competitive advantages entailed by each policy instrument. As these assessments require predictions about an uncertain future, they are strongly influenced by expectations about future government policy choices. These expectations are in turn influenced by the political context, particularly public opinion, and previous experience with a policy instrument. The model, developed inductively from interview data, is validated in the dissertation using new data from the same case and methods such as process-tracing and falsifiable tests. The model is found to offer a good explanation of business preferences for climate change policy instruments in Canada, and may be generalizable to other areas of public policy.

PREFACE

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LIST OF ABBREVIATIONS

AAC	Aluminum Association of Canada			
BCNI	Business Council on National Issues			
CAC	Cement Association of Canada			
CAPP	Canadian Association of Petroleum Producers			
CCCE	Canadian Council of Chief Executives			
CCPA CCRES	Canadian Chemical Producers Association Canadian Coalition for Responsible Environmental Solutions			
CEA	Canadian Electricity Association			
CEPA	Canadian Environmental Protection Act			
CGA	Canadian Gas Association			
CME	Coordinated Market Economy			
CPPI	Canadian Petroleum Products Institute			
CSI	Cement Sustainability Initiative			
CSPA	Canadian Steel Producers Association			
CVMA	Canadian Vehicle Manufacturers Association			
ENGO	Environmental Nongovernmental Organization			
EU	European Union			
ETS	European Union Emissions Trading System			
FPAC	Forest Products Association of Canada			
HC	Host Countries			
IETA	International Emissions Trading Association			
ISC3	Industry Steering Committee on Climate Change			
LME	Liberal Market Economy			
MAC	Mining Association of Canada			
MOU	Memorandum of Understanding			
NAPCC	National Action Program on Climate Change			
NRCan	National Resources Canada National Round Table on the Environment and the			
	The Bailway Association of Canada			
RDS	Royal Dutch Shell			
VCR	Voluntary Challenge Registry			
VUI	voluntary chanenge Registily			

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For my mother, without whom I never would have thought to begin, For Doug, without whom I never would have finished,

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CHAPTER 1: INTRODUCTION

It was a rather unexpected response. On January 7, 2008, Canada's National Round Table on the Environment and the Economy (NRTEE) published a report on climate change calling for government to implement "an economy-wide emission price policy" (*Getting to 2050*, 2008: 20). As the politically indecorous term "carbon tax" began appearing in the headlines of all of Canada's major news outlets, the political class – both government and opposition – responded with derision ("Advisory Panel," 2008; Campion-Smith, 2008; Cheadle, 2008; Curry, 2008; De Souza, 2008; Federal Report," 2008). In this context, swift condemnation from industry could only be expected. After all, a carbon price was anticipated to increase the costs of production in Canada. Yet, despite the business community's history of campaigning against climate change action, particularly the Kyoto Protocol (Macdonald, 2003), no such condemnation came from Canada's major business associations or large firms.

On the contrary, the Canadian Council of Chief Executives (CCCE) – the voice of big business in Canada – was unambiguous in its support, calling the report "a sound and comprehensive policy blueprint" ("CCCE," 2008). Even more surprising, the Canadian Association of Petroleum Producers (CAPP) signaled cautious agreement, suggesting that its members were "ready to move" on the policy (Cheadle, 2008). This left the federal government to oppose its own advisory board and the public to wonder what was going on in climate politics in Canada.

THE PUZZLE

It is indeed puzzling: Why would two of Canada's largest business associations come out in favour of a policy instrument whose very purpose is to increase costs to their members? Did other associations and firms agree with this stance or did these groups represent an anomaly among economic actors in Canada? Why and when did these associations shift their climate change policy preferences away from the voluntary programs and subsidies to which they had been previously committed ("Canada's Business Leaders," 1994; Macdonald, Forthcoming)? How do we explain this puzzling turn of events in Canadian environmental politics?

These questions are significant as they point to an under researched area of Canadian, and indeed global, political economy: the public policy preferences of major firms and business associations. Scholars in Canada and elsewhere have argued that "big business" has considerable, if variable, influence over public policy outcomes (Berry, 1974; Doern, 1978; Mansbridge, 1992; Toner and Doern, 1986; Trebilcock, 1978; Vogel, 1989). If this is indeed so, then what business wants and why they want it is a foundational element of business-government relations. In this case, however, not only is it uncertain what climate change policy instruments the Canadian business community supports, it remains unclear how and why they developed these preferences in the first place. The easiest explanation – that business groups look to the cost of compliance in determining their climate change policy instrument preferences – does not appear to provide a *prima facie* explanation of the case.

Upon further examination, the puzzle only deepened. This study of business preferences for climate change policy instruments included interviews with executives at

all of Canada's heavy emitting industry associations and a selection of large firms from the cement, forestry and oil and gas sectors. As it turns out, CAPP and CCCE's support for carbon pricing did not represent an anomaly in the business community in 2008 and 2009. Of the 30 business associations and large firms that participated in this study, 27 declared strong support for carbon pricing.

There was, however, variation in the type of carbon price supported. A plurality of participants supported cap-and-trade: four associations and seven firms stated an explicit preference for that instrument. Carbon taxation, however, was not without support. While only one association had a preference for a modified form of taxation (CAPP), four firms articulated clear preferences for that instrument. Moreover, of the five firms and seven associations that had no official preference for a particular type of carbon price (in other words, the board of directors or CEO had not approved the advocacy of a particular carbon pricing option but, in all but one case, the organization did declare support for a price on carbon in general), officials at four associations and one firm articulated "unofficial" or personal support for taxation. Finally, while there was overwhelming support for carbon pricing in 2008-2009, it appears that those preferences were relatively new. Firm and association officials traced their preferences back to 2006-2007 when the Canadian business community appears to have overwhelmingly shifted its support away from voluntary agreements and subsidies to carbon pricing. Tables 1 and 2 list the preferences of participating firms and associations in this study.

Name	Supports price on	Official Preference	Unofficial
	carbon?		(personal) preference ¹
Canadian Electricity Association (CEA)	No	Time, Money (through increase in price where regulated)	
Mining Association of Canada (MAC)	Yes	No	Carbon Tax
Canadian Vehicle Manufacturer's Association (CVMA)	Yes	Cap-and-trade	
Canadian Steel Producers Association (CSPA)	Yes	No	No
Canadian Gas Association (CGA)	Yes	No	Carbon Tax
Canadian Petroleum Products Institute (refiners and retailers) (CPPA)	Yes	No	Carbon Tax
Canadian Council of Chief Executives (CCCE)	Yes	No	Carbon Tax
Canadian Chemical Producers Association (CCPA)	Yes	Cap-and-Trade	
Railway Association of Canada (RAC)	Yes	Cap-and-Trade	
Forest Products Association of Canada (FPAC)	Yes	No	Cap-and- Trade
Aluminum Association of Canada (AAC)	Yes	Cap-and-Trade	
Canadian Association of Petroleum Producers (CAPP)	Yes	Modified Carbon Tax ²	
Cement Association of Canada (CAC)	Yes	No	

Table 1: Association preferences as of 2009

¹ Official preferences have been formally adopted by the organization through its decision-making apparatus; however, in many cases, representatives from associations or firms with no official preference articulated unofficial or personal support for an instrument. This is listed here because it demonstrates a higher level of support for carbon taxation within the business community than would otherwise be apparent. ² CAPP supports a carbon tax on marginal emissions above a set quota. It is therefore different than traditional carbon taxation,

which would tax all emissions.

Sector	Firm	Accepts a price on carbon?	Official Preference	Unofficial (personal) preference
FPAC		Yes	Cap-and-trade	
Forestry	Weyerhaeuser	Yes	Cap-and-trade	
Forestry	Canfor	Yes	No	Cap-and-trade
Forestry	Catalyst Paper	Yes	No	Carbon Tax
Forestry	West Fraser	Yes	No	No
Forestry	AbitibiBowater	Yes	Cap-and-trade	
		Ves	No	No
Cement	Essroc	Oualified ³	Voluntary, then	
		Quantes	Carbon tax	
Cement	St Mary's Cement	Yes	Cap-and-trade	
Cement	Holcim	Yes	Cap-and-trade	
Cement	Lehigh	Yes	No	Cap-and-trade
		-	1	
CGA		Yes	No	Carbon Tax
Natural gas	EnCana	Yes	Carbon Tax	
Natural Gas	Union Gas	Yes	Carbon Tax	
Natural Gas	Gaz Metro	Yes	Cap-and-trade	
		-	1	
САРР		Yes	Modified Carbon	
			Тах	
Petroleum	ConocoPhillips	Yes	Carbon tax in	
	Canada		Canada (Cap-and-	
			trade in US)	
Petroleum	Suncor	Yes	Cap-and-trade	
Petroleum	Nexen	Yes	Carbon tax	
Petroleum	Petro-Canada	Unclear	No (although	No
			support of CAPP	
			position)	
Petroleum	Shell Canada	Yes	Cap-and-trade	

Table 2: Firm preferences as of 2009 (associations for relevant sectors listed in bold)

These three empirical findings – that Canadian businesses overwhelmingly supported carbon pricing in 2009, that there was considerable variation in the type of price supported and that there was a shift in aggregate business preference in 2006-2007 - beg the (research) question: What causes variation in business preferences for climate change policy instruments over time and between organizations? To this end, this study

 ³ Essroc did declare support for carbon pricing, if necessary, but had a first preference for voluntary agreements.
 ⁴ Petro-Canada's views on carbon pricing were contradictory and thus no preference is recorded.

found that business preferences for climate change policy instruments were based on assessments of the risks and advantages created by the policy instrument and that expectations about future government policy choices and their impacts on the firm strongly influence these assessments. Expectations are, in turn, influenced by the political context of the day, and previous experience with a policy instrument. As these factors change or vary, therefore, so too do business preferences for climate change policy instruments.

THE ARGUMENT

There are two parts to this argument. First, business preferences for climate change policy instruments are developed not only with an eye to limiting compliance costs, but to limiting the risk created by the policy instrument– both with respect to the firm's own capital investments and the investment in the firm by external investors – while optimizing any possible advantage. As it is defined below, the concept of risk highlights the significance of predictability and the stability of costs, rather than just the absolute level of costs associated with an instrument.

Second, as these assessments are made in the context of considerable uncertainty – both with regard to which policy instruments are likely to be implemented *and* the design and impact of any policy instrument once implemented – managerial and investor expectations about future government policy instrument choices play a key role in determining preferences. The political context, particularly public opinion, strongly influences expectations about which policy instruments may be implemented, while previous managerial experience with a policy instrument influences expectations about the costs associated with an instrument and the predictability of those costs. In other

words, while managers examining particular policy instruments do seek to control and limit future costs while optimizing advantage, their perception of which policy instrument is most likely to meet these goals is strongly influenced by their previous experience. Ultimately, these two types of expectations underpin assessments of risk and advantage and thus shape preferences for climate change policy instruments.

This two-part argument can be summarized with the following model:

THE RISK-ADVANTAGE MODEL OF BUSINESS POLICY PREFERENCES

Overall, in determining preferences for particular policy instruments, business decision-makers attempt to:

- Limit risk to the company created by the policy instrument in the firm's own capital investments
- Limit the effects of the policy instrument on the risk perceptions of external investors.
- 3) Seek advantage from the policy instrument where possible.

Assessments of risk and advantage are undertaken in the context of considerable uncertainty both about the likelihood of an instrument being implemented *and* the design details and impacts of those instruments. Consequently, expectations play a key role in determining perceptions of risk and advantage and those expectations are based on:

- 4) The political context (Likelihood of implementation)
- 5) **Managers' past experience** with a policy instrument (design details and impacts)

RISK AND ADVANTAGE

While risk is a term that has many different meanings in different disciplines, it is here defined in investment management terms: risk is uncertainty that an investment will receive its expected return (Reilly, 2006). This definition best fits the usage employed by interview subjects in this study. Additionally, while many academic definitions of risk differentiate between quantifiable risk and nonquantifiable uncertainty (Knight, 1985), this definition makes no such differentiation. Risk is here defined as a particular type of uncertainty, whether it is quantifiable or not. Again, this added nuance matches interview subject usage of the term. Finally, while some disciplines also view risk as relating to the potential for positive or negative outcomes (upside versus downside risk) (Hubbard, 2009), interview subjects appeared to perceive risk as a purely negative phenomenon. In other words, managers were concerned that they would receive less than the expected return; that they could receive more did not cause concern and, indeed, was generally called advantage, opportunity or benefit. In this dissertation, therefore, the term risk relates to negative potentialities.

Clearly, the concept of risk incorporates the influence of cost. In order to protect long-term returns on investment and ensure that they reach the expected level, managers must attempt to limit the costs associated with production, including those created by regulation. However, the concept of risk also highlights the significance of cost predictability and stability; in other words, in attempting to increase the certainty related to *expected* returns, it is equally important that your costs can be determined in advance, a requirement which, it was found, may actually be more important than keeping costs below some absolute value. In other words, in deciding which of two policy instruments to support, a firm might actually have a preference for the more costly of the two because

it is more likely to provide long-term stability of cost, even if those costs will be higher. The importance of cost stability and predictability versus absolute level of cost is why managers interviewed for this study differentiated between risk and cost. As FPAC President Avrim Lazaar put it, "Cost minimization is not my number one priority. My number one priority is risk minimization" (Lazaar, 2009).

The significance of risk also highlights the significance of *policy certainty* in influencing business preferences for climate change policy instruments. Again, as risk is a type of uncertainty, decreasing the risk associated with climate change policy instruments is ultimately about decreasing uncertainty within the regulatory realm. While the design details of a particular policy instrument might theoretically create greater or lesser predictability of cost, it is impossible to have cost stability if governments are continually changing or threatening to change the regulatory regime. Firms need to be able to predict the long-term impacts of regulation on their investments and, therefore, a vacillating government can be one of the greatest impediments to investment and, ultimately, to business success.

The investment definition of risk also highlights another significant point: managers must examine the potential for risk created by a policy instrument from two perspectives – in relation to the firm's own capital investments and in relation to the investments made by external investors in the firm itself. In the former case, they attempt to determine the likelihood that the policy instrument will create uncertainty about the returns on the plants, factories and other investments of the firm. In the latter case, they are confronted by the possibility that shareholders or creditors will withhold funds due to

the uncertainty over expected returns caused by the potential implementation of the policy instrument.

Investors, whether within the firm or without, base their investment decisions on a trade off between risk and return, meaning that higher levels of risk without corresponding increases in expected return would undermine investment. Attempting to anticipate and allay investor risk perceptions, however, requires keeping one eye on the firm's reputation and public image because the Canadian political economy does not allow most investors access to inside information and they must therefore base their assessments on publicly available information (Hall and Soskice, 2003). Ultimately, the risk perceptions of capital investors and shareholders are important for two reasons:

- i) Without large capital investments, the firm would have difficulty growing and competing; and
- ii) If shareholders perceive the risks of investment as too high, they may sell their stock, leading to depressed share prices and increased likelihood of hostile acquisition by a competitor (Martin and McConnell, 1981; Powell, 1997: 1010).

Clearly, both of these possibilities would adversely impact the long term success and survival of the firm and, therefore, firms form preferences for policy instruments that would mitigate against these potentialities.

On the other side of the ledger, advantage is defined as the capacity of the firm to increase revenue as a result of the implementation of the policy instrument. This could be directly through the policy instrument's design or indirectly by changing the behaviour of key customers in the market. What is important is that the instrument is viewed as

strengthening the firm's position either in absolute terms (more revenue or reputational gains) or in relative terms vis-à-vis competitors.

The final element of the model – that manager expectations about future government policy choices and their impacts on the firm strongly influence perceptions of risk and advantage – also requires some explanation. In seeking to limit risks and optimize advantages in creating preferences for climate change policy instruments, firms are attempting to control the effects of government actions on their investments in an uncertain future. Their expectations about that future, therefore, impact how they perceive the risks and advantages. Two types of expectations matter. First, firms seek a stable, certain regulatory environment in which to invest and, therefore, their expectations about the likelihood of regulatory change and the likelihood that a particular policy instrument will be implemented influence their perceptions of risk. Only once there is an expectation of regulatory change does the regulatory environment become uncertain and thus risky, and, once that happens, only those instruments that could conceivably be implemented – providing a new stable regulatory regime – require attention (For instance, a government could conceivably nationalize all oil companies as a response to climate change, but if that has never been debated in the public discourse then it will not be considered a significant possibility). Expectations about changes in the regulatory environment thus encompass both the likelihood of change, and the probable direction of that change.

Second, expectations about the impacts of a policy instrument on the firm are also significant and these are influenced by previous experience with an instrument. While the political context influences expectations about regulatory change and which

instruments are likely to be implemented, it cannot explain all firm preferences, given that while some instruments may be "off the table" there is often more than one option under public discussion at a time. While an expert analysis of the costs associated with particular policy instruments might indicate a clear choice for firms, this study found that it was only once managers had experienced a policy instrument (in another jurisdiction) that those arguments were certain to hold sway. In other words, only when a firm had previously experienced a policy instrument were the impacts of the instrument viewed as known or certain and less risky than alternatives. In the absence of experience, managers are more likely to discount expert evaluations of costs and the predictability of costs; where firms have experience with a policy instrument, they all but invariably prefer it to likely alternatives.

CLIMATE CHANGE POLICY INSTRUMENTS AND THE THEORETICAL COST OF COMPLIANCE

The preceding analysis begs two questions: first, what are climate change policy instruments and, second, what would be the expert advice with respect to the costs associated with each? With respect to the first question, this dissertation uses three different terms to refer to the public policy process. First, by *policy*, I refer to the "broad framework of ideas and values within which decisions are taken and action, or inaction, is pursued by governments in relation to some issue or problem" (Brooks, 1989: 16). Policies include both goals and means. Climate policy, for example, specifies a *policy goal* vis-à-vis climate change (i.e. to reduce the emission of greenhouse gases, notably carbon dioxide, often by a specific amount or to a particular target). It also specifies the means or mechanisms – called *policy instruments* – by which that goal will be achieved.

Indeed, *environmental policy instruments* can be defined as the tools through which governments "wield their power in attempting to affect society – in terms of values and beliefs, action and organization – in such a way as to improve, or to prevent the deterioration of, the quality of the natural environment" (Mickwitz, 2003). This dissertation focuses specifically on the environmental policy instruments developed to mitigate climate change, which may vary significantly from one another in terms of their coerciveness and/or the costs they create for businesses or consumers.

Finally, by the *regulatory environment*, I refer to the total set of policy instruments, rules and legislation within which businesses operate – everything from payroll taxes to local zoning rules that determine where certain business activities may be undertaken. From the perspective of a firm, the regulatory environment is a key determinant of short-run and long-run costs; if these costs are unpredictable, returns on investment both by and in the firm become uncertain. Thus, potential changes to policy instruments within the regulatory environment create risks to such investments. Climate change policy instruments are only one possible source of such risks.

The distinction between policy goals and policy instruments is an important one because it is often blurred in discussions about climate change. Once a government has established a policy goal of reducing carbon emissions by a specific amount, it could in principle employ one of a range of policy instruments to bring about that reduction. Different policy instruments tend to be considered as linked to different policy goals, however, precisely because they vary in terms of cost and coerciveness: A government with an ambitious target for reductions may find that their policy goal is not credible if they pursue these reductions through voluntary agreements, for example. Conversely,

different policy instruments may be implicitly associated with different reduction targets (i.e. different policy goals). As these implicit assumptions are both empirically elusive and heavily dependent on context, this dissertation assumes that firms develop preferences about policy instruments on their own merits – rather than based on beliefs about what those instruments imply about specific policy goals (for instance, that government might impose a lower target if they employed a carbon tax rather than a capand-trade system). Nothing in the research – interviews or other data – implied that this assumption was invalid or that this sort of strategic lobbying played a central role in policy instrument preference development. Nonetheless, in some cases – with respect to voluntary agreements, for instance – a policy instrument might provide leeway for firms to influence government policy goals and this is taken into account in the discussion of costs below. Otherwise, however, it is assumed that climate change policy instrument preferences and government policy goals are independent.

What are the particular policy instruments related to climate change policy and what are the costs associated with each? There are five general climate change policy instruments available to governments. These can be ordered in terms of their theoretical costs to business to achieve the same policy goal, from least costly to most costly as follows: 1) subsidies, 2) voluntary agreements, 3) cap and trade systems (emissions trading without an initial auction of allowances), 4) traditional "command and control" regulation, and 5) traditional carbon taxation. If, for the purpose of this discussion, we assume that firms prefer less costly policy instruments, this list should also represent a firm's order of preference for climate change policy instruments.

The first two policy instruments, subsidies and voluntary agreements, are both

voluntary programs, meaning that firms are not forced to take part in these initiatives. Cap-and-trade programs, command and control regulation and taxation, on the other hand, are all forms of regulation, as firms covered under these programs do not choose to participate. Government compels firms to comply with the rules of the program, which are enforced through some form of penalty, either financial or legal.

Unsurprisingly perhaps, all things being equal, voluntary programs are far less costly than regulatory instruments. Subsidies are by far the cheapest policy instrument for the firm as all or most of the cost is incurred by the state (Field and Olewiler, 1994). Voluntary agreements are the second best scenario for the firm. They provide considerable leeway for industry to negotiate lower abatement levels (ensuring lower costs), as well as opportunities to positively influence public perception of their environmental and social conscience (Arora and Cason, 1996; Harrison and Antweiler, 2003). Voluntary agreements also provide significant flexibility for industry to design their abatement strategies based on the least costly options.

Cap and trade systems typically are the third cheapest instrument for the firm. In this regulatory system, the government sets a cap on the quantity of emissions allowed within the entire economy and then either auctions all permits or provides emissions allowances to existing firms up to that total capped amount under some form of allocation formula (e.g., based on past emissions). As the cap will likely be lower than the current quantity, a firm will generally need to decrease its emissions. In doing so, it has three choices: it may lower emissions to a point equal to its original allocation; it may lower emissions to a point less than its original allocation and sell its remaining allowances to

other firms for a price higher than the cost per unit reduction – called its marginal cost of abatement - or; it may lower emissions to a point greater than its original allocation and then buy credits from another firm at a price lower than its marginal cost of abatement.

Assuming that existing firms' allowances are "grandfathered" into the process (they need not buy their original allowances from government), cap and trade systems provide flexibility for firms to decrease the total cost of emissions reduction compared to a strict emissions standard that is uniform across firms. This is generally possible because firms have different marginal costs of emission abatement and, thus, both buyers and sellers are better off from the transaction. Unsurprisingly, a recent study of an SO₂ cap and trade system in the US confirmed that this instrument provided significant cost savings to industry when compared to traditional regulation (Burtraw and Palmer, 2004).

Traditional "command and control" regulation generally does not provide this flexibility and, consequently, ought to be more expensive for the firm. Governments usually set general standards (command) and firms are expected to meet those standards or face penalties (control), no matter their marginal cost of abatement. While some flexibility in enforcement is possible, the system itself provides no certainty of this (Field and Olewiler, 1994). Consequently, unlike a cap and trade system, a firm can expect to pay the entire cost of the reduction at its own marginal abatement cost. Firms would only be expected to support such a policy if it provided a clear competitive advantage over other firms; for instance, if existing firms are "grandfathered," while new entrants are provided stricter targets and penalties.

All else being equal (in other words, that the tax set by government is similar to the

market-derived price in an emissions trading system), taxes typically are far more expensive policy instrument for the firm. As taxes are imposed on all of a firm's emissions, not merely those exceeding a set quota, a firm would pay the tax on emissions and any costs of mitigation it may choose to undertake. It would make sense for a firm to decrease its emissions until its marginal cost of emissions abatement is equal to the tax, at which point paying the tax becomes cost-effective. This, of course, assumes that reductions are technologically feasible, not necessarily the case with respect to all carbon emissions. Nonetheless, a tax is expected to be much more expensive for the firm than other policy instruments because, in both traditional regulation and a grandfathered cap and trade system, the firm only pays for emissions above a certain limit. Indeed, Lyon and Maxwell (2003) suggest that industry always loses when an environmental tax is imposed.

Of course, in reality, the details of any climate change policy instrument can be expected to impact the costs for business and thus may impact this preference ordering. Most significantly, original credit allocations for a cap-and-trade program could be sold or auctioned, not grandfathered. In that case, firms are forced to pay not only for emissions over the cap, but also for the original allocation. Consequently, an auctioned cap and trade system has comparable costs to a carbon tax.

Second, while taxation appears to provide the least appeal to industry, revenueneutral taxation - when government gains no extra revenue from the policy instrumentmay be easier to accept. If industry believes that all or most of the tax will be returned through other tax reductions, the expectation of cost is very different than in traditional

taxation. A firm could decrease its overall taxation level through pollution abatement measures until its marginal cost of abatement is equal to the tax rate and, then, expect a significant amount of the remaining tax to be counteracted through tax decreases in other areas. Thus, in this theoretical situation, the firm expects to pay the price of mitigation plus the non-counteracted tax. The exact cost will depend on the details of the revenueneutrality arrangement.

There is, however, no guarantee that the tax will be returned to the firm through other sources. It is possible, for instance, that taxes on emissions will be used to decrease personal income taxes, providing no relief to industry. Such a tax is revenue-neutral, but from the perspective of government rather than industry. Additionally, even if taxes taken from a given sector are returned to that sector, inequalities related to the distribution of funds within the sector - which firms receive how much - could create further conflict between firms. It is possible that a revenue-neutral carbon tax could be developed such that some firms would be better off than under a grandfathered cap-and-trade (if they pay little carbon tax because their carbon intensity is low and they benefit substantially from the corporate tax cuts determined by government, for instance); however, at least as many firms would be likely to find themselves on the loosing end of such an arrangement. Moreover, and most importantly, it would be impossible for firms to know the exact cost of a revenue-neutral tax (the tax paid minus the tax reduced) in advance, meaning that even the "winning" firms in that scenario would not know that they were winners before the details of the program were set by government. Revenue-neutrality, therefore, introduces considerable uncertainty into the cost of a carbon tax.

There are other areas of uncertainty related to the costs of particular instruments. A cap-and-trade program, in particular, requires government to make decisions about a range of variables. Variables that must be determined by any government developing an emissions trading system include: the level of the cap, the base year (upon which the initial allocation will be made), which industries to regulate, whether to include offsets from non regulated industries, and whether the program will be "economy-wide"(attempt to include unregulated emissions by changing the location of regulation to producers of fossil fuels rather than users of those fuels).

All of these variables can be expected to impact not just the costs to the firm of a cap-and-trade program, but also the competitive position of some firms in relation to others. Moreover, even once the program is developed and the details are set, the market price for emission allowances might also be quite unpredictable, creating another significant area of uncertainty about the costs of the program. Finally, transaction costs associated with buying and selling within the new market – fees from banks, lawyers, and other brokers – introduce further cost uncertainty. Thus, while a grandfathered cap-and-trade program would likely be the lowest cost option for firms when compared to traditional regulation or taxation, the complexity of program design and the fact that the price is market-determined makes predicting the absolute value of those costs challenging.

With respect to command-and-control regulation, variables that might impact costs to the firm include: lead in times (the time that firms are given to prepare), level of penalties, breadth of coverage (who will be regulated), stringency of coverage for existing versus new plants or firms, and the basis of the standard (regulations can set

standards that require firms to employ best-in-class or most efficient technology, or to meet particular environmental goals). It is important to note, however, that as carbon reductions may be quite difficult in certain situations, paying penalties might be a firm's only option. If government were to add a criminal element to such penalties, this could completely curtail particular types of business activities. The legal requirements and level of coercion of a command and control regulatory system are, therefore, further areas of uncertainty for firms.

Despite these uncertainties, two key points can be drawn from this analysis: first, voluntary instruments (voluntary agreements and subsidies) can be expected to be far less costly than any of the regulatory instruments (cap-and-trade, traditional regulation or taxation). Second, of the carbon pricing instruments (cap-and-trade or taxation), a grandfathered cap-and-trade program can be expected to be considerably less expensive to the firm than a traditional carbon tax given that firms only pay for emissions above a set quota in one scenario and on all emissions in the other. Revenue-neutrality, however, complicates this analysis, making it possible that some firms would be better off under a carbon tax. It would be difficult for firms to know in advance whether they would be amongst the "winners" in the revenue neutrality lottery, however, as this would be highly dependent on the politically-determined details of the program. The key point is this: while a grandfathered cap-and-trade program assures firms that they will pay a carbon price on only a portion of their emission (those above the set cap), a revenue-neutral carbon tax requires firms to pay the price on all of their emissions, with a portion returned through other tax deductions. How large the return would be cannot be known in

advance but, all else being equal, it would need to be substantial to make up the difference in cost between straight carbon taxation and grandfathered cap-and-trade. Thus, preferring a revenue-neutral carbon tax to a grandfathered cap-and-trade program on the grounds that it might entail lower costs to the firm for the same policy goal would represent a considerable gamble. There might be other reasons why a firm would prefer a carbon tax, however, revenue-neutral or not, specifically that it provides greater price certainty when compared to the market-derived price of a cap-and-trade program.

These two points highlight two key questions related to the empirical findings of this study. First, why did Canadian firms shift their preferences away from voluntary agreements and subsidies towards carbon pricing in 2006-2007? Second, what explains the variation in preferences for carbon pricing mechanisms observed after this shift? Why do some firms and associations support a grandfathered cap-and-trade program while others support taxation or have no preference? While arguments can be made in favour of either policy instrument (grandfathered cap-and-trade can more predictably offer lower costs, while carbon taxation offers greater price certainty), why do some firms and associations privilege certain arguments while others privilege the opposing view? It can be assumed that the lack of a clear preference on the part of many associations is due to the internal machinations of the organization and the lack of a homogenous view among member-firms, but this is itself puzzling: why is there such variation in preferences for climate change policy instruments even within the same sectors?

Certainly, a simple account of preferences based on relative costs of compliance cannot answer these questions. This is both because the variation in preferences is far

more diverse than such an analysis would predict and because the true costs associated with both carbon-pricing instruments are complex and uncertain. The risk-advantage model, however, offers insight into both puzzling findings, explaining why there was a shift in aggregate business preference in 2006-2007 and how and why firms and associations developed their particular carbon pricing preferences thereafter.

*W*HY DID BUSINESS SHIFT PREFERENCES AWAY FROM VOLUNTARY AGREEMENTS AND SUBSIDIES?

The Canadian business community shifted its preferences away from the less costly voluntary agreements and subsidies because firms and their investors began to expect that voluntary policy instruments would be abandoned by government and those instruments could not, therefore, provide firms and investors with the long-term policy certainty they require to facilitate investment. As risk is a type of uncertainty, seeking to minimize risks in the regulatory realm ultimately means that, all else being equal, firms prefer policy instruments that provide long-term policy certainty. Policy certainty, however, has two dimensions; on the one hand, firms seek regulatory *stability* – the knowledge that the regulatory environment will remain unchanged throughout the lifespan of investments. On the other hand, they also seek policy instruments that provide compliance costs related to policy instruments, but highlights the fact that the theoretical cost of a particular policy instrument might be less important than the ability to predict what the costs associated with the regulatory environment will be over the long-term.

Usually, the *status quo* regulatory environment provides the greatest possible certainty both from the perspective of stability and predictability. The details of the

status quo regulatory environment are known and have been experienced; the costs they create are predictable. Assuming that the firm is succeeding in this environment, it would prefer this situation to continue over the long term and would only support relatively minor changes to that status quo or changes that are deemed to provide advantage with relatively little risk. In Canada, from 1989 to 2006, firms supported only voluntary agreements and subsidies, which involved only minor changes to the regulatory environment, were the least costly policy instruments, and also offered considerable predictability of cost, while providing some advantage in reputation and efficiency gains.

Once changes in the political environment create expectations of regulatory change, however, the *status quo* loses its stability and a key asset of the then current regulatory environment is lost. At this point, firms can no longer make long-term investment decisions predicated on the continuance of the current regulatory framework. Moreover, external investors, where aware of the potential for regulatory change, will also perceive higher risk. They might respond, in the case of major capital investors, by refusing to provide funds for large projects or, in the case of shareholders, by moving their investments to less risky alternatives in different industries or jurisdictions. In the latter case, a drop in shareholder demand could lead to a drop in share price which could in turn increase the firm's vulnerability to hostile takeover. Ultimately, these adverse outcomes are a consequence of uncertainty about the future regulatory regime; in other words, it is the mere perception of the likelihood of change that causes this, not the nature of the future regime per se.

The significant negative effects of policy instability make managers extremely cognizant of the need for stability in the regulatory realm. Articulating preferences vis-à-

vis policy instruments can be seen as an attempt to hasten the resolution of uncertainty created by expectations of regulatory change. Such preferences signal to governments that the firm wishes a particular instrument implemented, and help communicate to investors that the firm will be able to assure returns on investment despite regulatory uncertainty. In Canada, following a shift in public opinion in 2006, firms and business associations abandoned their previous preferences for voluntary agreements and subsidies. As the political debate at the time privileged market-based mechanisms, they overwhelmingly adopted preferences for carbon pricing and called for a price to be applied by government as soon as possible.

Why did Canadian firms respond so noticeably to a change in public opinion? A public opinion shift acts as a catalyst for the change in expectations that undermines perceived regulatory stability. In other words, the public opinion shift indicated a new trend in Canadian public policy and led managers to believe that government would ultimately respond by implementing a carbon price. The status quo could no longer be trusted to continue throughout the lifespan of investments. Public opinion also has the added impact of ensuring that investors are well aware of this trend, whether they are major investment firms with staff tasked with cataloguing risks or retail shareholders who make choices based on far less information. Once a policy issue like climate change rises to the forefront of the public agenda (creating uncertainty about the future regulatory environment and thus risks to investment), investor concern becomes a motivating factor for firm policy instrument preferences.

Public opinion thus plays a dual role in policy preference development: it highlights areas of likely regulatory change *and* it acts as an indicator of investor concern

for firms. With respect to the latter point, investors are a diverse and disparate group and include both larger institutional investors and retail shareholders. What this group has in common, however, is that they are a subset of the wider public – the investor class, so to speak – and the same political forces that shape public opinion shape their perceptions of risk within the regulatory realm. For firms trying to control and assuage investor risk perceptions, therefore, public opinion provides a handy indicator of investor concern.

Thus, the political context – the politics of the day – strongly influenced business preferences for government policy instruments in Canada by creating expectations in the minds of both managers and investors about the likelihood that the current regulatory structure would be abandoned in favour of a new one, and indicating which policy instruments might fill the resulting void. In Canada, in 2006-2007, political debates focused on so-called market-mechanisms – a carbon price – and therefore firms began articulating support for those policy instruments in the hope that, if government implemented a carbon price soon, long-term regulatory stability would return. This would in turn limit the risk to long-term returns on investment and assuage investor concerns about the firm's capacity to ensure returns on investment within the future regulatory context.

WHY IS THERE VARIATION IN SUPPORT FOR CARBON PRICING INSTRUMENTS?

In the Canadian case, as tables 1 and 2 above demonstrate, firms and associations overwhelmingly declared their support for a carbon price. They could not agree, however, on the type of carbon price that ought to be supported – a grandfathered cap-

an-trade program or a revenue-neutral carbon tax.⁵ Why this variation? This study argues that variation in support for carbon-pricing instruments is explained by the interaction of two variables: advantage and experience. The following section expounds on this argument.

Clearly, a plurality of firms and associations in Canada supported the option most likely to entail lower costs: a grandfathered cap-and-trade program. Seven firms and four associations supported that policy instrument. Eight firms and eight associations, however, (all of whom supported carbon pricing in general) either preferred a carbon tax or had no clear preference. In other words, despite the fact that a grandfathered cap-andtrade program is likely to be cheaper than a carbon tax for many if not all firms (depending on neutrality arrangements), a majority of participating firms and associations did not endorse that policy instrument.

The risk-advantage model indicates, however, that absolute costs are not the only determinant of business preferences. The concept of risk highlights the significance of cost stability and predictability for firms and, in this regard, a carbon tax would be far superior to a grandfathered cap-and-trade program. Once a carbon tax is set by government, firms would be in a position to predict their costs over a relatively long timeframe, while in an emissions trading system the carbon price could vary daily, if not hourly, and there would be far less ability to predict the price. A puzzling aspect of the findings remains, however: if price predictability is so important to firms, why don't all

⁵ At the time, it was widely assumed that any cap-and-trade program would be grandfathered and, while there was some variation, most respondents also assumed that a carbon tax would be revenue-neutral.
firms and associations support taxation? One could say that the need to ensure that expected returns on investment are achieved (in other words, to limit risk) forces firms to trade off the lower costs offered by a grandfathered cap-and-trade program against the greater price predictability offered by a carbon tax. Certainly, interview subjects who supported a grandfathered cap-and-trade program tended to highlight the flexibility and lower costs associated with the policy instrument, while those supporting a carbon tax tended to highlight price predictability and deride the uncertainty in cost associated with cap-and-trade. Such an explanation does not clarify why some firms valued price predictability while others valued lower cost, however. Clearly, an intervening variable is at work when firms choose to prefer one carbon-pricing instrument over another.

In an ideal world, firms would prefer policy instruments that kept costs both low and predictable. When – as it did in Canada from 2006-2009 – the political context pushes firms to choose between instruments that offer either cost predictability or lower cost, past experience plays a strong role in shaping this choice. Combined with perceived advantage, experience offers a far better explanation of the data than absolute considerations of either level or predictability of cost.

Why? At firms where preference decision-makers had previous experience with an instrument, they viewed the arguments in favour of that instrument as more compelling than decision-makers that had no experience, or had experience in the alternative instrument. The numbers prove the point: of the nine firms with experience in cap-and-trade, six support the instrument. Of the eight firms without experience in cap-and-trade, preferences vary: two support a carbon tax, while four have no preference and two

support cap-and-trade. Despite the considerably lower costs that it entails, only two firms without experience in cap-and-trade supported that instrument. To mix metaphors, the devil is always in the details and firms strongly prefer the devil they know

The important point here is to understand why experience matters so much to firms. I argue that experience has an ideational effect: familiarity with a policy instrument increases perceived certainty over design details and their impacts. In other words, experience acts as a heuristic device; managers assume that how the firm experienced the policy instrument before is how they will experience it in the future and they are therefore more likely to agree with arguments in favour of that instrument. In the absence of experience, preference decision-makers are left with competing arguments in favour of both policy instruments and no clear way to choose between the two. Their lack of experience breeds discomfort; since the details of none of the potential instruments are certain, they perceive all of them as risky. Once they have experience with an instrument, details and impacts are seen as more certain, thus less risky, and firms are more likely to support that policy instrument. Arguments in favour of that instrument – either that it is less costly or offers more predictable costs – are then given more credence by managers.

Perception of advantage also influences policy instrument preferences. Firms that perceived a clear advantage in a policy instrument tended to support that instrument, even if they had no experience with it. Thus, I argue that variation in the type of carbon price supported is explained by variation in experience with carbon pricing instruments and differences in perceived competitive advantage flowing from those instruments. Experience, however, appears to trump advantage, decreasing the significance of a clear

competitive advantage where the two contradict (where a firm has a theoretical advantage with one instrument but experience in another, they tended to have no official preference). In the end, business officials trust their own experience far more than they trust expert advice and this tendency has a considerable impact on policy instrument preferences.

THE CONTRIBUTIONS

The central themes of this argument – that firms seek to reduce regulatory uncertainty in order to decrease risk and that firms seek advantage where possible – are hardly novel. Fundamental to economics and management understandings of corporate decision-making and profit is the effect of uncertainty (Hofmann, 2007; Knight, 1985; Power, 2007) as well as investor/stakeholder concerns (Barnard, 1991; Benn, Dunphy and Martin, 2009). Indeed, the term "political risk" found in any investment management textbook refers to the very concerns highlighted here: that changes in the political environment will undermine the capacity of investors to receive their expected return (Reilly, 2006).

The model presented here, therefore, does not reinvent the wheel but instead helps integrate components from a broad range of literatures that are elsewhere largely left separate, while providing explicit clarification about the decision-making process of business leaders vis-à-vis government policy instrument choice. Indeed, the particular area of interest here, firm preferences for government policy instruments, has received limited specific attention in the literature, existing as it does at the intersection of political science, economics and management. As a result, research into business-government relations often leaves firm policy preferences undefined and the reader is left to infer what they will about what firms want from government and why they want it. Usually,

the underlying assumption is that firms are attempting to minimize absolute costs – an assumption that, while correct in part, leaves out important nuance. Firms are not only attempting to limit absolute costs, but seek cost predictability and stability, as well as advantage where possible; where these sometimes-conflicting goals do not provide a clear preference, they look to their own experience to fill the gap. This research, therefore, provides a significant cornerstone for further research into business-government relations in Canada, particularly the influence of business within the political process.

One of the unique contributions of this work is, however, to demonstrate how politics influences business preferences for climate change policy instruments. Not only does the current political context feed into expectations about regulatory stability, but previous government choices impact preferences by providing some firms with experience with particular instruments. Thus, business preferences are not exogenous, but endogenous, to the business-government relationship. While themes related to the impact of political institutions on business policy preferences can be found in some political economy literature, the explanation of the mechanism by which politics matters – by impacting expectations and, therefore, perceptions of risk and advantage – is novel.

THE DISSERTATION

This dissertation argues that the climate change policy instrument preferences of large firms are based on an assessment of the risks associated with the policy instrument for the firm's capital investments, how the policy instrument will impact the risk perceptions of external investors, and the competitive advantages entailed by the instrument. As these assessments require predictions about an uncertain future,

expectations about future government policy choices are fundamental to policy instrument preferences. Two types of expectations matter: expectations about the likelihood of regulatory change resulting in the implementation of a new policy instrument, and expectations about the details of a particular instrument and the impact of those details on long-term costs and the predictability of those costs. The first type of expectation is shaped by the political context with public opinion playing a key role in creating expectations of policy instrument change. The second type of expectation is influenced by previous experience, which creates perceived certainty over details and impacts. Ultimately, firms form preferences for policy instruments in order to seek a certain, stable, and predictable regulatory environment in which to invest and operate.

This risk-advantage model was developed inductively from the findings of qualitative research into business preferences for climate change policy instruments in Canada. As such, the initial study did not provide adequate evidence of the validity of the model as an explanation of the puzzle noted at the outset of this chapter. While the qualitative data suggested that business leaders perceived risk and investment as a key concern in their interaction with government on climate change policy – giving rise to the risk-advantage model – whether this actually impacted policy instrument preference development remained to be verified. Thus, further testing was required.

In such circumstances, George and Bennett contend, "In testing a historical explanation of a case, the most convincing procedure is often to develop an explanation from data in the case and then test it against other evidence in the case" (George and Bennett, 2005: 111-12). Consequently, the final phase of this research program involved testing the model through the collection of new data and the creation of falsifiable tests of

the implications of the model. New data based on historical documents, including parliamentary committee testimony, corporate annual reports, media interviews, and press releases, provided the foundations of this analysis – the results of which are presented in this dissertation.

The risk-advantage model entails four broad observable implications, each of which could be empirically verified:

- The political context impacts preferences by changing expectations about future government regulatory choices.
 - ☑ Firm preferences should vary in relation to changes in the political context that make changes to the regulatory *status quo* seem likely.
- 2) Public opinion is indicative of investor concern. Investors, like managers, are concerned by the lack of regulatory stability and the possible implementation of new policy instruments. Public opinion provides investors and managers alike with an indication of possible regulatory change. As such, it also indicates to firms an area of likely investor concern.
 - ☑ Firms should, therefore, respond to public opinion shifts by both shifting preferences *and* changing the way in which they communicate to investors about climate change in their annual reports to shareholders
- *3) Firms prefer policy instruments that confer competitive advantages, if any such advantages are on offer.*
 - ☑ Firms who perceive an advantage from a policy instrument should support that instrument.

- 4) Past experience with a policy instrument is an important source of confidence about the design details of the policy instrument and the impacts (absolute costs and predictability of those costs) they create.
 - ☑ Firms with past experience with a policy instrument should support that instrument.

The methodology behind the development of the model and the testing of it are discussed in detail in chapter 2. Chapter 3 then puts the argument in context by examining the literatures to which this study aims to contribute. The next four chapters (chapters 4-7) examine each of the observable implications in turn in an effort to establish the validity of the risk-advantage model derived from the initial study of business preferences.

Ultimately, these tests indicate that the model as articulated above does provide a reliable explanation of the puzzle within the case. There was, however, one null finding. Interview subjects argued that the personal convictions and beliefs of their leaders had influenced their firm or association's preferences for particular policy instruments. In the end, however, no independent evidence was found to support this contention and convictions and beliefs were discarded from the final model. This is not to say that the ideas of key decision makers have no impact on the environmental practices of major firms and business associations; chapter 8 examines this null finding and discusses another possible way in which ideas may matter to business's role in environmental politics. This dissertation then closes with a discussion of the conclusions of this study and implications for further research in chapter 9.

CHAPTER 2: METHODS

CAPP and CCCE's support for a carbon price in 2008 highlighted a significant puzzle. Unfortunately, unraveling this puzzle was not a straightforward exercise and, in the end, a three-phase research project was required. In the first phase, a traditional structured, focused comparative methodology was developed and interviews were undertaken. A preliminary analysis of the interview data, however, demonstrated weaknesses in the initial hypotheses, which led to a second phase of model-building based on a previously overlooked variable: risk. The third phase involved the development of testable propositions based on the model and the collection of new data in order to determine whether the model is indeed relevant in this case. The findings of this final phase are reported in subsequent chapters. This chapter lays out the methodological process and problems inherent to each phase, highlighting the foundations of the research design within the methodological literature.

PHASE **1**: INITIAL RESEARCH DESIGN AND FIELD WORK

Initially, the puzzle was interpreted as follows: despite the lower costs to the firm of voluntary agreements and subsidies, there was variation in business preference across the spectrum of possible policy instruments. At the time, no survey of current business preferences for climate change policy instruments was available but, as it was deemed unlikely that all firms and associations would support a more costly policy instrument, I assumed that CCCE and CAPP represented one of many positions within the wider business community. The initial research question was therefore stated as: *What causes variation in business preference for climate change policy instruments in Canada*? Given that business preferences for government policy options exist at the intersection of several disciplines – economics, management, psychology and political science, primarily – multiple literatures had potential relevance to the case. The initial survey of those literatures included works on business decision-making, corporate political activity, business-government relations, environmental politics, public policy development and psychological heuristics. While few of these fields dealt directly with the issue of business preferences for public policy options (chapter 3 describes the few that did), a number of themes were apparent and these were used as the basis of five hypotheses:

- Competitive Advantage/market factors: Variation in business policy
 preferences is caused by perceived competitive advantages by one firm or
 industry over others and depends on particular corporate circumstances and
 cost analyses.
- 2) **Ideas:** Variation is based on ideational factors, including corporate culture and/or the experience, values and beliefs of key decision-makers.
- Greenwash: In reality, there is no variation, as these associations were merely involved in greenwash (in other words, they were lying to improve their public image).
- 4) Policy Expectations: Variation is caused by differences in *expectations* for future government policy: where firm officials believe that a policy shift is likely, they will shift preferences to ensure that the least costly of the range of probable policy instruments is adopted.

5) **External Pressure:** Variation is caused by differences in external pressure from stakeholders. In other words, preferences are developed in response to the contentions or arguments of other actors. Pressure might come from unions, employees, environmental nongovernmental organizations, or shareholders.

The *competitive advantage* hypothesis highlighted the significance of market factors in creating differences between firms in their preferences for public policy instruments. The *ideas* hypothesis, on the other hand, imported concepts from the recent "ideational turn" in political science into our understanding of corporate policy instrument preferences. In contrast, the Greenwash hypothesis implied that, actually, CAPP and CCCE were merely misleading the public about their preference to ensure public support. In other words, there is actually no variation in policy instrument preferences. That hypothesis was included principally because it was the most common layman response to the explanation of the puzzle at the time. The expectations hypothesis might appear similar to the discussion of expectations in chapter 1; however, at that time, this hypothesis was merely a more nuanced interpretation of the original *cost* of compliance perspective. In other words, here expectations were seen as limiting the number of policy instruments on the table but that, ultimately, firms would prefer the least costly of the remaining instruments. Finally, the pressure group hypothesis focused on the importance of other groups (particularly environmental nongovernmental organizations) in influencing firm preferences for climate change policy instruments.

A comparative research design (George and Bennett, 2005; King, Keohane and Verba, 1994) was then developed to test the significance of each hypothesis. I anticipated that in comparing preferences of different business groups in relation to the variables inherent to the hypotheses, it would be possible to determine the significance of each hypothesis. In order to increase the number of observations, the research design included associations and firms, defining participant characteristics to ensure appropriate comparison.

On the association side, the study was open to all national associations from large final emitting sectors, representing large corporations. Only large final emitting sectors were included in order to ensure that all participating sectors would be regulated under all policy instruments. Given that most cap-and-trade programs formally regulate only large final emitters, including other industries (such as the service industry), which were not directly affected by that particular instrument, could have caused substantial bias in the data. The auto industry (Canadian Motor Vehicle Association – CMVA), whose operations are not strictly heavy emitting, was the only exception. That industry was included, however, due to the historic role it has played in climate change policy debates in Canada, particularly around the issue of tailpipe standards.

The limitation on including only organizations primarily representing large corporations was necessary because the decision-making processes within such large firms were expected to be substantially different from those of small businesses. Certainly it appeared inappropriate to compare Abitibi-Bowater, for example, with a mom-and-pop flower shop in small town Canada. Consequently, among the multisectoral business associations in Canada, only CCCE was included within this study. The

other multi-sectoral associations (Canadian Chamber of Commerce and the Canadian Manufacturers and Exporters) represent large and small business alike and, therefore, were not included.

The firms included in the study were limited to three industry "cases": cement, oil and gas, and forestry. These three industries were chosen to provide variation on the traditional explanatory variable: cost of compliance. Each industry faced a different cost impact from regulatory instruments such as cap-and-trade and carbon taxation. On one side of the spectrum, the forestry industry could be expected to pay very little under either carbon price policy instrument, due to the availability of a free (in the sense that they do not need to purchase it from another firm) and technically zero-emitting fuel source in waste biomass. Indeed, with respect to cap-and-trade, the forestry industry could be expected to gain revenue from the sale of allowances to other industries should they update their boilers to biomass from oil or natural gas.

On the other side of the spectrum, the cement industry could face substantial and possibly fatal cost increases from carbon pricing. Approximately 50% of emissions from cement production in North America are from fixed process emissions: emissions created through the chemical process of making cement (Hendriks et al., 2004). Unlike fuel related emissions, there is no available technology (such as fuel-switching) that would allow for a decrease in these emissions. Moreover, cement production is highly emissions intensive. One tonne of cement produces approximately 0.89 tonnes of carbon dioxide in North America (Hendriks et al., 2004). If a price on carbon were placed on all emissions, even if it were as low as \$10/tonne, it could be expected to decrease profitability substantially (if cement is selling for \$100/tonne, \$8.9 of that – 9% of the

return - could go to tax. If profits were 15% or \$15/tonne of cement, then profitability would decrease by half. If the carbon price were \$20/tonne, there would be no profit at all in this scenario).

In between these two extremes, the oil and gas sector does not face equivalent process emissions and has lower emissions intensity, even in the high emitting oil sands where 0.6 tonnes of carbon dioxide is emitted per tonne of oil produced (as of 2008)⁶ (Droitsch, Huot and Partington, 2010). Moreover, the industry makes much higher profits per tonne of C02 than the cement industry and, without fixed process emissions, has much more capacity to decrease emissions than that sector.

Very early on in the research, it became clear that the petroleum producers faced a very different set of incentives with respect to climate change policy instruments than natural gas producers because natural gas is far less emissions intensive (when consumed) than oil. Consequently, natural gas firms could be advantaged by climate change policy instruments vis-à-vis oil or coal, and it was inappropriate for these two types of products to be analyzed as one. Accordingly, they were separated into two "cases" and more natural gas producers were sent invitations to participate.

In order to corroborate the claims of business actors and to test the significance of hypothesis 3 (greenwash), the study also included 22 "elite observers" of business policy instrument preferences, including government officials with whom industry regularly negotiates, NGO observers, and consultants.

⁶ The conversion from barrels of oil is as follows: 7.2 barrels of oil is equivalent to 1 tonne of oil; if there are 83kg of C02 per barrel of oil, that is equivalent to 597.6 kg/tonne of oil or .597 tonne of C02 per tonne of oil.

From late 2008- August 2009, fieldwork in Ottawa, Vancouver, Calgary and Montreal resulted in sixty interviews with business officials and elite observers. In total, 17 firms and 13 associations participated. The interview subject was generally the CEO or director of environment from the organization and in some cases more than one official from a given firm or association participated (this was the choice of the firm or association). All known heavy-emitting sector associations participated: CCCE, cement, mining, petroleum production, petroleum refining, natural gas, forestry, auto makers, aluminum, steel, chemicals, railways and electricity⁷.

In each of the four industries, the goal was to include five firms per industry. In the end, five firms participated from the petroleum and forestry sectors, three from natural gas and four from the cement sector. Evidence was also included from Transalta, an electrical utility in Alberta, because the Chair of the National Round Table, Robert Page, was a senior executive at that firm for ten years and much of his testimony related to Transalta. Transalta is not included as a "participating firm", however, because Robert Page was not an official at Transalta at the time of his testimony. The data from Transalta was, therefore, considered supplementary to the overall comparative design.

PHASE 2: MODEL BUILDING

During the preliminary phase, subject testimonials pointed to two unexpected findings that highlighted challenges with the research design. First, instead of finding variation in business preference across the spectrum of climate change policy instruments, all firms and associations except three articulated support for a price on carbon, although they differed on the type of carbon price – cap-and-trade or carbon

⁷ See Appendix A for a list of interviews.

taxation - preferred. Interview subjects referred to a shift in the business community approximately three years previous towards support for carbon pricing. Thus, where variation across the independent variable was expected, instead preferences were clustered at one end of the spectrum of possible policy instrument choices. This suggested that the observations in this study – the firms and associations – might not be as independent as first thought, a common pitfall of case study research (George and Bennett, 2005: 33). Indeed, some interview subjects testified that other groups and associations had influenced their firm or association, particularly CCCE and/or the Industry Steering Committee on Climate Change (ISC3) – a group created in the late 1990s to ensure a common industry voice.

This new empirical evidence led to a conceptual shift in the understanding of the puzzle. Two interdependent questions now required answers: First, why had almost the entire business community shifted preferences to support carbon pricing? Second, what causes the variation in support of the type of carbon price, either cap-and-trade or carbon taxation? (In other words, the new research question was: what causes variation in business preferences for climate change policy instruments over time and between organizations?) While a comparative research design could conceivably 'get at' the second question, the first question suggested that this might not be a multi-case study after all, but a single-case study with a clear temporal element. As such, methods such as process-tracing might be more appropriate in exploring the issue. Moreover, it was clear that the interview data alone would be insufficient for understanding the case.

The initial elaboration of the hypotheses, while demonstrating some value, also presented a challenge in that they did not provide a complete explanation of the empirical

findings. While subject testimony suggested some support for four out of five hypotheses, none stood out amongst the group. In particular, some subjects pointed to competitive advantage as significant (particularly within the forestry and natural gas sectors); others suggested that ideational factors such as the convictions and beliefs of their CEO or familiarity with a previous policy instrument played a role. While there was very little reference to pressure from environmental NGOs, employees or unions, investors and shareholders were also the source of considerable concern. Finally, for some firms, the government's movement towards regulation in 2007 and 2008 in Alberta, BC and at the Federal level was cited as significant, suggesting that expectations might be significant. Why expectations mattered was unclear, however; if firms were merely choosing the lowest cost of the *probable* policy instruments, as the hypothesis assumed, then why did some firms now support taxation (the most costly policy instrument) and why did others have no official preference for a type of carbon price? Should they not now all support grandfathered cap-and-trade? Nonetheless, only the greenwash hypothesis had no support, as government officials testified that sector representatives were saying the same thing behind closed doors as in public.

The problem was that, at this stage, there was no clear winner amongst the hypotheses and no clear link or framework for understanding how they related to each other. While it could be that there were multiple factors at play, a new variable came to light during research, which appeared to convey a mental model that might tie the hypotheses together. That variable was risk. Examples of the use of the term include the following.

From EnCana's Executive Advisor and Former Vice President, Gerri Protti:

We categorize our risks on a wide range of issues, extremely wide and we have a chief risk officer in our corporation... When you look at climate, that has both materiality [and reputational] issues depending upon the type of regulation you're talking about. If it's extremely ill defined and we've announced we're going to produce 400,000 barrels of heavy oil out of north-eastern Alberta over the next 15 years – which we have announced – and, well, your investors say, what happens [if...]? What could happen under current emissions policies? Well, you then develop scenarios and the less well defined the legislative, regulative and the political environment is, the more risk there is (Protti, 2009).

From Suncor's Vice President of Sustainable Development, Gordon Lambert:

It's unacceptable to have a policy void . . . we as a sector, because we're oil producers, we end up holding the lightning rod for the debate and it really is governments that need to step up and declare public interest. Because even as companies we are not a proxy for the public interest. But we are having to make long term investment decisions and so you do need certainty in declaring the public interest in order to do what we do. So if we are always in this perpetual state of anxiety. . . [For instance, the government says] wait until next year comes around. It really is difficult. We don't know what to convey to investors. They don't know how to assess the risk (Lambert, 2008).

From the Canadian Gas Association's President Michael Cleland:

You are shifting along a sort of risk spectrum, no question about that. And the risk of not acting is starting to show up with, you know, you have your shareholders, you have insurance companies, you have all sorts of people who worry about securities and various types of things who say, "what are you doing to deal with your carbon intensity?" You've got, frankly, a public image, brand risk. And those start to accumulate at the other end and start to over balance the risk that you're going to incur a bunch of costs that you might have preferred to avoid. Or that your business model is going to disappear out from underneath you. Or that you are going to go and make a bunch of investments that are going to turn out to have been completely stupid. And that's always there as a possibility but it's [immense now] as compared to ten years ago (Cleland, 2009).

It is not unusual for case studies to bring attention to a previously overlooked

variable; indeed, it is one of the main strengths of case study methodology. According to

George and Bennett (2005):

Case studies have powerful advantages in the heuristic identification of new variables and hypotheses through the study of deviant or outlier cases and in the course of field work – such as archival research and interviews with participants, area experts, and historians. When a case study researcher asks a participant "were you thinking X when you did Y" and gets the answer, "No, I was thinking Z," then if the researcher had not thought of Z as a causally relevant variable, she may have a new variable demanding to be heard. (George and Bennett, 2005: 20)

George and Bennett describe the situation faced by this study when interview subjects, too often to be coincidence, discussed their policy instrument preferences in terms of "risk". What remained unclear, however, was what exactly business officials meant when using the term risk in reference to climate change policy instruments and how it related to the hypotheses above.

A point of methodological clarity is required here. While the significance of the concept of risk began to become apparent about half way through fieldwork (when about half of the interviews had been completed), I did not change the questions asked interview subjects in order to specifically examine the relationship between risk and climate change policy instrument preferences. While doing so might have increased the data related to the topic, it might also have introduced confirmation bias into that data and opened up the interviewer to the accusation that she was leading her subjects. Instead, the only change that I made was to ask interview subjects what they meant by risk, if the topic came up without prompting, and to attempt to zero in on a definition by doing so⁸.

Risk is such a commonplace term in the business lexicon that, when asked to clarify, business representatives often had trouble, generally providing only a circular

⁸ See Appendix B for interview questions.

definition that used the term risk to define risk. The next phase of this research, therefore, involved an analysis of business professional texts on risk management and business administration more generally in order to "get at" the concept of risk and to determine the implications of the pervasive use of the concept in setting preferences. This was guided by three questions: What is "risk" in this context? Why does it matter? What does it imply for our understanding of business preferences for climate change policy instruments?

As discussed in chapter 1, despite numerous possible definitions for risk, the investment management definition appeared to best fit the manner in which interview subjects widely used the term: risk is uncertainty that an investment will receive the expected return. Indeed, during this model-building stage, it became clear that risk and the associated implication of investor concern could help explain the relationship between the advantage, ideas, expectations and pressure group (significance of investors, in this case) hypotheses. Risk was the key to explaining the puzzle.

The first part of the model as initially developed was the same as the final version described in chapter 1. In determining preferences for climate change policy instruments, managers seek to:

- 6) Limit the risk of the policy instrument to capital investments
- Limit the effects of the policy instrument on the risk perceptions of external investors.
- 8) Seek advantage where possible.

At this stage, however, the second part of the model varied slightly from the final version in chapter 1. It was clear that the requirement to limit risk to capital investment *while* assuaging investor concern *and* seeking advantage was no simple feat, particularly given the uncertainty that existed about the likelihood of implementation and instrument design. The second part of the model, therefore, stated that, where there was ambiguity about the weighting of risk and advantage, managers turn to other ideational factors to fill in the gaps. Interview subjects suggested that business officials look to their own **experience** or the **convictions and beliefs of leaders** to fill in the holes of knowledge and create certainty around the effects of a policy instrument. As is discussed below, the connection between ideas and expectations was left implicit at this stage.

Initially, the model was based on the superficial results of the interview process (what interview subjects stated was important). Despite inclusion in previous hypotheses, therefore, corporate culture was not included in the model because it was not widely considered important by interview subjects who largely argued that culture could be reduced to the convictions and beliefs of the CEO.

As stated above, the most noteworthy contributions of the risk variable to this study is its ability to provide a structure and explanation for the varied significance of the initial hypotheses. Competitive advantage, ideas, and investors (pressure groups) are included directly within the model: where a public policy instrument offers an advantage, a firm will support that policy instrument. Where no advantage exists, however, firms must choose between risky options (both with respect to their own investments and those of investors) and, where there is ambiguity in weighting, ideational factors come into play.

While not explicitly part of the initial model, the significance of expectations could also be explained through the model; however, the explanation varied slightly from the initial articulation based on cost of compliance. In the initial hypothesis, expectations were thought to influence policy instrument preferences because firms facing an expectation of policy change would shift preferences to ensure that the cheapest of the probable policy options is adopted. The risk-advantage model, however, implies a second possibility: expectations matter to firm policy instrument preferences because they are fundamental to perceptions of risk and advantage. Expectations about future government policy choices impact perceptions of stability within the regulatory context, both for business officials and their investors. Once there is an expectation of regulatory change, firms shift their preferences to most likely policy instruments in order to once again create stability in the regulatory environment and, in doing so, to assuage investor concerns. Expectations about design details and the impact of those details, based on previous experience with a policy instrument and perceptions of competitive advantage, influence which of the remaining policy instruments the firm will support. Unlike with the initial expectations hypothesis, therefore, they will not necessarily support the least costly of the remaining policy instruments. If firms perceive a competitive advantage in an instrument and/or have experience with a particular instrument they are very likely to support that instrument. Experience appears to trump advantage in this analysis. This is discussed in detail in chapters 1, 6 and 7.

PHASE 3: PROPOSITION TESTING

George and Bennett contend:

An inductively derived explanation of a case can also involve more novel theories and variables. In this context, researchers are frequently advised not

to develop a theory from evidence and then test it against the same evidence; facts cannot test or contradict a theory that is constructed around them. In addition, using the same evidence to create and test a theory also exacerbates risks of confirmation bias, a cognitive bias toward affirming one's own theories that has been well documented both in laboratory experiments and in the practices of social scientists.

However, it is valid to develop a theory from a case and then test the theory against additional evidence from the case that was not used to derive the theory. This makes the theory falsifiable as an explanation for the case, and can circumvent confirmation bias . . . Indeed, in testing a historical explanation of a case, the most convincing procedure is often to develop an explanation from data in the case and then test it against other evidence in the case; otherwise, the only recourse is to test the explanation in other cases that differ in ways that may prevent generalization back to the original case (George and Bennett, 2005: 111-12).

As stated, this model was informed both by the testimony of the interview subjects and through a reading of the risk management and business practice literatures. This was not enough to demonstrate its relevance in answering the research question for two reasons: first, just because interview subjects *claimed* that risk was significant for their policy instrument preferences, this does not mean that concerns about risk management *actually* influenced their policy preference decision making. For that, we would expect to see particular changes in behaviour that matched expectations. Secondly, even if risk was indeed important, the model above may be an incorrect interpretation of what business officials mean in referring to risk. Consequently, as George and Bennett argue, a final research phase was required, which sought new evidence and correlations in testing the observable implications of the model.

Five observable implications were developed.

5) The political context:

- ☑ Since risk is a type of uncertainty, policy instrument preferences should vary with the political context, given that it is changes in the political context that would create uncertainty about the regulatory environment.
- 6) Public opinion is indicative of investor concern. Investors, like managers, are concerned by the lack of policy certainty and the possible implementation of new policy instruments. Public opinion provides investors (like managers) with an indication of possible regulatory change. As such, it also indicates to firms an area of likely investor concern.
 - ☑ Firms should, therefore, respond to public opinion shifts by both shifting preferences *and* changing the way in which they communicate to investors about climate change in their annual reports to shareholders

7) Advantage

☑ Firms who perceive an advantage from a policy instrument should support that instrument.

8) Experience

- ☑ Firms with past experience with a policy instrument should support that instrument.
- 9) Convictions and Beliefs
 - ☑ Shifts in preferences for climate change policy instruments should follow major changes in personnel at the firm.

This final phase of research tested each of these observable implications and, therefore, the utility of the model in explaining the case by drawing on new evidence. The evidence used for this proposition-testing phase included primary source literature from parliamentary committee testimonials, annual reports, government documents and secondary source material from mass media and scholarly articles. The interview data was also used, but only where a clear correlation could be tested and, therefore, falsified (for instance, preferences as articulated in the interviews were compared with previous experience which was either explained in interviews or determined independently). The only exception relates to the concept of advantage discussed in chapter 6; as the significance of competitive advantage for firms is well supported and overwhelmingly accepted in the strategic management literature, it was deemed unnecessary to create a falsifiable test using new data here.

Chapters 4-8 present the findings of this phase of research. Chapter 4 uses an exercise of process tracing to test implication 1. Chapter 5 examines the issue of investor concern, demonstrating that a change in the quantity and quality of mentions of climate change did follow a shift in business preferences. Chapter 6 then highlights the significance of advantage, while Chapter 7 examines the significance of experience. Chapter 8 discusses the sole null finding in this exercise: there was no independent evidence found to support the significance of the convictions and beliefs of key managers to policy instrument preferences, in part because of the lack of necessary data. However, chapter 8 provides evidence about another way in which beliefs might matter to the environmental actions of firms, in this case beliefs about risk rather than about climate change. While the evidence in that chapter is preliminary, it demonstrates another use of

the model: to help explain the differences between environmental laggards and leaders amongst firms. This argument, however, is secondary to the main purpose of this dissertation to understand business preferences for climate change policy instruments.

Thus, the model-testing phase demonstrated that the risk-advantage model does indeed provide a valid explanation of business preferences for climate change policy instruments in this case. The significance of the convictions and beliefs variable could not, however, be independently verified. At this stage, therefore, the model was rewritten in its final form, both to leave out the convictions and belief variable and to highlight the significance of expectations about future government policy. The latter change is less a change of substance, as of style and was done to clarify the significance of expectations and the political context for business preferences for climate change policy instruments, which were previously implicit within the model. The significance of expectations and the political context is demonstrated by the fact that, even though the original model did not specifically refer to them, the first observable implication did. Thus, the reworded model provides a clearer articulation of the argument of this dissertation.

This model was not, however, developed in a vacuum. This process was influenced by scholarly work from multiple fields, particularly in the hypothesis development stage. Chapter 3 examines the most relevant of those literatures and demonstrates how this research contributes to those research agendas.

CHAPTER 3: LITERATURE AND CONTRIBUTIONS

Business preferences for policy instruments are a foundational element of business-government relations. After all, how can we know how business influences government or measure the extent of that influence, if we do not first understand "for what" this influence is exercised. Yet, business policy preferences remain an under studied research area in political science and other social science disciplines. While no one theoretical perspective adequately or completely predicts business preferences for climate change policy instruments, diverse scholars in Canada and elsewhere have highlighted the multiple incentives facing the firm in its interaction with government. This chapter examines those literatures and discusses the general and specific contributions that this study makes to the study of political economy both in Canada and elsewhere.

The literature

FALSE STARTS: ENVIRONMENTAL POLICY IN CANADA AND BUSINESS-GOVERNMENT RELATIONS IN THE US

A common current in the environmental policy literature in Canada and the United States perceives environmental policy as developed in opposition to business interests and influence. Business is perceived as on one side of an adversarial policy divide in opposition to environmental groups and other proponents (Elliott, Ackerman and Millian, 1985; Harrison, 1996a; Litfin, 2000; VanNijnatten, 1999). There is strong logic in favour of this perspective: Environmental regulations by their nature create cost burdens for polluters – overwhelmingly heavy industry – and, consequently, industry can be expected to fight this imposition, unless the policy provides clear financial gain, as with particular contracts or subsidies (Harrison, 1996a; Kincaid, 1996; Litfin, 2000). Indeed, from this perspective, authors note that it is somewhat puzzling why we have environmental regulations at all, given the strength of industry vis-à-vis environmental groups (Harrison, 1996a). Governments can be expected to avoid "alienating" jobcreating industry, and thus avoid creating stringent environmental regulations, but this pattern can be overcome in times of high public salience of the issue or through participatory governance models, which limit the strength of the industrial lobby (Harrison, 1996a; Rabe, 1999; VanNijnatten, 1999).

The assumption either explicit or implicit within this significant literature is that industry's interest where environmental policy is concerned is equivalent to cost avoidance, particularly because most environmental policies cannot be expected to provide direct financial gains to most sectors or firms. Harrison sums up this perspective:

Regulation can be broadly defined as rules of behaviour backed by the legitimate sanctions of the state. In effect rather than providing a public service itself, either directly or indirectly, the government exercises its coercive powers to force someone else to provide the service and to pay for it. Thus, an important characteristic of regulation is that the costs borne by government to administer the program tend to be small relative to the costs borne by the private sector.

Regulation typically is perceived as imposing concentrated costs on regulated industries in order to confer diffuse benefits on the public. One would not expect governments to pursue such regulatory policies aggressively, since those affected by diffuse benefits generally would be uninformed, unorganized and thus unappreciative, while regulated interests would be well organized and unyielding in their opposition (Harrison, 1996a: 13).

It is from this perspective that CAPP and CCCE's support of carbon pricing appears the most puzzling. If limiting compliance costs were the main goal of business in interacting with government on environmental policy, why would Canadian industrial groups call for a carbon price over subsidies or voluntary agreements? Particularly given that research into environmental policy in Canada and the US is based on rigorous analyses and that previous work has supported the view that industry will generally oppose the imposition of environmental regulations using cost-related arguments, the Canadian case is all the more striking. Seeking a solution to this considerable puzzle requires examining literature outside the Canadian environmental policy realm.

The general literature on business-government relations in the US appears to provide a good starting point for such an exercise. Certainly, the literature on the political interactions between business and government is nowhere more prolific than in the United States where a long history of attention to interest group power has yielded considerable research on the topic. Interestingly, however, this has not led to a specific research agenda related to firm or business association preferences for public policy instruments; most work on the topic in the US instead focuses either on identifying and analyzing types of influences (Hall, 2006; Wright, 1990).– lobbying and contributions, for example – or levels of influence (Mitchell, 1997; Mucciaroni, 1995; Vogel, 1989). The tendency of authors in this largely pluralist or neopluralist⁹ tradition to focus on the structure of interactions with government rather than the actors involved means that policy preferences are generally perceived as exogenous to such models and theories, and therefore outside the scope of research. Where they are explicitly discussed, as in Mitchell (1997), they are vaguely defined as related to the "profit maximizing" nature of

⁹ Pluralism views the political system as made up of multiple interest groups vying equally for policy outcomes in a metaphorical political marketplace. Neopluralists, however, point out that not all interests are equal and that business actors tend to have more money and, thus, more influence within the political structure of the US.

the firm. How exactly profit is maximized through the firm's interaction with government is undefined, however, and the reader is left with the vague sense that firm policy preferences are based largely or entirely on the simple objective of avoiding the imposition of costs.

There are, of course, exceptions to this practice. Prakash (2000) focuses on the firm in his study of voluntary environmental program adoption by two US companies. He argues that leadership and power dynamics between key managers impact a firm's willingness to adopt programs, even when those programs provide no clear profit motivation. He contends that it cannot be assumed that firms will avoid environmental programs that increase costs while providing no revenue. Other work in economics and sociology support this perspective: for instance, Cyert and March's *A Behavioural Theory of the Firm,* which sees the firm as made up of a "coalition of multiple, conflicting interests" whose goals are determined by the "dominant coalition" within the firm (Cyert, 1993: xii). While this does not answer the question of why firms might support more expensive regulatory instruments over voluntary programs, it does point to the possible significance of the subjective interpretations of instruments by key managers in the formation of firm policy instrument preferences.

THREE PERSPECTIVES ON BUSINESS POLICY PREFERENCES: THE COMPARATIVE POLITICAL ECONOMY LITERATURE

The specific literature on business-government relations in the US may provide little groundwork for a study of business policy instrument preferences; however, several research areas related to global or comparative political economy do offer a foundation on which to build further study. First, the literature on firm and country preferences for protectionism versus trade liberalization highlights the significance of particular

economic characteristics on policy choice. Arguments generally fall into three categories (Kingstone, 1999): those arguing that preferences for or against liberalization are a function of the profile of production – whether a firm is export-oriented or domestic-dependent (Gourovitch, 1977; Milner, 1989); those focused on the abundance and scarcity of a nation's resources (either land, labour or capital) – scarce resource groups prefer protection, abundant resources prefer trade (Rogowski, 1987); and, finally, those that argue that the mobility of factors – whether an industry/firm could easily move – determines preferences (Frieden, 1991).

Following these authors, Kingstone (1999) undertook a qualitative study of industrialist preferences for free trade in Brazil. Despite expectations to the contrary, Brazil's debt crises of the 1980s led many industrialists to believe that the government's protectionist import-substitution industrialization policy was no longer sustainable. Industrialists were, therefore, open to new economic programs. Kingstone found that industrialist support for neoliberal policy varied with the government's credibility in ensuring policy outcomes. When industrialists had faith in the government's capacity to shepherd neoliberal reforms through Brazil's chaotic legislative process, they favoured the policy; when this faith was lost, they preferred the status quo.

Unlike others studying the same phenomenon (preferences for protectionism vs. liberalization), therefore, Kingstone's work highlights the significance of relationships and trust between industrialists and government, instead of the specific characteristics of the industry/production process in determining policy preferences. In that light, it is more akin to other recent work in comparative political economy, particularly the

Varieties of Capitalism literature, than the body of work on trade liberalism versus protectionism in which it is explicitly rooted.

In their book and subsequent work, Hall and Soskice (2003) along with numerous colleagues develop an analytical framework based on the concept of "comparative institutional advantage." In short, their Varieties of Capitalism framework is based on the premise that political institutions of a nation influence the strategies of the firms within it and lead to economies that are advantaged in certain types of production over others. Most significant for this study is that this framework "brings the firm back" into the analysis of political economy (Hall and Soskice, 2003: vi). The authors espouse a relational conceptualization of the firm, perceiving "firms as actors seeking to develop and exploit core competencies or dynamic capabilities understood as capacities for developing, producing, and distributing goods and services profitably" (Hall and Soskice, 2003: 6). Success in these ventures, however, is dependent on others, and, therefore, on the firm's "ability to coordinate effectively with a wide range of actors" (Hall and Soskice, 2003: 6). This coordination is problematic given the lack of control the firm has over other actors. Firms, therefore, turn to political institutions to help mitigate or eliminate coordination problems.

The framework highlights five "spheres" in which firms might face coordination problems: industrial relations (bargaining over wages), vocational training and education, corporate governance (investors), inter-firm relations, and employees. Ultimately, the authors argue that the firm will support political institutions that resolve their

coordination problems. They seek institutions¹⁰ that reduce uncertainty in their relationships with others and allow them and others to make credible commitments to each other.

In addition to providing a unique and explicit conceptualization of the firm as a political actor, the Varieties of Capitalism literature also highlights the fact that different institutional dynamics in different countries can be expected to have different impacts on firm action. Ultimately, Hall and Soskice argue that the "availability of different modes of coordination conditions the efficiency with which firms perform certain activities" (Hall and Soskice, 2003: 38). They differentiate between Liberal Market Economies or LMEs (US, Canada, Britain, Australia and New Zealand) and Coordinated Market Economies or CMEs (Germany, Japan, Switzerland, the Netherlands, and Sweden, among others). Firms in LMEs rely largely on the markets to deal with coordination problems, while firms in CMEs generally rely on nonmarket coordination and, often formalized, strategic interaction between actors.

Of particular interest for this study, investors in LMEs are forced to rely on public information about the companies in which they invest and, therefore, are more interested in short-term gains (the main indicator of the health of the corporation). In CMEs, on the other hand, institutions created to ensure the involvement of investors, employees and other stakeholders within firm decision-making bodies ensure that investors have more inside information about firm activities than investors in LMEs and, consequently, are able to focus on long-term growth, despite short-term losses. Firms in CMEs, therefore,

¹⁰ Hall and Soskice define institutions as: "a set of rules, formal or informal, that actors generally follow, whether for normative, cognitive, or material reasons" Peter A Hall and David W. Soskice, eds., <u>Varieties of Capitalism</u> (New York: Oxford University Press US, 2003) 9.

can weather short-term economic problems much easier because the availability of capital is less dependent on short-term returns. Firms in LME countries are thus more affected by the fickle perceptions of investors than those in CMEs given that those perceptions are more strongly related to the firm's public reporting and image than in CMEs.

While the Canadian political economy has received little specific attention under this framework, the LME/CME dichotomy does provide an indication of the generalizability of Canadian findings to other countries. From this perspective, Canada is a liberal market economy, although Bernard (2008) demonstrates that it has a higher level of employment and social protection than most other LMEs. Nonetheless, the Varieties of Capitalism literature suggests that the findings of this study vis-à-vis the significance of investors for business climate change policy preferences would only be expected to be relevant in other LMEs. While it is beyond the scope of this dissertation to test this hypothesis, it opens up an interesting avenue of future research.

A third area of research in political economy, while not directly engaging the concept of business policy preferences, highlights the complex strategies required by firms in interacting with government. Research on multinational corporation (MNC) interaction with often-developing host countries (HCs) draws attention to "vertically integrated, extractive investments characterized by risk, sunk costs, government learning, and oligopolistic rivalry" (Kobrin, 1987: p. 610). The "bargaining model" suggests that this relationship generally unfolds as follows: at first, when a firm approaches a government about extracting resources, it has considerably more power than the government due to control of knowledge, expertise and financial capital. Once the firm

has committed to production, however, and extraction has begun, power begins to shift to the host country, given the sunk cost of the investment in the operation. As locals gain expertise previously held exclusively by the company, the company becomes "obsolete" and power largely shifts to the government (Kobrin, 1987: p. 610).

Moran's (1974) examination of the fates of two copper companies in Chile in the 1960s provides a classic example of the phenomenon. Kennecott and Anaconda both mined copper in Chile through that period. By the end of the decade, political sentiments in favour of the nationalization of the industry became salient and, due to the increased local expertise developed through the previous decade, a nationalization policy was successfully carried out. What is significant in this story for this dissertation is the fact that the two very similar companies adopted two very different corporate strategies in dealing with the threat of nationalization with two very different outcomes.

While Anaconda continued business as usual through the 1960s putting more and more resources into Chile, Kennecott adopted a strategy of spreading out the risk of nationalization between as many other actors as possible. It sold a 51% share of its holdings to the Chilean government (forcing the government to reassess the value of the Chilean operations upward during negotiations, meaning that the 49% share was worth more than the previous 100%), got a number of US agencies involved in financing, made long term supply contracts with customers in Europe and, finally, sold those contracts to a third party in order to raise funds. When the company's operations in Chile were eventually nationalized, this web of invested parties, including US and European governments, put considerable pressure on the Chilean government to live up to contracts and compensate the company, which it ultimately did. While Anaconda lost

substantially, not receiving the expected return on its considerable investments, and receiving no compensation from Chile, Kennecott managed to operate in Chile throughout the 1960s without losing any value after nationalization (Moran, 1973).

Moran's research demonstrates that two very similar companies can follow very different strategies in dealing with government and, indeed, perceive the risks to their investments in very different terms. While Moran does not provide an explicit explanation of why this is, it again demonstrates the significance of managerial judgment about relationships with other actors in ensuring success. Moran notes that this strategy of spreading out the risk between multiple government-supported actors has been adopted by others in the extraction industry since that time (Moran, 1973).

Other work, specifically related to environmental policy also demonstrates the complex relationship between environmental policy and/or regulatory preferences and corporate strategy (Garcia-Johnson, 2000; Prakash and Potoski, 2007). Garcia-Johnson (2000), for instance, demonstrates that American companies operating in Mexico actually pushed for more stringent environmental regulation in order to create a competitive advantage for US companies over domestic corporations. As they had already adapted to more stringent regulation in the US, it was less costly for them to continue those practices in Mexico and more costly for their Mexican competitors who had not yet adopted higher standards. Vogel found a similar pattern in relation to environmental regulation between states. (Vogel, 1995).

In the final analysis, the literature on global and comparative political economy discussed above highlights three perspectives on firm public policy and regulatory preferences. First, the literature on trade liberalization draws attention to the significance

of particular industry, firm or market characteristics in determining preferences for government policy options. The models developed in that literature generally assume that certain specific characteristics are sufficient to explain policy preference variation. Moran's work in addition to other scholars interested in the "bargaining hypothesis" also highlights the significances of specific characteristics because, as Kobrin demonstrates, the hypothesis' utility is dependent on the particular characteristics of the extractive industries which are not present in all other industries, for instance manufacturing (Kobrin, 1987). Garcia-Johnson's work can also be said to fit in this category. Second, the Varieties of Capitalism literature explicitly adopts a relational perspective on business success, focusing on the need for coordination between the firm and other stakeholders. Where coordination problems exist, firms will look to governments to create institutions to overcome these problems. Finally, Prakash's work and, to a lesser extent, that of Moran highlight the significance of managerial leadership and power dynamics for firm decision-making. This could suggest an ideational component in which a leader's personal experience or beliefs impact firm decision-making. As is likely now apparent, each of these perspectives informed the initial hypotheses discussed in chapter 2.

These three perspectives are not, however, completely independent. Certainly, each relates, and in some cases is rooted in, the vast literature on strategic management. Porter's (1985) work on competitive advantage has been seminal in this regard, drawing attention to how factors related to the business environment can be exploited to create success within a competitive market and how the discrete activities of the firm can add value to the firm and even the industry (Porter, 1985). The point, though, is that business leaders must develop strategies, they are not inherent to any one industry or firm. Thus,
all three perspectives from comparative political economy discussed above highlight an aspect of competitive strategy, whether it be the effect of specific characteristics of the industry/firm, the significance of political institutions in creating the business environment in which advantage can be gained, or the power of managers to create complex strategies. While Porter's goal was more normative than that of this study – to assist business officials in determining successful strategies – and does not directly relate to policy instrument preferences, the link between Porter's competitive advantage and the perspectives in comparative political economy demonstrates that a model that incorporates all three perspectives could have considerable utility in understanding business decision-making on policy instrument preferences.

A MORE NUANCED PERSPECTIVE: CANADIAN PUBLIC POLICY AND REGULATION

This dissertation and the empirical research behind it is, however, a study of a particular aspect of *Canadian* political economy and, as such, is also grounded in the rich history of scholarship on public policy, regulation and business-government relations in Canada. Canadian scholars working in these fields have been far more skeptical of the pluralist paradigm that has molded US public policy discussions (Pross, 1996). While the study of public policy in Canada began with a strong focus on structure and process in the 1960s and early 1970s (Doern and Aucoin, 1971), the focus shifted first to two styles of political economy analysis (Marxist and public choice) and, more recently, to a focus on policy communities and networks (Doern, 1996). The latter traditions drew attention to different political actors and groups, including business actors.

While the majority of this work has not centred on the particular characteristics of business as a political actor, within their broader research agendas, Canadian scholars

nonetheless paint a picture of firms in Canada as a complex web of interests and needs, by no means a homogenous or static unit of analysis. In one of the best examples, Doern and Phidd (1992) contend,

There are indeed different segments and fragments of capital that find it necessary to organize in different ways and that find themselves in opposition with each other as they seek to invest, introduce new technologies, protect themselves from intolerable uncertainty, and seek favours from government (p. 70).

Canadian scholars generally agree that the level of influence exerted by business groups in Canada is less than that in the US, largely due to the institutional realities of cabinet-parliament government, decentralized federalism, and the greater strength of the state within the more collectivist political culture (Doern and Phidd, 1992: 67). Nonetheless, "there can be no doubt that interest groups, particularly cohesive producer groups, exert significant influence both in preserving the status quo and in promoting manageable change favourable to their interests" (Doern and Phidd, 1992: 68). Trebilcock (1978) argues that it is a myth that regulation is forced upon industry; instead, it is generally "designed and operated primarily for its benefit" (Stigler cited in Trebilcock, 1978). Interestingly, Trebilcock's argument is explicitly based on a pluralist theoretical perspective, which Doern and others argue has less relevance in Canada (Doern, 1978; Pross, 1996). Nonetheless, there is certainly an expectation amongst Canadian scholars that business groups will turn to the state to create institutions that favour their needs and that regulators would be influenced by such arguments. Highlighting the significance of uncertainty and investment, Doern maintains:

Economic concern about, and pressure to insure that "timelines" of, major investments profoundly affects regulators in that it reinforces their preference

for continuity and reliability and the need for their regulatory organization to have sound relationships with its clientele (Doern, 1978: 10).

As stated above, however, most of these scholars were not specifically interested in business-government relations in Canada, but instead the wider fields of public policy and regulation in general. Overwhelmingly, therefore, business is discussed in these works in passing or in relation to the main focus of government, institutions, or the wider pressure group phenomenon. There is, however, a body of literature that specifically focuses on business-government relations in Canada originating from the disciplines of history, management and, finally, political science.

ZEROING IN: BUSINESS-GOVERNMENT RELATIONS IN CANADA

Perhaps the most coherent research agenda has come from Canadian historians whose historical studies of early business-government relations in Canada highlight the strong influence of business on the early Canadian state. Mirroring Trebilcock, these authors argue that, in the early days of national development, there was little difference between the public interest and business interests (Armstrong, 1981; Bliss, 1987; Nelles, 2005). Business leaders used the state to "provide key services at public expense, promote and protect vested interests and confer the status of law upon private decisions" (Nelles, 2005: xxvii). Where political control of industry was in the interest of industry, strong state intervention became the norm (such as in the case of hydroelectricity); while in other areas where government action was resented, intervention declined and narrowed (Nelles, 2005). Moreover, by the early 20th century, business became adept at exploiting cleavages between the provinces and the federal government and would utilize the level of government more open to its views (Armstrong, 1981). This often exacerbated

negative relations between levels of government. As a point of interest, this finding runs contrary to contemporary accounts of the impact of federalism on business influence from political scientists who have found that, during times of crisis at least, federal-provincial bargaining actually decreases the influence of business (Berry, 1974; Toner and Doern, 1986). Nonetheless, while the level of influence provided business by federalism may have changed over time, these historical accounts provide a foundation for understanding the traditional role of business in Canadian politics on which current studies can build.

Other works in business-government relations have come from the field of business administration and management. In particular, Stanbury's (Stanbury, 1986) *Business-government relations in Canada: Grappling with the Leviathan* maps the interaction between political actors and outcomes, as well as the methods utilized by business groups in influencing government. His purpose is explicitly descriptive and normative, meant to provide business officials with a better understanding of the system to increase their effectiveness in dealing with government. It is therefore not an attempt to analyze or empirically research that system and, with respect to the goal of this dissertation, only provides a foundation for understanding business as a political actor in Canada in as much as it highlights what business scholars think business ought to do.

The focus of early work on business-government relations from political science was more analytical, depicting the nature of the relationship between business and government, either as 'elite accommodation', 'mutual misunderstanding', or 'dependency' (Atkinson and Coleman, 1987; Murray and McMillan, 1983; Presthus, 1973). This type of analysis tended to perceive business and government as operating in

two distinct spheres and to look to government to explain the positive or negative relationship between the two. Indeed, in Atkinson and Coleman's (1987) examination of the business-government relationship in Canada, the authors interviewed 102 government officials, but included no business leaders in their sample. As a result, while the government-side of the business-government equation was well understood in Canada (strengthened by the work on regulation and public policy discussed above), little empirical research or theory examined business itself as a political actor.

That changed with Coleman's (1988) *Business and Politics: A Study of Collective Action.* Coleman examines the question of how political accountability applies to business. He analyzes business's use of the tools of collective action and his unit of analysis is the business association in Canada. He ultimately argues that the lack of peak associations in Canada means that business is not easily held accountable in our system and that it is consequently difficult to organize the economy. Coleman's analysis is, however, largely focused on the manner in which business interacts with government (Coleman, 1988: 67) and does not provide a theoretical basis for understanding what business associations lobby for, even though he provides an exceptional and empirically grounded analysis of how they engage in our system. Nonetheless, Coleman's work represents one of the most substantial contributions to the study of business-government relations in Canada to date.

Since that time, however, there has been little knowledge added in this particular area of public policy research, a fact highlighted by Doern (1996: 23): "Despite the excellent work of scholars such as Bill Coleman and some business historians, we still lack compelling studies of the power and policy influence of key firms and corporations,

either in general or in particular policy domains." Indeed, the most recent general work on the topic (Hale, 2006), while providing an in-depth overview of the structure and tools of lobbying for students of business-government relations, again is lacking in new empirical research.

The exception is MacDonald's (Macdonald, 2007) study of business-government relations on environmental policy. MacDonald draws on a substantial historical review of business-government relations in the arena of environmental politics over four decades to further a theoretical and generalized understanding of firm action in that area. His goals are ambitious: he examines 1) the objectives of business, 2) their political strategies and tactics and 3) the source and extent of their power. He argues that the traditional profit motive, either cost minimizing or revenue extraction, is not the only objective of firm interaction with government; the need for legitimacy represents a distinct second objective for the firm. Moreover, MacDonald contends that firm responses to regulation are determined more by the degree of threat posed by the regulation – in particular, the coerciveness of the instrument and the impact of the issue – than by corporate culture. Finally, success in meeting these objectives is linked to external factors including 1) the institutional context, 2) government motivations and public opinion and 3) the prevailing view of the state-society relationship (large government, small government, etc).

MacDonald is the first scholar in Canada to provide an in-depth and empiricallygrounded discussion of firm objectives in attempting to influence government regulation and his work provides a starting point for further research on business preferences for particular policy instruments. In this regard, however, his findings are extremely useful but inconclusive, largely because of questions related to the concept of legitimacy. First,

the term legitimacy is left undefined, creating confusion over what is actually being argued. Nonetheless, assuming that legitimacy refers to public support for the firm and its practices, it remains unclear why it matters to firms. While he does state, "legitimacy is necessary for basic survival" and is part of "a longer-term strategy for achieving profits", he goes on to argue, "legitimacy is not just a secondary interest, contributing to the primary political goal of profit. It is instead a distinct and separate interest" (Macdonald, 2007: 31). This seeming contradiction leaves a clear question for further research: why do firms care about their public image and how is that motivation related to other possible motivations such as profitability and the long-term survival of the firm?

That there is a gap in the Canadian literature on business preferences for government policy instruments is made even more apparent by the existence of a compelling literature on the other side of the business-government relationship, related to government policy instrument choice. Doern and his colleagues (Doern, 1978; Howlett and Ramesh, 2005; Tupper and Doern, 1981) create a typology of policy instruments on a spectrum from least to most coercive: self-regulation, exhortation, subsidies, regulation, public enterprises and taxation. The authors argue that government will prefer the least coercive instruments, moving along the spectrum as necessary to overcome reticence and intransigence on the part of targeted sectors (Doern, 1978).

Interestingly, as chapter 4 will demonstrate in detail, this expectation is born out in the case of climate change policy in Canada until 2006-2007 when industry began demanding more coercive instruments than government was willing to provide. Christopher Hood's (1986) similar work in the UK might provide an explanation for this

apparent anomaly, as he argues that where the societal group is large and organized governments will stick with persuasion as a policy instrument. Hood, along with Howlett and Ramesh (Howlett and Ramesh, 2005) also highlights the significance of past experience in influencing current government policy preferences, something that the Canadian government is sorely lacking when it comes to climate change policy instruments. Howlett and Ramesh argue that this is due to the fact that past experience allows policymakers to make an instinctive assessment of the instrument effects and success, creating the possibility for a rational and objective choice. A similar argument is made in chapter 7 in relation to business policy preferences and experience. While it is beyond the scope of this research to examine the Canadian government's policy choices on climate change, the empirical record provided in the following chapters might provide a starting point for such an exercise.

While this literature provides a very strong theoretical foundation for understanding government policy instrument choice, there is a clear gap in theory and empirical research into firm preferences for government policy instruments in Canada. Indeed, while the Canadian public policy and regulatory literature paints a realistic picture of the firm as a multifaceted actor with complex and changing interests, little research specifically examines this issue. MacDonald's work is unique in its specific engagement with the topic, although it leaves further questions about the role of legitimacy in firm preference development and, therefore, provides a starting point for a research agenda rather than a conclusive endpoint. It is the main objective of this study to continue this agenda and in doing so to contribute to the study of Canadian political economy in general and Canadian business-government relations on environmental

politics in particular, as well as to engage with the literature in global political economy discussed above.

SPECIFIC CONTRIBUTIONS OF FINDINGS

This research's specific contributions to the literature are two-fold. First, the research provides an opportunity to examine a particular case of firm interaction with government and, therefore, adds empirical data to the study of comparative political economy. Second, it adds to the study of Canadian political economy and public policy in particular, providing clarification on the objectives of firms in their interactions with the Canadian state.

CONTRIBUTIONS TO THE LITERATURE ON COMPARATIVE POLITICAL ECONOMY

The model presented here creates a bridge between three somewhat unconnected currents in the literature on comparative political economy. The findings about the significance of risk and investment, competitive advantage and experience encapsulated in the model do not negate the significance of any one of the three perspectives on firm decision-making and preferences, but clarify how they may fit together in the Canadian case. Additionally, this research strongly supports the use of the newer Varieties of Capitalism framework in highlighting the significance of relationships with key stakeholders for business success, while demonstrating the limitations of the specific characteristics and managerial interpretation (ideational) perspectives.

In the Varieties of Capitalism literature, ensuring strong relationships becomes an expected motivator of firm political action because strong relationships are necessary for business success and coordination difficulties may lead to failure. From this perspective, therefore, the research question of this study becomes: what is the key coordination

problem facing Canadian companies vis-à-vis climate change policy? Who are the key actors affected and what relationships are required for business success? This study found that, in the case of climate change policy in Canada, the key relationship of which business officials were concerned was the relationship with potential and current investors. This corresponds with Hall and Soskice's account of the incentives and structure of Liberal Market Economies, where investors are far more preoccupied with ensuring expected returns in the short-term and more likely to jettison a firm where uncertainty about those returns exists. To some extent, therefore, the findings of this study add confirmatory evidence to a basic assumption of the Varieties of Capitalism analyses: that firms will support political institutions that help them deal with their coordination problems and, *thus*, that the main problems facing the firm are generally, if not entirely, relational.

Yet, specific industry or firm characteristics certainly still played a role in preference development (a fact that Hall and Soskice do not deny) and this dissertation also highlights the specific ways in which particular characteristics impact preferences in this case. With respect to the advantages that certain firms and industries might receive from policy instruments, the main differentials were the emissions intensity of their product vis-à-vis substitute products in the market (and, therefore, the price differential between two products when faced with a carbon price), the type of client on which the industry or firm primarily relied, and the availability of cleaner and cheaper "green" technology. Chapter 6 discusses this in detail.

Interestingly, where no competitive advantage stemming from a particular policy instrument was perceived by officials, specific firm characteristics did not have a

predictable effect on preferences. Where no advantage was perceived, two very similar firms in the same industry often adopted very different perspectives on which carbonpricing instrument to advocate. Where they perceived an advantage, however, specific characteristics did explain variation.

To some extent, these findings compare to Moran's (Moran, 1973) with respect to the copper industry in Chile: two very similar firms, faced with the equivalent threat of political intervention and risk to investment, can perceive that risk differently and adopt entirely different strategies in dealing with it. This study goes farther in explaining this pattern, however, in that findings suggest that where firms were primarily concerned with mitigating risks to long-term investments (did not perceive a competitive advantage from the instrument), past experience was the best predictor of the direction they took. Chapter 7 argues that the significance of experience is due to the fact that it creates a perception of certainty over effects of the policy when business leaders are familiar with the policy instrument and not merely due to increased efficiency gains within the corporation. Finally, the significance of the convictions and beliefs of key managers, which might also have explained this variation, was not supported by the data, although its effect could not be conclusively ruled out either.

Thus, this study contributes to the study of comparative political economy by creating a theoretical model that incorporates components from the three perspectives of political economy discussed above – relational (Varieties of Capitalism), specific characteristics of the firm, and ideational components. It also limits the latter two perspectives by clarifying the conditions under which specific characteristics and ideational components influence public policy preferences. First, it suggests that specific

characteristics of the firm are more significant for preference development when those characteristics create a clear advantage from a particular policy instrument and far less significant when they do not. Moreover, past experience has a far greater impact on perceptions of level of risk entailed by a specific instrument than the personal convictions or beliefs of leaders. The overall pattern of preference development – the acceptance of a need for regulatory instruments versus no need – is strongly affected by the firm's requirement for certainty for long-term investment and its relationship with investors. Indeed, all of the other elements of the model – advantage, experience and internal investment risk – link back to the requirement, within the Canadian economy, to ensure a positive relationship with investors on whose capital success and growth depends.

CONTRIBUTIONS TO THE STUDY OF BUSINESS-GOVERNMENT RELATIONS IN CANADA

The second significant contribution of this research relates specifically to the study of business-government relations in Canada, by providing an empirical case study of an understudied area of firm interaction with government in Canada. The key question left unanswered by MacDonald (2007), whose work began this research agenda in Canada, relates to the concept of legitimacy – defined here as public support for the firm and its practices – and why firms would care about it.

Due to the fascinating empirical observations in this case – not only that firms and associations now overwhelmingly support a price on carbon but, as chapter 4 demonstrates conclusively, that they shifted their preferences almost *en masse* in 2006-2007 following a shift in public opinion – it provides a particularly good opportunity for understanding the significance of public support for business political action. Indeed, the fact that a shift in aggregate business preference for climate change policy

instruments so closely followed a shift in public opinion appears to support MacDonald's contention that a key motivator of policy instrument preferences is public legitimacy.

One possible explanation for the observed relationship between public support and preference change is that public support is required to ensure growing demand and a positive differentiation from competitors with similar products. Firms, therefore, may adapt their policy instrument preferences in response to public opinion in order to protect and grow their market share. While there is undoubtedly some truth to this, one would expect that the susceptibility of demand to external changes like public opinion would depend on the characteristics of the product – whether it is a luxury or a necessity, and whether it has any substitutes. Given that the Canadian business community as a whole moved to support a price on carbon following a public opinion shift with no observable variation related to product, demand as the sole explanatory variable remains unsatisfactory.

A major contribution of this study to this research agenda is to highlight the significance of investor concern as a motivator in firm interaction with government. From this starting point, a second hypothesis explaining the link between public opinion and preference change can be deduced: Firms care about public opinion vis-à-vis policy instrument choices because it acts as an indicator of investor confidence, in particular that of shareholders. As chapter 1 briefly discussed, shareholders are a diffuse and divergent group. They thrive on and react to information and can easily move their money to another investment vehicle if they become concerned about the general direction of the firm. Should large quantities of shareholders flee a firm, demand for the firm's stock would collapse in turn increasing the likelihood of hostile acquisition and, thus,

threatening survival. As Hall and Soskice highlight, investors in LMEs are forced to rely entirely on public information to determine the level of risk entailed by their investments. Consequently, firms would be expected to pay close attention to their public reputations, not merely because members of the public are consumers but also because they are shareholders. This argument is well-supported by the management and economics literature on the competitive effects of firm reputations (Fombrun and Shanley, 1990).

Furthermore, in relation to public policy instruments specifically, shareholder perceptions of risk to their investments from public policy would be expected to be linked to their perceptions of certainty in the regulatory environment, what is generally referred to as political risk within the business literature (Reilly, 2006). Therefore, as expectations for future government policy change, concerns that the firm is ready and able to adapt to that regulatory change would also be expected to increase. Undoubtedly, given the diverse nature of shareholders as an investor group, those expectations would increase as a policy issue becomes more salient and as public demand for policy change increases. Firms would therefore be expected to shift preferences to the expected policy instrument and demand that that policy instrument be implemented now in order to create a new certain equilibrium in the regulatory environment. Obviously, this assumes that the firm can adapt to the policy instrument and that it does not completely undermine its business model.

Chapters 4 and 5 undertake a comprehensive test of this hypothesis. Ultimately, evidence supports the hypothesis that public opinion matters to the firm largely because it acts as an indicator of shareholder concern. Public support or concern about a particular policy area demonstrates a political trend in a particular policy direction and, thus, can be

expected to influence the investment decisions of the subset of the public which might be called the investor class, those who trade in capital assets and securities either professionally or personally. This finding, therefore, clarifies the motivation behind the concern for legitimacy observed by MacDonald. Unlike MacDonald, this study suggests that legitimacy is *not* a motivation distinct from profit and survival but is instead directly linked to both. This relationship between decreased legitimacy and profit and survival can be mapped as follows:



CONCLUSION

This review of the literature related to business preferences for public policy options has focused primarily on the comparative political economy and Canadian public policy traditions of scholarship. As business policy preferences exist at the intersection of many fields, including management, economics, history and political science, there is a vast amount of other literature that could also provide guidance for a study like this one. The literature reviewed here was chosen for inclusion, however, because it most directly relates to the topic of business decision-making *on public policy instruments* and represents the fields of study to which this dissertation attempts to contribute most directly. This chapter has put the inductive model into theoretical context and discussed the manner in which these findings validate, limit or clarify the theoretical arguments found in the literature. The model will be deemed valid if it is found to explain the patterns of preference change and variation observed, independent of the interview data from which it was derived (George and Bennett, 2005). The next four chapters provide the findings from that model-testing stage of research.

CHAPTER 4: CLIMATE CHANGE POLICY INSTRUMENTS, BUSINESS PREFERENCES AND PUBLIC OPINION

The risk-advantage model implies that the political context has an impact on business preferences for climate change policy instruments because changes in the political context can create expectations of regulatory change. An expectation of change in the regulatory environment increases the risk to investment, both for the firm itself and for the firm's investors, because the possibility of regulatory change makes it challenging to predict the costs associated with regulation over time. In order to overcome this problem, firms shift their preferences to expected policy instruments and call for the implementation of those instruments as soon as possible. By doing so, firms seek to recreate regulatory stability and, thus, decrease the risk of investment and assuage investor concern.

If the risk-advantage model and, by extension, this implication do indeed explain why the Canadian business community shifted their preferences away from voluntary agreements and subsidies and toward carbon pricing, then we would expect that shift to clearly correlate with a change in the political context. This chapter tests this implication through an exercise of process tracing, mapping business policy instrument preferences, public opinion and government policy declarations related to climate change policy instruments from 1988-2009. Ultimately, the exercise demonstrates that business preferences for climate change policy instruments did begin to shift away from voluntary agreements and subsidies towards carbon pricing in late 2006, after public opinion polls began to show that the environment in general and climate change in particular was becoming a top of mind issue for Canadians. Prior to 2006, the business community had

only articulated support for voluntary agreements, subsidies or public education, although they did support so-called "flexible mechanisms", including emissions trading systems, during international negotiations (but did not generally support domestic implementation). Thus, the contention of interview subjects that a major shift in business preferences for climate change policy instruments took place in 2006-2007 is born out and a link between that and the political context, particular public opinion, is also supported. The question of why public opinion matters to firms and associations is left to chapter 5.

To ensure clarity, the historical review is separated into ten distinct periods. At the end of each period either government policy or business preferences changed, or a major event in climate policy took place (such as the Kyoto Protocol). As there is considerable literature on government policy on climate change in Canada, this historical review focuses on business preferences during each period (an area in which the literature is sparse) and provides only a brief summary of government policy in relation to instrument choice (for reviews of government climate policy, see Bernstein, 2002; Harrison, 2007; Harrison, 2010; Hoberg and Harrison, 1994; Hornung, 2000; Macdonald, 2007; Smith, 1999). Moreover, this review focuses on domestic climate policy and business preferences for domestic policy instruments; it only refers to Canada's international treaty negotiations when those negotiations had implications for business preferences for climate change policy instruments. Changes in public opinion are also highlighted.

The beginning: **1988-1993**

Canadian climate change policy was conceived at the 1988 *World Conference on the Changing Atmosphere* in Toronto. There, international dignitaries and scientists, including Canada's Prime Minister, met for the first major conference on climate change (Bulkeley, 2003). Over the following five years, the Mulroney government developed policy proposals on climate change, as well as other environmental issues. Many observers, however, criticized the government's 1990 Green Plan as weak and ineffectual (Hoberg and Harrison, 1994). The plan focused on public education and spending and avoided any attempt to interfere in business behaviour (Hoberg and Harrison, 1994).

While media, opposition and environmental groups, were unimpressed by the government's plan, industry and the provinces were far less antagonistic, largely because its weak and vague measures caused little concern (Hoberg and Harrison, 1994). Indeed, during the period from 1988 to 1993, business preferences for climate change policy instruments were largely articulated in the negative: business was against regulation of any sort, particularly environmental taxes. When an early draft section of the Green Plan calling for a carbon tax was leaked to the Business Council on National Issues (BCNI), the organization reacted swiftly with calls and visits to the Prime Minister's office (Hoberg and Harrison, 1994). Interestingly, the final draft of the plan did not include the offending reference (Morton, 1990).

During this period public opinion in relation to environmental policy changed substantially. In July 1989, the environment was the "most important problem facing the country" according to Gallup (Hoberg and Harrison, 1994). Indeed, in 1990, polls showed that 75% of Canadians were willing to pay environmental taxes (despite the

government's rejection of the policy instrument) (Masterman, 1990). However, despite the salience of environmental issues, public knowledge of climate change during this period was very low: only 12% of Canadians, according to an Environics poll, were able to connect climate change to greenhouse gases, while 37% believed the phenomenon resulted from the depletion of the ozone layer (Spears, 1993).

Hence, the period from 1989-1993 was largely defined by high public salience of environmental issues, low public knowledge of the facts of climate change and a government that had declared itself unwilling to regulate. By September 1992, however, the recession had caused the salience of environmental issues to decrease drastically with only 3% of respondents in an Environics poll viewing it as a priority. The public's concern for environmental issues would not return to the heights of the late 1980s/early 1990s until 2006 ("Environmentalists," 1993).

Towards Kyoto: 1993 -1997

The Chrétien Government came into office in 1993 promising to beat the previous government in the environmental policy arena. Initially, however, the government allowed civil society to set the pace of action through the Climate Change Task Group, a civil society forum made up of NGO and business leaders. The group was set up in response to the instructions of the Joint-Minister's Meeting on November 17, 1994. The Task Group was a multi-stakeholder forum, mandated with "the development of a National Action Program to enable Canada to reach its climate change goals" (Bramley, 2000: 3.1p.2). Co-chaired by Larry Lechner of the Saskatchewan Department of Environment and Sue Kirby of Natural Resources Canada, the group included such diverse interests as Louise Comeau of the Sierra Club and representatives from the

Canadian Association of Petroleum Producers.

Government hoped the Task Group would achieve a consensus on the issue and had not brought forth any policy instrument proposals in advance. However, members complained that the government provided few resources to the group, leaving them with "the impression Ottawa wasn't serious" about the multi-stakeholder process or the issue (LeBlanc, 1995). Consequently, the Climate Change Task Group was considered a failure by many involved and some Environmentalists left the process in frustration in October 1994 (LeBlanc, 1995).

Nonetheless, if government had hoped that the Task Group would provide political cover for future action, it may have been pleased with the outcome. Prior to the environmentalist backlash, the group published 88 recommendations in June 1994, calling overwhelmingly for the use of voluntary programs, public education and subsidies, including the suggestion of a voluntary registry and challenge program (Bramley, 2000; Hornung, 2000; Macdonald, 2007).

The group's recommendations were injected into the political debate at a time when Cabinet was split on the issue. Environment Minister Sheila Copps supported regulation, while Natural Resources Minister Anne McLellan, the government's representative from Alberta, strongly favoured voluntary agreements (Smith, 1999). McLellan's view was supported not only by the Task Group but by industry more widely. In November 1994, the Business Council on National Issues (which later became CCCE) sent out a press release entitled, "Canada's Business Leaders Outline a Voluntary Strategy to Combat Global Climate Change" ("Canada's Business Leaders," 1994).

Three months later, it became clear that McLellan had won the battle in cabinet when she signed a Memorandum of Understanding (MOU) on behalf of her department with the Canadian Association of Petroleum Producers (CAPP). In the MOU, government and the oil industry agreed to work together on the development of a voluntary carbon registry program (Smith, 1999). In February 1995, the government announced its National Action Program on Climate Change (NAPCC), which had as its focal point the Voluntary Challenge Registry (VCR), suggested by the Task Group-(Macdonald, 2007).

On the international front, the business community, like the government supported so-called "flexible mechanisms": emissions trading and carbon sinks. In a 1996 speech, Thomas d'Aquino, President and CEO of the Business Council on National Issues, argued, "creative market devices such as emissions trading must be examined to see if such a scheme can bring about results in a lower cost manner."(d'Aquino, 1996). D'Aquino made it clear, however, that he was speaking about international emissions trading; there is no indication that the business community at that time was open to domestic emissions trading or that they would have supported concrete action to implement a Canadian trading system. This may be because international trading prevents competitive issues between firms in global markets, presuming all trading partners are involved, and because much of the cost could be borne by the state, by buying credits from other countries in order to meet commitments. Thus, international treaty negotiations aside, the business community were strongly in favour of voluntary initiatives from 1993 to 1997 in agreement with government. The public remained largely inattentive.

Роѕт Куото: 1997-2001

After the government agreed to an onerous cut to 6% below 1990 levels under the Kyoto Protocol in 1997, Mr. Chrétien tried to mend fences by promising greater consultations with both the provinces and civil society (Harrison, 2010). In 1998, the provincial and federal environment and energy ministers jointly initiated a National Climate Change Process. Central to the process was the creation of 16 issue tables in which 450 experts from all levels of government, industry, environmental groups and the scientific community were brought together to discuss a number of facets of climate change policy (Bramley, 2000).

The issues tables provided industry representatives with an opportunity to both learn about climate change policy instruments and articulate their preferences. In the report of the Upstream Oil and Gas working group under the Industry Issues Table, for instance, the oil and gas industry continued to argue in favour of voluntary programs. Over the longer term, it conceded that flexible international mechanisms were reasonable; however, it refused to take a stand on domestic emissions trading, going to great lengths to highlight the problems with the policy instrument ("Upstream Oil and Gas Industry Option Paper," 1999). Thus, throughout the late 1990s, industry remained squarely in favour of voluntary agreements in the near term. In 2000, the government issued *Action Plan 2000* which demonstrated its continued accord with industry, focusing on spending programs and public education (Bramley, 2000). These programs supplemented the Voluntary Challenge Registry, which remained operational from 1997-2004 as a public-private partnership (Macdonald, Forthcoming).

While aggregate business preference remained decidedly against emissions trading, in 2000, a small number of Canadian companies did declare a preference for capand-trade. On October 17, 2000, seven international companies – three with headquarters in Canada – announced a global initiative with the Washington-based environmental nongovernmental organization (ENGO), Environmental Defense, "the primary purpose of [which was] to champion market-based mechanisms" (Environmental Defense, 2000). Companies would set targets for themselves and could meet those targets through reductions or trading. The group, including Canadian companies, Alcan, Suncor and Ontario Hydro, sought to gain real-world experience in emissions trading and push governments to adopt the policy instrument¹¹ (Environmental Defense, 2000). These companies were the leaders within industry on climate change and remind us that, while the business community demonstrated a remarkable uniformity of preference in favour of voluntarism during this time, it was not a homogeneous unit. It is perhaps telling, however, that of the thousands of companies who could have taken part in the global initiative, Environmental Defense could only convince seven to participate. Generally, at that time, cap-and-trade was not in vogue.

THE RATIFICATION DEBATE: 2002

While government climate policy had shifted little throughout the 1990s, a noticeable, if rhetorical, change began in 2002 as the government prepared to ratify the Kyoto Protocol. In May, 2002, the Government of Canada published a *Discussion Paper*

¹¹ Shell International was also a member of the group, but its Canadian affiliate, Shell Canada, was not. At that time, Shell Canada had very different preferences than Shell International. This did not change until 2007 when Shell International bought the remaining shares in the Canadian company and disbanded the Canadian board of directors. The peculiar relationship between Shell International and Shell Canada is discussed in greater detail in Chapter 8 (Official at Shell Canada, (2009), vol.).

on Canada's Contribution to Climate Change ("Discussion Paper on Canada's

Contribution to Climate Change," 2002). The paper laid out three options for Canada's climate change policy: i) a program based on domestic emissions trading; ii) a program based on targeted measures (public information, subsidies, small regulatory changes, etc) or iii) a mixture of both. With this document, the government signaled for the first time its willingness to move beyond voluntary initiatives and even consider "regulation or, possibly, fiscal measures" in the battle to reduce our greenhouse gas emissions ("Discussion Paper on Canada's Contribution to Climate Change," 2002: 19).

During this period, the conflict between industry and government intensified. Throughout 2002, Canadian corporations and associations mounted their "largest effort to date to influence the environmental policy of the government of Canada" (Macdonald, 2003: 2). Letters from major associations, particularly CAPP, CCCE and the Canadian Chamber of Commerce, were sent to the Prime Minister and relevant ministers starting in September 2001 and other lobbying techniques continued throughout 2002 (Macdonald, 2003).

One of the main arenas for lobbying was the Government's own consultation process. In June 2002, the Government held "National Stakeholder Workshops on Climate Change" at locations across the country. Industry officials were invited along with representatives from ENGOs, labour and agriculture. The sessions provided industry with an opportunity to voice its concerns to government and the wider community. It also led to recognition among industry representatives that most other groups did not share their negative perception of ratification ("Meeting Minutes," 2002).

The same month, the Canadian Council of Chief Executives (CCCE), formerly the Business Council on National Issues, published a policy statement, *The Kyoto Protocol Revisited: a Responsible and Dynamic Alternative for Canada.* The statement succinctly summarized the majority business position on climate change, arguing against regulation with emissions trading because, "the various schemes of emissions trading contemplated all would raise costs for Canadian firms beyond those of their major competitors and penalize even highly efficient enterprises" (*The Kyoto Protocol Revisited*, 2002). Instead, the statement calls for greater public investment in research and development (subsidies) and continued use of voluntary agreements.

To support its call for a "Made in Canada" approach, CCCE continued to dispute the existence of a scientific consensus on climate change. In its policy statement, the organization argued, "in considering how far to go in imposing real costs on businesses, consumers and taxpayers, Canada must take into account the degree of uncertainty that still surrounds the science of climate change." It went on to quote a well-known skeptic of climate change, Professor Richard Lindzen of MIT, who argued that "We are not in a position to confidently attribute past climate change to CO₂" (*The Kyoto Protocol Revisited*, 2002: 4).

Over the summer of 2002, sensing Mr. Chrétien's commitment to the Kyoto protocol, industry geared up its lobbying efforts. These efforts were purposely organized and industry-wide. In the late 1990s, industry representatives had formed the *Industry Steering Committee on Climate Change* (known colloquially as ISC3) to allow corporations and industry associations "to collaborate, share ideas and try and create common approaches" on climate change (ISC3 official, 2009). A membership list in

2001 included the names of thirty business organizations. While most members were Ottawa-based business associations, a few firms – including Imperial Oil, Dow Chemicals and Ontario Power – were present on the list. By 2002, the ISC3 was playing a central role in coordinating business response to the government's climate change policy.

At the group's June 2002 meeting, 18 associations and firms discussed strategy; present at the meeting were representatives from the Canadian Chemical Producers Association, the Cement Association of Canada, the Canadian Electricity Association, the Centre patronal de l'environment du Quebec, The Forest Products Association of Canada, Canadian Council of Chief Executives, Canadian Fertilizer Institute, Ontario Power Generation inc., Canadian Environment Industries Association, Stelco inc., Canadian Energy Pipeline Association, Canadian Steel Producers Association, Mining Association of Canada, Aluminum Association of Canada, Canadian Chamber of Commerce, Noranda inc, Nova Chemicals and the Coal Association of Canada ("Meeting Minutes," 2002).

Members were encouraged to use multiple forums to lobby Members of

Parliament, particularly Liberals:

Members agreed that Liberal MPs should be a key part of industry's summer meeting program. It was noted that the Liberal Caucus will hold its summer meeting in Chicoutimi Quebec (August 19-22) and that member meetings with the Liberal MPs should be timed strategically to ensure that Kyoto ratification is raised as a topic of discussion at this meeting. It was noted that the caucus meeting program, which includes a golf tournament open to outsiders on Monday, August 19, may also offer an opportunity for industry representatives to meet informally with key Liberal MPs on this file ("Meeting Minutes," 2002). While the minutes of the meeting do note that representatives from the Department of Natural Resources (NRCan) continued to be "supportive of industry views" ("Meeting Minutes," 2002), there was clear concern that others within government "had made up their minds and are pushing forward on this file" ("Meeting Minutes," 2002). Specifically, continued attempts by industry to undermine the credibility of the science appeared to have little effect on government officials, particularly those from Environment Canada ("Meeting Minutes," 2002).

In early September, industry was given yet another reason to worry. While at the United Nations Conference on Environment and Development, Prime Minister Chrétien surprised many by announcing that a resolution on the ratification of the Kyoto Protocol would be voted in the House of Commons before the end of the year. This was surprising both because no indication of such an announcement was given in advance and because in Canada international treaties are ratified by cabinet. With his cabinet divided on the issue, however, Chretien looked to the House of Commons for support with the view that, if the House voted in favour of ratification, cabinet could hardly refuse (Harrison, 2007). For the business community, the announcement upped the ante, changing the venue of advocacy by providing far more power to backbench members of parliament than usual. Industry, consequently, shifted gears, looking to the Canadian public for support.

On September 10th, a full page ad appeared in the Globe and Mail, advocating industry views in favour of a "Made-in-Canada" approach (Macdonald, 2003). On September 26th, the creation of a coalition of 32 business organizations called the Canadian Coalition for Responsible Environmental Solutions (CCRES) was announced. In its inaugural press release, the group again called for a "made-in-Canada" approach to

climate change policy, similar to the one outlined by CCCE in June (Macdonald, 2003).

The coalition's plan had five "key points," focused on subsidies and voluntary

agreements:

- Recognition for past, present and future climate change actions to ensure that those who acted early are rewarded rather than penalized;
- Negotiated agreements with specific economic sectors on emissions performance targets;
- Enhanced education and consumer awareness campaigns aimed at energy conservation;
- Incentives for generators of renewable energy, those who invest in these clean energy sources and consumers who upgrade to cleaner sources from older technology; and
- Consideration of Canada's trade relationship with the United States and our membership in the North American Free Trade Agreement in order to ensure our ongoing competitiveness ("Coalition formed," 2002).

Over the following two months, CCRES representatives, led by CAPP and CCCE officials, wrote letters to high level officials, appeared before parliament, created websites in both official languages and began a major television campaign (Macdonald, 2003). Nonetheless, the shift, if minor, in government policy in favour of regulation was confirmed when the government released yet another implementation plan in November. Unlike previous plans, the document linked subsidies to "covenants, with a regulatory or financial backstop, and emissions trading with access to domestic offsets and international permits" for Large Final Emitters ("Government of Canada," 2002). One month later, despite the large expense in effort and money CCRES was ultimately unsuccessful in its founding objective: Following the passing of a House of Commons resolution in favour of ratification on December 10th, cabinet ratified the Kyoto Protocol on December 13th, 2002.

While the government had never before backed up its policy declarations with promises of regulation, the environmental plan of 2002 hardly represented a watershed moment in Canadian environmental policy. Covenants with regulatory backstops are perhaps best described as voluntary agreements with (possible) bite and, therefore, represent only a minor shift along the continuum of climate change policy instruments. Nonetheless, it was the first time that government had planned the adoption of emissions trading and, thus, does represent a departure from the past. At the time, the majority industry preference articulated by the CCRES and CCCE generally supported "covenants," but avoided discussion of emissions trading or other compliance mechanisms (See above and also: "Evidence (minutes)," 2002).

The one notable and unexpected exception came from CAPP, who appeared far more ready to adopt the government's language of covenants with regulatory backstops and offsets than any other Association. In a letter to two Atlantic Canadian Ministers on November 18, three days before the release of the Government's plan, CAPP's President and Chairman wrote: "We believe that our industry can negotiate with the two levels of government and agree on sector plans and the associated regulatory backstops" (Alvarez and Dielwart, 2002). The letter preceded this declaration with a discussion of the role that offsets should play in the system. As the following section will discuss, CAPP was then in private consultations with government, which may have provided it with reason for optimism about the capacity of industry and government to negotiate and agree.

THE DEAL: AUTUMN 2002

Publicly, it appeared that business and government could agree on little in the fall of 2002; however, privately, they managed to come to an accord. In a letter to John Dielwart, Chairman of CAPP, dated December 18th, five days after ratification, NRCan Minister, Herb Dhaliwal wrote:

On the price of carbon credits, the government will ensure that, during the first commitment period, Canadian companies will be able to meet their emission reduction and responsibilities at a price no greater than \$15 a tonne. . . With respect to the volume of emissions, the government will set the emissions intensity targets for the oil and gas sector at a level not more than 15 percent below projected business-as-usual levels for 2010 (Dhaliwal, 2002).

The letter articulated a deal between CAPP and the highest levels of government limiting the industry's future emissions liabilities. In September 2002, facing extreme protests from the business community, Mr. Chrétien ordered his deputy, the Clerk of the Privy Council, with the support and assistance of Anne McLellan, Minister of Natural Resources, to begin private negotiations with the petroleum industry (Alvarez, 2010; Harrison, 2010). While no formal agreement was ever signed between government and industry, the letter represented a negotiated settlement between the government and the petroleum sector (Alvarez, 2010). It was subsequently extended to all industrial sectors. The deal, however, is generally perceived as a coup for industry because projections at the time suggested that a price on carbon of between \$100 and \$250 per tonne would be required to ensure compliance (Harrison, 2007; Upstream Oil and Gas Industry Option Paper," 1999). It, therefore, made it impossible for Canada to meet its Kyoto protocol obligations without massive public spending on international credits or domestic subsidies (Harrison, 2007). Why Mr. Chrétien would agree to a plan that effectively undercut the Kyoto Protocol after fighting so hard for ratification was unclear at the time. Chapter 5 returns to this issue.

THE NRCAN YEARS: 2003-2004

In the wake of its agreement with industry, Chrétien appointed National Resources Canada as the lead department on climate change under Deputy Minister George Anderson. In November 2002, Anderson tapped Howard Brown, a former Director General at the Department of Finance, to develop regulations. While Brown's group moved forward on policy options, no policy instrument plan made it past the proposal stage during this time. One former official questioned the Prime Minister's support for regulation, as many proposals were sent to cabinet but never implemented (Senior official, 2009). Nonetheless, during this period, NRCan was in consultation with industry on a system that would include binding covenants (negotiated agreements) with an emissions trading component.

Despite its agreement with government in the fall of 2002, the oil industry quickly returned to a state of pessimism and hostility where climate change policy was concerned. In the February/March 2003 edition of HAZMAT magazine, CAPP president Pierre Alvarez lamented the Kyoto Protocol's effect on competitiveness:

Canada is the only country with a growing energy sector that is forcing the industry to absorb an additional financial burden associated with reducing emissions. The result will be to add more costs on hydrocarbon basins that are already some of the highest cost places to produce oil and gas in the global market. Any extra cost can make an industry uncompetitive internationally (Alvarez cited in Crittenden, 2003).

Alvarez argued that, instead of purchasing foreign credits, "energy innovation, research and development programs hold far more promise" – in other words, for CAPP in early 2003, subsidies remained the preferred instrument (Crittenden, 2003).

CCCE also showed no support for regulation. While appearing in front of the Standing Senate Committee on Energy, the Environment and Natural Resources, CCCE representative John Dillon argued in favour of negotiated agreements between government and industry based on "what is technically and economically feasible in those sectors" but said nothing about the regulatory backstop that the government had argued would accompany such agreements (Proceedings "Proceedings," 2003). Instead, Dillon argued that Government should compel industry only to become as efficient as possible given current technology.

Over time, however, industry preferences did appear to shift in response to government policy changes, at least among some individual firms. In fall 2003, the Government signed three memorandums of understanding (MOU) with industry groups: the Forest Products Association, Dupont Chemicals and the International Emissions Trading Association (IETA). All three MOUs lay out the principles involved in a potential emissions trading system ("Canada and Dupont," 2003; Government of Canada," 2003). A number of Canadian companies supported the IETA agreement, including Transalta, Suncor, Petro-Canada, Shell Canada, St. Lawrence Cement, ConocoPhillips, and Abitibi Consolidated. While the agreed upon principles were generally broad and related to harmonization with other international emissions trading systems, as well as the general principles of a well-functioning market, they do

demonstrate an acceptance on the part of a wider number of firms that emissions trading within Canada was likely ("Government and Industry," 2003).

Nonetheless, the majority of firms and associations at this time remained hostile to regulation. Mike Bradley, then the Chair of FPAC's climate change committee, remembers his industry being isolated from other business groups at the time. Only Dupont was, from his perspective, as open to emissions trading as the forestry industry (Bradley, 2009). Avrim Lazaar, FPAC's president, saw his group's position as a significant break from the business consensus: "We completely separated from the [other] groups and they weren't happy with us, but we weren't happy with them either" (Lazaar, 2009).

THE DION YEARS: 2004-2006

Immediately following Paul Martin's ascent to the office of the Prime Minister in December 2003, little changed in the realm of climate change. After the subsequent election in June 2004, however, Martin appointed former intergovernmental affairs minister, Stephane Dion, as Environment Minister. Over the following year, Dion lobbied hard to have the climate change file moved from NRCan to his department and, in 2005, he succeeded when he was appointed to chair a cabinet committee on climate change (Former Advisor to Minister of the Environment, 2009). His department subsequently drafted regulations, which included intensity targets for Large Final Emitters, emissions trading, and a technology fund for partial compliance.

Canada launched its new plan, "Moving Forward on Climate Change: a Plan for Honouring our Kyoto Commitments," in April 2005. While the plan included a regulatory cap-and-trade program, it continued to rely substantially on public spending.

Strenuously omitted from the plan were estimates on the cost and quantity of international credits that would be needed to meet Canada's Kyoto protocol commitments (Harrison, 2010). While the previous Liberal government had been supported by industry in its push for flexible mechanisms in the late 1990s and early 2000s, by 2005, such policies had fallen out of favour, both within government and without. As one former government negotiator explained:

Something funny happened on the way to ratification. You got the ... NGOs who kept on talking about these things as just being a bunch of loopholes, [saying], "all the reductions should be at home," etc. And then Industry thought about this a bit more and they said, "Well, hold on, why should all this money go oversees? Why instead shouldn't we put it towards the development of our own technologies?" [They made] it sort of an either/or kind of thing. Particularly, Paul Martin heard this coming from both sides - from the NGOs and the business community - and thought, 'well, that's a no brainer, I'll be for this too,' without appreciating the fact that he was painting the government into a very tight corner because A) it takes time for technology [to develop] and B) there is only so much that can be done domestically, certainly in the timeframe of 2012 (Drexhage, 2009).

International mechanisms, therefore, went unmentioned in the published plan; however, with a 100 megatonne shortfall between compliance and stated emissions reductions, it remained likely, if unacknowledged, that they would be required (Harrison, 2010).

Notwithstanding the government's obfuscation with respect to international mechanisms, there was considerable progress in the adoption of regulatory mechanisms that year. In July 2005, the Government published a *Notice of Intent to Regulate* in the Canada Gazette, the most substantial indication to that date that the government was serious about regulation ("Notice of intent to regulate greenhouse gas emissions by Large

Final Emittors," 2005). In November, the government upped the ante, adding carbon dioxide to the Canadian Environmental Protection Act (CEPA) list of toxic substances, an action that provided the necessary legislative authority for the regulatory framework to follow. Former aides testified that Dion planned for the final regulations to be published in January 2006 (Former Advisor to Minister of the Environment, 2009; Stein, 2009).

Despite Dion's clear push for regulation, his plans were not without their limitations. A bizarre debate and minor capitulation followed the government's introduction of a budget implementation bill on March 24, 2005. Section 15 of bill C-43 as introduced in the House of Commons would have removed the word toxic from the Canadian Environmental Protection Act. The point was to ultimately list carbon dioxide in the list of controlled substances without facing the scrutiny that would undoubtedly follow given that CO_2 is found in our very breath. The move, however, attracted attention and concern among the ENGO and legal community and was characterized as a backdoor channel for implementing a carbon tax by the Conservative opposition (Fishlock, 2005). Environmentalists and law experts later expressed concern that the change would make the act unconstitutional (Freeman, 2006). Ultimately, the government removed the reference from the budget and later listed CO_2 as toxic anyway.

In addition to this challenge, Dion lost a fight to regulate the auto industry. The Minister favoured regulation for the auto industry in relation to emissions standards. NRCan, on the other hand, favoured further use of voluntary agreements. Ultimately, Dion lost the battle in Cabinet, which chose a voluntary approach (Harrison, 2010). Consequently, while there is no doubt that Dion also preferred to implement regulation
for stationary sources in early 2006, his ability to get those policies past cabinet remained questionable.

During this period, the majority of business actors remained hostile to regulatory instruments (Former Advisor to Minister of the Environment, 2009; Stein, 2009). The day after the government unveiled its new climate change plan in April 2005, CCCE put out a press release decrying the government's continued focus on meeting its Kyoto targets. The release again called for a "more innovative, made-in-Canada approach", but provided few details on what that would involve, stating only that such an approach should "develop new technologies" ("Kyoto Plan," 2005).

Industry's lack of clear public declaration for any policy instrument at the time, however, masked continued support for voluntary agreements and subsidies. In January 2005, the Canadian Chemical Products Association (CCPA) wrote to Minister Dion arguing in favour of a Memorandum of Understanding between the chemical industry and the government. CCPA was not, however, looking to support a regulatory cap-and-trade program. Instead, they called for an MOU in the place of "permitting or other climate change legislative or regulatory measures" (Paton, 2005). In other words, they sought a voluntary agreement.

In September of that same year, CCPA president, Richard Paton, again wrote to Dion, this time arguing against the inclusion of carbon under the list of toxic chemicals for CEPA. As the government had anticipated when it attempted to remove the word toxic from the Act in the previous spring, CCPA's complaint resulted from the perceived foolishness of referring to CO_2 as toxic: "It would be inappropriate for CO_2 to be labeled as toxic under CEPA. Just as Cabinet recognized that it would be inappropriate and

confusing to the public to label road salt as toxic, the same conclusion should be reached for CO_2 ." Despite this and other interventions, Minister Dion succeeded in added CO_2 to the list in November of that year.

According to senior staff in the Minister's office at that time, CCPA was not alone in its views, particularly its distrust of regulation: "No one was saying regulate [in 2004-2005]. Everybody was saying, 'let's keep it voluntary. We're taking voluntary action. Trust us. Trust us" (Former Advisor to Minister of the Environment, 2009). Another senior staff member agreed: "They didn't like it. They did not want to be regulated" (Stein, 2009). Instead, both contended that industry continued to extol the virtues of voluntary programs up until the Liberals left office in early 2006.

THE HARPER GOVERNMENT: 2006

In December 2005, Prime Minister Martin lost a vote of non-confidence in the House of Commons and then lost the 2006 general election. Conservative leader, Stephen Harper, became Canada's new Prime Minister in January 2006. Mr. Harper had previously made clear his skepticism about climate change (Harper, 2002) and during his first six months in office abandoned all of the previous government's climate policies (Harrison, 2010; Senior official, 2009). When his government put out its "Made in Canada" plan in October 2006 in the guise of the Clean Air Act, it focused primarily on conventional air pollutants and planned merely to stop growth in carbon emissions by 2025.

Given that a "made-in-Canada plan" was first proposed by the Canadian Council of Chief Executives in 2002, it is understandable that most in the business community thought the threat of regulation had subsided in early 2006 (Macerollo, 2009). Industry's

first strategy in this new political environment was to reconfirm its support of voluntary agreements and subsidies. In Summer 2006, CCCE drafted a memorandum for the new Minister, Rona Ambrose (*Draft Memorandum*, 2006). They would, they claimed, "stand ready to support a '*made-in-Canada*' plan that makes measurable progress in addressing greenhouse gas emission from all segments of Canadian society" (*Draft Memorandum*, 2006: emphasis original). This policy should not, however, resemble the "flawed" policies of the previous government:

After many years of paying lip-service to a flawed international agreement and funneling taxpayers' dollars into dead-end schemes, it is time for a serious discussion about what Canadians are actually prepared to do, and how best to spend valuable resources, both private and public, to achieve sustainable and lasting solutions (*Draft Memorandum*, 2006).

The focus of the rest of the document was on developing incentives for investment in clean technology, the need for public-private partnership for technological growth and the requirement for feasible and effective targets. As of July 2006, therefore, CCCE's preferences had not changed substantially from those articulated during the ratification debate of 2002 and, indeed, they make this point explicit in the opening paragraph of the memorandum: "The Council first issued its strategy and recommendations on a '*Made-in-Canada*' climate change policy in 2002. Some of our fundamental thinking from that time remains unchanged" (*Draft Memorandum*, 2006: 1).

By the time that the Conservatives announced their plan in October, however, the political landscape had changed. The public, which had been largely inattentive to environmental issues since 1992, suddenly became interested and concerned. In January 2006, only four percent of respondents viewed the environment as the most important issue facing the nation. By July, climate change had moved into second place after health

care and by January 2007 it was considered the most important issue with the support of 26% of respondents for the first time in almost 15 years (*A Report to Globe and CTV*, 2009; Hoberg and Harrison, 1994). As a result, both the business community and the Harper government found themselves offside with the public by the fall of 2006.

The shift in public opinion was precipitated by a number of events in 2005 and 2006. First, the devastation caused by Hurricane Katrina in New Orleans in September 2005 provided environmentalists with an image to attach to the previously abstract concept of climate change, a practice that was common by summer 2006. Also in the summer 2006, Al Gore's movie, *An Inconvenient Truth*, attracted popular attention to the cause, eventually winning an Academy Award in early 2007. Suddenly, popular celebrities such as Oprah Winfrey were focused on climate change. This public attention was augmented by the release of Sir Nicholas Stern's report on the economics of climate change in United Kingdom that fall (Stern, 2006).

The public mood in favour of action on climate change clearly influenced business preferences. CCCE may still have been dissembling about regulation in July, but by November 2006 it was being forceful and clear. While testifying in front of the House of Commons Standing Committee on Environment and Sustainable Development, CCCE Representative John Dillon declared, "Industry is not opposed to regulation, as many of our critics have tended to suggest" ("Evidence," 2006). Despite the implication that support of regulation was a long time industry policy, this was the first indication CCCE had ever given publicly that it, or its members, would accept the implementation of a regulatory instrument.

A CLIMATE OF CHANGE: 2007-2008

Having fully digested the public's mood, governments – both provincial and federal – began to propose concrete regulatory frameworks in 2007. At the Federal level, the government replaced its rookie environment minister in January 2007 and announced a new regulatory plan, *Turning the Corner*, in April, 2007. Almost a year later, in March 2008, more details were provided. The program looked similar to the previous government's regulatory framework: intensity targets for large final emitters on a sectoral or facility basis (depending on industry), domestic emissions trading to reach targets, and a limited compliance technology fund at \$15/tonne. The technology fund component was to be phased out by 2018 (Environment Canada, 2008).

At the provincial level, Quebec was the first to act with a very limited \$3/tonne carbon tax in 2006. A more substantial carbon pricing program came from an unlikely source, Alberta, in 2007, when that government implemented the regulatory framework developed by the previous Federal Liberals during Minister Dion's tenure (Alvarez, 2010; Former Advisor to Minister of the Environment, 2009). The Alberta program, however, included two adaptations: emissions credits could only be bought from projects in Alberta and there was no limit on compliance through a technology fund at \$15/tonne. As a result, a program that on the surface appears to be a cap-and-trade program, given the lack of sellers of credits in Alberta, actually acts as a carbon tax on emissions above a set quota. It is, therefore, a hybrid of the two systems. At \$15/tonne, the program still represents one of the most substantial carbon prices in North America to date.

BC announced its high profile carbon tax in February 2008. The tax, which took effect on July 1, 2008, charged all consumers of fossil fuels \$10/tonne CO₂ and scheduled

an annual increase of $5/tonne CO_2$ until 2012 when the tax would be $30/tonne CO_2$. BC also put in place legislation for a planned cap-and-trade system as part of the Western Climate Initiative (WCI) to cover emissions by "designated large emitters" ("BC First Province to Legislate Cap and Trade," 2008).

Initially, the BC carbon tax was well received and the federal Liberal Party followed suit, announcing its "Green Shift," a proposal for a revenue neutral carbon tax, in June 2008. Unfortunately for the Liberals, gas prices increased drastically in the first half of 2008 and the policy instrument quickly became unpopular. In the October 2008 election, the party received its lowest vote share to that date in Canadian history with 26%. Whether this was due to the carbon tax, the party's unpopular leader (former Environment Minister, Stéphane Dion) or the economic crisis that erupted that fall, it was clear that carbon taxation would be relegated to the political wilderness at the federal level in Canada in the near future. In BC, however, the tax passed the test of the next election and remains in place (Harrison, 2009). During this period, other provinces also announced the development of regulatory instruments: Quebec, Ontario, Manitoba and BC joined the Western Climate Initiative pledging to develop a cap-and-trade system by 2012.

At the time, business preferences also shifted decidedly in favour of carbon pricing. While CCCE appeared to have shifted its preference in favour of regulation in late 2006, CAPP took more time. On February 12, 2007, Rick Hyndman, CAPP's climate change advisor, was quoted as stating, "sticking with the kinds of policy that we've been discussing – targets for emissions intensity improvements and investment in technology – is the right way to go. So neither a full-blown carbon tax or international emission

trading makes sense at this point" (Hyndman cited in "Alberta Executives," 2007). Two months later, however, Dr. Hyndman gave a presentation to CIBC World Markets in which he extolled the virtues of a global carbon tax. CAPP has supported a carbon taxlike policy instrument ever since. The policy instrument design would see the industry pay a set price on emissions above a set quota, a fact that makes the policy proposal a hybrid of cap-and-trade and taxation. Further, CAPP argues that all money collected should be returned to industry for green initiatives within the same industry that paid the "tax", another variation on the standard "revenue-neutral" taxation framework.

Other industries also appear to have gone through a similar shift during the same time period from late 2006 to early 2008. Cliff Mackay, President of the Railway Association of Canada (RAC), for instance, asked for a "white paper" on climate change policy instruments when he first joined the organization in May 2006. The white paper's support of cap-and-trade was approved by the board late that same year and became "the policy of the industry" (MacKay, 2009). Prior to that time, RAC had no clear statement on the issue (MacKay, 2009).

Many other interview subjects remembered a shift in the way industry thought of climate change around that same time period. For Tony Macerollo of the Canadian Petroleum Products Institute, for instance, "The fate was sealed, the door was shut roughly around December 2006/2007 maybe where the last remaining non-engagers recognized that they had to engage" (Macerollo, 2009). Forestry industry representatives, who were to some extent external observers of the majority business preference, also date the shift to 2006. According to Mike Bradley of Canfor, former chair of FPAC's climate change committee, "There was certainly a change in the mood of the public which would

probably date from around 2006 and [business] people started waking up to the reality that things are going to change, what is the best way for us to cope in a world where we have this carbon constraint . . . and that's circa 2006" (Bradley, 2009).

WAITING FOR OBAMA: 2008-2009

After the eruption of the economic crisis during the 2008 Canadian election and the subsequent election of President Obama in the United States, the Canadian government delayed its planned regulations. The government claimed both that it was delaying due to the economic crisis and that it was waiting for the American administration to act in order to create a continental policy instrument (McCarthy, 2010; Rennie, 2009). Surprisingly, despite the decrease in pressure from government, the business community remained strongly in favour of carbon pricing in 2009. Variation, however, existed in the type of carbon price supported (see chapter 1 for summary of preferences).

Industry preference at the time of interview was clearly against further delay. As Lehigh's Brent Korobanik explained, "the big thing here is that we just want to know what we're facing and get on with it"(Korobanik, 2009). Other business leaders made a similar case, decrying the lack of certainty around policy created by the federal government's continued delays (Lazaar, 2009) (Hyndman, 2008). Officials at Environment Canada confirmed industry's displeasure further postponements (Official at Environment Canada #2, 2009; Official at Environment Canada #4, 2009). As one government official explained in 2009:

The fact that the US administration is changing, our minister is changed, government changed; there is a transition process now that we are wading through. Our political system, federally, ... has had so much transition over the past three years; it is very frustrating for them as stakeholders because

they are not getting the certainty that they need to be able to make their decisions. It's very, very frustrating for them.

Interestingly, since that time, much has changed in climate politics in North America. The Canadian government continued to wait for US action, which remained likely – and indeed was ongoing in Congress – until April 2010 when the best chance for a US cap-and-trade program collapsed at the US Senate. The Democrats loss of control of Congress in November 2010 extinguished any hope for a resuscitation of carbon pricing in the US in the near-term (Lizza, 2010). This, coupled with the Canadian government's continued unwillingness to act unilaterally, has meant that, unlike in 2009 when interviews were carried out, carbon pricing is no longer viewed as inevitable in either Washington or Ottawa.

Nonetheless, the timeframe for this research and, therefore, this history ends in 2009, following the completion of interviews. It is not feasible within the confines of this dissertation to undertake fieldwork again in order to determine whether business preferences have again shifted as a result of changing expectations. Nonetheless, the findings from this history summarized below do provide a starting point for predicting a pattern of adaptation between industry preferences and expectations for instrument adoption. These predictions are discussed in chapter 9.

SUMMARY OF FINDINGS

The preceding historical review summarizes government policy on climate change and business preferences for climate change policy instruments in Canada over a twenty-one year period from 1988 to 2009. For clarity, the pattern of business

preference and government policy variation is plotted chronologically in Chart 1. The policy instruments proposed by government since 1988 are arranged on an ordinal scale on the Y access by level of coercion and theoretical cost to business. This required some interpretation. The astute reader will note that, contrary to the theoretical breakdown of cost in chapter 1, command and control regulation is listed above both carbon pricing mechanisms – carbon tax as well as cap-and-trade – because it offers less flexibility to business and was seen as more coercive. Cap-and-trade and carbon taxation are listed together, despite the rather large difference in cost, because they were seen as alternative forms of carbon pricing by business leaders in this study.

The data points on the graph for the government side represent clear policy declarations. Between 2008 and 2009, after Minister Prentice delayed implementation of the government's long-planned Turning the Corner regulatory framework, no further government points are indicated. This is indicative of the political environment vis-à-vis climate change at that time: the government had effectively handed over control of the details of a future regulatory policy instrument to the White House and/or US Congress and, consequently, there was very little in the way of clear policy declarations vis-à-vis policy instruments from the Canadian government. Moreover, many business people perceived the current "Waiting for Obama" policy rational as akin to "Waiting for Godot"; in other words, the current policy was seen less as a clear declaration in favour of a continental cap-and-trade program and more as an excuse for continuing the status quo of no policy. In line with this perspective, I have left the government side blank after 2008.

On the business side, an estimated placement for aggregate business preference at a given time was created based on the most common preference of industry associations and firms at that time. This is possible because, despite industry's heterogeneity of products and processes, a majority preference was discernable at all time periods. The declared preferences of CCCE provided the key indicator of this placement, because the Council of Chief Executives played a leadership role on climate change within the business community from the early 1990s onward. The exception to this being in 2002, when CAPP took the lead and negotiated the agreement that was later extended to all industrial sectors.

Nonetheless, the graph represents an interpretation of government declarations vis-à-vis policy instruments and policy instrument preferences, given the historical review above and, thus, certain data points are open to some debate. For instance, in 2006, the Government's declared policy is illustrated as "no policy". While for most of 2006, the Harper Government appeared uninterested in creating climate change policy, as a government official testified (Senior official, 2009), by late 2006 it had created a policy statement encapsulated in the Clean Air Act. At that time, Minister Ambrose stated, "from now on, every industrial sector will have mandatory requirements and we will enforce those requirements" ("Tory Bill," 2006). This could certainly be interpreted as a move towards strong command and control regulation; however, given that the government set no targets in the plan, stated that it planned to negotiate over the next four years (the length of an entire election cycle) and planned no hard caps on emissions until 2025 when they would likely be long out of office, it could also be interpreted as a delay strategy. It appeared more credible, therefore, to continue to list the government's policy

as "no policy," even after the government's introduction at Parliament of the Clean Air Act, rather than to interpret that policy as a jump up to command and control regulation at the top of the graph. While this interpretive element is a limitation, the graph is nonetheless useful in examining how business preferences and government policy varied over time.

The 2002 agreement represents a second area of murkiness with respect to the placement of data points. The deal put an upper limit on a possible carbon price, but did not create a regulatory framework for such a price. After the deal was done, both the government and the business community returned to their previous policy choices - with the government supporting "covenants" with an undefined regulatory "backstop" and industry continuing to call for subsidies and voluntary agreements. To interpret this agreement as a complete policy or preference shift on the part of either business or government, therefore, is plainly an overstatement. The negotiation and subsequent agreement were, however, out of place within the pattern of business-government relations on climate change at the time, particularly given the very public fight then being waged by the Coalition for Responsible Environmental Solutions. For want of a better manner of indicating this surprising event within the context of the graph, I have placed the data point in line with a carbon price – clearly the focus of the deal. This is, however, for illustrative purposes only and is not meant to imply a complete preference shift. The reasons behind this perplexing arrangement are discussed in chapter 5.



This exercise of process tracing summarized in the graph above highlights four traits of business preferences for climate change policy instruments in relation to government policy declarations and public opinion since the late 1980s:

- Despite small pockets of dissent, there was a remarkable amount of homogeneity in business preferences during the entire period from 1989- 2009, although after 2006 there was variation in the type of market-mechanism (carbon price) supported.
- 2) From the early 1990s to 2006, business overwhelmingly supported voluntary agreements and subsidies to deal with climate change. Business actors generally articulated their disapproval with regulatory policies, whether traditional or market-mechanisms, due to the increased costs they would entail particularly visà-vis global competitors. Government movement towards limited emissions trading and somewhat (although slightly) more coercive policies after 2004 did not elicit an immediate change in aggregate business preference.
- 3) A clear change in business preferences for climate change policy instruments away from voluntary agreements and subsidies in favour of carbon pricing was first discernable in late 2006, immediately following the first indications of clear shift in public opinion. It appears, therefore, that public opinion directly impacted business preferences for climate change policy instruments. Indeed, business actors, at least at industry leader CCCE, appeared at least as or possibly more attentive to public opinion than government, first demonstrating a shift in rhetoric in November 2006 while the federal government was still defending its much

maligned *Clean Air Act*. The overall shift in business community preferences, however, took place over the following 6 to 8 months (late 2006-mid 2007) and corresponded with a time when both business and governments were adapting to the increased salience of climate change as a policy issue.

4) There is no indication of why the rhetoric previously employed against market mechanisms – that they would increase costs in relation to competitor countries, decreasing Canada's competitiveness – was no longer deemed valid; this is particularly striking given that the business community was not generally calling for the government to wait for the US, despite the government's insistence on doing so in 2009.

CONCLUSION

This exercise in process tracing demonstrates that, as the risk-advantage model would suggest, business preferences for climate change policy instruments in Canada did vary in relation to the political context and, in particular, public opinion. Why is business so sensitive to public opinion that firms and associations abandoned their previous strategy of fighting against all regulatory instruments on the grounds that regulation would increase costs and decrease competitiveness? The risk-advantage model suggests two reinforcing reasons for this: public opinion acts as an indicator of future trends in public policy *and* an indicator of an issue-area of likely investor concern. First, as the introduction to this chapter discussed, public opinion acts as an indicator of an area of likely regulatory change; where an issue has become salient, government is more likely to act, creating regulatory instability by the very suggestion of change. Firms, therefore,

seek to have expected changes implemented as soon as possible in order to create a new, stable regulatory environment in which to operate and invest.

Second, this expectation for regulatory change also impacts the risk perceptions of external investors, a disparate and diverse group. Firms, seeking to ensure investor confidence, thus, look to public opinion as an indicator of investor concern. As chapter 5 will demonstrate, the need to assuage investor concern helps explain not only the quick reaction of industry to the 2006 public opinion shift, but also the 2002 negotiation and deal on an upper limit on a future carbon price, an anomalistic data point on the graph. In short, then, this research suggests that business preferences for climate change policy instruments are influenced by the political context both because changes in the political realm impact risk analyses vis-à-vis the firm's own capital investments *and* because the political context is a key consideration in the risk analyses of external investors. It is to the latter point that I now turn.

CHAPTER 5: TESTING THE LINK BETWEEN PUBLIC OPINION AND INVESTMENT

Why does public opinion matter to firms? This question is not only significant for understanding the findings of this study but, as chapter 3 discussed, is also relevant to previous work in business-government relations on environmental policy in Canada (Macdonald, 2007). Chapter 3 articulated a hypothesis, implied by the significance of investor concern in the risk-advantage model: that public opinion matters to business actors in part because it acts as a clear indicator of investor, particularly shareholder, concern. This chapter tests that hypothesis by analyzing the annual reports of participating firms to determine whether a change in communications with shareholders was discernable after the shift in public opinion. Evidence presented here demonstrates that this change was indeed apparent in annual reports, a central medium through which firms communicate with shareholders. Before undertaking this test, however, this chapter begins by introducing the findings from interview data, which led to the focus on investment as a determinant of policy instrument preferences within the model.

Interview subjects left little doubt that investment was a top of mind issue for business leaders when analyzing climate change policy instruments. As the President of the Canadian Chemical Producers Association (CCPA) explained:

It reflects the nature of our industry. Most investments in our kind of industry - same with steel, mining and forestry - they're like 30-year investments, so you don't want to be doing something and then find out ten years later that society has decided that this is not a good thing to be doing because it's just too expensive to change the plant. So, what you want to do is to anticipate what society wants and consequently work on a balanced approach that gives you, what we call in Responsible Care, a license to operate (Paton, 2009).

For industry, one of the greatest challenges of the climate change regulatory environment – in particular, the lack of certainty about government policy instrument choices and implementation - is that it undermines the capacity to plan and, therefore, to make large-scale investments. Adding insult to injury, contended CCCE in 2006, is the fact that the firms most affected by climate change policy are also those most impacted by policy uncertainty:

The industries that are most energy-intensive and therefore high in GHG emissions also tend to have very long-lived capital stock. They will need the signals and policy support so that they can make necessary investments in both short-term adjustments and long-term technology development and deployment (*Draft Memorandum*, 2006: 8).

CCCE, therefore, entreated government in 2006 to provide "a stable policy environment" for investment (*Draft Memorandum*, 2006: 8).

For some firms, the worst-case scenario for climate policy could completely undermine the firm's business model and threaten its survival. Robert Page, NRTEE Chair and former senior executive at Transalta, a coal-generated power company based in

Calgary, explains:

If the government of Canada says five years from now coal-fired power generation will cease in this country, you're done. And, yes, your other wind power and natural gas and others can keep going, but you've got a locked in investment there and you suddenly have a stranded asset (Page, 2009).

According to Page, during his time at Transalta, the possibility that governments in

Canada or the US would one day ban coal-fired generation was a real and serious concern

that animated the company's climate change strategy. Given that Transalta had

previously invested substantially in coal, such a ban could threaten its expected return on

investments, although the company's ability to survive would depend on the details of the ban. This would include any phase out period and timing vis-à-vis the lifespan of current investments.

The chance that today's investment will become "stranded" tomorrow is at the very heart of the concept of risk for business leaders. Avoiding this possibility with respect to climate change policy instruments requires a stable and long-term regulatory framework. Otherwise, firms are unwilling to make the large investments that are commonplace in heavy industry. In 2009, Oil firm, Nexen, for instance, delayed the second phase of oil sands development at Long Lake, Alberta because of uncertainty over climate change regulation (Blackwell, 2009). While Nexen appears to be moving forward with the project in 2011, the company noted in their 2010 annual report:

Any required reductions in the greenhouse gases (GHGs) emitted from our operations (without an allowed offset compliance mechanism) could result in increases to our capital or operating expense, or reduced operating rates, especially at the Long Lake project, which could have an adverse effect on our results of operations and financial condition (Nexen, 2010: 39).

The dilatory effects of policy uncertainty on long-term investment leads business leaders to pay considerable attention to policy trends, trying to 'read the tea leaves' as much as possible. As a former senior official at Gaz Metro explained:

When you are in businesses that work on a long-term basis, their screen to the future integrates emerging trends and they have to take good note of it because the investors do and the investors ask questions and they say, "what do you intend to do about this?" So, you have to address these issues. Addressing issues is short term, but addressing trends that start emerging is something that you have to do because you are talking about billions of dollars of investments in the future. So, I would venture to say that large industry is very sensitive, very permeable, to those kinds of evolving trends and they start factoring them in much earlier than we suspect (Former official at Gaz Metro, 2009).

As this quote implies, the internal investments discussed above are unavoidably linked to the second type of investment: those made in the firm by shareholders and institutional investors. The risk assessments of investors, both institutional investors and shareholders, are significant given that without financial investment industries are unable to grow. Moreover, firms are in competition for investment with other firms in the global market place and, therefore, must ensure that they are perceived as a safe vehicle for investment capital. As the President of the Mining Association of Canada, Gordon Peeling, argued to a House of Commons committee in 2002:

Capital is very mobile, and if it can earn a better return on resource development outside of Canada, it will flow to those jurisdictions with no Kyoto obligations. That's just not Canadian capital, that is New York capital, Zurich capital, London capital--all those markets this industry goes to for both investment purposes here in Canada, and investment purposes and opportunities outside of Canada ("Evidence," 2002).

Shareholders can also influence corporate decision-making by withholding investment. Not only could retail shareholders choose to move *en masse* away from a firm, but large shareholder blocks, such as pension funds, could cause significant damage to a firm's share value:

You see, the Ontario teachers pension fund was the second largest shareholder in Transalta during the years that I was there, and the Canada Pensions Fund was the largest. If these pension funds start getting complaints from all their members that we are not good corporate citizens, then those pension funds begin to feel the pressure that the continuance of their contracts are going to be challenged in connection with that (Page, 2009).

Interestingly, withholding funding is not the only manner in which investors

influence corporate action. Shareholders can have a significant impact on corporate

governance, a power that is less often wielded, but nonetheless top-of-mind for some:

There are blocks now of shareholders that have a lot of influence and if they don't like what a company is doing, they are going to voice their opinion and they are going, if necessary, to change the board. (Official at Shell Canada, 2009).

Business leaders in Canada paint a picture in which investment is a constant concern for senior executives, both ensuring the company is in a position to make long term investments and ensuring that external investors are satisfied with the company's ability to provide stable and expected returns. Climate change policy is one area that can undermine investor confidence and, therefore, undermine business success. Business preferences for government policy instruments, consequently, are created with one eye on limiting the risks to investment. CCCE's John Dillon discussed the issue while testifying before Parliament only days before Canada ratified Kyoto:

The most immediate impact of a decision to ratify the Kyoto Protocol would be on business investment, and not just in the oil patch. The federal government has acknowledged that investment is critical to boosting Canadian productivity and incomes, yet Canada would be the only country in the western hemisphere to accept a target, and that alone is likely to push investment to other countries with no targets. Canadians will pay the price but the global climate will see little gain. A move to ratify the Kyoto Protocol without a clear and detailed implementation plan would, we believe, compound this damage. Unless Canadian and international investors are given a clear picture of what new rules will affect business costs in the years ahead, they have to assume that these new costs will be significant. Any uncertainty in the implementation plan adds to the risks of making investments in Canada and is likely to affect not only new investments but also the credit ratings of existing business ("Evidence (minutes)," 2002).

Finally, FPAC President, Avrim Lazaar, perhaps best summed up the relationship

between investment, certainty and business success:

Because the most critical factor in business success is attracting investment and the thing that investors like the least is unknowable risk, even if the eventual regime won't cost us as much, the ten or fifteen years of uncertainty as to what it will be will cost us enormously. So, knowing what the government's going to do and then having some confidence that they're actually going to do it is our number one priority. Nothing else is as important as that (Lazaar, 2009).

THE 2002 DEAL: OIL SANDS INVESTORS AND CANADIAN CLIMATE POLICY

It is not, however, just the words of business leaders that highlights the effects of investment and investors on business-government relations. According to both a senior government official and the former president of CAPP, in 2002, third party investors had considerable influence on the course of climate change policy in this country. Chapter 4 briefly discussed the 2002 arrangement between the Government of Canada and the Canadian Association of Petroleum Producers in which the government agreed to cap a future carbon price at \$15/tonne and limit industry's target to 15% below 2010 business-as-usual levels. The Minister of Natural Resources, Herb Dhaliwal, made the commitment in a letter to the Chairman of the Canadian Association of Petroleum Producers only five days after cabinet ratified the Kyoto Protocol. Given that Canada was expected to require a 30% reduction from business-as-usual in 2012 to meet its Kyoto targets and that large final emitters (all of whom were subsequently extended the same assurance) represent approximately 50% of Canada's greenhouse gas emissions, the commitment made implementation problematic at best. Moreover, economic analyses at the time suggested that a \$150/tonne price on carbon would be required to decrease emissions to the Kyoto target (Harrison, 2010). As Harrison explains, "the effect of the \$15/15 percent guarantee thus was to render it impossible for Canada to comply with the

Kyoto Protocol other than through massive public spending on either international credits or domestic subsides to business" (Harrison, 2010).

Needless to say, observers were baffled by the government's decision. Why would the Chrétien government make such a seemingly irrational policy choice only days after ratifying the Kyoto Protocol? MacDonald (2003) suggested that the deal resulted from the influence of NRCan, as the agreement was made by the department of Natural Resources without the knowledge of Environment Canada or Cabinet. As Harrison notes, however, negotiations were conducted between CAPP President Pierre Alvarez, NRCan Minister Anne McLellan, *and* the Prime Minister's own deputy, the Clerk of the Privy Council (Alvarez, 2010; Harrison, 2010). As a result, while Environment Canada may not have been involved, the agreement clearly had the consent of the Prime Minister and cannot be explained by a department gone rogue.

Another explanation is that the Prime Minister was forced to make the concession by a concerned cabinet. Harrison argues that the agreement was integral to resolving divisions in cabinet on climate change policy in 2002 and, thus, played a significant role in ensuring ratification (Harrison, 2010). In other words, for Mr. Chrétien, settling with the oil and gas industry was a necessary prerequisite to ratification.

While cabinet concern was undoubtedly a key issue for the prime minister, many aspects of the deal remain unexplained. When compared to other sectors, the petroleum sector was arguably the most able to afford to continue to fight government and the least affected by possible increased cost given its high profit margins, as John Dillon confirmed:

The oil and gas sector was less concerned about current cost than in getting some certainty on costs over the longer-term, as their investments are very

much about expensive and long-lived capital stock. When their profits were high and the oil prices were high it was a little hard for them to argue that they couldn't afford the cost that was being talked about (Dillon, 2009).

In other words, the short-term profitability of the oil sands was not in doubt. Government would have been aware of this fact. Why, then, did cabinet care so much about the antagonism of the oil and gas industry, particularly given that, at the time, the Liberals only held two seats in Alberta? Moreover, if costs were relatively less important to the oil and gas sector, why did CAPP and not another industry more affected by current cost increases decide to negotiate? Mr. Dillon alludes to the answer in his quotation above.

As it turns out, the simplest explanation for the deal was in part correct. The agreement resulted from a need to limit the possible costs of future climate programs, which the ratification of Kyoto was deemed to make more likely. It was not, however, that industry representatives themselves were concerned by the possible future costs of climate policy and, consequently, decided to concede on carbon pricing. They were clearly ready to fight ("Meeting Minutes," 2002) and most likely would have continued to do so, without any inclination to negotiate, had concerns not been voiced by a third party, which insisted that the oil and gas industry negotiate to create certainty around future carbon liabilities. That third party was the institutional investors whose funding was required to develop the Alberta oil sands (Alvarez, 2010) (Senior official, 2009).

It is no coincidence that the deal resulted from negotiations between CAPP and government, and not any other association. Despite the fact that CAPP was known to be the most hostile to government regulation on climate change (Fairbank, 2009) and had arguably the most resources to fight the government on the issue, it was forced to

negotiate in order to ensure the continued growth of its industry. At the time, there were a number of upgrader projects under development in the oil sands (Alvarez, 2010). Upgrading is the process through which bitumen from the oil sands is transformed into synthetic crude oil, which is subsequently refined into gasoline and other petroleum products. Upgraders are usually situated near the source of bitumen in Alberta, but could conceivably be moved to other jurisdictions. These multibillion-dollar facilities required considerable external funding from institutional investors who were refusing to provide capital without greater certainty over the future price of carbon.

The lack of certainty around a future carbon price increased the risk of oil sands projects for investors. While most in Ottawa may have viewed it as unlikely that a carbon price would completely undermine the profitability of oil sands production as John Dillon mentioned above, investors were concerned about ensuring *expected* rates of return, not merely positive rates of return. Thus, the uncertainty of costs matters as much or more than the absolute cost. While future carbon prices remained undefined by government, the risks of investment were high. This, in turn, made the risk-return tradeoff of oil sands projects unpalatable (in other words, the expected returns of the project were not high enough to counteract the increased risk). According to Pierre Alvarez, then President of CAPP, and a government official close to negotiations, this was the driving force behind the 2002 deal.

Petroleum companies, therefore, were forced to acknowledge that without greater certainty on this issue the new upgraders under development would have to be either cancelled or moved to areas without climate change targets – for instance, Montana – where funding would be easily acquired (Alvarez, 2010; Senior official, 2009). While

the oil in Alberta could not be moved, the processing plants were relatively mobile. As

CAPP's Richard Hyndman explained to a House of Commons Standing Committee on

Industry, Science and Technology on December 11, 2002:

Nobody's going to move the [upgrader] plants that are already there, they're not on rollers, but it is a serious consideration for the new oil sands projects where the upgrading hasn't happened. So, somewhere between the bitumen you pull out of the ground and the gasoline that goes into the cars, you have to do the refining, and in the case of Syncrude and Suncor, and now the Shell project that's about to start up, that bitumen is brought up to the quality of light crude oil [in Alberta], which is sent to eastern Canada or central Canada and the U.S. But some of the new projects have a choice as to whether they locate the upgrading part in the U.S. or in Canada, near the production source, and if you're putting costs on doing the upgrading because of the carbon dioxide emissions associated with that energy use in Canada and not in the U.S., that will tip the balance towards locating them in the U.S ("Evidence," 2002).

Indeed, the True North project at Fort Hills, Alberta, was abandoned in 2002 due to a number of factors including uncertainty over a price on carbon ("True North," 2003). While this fact was not publicly noted until January 2003, CAPP Climate Change Advisor, Rick Hyndman, referred to the project's cancellation at his above quoted appearance at Parliament on December 11, 2002, suggesting the actual decision was made much earlier ("Evidence," 2002). Other projects threatened to follow suit. According to Hyndman, Nexen had also delayed a project due to climate change policy uncertainty that year ("Evidence," 2002).

The postponed developments became an intergovernmental relations headache for the federal government. The Province of Alberta was understandably livid at the potential loss of investment and jobs and called on the federal government to act. This point is significant: negotiations were not suggested by the Prime Minister to protect his legacy, but undertaken at the insistence of the Province of Alberta (Senior official, 2009) and, therefore, were directly linked to investor concern. Negotiations began in September 2002 and, by December, a deal was struck. With certainty over a future price of carbon at no more than \$15/tonne, investors' risk-return trade off looked much more palatable and development continued.

To many observers, this story may appear strange. After all, fluctuations in the price of oil, exchange rate fluctuations and/or Alberta labour force costs would appear to be greater uncertainties vis-à-vis oil sands development than any possible carbon price. Nonetheless, both a government official and CAPP's then President, Pierre Alvarez, confirmed that investor risk aversion vis-à-vis a possible future carbon price did drive negotiations that year. While the deal appeared irrational for government at first glance and contrary to CAPP's apparent preference, when the influence and interests of third party investors are taken into account, the agreement makes sense for both CAPP and the Government of Canada. On CAPP's side, oil companies were literally able to take Dhaliwal's letter to the bank and, consequently, get the funding to enable growth and increased profit in the industry.

It is important to note, however, that it was not so much the absolute cost that mattered, but the uncertainty over those costs and the impact that they were having on investment. This explains why no one, including Pierre Alvarez, can remember why \$15 was chosen as the upper limit of a price on carbon in 2002 (Alvarez, 2010; Senior official, 2009). The price mattered less than the certainty that the agreement created. With their bankers satisfied, CAPP returned in 2003 to articulating support for the organization's original preferred policy: voluntary agreements and subsidies. Thus, while

CAPP bounded the risk to investors by negotiating the deal, the organization did not completely alter its preference ordering at that time.

There is, however, one unexplained element of the deal on the business side. The government's commitment to ensure prices were no greater than \$15/tonne related only to the "first commitment period" (Dhaliwal, 2002), a timeframe that was then defined as 2008-2012, certainly far less than the 30-50 year life spans of most upgrader projects. Why, then, were investors satisfied by the deal? No clear response to this question was found; evidence merely demonstrates that investors were indeed satisfied and tensions waned (Alvarez, 2010; Senior official, 2009). This may point to a subjective element of such interpretations. The concept of anchoring from cognitive psychology – the habit of people to bias their numerical estimates toward a previously available number (in this case, \$15), estimating upward or downward from that number – may provide a possible explanation (see Tversky, 2000). The scope of this research, however, did not allow a conclusive response to this question. Nonetheless, it appears that once the risks were bounded for the first commitment period, investors felt that the level of risk was low enough in relation to expected returns to warrant the investment. The risk-return tradeoff was acceptable at that time.

There is evidence, however, that this perception of certainty or lowered risk with respect to possible future carbon pricing instruments was, for many business officials, short lived. By 2009, interview subjects were lamenting the continued uncertainty and appeared unwilling to trust that current governments would continue the commitments of previous ones. Asked whether he undertook specific cost-benefit analyses of potential climate change policy instruments, Nexen's Climate Change Advisor stated:

There is no ability to do that right now with any sense of confidence because the policy keeps changing and the timelines keep changing. So in December 2002 when minister Dhaliwal put out his letter from the Government of Canada saying that the program for the Government of Canada would be a fifteen percent at a maximum cost of \$15 per tonne, the investment community from Lehman Brothers to Moody's came out and they could say "well, that was 22 cents for Suncor, 47cents for Nexen . . ." And [since] then [Government has] moved on to so many other things. So every time . . .We now get Turning the Corner and then Canada's regulatory framework for air emissions. I stopped after April 2007, I haven't done a note to our senior management in-depth talking about the pros and cons of any policy initiative because it's going to change (Robson, 2009).

Nonetheless, on the government's side in 2002, the deal prevented a political grenade from exploding in Alberta in the potential loss of billions of dollars in development and thousands of jobs. Dhaliwal made this explicit in the final paragraph of his letter to CAPP:

The Government recognizes such clarity on the cost and volume issues is important for industry to be able to plan and make the investments which will create jobs and increase incomes for Canadians. In providing this clarity, we believe we have addressed a very significant concern for industry and set the stage for a cooperative approach to implementing Canada's Climate Change Plan (Dhaliwal, 2002).

As Harrison found, concessions on the part of government are more likely when jobs will be lost in a specific region (Harrison, 1996b). The political power of Alberta as an economic engine for the nation and its treasury further amplified the significance of the problem and increased cabinet's concern. For Alvarez, however, the insistence that government create certainty around possible future carbon prices or jobs in Alberta would be lost was not a threat, but a market reality (Alvarez, 2010). Uncertainty with respect to government policy negatively impacted investor risk analyses and, thus, influenced business action.

EXPLAINING THE 2006 SHIFT: PUBLIC OPINION AS AN INDICATOR OF SHAREHOLDER CONCERN

The account offered by interview subjects of the influence of third party investors on business-government relations in Canada provided the foundation for the creation of the risk-advantage model. If this model has broader explanatory power, however, further evidence – independent of the interviews – should indicate a link between investors and business preferences for climate change policy instruments in Canada. In particular, the model suggests an explanation for the connection between public opinion and the business preference shift in 2006-2007 demonstrated in chapter 4: firm officials may view public opinion as an indicator of investor concern.

Firms may care about public opinion because it points to top-of-mind issues for investors, particularly shareholders (or potential shareholders). Like institutional investors, shareholders choose which firms to invest in by balancing risks with returns. Expectations of future government regulation would be expected to influence their risk perceptions, but more so when shareholders are aware of the impending change. Given that shareholders are a diffuse and diverse group, this would be expected when the policy area is garnering significant attention in the media. Thus, the same forces that were at play in 2002 may have led to the 2006 preference shift, but the characteristics of shareholders as investors (compared to institutional investors) means that firms must infer shareholder views from other indices, specifically public opinion.

If public opinion matters to firms because it is an indicator of shareholder concern, two correlations should be observable. First, a public opinion change should have been followed by a clear change in corporate preferences, just as chapter 4

demonstrated. Secondly, a public opinion shift should *also* have been followed by a shift in the manner in which firms communicate with shareholders about climate change. In other words, having interpreted the public opinion shift as an indication of shareholder concern, firms should respond by addressing these concerns in their communications to shareholders, specifically their annual reports. Particularly, the number of mentions of climate change in annual reports – the main method through which firms communicate with shareholders – should increase as firms try to convince shareholders that climate change policy does not represent a risk to their investment. Prior to the public opinion shift, climate change policy would not have been considered a perceived source of risk for shareholders and, therefore, would have received far less attention in the annual reports.

To some extent, counting "mentions" – that is, every time the term climate change¹² comes up in an annual report – is a bit of a blunt instrument. After all, the method does not examine the quality of those mentions (what exactly the firm was saying when referring to climate change) and also does not take into account differences in writing style (for instance, some authors might go out of their way not to use the same term twice, which would artificially decrease the number of mentions). Nonetheless, as the number of mentions was counted to create an average across an industry in a given year and issues related to writing style should be prevalent in all years, an apparent shift in the average number of mentions at any particular timeframe would suggest a change in the manner in which a firm is communicating with its shareholders. With respect to the

¹² In one annual report, the firm never used the term 'climate change' but used 'climate protection' as a synonym. Those references were counted given that, in that case, not counting the term 'climate protection' would have artificially lowered the average.

quality of those mentions, an examination of the language used by firms in relation to climate change also supports this perspective. This is discussed in greater detail at the end of the chapter.

Out of the three industries compared in this study, the relationship between public opinion in Canada and shareholder communications would be expected to be the most pronounced in the oil and gas industry. Half (four) of the petroleum and natural gas firms in this study are publicly traded companies with headquarters in Canada. Their managers, therefore, would be expected to be both concerned about shareholder confidence (as publicly traded companies) and more sensitive to Canadian public opinion as they live and work in Canada. Foreign managers in headquarters abroad would be far less likely to be aware of, let alone concerned about, Canadian perceptions.

Of the remaining firms in that industry, two are headquartered in the US, one is European (although until 2006, it was Canadian) and one is owned by a partnership of other companies. If the above hypothesis holds, the American companies would also be expected to increase the quantity of mentions of climate change in their annual reports after 2006 because the issue of climate change became salient in the US at around the same time. In Europe, however, public concern for climate change increased earlier (Lorenzoni and Pidgeon, 2006). Consequently, on average, we would expect the oil and gas industry annual reports to demonstrate a clear increase in reference to climate change after 2006. It should be noted that this shift should be the most apparent in the 2007 annual report, because 2006 reports would have been written in late 2006 and early 2007 before the public opinion and business preference shifts were complete. By late 2007 and

early 2008, public sentiment on climate change was clear and business officials should have responded with greater concern within subsequent annual reports.

The forestry industry would also be expected demonstrate an increase in reference to climate change after 2006, as four out of five companies are publicly traded and headquartered in Canada. The only exception is the US company Weyerhaeuser. Given that the forestry industry was an early adopter, however, supporting a cap-and-trade program from 2003 onward, we would expect the change in communications with shareholders to be far less pronounced than in the oil and gas industry. After all, as will be discussed in chapter 6, climate change does not represent as great a source of risk to investors of forestry firms as the oil and gas industry. Managers, therefore, would be expected to focus far less time within the annual report on the issue.

The cement industry, in contrast, would be expected to show little or no change in treatment of climate change in its annual reports before and after 2006. This is not because managers in Canada were unaware of public opinion shifts, but because all four participating companies were either wholly owned subsidiaries of much larger corporations or merely arms of those foreign corporations, three from Europe and one from Brazil. As none of the Canadian organizations were publicly traded, there were no available annual reports for these companies. The parent companies' reports – written in the company's home country – are unlikely to be influenced by Canadian (or American) public opinion changes, particularly because in Europe climate change was a salient issue far earlier (Lorenzoni and Pidgeon, 2006). In other words, the shareholders that cement company annual reports aim to influence are not largely from North America and,

therefore, North American public opinion shifts would be expected to have little or no effect on shareholder communications.

The following three charts graph the number of mentions of climate change in the annual reports of all three industries from 2001 to 2009¹³.





As expected, in the oil and gas industry, there was a clear change in the number of mentions of climate change in the 2007 annual reports, the year after the public opinion shift began. From 2001 to 2006, mentions of climate change remained relatively constant at approximately 2.4 mentions per annual report. In 2007, the treatment of the subject increased considerably with an average of eight mentions per report. This decreased slightly in 2008 to four mentions per report. Interestingly, despite the focus on the economic crisis that year, mentions of climate change were still two times higher than in

¹³ The graphs were developed from the annual reports of seven participating oil and gas companies (Gaz Metro did not have available annual reports), five participating forestry firms and three participating cement firms (no reports were available for Essroc or its parent). In total, the graphs include 58 oil and gas annual reports, 43 forestry annual reports and 21 cement annual reports. Where reports were publicly available, they were included.

the pre 2007 time period. In 2009, climate change returned to an average of eight mentions per report, four times the pre 2007 level.



Figure 4: Forestry industry annual reports

In the forestry industry, there was also an increase in mentions of climate change after 2007 but, as expected, the change was less pronounced than in the oil and gas industry. Other than in 2002, the year of the ratification of the Kyoto Protocol, climate change was mentioned on average 0.45 times per report from 2001 to 2006. After 2006, average mentions increased to 1.7 times per report. Thus, while managers in the forest industry clearly responded to public opinion in increasing the treatment of climate change in annual reports after 2006, they did not feel the same urgency in dealing with the issue as oil and gas executives. As chapter 6 discusses, forestry firm preferences were largely determined by perceptions of competitive advantage and not the risk perceptions of external investors.





In the cement industry, again as expected, there appeared to be little relationship between Canadian public opinion and references to climate change in annual reports of participating companies, although the trend is clearly up since 2000. While references to climate change have increased over the decade, there was no discernable change in 2007. Indeed, the largest increase in mentions of climate change in the cement industry annual reports took place in 2005, a year that means little to Canadians, but a lot to European business officials. The European Unions Emissions Trading System came into effect on January 1, 2005, and would have been expected to receive considerable attention in that year's reports to shareholders for European companies.

The above analysis of corporate annual reports demonstrates that, as expected, public opinion shifts correlated not only with a shift in business preferences but also with an observable increase in the treatment of climate change in reports to shareholders in the oil and gas and, to a lesser extent, forestry industries. This suggests that concern over investor confidence did influence the change in business preferences for climate change policy instruments in Canada. The increased salience of the issue for the public appears
to have been perceived as likely to correspond with increased salience of the issue for shareholders.

The language employed in relation to climate change within corporate annual reports supports this analysis. Many of the participating companies, particularly in the oil and gas industry, listed climate change issues under the heading of "risks" or "risk management" (For examples see: *Annual Review (Shell)*, 2008; ConocoPhillips Canada, 2008; EnCana, 2008; Nexen, 2008a; Petro-Canada, 2008; Suncor Energy, 2008). The subsequent texts then assured shareholders that for that particular firm, the risks associated with climate change regulation were limited. For instance, in 2008, Nexen declared to shareholders, "We believe we are well positioned to meet the challenges of climate change and environmental regulations" (Nexen, 2008b). For these companies, proving that they will continue to provide stable returns despite expected regulatory changes was a central objective of shareholder communications on climate change.

CONCLUSION

This chapter and the previous, taken together, make the case that the business community shifted preferences *en masse* in 2006-2007 because the increased salience of climate change as a policy issue changed expectations about the stability of the current regulatory regime, creating risk for the firm's capital investments and highlighting a clear area of investor concern. Public opinion was the catalyst for the remarkable shift in policy instrument preferences across the business community at that time; however, the concern about public opinion is not altruism or even merely a matter of staying on the good side of customers. As Lazaar explained above, "the most critical factor in business success is attracting investment" and public opinion provides an indicator of areas of

investor concern and future trends in public policy that might impact returns on capital investments. Canadian businesses responded to the major public opinion shift in 2006-2007 by accepting the inevitability of carbon pricing and calling for that price to be implemented now in order to create a new regulatory equilibrium and provide certainty for investors. The latter need required a shift in policy instrument preferences within firms and associations.

Nothing in the public opinion shift or in communications with investors, however, defined the type of carbon price that ought to be implemented in Canada. Thus, while firms and associations accepted that a carbon price was coming and sought to have it implemented as soon as possible, they were left to their own devices to determine which pricing mechanism – carbon taxation or cap-and-trade – they would support. How did they make this decision? If firms were merely choosing the less costly of the two pricing mechanisms, we would have expected the business community to overwhelmingly support grandfathered cap-and-trade; however, preferences for carbon pricing mechanisms were far less heterogeneous than this would imply.

The model provides two other explanations. First, firms will support a policy instrument that provides an advantage where possible. If no advantage is perceived, they seek to limit the uncertainty related to future returns on investment (risk). Clearly, in the latter case, this means that they seek not only to limit the absolute costs associated with compliance where possible, but they also seek to ensure the predictability and stability of those costs. As these two requirements can lead to opposing preferences, preference decision-makers tend to turn to the firm's previous experience with instruments to create

perceived certainty over impacts. The next two chapters examine these two arguments – advantage and experience – in turn.

CHAPTER 6: ADVANTAGE

The significance of competitive advantage to firm decision-making is neither novel nor contested. Indeed, it is a fundamental concept in business strategy, well developed in the literature on the topic. As such, it is neither worthwhile nor necessary to provide a falsifiable test of the competitive advantage variable in the risk-advantage model. Other scholars, specializing in the area, have established the significance of competition on business success (Porter, 1985) and doing so here would be intellectually redundant, adding nothing to the literature.

Unlike the other chapters in this dissertation, therefore, this chapter does not attempt a test of the model with new data or previously unexplored correlations; instead, it presents the findings of the interview data, highlighting the two types of advantage – direct and indirect – that can flow from carbon pricing mechanisms and how they influenced corporate policy preferences of participating firms in this study. In doing so, it contributes to the environmental policy literature by stressing the complex ways in which environmental policy instruments can influence market factors and, therefore, the competitiveness of particular products and firms over others.

THE FORESTRY INDUSTRY: DIRECT ADVANTAGE

Firms could receive two types of advantage from a climate change policy instrument: direct or indirect. A direct advantage of a climate change policy instrument is one that flows directly from the rules and regulations of the policy framework. The most obvious example is a firm's ability to sell allowances on a carbon market within a cap-and-trade program. Allowance sales could not only reduce compliance costs, but yield net profits to certain firms if the policy instrument is grandfathered and they are net sellers. This direct advantage has led the forestry industry to act proactively on climate change far before other industrial sectors, and has led some firms and associations to view cap-and-trade in a positive light, despite the government intervention it implies.

In 2003, the Forest Products Association broke ranks with other business associations operating in Ottawa and signed a memorandum of understanding with the Government of Canada on the principles involved in a future cap-and-trade program ("Government of Canada," 2003). During that period, the Association led its members in taking aggressive action, decreasing emissions to 57% below 1990 levels by 2010 (FPAC, 2010). FPAC's leadership at the time remembers the displeasure that the organization's active support of a regulatory instrument provoked among other industry associations (Bradley, 2009; Lazaar, 2009). These groups saw FPAC as being "on the other side of things" during this period (Hyndman, 2008).

Why did the forestry industry association shift its climate change policy instrument preference three years before any other major association? The answer articulated by AbitibiBowater's Manager of Energy, Development and Strategy, Martin Fairbank, is hardly surprising:

One of the main reasons that we have been progressive is that we do have the opportunity to use [low-emitting] waste biomass to replace fossil fuels. So, you cut the tree in the forest, if you bring the logs to the saw mill, you take off the bark and the bark is available right there and it sort of gets a free ride because you don't charge any transportation costs for that bark from the forest to the sawmill and if the saw mill is pretty close to the paper mill than the bark is almost free. Twenty years ago that bark was being buried because it was a lot easier to buy cheap oil and burn it in your boiler (Fairbank, 2009).

Not only is waste biomass available for consumption at only the cost associated with processing it, it is also very low-emitting in comparison to other fuel sources.

Consequently, the forestry industry is in a better position to cut emissions than other industries due to this industry specific circumstance, and actually decreases costs by doing so.

While the fuel itself is almost free, however, the technological investment required to switch fuels is not. If governments provided an opportunity to sell surplus emissions credits through a cap-and-trade program, the industry could offset most or all of this cost through the new revenue gained on the carbon market. Fairbank explains:

It's also very expensive to build a boiler that's capable of burning a solid product like [biomass]. We just finished an investment that was \$84 million at our St. Francis, Ontario Mill to build a biomass boiler, whereas you can buy a packaged natural gas boiler for maybe \$10 million. Right now we are getting decent return on investment by the cost difference between natural gas and bark, provided we can keep the mill running all the time, which is a problem right now. If there were carbon credits right now, it would be *really* a good investment. (Fairbank, 2009).

Thus, the forestry industry's decision in 2003 to support a cap-and-trade program stemmed from the realization that the policy instrument provided considerable advantage to the industry, given the availability of a low-emitting and free alternative fuel source and the need to make considerable investments to exploit that fuel. Cap-and-trade would allow the industry to earn money by decreasing emissions and ensure an even greater return on investment in biomass boilers. Interestingly, however, the advantages were only salient for decision-makers after the risks of the policy were deemed negligible. Paul Lansbergen, FPAC's Director of Energy, Economics and Climate Change argued:

I think naturally when it comes to government policy everyone is going to assess the risks first. And in our case, the risks were much smaller and the opportunities much greater. So, you look at the risks and its more, how do the rules really affect you on the ground? So, given that and given our opportunities, how can we think of a different way of doing it such that it still meets the government objective but positions us more on the opportunities side rather than the risk side (Lansbergen, 2009).

For most of the period since 2003, the policy instrument that positioned the forestry industry "more on the opportunities side" was cap-and-trade. Recently, however, some in the industry has become disillusioned by the government's continued movement of the base year on which allowances would be allocated. The 2003 MOU promised the industry that if they acted now, they would be credited for that action once an emissions trading program was put in place. In 2008, the Harper government's Turning the Corner policy proposal set the base year for action at 2006, with little credit for earlier action. This left the industry "frustrated" with the ever-changing details of a possible cap-and-trade program in Canada (Lansbergen, 2009), particularly because much of their emission reductions would not be rewarded by the system.

As of 2009, the industry association no longer claimed to hold a specific preference for cap-and-trade versus carbon taxation. Under revenue-neutral carbon taxation, unlike a cap-and-trade program, firms would not be provided a new revenue stream through credit sales, but they might receive cuts to corporate taxes while likely paying only minimal new taxes because of the industry's low emissions. Thus, if a later base-year is assumed, the advantage of cap-and-trade decreases and firms begin to look at both policies, cap-and-trade and carbon tax, from the perspective of limiting risk. "The devil," FPAC President Avrim Lazaar argued, "is in the details" (Lazaar, 2009).

Nonetheless, while FPAC's President claimed not to have a particular preference for cap-and-trade over taxation, Lansbergen stated that grandfathered cap-and-trade with offsets would be ideal for the industry; If the Association could create the perfect

instrument, it would be a specific form of emissions trading (Lansbergen, 2009). Offsets are significant because they could allow forestry firms to gain revenue through sequestration activities and/or wood products manufacturers to sell credits, despite the fact that those operations would likely not be regulated in a cap-and-trade system. Additionally, regulated industrial facilities, such as pulp and paper plants, would also be in a good position to sell.

If grandfathered cap-and-trade with offsets would clearly provide advantage to the industry, why was FPAC, in 2009, not strongly committed to the policy? While the government's lack of support for early action has certainly bread cynicism amongst industry executives, Chapter 7 provides a second explanation for the industry association's hesitancy: there is no consensus in the industry because, for some forestry firms headquartered in BC, the certain, status quo option is now a carbon tax. This appears to have changed the risk/advantage assessments of cap-and-trade versus carbon taxation for BC firms; while participating BC firms were clearly not enamoured with the policy instrument, they were surprisingly reticent to argue against it. Forestry firms outside of BC, on the other hand, remained committed to cap-and-trade. Chapter 7 discusses this familiarity effect in detail.

NATURAL GAS AND THE RAILWAYS: INDIRECT ADVANTAGE

While direct advantage is the most obvious way in which a firm can benefit from a climate change policy instrument, this is not the only type of advantage. Indirect advantages result from the influence that a climate change policy instrument may have on a third party – generally, a firm's clientele. If a firm expects that a particular policy

instrument will provide an incentive to customers to purchase its product (relative to an alternative), it will prefer that policy instrument.

Interestingly, however, the type of policy instrument preferred tends to depend on the type of client-market on which the firm is currently focused or wishes to expand into, and on the emission intensity of alternative available products within a given jurisdiction. In the natural gas industry, the participating natural gas firms operating in Ontario, Alberta and/or US jurisdictions were strongly in favour of a carbon tax. Three arguments were made to support this preference. First, executives believed that taxes would support the current choices of individual consumers, their main clients in the residential space heating market, and, second, open up a new market by providing electric utilities with a clear incentive to switch from higher-emitting coal to lower-emitting natural gas (Dill, 2009; Protti, 2009). Quite simply, carbon taxes would make coal relatively more expensive and natural gas relatively less expensive to the utility. A third possibility, highlighted by the Executive Vice President at EnCana, was that natural gas could serve as the fuel of choice for the North American transportation fleet, provided that a price incentive would cause political demand for an expansion of the required infrastructure (Protti, 2009).

The first argument is straight-forward and refers to the issue of scope of the policy instrument. Carbon taxation would directly and visibly charge both residential and corporate customers of fossil fuel firms for the emissions in the product, while cap-and-trade almost always limits inclusion within the program to large final emitters. In the case of carbon tax, current residential clients of natural gas firms would have one more reason to be thankful for their natural gas systems, while residents using other fuels for

space heating (heating oil or electricity from coal are the alternatives in Ontario, for instance) would be provided an incentive for fuel switching.

In the traditional large emitter cap-and-trade program, on the other hand, this market would be unlikely to be covered by the cap and, therefore, natural gas firms would not be provided with a price advantage over other options in the residential sector. It is possible that a cap-and-trade program could force fuel producers, suppliers, transporters, or distributors to hold credits to cover the carbon content in the product, creating a system that would cover both residential and large-scale clients, but this type of policy instrument design has not been the focus of previous Canadian government policy debates. Given that natural gas is now the fuel of choice in the residential markets in both Alberta and Ontario, both firms appeared *certain* that a carbon tax would only support that position, while simultaneously providing opportunities for expansion where possible, including by other arms of the company in the US (should a tax also be put in place there). From the firms' perspective, however, cap-and-trade provides no such certainty: as the President of Union Gas put it, "I have no idea how a cap-and-trade system is going to impact a residential customer of Union Gas" (Dill, 2009)..

The second argument that utilities might switch to natural gas after the implementation of carbon taxation, which was cited by both companies, highlights the weighing of risks and advantages in the company's analysis of policy instruments. As one executive explained,

One of the messages that we've been giving to governments is that you are underplaying the role that natural gas can play in the North American economy. For example, did you know that there is more installed nameplate generating capacity for natural gas in the US, by far, than coal? Everyone talks about coal. The amount of energy produced by coal is [very high], the amount of energy produced by natural gas is [half at most], capacity [of

natural gas] is [high] vs. [coal: low]. The reason why is that [the coal capacity is] base load; [natural gas] are peaking units for peaking and utilities have had a systemic bias for coal. They're often integrated with coal companies, and that's the base load and that's what they understand. You could have an immediate environmental impact by just taking those [natural gas] units and burning them more. Now, you're probably going to pay more, even at these lower prices, for the natural gas than for the coal, so the electricity price would go up and, the utilities, that's just not something they're interested in (Protti, 2009).

From the perspective of company executives at Union Gas and EnCana, "Once again [this] leads you to a carbon tax (Protti, 2009)": in other words, carbon taxation would clearly and simply increase the cost of coal to utilities relative to natural gas and, hopefully, increase the likelihood of increased take up of natural gas by utilities. Theoretically, the type of large-emitter cap-and-trade program discussed in Canada should have the same effect, given that this argument relates to change in behaviour by large final emitters, the electrical utilities. Forcing utilities to buy credits for emissions should cause coal to be relatively more expensive and natural gas to be relatively less expensive to the utility. Interestingly, the executives interviewed for this study were unconvinced of this effect and strongly preferred a carbon tax (Dill, 2009; Protti, 2009). Indeed, when asked why a cap-and-trade would not also increase the cost of coal to utilities, the President of Union Gas responded that it would not "because [they] can just buy credits."

Such a response might indicate a misunderstanding on the part of the interview subject about the working of cap-and-trade – after all, it is by forcing firms to buy credits that cap-and-trade would increase the price of coal; however, the rest of the discussion suggests that, actually, natural gas executives had a strong understanding of the riskadvantage implications of both policy instruments to their industry and that this

understanding determined their preferences for carbon taxation. Both executives at EnCana and Union Gas held the view that the many options available in the details of a cap-and-trade system create risk and uncertainty, where the simplicity of carbon taxation creates only advantage given that it would not only support their position in the residential market, but clearly and efficiently increase the cost of coal to utilities. They highlighted the potential for "gamesmanship" amongst speculators and market actors decreasing the impact of price increases on utilities under cap-and-trade, as well as the possible loopholes within the regulations themselves that might decrease the impact (including subsidies or unfair allowances to certain industries, like coal). As the Executive Vice President of EnCana explained:

[Carbon Taxation provides] an efficient vehicle for pricing. So, if you have a choice, say, [with a carbon tax] 'here is your cost, go away and do what you need to do to minimize it' vs. [with cap-and-trade] 'Here's a set of legislation, we're going to put regulations to it but we're not exactly sure how we're going to do it.' We have to determine what facilities are going to be eligible, what exemptions there might be and it gets really complex. What that introduces for an executive team of a company and for the board of directors is risk, because you can't quantify it. (Protti, 2009)

Thus, two issues interact to create a clear preference for carbon taxation amongst these firms. First, the scope of the carbon tax as impacting both residential and commercial customers means that that policy instrument provides an advantage in all areas of the economy in which natural gas firms either currently operate or hope to expand. This includes the residential space heating market, the transportation market, and the electricity market. Cap-and-trade would only directly, and therefore with certainty, cover the electricity market. It could, conceivably cover the other two markets, but that would depend on the details of the policy instrument and the extent of the impact would be difficult to determine in advance. The second issue is that, even in the electricity sector, the uncertainty surrounding emissions trading regulations vis-à-vis natural gas and the possibility of gamesmanship creates a perception of risk for the firms where carbon taxation, given its clarity and simplicity, creates only a perception of advantage. In other words, executives have complete faith that a carbon tax will impact their markets as they expect, creating a clear advantage for their product, while they lack that faith with respect to cap-and-trade.

To some extent, this level of uncertainty vis-à-vis cap-and-trade is indicative of the particular nature of the natural gas industry: in a 2008 report on cap-and-trade to the US Congress, the Pew Centre for Global Climate Change highlighted the natural gas industry as a particularly complex industry to regulate through cap-and-trade for a number of reasons – it includes large and small emitters, generates fugitive methane emissions throughout the supply chain, changes hands multiple times between production and the end-user, and can also be incorporated into manufactured products without combustion (and, thus, emission) (*Scope*, 2008). Policy-makers, therefore, must examine many options in developing a cap-and-trade program to deal with this industry, making it impossible for firms to know the details before the program is developed. To avoid this complexity and optimize advantage, a carbon tax is seen as the overwhelming favourite for these firms.

In Quebec, where Gaz Metro supported cap-and-trade, however, none of these advantages apply. First, the alternative fuel for the public utility in that province was not higher emitting coal, but zero-emitting hydro. Neither carbon taxation nor cap-and-trade provided an incentive for uptake of natural gas in the electricity sector. Second, Gaz Metro is not a significant player in the residential heating and cooking sector in Quebec

where 78% of residential space heating is fueled by lower emitting electricity and wood ("Residential sector,"). Consequently, a carbon tax would neither increase the attractiveness of natural gas as a fuel source in relation to the alternative in the market, nor did its scope and impact on residents matter to the firm.

Unlike the other firms in this study, the majority of Gaz Metro's customers are large emitting commercial clients. As a carbon tax and traditional cap-and-trade program would both directly cover large emitters, Gaz Metro compared the effect of each policy on those clients and decided that cap-and-trade would provide greater flexibility to their clients and was therefore preferable (Former official at Gaz Metro, 2009). This choice, however, was not about supporting a policy instrument that provided a clear advantage for fuel switching, but about choosing between the lesser of two evils: the least risky policy.

The Railway Association of Canada, on the other hand, supports cap-and-trade for a similar reason as the Alberta and Ontario natural gas firms support carbon tax: it believes the policy instrument will provide an incentive to its main customers – commercial shippers – to switch from trucking to railways. Cliff MacKay, the President of the Railway Association, explained the difference in perspective between Ontario and Alberta's Natural Gas companies and his association:

[They want carbon taxation] because their major customers are consumers. Our major customers are corporate shippers. So, for us, a three-percent at the margin change in price as a result of a cap-and-trade system [would really matter to our commercial customers] or us being able to say to Dow Chemical, 'we can give you an advantage if you use rail because we can then pass our credits on to you.' It makes a difference. It makes no difference to the average consumer. You'd have to have a 10, 15, 20% hit [for the consumer to actually change] (MacKay, 2009). Consequently, for the railway firms, the fact that they are a lower emitter than the alternative land based shipping form – trucking – creates advantage in a low carbon economy. Moreover, unlike the natural gas firms above, the industry's overwhelming focus on commercial clients makes cap-and-trade an appropriate policy instrument to cause the behavioural change they seek: a switch to rail.

Interestingly, advantages also influence an industry's competitiveness as an investment vehicle. The President of the Railway Association of Canada explained,

From the shareholder side . . . I would call it interest. Shareholders and analysts see our environmental advantages as perhaps being a contributor to shareholder value over time, as life unfolds. Its one of the factors that leads a lot of analysts to say openly that, notwithstanding the short term stuff we're living through at the moment, rail has a fairly bright long term growth future. Its not the only issue but its one of the issues. So, from a shareholder/investor view, environment tends to be a positive for us as opposed to a negative. It's a different kind of game (MacKay, 2009).

Thus, not only does climate policy provide a possibility for increased demand, and therefore revenue, for the railways, it also assuages investor concern and strengthens the industry's investment status, despite some recent financial problems.

CONCLUSION

While the previous chapters in this dissertation explained why a company might prefer a regulatory policy instrument to a less costly voluntary initiative, this chapter begins to explain how a company would choose one regulatory policy instrument over another. Direct advantages, which flow directly from the policy instrument itself, provide firms with opportunities to expand their market share and revenue stream. Indirect advantages can create these same opportunities, but as a result of the policy instrument's impact on the incentives and costs faced by a firm's clientele – or potential clientele.

Interestingly, advantages appeared to influence firms and associations in a relatively predictable manner. Firms and industries or sectors provided a clear advantage by a particular policy instrument strongly supported that policy instrument. The only exception to this rule in this study was the forestry industry as FPAC was more hesitant to support grandfathered cap-and-trade than expected. Chapter 7 provides an explanation for this based on the significance of experience for preference development. Nonetheless, in most cases, where advantages existed, they provided a clear strategy for corporate policy instrument preferences. Firms whose products were lower emitting than alternatives supported the policy instrument whose scope would directly cover their customers in key markets, either commercial or residential.

Climate change policy instruments do not offer a competitive advantage to all firms and, therefore, not all firms can base their policy instrument preferences on analyses of advantage. Chapter 7 discusses the second manner in which firms choose policy instruments: by seeking to limit the risk associated with a regulatory change. It finds that firm officials generally turn to their own experience to create perceived certainty over outcomes and effects.

CHAPTER 7: EXPERIENCE

The risk-advantage model implies that previous experience with a policy instrument is key to understanding support for that instrument. Previous experience provides officials with an ability to see for themselves the impacts of a policy instrument on the returns on the firm's capital investments and the effect that the potential implementation of an instrument will have on the firm's ability to compete for investor capital. In other words, experience acts as a heuristic device; as business officials assume how a policy instrument affected the firm in the past will be similar to how it impacts the firm in the future, experience provides perceived certainty over the effects of implementation. In doing so, it lowers the perception of risk to the firm.

This chapter tests this implication of the model by examining whether a correlation exists between previous experience and current support for an instrument. It establishes that indeed such a correlation exists and, thus, adds the final piece to the puzzle of this dissertation, explaining that variation in support for particular carbon pricing instruments –some firms and associations support cap-and-trade while others support carbon taxation and others have no preference – is largely explained by the fact that some firms receive advantage from certain instruments while other do not (see chapter 6) *and* by variation in previous experience with the instrument between firms. As the final section of this chapter explains, these two variables – advantage and experience – taken together explain the variation in carbon pricing preferences observed in this case. Before undertaking the test of the experience based on lower perceived risk differ from

those based on advantage and why not all the observed variation can be explained by differences in perceived advantage.

LIMITING RISK: EXAMPLES AND VARIATION

One of the most puzzling empirical observations related to this case is that firms, within the same industry and with similar product mixes and corporate circumstances, have adopted completely different preferences for carbon pricing mechanisms. Evidence suggests that while the influence of advantages on policy instrument preferences tends to be relatively uniform across firms facing similar corporate circumstances and market factors, there is considerable variation in the preferences of firms without an apparent competitive advantage, and market factors do not adequately explain this variation. In other words, for firms who cannot expect to gain revenue or market share due to the implementation of a carbon pricing mechanism, there seems to be no clear reason why some firms and associations support a cap-and-trade program while others either support taxation or have no official preference. Less than half of firms and associations in this study were willing to declare support for a grandfathered cap-and-trade program, despite the lower costs it would entail. While a clear perception of advantage appears to explain support for taxation by two firms in this study and cap-and-trade by another three, the majority of carbon pricing preferences remain to be explained.

The risk-advantage model provides an explanation both for the existence of variation in policy instrument preferences between similar firms and the type of policy instrument that firms have ultimately chosen to support. While firms, seeking to decrease the risk associated with the regulatory realm, would both like to keep compliance costs low and ensure cost predictability and stability over the long-term, these two

requirements can provide contradictory logic vis-à-vis carbon pricing instruments. On the one hand, a grandfathered cap-and-trade program typically is considerably cheaper than a carbon tax, but the market-determined price and the existence of complex program designs make predicting the exact price and overall cost difficult. On the other hand, once government sets a tax rate, carbon taxation would provide far more price predictability than a market-determined carbon price. Yet, given that a grandfathered cap-and-trade program is only paid on emissions over a set quota and that the exact cost would depend on the amount of other tax returned under revenue-neutrality, a carbon tax offers neither complete cost predictability nor the most likely lowest cost option.¹⁴ In short, for firms who have chosen to support carbon pricing to increase regulatory stability and, therefore, facilitate investment, but who do not perceive an advantage in either option, the choice is difficult. Which pricing instrument would have the *least* negative effect on the firm?

In some cases, officials are able to construct a very logical explanation for why one carbon pricing instrument is 'less bad' than the other. The perspective of the Canadian Petroleum Products Institute (CPPI) provides a good example of an association aiming to mitigate the risk associated with a public policy instrument. The Institute represents petroleum refiners (gasoline producers). While the organization did not have an official preference for a climate change policy instrument, the representative suggested that a carbon tax had considerable "traction" within the industry because the price on the product's emissions would be paid, not by the refiner itself, but by the consumer, preventing US refineries from gaining an unfair advantage.

¹⁴ See chapter 1 for a discussion of the costs and details of the different climate change policy instruments.

The Institute was concerned that the refining industry would relocate all refineries to the US if Canadian refiners were to face a price on carbon while US refiners did not. Absent border adjustments (which the representative appeared skeptical would be put in place given trade agreements), under cap-and-trade, refineries in Canada would face a cost that US refiners did not and cheaper gasoline from the US might enter the Canadian markets, while more expensive Canadian gasoline might also be uncompetitive in the US market. A carbon tax, on the other hand, would be paid at the point of sale, meaning that all gas sold in Canada would be treated equally, whether refined in the US or Canada. This would avoid any need for complicated tariffs or border adjustments. While the representative acknowledged that a cap-and-trade system could provide the same security, depending on the point of regulation, he appeared to view carbon taxation as preventing competitiveness issues with greater simplicity and certainty. The only possible downside would be a decline in revenue should the carbon tax cause decreased demand. The Institute, however, appeared confident that Canadian consumers would be willing to pay fairly high prices for gasoline before they started changing their behaviour (Macerollo, 2009).

Perhaps the most interesting aspect of the explanation of CPPI's perspective is not the interest in a carbon tax, but the fact that the association is unable to create a clear preference based on this analysis. Despite the strong logic in favour of taxation for refiners, the Institute faces considerable variation in preference amongst its member firms. Indeed, in the Canadian petroleum industry more broadly, there was significant variation in preferences in 2009. Some firms supported carbon taxation (Nexen,

ConocoPhillips in Canada), while others support cap-and-trade (Shell, ConocoPhillips in the US, Suncor).

The most obvious explanation for lack of agreement among refiners is that the modern multinational corporation is a maze of horizontal and vertical integration, which means that one corporate banner could fly over a number of products and processes. Different products could imply different preference logics. Consequently, companies and associations may be faced with choosing between one policy instrument, which is a source of less risk for one area of operations but a source of high risk for another, and another policy instrument with the opposite problem. This is equally the case for advantages.

Indeed, attempting to prevent this sort of contradictory logic of risk and advantage was part of the reason that Encana chose to split its oil and natural gas operations into two separate companies. Encana now focuses solely on natural gas, while the newly created Cenovus has taken over petroleum operations¹⁵. One of the company's senior executives explained:

One of the reasons for doing that is that the people who work the oil projects have a different set of issues than the people that work in natural gas projects, also a different set of opportunities. We're going to need both hydrocarbons. [Natural gas] is dramatically different in terms of the carbon load of a unit of energy . . . and people think that's the only thing [that is going to matter]. Natural gas also has no particulates, no mercury. Things that coal and oil have . . . So, the fact [is] natural gas and oil in our company are competing against one another [and, we believe,] they are not really competing as much as they should be (Protti, 2009).

¹⁵ At the time of interview, they remained one united corporation although the split was already planned.

With respect to CPPI, many refiners are also petroleum producers and/or natural gas producers and may have supported cap-and-trade at the company level for other reasons. Suncor, for instance, is a member of CPPI but strongly supports cap-and-trade as a policy instrument.

Yet, multiple products within one company do not appear to explain all of the variation in carbon pricing preference within the business community. Many companies with similar product mixes support different instruments: Suncor and Shell's support for cap-and-trade versus ConocoPhillips Canada or Nexen's support for carbon tax, for instance. In the cement industry, where the product and processes tend to be homogenous, Essroc is strongly against cap-and-trade despite the rest of the industry's unanimous support for that policy instrument. While officials at these companies tend to use the same sort of arguments in favour of their preferred policy instrument – cap-and-trade is cheaper and more flexible, while taxation offers greater price predictability and simplicity – the arguments themselves do not explain the variation but instead merely reframe the puzzle: why are certain arguments in favour of certain instruments more compelling for some companies than others? Why do some firms prefer the lower costs associated with a grandfathered cap-and-trade program when others prefer the higher price predictability of a carbon tax?

Interview subjects highlighted a possible answer to this question, which was included in the risk-advantage model: firms are more likely to support policy instruments with which they have previous experience. I argue that experience allows firm officials to judge policy instruments for themselves, instead of basing their preferences on theoretical arguments or expert advice. Furthermore, experience provides officials with perceived

certainty over the effects of a policy instrument (while theoretical arguments can be contradictory creating doubts about their validity, experience is viewed as undeniable), which in most cases lowers the perception of risk. This implication of the model and the argument behind it is tested in the following section.

THE FAMILIARITY EFFECT

Interview subjects often referred to previous experience in explaining their organizations' preferences. The European Union Emissions Trading System (EU ETS) generally increased support for cap-and-trade among European-owned companies. The representative from Shell Canada, for instance, argued:

Shell has been instrumental and very closely engaged in the development of the EU ETS. And so I think it is natural that we would have a much higher comfort level with a cap-and-trade system, but – at the same time – we are dealing in new territory [with a carbon tax]. There has never been a carbon tax that has been applied as broadly as it would have to be if we were going to implement it. . . There isn't a lot of experience out there and what there is is on cap-and-trade (Official at Shell Canada, 2009).

Interestingly, while the European system's price volatility was sometimes cited as a reason *not* to support cap-and-trade by some firms (Protti, 2009), firms with considerable experience with it never made this argument. Holcim's representative, for instance, referred to the problems but still viewed this experience as positive and part of the company's support for cap-and-trade. What appeared important was that with capand-trade they *knew* where the pitfalls lay:

It's great that the EUETS is in place because it allows us to see what works and what doesn't work. For example, we realize now how important the baseline information is when you come up with the target and how having the policies improperly done can affect competitiveness...(Robitaille, 2009). The American sulfur oxides and nitrogen oxides emissions trading program also provided companies with an opportunity to experience cap-and-trade. For Weyerhaeuser, this was integral to the company's preference: "We did sell some emission credits and we thought it was a really good program... I'm not sure if it was our company's success or the overall success of the program" (Official at Weyerhaeuser, 2009). According to National Round Table on the Environment and Economy chair, Robert Page, experience with sulfur dioxide offsets also drove his former company, Transalta, in its policy preference, as officials learned that the utility could make money through emissions trading. According to Page,

When it actually happened that we got three-times the price for those SO₂ credits than I'd estimated . . .this made a real difference to the Board's assessment even on my conservative estimates. Then, when it turned out that we made even more than that and that [emissions trading] was a significant way of financing our new technology investment in those plants . . . the company then came to understand that I, with all the emission credits that I sold and all the wind power that I brought to the company, I became a profit centre for the company (Page, 2009).

These and other references to experience within the interview data highlighted the possible significance of experience as an explanatory variable, which was subsequently included in the model. Creating a test of the variable, however, requires an understanding of the causal mechanism behind its impact. Experience could influence business preferences for climate change policy instruments in two ways. First, a firm with previous experience in an instrument would be expected to have the administrative processes in place and the expertise within the organization to efficiently handle the administrative requirements of the program. It could, therefore, be far more efficient, and thus less costly, to support previously experienced policy instruments.

As stated above, the risk-advantage model implies a second possibility: direct experience may provide managers with a greater sense of certainty over policy instrument effects and a manner in which to differentiate between competing logics in favour of each instrument. In other words, when decision makers are familiar with a policy instrument and have experienced the effects on the firm, they are more likely to feel comfortable with that policy instrument, assuming that what happened before will happen again, both with respect to the overall design of the program and the effects of the design. In most cases, experience would be expected to bolster support for an instrument, as a known problem is generally perceived as better than the utter uncertainty associated with an instrument that has never been experienced; however, if a previously experienced policy instrument caused significant damage to the firm, officials may view that outcome as equally certain should it be implemented here and therefore oppose the instrument, unless they associated the damage with a particular detail – which can be avoided – and not an integral aspect of the instrument.

Robert Page, in explaining his personal preference as Chair of the National Round Table summed up this reasoning succinctly:

My personal preference is for a cap-and-trade system because I've seen it work. I understand it. It gives companies an option to be entrepreneurial. To find the least cost options. Not to just sit back and take a tax between the eyes. There is no business judgment that's involved with the carbon tax. So I tend to prefer a cap-and-trade system over just a straight carbon tax...I guess a fall back on what I understand and what I've done...

Howlett and Ramesh (2005) made a similar argument to this in relation to *government* policy instrument choice: policymakers are more likely to favour policy instruments with which there is previous experience because it allows them to instinctively employ

objective and rational decision-making. Otherwise, the number of unknowns prevents such analyses and policymakers are left to guess at outcomes without any point of reference.

Testing the significance of experience on firm policy preferences, therefore, requires the observation of two correlations. First, if experience indeed matters to preferences, there should be a clear relationship between previous experience and the declared preference of a firm. Second, if the perception of certainty gained from managerial familiarity is what drives the link between experience and preferences, then the location of that experience – near to the offices of those making preference decisions – would be significant. The managers must have a level of connection and personal experience with the policy instrument in order for familiarity to have an effect. If cost efficiencies are the driving force, however, it should not matter where the experience is gained.

There was a clear correlation among the sample of firms in this study between those who had experience with an instrument and support for that instrument. Ten firms¹⁶ had experience with cap-and-trade systems only, while three firms had experience with carbon taxation only¹⁷. Seven of ten firms with experience with cap-and-trade supported the system and representatives from those firms directly cited their experience as a reason for their preference. When firms with only peripheral experience with capand-trade (those for whom the experience was in a jurisdiction on a different continent

¹⁶ Firms with experience with the Alberta system are not included in this count or analysis because that system is a hybrid, which could be termed either a cap-and-trade program or carbon tax. In reality, it does not fit the traditional conceptualization of either instrument and, consequently, it was not included in this analysis.

¹⁷ This summary includes Transalta, which is not included in the summary in chapter 1 as it was not technically participating.

than the company's head office) were removed from the sample, the correlation between experience and preference increased to seven of eight firms. In addition, experience with a carbon tax was found to decrease support for cap-and-trade among forestry firms who could be expected to support such a policy due to the clear advantage it offers for that industry.

Representatives of seven firms (Suncor, Transalta¹⁸, Abitibi Bowater, Weyerhaeuser, Shell, Holcim Cement and Lehigh) pointed directly to the company's positive experience with cap-and-trade as significant for their firm's support of the policy instrument. Suncor was an early pioneer in emissions trading, having taken part in the first post-Kyoto cross-border trade in 1997 with Niagara Mohawk Power in the US. The trade, facilitated by the US-based NGO, Environmental Defense, was a success and since that time the company has been committed to cap-and-trade (Lambert, 2008).

Transalta, Abitibi Bowater, and Weyerhaeuser all had experience in the American SOx and NOx cap-and-trade program, which they viewed favourably. Shell, Holcim, and Lehigh, as European owned companies, had experience with the European Union Emissions Trading System (EUETS), which became operational in 2005. In all of these cases, the firm's previous experience with cap-and-trade was cited as a significant reason why the organization now supports the policy instrument.

¹⁸ The evidence on Transalta's preferences and experience was provided by Robert Page, previously the Vice President of Sustainability for the corporation. Transalta is not included in most of the analysis of preferences in the previous chapters because Robert Page was no longer affiliated with the corporation at the time of interview. In this analysis, however, the requirement is only to know the preference and the experience of the firm, both of which was available in the data. Therefore, while Transalta is not strictly speaking a "participating firm" it is included in this chapter. It is not included in the summary in chapter 1, however, which explains the slight discrepancy in figures.

The previous chapter demonstrated that where a company had a clear advantage from a policy instrument, they are likely to support that policy instrument. It should be noted, therefore, that among the firms above, only Abitibi Bowater and Weyerhaeuser, two forestry firms, also received a clear market advantage from grandfathered cap-andtrade. For these two firms, there was a double incentive to support cap-and-trade and it is consequently impossible to determine which influence was stronger using qualitative methodology. The other firms, however, were developing preferences in the absence of clear advantage and would be expected to have focused instead on limiting risk. For these firms, previous experience appears to have decreased the perception of risk associated with the policy instrument.

Interestingly, the only firms in the study to have direct experience with carbon taxation also appeared to be influenced by this experience, in this case by counteracting the effect of the clear advantage of cap-and-trade. Forestry companies are expected to benefit the most from a grandfathered cap-and-trade program, because of the industry's ability to lower emissions cost-effectively. Nonetheless, the three forestry firms operating in BC did not have a clear, official preference for cap-and-trade. Each was hesitant to declare a preference at all, although interview subjects stated personal preferences in two cases: one for cap-and-trade and one for a carbon tax (Bradley, 2009; Brown, 2009).

Given the clear advantage of cap-and-trade for the forestry industry, this lack of official preference is surprising. It also stands in stark contrast with the clear official preferences of the forestry firms headquartered outside of BC (Abitibi Bowater and Weyerhaeuser), both of which strongly supported cap-and-trade as expected (Fairbank,

2009; Official at Weyerhaeuser, 2009). While none of the BC companies appeared completely enamored with carbon taxation, each referred to the simplicity of the system and suggested that there were pros and cons to both cap-and-trade and carbon taxation. It should be noted that none of the BC forestry firms had experience with cap-and-trade unlike the Abitibi Bowater and Weyerhaeuser. Ultimately, it appears that experience with a revenue-neutral carbon tax in BC has prevented companies from dismissing the policy option altogether and enhanced the positive aspects of taxation, which may have otherwise been ignored. In other words, experience appears to be a more significant influence on preferences than advantage. If, as the Forest Products Association's President put it, "the devil is in the details" (Lazaar, 2009), it also appears that business officials prefer *the devil they know*.

This is not to say that in all cases experience increases positive associations with an instrument. Essroc pointed to negative experience in the SOx and NOx cap-and-trade program as the main reason the company is firmly against the policy instrument. The representative stated that the company was particularly concerned about speculation and saw the instrument as controlled by "bandits in the woods:" the bankers and brokers that would take a cut of each transaction. Instead, if carbon pricing were inevitable, the company preferred taxation (Molchan, 2009). This is, interestingly, the only case in which prior experience was cited as the reason for *not* supporting a policy instrument.

There are two outliers in this pattern of experiential influence on risk assessments. Nexen and ConocoPhillips Canada, both supporting a carbon tax in Canada, have nonetheless had some experience with emissions trading in their UK operations. Interestingly, however, there was a clear difference between these two firms and the other

firms with previous experience above: unlike the other companies, in both of these cases, the experience was limited to a peripheral region of operations well removed from head offices. Both ConocoPhillips and Nexen are headquartered in North America, a continent away from the United Kingdom. In all other cases, the company's highest levels were headquartered on the continent where the experience took place.

These outliers support an underlying assumption of the above analysis: that it is managerial familiarity leading to an increased perception of certainty, rather than increased efficiency, that explains the clear correlation between experience and preference. At first glance, it might appear that experience matters because of the increased efficiencies associated with harmonized policy. Already having the administrative processes in place to deal with a particular policy instrument, a firm might believe it cheaper to stick with that policy than to change to another. While there is undoubtedly some truth to this, if the only reason for the correlation was that previous experience could be expected to lead to increased efficiency and lower costs, then the location of the experience should have had little effect. ConocoPhillips, for instance, could have transplanted the policies already in place in the UK to Canada and even transferred personnel to ensure they had the expertise to do so (interview subjects referred to prior circumstances in which personnel with climate change expertise were transferred from one arm of the company to another to augment the knowledge base).

Instead, this dissertation argues that experience is significant in firm policy instrument preference development because it provides the perception of certainty over outcomes. Having personally experienced a policy instrument before and seen the firm survive it, managers assume that future experience with the policy instrument will mirror

past experience. The effects of the previously experienced policy instrument are viewed as more certain and, therefore, the policy instrument is less a source of risk to the firm; objective investment choices are more possible. This perception, however, requires that the decision-makers are comfortable and familiar with the policy instrument (otherwise, it remains an unknown). That perception would be strongest when the experience is in the jurisdiction in which the firm's decision-makers are based and weakest when it is many jurisdictions removed from those offices.

As table 3 illustrates, the findings here support this interpretation: Of the 13 firms with previous experience with an instrument, only three did not appear positively influenced by that experience. Of those, two firms had only peripheral experience with the policy. In all of the ten cases in which firms demonstrated a positive correlation between experience and support, past experience was in the same continent, and generally same jurisdiction, as the head office where key decision-makers were based. Thus, this research demonstrates a clear "familiarity effect" in which managers are more likely to support a policy instrument that they, along with their organization, have experienced.

Table 3: Experier	nce, advantage and preferences		
Firm	Previous Experience in same jurisdiction as head office	Apparent advantage	Preference
Suncor	Cap-and-trade		Cap-and-trade
Abitibi Bowater	Cap-and-trade	Cap-and-trade	Cap-and-trade
Weyerhaeuser	Cap-and-trade	Cap-and-trade	Cap-and-trade
Shell	Cap-and-trade		Cap-and-trade
Holcim	Cap-and-trade		Cap-and-trade
Lehigh	Cap-and-trade		No preference
Transalta	Cap-and-trade		Cap-and-trade
Essroc	Cap-and-trade		Voluntary or
			Carbon tax
Canfor	Carbon Tax	Cap-and-trade	No preference
West Fraser	Carbon Tax	Cap-and-trade	No Preference
Catalyst	Carbon Tax	Cap-and-trade	No Preference
	Previous experience outside		
	of head office jurisdiction		
Nexen	Cap-and-trade (UK – head		Carbon tax
	office in Calgary)		
ConocoPhillips	Cap-and-trade (UK – head		Carbon tax
Canada	office in Calgary/Houston)		
	No Experience		
St. Mary's	No	Cap-and-trade	Cap-and-trade
Union Gas	No	Carbon tax	Carbon Tax
Encana	No	Carbon tax	Carbon tax
Petro-Canada	No	No	No Preference
Gaz Metro	No	No	Cap-and-trade

CONCLUSION

This chapter along with the previous on advantage explains the variation in preferences for particular carbon pricing instruments. While almost all participating firms in this study articulated support for carbon pricing in general, they could not agree on which type of carbon price ought to be implemented. Amongst the firms examined here, ten firms supported cap-and-trade, five supported carbon taxation and five had no preference. While firm officials often made similar arguments in supporting their preference (cap-and-trade is cheaper and more flexible, while taxation provides greater price predictability, efficiency and simplicity), it was not immediately clear why some firms dismissed arguments that others found compelling. These arguments did not, in of themselves, appear to explain the variation. However, when previous experience and perceived advantage are examined in relation to preferences, a pattern begins to emerge. Table 3 does just that and the pattern that emerges can be summed up in the following five statements:

- 1. Where a firm has previous experience in a carbon pricing instrument in the same jurisdiction as the head office of the firm (local experience), but no apparent advantage in either instrument, it supports the instrument with which it has experience.
- 2. Where a firm has local experience with an instrument and can expect to receive an advantage from that instrument, it supports that instrument.
- 3. Where the firm has local experience with one instrument, but can expect to receive an advantage from another, it has no official preference.
- 4. Where a firm has no local experience, it supports the policy instrument with which it can expect to gain advantage.

5. If it has neither local experience nor advantage, no clear explanation for preferences is apparent (they appear somewhat random – two in favour of a carbon tax, one with no preference, one in favour of cap-and-trade).

There are only two outliers in this pattern of preferences: Essroc opposes cap-andtrade despite experience with it in both the US and Europe and Lehigh, despite experience with cap-and-trade in Europe, has no official preference.

In summary, therefore, this chapter demonstrated that firm decision-makers' familiarity with a policy instrument through past experience was the most significant predictor of preferences for a cap-and-trade program versus a carbon tax and even decreased the impact of a clear advantage on corporate preferences. This chapter argues that this is because experience increases the perceived certainty over outcomes and, thus, affects the evaluation of the level of risk entailed by the policy instrument.

The previous four chapters of this dissertation undertook two interrelated exercises: they tested the validity of the risk-advantage model induced during the first phase of interview research by examining its utility in explaining, first, the 2006-2007 shift in aggregate business preferences and, second, the variation in current preferences for carbon pricing instruments. To this end, the model provided considerable benefit by highlighting significant variables – particularly, third-party investor concern and previous experience. A change in perception of investor concern, based on changing expectations for future policy implementation, led to a general shift in business preference towards carbon-pricing in 2006-2007. Variation in the type of carbon price subsequently supported by firms can be explained either by the advantages offered by the policy instrument or by firms' experience with a policy instrument. As such, the model-testing phase suggests that the model provides a good foundation for understanding corporate preferences for climate change policy instruments in Canada.

CHAPTER 8: THE IDEAS OF MANAGERS – A NULL FINDING WITH POTENTIAL

Interview subjects often referred to the convictions or beliefs of key decisionmakers as significant in determining business preferences for climate change policy instruments. This chapter explains why the convictions and beliefs variable was ultimately left out of the final model of this dissertation: because no independent evidence was available to support the argument and, once experience and competitive advantage were taken into account, there appeared to be little left to explain. This does not mean that the ideas of key managers are of no import; the final section of this chapter discusses how managers' ideas about risk – as relating to short-term profits or long-term expected profit – may impact firm action on the environment. This latter finding, while preliminary, suggests a significant avenue for future research.

CONVICTIONS AND BELIEFS

In the first phase of research, interview subjects highlighted the convictions or beliefs of key decision-makers in determining preferences. For instance, the former official from Petro-Canada in explaining the company's hesitance to declare a climate change policy preference, stated: "I'd say the CEO sets the tone for sure." The interviewer clarified, "So, another CEO may have gone another direction?" The former official at Petro-Canada's responded, "Absolutely." Other interview subjects also referred to the significance of their CEO in supporting a particular preference, often
telling stories about the CEO's personal or professional history or even family situations (Dill, 2009; Mitchell, 2009). Clearly, interview subjects believed that the values that their leaders brought to their organization had a significant impact on the policy preferences of the firm.

This was equally true of associations as firms. Canfor's Mike Bradley, previously chair of FPAC's climate change committee, described how the Association's staff influenced firms in supporting emissions trading in 2003:

Someone's got to convince [the CEOs] that there might be more to gain by doing this than lost. And that's where groups like FPAC played a very important role... If you'd had a different group there, they could have actually argued against it. They could have all these compelling reasons why not to do it...the leadership of the group [makes the difference]. That's the people – they're personalities, where their hearts are... (Bradley, 2009)

While interview subjects clearly viewed convictions and beliefs of particular individuals as important, testing the significance of these variables in the second phase of research presents a particular methodological challenge. If personal convictions and beliefs were a significant determinant of policy preferences, evidence of a pattern of preference change when and if the corporate or association leadership changes would be expected. Uncovering such patterns, however, presents a challenge because it requires knowledge about the internal workings of firms and associations, an area that is generally beyond the scope of this research.

There is some evidence that a pattern may exist: Shell Canada changed its preference in 2007 immediately following the disbanding of its Canadian board of directors in favour of its European board. Prior to 2007, Shell Canada was – like many Canadian companies – avoiding a strong stance, accepting only intensity targets at a

limited level. Royal Dutch Shell (RDS), the international company that at the time owned 78% of Shell Canada, on the other hand, was actively examining future scenarios related to climate change. These scenarios analyzed the likely future conditions for the business if: a) "climate change events precede climate change action" (called the "scramble scenario") or b) "climate change action precedes climate change events" (called the "blueprint scenario") (Official at Shell Canada, 2009). Royal Dutch Shell ultimately came to believe that a scramble scenario would lead to such severe restrictions on operations that the company's future could be threatened. Officials decided, therefore, that "the well-being of our company is best served by a blueprint scenario" (Official at Shell Canada, 2009). The European company's preference for "climate change action" was a cap-and-trade program. As noted above, this was the instrument with which the European company had substantial experience through the EUETS.

Despite the fact that it owned the majority of the Canadian company's shares, Royal Dutch Shell was in a minority shareholder position on Shell Canada's board of directors prior to 2007. Only four out of ten board members represented Royal Dutch Shell; the rest were made up of Western Canadian business officials. In 2007, RDS purchased the remainder of Shell Canada's shares and took complete control of its operations, disbanding Shell Canada's independent board of directors. According to the company's representative, Shell Canada's preference for a cap-and-trade system dates "more or less [to] when Shell Canada became 100% owned by the Royal Dutch Shell group" (Official at Shell Canada, 2009). Thus, in the case of Shell Canada, the individuals involved did appear to influence preferences.

Two points however draw into question the significance of convictions and beliefs: first, the switch to the European Board of Director also changed the experience on which the board was drawing. The Canadian board had no experience with any instrument, while the RDS board had, by that time, two years experience in emissions trading through the European system. It is likely, therefore, that the shift had less to do with personal convictions and beliefs and more to do with changes in experience. Second, the purchase of Shell Canada by RDS took place during the same time period as the shift in general business preference in Canada in favour of carbon pricing. It is likely, therefore, that some form of change in preferences would have taken place at Shell Canada at that time even if the company's board had remained independent.

The methodological challenges inherent in testing the convictions and beliefs variable, thus, include: the inability to collect adequate data and the difficulty with differentiating between the experience variable and the convictions and beliefs variable. Faced with these problems, the first step in testing the significance of personal convictions and beliefs was to determine whether, after the competitive advantage and experience variables are taken into account, there is anything left to explain. If the answer is yes, then further data collection is warranted. If the answer is no, then the issue is moot.

As it turns out, with respect to firm preferences, almost all of the variation in corporate preferences for carbon pricing instruments can be explained through either the advantage or experience variables. Table 4 below, similar to table 3 in chapter 7, lists firms and preferences in relation to advantage and prior experience, both firms whose

preferences can be explained by expectations or advantage and those that remain unexplained.

Table 4: Correlation between experience and competitive advantage and preference

Variation explained by competitive advantage or experience

Firms with a competitive advantage that	
correlates with their preference	
St Mary's Cement	Cap-and-trade
Encana	Carbon Tax
Union Gas	Carbon Tax
AbitibiBowater	Cap-and-trade
Weyerhaeuser	Cap-and-trade
Firms with experience in one carbon	
pricing instrument, but an advantage in	
another.	
West Fraser	No Preference
Canfor	No Preference
Catalyst Paper	No Preference
Firms with local experience that correlates	
with their preference.	
Firm	Preference
Suncor	Cap-and-trade
Abitibi Bowater	Cap-and-trade
Weyerhaeuser	Cap-and-trade
Shell	Cap-and-trade
Holcim	Cap-and-trade

Lehigh

Transalta

Variation NOT explained by competitive advantage or experience

Cap-and-trade Cap-and-trade

Firms with local experience, supporting the opposite policy instrument Essroc (experience: cap-and-trade)	Carbon tax or voluntary
Firms with peripheral experience, supporting the opposite policy instrument ConocoPhillips Nexen	Carbon Tax Carbon Tax
Firms with no experience or advantage Gaz Metro Petro-Canada	Cap-and-trade No preference

Only five firm preferences are not, at first glance, explained by either the advantage or experience variables – when the latter is defined as a positive correlation between experience and preference. Upon closer examination, however, experience did play a role in the preference of one of those firms. Essroc's negative experience with cap-and-trade led the company's representative to believe that any future cap-and-trade program would have similar problems; in other words, the negative experience did provide certainty to the firm, but by causing it to abandon one possible policy instrument choice, in favour of the alternatives. Consequently, while the familiarity effect appears to generally breed support for an instrument, Essroc reminds us that, if a policy instrument is implemented badly in one instance, a firm may not support it in others.

Thus, of the 18 firms discussed in this study¹⁹, only the preferences of four cannot be explained by competitive advantage or previous experience. It is possible, therefore, that in the absence of advantage or experience, officials draw on their personal convictions or beliefs about a policy instrument and its effects. More research, however, would be required to determine the extent of that effect. This limitation is a problem inherent to the small-*n* nature of this study. A larger dataset would allow for multiple regression analysis, which could determine whether the remaining effect can be attributed to convictions and beliefs when other variables are held constant. Without a larger data set, however, this is not possible and, therefore, for the purposes of this study, the significance of this variable is considered null.

In addition, the increased support for carbon tax in the sample of "unexplained" firms suggests that that continuing research agenda ought to examine whether firms with

¹⁹ Transalta is included here as in chapter 7 but, as it is not strictly a participating firm, it is not included in the summary in chapter 1.

no advantage or direct experience prefer carbon taxation more frequently. If a larger sample of firms demonstrates that this is the case, this finding might further support the significance of the familiarity effect, given that taxation in general is a policy instrument with which firms have considerable experience, even if carbon taxation is new.

Thus, while further research is required, it appears that the convictions and beliefs of key managers had very little if any affect on the climate change policy instruments of firms in this study. This does not mean, however, that the ideas of managers have no import: during the course of this study, a correlation was found between managers' perceptions of risk – as relating to short-term profits versus long-term expected profits – and the level of environmental engagement undertaken by the firm. In other words, companies where managers thought of climate change policy instrument risks as only impacting the next quarter or next year's profits were far less proactive than companies who took a long-term view. For the latter group, climate change policy in general and their specific policy instrument choices was much more a matter of survival for the firm, than for those with a short-term view. In both cases, the concern was that profits would fall, but the latter group perceived a greater threat to the firm and was therefore more proactive. The final section of this chapter examines the evidence related to this temporal aspect of risk in greater detail.

LONG-RUN VS. SHORT-RUN PERSPECTIVES ON RISK

The distinction between the long-run and short-run is significant in microeconomics. The short-run is a time period when many fixed commitments dictate firm decision-making (such as contracts or leases), while in the long run all commitments are variable. In the short-run, fixed costs might make entry into or exit from a market

challenging. In the long-run, however, a firm can enter the market in response to longterm expected profits and it can leave that market in response to losses. In other words, while in the short-run, the way things are now might limit choices, in the long-run, anything can change.

The distinction between the long-run and short-run is useful here because it highlights two potentially different perspectives on risk related to climate change policy instruments. Managers with a short-run perspective might view the firm's current commitments, the firm's current profits, and the current configuration of the market, as preventing any major upset. Climate change policy instruments, therefore, would represent another increased cost but would not be viewed as representing much of a threat. In the long-run, however, everything can change and firms could loose their market share and even be forced out of the market due to changes brought on by climate change policy instruments. For those with a long run view, the risks associated with climate change policy instruments could be substantial and they would warrant immediate action.

This difference in managerial perspective might therefore help explain the differences in environmental action of major firms. In other words, it might explain why some firms are leaders and others are laggards. Certainly, the evidence from this study suggests a correlation between a long-run perspective and greater environmental action. There are, however, significant limitations to this finding: there were not enough laggard firms within the dataset to provide a reliable test of this hypothesis. Moreover, while this chapter assumes that long-run and short-run perspectives are ideational, other material explanations – for instance, that a firm has more long-run capital-intensive stock than its

competitors – might also explain managerial perspectives. Nonetheless, the evidence from this study is laid out for each industry included with these limitations discussed in the final section of this chapter.

CEMENT

In the cement industry, a long-term perspective appears to have been prevalent across the industry from an early stage. In 1999, ten of the world's biggest cement companies formed the Cement Sustainability Initiative (CSI) under the rubric of the World Business Council for Sustainable Issues. The group has since expanded to include twenty-three members ("World Business Council on Sustainable Development," 2010). All of the participating cement firms in this study are now members of the organization.

The initial group commissioned a \$4 million research project on the "long-term sustainability" of the industry from Battelle Memorial Institute in the US (Klee and Coles, 2004: 115). Independent observers monitored the venture, including Mustafa Tolba, former Director General of the UNEP. The "Battelle Report", entitled *Towards a Sustainable Cement Industry*, was published in March 2002 and called for a number of changes within the industry. In response, CSI members published an action plan, entitled *Our Agenda for Action*, in July 2003, "to fundamentally examine and change the way in which [the cement industry] does business" (Klee and Coles, 2004: 114).

The founding of the Cement Sustainability Initiative was directly related to the recognition by leading cement firms that, in a low carbon future, the viability of cement as a product and the industry as a business would be questionable. According to Howard Klee, CSI Project Manager, and co-author Elaine Coles:

This was of course not simply an altruistic decision – it is an acknowledgement by the participating companies that their 'license to

operate', competitiveness, profitability and ultimately long-term survival are inextricably linked to meeting their environmental and corporate social responsibilities (Klee and Coles, 2004: 115).

Had there been any doubt of this fact when the initial group formed in 1999: "the [Batelle] report's message to the cement industry was unambiguous – the industry needs to change in order to ensure its long-term survival and success" (Klee and Coles, 2004: 116).

As most cement firms are headquartered in Europe where climate change became a salient issue much sooner (Lorenzoni and Pidgeon, 2006), the industry acted far earlier than North American manufacturers (Page, 2009). Canadian subsidiaries have subsequently adopted their parent company's preference, a fact that explains the comfort with which cement firm representatives speak of cap-and trade. Only one firm in the industry, Essroc (subsidiary of Italcementi), supports a carbon tax due to concerns over possible speculation within a carbon market (Molchan, 2009; Robitaille, 2009).

The cement industry, perceiving the risks of climate change over the long-run, moved early to adapt to climate change regulation. This perception of risk related to climate change was likely linked to the same forces discussed chapters 4 and 5: public opinion and investor expectations for regulatory policy changes. As the leading cement firms are based in Europe, their perceptions of threat would be related to the policy climate in Europe and public opinion there. It should be noted that, unlike in North America, by the mid 1990s, between 84% and 89% of the public in Europe reported being very or quite worried about climate change (Lorenzoni and Pidgeon, 2006). Moreover, by the late 1990s, the signing of the Kyoto protocol and European governments' proactive

stances would have been expected to increase public and investor expectations for greater regulatory action. Thus, faced with a new policy climate that could threaten their longterm viability, cement firms as a group reacted proactively, not obstructively, to adapt to the new business environment and ensure their long-term viability.

PETROLEUM

In the petroleum industry, there is much more variation among firms as to their level of action vis-à-vis climate change. Some firms are known to be leaders while others are considered laggards. What might explain this variation? Differences in managerial perception of the risks associated with climate change as either affecting short-term profits or long-term expected profits could explain differences between firms.

Certainly, evidence from this study points to this pattern, although unavoidable limitations with the data prevent a conclusive result. On the one hand, four of the petroleum companies in this study – ConocoPhillips, Suncor, Nexen and Shell – have been extremely proactive with respect to climate change: defining clear preferences, articulating those preferences publicly, hiring staff to deal with climate change directly, and creating public communications on the issue, among other things. Managers at these companies did perceive the regulatory threats associated with climate change in very broad terms, using language that demonstrated a concern for each company's long-term survival. Officials from Shell, ConocoPhillips and Suncor pointed to possible market closures and product bans due to the environmental impacts of the oil sands. Nexen's representative talked about the possibility of higher costs leading to hostile acquisition due to the falling share prices associated with climate policy:

When I talk about Shareholders, it's just a recognition that it's not our money, it's their money. So, they expect and deserve a competitive rate of

return. If they don't get it, you run the risk of having them withdraw their funds and having them go invest in someone else. Where you get into real big differences for what the cost of producing a barrel of oil is here vs. the cost of producing a barrel of oil in the United States, you get into competition issues. And, if you are interested in investing in the oil and gas sector and you are going to get a more competitive rate of return from investing in Hess or in El Paso or some equivalent American organization or somewhere else, investors may choose to do that and then you end up with Canadian companies being disadvantaged. Their credit rating goes down, their share price goes down, they still have reserves, someone comes along and takes them out (Robson, 2009).

Thus, for each of these corporations, climate change merited attention largely because it

could undermine the viability of the firm over the long-run.

The fifth petroleum firm in this study, Petro-Canada, purposely avoided a

proactive stance on the issue. The company's representative explained:

If we don't see a benefit but we see risk, then we are not going to publicly disclose things. In those kinds of things, in reputation management . . . like a Nexen or a Suncor who may not have a direct link – well, in Nexen's case no real link – to the gas pumps, they can say whatever they want and the public [can't respond]. Particularly Nexen can say, "oh yeah, we love carbon tax" because they don't have customers that are going to *not* go to their gas station. So, Petro-Canada's behaviour was really based on [the fact that] we're Canada's gas station: we have 1500 gas stations across Canada. Given that we started as a crown corporation, if an email went around [stating], "lets boycott gas stations", well, what gas station would they boycott? Petro-Canada. So, we would manage our reputation very carefully. So, there is really no benefit to Petro-Canada coming out publicly and saying we're in favour of a carbon tax or we're in favour of a cap-and-trade.

The claim that Petro-Canada purposely avoided taking a stance on climate change is supported by the corporation's annual reports. Climate change is not mentioned within the company's annual reports until 2008, much later and far less than other participating companies in the industry. The firm was, however, very happy to allow CAPP to deal

with the issue in its stead and supported any action that the association viewed as necessary (Former Official at Petro-Canada, 2009).

Petro-Canada's policy of avoidance corresponded with a lack of concern on the part of the company representative about the implications of climate change policy instruments for the long-run viability of the firm. The interview subject stated that the company's climate change strategy "was really risk mitigation" and defined risk in terms of increased or variable costs. When asked if this could threaten long-run survival, however, the official responded "no, because supply and demand would kick in." From Petro-Canada's perspective, he/she argued, the company would merely pass on the cost to consumers and, unless there was a change in demand, the long-term viability of the corporation would not be threatened (Former Official at Petro-Canada, 2009). Thus, without a long-run perspective, the company saw "no benefit" in proactively taking a stance on climate change. Instead, they saw a proactive strategy as threatening the company's political stance.

Interview subjects at the proactive companies also supported the hypothesis that less proactive companies conceived of risk in a short-term rather than long-term perspective (Auston, 2009; Official at Shell Canada, 2009). A representative at Shell Canada described that company's perspective on climate change policy as:

[In a] scenario where we don't act for five to ten years, when action happens it will be so severe and draconian that it will be very damaging to the company, our interests, to our shareholders . . .We intend to develop the oil sands resource. Ten years from now, if climate change has not been addressed, people might say, "well, no, I'm afraid you can't develop that oil sands resource anymore." So, we think it's best for us to take action and take action now in a meaningful way (Official at Shell Canada, 2009). A ban on the development in the oil sands would leave Shell Canada and other petroleum companies in Canada with a sizeable stranded asset that could seriously impact the company's long-term expect profits and, even, its survival. Whether a company perceives this threat as probable, therefore, would impact whether they adopt a proactive strategy with respect to climate change. The official at Shell Canada believed that inactive firms "must come up with different visions in terms of planning and how long they are planning for" (Official at Shell Canada, 2009). He/she suggested that a company like Exxon – "probably today the most successful oil and gas company in operation from a revenue and profitability perspective" – must feel that, given their current success, the best strategy is to advocate the status quo and avoid increased costs, as long as possible (Official at Shell Canada, 2009). The difference between these companies according to the Official at Shell Canada: "It's risk and it's also being broader minded in your thinking in terms of what influences will make you a successful company or an unsuccessful company"(Official at Shell Canada, 2009).

Consequently, interview data from the petroleum sector also suggests that proactive companies conceived of the risks of climate change from a long-run perspective, while the only petroleum company in this study that adopted a policy of avoidance, did not. Moreover, interview data suggests the hypothesis that this phenomenon is not unique to the participating firms in this study.

TRANSALTA

Robert Page, former senior executive at Transalta, was interviewed for this study in his capacity as Chair of the National Round Table on the Environment and the Economy. Transalta was generally not included as a participating firm because Robert

Page was no longer affiliated with the company when he testified. His testimony with respect to Transalta is, however, used here to augment the data from other industries.

Transalta is often cited as a leader on climate change among firms in Canada. Supporting the data from other industries, Robert Page, suggests that the company's proactive strategy is due largely to its concern for its long-term survival:

For some companies, they look at the bottom line as something on a year by year basis and what's really critical is what will the numbers be for the next quarter, the next half, the next year. That's what drives the share price and, therefore, that's the only thing [they] should really be [looking at]. Something out five years, ten years, fifteen years, then, is not something that [they're] going to be concerned about. The proactive school says, 'look, unless I'm working on public policy, or public attitudes, or new technology development or innovation and this kind of thing, because its all interrelated, then I'm going to get hit and I'm going to get hit hard'. Transalta has been in business for 100 years and they view themselves as wanting to be in business for another hundred years (Page, 2009).

As a coal-fired utility, Transalta – like cement producers and proactive oil producers – saw climate change as something that could – *in the long-run* – undermine the company's entire business model. This was both because increased public concern for climate change might lead governments to limit or ultimately ban the use of coal and because reputational concerns could impact revenue. Page argued that many firms have learned this lesson due to recent environmental scandals:

Risk is more than just a financial question. Risk brings in the issue of the brand. You know, the Exxon Valdez, had it [belonged to] a smaller company, could have easily put Exxon into bankruptcy because at one point the liability was over 6 billion dollars that they were having to pay in connection with it. They had the resources to cover that [but] many companies wouldn't have. [In addition,] when you had the Exxon Valdez, a whole group of people publicly sent in their credit cards chopped up . . . When your corporate brand for environmental, or safety or health reasons gets a real whack, than that in turn hits you in terms of your market sales.

People back away from buying your product in connection with it (Page, 2009).

In order to forestall possible product bans and possible brand implications not only in Canada but in the US, Transalta became active: decreasing emissions, buying emission credits and taking part in emission credit trades from an early period. Having had positive experience with these endeavors, Robert Page contended that the company remained committed to emissions trading as its preferred climate change policy instrument (Page, 2009).

THE LIMITATIONS

While the available observations all support the hypothesis that different managerial perspectives on risk – namely whether they take a long-run or short-run perspective – impact the environmental action of large firms, there are clearly limitations with the available data. First, there is only one non-proactive company in the sample: Petro-Canada. It is, consequently, difficult to generalize to other non-proactive firms based on evidence from a single case.

Second, the former official at Petro-Canada was speaking after Petro-Canada was no longer operational, having been taken over by Suncor a few weeks prior to the interview. It is difficult to be certain, therefore, whether that particular official was in a good position to speak for the firm. Consequently, while the above statements do provide an indication of corporate policies with regard to climate change at Petro-Canada prior to 2009, they are less reliable than the statements of other petroleum executives, all of

whom had the authority and authorization to speak for the firm while it remained operational. Unfortunately, all of those officials were from proactive firms.

The reason the lack of more inactive companies, however, was not that I intentionally sought out only proactive firms, but that so-called laggard companies generally refused to participate. Officials at Imperial Oil (also called Esso or ExxonMobil), Total, Husky, Canadian Natural Resources Limited and Synenco were also contacted and either refused to participate or did not respond to requests. While it would be inappropriate to label the level of activity of these firms without either interview data or further primary research, none of these firms were highlighted as leaders by interview subjects from government, NGOs or other firms, which the proactive companies above were. It appears, therefore, that at least some of these firms would be considered inactive on the issue.

Interestingly, refusing to publicly discuss their climate change preferences and action may go hand in hand with an inactive strategy. Indeed, an official at Imperial Oil – a subsidiary of ExxonMobil well known for its obstructionist behaviour with respect to climate change – explained that he could not submit to an interview because it was the company's policy not to discuss internal decisions. The Petro-Canada representative confirmed that this had also been that firm's policy:

Our 'preference' was not to be in favour of any kind of policy. And that's frankly kind of the way Petro-Canada operated. We were very tight about what we would communicate publicly, which is probably why you were having difficulty getting someone to talk to you (Former Official at Petro-Canada, 2009).

The former official at Petro-Canada only agreed to speak after the company had been taken over by Suncor, freeing him/her from the shackles of the corporation's policies.

Third, it was beyond the scope of this study to determine why managers at some firms adopt a long-run perspective, while others adopt a short-run view. While I interpret this finding as indication of the significance of ideas for firm environmental action, it is equally possible that it is indicative of differences in the characteristics of the firm. Managers in firms with more long run capital stock might take a longer-run view, for instance. The alternative explanation, and the one assumed here, is that differences can be attributed to either CEO leadership or corporate culture. Again, however, this requires further study.

CONCLUSION

This chapter explained why the convictions and belief variable was left out of the final iteration of the model and also discussed an alternative way in which managerial ideas may be significant for environmental politics. While of possible import, the case cannot be made that convictions and beliefs are of significant enough influence to warrant inclusion in the model. The final chapter of this dissertation concludes by summarizing the findings and highlighting other areas of future research.

CHAPTER 9: CONCLUSIONS

This research began with an empirical puzzle: why did leading Canadian firms and business associations declare support for a carbon price over less costly voluntary options? It concludes with an empirically validated model that explains business preferences for climate change policy instruments in Canada. I argue that business preferences for climate change policy instruments are determined by senior officials through an analysis of three central factors: the risks implied by the policy instrument for the firm's own capital investments, the effect that an instrument could have on the risk perceptions of external investors and, finally, any possible advantage that the instrument might offer. As these analyses ultimately require managers to make predictions about an uncertain future, these assessments are strongly affected by expectations about future government policy choices – both the likelihood and form of regulatory change, and the specific design and impacts (in terms of absolute level of cost and predictability of those costs) of any instrument implemented. Expectations about the likelihood and form of regulatory change are in turn influenced by the political context, while the firm's previous experience with a policy instrument strongly influences managers' perception of the impacts that the instrument would have on the firm.

This dissertation responded to the empirical puzzle by asking: what causes variation in business preferences for climate change policy instruments over time and between organizations? The model advanced herein provides an answer that, like the question, has two parts. Variation in preferences for climate change policy instruments *over time* is caused by changes in the political context – changes that create uncertainty

about the regulatory environment, and thus risk to investment. Variation in preferences *between organizations* is the result of two factors: Differences in the potential advantages that certain policy instruments might create for certain firms, and differences in previous experience with particular policy instruments on the part of firms. The impact of political context and past experience mean that business preferences for climate change policy instruments are shaped by the past actions of governments, and the prospects of future action by subsequent governments. Business preferences in this domain are thus mutable and endogenous to the business-government relationship itself rather than fixed and exogenous. This finding not only contributes to our understanding of the Canadian case; it also lays the foundation for further research into business-government relations more broadly.

SUMMARY OF THE CANADIAN CASE AND CONTRIBUTIONS

This research was originally conceived as a study of business influence on climate change policy in Canada. The unconscious assumption at the root of such an enterprise was that business was somehow to blame, likely due to a need to avoid cost, for Canada's continued failure to take substantial action to reduce its growing greenhouse gas emissions. By understanding how business influenced government in Canada, an understudied area of research, policy-makers and environmentalists might be able to overcome this influence and finally take action on climate change.

Then, in January 2008, the news from Ottawa highlighted not only the fact that this assumption was unproven, but also that it might be inherently flawed. The National Round Table on the Environment and the Economy had called for a carbon price – erroneously reported in the media as specific support for a carbon tax. The government

was derisive; the opposition responded by reiterating its support for cap-and-trade. The only outright defenders of the NRTEE that day came from the business community and, indeed, from two of the country's most powerful business groups: the Canadian Council of Chief Executives and the Canadian Association of Petroleum Producers.

This turn of events threw into question the very viability, in addition to the utility, of a study of business influence on climate change policy at that time. Were business preferences actually impacting the climate change policies of the Government of Canada? How could we know if business was exerting influence on policy outcomes without first knowing what business actually wanted when it came to climate change policy in Canada? The one was a prerequisite to the other.

The research presented in this dissertation, therefore, furthers the study of business-government relations on environmental policy in Canada. By focusing entirely on business policy instrument preferences – what businesses want from government and why they want it – it provides clarity on the incentives and motives of one half of the business-government relationship, the half that has generally received less attention in the study of public policy in Canada. In doing so, it sets a foundation for future studies of business influence on public policy in Canada.

This research demonstrates that, in deciding to support one policy instrument over another, firms do not only seek to limit compliance costs, but also to ensure cost predictability and stability and, where possible, to gain advantage. Where an expectation of regulatory change has created regulatory instability (the inability of firms to know what their regulatory costs will be during the lifespan of their investments), businesses will adopt preferences for the policy instruments deemed most likely to be implemented

and, therefore, to create a new stable regulatory environment. In the Canadian case, large business in Canada supported the least expensive and most predictable policy instruments, voluntary agreements and subsidies, for 15 years - until public opinion created strong expectations for regulatory change, not just among firm officials but among their investors. Once this happened, the status quo was viewed as transitory and could not be relied upon to be relevant to future investment decisions, either within the firm or by external investors. Creating a new regulatory equilibrium, therefore, required that government implement a new policy as soon as possible and large business in Canada, almost *en masse*, changed their preferences to the type of policy instrument deemed most likely: carbon pricing. This happened even though carbon pricing instruments would be far more expensive than the status quo – voluntary agreements and subsidies.

In choosing between probable policy instruments – in this case, types of carbon pricing instruments – firms obviously prefer instruments that offer an advantage over competitors. Where no such advantage exists, however, firms in Canada faced a conundrum: Do they believe the proponents of grandfathered cap-and-trade that it offers the most flexible, least cost option? Or do they believe the proponents of carbon taxation that it would be the simplest, most efficient and most predictable instrument? In other words, do they support the least expensive policy instrument or the one that offers the most predictable costs? Given the difficulty in deciding between these two negative choices, firms generally adopted preferences for the instruments that they had already experienced in other jurisdictions. I argue that this is because managers see the effects of the previously experienced instrument as more certain than alternatives. In other words,

they are able to judge for themselves what the impact of the policy instrument would be on the firm and, consequently, are more likely to support that instrument. This tendency even decreased the effect of advantage where firms had experience in one instrument but a theoretical advantage in another.

NEXT STEPS: FUTURE RESEARCH OPPORTUNITIES

TESTING GENERALIZABILITY

Where do we go from here? The risk-advantage model, developed from the answers that senior business officials, policy makers and NGO officials gave to questions about business policy preferences, clarifies the decision-making framework used by business officials in determining policy preferences. A subsequent test of that model, within the same case, demonstrated that, with one exception, it was indeed useful in explaining business preferences for climate change policy instruments in Canada over time and across sectors. It could therefore be useful in understanding business preferences for public policy instruments in other policy areas and other jurisdictions.

Demonstrating the generalizability of the model, however, will require further research. The Varieties of Capitalism literature warns us that findings related to the Canadian political economy may only be relevant in Canada and other Liberal Market Economies, like the United Kingdom, United States, Australia and New Zealand. The particular structures of the Canadian economy make corporate governance and relationships with investors a much more significant influence than in the Coordinated Market Economies common in Europe. More research is required to determine whether the model can transfer beyond Canadian borders.

Nonetheless, prima face evidence suggests that, at least in other LMEs, such as the United States, such an exercise might prove fruitful. Indeed, the key variables highlighted by the model – particularly the significance of certainty, policy expectations and investor concern – could help explain some of the more puzzling events in US climate politics since 2008. From 2008-2010, a number of US lawmakers worked to develop a cap-and-trade system for the country, ultimately failing to achieve their goal. During this period, three US petroleum firms – Shell, ConocoPhillips and BP – proposed that transportation emissions be covered within the system through an unorthodox policy instrument called a "linked fee" that would have firms buying allowances for the carbon content in their product (Lizza, 2010). Exxon Mobil had previously proposed such a fee in a letter to the Western Climate Initiative in 2008 (Stuewer, 2008). The fee would be paid on the average price of gasoline sold by each firm and based on the average cost of carbon in the cap-and-trade system over the previous three months (Lizza, 2010). Ultimately, in the spring of 2010, the American Petroleum Institute, the American Association representing oil and natural gas producers, agreed to support the idea, demonstrating a level of unanimity within the US industry that has not been apparent within the Canadian industry.

Interestingly, two of these companies – Shell and ConocoPhillips – had previously supported a traditional cap-and-trade program in the US or internationally, while Exxon Mobil was known for its obstructionist actions – including hiring climate change deniers – but has more recently declared a preference for taxation (Clark, 2009). Why were these firms' preferences now coalescing around the unorthodox idea of a linked carbon fee? When expectations for US climate policy, in addition to industry's

need to limit risks and create certainty, are taken into account, the linked fee may be seen to offer a good risk mitigation strategy for firms.

Unlike in Canada, almost all cap-and-trade proposals in the US had included a component to cover transportation fuels by forcing suppliers or refiners to hold credits for the carbon in that fuel (*Scope*, 2008). Consequently, US oil companies expected that any cap-and-trade program ultimately implemented would ensure a new and unknown cost of production, most likely at the refining or distribution stage (*Scope*, 2008). Moreover, the cap-and-trade system would provide firms with very little ability to manage the risks associated with the new cost, given that it would be determined in a new market without a clear history or pattern of volatility from which to predict future costs. In a perspective that mirror's CPPI's in chapter 5, firms were concerned that this inability to plan for or control costs would undermine the US's refining industry in favour of global competitors (Lizza, 2010).

Thus, the "linked fee" had two benefits: in comparison to a volatile market-based cap-and-trade program, it allowed firms some certainty over pricing, at least over a threemonth term. It also had the bonus of providing a possibility that, instead of paying major sums to other industries to buy credits through a cap-and-trade program, the petroleum industry could conceivably get access to some of those funds, paid to government, through other programs or tax cuts. Exxon Mobil described this possibility in its letter to the WCI in 2008:

Given WCI's choice to implement a cap-and-trade on large stationary emitters of GHGs, Exxon Mobil supports addressing fossil transportation fuels through a market-determined carbon fee, rather than direct inclusion in the cap-and-trade program. The carbon fee should be equivalent to the cost of carbon in the cap-and-trade program, with *recycle of the revenue through a broad-based reduction of a current tax on labor or capital*. The linkage

could be accomplished efficiently by basing the fee on the average cost of carbon in the industrial cap-and-trade program during a recent period of time. This "linked fee" approach *will ensure a consistent price of carbon in the market (unlike LCFS or biofuels mandates) while minimizing market instability, price volatility and the potential for supply disruptions* (emphasis addedStuewer, 2008).

The most significant variable in the equation, however, was certainty, particularly price stability, which explains a turn of events that puzzled even lawmakers. After it became clear that the "linked fee" would come under attack by media and political opponents as a new gas tax, lawmakers proposed a new option: firms would have to buy permits but government would sell those permits at a stable price outside of the normal cap-and-trade system. Industry showed no reticence in agreeing to the surprise of policymakers (Lizza, 2010). Ultimately, the new option was both more probable *and* might even provide greater certainty over costs during longer periods. While the coalition behind the US cap-and-trade system ultimately fell apart in late April 2010, the US petroleum industry's preference for a linked fee over the previously expected cap-and-trade program demonstrates the *prima face* utility of the model in understanding firm climate change policy instrument preferences in other jurisdictions.

Questions, however, remain, particularly about the generalizability of the model to other policy areas. While the Varieties of Capitalism framework does suggest the significance of relationships with investors in Liberal Market Economies, Hall and Soskice (2003) list four other "spheres" which might cause firms coordination problems. Relationships with other stakeholders – employees, unions, other firms, educational institutions – predominant in these spheres could also have a considerable effect on business policy preferences. The question that remains, therefore, is: Does the structure

of Canada's political economy mean that investors will *always* represent the most significant relational problem faced by Canadian firms or is it the specific characteristics of climate change policy instruments that lead to the preeminence of investors in the minds of policy instrument preference decision-makers grappling with that topic? Would business leaders grappling with other policy areas – employment equity, trade, health and safety – use similar decision-making analyses? Answering this question is required to determine whether the model developed here is generalizable to other policy issue areas.

CONFIRMING THE FINDINGS: EXPANDING THE N

Given the limited availability of previous research into business preferences for public policy in Canada, qualitative methods were deemed the best way to 'get at' the empirical puzzle; the most appropriate way to figure out what businesses in Canada wanted and why they wanted it was to ask those businesses, through their senior officials, directly. Interviewing other members of the Canadian climate change policy community outside industry provided corroborating evidence on business perspectives and actions. This type of research – focused directly on policy instrument preference development had not been undertaken previously in Canada.

Qualitative research, however, comes with its own trade-offs and limitations. Undoubtedly, in creating this model, a level of interpretation was required in finding patterns within the data provided by sixty interview respondents. To overcome this possible challenge, the subsequent model-testing phase, laid out in chapters 4-8, was required to ensure the model's validity in explaining the case. The model passed this test with one exception: the significance of convictions and beliefs could not be confirmed.

However, given the time involved in contacting, setting up and undertaking interviews, the sample size is relatively small. In the forestry and cement industries, this is because the industry itself is small in Canada (for instance, there are only nine member-firms of the Cement Association of Canada), while in the petroleum sector it was extremely difficult to get companies to respond despite significant attempts to expand the sample. Nonetheless, a larger sample size would have increased the reliability of the findings.

While a small-n case study format was deemed the best methodology to unravel the puzzle at this juncture, the next step in this research agenda may be to test the findings through a quantitative analysis with a larger n dataset. This would provide an opportunity to further examine certain specific implications of the model, including the link between experience, competitive advantage and specific policy preferences, as well as the possible significance of convictions and beliefs on firms without experience or an advantage. Moreover, a quantitative study could provide further support for the generalizability of the model across sectors in Canada, which in this study were only represented by their associations.

Nonetheless, the small-*n*, qualitative methodology employed here has proven fruitful in providing an opportunity for theory-building in an area of research in Canadian public policy that is generally underdeveloped. Had this research begun as a quantitative analysis, it is quite possible that the significance of risk as a concept and investment in general would have been missed.

This case-study research also demonstrates the utility of viewing the firm, not as unitary actor, but as a composite actor in which decisions are based on interactions between decision-makers (Prakash, 2000). In doing so, space is opened for ideational

components in decision-making, while not negating the significance of market factors and the incentives inherent within the structure of the economy. This does not mean that it is never useful to assume a unitary firm, but that empirical case study research, which can highlight the complex interactions of leaders in decision-making, can also be fruitful.

New avenues for future research

The patterns of firm decision-making and behaviour discussed in this dissertation also highlight specific issues in business-government relations on the environment, which require further study. Chapter 8 described one such research area: the possible link between managers' perception of climate change policy risk – from a long-run or shortrun perspective – and variation in corporate willingness to act on the environment. Do the findings of that chapter – that firms appear more willing to act progressively on the environment when they take a long-run perspective – bear out in a wider and more diverse dataset?

Another area requiring further research relates to the effect of policy learning and norm diffusion on business preferences for policy instruments. The story of business preferences for climate change policy instruments in Canada demonstrates that business, while diverse in products and processes, can exhibit an extraordinary amount of homogeneity in their policy instrument preferences. The Canadian business community adopted similar preferences for approximately fifteen years with only limited exceptions and then shifted those preferences in the same approximate period in response to public opinion. The main reason for this homogeneity highlighted in this dissertation is that Canadian firms, no matter their sector, face similar incentives and obstacles vis-à-vis investment. This does not negate, however, a role for learning and norm diffusion in

preparing business officials to view a public opinion shift as an indicator of significant shareholder concern and increased likelihood of policy change. Moreover, it might help explain why a carbon price, not traditional command and control regulation, was supported almost unanimously. Indeed, learning and dialogue could play a considerable role in creating consensus among industry officials in their interpretations of the policy issue, and their expectations vis-à-vis the possibility of regulatory change; however, this link remains elusive.

The existence of the Industry Steering Committee on Climate Change (ISC3), a group made up of representatives of Canadian business associations and large firms, particularly highlights this possibility. Several interview subjects cited the ISC3, created in the late 1990s, as providing a forum for debate, learning and collaboration. In this regard, the semi-formal organization could represent a "deliberative institution", which Hall and Soskice argue industry will develop to "enhance the capacity of actors in the political economy for strategic action with new or unfamiliar challenges"(Hall and Soskice, 2003: 12). Certainly, the organization provided a forum for firms and association to grapple with climate change as a group, cutting across sectors and organizations, at a time when industry understanding of the policy implications and science was in its infancy. Further research into the organization's role could, therefore, prove fruitful in explaining the link between policy learning and the decision-making framework described here.

One additional research area requires further attention. In this dissertation, communication between the firm and the shareholder has been portrayed as similar to that of a government and its constituents: firms take the temperature of the shareholders

through public opinion and then respond through mass marketing documents such as annual reports. Institutional investors and creditors, on the other hand, can articulate their views directly to firms in meetings and other direct communications. Thus, while institutional investors have a clear voice, shareholder perceptions can only be inferred through public opinion.

While this conceptualization of shareholder-firm interaction undoubtedly has much truth, the existence of organizations aimed at providing intelligence and advice to shareholders could provide a vehicle for more direct communications. Proxy firms, such as Standard and Poor's or RiskMetrics, provide advice and rankings of firms for the purpose of assisting shareholders in decision-making. While it would be incorrect to suggest that these firms speak for shareholders – since they do not attempt to provide any actual representation – their reports may provide another manner in addition to public opinion through which firms gauge the concerns of shareholders. Consequently, further research and theorizing is required to understand the role of external investors in public policy. Shareholder influence, as referenced in this dissertation, is undoubtedly less complex than the reality. A more nuanced understanding of the investor as a political actor is likely required.

THE FINAL WORD ...

A central finding of this research is that, when business and government negotiate on climate change policy in Canada, there is a third person at the table: the investor. Understanding the logic of investment – particularly the need for policy certainty to decrease the risks inherent in any investment – clarifies the rationale behind business preferences for climate change policy instruments. Firms and industries protect their

reputations to ensure investor confidence, while simultaneously making investment decisions within a regulatory environment dictated by government. As society moves toward more stringent environmental policy instruments, business preference is that any change happens sooner rather than later, so that a new regulatory equilibrium can be established and investment facilitated.

Business preferences are, therefore, influenced by the political context in which they are developed. The findings of this dissertation provide a basis for understanding and even predicting business behaviour vis-à-vis government under diverse political conditions. The key variables highlighted here – policy certainty, expectations for future government policy, advantage, experience and investor concern –provide a foundation for explaining or predicting how business will react when the political and policy environment changes in Canada.

Three years after interviews, the near-term regulatory expectations of all actors grappling with these issues have undoubtedly changed. As has been mentioned in previous chapters, by 2011, the failure of the US congress to pass legislation creating a cap-and-trade program and the Canadian government's continued unwillingness to act unilaterally have changed the climate change regulatory environment for Canadian firms and associations. In this new regulatory environment, it can be expected that investor concern about a firm's ability to adapt to a carbon price will also have diminished and other, more pressing "risks" will have taken centre-stage. How will Canadian firms and associations react? Will their preferences for climate change policy instruments have once again changed?

The pattern explored in this dissertation suggests that Canadian firms will adapt their support to the most certain policy instruments. It would be unsurprising if the strong support for carbon pricing that was overwhelmingly articulated in interviews in 2008 and 2009 will have diminished, as firms and associations reassess, attempting to determine whether government regulatory change of any sort is likely and, if so, what it may be. Whether they abandon their previous preferences, however, will depend on how they interpret the current policy void and whether they deem it likely to continue indefinitely.

However, the overwhelming finding of this study is that big business should not be assumed to be the enemy of strong environmental policy. Given certain political conditions – creating expectations for regulatory change and clear indications of investor concern – the firms and associations in this study demanded more stringent environmental regulations than the government was ultimately willing to provide in 2009. Given the significance of policy certainty and investment to business success, this was not altruism; it was good business sense.

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APPENDIX A: LIST OF INTERVIEWS

1	Abitibi-Bowater	Martin Fairbank, Manager, Energy Development and Strategy
2	Aluminum Association of Canada	Confidential
3	Canadian Association of Petroleum Producers	Pierre Alvarez, Former President
4	Canadian Association of Petroleum Producers	Richard Hyndman, Senior Advisor on Climate Change
5	Canadian Chemical Producers Association	Gordon Lloyd, Vice President, Technical Affairs
6	Canadian Chemical Producers Association	Richard Patton, President and CEO
7	Canadian Council of Chief Executives	John Dillon, Vice President, Regulatory Affairs and General Counsel
8	Canadian Electricity Association	Pierre Guimond, President
9	Canadian Electricity Association	Victoria Christie, Senior Advisor Environmental Affairs
10	Canadian Gas Association	Mike Cleland, President and CEO
11	Canadian Petroleum Products Institute	Tony Macerollo, Public and Government Affairs
12	Canadian Steel Producers Association	Confidential
13	Canadian Vehicle Manufacturers Association	Mark Nantais, President
14	Canfor	Mike Bradley, Director Technology
15	Catalyst Paper	Lyn Brown, Vice President Corporate Relations and Social Responsibility
16	Cement Association of Canada	Bob Masterson, Director of Policy
17	ConocoPhillips	Bob Mitchell, Manager Climate Change
18	ConocoPhillips	Dale Austin, Director Climate Change Business Frameworks
19	Delphi Group	Joe Rogers, Technical Manager
20	Delphi Group	Mike Gerbis, CEO
21	EnCana	Gerry Protti
22	Environment Canada	Confidential
23	Environment Canada	Confidential
24	Environment Canada	Confidential
25	Environment Canada	Confidential
26	Environment Canada	Confidential
27	Environment Canada	Confidential

28	Environment Canada (retired)	Dr. Robert Slater, Former Senior Assistant Deputy Minister, Environment Canada
29	Essroc Cement	Gary Molchan, VP Environmental Affairs
30	Forest Products Association of Canada	Avrim Lazaar
31	Forest Products Association of Canada	Paul Lansbergen, Director, Economics, Energy and Climate Change
32	Gaz Metro	Confidential
33	Government of British Columbia	Confidential
34	Holcim Cement	Luc Robitaille
35	International Institute for Sustainable Development	John Drexhage, Director, Climate Change and Energy Program
36	ISC3 Secretariat	Confidential
37	Lehigh Cement	Brent Korobanik, Manager, Environment
38	Mining Association of Canada	Gordon Peeling, President and CEO
39	Mining Association of Canada	Paul Stothart, Vice President, Economic Affairs
40	National Roundtable On the Environment and the Economy	David McGuinty, MP (Liberal Environment Critic), Former Executive Director of NRTEE
41	Nexen Energy	Wishart Robson, Senior Advisor for Climate Change
42	NRCAN	Confidential
43	NRCAN	Confidential
44	NRCAN	Confidential
45	Office of the Auditor General	Confidential
46	Office of the Minister of the Environment (Dion)	Confidential
47	Office of the Minister of the Environment (DION)	Dahlia Stein, Senior Policy Advisor (Environment)
48	Pembina Institute	Marlo Raynolds, Executive Director
49	Pembina Institute	Matthew Bramely, Director, Climate Change
50	Petro-Canada	Confidential
51	Shell Canada	Confidential
52	Sierra Club	Stephen Hazzell, Executive Director
53	St. Mary's Cement Inc.	Martin Vroegh, Environment Maager
54	Suncor	Gordon Lambert, VP Sustainable Development
55	The Railway Association of Canada	Cliff Mackay, President and CEO

56	TransAlta	Bob Page, Former Vice President Sustainable Development, Transalta
57	Union Gas/Spectra Energy	Julie Dill, President and CEO
58	West Fraser Timber	Cindy McDonald, Manager Environmental Affairs
59	Weyerhaeuser Company	Confidential
60	WWF/Boxfish Consulting	Lorne Johnson, Former Director of Ottawa Branch, WWF and Consultant, Boxfish

APPENDIX B: INTERVIEW QUESTIONS

Note: Interviews were semi-formal. Thus, the goal was to ask or have answered all questions on the list but there was no need to ask them in a particular order or to force subjects to stick to a particular time limit in discussions. Often interviews appeared more like a conversation and many topics not listed in these here were discussed.

BROAD INTERVIEW QUESTIONS – INDUSTRY PLAYERS (Associations/Firms)

Questions:

- 1. First, would you mind articulating the your organization's preference for which climate policy instrument (carbon tax, cap and trade, regulation, voluntary agreements, subsidies) the government adopts?
- 2. Why that policy instrument?
- 3. When do you think your organization began to adopt this view?
- 4. What was the key variable (negative or positive) that makes you believe this is the right policy instrument?
- 5. Did any one event or series of events lead to its adoption?
- 6. Did any individuals take a lead in moving the organization in that direction?
- 7. Have you faced any pressure from outside sources Shareholders, ENGOs, Customers, etc. to adopt this policy instrument?
- 8. If you had to describe your organization's views on other policy instruments, which would you be willing to accept, which concern you most?
- 9. Has your organization publicly supported this policy instrument?
- 10. Has it advocated this policy instrument to government or do you leave that to the association? How was advocacy carried out?
- 11. The Democrats have taken power in the US and I've read a number of reports of congress planning to take strong action on climate change. Does this affect your view on what Canada should do?

- 12. Within your industry is their homogeneity or diversity on this issue? Does everyone agree or disagree?
- 13. What leads to this homogeneity (diversity)?

BROAD INTERVIEW QUESTIONS - GOVERNMENT/NGO OFFICIALS

- 1. Could you state your name, title and the exact organization you work for?
- 2. Would you mind describing your job, particularly in relation to climate change policy?
- 3. Could you describe your interaction with industry on the climate change file over the past ten years?
- 4. What industry have you mainly worked with?
- 5. How would you characterize your relationship with this industry? Was it positive or negative?
- 6. What was the form of those interactions? Weekly/monthly/yearly consultations? Meetings? Telephone?
- 7. Do you have any knowledge of that/those industry(ies)'s views on which climate change policy instrument government should support?
- 8. Has that always been the case? (Has that preference changed over the past ten years?)
- 9. How has it changed?
- 10. Why do you think that is the case? (Why did they support one policy instrument over the other?)
- 11. Could you discuss their level of interest in the policy instrument? How strongly did they advocate one policy instrument over another?
- Do you think that industry perspectives have influenced government/your policy/perspective? Vice versa?