Stock Market Reactions to Supreme Court Judgements on Aboriginal Rights and Title: Implications for the Canadian Economy

by

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An essay submitted to the Department of Economics
in Partial fulfillment of the requirements for
the degree of Master of Arts

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Kingston, Ontario, Canada

July 2008

Abstract

This paper empirically tests whether unexpected changes to secure legal property rights regimes generate measurable economic effects. In Canada, recent Supreme Court judgements have dramatically changed political and legal understandings of Aboriginal rights and title. According to the Mining Association of Canada, these sudden legal changes have generated conflict and uncertainty, which has undermined collaboration and agreements between Aboriginal groups and industry, and aversely impacted the resource sector and overall economy. The paper uses an event study methodology as a framework to evaluate the validity of industry concerns. The empirical evidence - that the impact of unexpected legislative changes to Aboriginal rights and title is limited to resource-orientated sectors, that the significance of this effect is dependent on the amount of uncertainty and new information generated by the judgement, and that the impact is not instantaneous due to the complexity of the law - is consistent with industry claims. The evidence provides cautious support for the hypothesis that sudden changes to secure legal property rights regimes negatively impact long run economic growth and development.

Acknowledgments

I would like to thank my advisor Professor Cherie Metcalf for her invaluable guidance, patience, time, and enthusiasm. I would also like to thank the QED MA Class of 2008, which made my experience at Queen's an unforgettable journey.

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1 Introduction

Indigenous peoples around the world are undergoing a transformative period in their relations with state governments. While colonial practices and attitudes remain deeply embedded in institutional relationships, the influence of a number of factors (ie. historical, legal, social, political, and economic), has significantly changed this relationship over time. This paper focuses on the development of Aboriginal rights and title in Canadian policymaking and law. Recent Supreme Court of Canada judgements in particular have had dramatic implications on formal and interpretative understandings of Aboriginal rights and title, as well as on perceptions of property rights.[1]

As rising commodities prices expand natural resource exploration and development activities, much of Canada's economic growth potential is linked with traditional Aboriginal lands. Aboriginal peoples often require recognition of rights and security of land tenure as preresquites for resource development and industry partnerships. In cases where Aboriginal land claims remain unsettled by treaty, the state must negotiate agreements with Aboriginal communities. Industry opposes the contemporary negotiation process, which it claims is slow and expensive. Industry argues that rather than improve opportunities for collaboration and agreements, the direction of recent policy and law has generated complexity and uncertainty, fostered conflict, made negotiations more difficult, further entangled the regulatory process, and undermined the process for developing partnerships.[2] The resource sector, which stands to bear a disproportionate share of any cost resulting from unexpected political and legal changes to Aboriginal rights and title, has been particularly outspoken about the adverse impact of recent policy and legal decisions. Instead, industry advocates for immediate government action to acknowledge Aboriginal rights and settle land claims.

The CDAWN school argues that economic performance depends on efficient economic

[1]The Supreme Court cases I refer to are: *Calder v. Attorney-General of B.C.*, [1973] S.C.R. 313; *R. v. Sparrow*, [1990] 1 S.C.R. 1075; *R. v. Van der Peet*, [1996] 2 S.C.R. 507; *Delgamuukw v. British Columbia*, [1997] 3 S.C.R. 1010; *Haida Nation v. British Columbia (Minister of Forests)*, 2004 SCC 73, [2004] 3 S.C.R. 511; and *Taku River Tlingit First Nation v. British Columbia (Project Assessment Director)*, 2004 SCC 74, [2004] 3 S.C.R. 550, *R. v. Marshall; R. v. Bernard*, 2005 SCC 43, [2005] 2 S.C.R. 220; and *Mikisew Cree First Nation v. Canada (Minister of Canadian Heritage)*, 2005 SCC 69, [2005] 3 S.C.R. 388.

[2]See "We Need Action on Land Claims and We Need it Now" by Gordon Peeling, President and CEO Mining Association of Canada to the Standing Committee on Aboriginal Affairs on April 7, 2008 in OttawaLife, July/August 2008 at 40.

organization.[3] Long-run economic growth is thus dependent on the the ability of institutions to minimize transaction costs, and should increase with greater enforceability, predictability, and specificity of property rights. The relationship between natural resource development and Aboriginal rights and title gains further importance in Canada, as resources are a leading sector of the Canadian economy,[4] and resource development generates royalties, employment opportunities, linkages, and trust funds in rural Aboriginal communities. As the legal system can alter the cost of property rights though its impact on transaction costs, if industry concerns are valid, then the effect of recent Supreme Court judgements has significant implications for growth and development at the community, regional, and national level.

This paper empirically tests whether unexpected changes to secure legal property rights regimes generate measurable economic effects. The purpose is not to analyze the trade-off between social justice and industry interests, but rather to conduct a test of the economic and statistical significance of industry's claims. Using data from the Toronto Stock Exchange, I apply an event study methodology to examine the stock market response to recent Supreme Court judgements on Aboriginal rights and title. The empirical evidence - that the impact is limited to resource sectors, that the significance of the effect is dependent on the amount of uncertainty and new information generated by the judgement, and that the impact is not instantaneous due to the complexity of the law - is consistent with industry claims. More generally, the results appear to provide support for CDAWN's claims, that unexpected changes to stable legal property right regimes negatively impact future economic growth and development.

The relationship between Aboriginal people and the Canadian state is challenging and complex. Policy and lawmakers have developed a broad framework for action, but this process is incremental and costly. As a consequence, the characteristics of the process adversely affect the development of resource firms, and subsequent linkages. Policy and

[3]CDAWN refers to the economists Coase, Demsetz, Alchian, Williamson, and North. See Coase, R., 1960. The Problem of Social Cost. Journal of Law and Economics 3, 1-4. Demsetz, H., 1967, Toward a Theory of Property Rights. American Economic Review: Papers and Proceedings, pp. 347-359. Alchian, A., 1965. Some Economics of Property Rights. II. Politico. Reproduced in: Alchian, A., 1977. Economic Forces at Work. Liberty Press, Indianapolis, pp. 127-149. and North, Douglass C., 1990. Institutions, Institutional Change and Economic Performance. Cambridge: Cambridge University Press.

[4]See Keay (2008).

lawmakers need to think of innovative ways to carry out the negotiation and agreement process, which can achieve social objectives while decreasing transaction costs.

The remainder of the paper is organized as follows. The first section reviews relevant literature pertaining to growth and property rights theory, as well as multistakeholder interests in Aboriginal rights and title. This is followed by a historical overview of significant policy and Supreme Court judgements on Aboriginal rights and title. Section 4 outlines the event study methodology applied in this paper, and Section 5 presents the empirical work and results. The paper finishes with a conclusion as well as suggestions for future policymakers and research.

2 Literature Review

2.1 Property Rights

Solow, Ramsey-Cass-Koopmans, and Romer comprise the major models of macroeconomic growth. According to the general Solow model, steady long-run growth in GDP per person depends on continuous exogenous technological progress.[5] In the Ramsey-Cass-Koopmans model, long-run growth depends on the level of the marginal product of capital relative to the discount rate.[6] Newer endogenous growth models, such as Romer's, stress the importance of human capital.[7] However, these models are limited in scope as they assume perfect property rights,[8] which is not always the case. Several studies have shown that different degrees of property rights, as well as changes in property right regimes, have an impact on long-run economic growth (North and Thomas 1973, Rosenberg and Birdzell 1986).

Secure property rights are a critical component of growth, and gain their significance in their role helping agents form expectations (Demsetz 1967). The predictability and specificity of property rights is thus critical in determining the allocation and use of resources, as well-enforced property rights encourage allocative efficiency, and the value of goods is partly determined by the security of property rights conveyed in transactions (Furubotn

[5]See Sorenson *et al.* (2005) for more detailed description of the Solow, Ramsey-Cass-Koopmans, and Romer models.

[6]Ibid.

[7]Ibid.

[8]Property rights refer to right to possess, to use, and to dispose of property. The six characteristics of property rights are flexibility, exclusivity, quality of title, transferability, divisibility, and duration. By "perfect property rights," I imply each characteristic is maximized. See Guerin (2003) at 14.

and Svetozar, 1972). Further, when private agents face decisions whether to invest or to consume, the greater the probability that agents will benefit from investment, the more likely the agent is to invest, leading to increased long run growth rates (Torstenson 1994).

Institutions are another necessary component of long-run growth. Bardhan (1989) and Sened (1997) provide evidence supporting the link between institutions and property rights. Bardhan argues society's economic structure - which provides the foundation for all political economy institutions - is determined by property relations, and corresponds to a country's level of production and technology. According to Sened's (1997) legal centralist view, the government is a necessary player which both grants and protects rights, so long as the public is willing to pay for the cost of the institution. Accordingly, government institutions are a necessary condition for the emergence and continuity of property rights.

The CDAWN school argues efficient economic organization is the basis for economic growth. Efficient organization requires institutional arrangements and property right regimes that generate incentives for the private rate of return to approach parity with the social rate of return. In other words, economic performance is reliant on transaction costs - the costs related to the transfer, capture and protection of property rights (ie. information, negotiation, monitoring, coordination, and enforcement of contracts) - and the ability of institutions to minimize these costs. As transaction costs fall, due to greater precision, definition, and enforcement of property rights, the number of mutually beneficial transactions should rise, causing GDP per capita to increase (Demsetz 1967, Libecap 1978, Barzel 1997). Long-run economic growth should thus increase with greater enforcement of property rights and with lower transaction costs (Classens and Laevan 2003).

Property rights regimes change for a number of reasons. According to Demstez, "...property rights develop to internalize externalities when the gains of internalization become larger than the cost of internalization."[9] Changes in technology, access to new markets, factor scarcity, and state intervention, are all factors that can trigger change by altering economic values. If this creates profit opportunities that are unrealized under the existing property rights regime, new property rights regimes emerge to take advantage of updated cost-benefit opportunities. This line of argument is similar to Posner (2003), who states

[9]See Demstez (1967) at 87.

that the emergence and growth of property rights is dependent on changes in the ratio of the benefits to costs of property rights. In general, when dealing with property rights regime change, a legal framework is adequate to enforce rights, settle disputes, and negotiate agreements between parties.[10]

The purpose of this paper is to empirically test whether unexpected changes to secure legal property rights regimes impact economic growth. One application of this question is whether native title cases have economic costs. Brooks *et al.*'s (2003) paper, "Sudden Changes in Property Rights: The Case of Australian Native Title," uses an event study methodology to analyze the impact of significant native title Australian High Court judgements on stock market prices of firms listed on the Australian Stock Exchange (ASX).[11] As industry has an incentive to exaggerate the magnitude of economic costs arising from native title judgements, employing an event study analysis is a way to obtain a measure that is "...objective, contemporaneous, and free from look back bias."[12] Assuming the stock market is informationally efficient, and that stock market prices as unbiased forecasts of future prices, testing the market's reaction to native title judgements should value the net cost or net benefit to changes in property rights.[13]

Brooks *et al.*'s empirical method is as follows. The authors use an AR(1) process, and daily prices from the ASX's all share accumulation index data and sector indices, to determine if High Court judgements on native title have an overall impact on the ASX. A dummy variable marking the date of the decision is used to access the judgement's impact. Multiplying the dummy parameter by the market capitalization of the stock market

[10]See Guerin (2003) at 12.

[11]See *Mabo v Queensland (No 2)* [1992] HCA 23; (1992) 175 CLR 1 (3 June 1992) and *Wik Peoples v Queensland* [1996] HCA 40; (1996) 187 CLR 1; (1996) 141 ALR 129; (1996) 71 ALJR 173 (23 December 1996). In *Mabo (No 2)*, a majority of of the judges of the Australian High Court recognized that the indigenous Meriam people held native title under Australian law, and that the source of their indigneous rights pre-dated the imposition of British sovereignty. *Mabo (No 2)* thus ended the doctrine of *terra nullius* in Australia. In *Wik Peoples*, the Australian High Court ruled that native title is not automatically extinguished by pastoral leases. Pastoral leases, unique to Australian law, originated in the 1820s as a way for the government to legitimize squatters in the outback. The leases were originally issued for cattle grazing, and the Court ruled it did not recognize the right of pastoralists to engage in economic diversification. In other words, it was illegal for pastorals to engage in agriculture, mining, and other economic activities. While *Mabo (No 2)* applied mostly to vacant Crown land, thus affecting mineral exploration, pastoral leases cover 78% of Australia's land mass, much of it already engaged for decades in diverse economic activities. Subsequently, *Wik Peoples* affects the state, pastoral farmers, and mining industries. See Brooks *et al.* (2003).

[12]See Brooks *et al.* at 437.

[13]For a discussion of studies linking finance to microeconomic and macroeconomic growth, See Levine (1997).

generates a parameter indicating whether the judgements resulted in a net cost (negative parameter) or net benefit (positive parameter). Brooks *et al.* find neither of their dummies to be statistically significant, and subsequently that the *Mabo v Queensland (No 2)* and *Wik Peoples v Queensland* decisions had no effect on the overall market. The authors also test the effect of these court judgements on industrial sectors, and domestic and world market indices, but find no market reaction to either court decision. In sum, Brooks *et al.*'s evidence indicates sudden changes in native title law does not aversely impact the economy.

This paper expands and improves upon Brooks *et. al*'s methodology. My analysis employs Canadian data spanning six Supreme Court judgments. Using multiple judgements enables me to test if judgements which resulted in higher levels of uncertainty resulted in larger changes in terms of net costs or net benefits. Further, while Brooks *et al.* limit their study to the sector level, I also analyze data for individual firms. This enables me to remove firms which may be influenced by confounding events, or which lack characteristics that would make them amenable to the study. In terms of empirical design, Brooks *et al.* employ dummy variables to estimate the impact of native title decisions. This approach is an unconventional application of event study analysis. The use of dummy variables to measure the impact of native title is particularly questionable as native title law is, in general, highly technical and ambiguous, and the impact resulting from the release of a judgement should not be felt immediately. It takes time for experts to understand and communicate the judgement's implications to investors, and an empirical analysis of this nature should test for an impact over several days. Further, the use of dummy variables limits the authors interpretation of their empirical results, as they can only comment on the direction, and not the magnitude, of the impact. This paper avoids dummy variables by following a more common event study methodology outlined in MacKinlay (1997). My analysis involves i) defining the event and event window, ii) measuring the stock's return during the event window, iii) estimating the stock's expected return during the event window in lieu of the event, iv) computing the abnormal return, and v) evaluating its statistical or economic importance.

2.2 An Evolving Relationship

When Britain colonized its settler states, it recognized neither Aboriginal sovereignty nor indigenous customary law, mostly because Aboriginal laws and institutions failed to conform to European understandings (Mason 1997, Ivison 1997).[14] Mason provides an international comparison of contemporary differences in the relationship between Aboriginals and the state stemming from decisions made in the post-European discovery period. As Ivison explains, the decision to ignore Aboriginal sovereignty and customary law has significant implications. For example, recognition of Aboriginal rights would have lead to jurisdictional rights, and possibly a kind of coordinate sovereignty between the Crown and Aboriginal groups.

In the past several decades, state legal systems and governments have begun to recognize Aboriginal customary law and the existence of legal pluralism (McLachlan 1988).[15] McLachlan argues this recognition of Aboriginal customary law is interpreted as a symbol of the state and legal systems' recognition of indigenous peoples' claims of "difference," as it affects land rights and claims of sovereignty. With the movement toward a social justice approach to Aboriginal relations by the state, the moral and political significance of historical agreements, and especially the meaning of indigenous sovereignty, has shifted significantly.

The re-opening of political and legal space to define the relationship between Aboriginals and the state has generated a growing literature on Aboriginal land expropriation, historical justice, and reparation.[16] Waldron (1992) argues reparations can serve as symbolic gestures for past injustices, and as a sign of respect to the grieved parties.[17] In terms of legitimizing reparations from a social justice standpoint, Waldron argues the expropriation of Aboriginal land can be conceptualized as a persisting injustice, which continues as long as the expropriated land is not returned to the Aboriginal groups from whom it was taken.

[14] See Posner (1980) and Bailey (1992) for a detailed description of Aboriginal society and its property regimes.

[15] This is proven by both court judgements (Brooks *et al.* (2003)) and government actions (for example, the 1986 Australian Law Reform Commission was created "...as "primarily a response to the legal system's search for justice in dealing with the Aboriginal people," from questions of self-government or autonomy." See McLauchlan (1988) at 375 and the Australian Law Reform Commission's 1986 report, The Recognition of Aboriginal Customary Laws at paragraph 1037). This shift in legal and political recognition stems from domestic changes in social norms mentioned earlier, as well as from international pressure (Lupton 1999).

[16] For an analysis of the Australian relationship, see Short (2003).

[17] See Waldron (1992) at 6.

Further, as in the case of many Aboriginal claims, as the land was taken from an entity (such as a community or tribe) which still exists today, the entity retains the claim to the original dispossession of its lands.

However, correcting historical injustices may create disruptions or deterrents to economic development. According to Waldron, property rights help agents form expectations in regards to the resources under their control, and economic organization and activity is built around these expectations. If these expectations are overturned for social justice reasons, the result is likely costly.[18] Further, as Mason (1997) explains, the renegotiation of these relationships procedures can become quite complicated and generate a great deal of uncertainty.

The main opponent of recent Supreme Court of Canada judgements on Aboriginal rights and title is industry,[19] particularly the resource sectors. Industry argues that the complexities and uncertainties generated by this process create project delays, increase investor uncertainty, create new contexts of legal liability, divert mineral exploration overseas, and impede economic development.[20] According to Lavelle (2001), while industry may attest that Aboriginal rights and title claims have disastrous economic consequences, at least in the case of Australia, the empirical evidence suggests only marginal effects.[21] Instead other market indicators, including "...commodity prices, overseas demand, the exchange rate, wage costs, interest rates and industrial relations,..." appear to have had a much greater impact on investor confidence.[22] Continuing with the Australian case, Lavelle finds political posturing and the ability to influence government policies to be the primary forces behind industry opposition to Aboriginal rights and title law. As industry concerns can influence policymakers and the law, it is significant whether industry opposition to recent Aboriginal rights and title judgements is for economic or political reasons.[23]

This paper evaluates the validity of industry's claims by using an event study methodology to analyze stock market reactions to Supreme Court judgements on Aboriginal rights

[18] See Waldron (1996) at 16.
[19] By "industry," I imply to private-sector commercial interests.
[20] See Lavelle (2001) at 101.
[21] See Lavelle (2001) at 104.
[22] See Lavelle (2001) at 105.
[23] There are a number of papers describing how Australian mining companies heavily influenced Aboriginal rights and title law by applying immense pressure on government (Short 1997, Lupton 1999, Horrigan).

and title. This framework is an improvement on Lavelle's analysis, which relies on market statistics, as this approach enables me to test i) whether unexpected changes to Aboriginal rights and title law impacts specific sectors, ii) whether the significance of this effect is dependent on the amount of uncertainty and new information generated by the judgement, and iii) whether the complexity of the law affects the length of the impact.

3 Aboriginal Rights and Title

3.1 Historical Overview

The first formal agreements between indigenous and European nations consisted of a number of international Peace and Friendship treaties signed between the British Crown and Maritime indigenous bands from 1725 to 1779. Indigenous peoples played a critical role in determining the European victor in the struggle for North America, and these treaties secured European nations strategic military alliances or promises of neutrality in exchange for rights to trade.[24] Unlike later treaties, the Peace and Friendship treaties did not reference transfer, cession, or surrender of title or rights to land and resources. Aboriginals understood these treaties as the basis of their relationship with the Crown.

A major landmark in Aboriginal relations occurred with the end of the European struggle for the New World. In the 1763 Treaty of Paris, the British issued a *Royal Proclamation* to promote integration of New France's territories into British North America.[25] The Crown included special Indian Provisions within the *Proclamation*, which enabled the Crown to maintain control over land distribution and treaty negotiations.[26] The *Proclamation*, which requires the consent of Aboriginals for any land negotiations, provides the legal foundation for Aboriginal claims to treaty rights. Subsequently, the *Proclamation* can be construed

[24]See Miller (2000) at 79. For the text of the 1752 Peace and Friendship treaty, see Indian and Northern Affairs Canada - 1752 Peace and Friendship Treaty Between His Majesty the King and the Jean Baptiste Cope at paragraph 3 and 4: $< http://www.ainc-inac.gc.ca/pr/trts/pft1752_e.html >$, (Assessed June 9, 2008).

[25]See *Royal Proclamation (1763)*, R.S.C. 1985, App. II, No. 1 at $< http://www.ainc-inac.gc.ca/ch/rcap/sg/sga4_e.html >$, (Assessed July 18, 2008).

[26]For example, British subjects were forbidden to settle on Aboriginal lands or to purchase land from Aboriginals. Aboriginal land could only be ceded to the Crown, and the *Proclamation* established an official system by which to extinguish Indian title. This system ensured that any future negotiation with the Aboriginals was conducted in public by representatives of the Crown, and that the final results of negotiations were recorded in written treaties (See *Royal Proclamation (1763), R.S.C. 1985, App. II, No. 1* at paragraph 14 and 17).

as the Crown's recognition of Aboriginal rights to land before the assertion of British title. While the *Proclamation* gave the Crown the right to purchase Aboriginal hunting and fishing grounds, it also gave Aboriginal peoples the right to hunt and fish on their traditional lands. Additionally, the Provisions created an obligation for the Crown to sustain the welfare of Aboriginals. These points would be very important in future claims and court cases by indigenous peoples. The *Proclamation*, considered by many Aboriginals as their *magna carta*,[27] illustrates an Aboriginal/Crown relationship founded on peace, friendship and respect.

By 1830, the federal government's perception of Aboriginal peoples had shifted from military allies of powerful nations to social and economic problems.[28] The government pursued a policy of complete assimilation by concentrating Aboriginals on reserves, proselytization, Western education and residential schooling, forced adoption of sedentary agriculture, and enfranchisement.[29] With the formation of the Canadian state under the *British North American Act* of 1867, the government gained greater power to interfere in Aboriginal affairs. Under Section 91(24) of the *British North American Act*, the federal government and parliament assumed constitutional authority and responsibility over Indians and any land reserved for them.[30] Any treaties between the Crown and Aboriginals would henceforth be negotiated by representatives of the Canadian government.

The acquisitions of Rupert's Land in 1870, Manitoba in 1870, and British Columbia in 1871, induced the motivation for a new Aboriginal policy in Canada.[31] Between 1871 and 1921, the Crown signed eleven numbered treaties with Western indigenous groups as part of a policy to protect Aboriginals from the coming immigration, settlement, and economic development of the West.[32] However, not all areas of Canada were covered by treaties, the significant exceptions being British Columbia and parts of the Maritimes not already subject

[27]The *Proclamation* is part of a treaty between Aboriginal peoples and the Crown, and is interpreted by some as as a positive guarantee of the right to Aboriginal self-governance.

[28]See Miller (2000) at 125 and 126. As evidence of the changing relationship between Aboriginals and the state, by 1830, responsibility of Aboriginals in the federal government had shifted from military to civil officials.

[29]See Miller (2000) at 126. Enfranchised Aboriginals lost their Aboriginal status. With the *Gradual Civilization Act* of 1957, the state gained the authority to forcibly enfranchise educated Aboriginals.

[30]See *Canada Act 1982 (U.K.)*, c. 11 at 91(24).

[31]See Miller (2000) at 197.

[32]See Miller (2000) at 109.

to the Peace and Friendship treaties. The absence of treaties in some parts of Canada would create unresolved Aboriginal claims, as well as arguments by Aboriginal groups that they still possessed title to their traditional territories as title had never been formally ceded to the Crown.

Continuing with the federal government's policy to "civilize and assimilate" Canada's Aboriginal peoples, in 1876 the state passed a new version of the *Indian Act*, which gave the Department of Indian and Northern Affairs complete control over all aspects of daily life on reserves. Through the *Indian Act*, the government gained the right to regulate political, cultural, and land institutions, as well resource and economic development on reserves. The government placed significant restrictions on the personal liberty of status Aboriginals. As an experiment in social engineering, Aboriginal children were forcibly sent away from their families to live in residential schools.[33] However, the *Indian Act* appears largely disjoint from Canadian policy and legal norms as it is based on race.[34] Consequently, the *Indian Act* is generally viewed as a step-back in the development of relationship between Aboriginals and the state. The government's perception and policy toward Aboriginals during this period form the basis for a social justice approach in contemporary Canadian policymaking and legal judgements.

St. Catharines Milling and Lumber Co. v. R (1888), 13 S.C.R. 577 was the first important case involving Aboriginal land rights in Canada and had significant implications for division of legislative powers and property rights. At issue, the province of Ontario and the federal government both claimed possession of title to lands ceded to the federal Crown in Treaty No. 3 (1873). The federal government argued it had authority from Treaty No. 3 and Section 91(24) of the *British North American Act* to sell federal logging permits on Ojibway land. The Province argued that the federal government did not have the authority to grant St. Catharines Milling and Lumber Company a timber licence, instead taking the position that title reverted to the Province the moment title had been ceded to the federal Crown. The Supreme Court ruled in favour of the Province, agreeing that federal interest

[33]See Miller (2000) at 260 and 264.

[34]The *Indian Act* is based on race as it defines a person as "an individual other than an Indian." Aboriginals could only become legal persons by giving up their Aboriginal status. Further, from an Aboriginal perspective, race is only a part of what constitutes their claim of "difference." Rather, "indigeneity" is the source of difference.

in treaty lands ended with the surrender or alienation of Aboriginal land to the federal Crown, after which Aboriginal interest in the land passed on to the provincial Crown.[35] The Supreme Court concluded that Aboriginals have a right to occupy and use the land, but not to own it, and that Aboriginal title is an interest that forms a burden on the Crown's title. The Crown's fiduciary relationship with Aboriginal peoples would be further defined and extended in both the *Sparrow* and *Van der Peet* judgements.

The next major development in Aboriginal rights and title occurred with the release of the White Paper (1969) by MP Jean Chrtien under the Pierre Trudeau government. One of Trudeau's platforms was to generate fairer treatment for disadvantaged groups, and growing public awareness of Aboriginal peoples' plight led the Canadian state to attempt to renew and redefine its relationship with Aboriginals.[36] In the White Paper, Chretien argued that Aboriginals were ordinary Canadians whose special rights and status was discriminatory and prevented them from participating fully in Canada's economic, social, and political institutions.[37] In order to "welcome" Aboriginals into mainstream Canadian culture, the White Paper recommended terminating Aboriginals' special rights and status by abolishing the *Indian Act* and Aboriginal rights enshrined in Section 91(24) of the *British North America Act*.[38] However, the White Paper generated a huge backlash from Aboriginal communities. Through both sides acknowledged the need for a significant change in the relationship between Aboriginals and the Crown, Aboriginal peoples rejected the White Paper's method as it ignored Aboriginal proposals.[39] Also, many Aboriginals felt the proposal offered inadequate solutions to the serious needs of indigenous communities living on reserves. In response, Aboriginals became much more active in fighting for their political and legal rights.[40] Thus the White Paper played a pivotal role in shifting the relationship

[35]The Supreme Court's ruling was based entirely on an interpretation of the *Royal Proclamation*, which gave Aboriginals "...a personal and usufructuary right, dependent upon the good will of the sovereign..." as the sole source of Aboriginal land rights. See summary of case in *St. Catharines Milling and Lumber Co. v. R (1888)*, 13 S.C.R. 577.

[36]See Miller (2000) at 328.

[37]Aboriginal special rights and status results from treaties and government policy.

[38]See the White Paper (1969) at 7 and 11. This action would have ended reserves and treaty agreements. In exchange, Aboriginal people would have received economic development funds.

[39]For example, Aboriginals wanted economic and social solutions without loss of identity, as well as recognition they had retained some of their rights as self-determining peoples. See Miller (2000) at 333.

[40]Opposition to the White Paper led to creation of political organizations, such as the Assembly of First Nations, to represent Aboriginal needs and beliefs to government.

between Aboriginals and the Crown to its contemporary status.

3.2 Recent Supreme Court Judgements

The policy framework and legislation developed thus far sets the backdrop for a series of recent Supreme Court judgements which had dramatic effects on Aboriginal rights and title in Canadian law.[41] This section of the paper explores the qualitative significance, and predicts the economic impact, of each judgement on firm transaction costs related to the transfer, capture, and protection of property rights. In Section 5, an event study methodology is applied to examine the quantitative significance of these judgements, and to provide direct measures of the cost of changes to property rights regimes.

In 1971, the Nishga'a tribal council brought action against the province of British Columbia. The band claimed ownership and jurisdiction over their traditional territory in northwestern B.C., arguing i) that their title to the land had never been lawfully extinguished,[42] and ii) that their nation had an unextinguishable Aboriginal right, confirmed by the *Royal Proclamation* of 1763, to collectively use and occupy their traditional lands.[43] In response, the Province argued that B.C. did not fall within the terms of the *Proclamation*.[44] The Province also submitted a counter-claim that the Nishga'a had no right or interest to the land,[45] and that any Aboriginal compensation claims should be made to the federal Crown. The B.C. Supreme Court ruled in favour of the Province, concluding that Aboriginal rights in B.C. had been lawfully extinguished by colonial legislation.

In 1973, the Nisga'a's case reached the Supreme Court of Canada. The Supreme Court's judgement had immediate and extensive effects, laying the foundation for a series of judgements that substantially altered the direction of Aboriginal rights and title in Canadian

[41]These judgements include: *Calder* (1973), *Sparrow* (1990), *Van der Peet* (1996), *Delgamuukw* (1997), *Haida Nation* and *Taku River Tlingit First Nation* (2004), *Marshall and Bernard* (2005), and *Mikisew* (2005).

[42]The band argued they never formally consented to give up their land, and thus still retained title to their land.

[43]The band claimed the *Royal Proclamation* of 1763 applied to the Nishga'a's territory and "...entitled them to its [the Crown's] protection." See *Calder v Attorney-General of B.C.*, [1973] S.C.R. 313 at 315.

[44]The Province argued that it did not come under British sovereignty and protection until 1846, and that the Nishga'a territory did join B.C. until 1858. Thus, the Nishga'a were not under British protection at the signing of the *Royal Proclamation*, and subsequently beyond the *Proclamation*'s scope.

[45]The Province argued it did not recognize Aboriginal title - citing a series of proclamations and ordinance made by B.C Governor Douglas between 1858 and 1863 as evidence - and consequently did not have to negotiate treaties to extinguish title. See *Calder v Attorney-General of B.C.*, [1973] S.C.R. 313.

policy and law, thus bringing it into its contemporary state of affairs. In a split panel decision, the Supreme Court judges acknowledged and confirmed the existence of Aboriginal rights in law, and agreed that the Nisga'a's Aboriginal rights and title derived from their historic occupation and possession of the land.[46] Further, the judges ruled that Aboriginal peoples had the right to their homelands where title had not been surrendered or extinguished, with onus for proving title falling on Aboriginals peoples.[47] Prior to *Calder*, Aboriginal claims were of a political, rather than a legal nature, and the private claims put forth by industry were considered legally superior to Aboriginals' claims. The *Calder* judgement is thus significant for turning Aboriginal title into legal claims, on par with other property rights. As a result of *Calder*, Canada could no longer be considered *terra nullius* in law, and Aboriginals gained stronger legal support to land title claims. However, *Calder* still left private property rights claims relatively secure because, at least federally, the Crown retained the authority to extinguish or settle Aboriginal claims competing with other property rights. The strong possibility that the Supreme Court would eventually recognize native title prompted the federal government to create a comprehensive land claim system.

The inclusion of s. 35 in the 1982 *Constitution Act* marked a major legal institutional change in the relationship between Aboriginals and the state.[48] S. 35 transformed Aboriginal rights and title claims into constitutional issues, and defined Aboriginal title as a right to the land itself. Subsequently, once Aboriginal title is proven, government loses the power to unilaterally extinguish title. When land is subject to competing claims, s. 35 requires Aboriginal claims be considered as legally superior to other property rights claims. As a legal document, s. 35 is the legitimizing basis for recent Supreme Court judgements, of which the economic impact is empirically tested in this paper.

Sparrow (1990) provided the Supreme Court the opportunity to create guidelines on how to apply Aboriginal Rights under s. 35.[49] The case came to court when a B.C. Abo-

[46]Subsequently, the *Royal Proclamation* was not the source of Aboriginal title, it merely recognized it. See *Calder v Attorney-General of B.C.*, [1973] S.C.R. 313 at 156.

[47]See Ibid at 146.

[48]According to s. 35(1), "The existing aboriginal and treaty rights of the aboriginal peoples of Canada are hereby recognized and affirmed." According to s. 35(2), "In this Act, "aboriginal Peoples of Canada" includes Indian, Inuit, and Metis Peoples of Canada."

[49]Note, during this period, cases reviewed by the Court referred only to limited aspects of "way of life'

riginal man was convicted of fishing with a net larger than regulations permitted. The appellant argued that he was exercising a pre-existing Aboriginal right to fish for food, and that the net size restriction in his band's license was inconsistent with s. 35. The Court ruled unanimously that s. 35 applies to rights that were in existence when the Constitution came into effect. When the purposes of Aboriginal rights are considered, the Court felt it clear that "...a generous, liberal interpretation of the words in the constitutional provision is demanded." For example, existing Aboriginal rights must be interpreted flexibly so as to permit their evolution over time (ie. rights should not be frozen to those that existed at the time of European contact). The Court ruled that the federal government could not unduly interfere with Aboriginal rights unless it passed strict tests of justification and,[50] due to the government's fiduciary duty to Aboriginal peoples, the government needed to give Aboriginal rights priority. The implications for *Sparrow* are that Aboriginal claims to resources could take precedence over competing claims, even if the government can prove it is justly infringing on an Aboriginal right. Further, Aboriginal claims could potentially invalidate licences already granted to the private sector by government. In terms of *Sparrow*'s influence on property rights, I predict the judgement increased firm transaction costs.

Van Der Peet (1996) gave the Supreme Court another opportunity to address the legal scope of Aboriginal Rights under s. 35.[51] As background, an Aboriginal B.C. man was charged with violating the terms of the Indian food fishing license by commercially selling salmon. The appellant argued that the restrictions of the native food fishing license infringed his Aboriginal rights as protected by s. 35. In a 7-2 decision, the Supreme Court judges ruled that the Aboriginal right to fish for food and ceremonial purposes did not include the right to sell fish for commercial purposes, as selling fish is not part of the distinctive culture of Sto:lo Nation. The *Van der Peet* judgement resulted in the "integral to a distinctive culture" test to determine whether an Aboriginal practice is a constitutionally protected right.[52] The

rights, with particular protection from regulation for traditional hunting, fishing, and trapping, rather than from commercial activities.

[50]See *R. v. Sparrow*, [1990] 1 S.C.R. 1075.

[51]Placing Aboriginal rights within the constitution is significant as, "Section 35(1) provides the constitutional framework through which the fact that the aboriginals lived on the land in distinctive societies, with their own practices, customs and traditions, is acknowledged and reconciled with the sovereignty of the Crown." See *R. v. Van der Peet*, [1996] 2 S.C.R. 507.

[52]The Court defined Aboriginal rights as those activities that are "integral to the distinctive culture of the Aboriginal group claiming the right." Also, note the use of "distinctive" not "distinct." "Distinct" sets

test requires Aboriginal peoples to establish their rights by proving that they are based on pre-European contact practices, customs, and traditions that are integral to the distinctive culture of the Aboriginal group claiming the right. As Aboriginal rights are specific to each culture, "...their scope and content must be determined on a case by case basis."[53] According to *Van der Peet*, Aboriginal rights protect only those customs which have continuity with practices existing before the arrival of Europeans. Thus, the integral and distinctive test extends protection to commercial activities derived from traditional economic and cultural practices, but would not extend to protection of Aboriginal practices that developed solely as a result of European influence. A serious implication of the "distinctiveness" test is it makes it extremely difficult for Aboriginal peoples to assert that Aboriginal rights includes development of non-renewable resources.

Van der Peet had further implications regarding the legal interpretations of Aboriginal rights and indigenous perspectives. The judges recognized Aboriginal rights as stemming from cultural practices, rather than from political recognition, thus ensuring that the concept of Aboriginal rights should never challenge Crown sovereignty. As Aboriginal rights are recognized in the Constitution, the courts will not acknowledge that Aboriginal peoples hold fundamental rights if such an acknowledgment challenges the sovereignty of the Crown. Rather, Aboriginal rights must be reconciled with the Crown, and evidence of indigenous rights must be used for Aboriginal title, not claims of ownership. The judges also ruled that Aboriginal perspectives must be framed in terms cognizable with the Canadian legal and constitutional structure.[54] This substantially weakens the potential for Aboriginal claimants to express the law on their own terms according to their own customs, making it more difficult for Aboriginal peoples to prove title claims. In terms of *Van der Peet*'s influence on property rights, I predict the judgement lowered firm transaction costs.

In 1996, the Supreme Court issued a landmark judgement on Aboriginal rights and title. At issue, the Gitksan and Wet'sewet'en Aboriginal bands brought the province of B.C. to court, claiming ownership and jurisdiction over their traditional territory, and asserting that

the bar to show something is unique a bit higher than "distinctive."

[53]See *R. v. Van der Peet*, [1996] 2 S.C.R. 507 at paragraph 69.

[54]Of note, the dissenting Judge McLachlin stated that the court should take into account both the perspective of Aboriginal people and the perspective of common law, and that the court needed to recognize the legitimacy of Aboriginal laws and customs.

their pre-existing Aboriginal rights and title had never been formally extinguished. The appellants' used both a common law (historic use of the land) and Aboriginal explanation (song and dance) to justify their claim of ownership.[55] The B.C. Supreme Court judge rejected the appellants' evidence of oral history, and subsequently their claim. The bands appealed, and the Gitskan proceeded to the Supreme Court.

The Gitskan's claim was originally about ownership and jurisdiction, but at the Supreme Court the band changed its claim to one concerning title. In the *Delgamuukw* case, the Supreme Court directly addressed Aboriginal title for the first time. The Court ruled that Aboriginal title exists as part of the Canadian legal system, is a constitutional right, can only be sold to the federal government, and has specific characteristics as to its source, proprietary content, inherent limit, communal nature, and inalienability.[56] The *Delgamuukw* judgement established a test for proving Aboriginal title, which requires occupancy prior to the assertion of Crown sovereignty, and continuity of occupancy to the present day. These strict requirements make it more difficult for Aboriginal groups to prove title. The Court also ruled that Aboriginals could not engage in post-European contact activities if these activities threatened Aboriginals' cultural relationship with the land. Subsequently, Aboriginal groups interested in attracting economic opportunities may have to surrender title to the Crown in order to have access to natural resource development.

Contrary to *Van der Peet*, in *Delgamuukw* the Court ruled that the law needed to find ways to accommodate oral traditions as evidence, and that oral history could be used to prove Aboriginal title. In many instances, oral traditions constitute the only proof of Aboriginal peoples' claims to historical possession of land. This ruling thus expands the types of evidence the courts could hear to establish title, and increases the likelihood of Aboriginal groups establishing title. However, the Court also ruled that Aboriginal justifications needed to be reconciled in a manner that complimented and did not strain the common law structure. This set a high bar in terms of what sort of Aboriginal justifications the Court would be willing to accept. According to the Canadian Mining Association, the ambiguity surrounding the scope of *Delgamuukw* discourages long-term mining investment.[57] In

[55]The Aboriginal explanation consisted of an "adaawk," a collection of oral stories, and a "kungax," a spiritual song, about their attachment to the land.

[56]See *Delgamuukw v. British Columbia*, [1997] 3 S.C.R. 1010 at 112.

[57]See The Mining Association of Canada: Aboriginal Economic Development and the Canadian Mining

terms of *Delgamuukw*'s influence on property rights, I predict the judgement increased firm transaction costs.

The *Marshall and Bernard* (2005) Supreme Court judgement provided guidance on how to assess Aboriginal land claims in areas subject to the Peace and Friendship treaties. In both cases, members of the Nova Scotia and New Brunswick Mi'kmaq First Nations were convicted of selling logs cut on provincial Crown land without a permit. Both men argued they did not require permission from the provincial government to harvest timber, as the Peace and Friendship treaties endowed them with the treaty right to harvest resources for commercial purposes, and they already held Aboriginal title to the land. In a unanimous decision, the Supreme Court ruled that the Mi'kmaq did not have a treaty right for harvesting and selling timber, and that Aboriginal title had not been proven in the territories in question. The Court argued that while treaty rights are not frozen in time, arguments for treaty rights require a logical evolution from the Aboriginal activities which occurred at the time the treaty was signed. As the Mi'kmaq did not traditionally engage in logging, the Peace and Friendship treaties did not protect logging related activities. In regards to the claim to title over the land, the Court ruled that the evidence for proving Aboriginal title did not meet the standards set by the *Delgamuukw* judgement. This indicates that the law requires strong evidence of exclusive occupation of land from Aboriginal groups claiming Aboriginal title, and subsequently makes it more difficult for Aboriginal groups in non-treaty areas to obtain Aboriginal title.[58] This decision also makes it more difficult for Aboriginal groups to argue they have title or treaty rights to resources which were unknown or unexploited at the time of treaty agreements.[59] In terms of *Marshall and Bernard*'s influence on property rights, I predict the judgement lowered firm transaction costs.

In 2004 the Supreme Court issued judgement for *Haida Nation* and *Taku River Tlingit First Nation.* This judgement generated parameters regarding the Crown's responsibility to consult and, where possible, to accommodate Aboriginal concerns in cases where Aboriginal

Industry - Presentation to the Standing Committee on Aboriginal Affairs and Northern Development at June 10, 1998 $< http://www.mining.ca/www/PublicPolicyIssues/Documents/AboriginalEconomic.php >$ (Accessed May 9, 2008)."

[58]See Lawson Lundell, Implications of the Recent Supreme Court Decision in: *R. v. Marshall; R. v. Bernard.* at 4.

[59]Ibid.

rights have been asserted but not proven. As background, the Haida Nation challenged the Province of B.C.'s right to approve the transfer of tree farming licences from one private company to another. In the *Taku River Tlingit Nation* case, the Taku River Tlingit Nation challenged the Province of B.C.'s decision to let a private company re-open and build a road to an old mine. Both Aboriginal groups argued that they had rights and title to the land in dispute, though it had not yet been established by litigation or treaties. Further, as the Province's actions would affect their claims to rights and title, the Aboriginal groups argued the Province had a responsibility to consult. The Province argued it did not have to consult until rights were proven.

The Supreme Court found the Crown had a duty, based on the honour of the Crown, to consult with First Nations which had asserted an Aboriginal right, when the Crown's actions may adversely affect that right. Specifically, the Court ruled that i) the consultation obligation applies where rights are considered, ii) the scope of duty to consult is proportionate to the impact of decision and the strength of the claim,[60] iii) there is no obligation to obtain Aboriginal consent, and iv) the duty to consult rests solely with the Crown. The Court placed the duty to consult on a sliding spectrum; at one end the government need only notify Aboriginal groups and listen to their concerns, while at the other, the government must allow Aboriginal groups to be involved in the decision-making process. While the *Haida Nation* and *Taku River Tlingit First Nation* judgement provides a framework which further defines the Crown's duty to consult and accommodate, and absolves industry's obligation to consult, the expansion of cases where there is an obligation to consult, combined with vague standards, generated pervasive but uncertain legal obligations. Further, the alteration of the consultation and negotiation procedure created uncertainty as government and industry needed to adjust to the new regulations and policies.[61] In terms of the influence of *Haida Nation* and *Taku River Tlingit First Nation* on property rights, it is unclear whether the dominant effect was higher or lower firm transaction costs.

The 2005 *Mikisew* judgment built on the *Haida Nation* and *Taku River Taligt Nation* judgement by further expanding and clarifying the responsibilities of government to consult

[60] ie. consultation may lead to an obligation to accommodate.

[61] For example, in *Haida Nation*, the Province's failure to consult invalidated established property rights for the successor private company.

and accommodate Aboriginal concerns. The Mikisew, whose traditional territory is located within territories covered by Treaty No. 8,[62] argued that the Crown had not adequately consulted them before approving a road though the band's territory. The band believed that the road would interfere with their traditional activities. The government argued it was not infringing on the rights of the Mikisew, but rather exercising its treaty right to take up "...such tracts as may be required or taken up from time to time for settlement, mining, lumbering, trading or other purposes."[63] In a 9-0 decision, the Supreme Court ruled the Crown's duty to consult was not discharged with the signing of Treaty 8. The Court's judgement implies that the Crown, even if it possesses a treaty right to affect Aboriginal interests, retains an obligation to consult Aboriginal peoples if taking up the land may adversely affect those rights. While this judgement clarified that the consultation obligation also applies to treaty rights, the *Mikisew* judgement did not likely have significant ramifications, as it was consistent with political and legal movements to reconcile Aboriginal and public interests.[64] In terms of *Mikisew*'s influence on property rights, I predict the judgement increased firm transaction costs.

4 Event Study Methodology

The next step is to quantitatively test the economic impact of these judgements using an "event study" analysis. This methodology is based on the premise that stock prices rapidly absorb and reflect all publicly available information (the semistrong version of the efficient market hypothesis), and the assumption that the value of a stock reflects the present discounted value of investment.[65] Subsequently, only unanticipated events should change stock prices and any impact of an event on a firm should be observed relatively quickly by an abnormal movement in the firm's stock price. The abnormal return is considered

[62]The Mikisew live in the Peace Point Reserve, which is located partly in Alberta and partly in the Northwest Territories.

[63]See *Mikisew Cree First Nation v. Canada (Minister of Canadian Heritage)*, 2005 SCC 69, [2005] 3 S.C.R. 388 at paragraph 2.

[64]"The decisions balancing of governments power to manage lands and resources with protection of treaty hunting, fishing and trapping rights is consistent with the theme of prior Supreme Court decisions emphasizing the need for reconciliation of aboriginal interests with the broader public interest." See Lawson Lundell, The Mikisew Cree Decision: Balancing Government's Power to Manage Lands and Resources with Consultation Obligation Under Historic Treaties, Nov. 24, 2005, at 5.

[65]See Fama *et al.* (1969) for further discussion of these assumptions.

the event's impact on the capitalized value of the firm. The structure of an event study is fairly simple, consisting of four components: i) defining the event and event window, ii) measuring the stock's return during the event window, iii) estimating the stock's expected return during the event window, iv) computing the abnormal return, and v) evaluating its statistical or economic importance.[66] This framework thus allows researchers to analyze the economic impact of an event over a short period of time, and to use the empirical results to understand the effects of the event studied. Event study methodologies are commonly applied in studies of finance and the economics of law.[67] In a survey of event studies methods used in economics and finance, MacKinlay (1997) argues this methodology provides a simple framework in which to measure the impact of an event on the value of a firm using financial data. According to Bhagat *et al.*'s (2002a) review of event study methods applied in a legal context, event studies are among the most successful methodologies used to apply econometrics to policy analysis.[68]

The first step is to define the unanticipated event of interest. As information may not be transmitted and responded to by investors instantenously, it is typical to define an "event window," or time period to study stock prices involved in the event.[69] In general the choice of sampling interval is between daily and monthly data, and the significant power gains associated with shorter intervals makes daily data preferable.[70] To determine if the event has an impact, event study analysis relies on a measure of abnormal return (the actual minus the expected return) of a security over the event window. The abnormal return for

[66]See Baghat *et al.* (2002a) at 143-144.

[67]See Bhagat *et al.* (2002a) and MacKinlay (1997) for literature reviews.

[68]See Bhagat *et al.* (2002a) at 141.

[69]See Bhagat *et al.* (2002a) at 146. There is some theoretical debate regarding the optimal event window. In order to maximize power gains, the event window should also be made as narrow as possible (Higher power is desirable and can be generated by increasing sample size, by shortening the event window, or by increasing certainty of the event date). However, Antweiler and Frank (2006) find results from event studies are very sensitive to the length of the event window. This suggests longer event windows should be used when possible. Thus, even if the event is one day, the event window should be set for a longer period as price effects may be felt before or after the event. See MacKinlay (1997) at 15, 19, and 28-32.

[70]See MacKinlay (1997) at 34. Brown and Warner (1985) examine how characteristics of daily stock returns may affect event study methodology. The potential problems with using daily data include i) non-normality of returns and excess returns, ii) OLS estimate bias of market model parameters due to non-synchronous trading, and iii) variance estimation (daily excess returns can exhibit serial dependence, cross-sectional dependence, and stationary of daily variances). However, evidence from simulations leads the authors to conclude methodologies based on the OLS market model using daily data and standard parametric tests are generally well-specified.

firm i at event date t is:

$$AR_{it} = R_{it} - E(R_{it}|X_{it}) \tag{1}$$

Where AR_{it} is the abnormal return, R_{it} is the actual return, $E(R_{it}|X_{it})$ is the normal return, and X_t is the conditioning information for the normal return.

The most common method used to estimate the expected return is a statistical approach known as the "market return" model.[71] The market model assumes a stable linear relation between market and security returns. For any security i the market model is:

$$R_{it} = \alpha_{it} + \beta_i R_{mt} + e_{it} \quad E(e_{it}) = 0 \quad var(e_{it}) = \sigma^2_{e_i} \tag{2}$$

Where R_{it} is period-t returns on security i, R_{mt} is period-t returns on the market portfolio, e_{it} is the zero mean disturbance term, α_i and β_i are parameters, and $\sigma^2_{e_i}$ is the variance.[72] The next step is to measure and analyze the abnormal returns, and to determine the significance of the event. Parameters for the market model are estimated using Ordinary Least Squares, a method which is a consistent and efficient estimation procedure given the assumptions above.[73] The estimated normal parameters from this model are used to calculate the difference between the predicted and actual return following the event, or the "abnormal returns" for firm i:

$$AR_{it} = R_{it} - \hat{\alpha}_i - \hat{\beta}_i R_{mt} \tag{3}$$

[71] See MacKinlay (1997) at 17. The market model assumes asset returns are multivariate normal and independently and identically distributed. These assumptions are empirically reasonable and the results are robust to deviations from this assumption. Market model parameters are typically estimated using between 100 to 200 daily returns prior to the event. See MacKinlay (1997) at 15. The estimation window and event window should not overlap in order to ensure the normal return market parameter estimates are not influenced by event returns. If overlap occurs, the event impact would be captured by both the normal market and abnormal returns. See MacKinlay (1997) at 20.

[72] Another statistical model which can be used to model the normal return is the factor model. The factor model is a more complex version of the market model, which reduces variance in exchange for additional data requirements. See MacKinlay (1997) at 18-19. Alternative economic models include the Capital Asset Pricing Model (CAPM) and the Arbitrage Pricing Theory (APT). However, these economic models offer little gains, and the CAPM results are sensitive to CAPM restrictions. As the biases created by the CAPM are avoided at little cost by the market model, statistical models dominate the literature. See Mackinlay (1997) at 19.

[73] See MacKinlay (1997) at 20. Coutts *et al.* (1994) find Ordinary Least Squares market model estimates, without rigorous misspecification analysis, should be treated with extreme skepticism. In its stead, Coutts *et al.* recommend nonparametric estimation techniques. However, the general consensus in the literature provides enough support for the OLS market model approach to justify the use of this method for the purposes of this paper. An alternative method is the "constant mean return" model. In this model, the mean return of a given security is constant over time. See MacKinlay (1997) at 15. The market model is superior to the constant mean return model because in the market model the variance of the abnormal return is reduced. The potential gains to using the market model depends on the R^2. See MacKinlay (1997) at 18.

Under the null hypothesis, and with large enough samples, the abnormal returns will be jointly normally distributed with $E(AR_{it}) = 0$ and $\sigma^2_{AR_{it}} = \sigma^2_{e_i}$.[74]

In order to evaluate an event's statistical or economic importance, the abnormal returns over the period of the event window (from T_1 to T_2) are aggregated to determine the sample cumulative abnormal return (CAR) from T_1 to T_2:[75]

$$CAR_i(T_1, T_2) = \sum_{t=T_1}^{T_2} AR_{it} \tag{4}$$

with variance for firm i:

$$\sigma^2_i(T_1, T_2) = (T_2 - T_1 + 1)\sigma^2_{\epsilon_i} \tag{5}$$

The null hypothesis - that the event has no impact on the distribution of returns - is tested using a normally distributed z-statistic. However, as tests based on one firm are generally not empirically significant,[76] abnormal return observations should be aggregated both across the event window and across a number of firms that experience the same event.[77] The result is an average cumulative abnormal return (CAAR):

$$CAAR_i(T_1, T_2) = \frac{1}{N} \sum CAR_i(T_1, T_2) \tag{6}$$

with variance:

$$var(CAAR_i(T_1, T_2)) = \frac{1}{N^2} \sum_{i=1}^{N} \sigma^2_i(T_1, T_2) \tag{7}$$

With these formulas, a normally distributed z-statistic can be used to test the null hypothesis that the abnormal returns are zero for the CAAR, both across the event window and averaged across firms and events.[78]

[74] The conditional variance $\sigma^2_{AR_{it}}$ will have disturbance variance σ^2_e and independence so long as the estimation window is large enough such that it is reasonable to assume the variance of the sampling error of the market model parameter estimates is zero. See MacKinlay (1997) at 21. If the variance of the announcement period abnormal return is not the same as the variance of the estimation period residuals, then this method of estimating σ^2_e is inappropriate, and nonparametric tests may have to be used. See Bhagat *et al.* (2002a) at 147.

[75] Aggregation also reduces the impact of other event announcements, released on the same day as the event under study, which may be affecting share value. See Bhagat *et al.* (2002a) at 147.

[76] Tests based on one firm are generally not significant because tests with small sample sizes usually have low power. See Metcalf (2007) at 20 and Mackinlay (1997) at 21.

[77] As clustering (overlap of event windows in securities within sample) occurs in this model, I cannot assume the covariances across securities are zero. Subsequently, cross-sectional dependence may be an issue. See MacKinlay (1997) at 24 and 27. However, this is unlikely to be a problem so long as the market model is applied to stocks chosen from different industries. See Brown and Warner (1985) at 15 and 22.

[78] As σ^2_e is never known and always estimated, the distributional result is only known asymptotically. See MacKinlay (1997) at 24. By assuming average abnormal returns are IID, by the Central Limit Theorem the average abnormal return is normally distributed of mean zero. See Bhagat and Romano (2002a) at 147.

5 Estimation and Results

5.1 Estimation Data

I obtained daily closing prices of the S&P/TSX Sector Indices, TSX Group Indices, and common stock prices from the Canadian Financial Markets Research Centre (CRMC) Summary Information Database,[79] which includes information for stocks listed on the Toronto Stock Exchange. An advantage to analyzing Indices is it provides evidence as to whether Supreme Court judgements have an aggregate impact on the market. The data for Sector Indices span all six Supreme Court judgements, enabling me to compare abnormal returns from *Sparrow* to *Mikisew*. As this study focuses on sectors most likely to be directly influenced by Aboriginal rights claims and law, I apply an event study analysis on Sectors which should be affected by legal changes to Aboriginal rights and title (Energy, Minerals, and Utilities) and do not examine Sectors which should not be affected (Industrials, Consumer Discretionary, Consumer Staples, Health Care, Financials, Information Technology, and Telecommunications Services). The Group Indices categorize data into more definitive categories, which permits a closer examination of each judgement's impact on various resource sectors. However, as the TSX stopped collecting data for Group Indices in 2002, I am limited in my Group Indices analysis to the *Sparrow*, *Van der Peet*, and *Delgamuukw* judgments. Similar to the methodology applied for Sector Indices, I empirically test Groups which should be affected by changes to Aboriginal rights and title law (Gold and Silver, Metals and Minerals, Oil and Gas, Paper and Forest Products, Real Estate and Construction, Transportation and Environmental, and Utilities), and do not examine Groups which should not be affected (Consumer Products, Industrial Products, Communications and Media, Merchandising, Financial Services, Pipelines, and Conglomerates).

As relatively few companies are contained in each Sector and Group category, is it plausible that one or two companies may be driving the results for an entire category. One way to overcome this concern is to examine the impact of Supreme Court judgements on individual firms within an Indice. I choose to analyze firms comprising the Group Indices during *Delga-*

[79]For more information on the companies comprising the Indices, see the Computing in the Humanities and Social Sciences, University of Toronto (CHASS) Data Centre at $< http://www.chass.utoronto.ca/cgi-bin/chassnew/display.pl?page=index >$ (Accessed July 21, 2008). There are 10 Sector categories and 14 Group categories. The data is for trading, not calendar, days.

muukw, because this case is most directly linked to property rights. Further, *Delgamuukw*'s verdict generated the highest degree of uncertainty relative to the other judgements with Group Indices data.[80] To reconstruct the Group Indices, I obtained company listings from the Green Pages of the December 1997 Toronto Stock Exchange Review. I dropped companies which were not available in the CHASS database, or which did not have data spanning the estimation window on a continuous basis. As the event study methodology is valid only if there are no confounding events, I reviewed the Globe and Mail newspaper one week prior, and four days post-announcement date,[81] for major news releases on firms which appeared to reveal, or to be based, on new information. The confounding events which led me to drop companies include court verdicts on insider trading, announcements of cuts in credit ratings, hostile takeover speculations, major resource discoveries, approvals and suspensions of major projects, and significant acquisitions and sales.[82] I also empirically tested for confounding events in the pre-announcement period, and dropped firms which had statistically significant z-scores up to two days prior to the announcement date.[83] Analysis on a firm level enables me to remove firms from the sample which lack characteristics amenable to the study, and firms lacking Canadian resource operations were removed.[84] I expect the empirical results for the firm analysis to be the most consistent with my hypothesis.

[80]Two years after the *Delgamuukw* verdict, the unpredictability of the judgement remained largely unresolved, as evidenced by the CMA's statement to government:

> ...the recent Supreme Court decision on Aboriginal Title (Delgamuukw decision) has cast a dark shadow of uncertainty on resource development and investment in British Columbia and elsewhere in Canada. The industry feels that waiting for court challenges over the next 10 years to define the scope of the Supreme Court decision will discourage mining investment over the long-term in Canada. Governments are asked to clarify the Delgamuukw decision on an urgent basis.

See The Mining Association of Canada: Aboriginal Economic Development and the Canadian Mining Industry - Presentation to the Standing Committee on Aboriginal Affairs and Northern Development, June 10, 1998 at $< http://www.mining.ca/www/Public_Policy_Issues/Documents/Aboriginal_Economic.php >$ (Accessed May 9, 2008).

[81]I chose to search for confounding events up to four days post-announcement date, in order to cover the longest event window of 5 days.

[82]The firms dropped for these reasons are Royal Oak Mines, TVX Gold, Alcan, Cameco, Inco, Westmin Resources, Amber Energy, Canadian Natural Resources, and Tembec. See Appendix, Table 11.

[83]The firms dropped for these reasons are Dia Met Minerals, Miramar Mining, Cominco, Beau Canada Exploration, Blue Range Resources, Baytex Energy, Cabre Exploration, Norcen Energy Resources, Tri-link Resources, Doman Industries, BC Telecom, BCE Mobile Communications, Fortis, NewTel Enterprises, and Rogers Wireless Communications.

[84]I obtained information on geographic operations through Google Finance and firm websites. The firms dropped for these reasons are Dayton Mining, Eldorado Gold, Glamis Gold, Greenstone Resources, Golden Star Resources, Meridian Gold, Orvana Minerals, Pan American Silver, Rio Narcea Gold Mines, Southwestern Resources, AUR Resources, Lionore Mining, Denbury Resources, Gulfstream Resources, and Pacalta Resources. See Appendix, Table 12.

My event is the release of significant Supreme Court of Canada judgements on Aboriginal rights and title. The Court's release of judgement procedure ensures the events do not suffer from typical event study problems,[85] such as an inability to clearly identify the first public announcement of an event, the possibility of news-leakage, and uncertainty whether the announcement was made before of after market closure.[86] For example, the announcement date of each judgement is clearly identified on the Court's website.[87] Advance notice that the Court will release its judgment is disseminated by news release, and anyone can sign up for electronic notifications from the Canadian Parliamentary Press Gallery or the Executive Law Officer. This implies I can assume information from the judgment is easily accessible on the announcement date. The Court's proceedings are generally quite secretive, ensuring any new information contained in the Court's judgement should be captured by changes in the stock prices after the announcement. Decisions are always released at 9:45 am Eastern Standard Time, indicating I can use the closing prices of daily stock returns as data. Correcting for these problems would require a longer announcement period, thereby decreasing the test's precision.

The estimation window and event window also need to be specified. I chose an estimation window starting 200 trading days prior to the event window. However, as the *Marshall and Bernard* judgment occurs 88 trading days prior to the *Mikisew* judgement, the estimation window for *Mikisew* varies between 81 and 83 days. Recommendations for event window lengths span from one to ten days.[88] Due to the uncertainty in the literature regarding the optimal length of an event window, I considered event windows of various lengths. Defining the announcement date as event day [0], the event windows considered are [0], [0,1], [0,2], [0,3], and [0,4]. As Aboriginal rights and title judgements are complex, and require time for experts to thoroughly read, understand, and communicate the judgement's implications

[85]For a detailed description of the Court's procedure, see Supreme Court of Canada, Media Portal, Decisions of the Court, Release of Decisions of the Court $< http://www.scc-csc.gc.ca/mediaportal/decisionscourt/index_e.asp >$ (Accessed May 19, 2008).

[86]See Bhagat *et al.* (2002a) at 144 and 145. Uncertainty on the last point necessitates inclusion of daily returns for the day after the announcement.

[87]The six announcements dates used in this empirical study are *Sparrow* (May 31, 1990), *Van der Peet* (August 21, 1996), *Delgamuukw* (December 11, 1997), *Haida Nation* and *Taku River Tlingit First Nation* (November 18, 2004), *Marshall and Bernard* (July 20, 2005), and *Mikisew* (November 24, 2005). See Judgements of the Supreme Court of Canada $< http://scc.lexum.umontreal.ca/en/ >$ (Accessed May 20, 2008).

[88]See Bhagat *et al.* (2002a) at 164 and Gupta and Goldar (2005).

to clients, I expect that any impact of the judgement on stock prices will be greater as the event window increases in length. Most studies using daily data also choose an event window beginning two or three days prior to the event.[89] I do not include any pre-event days in my analysis as, assuming there is no leakage of information, including pre-event days in the event window would only increase the probability of capturing confounding events. In case a prior event is affecting the event date [0], I test for statistically significant abnormal returns up to two days prior to the event.

For my measure of market returns, I selected the S&P/TSX Composite Daily Price Index available in the CRMC Summary Information Database. As the Composite Index is comprised of Sector and Group Indices, I cannot assume that the explanatory variables are exogenous. Subsequently, the OLS estimators may be biased.[90] However, as I did not include a number of Sector and Group categories in my analysis, the degree of endogeneity bias may be limited.

5.2 Results

The empirical purpose of this paper is to determine whether sudden changes to secure legal property rights regimes result in net costs or benefits to the economy, and whether this impact is significant. To test this, I examine the impact of the release of new information (Supreme Court judgements on Aboriginal rights and title) on the current valuation of Indices and firms,[91] and whether the resource sector in particular experiences a significant adverse effect as a result of these judgements.[92] The two aspects of the results are the statistical and economic significance of the estimates. The sign and size of the economic estimates are direct measures of the cost of changes to property rights. Legal changes can alter the cost of property rights through its impact on transaction costs, and this section

[89] See Antweiler and Frank (2006) at 1.

[90] See Davidson and MacKinnon (2003) at 89-90.

[91] *Calder* is not included in the empirical analysis for two reasons: i) the CFMRC's daily data database begins January 2, 1975, almost two years after the *Calder* decision, and ii) *Calder* is an exception as a common law decision, as all other judgements are constitutional decisions.

[92] If the efficient markets hypothesis is true, the full expected value may already be capitalized into the share value. However, this hypothesis is likely untrue because the complex nature of Aboriginal rights and title legislation implies the effect is not instantenous (the longest event window is five days, and it is very plausible that the impact may continue after this point). In addition, the economic impact of this analysis is likely not full costs, as resource industries do not work in isolation, and are interconnected with international and domestic markets.

provides the opportunity to test the CDAWN school's claim that economic performance is dependent on the ability of institutions to minimize transaction costs.

The Sector Indices estimation results for all six court judgments are listed in Tables 1 through 6. The empirical results for *Sparrow* are listed in Table 1. Referring back to the qualitative description of recent Supreme Court judgements in Section 3.2, the main implications of *Sparrow* are that Aboriginal claims to resources could take precedence over competing private sector claims, and that Aboriginal claims could potentially invalidate licences already granted to the private sector by government. In terms of *Sparrow*'s influence on property rights, I predicted the judgement increased firm transaction costs. The CARs for the Energy and Materials sectors are negative but not significant. The significant CARs for the Utilities Sector range from 1.8% to 3.93% ([0,1] to [0,4] windows). The sign of the Utilities Sector's CARs is positive, implying that the *Sparrow* judgement positively impacted the profitability of the Utilities Sector. In sum, only the direction of the economic impact for the Energy and Materials Sectors, and the magnitude of the Utilities Sector, is consistent with my prediction. The empirical results do not provide strong support for CDAWN's and industry's claims.

Table 1: Sector Cumulative Abnormal Returns for *Sparrow*

Sector	[-2]	[-1]	[0]	[0,1]	[0,2]	[0,3]	[0.4]
Energy	-.0013	.0046	-.0040	-.0071	-.0044	-.0072	-.0185
	(-.19)	(.70)	(-.61)	(-.75)	(-.38)	(-.54)	(-1.24)
Materials	.0029	.0088	.0091	-.0013	-.0049	-.0090	-.0115
	(.30)	(.92)	(.95)	(-.10)	(-.30)	(-.47)	(-.54)
Utilities	-.0108	-.0012	.0070	.0180*	.0334**	.0279*	.0393**
	(-1.47)	(-.16)	(.94)	(1.73)	(2.62)	(1.89)	(2.38)

*Significant at .1; **Significant at .05; ***Significant at .01.

The empirical results for *Van der Peet* are listed in Table 2. The *Van der Peet* judgment led to a test to determine whether an Aboriginal practice was a constitutional right, making it more difficult for Aboriginal peoples to argue that their rights extended to commercial activities that developed solely as a result of European influence. Further, the *Van der Peet* judgment substantially weakened the potential for Aboriginal claimants to express the law according to their own terms and customs, thus limiting the range of evidence for

title claims permissible in court. In terms of *Van der Peet*'s influence on property rights, I predicted the judgement lowered firm transaction costs. Examining the empirical results, all of the CARs for the Energy, Materials, and Utilities Sectors lack significance. In terms of the direction of the magnitude of the effect on stock prices, the CARs for the Energy Sector are negative, for the Materials Sector are positive, and for the Utilities Sector switch from negative to positive at the [0,1] window. Thus only the direction of the effect for the Materials and Utilities Sectors is consistent with the qualitative prediction, and the empirical results for *Van der Peet* are not consistent with CDAWN's and industry's claims.

Table 2: Sector Cumulative Abnormal Returns for *Van der Peet*

Sector	[-2]	[-1]	[0]	[0,1]	[0,2]	[0,3]	[0.4]
Energy	.0055	.0065	-.0047	-.0061	-.0098	-.0092	-.0123
	(1.01)	(1.22)	(-.88)	(-.80)	(-1.05)	(-.86)	(-1.03)
Materials	-.0009	.0127	.0047	.0128	.0204	.0221	.0186
	(-.11)	(1.63)	(.59)	(1.15)	(1.49)	(1.40)	(1.06)
Utilities	.0047	-.0014	-.0027	-.0031	.0015	.0085	.0026
	(.80)	(-.26)	(-.50)	(-.40)	(.16)	(.78)	(.21)

*Significant at .1; **Significant at .05; ***Significant at .01.

The results for *Delgamuukw* are listed in Table 3. *Delgamuukw* established a test for proving title, requiring pre-European occupancy and continuity of occupancy to the present, and ruled that Aboriginals could not engage in post-European contact activities if these activities threatened their cultural relationship with the land. As well, *Delgamuukw* expanded the types of evidence admissible in courts to establish title, thus increasing the likelihood of establishing title. However, the scope of Aboriginal justifications the court would be willing to accept was ambiguous. In terms of the influence of *Delgamuukw* on property rights, I predicted the judgement increased firm transaction costs. The empirical evidence for *Delgamuuku* indicates the judgement had a strong negative impact on the valuation of firms in the Energy Sector, with significant CARs ranging from -2.75% to -5.11% ([0,1] to [0,4] windows). While the CARs for the Materials and Utilities Sectors are also negative, they are not significant. Thus, only the Energy Sector is fully consistent with the prediction that *Delgamuukw* should have had a strong negative impact on resource sectors. However issues with the data (which are discussed later) imply these results should not be interpreted as a

substantive refute of CDAWN's and industry's claims.

Table 3: Sector Cumulative Abnormal Returns for *Delgamuukw*

Sector	[-2]	[-1]	[0]	[0,1]	[0,2]	[0,3]	[0.4]
Energy	.0153	-.0070	-.0275***	-.0342**	-.0525***	-.0676***	-.0511**
	(1.53)	(-.70)	(-2.75)	(-2.42)	(-3.03)	(-3.39)	(-2.29)
Materials	-.0012	-.0100	-.0157	-.0151	-.0108	-.0093	.0319
	(-.10)	(-.89)	(-1.40)	(-.94)	(-.55)	(-.41)	(1.26)
Utilities	.0071	.0063	-.0094	-.0062	-.0083	-.0078	-.0063
	(1.00)	(.88)	(-1.32)	(-.61)	(-.68)	(-.55)	(-.40)

*Significant at .1; **Significant at .05; ***Significant at .01.

The results for *Marshall and Bernard* are listed in Table 4. *Marshall and Bernard* made it more difficult for Aboriginals in non-treaty areas to obtain Aboriginal title, and for Aboriginal groups to argue that they have title or treaty rights to unknown or unexploited resources at the time of treaty agreements. In terms of the influence of *Marshall and Bernard* on property rights, I predicted the judgement lowered firm transaction costs. In terms of the empirical results, the CARs for the Materials Sectors are positive, the CARs for the Utilities Sector are negative, and the CARs for the Energy Sector switch from positive to negative at the [0,2] window. As all the CARs lack significance, I cannot reject the hypothesis that there is no economic effect on these Indices. Thus, the empirical results do not provide strong support for CDAWN's and industry's claims. However, if *Marshall and Bernard*'s impact is limited to the Maritimes, and the firms comprising the Indices lack Maritime operations, then *Marshall and Bernard*'s impact may not be reflected in the results.

Table 4: Sector Cumulative Abnormal Returns for *Marshall and Bernard*

Sector	[-2]	[-1]	[0]	[0,1]	[0,2]	[0,3]	[0.4]
Energy	.0013	-.0105	-.0022	-.0092	.0122	.0153	.0139
	(.09)	(-.80)	(-.16)	(-.49)	(.53)	(.58)	(.47)
Materials	.0025	.0072	.0169	.0270	.0301	.0254	.0150
	(.22)	(.64)	(1.50)	(1.68)	(1.54)	(1.12)	(.59)
Utilities	.0025	-.0002	.0082	-.0035	-.0030	-.0004	-.0040
	(.42)	(-.03)	(1.38)	(-.42)	(-.29)	(-.03)	(-.30)

*Significant at .1; **Significant at .05; ***Significant at .01.

The results for the *Haida Nation* and *Taku River Tilgit Nation* judgement are listed in

Table 5. This judgement absolved industry's obligation to consult, and determined that the government can design the consultation process between the Crown and Aboriginal peoples, so long as it represents a reasonable effort by the Crown to consult and accommodate.[93] The implications of these elements should have generated a weak positive impact on resource sectors. However, *Haida Nation* and *Taku River Tilgit Nation* also generated pervasive but uncertain legal obligations, which should have resulted in a weak negative impact on resource sectors. In terms of the influence of *Haida Nation* and *Taku River Tlingit First Nation* on property rights, I felt it was unclear whether the dominant effect of the judgement was higher or lower overall firm transaction costs. Turning to the empirical results, the economic impact is positive for the Energy Sector, with the significant CARs ranging from 2.06% to 5.13% ([0] to [0,3] windows). For the Materials Sector, the direction on the economic impact swiches between positive ([0,1], [0,2] and [0,3] windows) and negative ([0] and [0,4] windows). The significant CARs are 3.82% and 3.96%, for the [0,1] and [0,2] windows respectively. The significant CARs for the Utilities Sector are -1.9% and -1.5% ([0] and [0,1] windows). All three Sectors have significant CARs in the pre-announcement period, which may be an indication they are influenced by confounding events. The implications of the different elements of the judgement make it difficult to disentangle how the various elements are influencing and affecting each other within each Sector.

Table 5: Sector Cumulative Abnormal Returns for *Haida*

Sector	[-2]	[-1]	[0]	[0,1]	[0,2]	[0,3]	[0.4]
Energy	-.0324***	-.0151	.0206**	.0484***	.0501***	.0513**	.0294
	(-3.18)	(-1.45)	(1.96)	(3.27)	(2.76)	(2.45)	(1.26)
Materials	-.0506***	.0089	-.0002	.0382**	.0396*	.0189	-.0159
	(-4.11)	(.70)	(-.02)	(2.11)	(1.79)	(.74)	(-.55)
Utilities	.-.0250***	.0251***	-.0190***	-.0155*	-.0110	-.0042	-.0231
	(-4.17)	(4.01)	(-2.91)	(-1.68)	(-.97)	(-.32)	(-1.58)

*Significant at .1; **Significant at .05; ***Significant at .01.

The results for *Mikisew* are listed in Table 6. In *Mikisew*, the Court expanded and clarified the responsibilities of government to consult and accommodate Aboriginal concerns, ruling that the Crown, even if it possesses a treaty right to affect Aboriginal interests, retains

[93]See Lawson Lundell, The *Haida Nation* and *Taku River Tlingit* Decisions: Clarifying Roles and Responsibilities for Aboriginal Consultation and Accommodation, by John Olynyk at 4.

an obligation to consult Aboriginal peoples if taking up the land may adversely affect those rights. In terms of the influence of *Mikisew* on property rights, I predicted the judgement increased firm transaction costs. The CARs for all three Sectors are positive and lack significance. This suggest that *Mikisew* had to statistical verifiable economic impact on the value of firms in these sectors. I noted earlier that *Mikisew* likely did not have significant ramifications, as it was consistent with political and legal movements at the time, and its outcome was anticipated. However, the mixed economic outcomes from the *Haida Nation* and *Taku River Tilgit Nation* judgement, which occurred approximately one year prior to the *Mikisew* judgement, may have generated some uncertainty regarding *Mikisew*'s outcome. In sum, the empirical results do not provide strong support for CDAWN's and industry's claims.

Table 6: Sector Cumulative Abnormal Returns for *Mikisew*

Sector	[-2]	[-1]	[0]	[0,1]	[0,2]	[0,3]	[0.4]
Energy	.0171	.0270	.0150	.0176	.0020	.0050	.0091
	(.87)	(1.37)	(.75)	(.63)	(.06)	(.13)	(.20)
Materials	.0170	-.0005	.0063	.0100	.0101	.0150	.0001
	(1.45)	(-.04)	(.54)	(.60)	(.50)	(.64)	(.00)
Utilities	-.0044	.0011	.0134	.0167	.0154	.0188	.0016
	(-.45)	(.11)	(1.36)	(1.21)	(.91)	(.96)	(.07)

*Significant at .1; **Significant at .05; ***Significant at .01.

Overall, the empirical results for the Sector Indices provide inconclusive evidence of my qualitative hypotheses, and CDAWN's and industry's claims. Contrary to my predictions, significant CARs occur only for the Utilities Sector in *Sparrow*, the Energy Sector in *Delgamuukw*, and the Energy, Materials, and Utilities Sectors in *Haida*. When a judgement does result in a significant economic impact, the effect is not instantaneous, though there is no consistent pattern in terms of the magnitude and size of the effect as the event window lengthens. The generality of the Sector categories, the presence of significant CARs in the pre-event period, the lack of significant CARs for the *Delgamuukw* judgement, and the presence of firms with characteristics not amenable to the study, are all indicators that the analysis should be applied to more refined data.

The Group Indices estimation results for the *Sparrow*, *Van der Peet*, and *Delgamuukw*

judgements are listed in Tables 7, 8, and 9, respectively. The advantage of this data set is its greater disaggregation of categories, which provides more precise estimates to evaluate in relation to my hypotheses. I predicted earlier that *Sparrow* should have weakly negatively impacted resource sectors. The significant CARs for the Gold Group are -4.52% and -4.71% ([0,3] and [0,4] windows), for the Metals Group range from 3.34% to 3.13% ([0,2] to [0,4] windows), for the Paper Group range from 1.94% to 3.44% ([0,1] to [0,4] windows), for the Real Estate Group range from 2.14% to 3.04% ([0,1] to [0,4] windows), and for the Utilities Group range from 1.9% to 2.61% ([0,2] to [0,4] windows). In terms of the direction of the effect, every Group (with the exception of Gold and Oil) has positive CARs. For the Groups with positive CARs, the empirical results indicate that *Sparrow* lowered firm transaction costs. According to CDAWN's claims, long-run economic growth is dependent on the ability of institutions to minimize transaction costs. This implies that *Sparrow*'s influence on property rights resulted in an increase in long-run economic growth.

Table 7: Group Cumulative Abnormal Returns for *Sparrow*

Industry	[-2]	[-1]	[0]	[0,1]	[0,2]	[0,3]	[0,4]
Gold	.0038	.0040	-.0062	.0028	-.0298	-.0451*	-.0474*
	(.22)	(.23)	(-.26)	(.11)	(-1.22)	(-1.85)	(-1.95)
Metals	.0019	.0168	.0201	.0272*	.0334**	.0388**	.0313**
	(.17)	(1.56)	(1.31)	(1.77)	(2.17)	(2.52)	(2.04)
Oil	-.0012	.0046	.0036	.0001	-.0029	-.0001	-.0029
	(-.18)	(.70)	(.39)	(.01)	(-.31)	(-.01)	(-.30)
Paper	.0007	.0003	.0083	.0194**	.0229**	.0288***	.0344***
	(.10)	(.04)	(.85)	(1.97)	(2.32)	(2.93)	(3.50)
Real Estate	.0002	.0035	.0082	.0214**	.0288***	.0316***	.0304***
	(.03)	(.51)	(.84)	(2.20)	(2.96)	(3.25)	(3.13)
Transport	.0006	.0198	.0260	.0211	.0265	.0271	.0312
	(.04)	(1.26)	(1.16)	(.94)	(1.18)	(1.21)	(1.39)
Utilities	.0025	.0217	.0060	.0126	.0196**	.0257***	.0261***
	(.39)	(3.36)	(.65)	(1.37)	(2.14)	(2.80)	(2.85)

*Significant at .1; **Significant at .05; ***Significant at .01.

I predicted the *Van der Peet* judgement should have weakly positively impacted resource sectors. The significant CAR for the Gold Group is 3.4% ([0,4] window), for the Metals Group range from 3.2% to 3.27% ([0,1] to [0,4] windows), for the Paper Group range from 2.71% to 4.16% ([0,2] to [0,4] windows), and for the Transportation Group range from 3.29%

to 3.21% ([0] to [0,4] windows). All of the CARs (with the exception of those in Oil, Paper, and Real Estate) are postive. In terms of *Van der Peet*'s influence on property rights, I predicted the judgement lowered firm transaction costs. However, only the empirical evidence for the Metals and Paper Groups provides consistent support for the my qualitive prediction, as well as CDAWN's and industry's claims.

Table 8: Group Cumulative Abnormal Returns for *Van der Peet*

Industry	[-2]	[-1]	[0]	[0,1]	[0,2]	[0,3]	[0.4]
Gold	-.0059	.0220	.0150	.0098	.0229	.0298	.0340*
	(-.41)	(1.53)	(.73)	(.48)	(1.12)	(1.45)	(1.66)
Metals	.0039	.0051	.0186	.0320**	.0280**	.0345***	.0327***
	(.44)	(.58)	(1.51)	(2.60)	(2.28)	(2.80)	(2.66)
Oil	.0056	.0066	.0046	.0001	-.0012	-.0048	-.0041
	(1.01)	(1.22)	(.61)	(.01)	(-.15)	(-.63)	(-.54)
Paper	.0053	.0148	.0053	.0177	.0271**	.0354***	.0416***
	(.58)	(1.67)	(.42)	(1.40)	(2.15)	(2.80)	(3.29)
Real Estate	.0020	-.0095	.0153	.0171	.0194	.0227	.0247
	(.22)	(-1.07)	(1.22)	(1.36)	(1.55)	(1.81)	(1.97)
Transport	.0166*	-.0040	.0329**	.0260**	.0337**	.0399***	.0321**
	(1.69)	(-.40)	(2.36)	(1.86)	(2.42)	(2.86)	(2.30)
Utilities	.0152***	-.0054	.0008	-.0001	-.0018	-.0040	-.0096
	(2.67)	(-1.01)	(.11)	(-.01)	(-.25)	(-.54)	(-1.29)

*Significant at .1; **Significant at .05; ***Significant at .01.

Delgamuukw should have had a strong negative impact on resource sectors. In terms of the empirical evidence, every Group has significant CARs. Further, with the exception of the Gold Group, the direction of the economic impact for all Groups is negative. The significant CARs for the Gold Group range from 5.81% to 11.98% ([0] to [0,4] windows), for the Metals Group range from -5.59% to -6.27% ([0,2] to [0,4] windows), for the Oil Group range from -3.78% to -7.81% ([0,1] to [0,4] windows), for the Paper Group range from -3.38% to -5.12% ([0,1] to [0,4] windows), for the Real Estate Group range from -2.51% to -5.81% ([0,2] to [0,4] windows), for the Transportation Group range from -3.38% to -6.59% ([0,1] to [0,4] windows), and for the Utilities Group are -2.58% and -2.76% ([0,3] and [0,4] windows). In terms of *Delgamuukw*'s influence on property rights, I predicted the judgement increased firm transaction costs. With the exception of the direction of the CARs for the Gold Group, the empirical results for *Delgamuukw* thus far provide the most consistent

evidence to support my qualitative predictions, as well as CDAWN's and industry's claims.

Table 9: Group Cumulative Abnormal Returns for *Delgamuukw*

Industry	[-2]	[-1]	[0]	[0,1]	[0,2]	[0,3]	[0.4]
Gold	-.0085	-.0347*	.0581**	.0518*	.0837***	.1111***	.1198***
	(-.41)	(-1.70)	(2.00)	(1.78)	(2.88)	(3.81)	(4.12)
Metals	.0031	-.0046	-.0033	-.0308	-.0559***	-.0638***	-.0627***
	(.23)	(-.35)	(-.18)	(-1.66)	(-3.01)	(-3.43)	(-3.38)
Oil	.0149	-.0070	-.0101	-.0378***	-.0448***	-.0633***	-.0781***
	(1.49)	(-.70)	(-.71)	(-2.67)	(-3.17)	(-4.47)	(-5.52)
Paper	.0009	-.0036	-.0094	-.0338***	-.0475***	-.0501***	-.0512***
	(.10)	(-.39)	(-.72)	(-2.57)	(-3.60)	(-3.80)	(-3.88)
Real Estate	-.0035	-.0069	-.0020	-.0163	-.0251*	-.0430***	-.0581***
	(-.38)	(-.74)	(-.15)	(-1.24)	(-1.90)	(-3.26)	(-4.41)
Transport	.0131	-.0016	-.0114	-.0383**	-.0403**	-.0659***	-.0662***
	(1.07)	(-.13)	(-.66)	(-2.22)	(-2.34)	(-3.82)	(-3.84)
Utilities	.0129	-.0019	.0054	-.0089	-.0122	-.0258*	-.0276*
	(1.17)	(-.17)	(.34)	(-.57)	(-.78)	(-1.65)	(-1.76)

*Significant at .1; **Significant at .05; ***Significant at .01.

Relative to the results from the Sector analysis, the results from the Group analysis appear more consistent with my qualitative predictions and CDAWN's and industry's claims. In particular, the greater disaggregation of Group categories allows me to measure the economic impact of each judgement on particular sectors of the economy. However, the continued presence of significant CARs in the pre-event period, as well as some inconsistencies regarding the significance and direction of CARs relative to the expected impact of the judgement, indicate that further refinement of the data would enhance confidence in the results.

Analysis on a firm level provides greater control over the characteristics of firms included in the sample. The CAARs and z-scores for the re-constructed Group Indices for the *Delgamuukw* judgement are listed in Table 10.[94] The significant CAARs for the Gold

[94] A total of fifty-seven firms are used in my analysis. Ten firms comprise Gold and Silver (Barrick Gold, Bema Gold, Brillant Mining, Cambior, Echo Bay Mines, Kinross Gold, Lytton Minerals, Placer Dome, Raytec Metals, and Viceroy Resources), one firm comprises Metals and Minerals (Rio Algom), twenty firms comprise Oil and Gas (Alberta Energy Company, Anderson Exploration, Berkley Petroleum, Crestar Energy, Dreco Energy Services, Enerflex Systems Income Trust, Ensign Energy Services, Gulf Canada Resources, Numac Energy, Newport Petroleum, Northrock Resources, Petro-Canada, Pan East Petroleum, Pinnacle Resources, Rio Alta Exploration, Ranger Oil, Shell Canada, Suncor Energy, and Ulster Petroleums), eight firms comprise Paper and Forest Products (Alliance Forest Products, Canfor, Donohue, Domtar, Repap Enterprises, Slocan Forest Products, St. Laurent Paperboard, and West Fraser Timber), three firms comprise Real Estate and Construction (Cambridge Shopping Centres, Oxford Properties Group, and Trizec Hahn),

Group range from 4.04% to 16.65% ([0,1] to [0,4] windows), for the Oil Group range from -3.05% to -5.1% ([0] to [0,4] windows), for the Paper Group is -4.27% ([0,2] window), for the Real Estate Group ranges from -2.14% to -6.65% ([0] to [0,4] windows), and for the Utilities Group is -2.09% ([0,2] window). With the exception of the CAARs in the Gold and Paper Groups, the direction of the economic impact for all Groups is negative.

Table 10: Reconstructed Group Cumulative Average Abnormal Returns for *Delgamuukw*

Industry	[-2]	[-1]	[0]	[0,1]	[0,2]	[0,3]	[0.4]
Gold	-.0214*	.0417***	.0019	.0404**	.0409*	.0620**	.1665***
	(-1.71)	(3.34)	(.15)	(2.27)	(1.87)	(2.46)	(5.91)
Rio Algom	.0051	-.0082	-.0121	-.0087	-.0282	-.0331	-.0185
(Metals)	(.30)	(-.48)	(-.70)	(-.36)	(-.94)	(-.96)	(-.48)
Oil	-.0083	-.0075	-.0305***	-.0417***	-.0632***	-.0700***	-.0510**
	(-.90)	(-0.81)	(-3.33)	(-3.22)	(-3.98)	(-3.82)	(-2.49)
Paper	-.0176	.0127	-.0095	-.0184	-.0427*	-.0454	.0148
	(-1.25)	(.89)	(-.67)	(-.92)	(-1.73)	(-1.60)	(.47)
Real Estate	-.0027	-.0060	-.0244**	-.0348**	-.0576***	-.0718***	-.0665***
	(-.24)	(0.54)	(-2.22)	(-2.23)	(-3.02)	(-3.26)	(-2.70)
Transport	.0010	-.0024	-.0030	-.0021	-.0043	-.0021	-.0017
	(.10)	(-.23)	(-.29)	(-.14)	(-.24)	(-.10)	(-.07)
Utilities	.0102	-.0045	-.0107	-.0094	-.0209*	-.0191	-.0158
	(1.45)	(-.64)	(-1.53)	(-.95)	(-1.71)	(-1.36)	(-1.01)

*Significant at .1; **Significant at .05; ***Significant at .01.

Having removed firms with characteristics not amenable to the study, I place the most confidence in my empirical results listed in Table 10. These results have both similarities and differences relative to the empirical results listed in Table 9. *Delgamuukw*'s impact should be strongest in the resource-orientated industries (Gold, Metals, Oil, and Paper), which are most dependent on rural land areas subject to Aboriginal claims. For the Gold Group, the CAARs, like the CARs in Table 9, continue to be positive and significant. The magnitude of the effect on stock price remains the largest relative to the other six groups, peaking at 16.65% for the reconstructed results, and at 11.08% for the Indices results, for the [0,4] window.[95] For the Minerals Group, only one firm remained after I refined the

four firms comprise Transportation and Environmental (Air Canada (2), Laidlaw, and Transat) and 8 firms comprise Utilities (ATCO, Bell Canada, Bruncor, Canadian Utilities (2), Fonorola, Manitoba Telecom, QuebecTel Group, and Teleglobe Inc.).

[95]The CAARs for Gold seems very large relative to other groups. During this period, the price of gold in the overall market was extremely volatile, and this may be influencing the results. For example, the day prior to the *Delgamuukw* judgement, the price of gold dropped below $285 (U.S.) an ounce, an 18 year low.

data, and none of the CAARs for Rio Algom are significant.[96] For the Oil Group, the CAARs and the CARs are similar, falling between -3% to -8% for both the reconstruced and Indices results. The CAARs for the reconstruced Paper Group lose some of their significance relative to the Indices results. As well, the direction of the economic impact for the Paper Groups' reconstruced CAARs switch between positive and negative, while the Paper Groups' Indices CARs are all negative. The Real Estate Group results follow the same trend as the resource-orientated industries. This is suprising as this industry should be more diversified, and subsequently less affected by unexpected changes to Aboriginal rights and title legislation. The CAARs for the reconstruced Real Estate Group are significant for the [0] to [0,4] windows, while the CARs for the Indices results are only significant for the [0,2] to [0,4] windows. The Transportation and Utilities Groups are more diversified than the resource-orientated Groups. Consequently, after refining the data, the reconstruced CAARs lose most of their significance. None of the CAARs for the reconstruced Transportation Group are significant, which is opposite the Indices results, which has significant CARs for the [0,1] to [0,4] windows. For the Utilities Group, significance occurs only once in the reconstruced results, at the [0,2] window, but twice in the Indices results, at the [0,3] and [0,4] windows. The empirical results for *Delgamuukw* thus far provide the most substantive evidence to support my qualitative predictions, as well as CDAWN's and industry's claims.

While I postulated that the complexity of Aboriginal rights and title judgements should cause a lagged impact on stock market prices, and that this impact should increase as the event window lengthens, my empirical results are not entirely consistent with this prediction. What the evidence does show, for Sectors, Groups, and the reconstructed Group results, is that the significant impact of each judgement is not instanatenous. Rather, the stock price is generally affected over a several day period.

6 Conclusion

The purpose of this paper is to empirically test whether sudden changes to secure legal property rights regimes impacts economic growth. Using the example of stock market re-

See "Gold Falls Below $285 (U.S.) Barrier,"' The Globe and Mail, Dec. 10, 1997 at B18.

[96] As mentioned in Section 4, tests based on one firm are generally not significant.

actions to Supreme Court judgements on Aboriginal rights and title, I applied an event study methodology to empirically test industry's claims that the uncertainties and conflicts generated by these judgments are aversely affecting the resource sector and overall Canadian economy. As resource development increasingly occurs in areas subject to Aboriginal claims, if industry concerns are valid, then rural Aboriginal communities also stand to lose some economic benefits, such as royalties, employment opportunities, linkages, and trust funds.[97] The empirical results of this paper appear to provide support for industry's claims. The results indicate that this impact i) is limited to resource-orientated industries, ii) is dependent on the amount of uncertainty and new information generated by the judgement, and iii) is felt over several days, as it takes time to understand and communicate the implications of Aboriginal rights and title legal documents. In terms of the influence of legal changes on property rights, my results provided stronger support of my qualitative predictions, and CDAWN's and industry's claims, as I further refined the data. In sum, the evidence appears to support CDAWN's hypothesis that secure legal property rights regimes are fundamental to economic growth.

Brooks *et al.*'s study is the only other paper which uses an event study to analyze the impact of significant native title court judgments on stock market prices of firms. However, Brooks *et al.* find that sudden changes to native title legislation does not aversely impact the economy, which is a different conclusion than the one reached in this paper. One explanation for this difference may be the improved methodology used in this paper, which relies on a more conventional application of an event study framework. An extension of this paper would be to apply the more conventional methodology to the Australian case.

There are also opportunities to increase confidence in the empirical results by improving the data and extending the analysis. The presence of statistically significant z-scores before the announcement date indicates the presence of confounding events. While I did not find mention of these events in the Globe and Mail, I would have liked to have checked more media sources, and particularly a finance-orientated paper. Another point of contention is the sample size, which for the Indices categories is relatively small.[98] An alternative

[97] See Hipwell *et al.* (2002) at 10.

[98] For example, in the firm analysis of *Delgamuukw*, the sample size of categories ranges from three to twenty firms. Sample size (n) affects the the precision of the coefficient estimator though the variance,

to choosing firms based on the Indices would be to construct categories from the firm up. This method would give more flexibility in terms of the characteristics and number of firms included in the analysis. As a possible extension, one could conduct a firm level analysis for all the judgements, similar to how I reconstructed the *Delgamuukw* Group Indices, and compare the results to the TSX Sector and Group Indices results. Further extensions of this paper could examine the effect of market indicators mentioned by Lavelle (2001), such as commodity prices and wage costs, on investor confidence. Finally, a market capitalization exercise would help give a sense of the overall economic impact of the cases.

Resource exploration and development depends on a multistakeholder relationship between Aboriginal communities, industries and government. From a policy perspective, managing this relationship is difficult and complex. Resource activities are not limited to economic effects, and have specific political, historical, moral, legal, spiritual, socio-economic, cultural, and environmental impacts on Aboriginal communities.[99] Though policymakers may be interested in quantifying social justice aspects, and moving towards a cost/benefit analysis of social justice and economic costs, that is not the objective of this paper. Rather, the results of this empirical exercise appear to provide support of industry's claims that the current process is slow and inefficient. The results highlight the need for policymakers and lawmakers to consider ways to achieve social objectives while minimizing uncertainty and complexity, and encouraging investment in the resource sector, in order to secure long run economic growth and development.

which is proportional to 1/n. See Davidson and MacKinnon (2003) at 101.

[99]See Hipwell (2002) at 13 and 43.

A Tables

Table 11: Firms Dropped for Group *Delgamuukw* Analysis - Possible Confounding Events

Firm	Group	General Info	Confounding Event Date(s) and Story
Royal Oak Mines	Gold and Silver	Google Finance	Dec. 4 - Firm cash-strapped Dec. 4 - Opinion piece shares bad investment Dec. 8 - Cut in credit rating Dec. 12 - Bank predicts shares may be worthless
TVX Gold	Gold and Silver	www.mbendi.co.za	Dec.11 - Firm to continue with major project
Alcan	Metals and Minerals	Google Finance	Dec.12 - Major project approval
Cameco	Metals and Minerals	Cameco website	Dec.12 - Plans for major project suspended Dec. 13 - Plans for major project fall through
Inco	Metals and Minerals	www.valeinco.com	Dec. 4 - Possible hostile takeover Dec. 6 - Possible lawsuit against firm Dec. 10 - Firm denies cutting production, shares fall Dec. 11 - Political tension with Provincial government Dec. 11 - Report firm vulnerable to takeover
Inco Class VBN	Metals and Minerals	www.valeinco.com	Relation to Inco
Westmin Resources	Metals and Minerals	Google Finance	Dec. 12 - Threatened by hostile takeover
Amber Energy	Oil and Gas	www.business.com	Dec. 13 - Firm makes acquisition
Canadian Natural Resources	Oil and Gas	Google Finance	Dec. 11 - Stocks picking up steam Dec. 11 - Report future projects lined up
Tembec	Paper and Forest	Google Finance	Dec. 13 - Firm makes acquisition

Table 12: Firms Dropped for Group *Delgamuukw* Analysis - Lack of Canadian Operations

Firm	Group	General Info	Geographic Operations
Dayton Mining	Gold and Silver	www.pacrim-mining.com	South America and the U.S.
Eldorado Gold	Gold and Silver	Yahoo Finance	Asia and the Middle East
Glamis Gold	Gold and Silver	Google Finance	Central America and the U.S.
Greenstone Resources	Gold and Silver	Google Finance	Central America
Golden Star Resources	Gold and Silver	Google Finance	South America and West Africa
Meridan Gold	Gold and Silver	www.meridiangold.com	Americas
Orvana Minerals	Gold and Silver	Google Finance	Americas
Pan American Silver	Gold and Silver	Google Finance	Americas
Rio Narcea Gold Mines	Gold and Silver	Google Finance	Europe and West Africa
Southwestern Resources	Gold and Silver	Google Finance	South America and Asia
AUR Resources	Metals and Materials	Google Finance	Chile and Newfoundland
Lionore Mining	Metals and Materials	Google Finance	Australia and Africa
Denbury Resources	Oil and Gas	www.denbury.com	U.S.
Gulfstream Resources	Oil and Gas	Google Finance	Overseas
Pacalta Resources	Oil and Gas	Google Finance	Ecuador

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