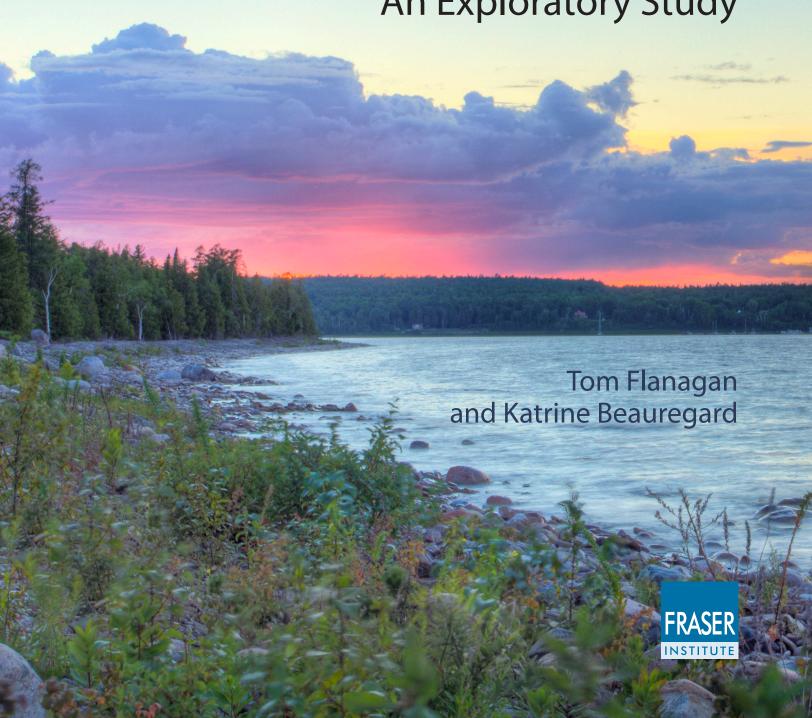


The Wealth of First Nations

An Exploratory Study



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Contents

Foreword from Chief Michael LeBourdais / iii			
Executive summary / v			
Introduction / 1			
The institutional approach / 2			
Measuring well-being / 5			
Measuring First Nation institutions / 8			
Bivariate analysis / 13			
Multivariate analysis / 16			
Causal interpretation / 20			
Fee simple: A new development / 23			
Conclusion / 25			
Technical appendix / 26			
References / 28			
About the author & Acknowledgments / 31			
Publishing information / 32			
Supporting the Fraser Institute / 33			
Purpose, funding, & independence / 34			
About the Fraser Institute / 35			
Editorial Advisory Board / 36			

Foreword

As the Chief of the Whispering Pines/Clinton Indian Band, I am pleased to write the foreword for this study. It is gratifying to see research that begins to empirically demonstrate the economic importance of individual property rights in our communities. I know personally what our lack of property rights means.

When my grandfather met the woman who would become my grandmother and asked her to marry him, she agreed on one condition—he had to build her a home. My grandfather was a hard working rancher, just like his son and just like me. He built her that home and they got married. They had a large family and my grandfather built two more homes on reserve for his children. He owned three houses outright and ran a farm and orchard on his land near Lillooet. None of these houses have any value but to keep the weather off our backs.

My father later inherited a ranch from his father. He owned a house and built another, but when he went into a bank in the 1980s to apply for a credit card (so he could rent a car and reserve a hotel, like any other Canadian), he was turned down and told that he didn't have any collateral. His two houses and his ranch were insufficient collateral because of provisions in the Indian Act that state that an Indian reserve is "a tract of land, the legal title to which is vested in Her Majesty."

It is because of this reality that our community, along with others, is leading the proposed First Nation Property Ownership legislation. We are doing this because dependency is not our way. Over 60% of my community's population is younger than 30 years of age. I am proud that many of our young adults are educated and employed. They want to stay, live, and prosper in our community. The proposed property ownership legislation will give us

hope that we can restore our values and property rights that the Indian Act took away.

It is for these reasons that this research is important to our community, First Nations, and anyone else interested in making First Nations partners in the market economy and the Canadian federation.

Michael LeBourdais is currently serving his fifth term as Chief of the Whispering Pines Indian Band, situated in the heart of British Columbia's interior.

Executive Summary

The standard of living of First Nations is on average much lower than that of other Canadians, but some First Nations have achieved higher well-being than others.

This paper is an investigation into the factors that promote prosperity for First Nations. We use the Community Well-being Index (CWB), calculated by the Department of Aboriginal Affairs, as a measure of prosperity for First Nations. As possible explanations of differences in well-being, we develop and test four indicators of respect for property rights and the rule of law: use of Certificates of Possession, adoption of property tax, entry into the First Nations Land Management Act, and avoidance of third-party management. In a multiple regression analysis, all four variables are positively correlated with higher CWB scores, even after controlling for cultural background and remoteness of location. Our findings are consistent with comparative and international research that has highlighted the importance of property rights and the rule of law for economic growth.

Introduction

"If it matters, measure it." — Michael Walker

By any standard, Canada's First Nations (status Indians), especially those who live on reserves, are less well-off than most other Canadians. First Nations people lag behind other groups, even other Aboriginal groups such as Métis and non-status Indians, in income, rate of employment, quality of housing, years of education, life expectancy, and any other aspect of standard of living that can be objectively measured (Flanagan, 2008: 222-230). Canadians from all parts of the political spectrum agree on the need for First Nations to attain a higher standard of living, but there is no unanimity on how to attain that goal.

Yet not all the approximately 600 First Nations are in the same situation. Some are living in near-Third-World standards of destitution, while others enjoy a standard of living similar to the Canadian average. This great range of variation offers a statistical opportunity to look for the correlates of success, which may in turn offer some practical direction on how all First Nations can improve their standard of living.

The institutional approach

Following the lead of Nobel-Prize-winner Douglass North, contemporary economics and political science emphasize the importance of legal and governmental institutions in explaining economic progress and associated advances in well-being. The Fraser Institute's annual survey, *Economic* Freedom of the World, first published in 1996, is an important part of this literature. It produces an aggregate score for sovereign states based on measures of size of government, legal system and property rights, sound money, freedom to trade internationally, and regulation. The most recent volume highlights positive correlations between economic freedom and per capita income, economic growth, life expectancy, and related indicators of well-being (Gwartney, Lawson, and Hall, 2012: 23-24). Similar results have emerged in the Fraser Institute's Economic Freedom of North America series, which compares American states and Canadian provinces. Those subnational units that score higher on the freedom index also tend to score higher on measures such as GDP per capita and annual growth rates (Ashby, Bueno, and McMahon, 2012: 12-14).

In a broad review of international and comparative studies, Francis Fukuyama found that individual property rights and the rule of law were consistently correlated with economic growth and prosperity (2011: 468-475). Most recently, Deron Acemoglu and James Robinson (2012), in a magisterial historical survey, argue that prosperity is based on inclusive economic institutions—open markets and widely dispersed property rights—as well as inclusive political institutions—the rule of law and widely held political rights.

In many publications, the Harvard Project on American Indian Economic Development has also argued that governance is crucial to economic development for native peoples: When Native nations back up sovereignty with stable, fair, effective, and reliable governing institutions, they create an environment that is favorable to sustained economic development. In doing so, they increase their chances of improving community well-being (Jorgenson, 2007:24).

Other scholars in the United States and Canada espouse similar views (Anderson, Benson, and Flanagan, 2006). Most recently, John Graham (2012) argued that the major barrier to the progress of Canadian First Nations is "dysfunctional governance." But in spite of the general consensus around this point, much of the evidence proffered is anecdotal, based on case studies, rather than systematic.

There is, to be sure, some quantitative evidence from American research. In a study of 67 American reservations from the mid-1970s to 1990, the Harvard Project's Stephen Cornell and Joseph Kalt found that both income growth and workforce participation were positively and significantly related to institutional factors in reservation government. Assembly-style direct democracy, as practiced, for example, on the Crow reservation in Montana, performed the worst; separation-of-powers regimes with a strong executive (i.e., an elected chief) did better; and quasi-parliamentary systems, where the chief was chosen by and accountable to an elected council, did by far the best, even after controlling for the impact of economic growth in adjacent counties. The presence of an independent judiciary was also positively correlated with economic progress, though not at a statistically significant level in this small study (Cornell and Kalt, 2000). Terry Anderson and Dean Lueck (1992) showed that trust land on Western Indian reserves is about 50% less productive than comparable, but individually owned, agricultural land in neighbouring counties. In a different study, Anderson and Dominic Parker used multiple regression to tease out the importance of several factors in explaining economic growth on American Indian reservations in the years 1989 to 1999 (they included only reservations with populations larger than 1,000). Again, institutional and governance factors stood out. Reservations that, under Public Law 280, allowed "non-Indian litigants access to state courts in contract and tort cases," thereby providing more predictability in adjudication, experienced faster growth. There was also "a robust negative relationship between the size and scope of tribal government and economic growth." Finally, "BIA trust constraints on land have stunted the long-run economic developments of reservations whose economies depend on natural resource use (including farming and ranching)" (Anderson and Parker, 2007:

186). All this was after controlling for the effect of adjacent county growth and casino gambling.¹

Although the research on American Indian reservations is sparse, it fits with the international literature highlighting property rights and the rule of law as key factors in promoting economic development. This paper is an initial attempt to deploy a quantitative research strategy with Canadian First Nations, to see if statistical evidence supports the proposition, derived from comparative and international research, that institutions of property rights and the rule of law are positively related to economic and social well-being.

¹ Casino gambling can have a huge, outlier impact on economic growth if the reservation is located close to a major population centre and if there is little competition from other gambling facilities. It is best treated as a separate variable rather than as simply part of economic growth.

Measuring well-being

In a recent analysis of the effect of educational attainment on First Nations, Sharpe and Lapointe (2011) used average earnings and GDP per capita as indicators of economic outcomes on Canadian Indian reserves. There are at least two reasons, however, to believe that a broader indicator of well-being is more appropriate in measuring on-reserve outcomes. First Nations people, especially those living on reserves, often receive substantial in-kind income, such as subsidized housing, supplementary medical benefits, and financial assistance in attending institutions of higher education. Moreover, reserve populations tend to be very small, so that the presence of a few First Nation millionaires could drive average income statistics higher without reflecting much improvement in well-being for most band members. Fortunately, a more broad-based measure of community well-being is available.

Since 1982, the Department of Aboriginal Affairs has been compiling the Community Well-being (CWB) index, based on data collected by Statistics Canada every five years (O'Sullivan and McHardy, 2007; O'Sullivan, 2012). The values used in this study are based on the 2006 census, which was the most recently available when the research was done.

The CWB is a summation of four equally weighted aspects of onreserve life as measured by Statistics Canada data: per capita income, education, housing, and workforce participation:

 Per capita income is logarithmically transformed, so that the impact of income is not overestimated, and the presence of one or two millionaires in a small First Nation will not have an undue effect. Education is measured in two ways:

- Percentage of the community aged 15 and over that has completed at least grade 9 (weighted 2/3 of the education component).
- Percentage of the community aged 20 and over that has at least finished secondary school (weighted 1/3 of the education component). As more and more native people attend post-secondary institutions, it will be important to some day measure the post-secondary completion rate, but for the time being that number is still relatively small and does not need to be measured separately.

Housing is also measured in two ways, emphasizing both quantity and quality:

- Quantity: percentage of the population living in housing with no more than one person per room (i.e., not crowded).
- Quality: percentage of the population living in dwellings that do not need major repairs (i.e., in good shape).

Labour force participation is also measured in two ways:

- Percentage of the population aged 20 and over who are involved in the labour force, which means seeking work even if not now employed.
- Percentage aged 15 and over employed.

These four aspects of community life are standardized into percentages, weighted as described above, and then added together to give the final CWB, which can range from 0 to 100. The mean or average value for First Nations is 57, as compared to 77 for other Canadian communities in 2006 (O'Sullivan, 2012).

In recent census years the CWB has been calculated for about 85% of First Nations communities,² omitting those with populations less than 100 persons and others where there are issues of data quality or where the band government will not grant access to census takers. Unfortunately, this latter category includes the large and important Iroquois communities in eastern Canada. Our database for 2006 includes 463 First Nations. The CWB is also calculated for over 4,000 other Canadian communities, thus facilitating comparison of aboriginal standards of living with those of other Canadians. In

² For more on the CWB see: http://www.ainc-inac.gc.ca/eng/1100100016643.

fact, such comparative analysis has been the main use of the CWB thus far (White and Maxim, 2007; Graham, 2012).

However, the CWB has also been used in one piece of research more related to the topic of this paper. A 2007 time-series analysis found that the CWB of Canadian First Nations was unaffected by receipt of money in settlement of specific claims (White, Spence, and Maxim, 2007). Although this was not an institutional study, it suggested that receipt of windfall benefits had no positive effect on community well-being, thus indirectly reinforcing the importance of institutional and governance factors in promoting or retarding economic development.

While the CWB appears to be the best available measure and has been used in other research, it is not without problems. It shares two difficulties associated with all aggregated indexes: the weighting—25% each for income, education, housing, and labour force participation—is arbitrary; and the CWB as an aggregated variable has no natural interpretation. It is not clear, for example, what an increase of, say, 10 points means. In contrast, each of the four components has a natural interpretation; an increase means more dollars, or years of education, or more spacious housing in better repair, or more jobs.

As noted above, the CWB is not available for all First Nations; and when it is available, there are potential problems with the composition of the on-reserve population. Some reserves include non-Indian residents whose socio-economic characteristics may be different from the First Nation norm. Also populations on many reserves are quite mobile, with many band members moving back and forth from neighbouring cities. Depending on who is coming and who is going, reserve populations may be demographically different in different census years. But all indexes are problematic in one way or another, and we believe the potential problems with the CWB do not prevent its usage in research, especially in an exploratory study of this type.

Measuring First Nation institutions

In many respects, First Nations share economic, legal, and political institutions with other Canadians. First Nations use the Canadian currency and banking system, are subject to the Canadian Criminal Code and court system, and vote in provincial and federal elections. In other respects, all First Nations have different institutions from other Canadians—e.g., immunity from taxation on reserves and receipt of supplementary medical benefits. But if we are trying to relate differences in outcomes for First Nations to institutional differences, we must look for legal and political institutions that vary among reserves, and for which data are available. We have identified four such institutional variables:

- Prevalence of certificates of possession (CPs)
- Enactment of on-reserve taxation
- Entry into the First Nations Land Management Framework Agreement
- Avoidance of external fiscal management

As will be explained below, these four variables overlap somewhat. The first three involve recognition and protection of individual property rights, while the last three concern matters of government competence. As a group, they can be considered measurements of property rights and good governance, which the international and comparative research has identified as crucial variables in explaining differences in economic outcomes.

Prior to the colonial era, First Nations in what is now Canada had a variety of property institutions, ranging from collectively controlled hunting grounds to family owned farms, fishing stations, and trap lines (Flanagan,

Alcantara, and Le Dressay, 2010: 30-41). One of the tragedies of Canadian history is that these rights were largely ignored while First Nations were sent to live on land reserves that they did not, and still do not, own. According to section 91(24) of the Constitution Act, 1867, Parliament has jurisdiction over "Indians, and Lands reserved for the Indians." The Indian Act further specifies:

Subject to this Act, reserves are held by Her Majesty for the use and benefit of the respective bands for which they were set apart, and subject to this Act and to the terms of any treaty or surrender, the Governor in Council may determine whether any purpose for which lands in a reserve are used or are to be used is for the use and benefit of the band [s. 18(1)].

The Indian Act regime has never allowed for individual fee-simple ownership of reserve land, but it does provide (or allow) for three forms of individual property rights that are less robust than fee simple:

Customary rights are the most common form of individual landholding on First Nations lands. That they are not enforceable in Canadian courts makes them a weak form of property. There are probably tens of thousands of customary rights on Canadian Indian reserves, but no one is sure of the number because there is no central list of such landholdings. This absence of documentation and central recording makes it impossible at the present time to construct a customary rights variable for statistical analysis, even though we know that some First Nations, such as Lac La Ronge and Membertou, have created successful systems of customary property rights that work in practice because of band-supported surveying, record-keeping, and by-law creation.³

A second form of individual property on reserve land is the certificate of possession (CP), which is provided for by s. 20(1) of the Indian Act. A CP is a permanent title to a piece of reserve land, approved by the band council and then issued by the Minister. A CP can be enforced in court, so in that respect it is similar to ownership in fee simple, but it is not as strong as fee simple for two main reasons. First, transactions require the approval of the Minister, which often introduces uncertainty and bureaucratic delay. Second, a CP can only be sold to another member of the same First Nation band. Given the small population of most First Nations, this means there are few potential buyers and hence almost no real estate market for CPs. Also, where CPs have been in existence for many years, ownership may have become subdivided through inheritance to the point where managerial decision-making for the

³ Email message from Randy Jenkins, Department of Aboriginal and Northern Affairs, to Tom Flanagan, January 2, 2013.

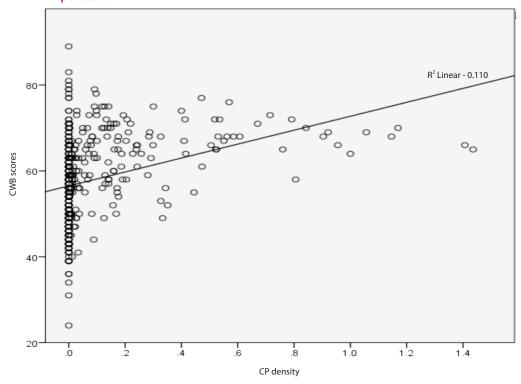


Figure 1: Linear regression of community well-being index upon density of certificates of possession

land becomes gridlocked. Some CPs on the Iroquois reserves in Ontario now have hundreds of owners.⁴

Yet, even though the CP has limitations compared to fee simple ownership, it is the best individual property right available to reserve residents under the Indian Act. At the end of 2011, the Indian Land Registry in Ottawa had a record of almost 44,000 CPs and was able to give us the total number of such holdings on each reserve. By dividing that total by the on-reserve population of the First Nation, we constructed a variable representing the density of certification for each First Nation. We interpret that as a measure of private

⁴ Email message from Randy Jenkins, Department of Aboriginal and Northern Affairs, to Tom Flanagan, January 2, 2013.

⁵ Email message from Randy Jenkins, Department of Aboriginal and Northern Affairs, to Tom Flanagan, November 18, 2011. The Registry list is actually of landholdings for which there is "Evidence of Title," a category including, for example, veterans' grants, which are legally similar to CPs. In any case, CPs make up most of the list.

property, because the CP is the closest equivalent to private property that First Nations people can possess on their own lands.⁶

A third form of individual property right on First Nations land is the lease, which is provided for in three different ways by the Indian Act:

- Under s. 28(2), the Minister may approve short-term leases—up to a year without consent of the Band Council, and longer-term leases with consent of the Band Council.
- Under s. 38(2), a band may "designate" land for leasing by the Minister. Approval is required by the whole band, either in a meeting or by a referendum.
- Under s. 58(3), "The Minister may lease for the benefit of any Indian, on application of that Indian for that purpose, the land of which the Indian is lawfully in possession without the land being designated." This section is normally used to allow CP holders to lease their land.

Leases are private property rights. In return for payment, the lessee (the tenant under the lease) gets control of the land and can use it in whatever way the lease permits—living on it, farming it, or developing a business. Again, if the lease permits, the tenant can use the lease as security for a mortgage, leave it to heirs, or sell it to a purchaser in the marketplace. The buyer does not have to be another band member, unless specified in the lease. The lease goes beyond the limitations of the other forms of individual property rights available to First Nations. Unlike customary rights, leases can be enforced in Canadian courts; and unlike certificates of possession, they can be sold to anyone, not just to other band members. But leases by their nature are temporary and hence never as valuable as outright ownership.

When we carried out this research, we did not have access to an overall listing of leases of Indian reserve land. However, a partial proxy is available in the list of those First Nations that have adopted property tax regimes. The list is maintained by the First Nations Tax Commission, which offers technical assistance in this area. Our assumption in this paper is that a First Nation would not go to the trouble of adopting a tax regime unless there was enough

⁶ When our paper was on the verge of publication, we became aware of Brinkhurst and Kessler (2013). Their working paper, like ours, is a quantitative study of CPs. However, crucial variables are defined differently and different questions are asked. We look forward to eventual publication of this and other papers by Kessler and her collaboators.

⁷ There are two statutory authorities for taxation on Indian reserves, s. 83 of the Indian Act and the First Nations Statistical and Management Act. Some bands operate under one or the other statute, and some are approved under both. For our purposes in this paper, the distinctions do not matter. See: http://www.fntc.ca.

leasehold property on the reserve to make it worthwhile. We will therefore view adoption of a tax system as a proxy for the presence of leasehold property that is worth taxing, even as we continue to search for a body of data on leasing that can be statistically analyzed. Adoption of a tax system is also a more general indicator of governmental competence, because it takes considerable effort to meet statutory criteria and be accepted for regulatory purposes by the First Nations Tax Commission.

Another variable that combines recognition of property rights with governmental competence is enrolment in the First Nations Land Management Framework Agreement. The First Nations Land Management Act, passed in 1999, makes it possible for First Nations to opt out of the land-management provisions of the Indian Act and enroll in a new regime, under which they can draft their own land management code. After the code has been approved, the First Nation band still does not own its own land but can enter into property transactions such as leases without further approval by the Minister. Effectively, the band's functional property rights, in the sense of control over the land on which they live, are enhanced. The First Nations Land Management Board publishes lists of First Nations that have completed their entry into the Framework Agreement as well as others that have signalled signalled their intention to apply but not yet completed the process.⁸

Finally, we have created a variable of governmental competence based on bands' ability to balance their budgets and stay out of debt. When debts and unpaid bills mount too high, the Department of Aboriginal Affairs can put a First Nation under three increasingly stringent forms of external control: required management, co-management, and external management. At the most extreme level, the band loses control of its budget completely and all bills are paid by an accounting firm appointed as an outside trustee. Lists of First Nations in financial difficulty are not normally published, but we were able to obtain one in 2011 through an access-to-information request made by journalists (Welch and Rabson, 2011).

⁸ See: http://www.fafnlm.com/member-communities.html.

⁹ Aboriginal Affairs has now started to release this information. See: http://www.aadnc-aandc.gc.ca/eng/1308848096847/1308848167117.

Bivariate analysis

We hypothesize that each of these four variables, because they indicate respect for property rights and/or governmental competence, will show a positive relationship with the CWB. A statistical test for each case follows.

Figure 1 is the scattergram of the linear regression of the CWB upon the density of certification on reserve land (i.e., the number of CPs per reserve inhabitant).

The correlation coefficient is 0.33, which explains 0.11 of the variance, indicating a modest but still statistically significant relationship in the predicted direction (n = 463, p < .001). The regression equation is:

CWB = 56.5 + 16.2 X CP Density

Interpreted in words, that means that when Density of Certification is 0 (i.e., no CPs at all on the reserve), the average CWB Index is 56.5; and if the Density of Certification were increased to 1.0 (i.e., one CP per inhabitant), the predicted CWB would be 56.5 + 16.2 = 72.7. That is a big difference in both statistical (1.63 standard deviations) and practical terms, representing a move from depressing poverty to a situation not far from the average Canadian community. However, the scattergram in Figure 1 also shows that CPs are not a magic elixir.

Figure 1 looks more like a cloud than a straight line, which means there is a lot of variation, and the presence of more CPs does not always translate into higher well-being. Reliance on CPs explains only 11% of the variance in community well-being. For a dramatic illustration of this fact, concentrate on the extreme left side of the graph, where the CP variable is valued at 0 (i.e., no CPs on the First Nation's Land). The CWB in this situation ranges from barely over 20 (very low) to well over 80 (very high). With such a range of well-being for reserves that have no CPs, it is obvious that CPs are only part

of the story of well-being, and other factors must be involved. Reliance on CPs is not a magic wand that changes everything, but it appears to be one among many factors related to community well-being for First Nations.

Another conclusion from inspection of the scattergram is that the positive effect of CPs tends to level off after the value of CP Density reaches about 0.80 on the x-axis. Beyond that point, having more CPs per capita is not correlated with higher values of the CWB along the y-axis. In simple language, CPs seem to be beneficial, but only up to a point. And, indeed, all Canadian communities retain some land in government ownership to be used for public purposes, such as parks, roads, and schools.

Finally, we have to concede that OLS regression analysis is limited here by the fact that so many cases are clustered at the left end of the X-axis, particularly at 0. Ideally, variables used in regression should be normally distributed, so this analysis should be interpreted as heuristic rather than definitive.

To assess the relationship between having a tax system and the CWB Index, we used a t-test for statistical significance in difference of means, because our tax variable was coded simply yes or no. Table 1 presents the findings:

Table 1: T-test for relationship between CWB and property tax

Mean CWB of First Nations with tax regime	60.4
Mean CWB of First Nations without tax regime	56.4

t=3.93, p<.001, n=4t63

On average, First Nations with tax regimes have a CWB four points higher than those without (60.4-56.4=4.0). When we disaggregated the data by province, the relationship was in the same direction in every province except Alberta, for which we have no explanation at the moment. The overall relationship, while statistically significant, does not seem to be of much practical significance; 4.0 points on the CWB Index is not a very large difference. Remember, however, that our tax regime variable is only a proxy for the presence of leasehold property, based on the assumption that First Nations adopt tax systems because they have leaseholds worth taxing. This should really be a quantitative variable, based on the value of property on the reserve. If we can obtain usable data on assessed values or leasehold contracts, we can explore this possibility further in a subsequent analysis.

We also used a t-test to examine the relationship between entering the First Nations Land Management Agreement and the CWB Index (Table 2):

Table 2: T-test for relationship between CWB and entry into First Nations Land Management Act (FNLMA)

Mean CWB of First Nations in the FNLMA	64.8
Mean CWB of First Nations not in the FNLMA	57.4

t=4.04, p< .001, n=463

It is again clear that entering the FNLMA is positively associated with a higher CWB Index, and indeed the average magnitude of the effect (7.4 points) is larger than that of adopting a tax system.

Finally, we investigated the relationship between governmental competence, as indicated by staying out of third-party management, and the CWB. Here the appropriate statistical procedure was analysis of variance, because there are four categories in the external-management variable (Table 3):

Table 3: Analysis of variance for relationship between CWB and external management

No external management	CWB = 60.6
Required management	CWB= 53.4
Co-management	CWB= 50.7
Third-party management	CWB= 47.2

Statistical significance, F= 25.68, df= 3, p < .001

The data show an inverse relationship between the variables that is both statistically and practically significant. First Nations that stay out of financial trouble have an average CWB 14.4 points (1.45 standard deviations) higher than those whose troubles are so severe that they end up in "third-party management," at which point they lose control of their affairs to an external accounting firm. The effect between the extremes is as one would expect, with each gradation of external control being associated with a lower mean CWB.

Multivariate analysis

Each of our four indicators of property rights recognition and governmental competence have been shown to be significantly related to the CWB of First Nations. At the next stage of the analysis, we ask two further ceteribus paribus questions: (1) does each of these variables have an impact in the presence of all the others; and (2) are there other background (control) variables that are driving the observed relationships? We will construct a multiple regression model in an attempt to answer these questions.

We introduce two control variables. One is remoteness from urban areas, which is published by the Department of Aboriginal Affairs in its community profiles of First Nations. The department's index of remoteness uses four categories to designate First Nations, ranging from an easy drive away from an urban area up to "special access" (i.e., accessible only by air travel or ice road). We collapsed these categories to make a dichotomous variable (near or not near an urban area) because of evidence that the effect of increasing remoteness is not monotonic (Sharpe and Lapointe, 2011: 26; White and Maxim, 2007). But there certainly is good evidence that being located near an urban area increases economic opportunity (Sharpe and Lapointe, 2011: 26; White and Maxim, 2007), so remoteness as we have redefined it remains an appropriate control.

The second control variable is less clear-cut. The cultural background of some First Nations may have been more conducive to the adoption of individual property rights than that of others. The aboriginal inhabitants of southern Ontario and Quebec, especially the Iroquois and Hurons, derived most of their food from agriculture. Families controlled plots of land for growing corn, beans, and squash—not fee-simple ownership, but a form of real property none the less. In British Columbia, all First Nations on the Pacific

side of the Rocky Mountains harvested salmon to a greater or lesser extent, and families had hereditary rights to particular fishing spots—another form of real property. In contrast, the hunting peoples of the plains and northern forests roamed in pursuit of game. They had collective hunting grounds, but not individual or family-controlled pieces of land, though some forest hunters developed family-controlled trap lines as part of the fur trade (Flanagan, Alcantara, and Le Dressay, 2011: 30-41).

Unfortunately, our data set contains very few Iroquois reserves because most do not cooperate with Statistics Canada in carrying out the census. Some Algonquin-speaking peoples in southern Ontario and Quebec also practiced agriculture, but in a less intensive way; and without detailed ethnography on each First Nation, it is not possible for us to know which ones should be coded as having an agricultural background. We have, therefore, limited our cultural variable to salmon fishing, by coding First Nations on the Pacific side of the Rockies as 1 and all others as 0. This is only a rough approximation of reality, as the British Columbia natives differed greatly in the extent to which they led a sedentary life based on the fishery or simply incorporated fishing into their seasonal round of food-gathering. Much remains to be done in this field of cultural background.

The multiple regression model is shown in Table 4. It has been calculated with robust standard error to correct for possible heteroscedasticity of the explanatory variables

Looking first at the control variables, we see that remoteness is highly statistically significant (p <.000) and cultural background is marginally significant (p < .05) in impact (a better specification of the cultural variable would probably increase its explanatory effect). In other words, net of any institutional factors, First Nations located near urban areas, and those with a cultural background including salmon fishing, tend to have a higher CWB. Our finding on the effect of remoteness is consistent with that of White and Maxim (2007). Much more work on cultural background, based on finergrained analysis of individual First Nations, remains to be done.

Table 4: Multiple regression model

	B (robust s.e)	Beta
FNLMA	4.087* (1.829)	0.104
Property tax	1.590 (1.078)	0.068
CP density	13.432*** (1.745)	0.263
External management	-3.094*** (0.547)	-0.249
BC fishery	2.183* (1.069)	0.097
Remoteness	3.763*** (1.085)	0.179
Constant	54.976*** (0.731)	
*p<0.05 ****p<0.001 R2 = 0.315, Adjusted R2 = 0.303		

Be that as it may, control variables in this model explain only a small part of the total variance. All four institutional variables remain important, although the weakly specified proxy of property tax fails to reach conventional statistical significance. Among the four variables, intensity of certification has the largest practical significance, in that moving from 0% to 100% certification predicts an increase in CWB of 13.43 (1.35 standard deviations). That is a large increase, though not feasible in practice, because First Nations, like all other communities, need to retain some land in public ownership for public purposes.

One way of looking at these results is to think of the four variables as a menu of institutional options for strengthening property rights and the rule of law—distributing many certificates of possession, creating a property tax regime for leaseholds, entering the First Nations Land Management Agreement, and staying out of third-party control. A First Nation which did all of these things (and it is possible to do all of them simultaneously) would have a predicted CWB of 77.1 (add all the B coefficients to the constant), equal to the Canadian average of 77 in 2006 (O'Sullivan, 2012). While this cannot be taken directly as a prescription for reform, it strongly suggests that among First Nations, as among all other human communities, individual property rights and the rule of law are associated with a higher material standard of living.

Although we do not show the results here, we also ran the multiple regression four additional times with each of the CWB components, rather

than the CWB itself, as the dependent variable. Unfortunately, this reduced the size of the database from 463 cases to 175 because the Department of Aboriginal Affairs has, in a majority of cases, published only the aggregate CWB and not the component scores. CP Density and Remoteness remained highly statistically significant in each specification. With housing as the dependent variable, the regression coefficient for CP Density rose to 20.82, confirming that better property rights in land have a particularly strong relationship with housing quality. This is not a surprising result, given the intimate connection between homes and the land on which they are built. With all the other variables, the direction of the relationship remained the same, but statistical significance was no longer achieved because of the smaller sample size.

Causal interpretation

This is a correlational study, so up to this point we have referred to "associations" or "relationships" between variables and avoided any implication of causality. Remember that our indicator of prosperity and well-being—the CWB—comes from 2006 Statistics Canada census data. Except for prevalence of certificates of possession, the dates for the legal and governmental variables do not precede the CWB, so they cannot be interpreted as causes of variation in the CWB:

There are two statutory instruments that make it possible for First Nations to adopt regimes of property taxation. First was the "Kamloops amendment" to the Indian Act, passed in 1988, and second was the First Nations Statistical and Management Act, passed in 2005 (Flanagan, Alcantara, and Le Dressay, 2010: 138). Most of the First Nations that now have property tax regimes have adopted them too recently to have impacted the 2006 CWB.

The First Nations Land Management Act was not passed until 1999, so there hasn't been time for the land codes adopted by even the earliest entrants into the Framework Agreement to have affected economic and social conditions as measured in 2006. Indeed, many of the First Nations now in the Framework Agreement would have entered after 2006.

The list of First Nations in various degrees of third-party management dates from 2011, five years after the date of the CWB data employed in this study.

Given these temporal relationships, it is obvious that these three variables cannot be interpreted as causes of the 2006 CWB scores. If there is a causal relationship, it may be reversed. First Nations that are already better off than others may be more likely to have the desire and the organizational capacity to adopt regimes of property tax, to enter the FNLMA Framework Agreement, and to stay out of financial difficulty. It will take further research

over a longer period of time to see if these decisions also lead to faster rates of improvement in the CWB.

The situation is different, however, for certificates of possession. The earlier equivalents of CPs, then called location tickets, were provided for in the first version of the Indian Act in 1876. Most Canadian reserves were established in the nineteenth and early twentieth century, and many CPs date back to the founding years, when families interested in farming and ranching staked out their claims to reserve lands. We don't have exact data, but we know that reserves where CPs are prevalent have had them for a long time prior to 2006. It thus seems more plausible to put a causal interpretation on that variable, to hypothesize that higher prevalence of CPs has led over time to higher CWB scores, even after controlling for First Nations' cultural background and proximity to urban areas.

However, many unresolved questions of endogeneity loom over this discussion. Endogeneity is a complex topic in econometrics, but for the policy community it can be described simply as a loop of interdependence between the independent and dependent variables in a statistical model. Our findings suggest that, while better governance and property rights may lead to a higher state of well-being as measured by the CWB, higher well-being may also increase the community's demand for better governance and property rights. Endogneity of this type is a well-known problem in all systematic research on the effects of property rights (Galiani and Schargrodsky, 2010).

Omitted-variable bias is also a problem here. Not all Indian reserves were created equal. Some were located on valuable farm land, others on bush on the Pre-Cambrian Shield. Some were established near cities with dynamic markets and educational institutions, others were sited hundreds of miles away from the nearest urban area. It is quite possible that these different initial endowments have affected not only subsequent well-being but also choices about governance and property rights. Living on more valuable land may have encouraged inhabitants of some reserves to seek Certificates of Possession as well as more effective governance to enhance the value of their property. If that is true, there could be an endogeneity problem between the CWB and property/governance variables, in that both might be correlated with an initial-endowment variable that is not present in the model.

Hopefully, further research by more sophisticated practitioners of econometrics may be able to tease apart some of these endogenous relationships. However, it is not easy to obtain systematic economic information about First Nations. Their unique legal situation means that they do not publish information in the same way as other governments in Canada; and federal agencies generally maintain confidentiality for First Nations, treating them much like businesses (which they are in some ways) whose proprietary information needs to be protected. For example, Indian Oil and Gas Canada does not release information on the amounts of revenue earned by

the approximately 50 First Nations engaged in hydrocarbon resource extraction. The Department of Aboriginal Affairs has a database of information on approximately 220,000 leases of First Nations land, but it is not publicly available. And so on.

Without glossing over the statistical difficulties that remain to be confronted, we offer the following summary for the policy community: Increased reliance on CPs at an earlier date tends to correlate positively with a higher CWB at a later date. The statistical model itself does not prove causation, but causation is a reasonable conjecture in light of the large volume of international research on the connection between property rights and prosperity. Given the time frame of the data that we have to work with, our other three indicators of governmental competence and respect for property rights seem correlated with CWB scores in the opposite direction, namely that greater prosperity tends to create a demand for better governance and better recognition of property rights. Future research may help determine whether these variables also promote more rapid growth in the CWB.

¹¹ Email message, Strater Crowfoot to André Le Dressay, forwarded to Tom Flanagan, January 8, 2013.

¹² Telephone conversation with Randy Jenkins, Department of Aboriginal Affairs, January 10, 2013.

Fee simple: A new development

For almost all of Canadian history, the location ticket or certificate of possession has been the strongest form of individual property right available on Indian reserves. However, starting with the 2000 Nisga'a Final Agreement, there has been some movement towards creating fee-simple, or freehold, ownership on reserves. The Nisga'a Land Titles Office now offers fee-simple ownership to Nisga'a Nation members; and once they have received a freehold title, they can sell it to anyone. Fee simple title for individuals is also part of the treaty recently signed with the Tssawwassen Nation, and will perhaps be incorporated into other BC treaties as they are negotiated.

Also under discussion is the First Nations Property Ownership Act advocated in Flanagan, Alcantara, and Le Dressay (2011), which would allow First Nations to opt out of the Indian Act and into a regime of fee-simple property on a voluntary basis. The idea was endorsed by the House of Commons Finance Committee and mentioned favourably by the Minister of Finance in the spring 2012 budget papers. The First Nations Tax Commission has been working with federal officials to draft a bill for submission to Parliament. If and when the legislation is finally passed, it is expected that about a dozen First Nations might want to opt in at the outset, with others perhaps following if the results seem favourable.

Based on the research reported here, it seems likely that the First Nations opting for individual fee-simple ownership will have higher-than-average CWB scores, and that the adoption of fee-simple ownership for individuals will promote economic growth and thus lead to further improvement

¹³ See: http://nisgaalandtitle.ca/content/grant-fee-simple-under-nisgaa-landholding-transition-act.

¹⁴ See chapter 4 at: http://www.gov.bc.ca/arr/firstnation/tsawwassen/down/final/tfn_fa.pdf.

¹⁵ See http://www.fnpo.ca/Home.aspx to read the 2012 Budget papers.

in the CWB. However, these are only hypotheses, as the real world is complex, and reforms do not always work out as anticipated. It will be an important agenda item for future research to track the introduction of fee simple ownership rights onto Indian reserves and to attempt to measure the economic impact.

Conclusion

Some Canadian First Nations have succeeded in achieving noticeably higher levels of prosperity, as measured by the Department of Aboriginal Affairs Community Well-being Index. As possible explanations of how this success has been achieved, we have developed and tested four indicators of respect for property rights and the rule of law: use of Certificates of Possession, adoption of property tax, entry into the First Nations Land Management Act, and avoidance of third-party management. In a multiple regression analysis, all four variables are positively correlated with higher scores on the Community Well-being Index, even after controlling for cultural background and remoteness of location. Our findings are consistent with comparative and international research that has highlighted the importance of property rights and the rule of law for economic growth. Although this is an exploratory study and more research is needed, our findings suggest that the way for Canadian First Nations to achieve higher levels of prosperity is to develop stable governing institutions and property rights that encourage participation in economic markets.

Technical appendix

Variables:

Dependent variables:

The dependent variables (CWB, Income, Education, Housing, Labour) are all described in the text.

Independent variables:

FNLMA:

Dummy variable where First Nations were coded '1' if they signed the First Nation Land Management Framework Agreement and '0' if they did not. Source: http://www.fafnlm.com/member-communities.html.

Property Tax:

Dummy variable where First Nations were coded '1' if they have enacted onreserve taxation and '0' if they did not.

Source: http://www.fntc.ca/index.php?option=com_quickfaq&view=category&cid =2&Itemid=31&Iang=en.

CP Density:

The number of parcels with active EOTs divided by the population of each reserve.

Source: Aboriginal Affairs and Northern Development Canada.

External Management:

Ordinal level variable where First Nations where classified into four categories. Reserves without any external management are coded '0'; First Nations that are recipient managed are coded '1'; reserves that are co-managed are coded '2'; and those that are managed by a third party are coded '3.' We used it as an interval-level variable in the regression models because analysis of variance showed a monotonically decreasing trend through all four categories. Source: Mary Agnes Welch and Mia Rabson, "Contentious Cleanup," Winnipeg Free Press, December 10, 2011.

Control variables:

BC Fishery:

Dummy variable where First Nations are coded '1' if they are situated in British Columbia but not part of the Treaty 8 Bands.

Source: http://www.gov.bc.ca/arr/firstnation/treaty_8/default.html.

Remoteness:

Dummy variable where First Nations are coded '1'if they are located in close proximity to an urban centre and '0' if they are not.

Source: http://pse5-esd5.ainc-inac.gc.ca/fnp/Main/index.aspx?lang=eng.

Table 5: Descriptive statistics for all variables

	Mode	Median	Mean	Standard deviation	Minimum	Maximum
FNLMA	0	0	0.060	0.239	0	189
Property tax	0	0	0.212	0.409	0	1
CP density	0	0	0.082	0.203	0	1.436
External management	0	0	0.425	0.766	0	3
BC fishery	0	0	0.250	0.434	0	1
Remoteness	0	0	0.311	0.464	0	1
CBW	58	58	57.810	9.965	24	89
Income	54	53	53.413	12.870	15	90
Education	48	31.5	32.419	12.218	11	58
Housing	73	69	67.988	14.484	28	96
Labour	67	69	69.105	8.654	47	87

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