

Sovereignty, Credible Commitments, and Economic Prosperity on American Indian Reservations

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Abstract

American Indian reservations are islands of poverty in a sea of wealth. Because this poverty cannot be explained solely by natural resource, physical, and human capital constraints, institutions are likely to be part of the explanation. One of the institutional variables is the sovereign power of tribes, which allows tribal governments to act opportunistically. The potential for such opportunistic behavior can thwart economic development if tribes are unable to make credible commitments to stable contract enforcement. One avenue for credible commitments is Public Law 280, which required some tribes to turn judicial jurisdiction over civil disputes to the states in which they reside. Using data for 1969–99, we find that per capita income for American Indians on reservations subject to state jurisdiction grew significantly more than it did for Indians who were not.

1. Introduction

A robust explanation of why reservation Indians are among the poorest of America's minorities has remained elusive. Despite recent economic growth partly due to casino gaming, per capita income for Native Americans living on reservations in 1999 was \$7,846, compared with \$14,267 for Indians living off reservations and compared with \$21,587 for the average U.S. citizen. As with many explanations of economic development, the poor performance of reservation economies has been mainly attributed to poor land quality, geographic isolation, and inadequate human capital to manage what few assets Indians have.

Recently, however, scholars have focused more on institutions. Anderson and

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Lueck (1992), for example, considered the impact of land tenure on agricultural productivity and found that trust constraints imposed by the federal government significantly reduced the value of agricultural output on reservation land. Cornell and Kalt (2000) found that the design of tribal governments explained some of the differences in 1989 unemployment levels and in income growth from 1977 to 1989 for a cross section of large reservations. Most recently, Anderson, Benson, and Flanagan (2006) brought together studies comparing the institutional environments of U.S. and Canadian reservations and identifying a number of specific political and legal obstacles to greater economic development.

None of the aforementioned studies, however, specifically consider the impact of credibly committing to a consistent rule of law despite the fact that cross-country studies find this to be a significant explanatory variable. For example, Acemoglu, Johnson, and Robinson (2001), Hall and Jones (1999), Barro (1997), and Keefer and Knack (1997) all find that proxies for a stable rule of law and restraints on the government's ability to expropriate property correlate positively with economic growth. Moreover, the correlations are robust to instrumentation and other empirical procedures, which suggests that strong institutions cause growth. As North and Weingast (1989, p. 803) put it, "The more likely it is that the sovereign will alter property rights for his or her own benefit, the lower the expected returns from investment and the lower in turn the incentive to invest. For economic growth to occur the sovereign or government must not merely establish the relevant set of rights, but must make a credible commitment to them."

This paper specifically controls for the ability of tribes to credibly commit to an institutional environment conducive to investment on reservations. Public Law 280 (PL 280), which was passed in 1953 and implemented in the 1950s and 1960s, forced some reservations to turn over their judicial systems to the states in which they reside while other reservations retained their judicial sovereignty. We hypothesize that having contract disputes decided in state courts credibly commits tribes and tribal members in a way that tribal jurisdiction cannot and therefore leads to greater economic growth.

With approximately one-third of the 81 largest Indian reservations in the United States under the judicial jurisdiction of state courts, we are able to estimate the effect of a more stable rule of law on economic development. Importantly, the reservations under state jurisdiction were selected not because of their potential for economic growth but because of their "lawlessness," to use the description of the U.S. Congress. Furthermore, the transfer of civil jurisdiction to states "was an afterthought in a measure aimed primarily at bringing law and order to the reservations, added because it comported with the pro-assimilationist drift of federal policy" (Goldberg-Ambrose 1997, p. 50). For these reasons we view PL 280 as a natural experiment for testing the hypothesis that tribes credibly committing through state courts will experience more economic growth, which we do using data from 1969–99.

The paper is organized as follows. Section 2 describes the judicial sovereignty

of Indian tribes and PL 280. It also lays out the congressional motivation for passing the law, a crucial determinant of which reservations were forced to submit to state judicial jurisdiction. Section 2 also articulates our hypothesis that state jurisdiction credibly commits reservation Indians to contracts and thus promotes economic growth. In Section 3, we then provide empirical tests using per capita income growth of American Indians on reservations between 1969 and 1999 as the dependent variable, with this period measuring economic performance since PL 280 was uniformly enforced across states. Section 4 concludes and puts these findings in the context of cross-country studies with similar results.

2. Tribal Sovereignty and Credible Commitments

Since 1831, when Chief Justice Marshall wrote his famous *Cherokee Nation v. Georgia* (30 U.S. 1 [1831]) decision, tribes have struggled to assert their sovereignty.¹ Justice Marshall ruled that a tribe is “a distinct political society separated from others, capable of managing its own affairs and governing itself” but also that reservations are not a “foreign state” (30 U.S. 16). The decision referred to reservations as “domestic dependent nations” and the relationship with the federal government as “that of a ward to his guardian.” Under this doctrine, tribal authority to create and enforce laws on reservations is exclusive unless the federal government exercises its “guardian” power by extending federal or state jurisdiction on to reservations.

One of the clearest examples of the federal government usurping the sovereign judicial powers of tribes is PL 280, which was passed in 1953 to transfer substantial jurisdiction over Indian country to states. Public Law 280 required that jurisdiction over criminal offenses and civil disputes on some reservations be turned over to the states.² The law initially mandated that the transfer apply to most Indian reservations located in Alaska, California, Minnesota, Nebraska, Oregon, and Wisconsin (see Table 1). These states are known as the mandatory PL 280 states because Congress, not the state legislatures, initiated the transfer of jurisdiction and did so without tribal consent.

Congressional records indicate that PL 280 was advanced as an opportunity to improve criminal law enforcement on reservations perceived to lack adequate tribal forums. This rationale is articulated in the 1953 Senate report on the law (U.S. Senate 1953, p. 5): “As a practical matter, the enforcement of law and order among the Indians in the Indian Country has been left largely to the Indian groups themselves. In many States, tribes are not adequately organized to perform that function; consequently, there has been created a hiatus in law enforcement authority that could best be remedied by conferring criminal jurisdiction on States indicating an ability and willingness to accept such responsibility.”

¹ The laws and court cases discussed in this section are described in further detail by Getches, Wilkinson, and Williams (1998) and Strickland and Wilkinson (1982).

² Prior to Public Law 280 (PL 280), criminal jurisdiction on the affected reservations was shared by tribes and the federal government and civil jurisdiction was held by tribes.

Table 1
States with Public Law 280 (PL 280) and Related Jurisdiction

State	Mandatory PL 280		Optional PL 280		Notes
	Yes	No	Criminal	Civil	
Alaska	No	No	No	No	Tribal jurisdiction over some criminal offenses committed on the Annette Island Reservation was retained by the Metlakatla Indian Community
Arizona	No	No	No	Partial: the state assumed jurisdiction over water and air pollution (1967)	
California	Yes	No	No	No	
Florida	No	Full (1961)	Full (1961)	Full (1961)	
Idaho	No	Partial: the state assumed jurisdiction over seven subject areas and full jurisdiction with tribal consent (1963)	Partial: the state assumed jurisdiction over seven subject areas and full jurisdiction with tribal consent (1963)	Full (1961)	The seven subject areas are school attendance, juvenile delinquency, abused children, mental illness, public assistance, domestic relations, and operation of vehicles on state and county roads; the Nez Perce is the only tribe to consent, allowing state jurisdiction over additional criminal offenses
Iowa	No	No	No	Full, over the Sac and Fox Reservation (1967)	A federal statute passed in 1948 conferred criminal jurisdiction to the state over the Sac and Fox Reservation
Kansas	No	No	No	No	A federal statute passed in 1940 conferred criminal jurisdiction to the state over all reservations within the state
Minnesota	Yes	No	No	No	Red Lake Reservation was exempted; PL 280 jurisdiction over Bois Forte Reservation (formerly Nett Lake) was retroceded in 1972
Montana	No	Full, over Flathead Reservation	Full, over Flathead Reservation	Full, with tribal and county consent, but no tribe has consented (1963).	Most of the criminal jurisdiction assumed by the state over Flathead Reservation was retroceded in 1993
Nebraska	Yes	No	No	No	The state retroceded criminal jurisdiction over Omaha Reservation in 1970 and over the Winnebago Reservation in 1986

Nevada	No	Full, with tribal consent	Full, with tribal consent (1955)	PL 280 jurisdiction was conferred over a number of small reservations; retrocession has now occurred over most reservations in this group
New York	No	No	No	Federal statutes passed in 1948 and 1950 conferred criminal and civil jurisdiction to the state over all reservations
North Dakota	No	No	Full, with individual or tribal consent, but no tribe has consented (1963).	A federal statute passed in 1948 conferred criminal jurisdiction to the state over Devil's Lake Reservation; individual acceptance has been held invalid under the Supremacy Clause of the U.S. Constitution
Oregon	Yes	No	No	Warm Springs Reservation was exempted; the state retroceded criminal jurisdiction over Umatilla Reservation in the 1980s
South Dakota	No	The state attempted to assume jurisdiction over criminal offenses and civil causes of action arising on highways, subject to federal government reimbursement of enforcement costs (1961)		The state supreme court held this assumption to be invalid
Utah	No	Subject to tribal consent (1971)		No tribe has consented
Washington	No	In 1957, the state assumed full PL 280 jurisdiction over nine reservations without tribal consent; in 1963, the state assumed jurisdiction without tribal consent over non-Indians and limited jurisdiction over Indians on the remaining reservations		Criminal jurisdiction over Quinalt and Port Madison Reservations assumed through the 1957 legislation was retroceded in 1969 and 1972, respectively; the jurisdiction assumed over these reservations through the 1963 legislation remained intact; in 1986 the state retroceded jurisdiction over Indians for crimes committed on the Colville reservations
Wisconsin	Yes	No	No	Menominee Reservation was exempted and was terminated by federal statute in 1961; Menominee Reservation was reinstated in 1973, and retrocession of PL 280 jurisdiction was granted shortly thereafter

Sources. Data for all states are from Strickland, Rennard, and Wilkinson (1982, pp. 362–75). Additional data are from the following sources: Idaho, Kane (2005); Montana, Bozarth (2000); Nebraska, Charging (2005); Nevada, Goldberg and Champagne (2005); Oregon, Melton and Gardner (2000); and Washington, Johnson and Pascal (1992).

A further indication that PL 280 was aimed at removing lawlessness is that Congress specifically exempted some reservations in Minnesota, Oregon, and Wisconsin (see Table 1) on the grounds that they had satisfactory law and order and well-functioning tribal criminal courts.

The Senate report gives only a terse reference to civil jurisdiction, which was also extended to the mandatory states through PL 280. Goldberg-Ambrose (1997, p. 50) argues that the extension of civil jurisdiction was an “afterthought in a measure aimed primarily at bringing law and order to the reservations, added because it comported with the pro-assimilationist drift of federal policy and because it was convenient and cheap.”

Given the proassimilation drift of federal policy during the 1950s, it is surprising that more reservations were not placed under PL 280. Some tribes probably retained their jurisdiction only because their reservations are in states with constitutions that had disclaimers of jurisdiction over Indian country. The states that had constitutional disclaimers when PL 280 was passed were Arizona, Idaho, Montana, New Mexico, Nevada, North Dakota, Oklahoma, South Dakota, Utah, Washington, and Wyoming.³

All states were eventually given the option to assume PL 280 jurisdiction through state legislative action, and some exercised this option (see Table 1). Among the nondisclaimer states, Florida and Iowa assumed the full amount of jurisdiction available under PL 280. Despite legal uncertainties, some of the disclaimer states, notably Washington, also assumed jurisdiction without amending their constitutions and without gaining tribal consent. Other disclaimer states, such as Nevada, North Dakota, and Utah, attempted to obtain jurisdiction over reservations through the consent of tribes, but with the exception of some small reservations in Nevada, no tribes consented.⁴

Although PL 280 was initially passed in 1953, it was not until 1971 that the last optional state took action, and it took a series of court rulings starting in 1959 and running well into the 1970s to clarify the implications for civil jurisdiction on reservations (see the Appendix). In summary, these court rulings clarified two effects of PL 280 on jurisdiction over civil disputes. First, PL 280 gives non-Indian plaintiffs the right to file suits over contract disputes with Indian defendants in state courts, cases that are otherwise under the exclusive jurisdiction of tribal courts. Second, tribes governed by PL 280 are apparently better able to waive sovereign immunity in business dealings, thus enabling

³ The federal government required new states to include disclaimer clauses as prerequisites to gaining statehood after a 1881 Supreme Court ruling held that states could adjudicate crimes committed on reservations by non-Indians against non-Indians (Wilkins 2002). The forced disclaimers were meant to ensure federal jurisdiction over such crimes.

⁴ Because the initial version of PL 280 made no provision for states to return criminal jurisdiction to the federal government or civil jurisdiction to the tribes, Congress amended the legislation in 1968 to allow states to return all or part of the jurisdiction assumed under PL 280. However, the tribes themselves had no mechanism for securing retrocession if the state was unwilling, and tribes could not veto state-initiated retrocession (see Goldberg-Ambrose 1997). Since 1968, retrocession has affected criminal jurisdiction over some reservations (see Table 1).

parties contracting with such tribes to sue tribal business entities in the state court.

Public Law 280 is important to economic growth on Indian reservations because it conveys a credible commitment to outsiders that tribes and members will adhere to contracts. That is, PL 280 is a solution to what Haddock (1994) calls “the sovereign’s paradox” (although a more appropriate term would be “sovereign’s dilemma”). The dilemma for a sovereign government is that its power to enforce property rights and contracts also gives it the power to take property rights and break contracts. Hence, the dilemma for political agents is whether to use sovereign powers to produce public goods and increase productivity or to use them to encourage rent seeking with its concomitant expenditure of effort to acquire or defend rents.

There are two ways in which a tribe may succumb to the dilemma of using its sovereign power to redistribute rents. First, a tribe can change the terms of a contract *ex post* and avoid suit in an outside court by claiming sovereign immunity. Tribes can attempt to avoid this dilemma and create credibility by waiving sovereign immunity and allowing disputes to be adjudicated by an outside court, but this option is limited and fraught with legal uncertainties. First, waivers of sovereignty must be explicit, as courts have held that commercial activities of tribes do not in themselves constitute implied waivers (McLish 1988). Second, as McLish (1988, p. 179) notes, there is “debate as to whether tribes can expressly waive their own immunity without congressional authorization.” This means that federal courts might rule that a tribe had no authority to waive its immunity in a contract and thus disallow suits against the tribe for breach of contract in an outside court. More generally, federal courts have a record of ruling that tribal immunity from suit is always retained except when the tribe’s ability to waive immunity is patently apparent (see Haddock and Miller 2006). According to both McLish (1988) and Haddock and Miller (2006), less stringent waiver requirements would help tribal businesses compete more effectively in the non-Indian business world.

A second way a tribe can succumb to the sovereign’s dilemma is to use its sovereign judicial power to selectively enforce contracts between members and nonmembers. Getches, Wilkinson, and Williams (1998, p. 528) note that “there is a widespread feeling held by many non-Indians that tribal judges are biased against them. There are also complaints of incompetence, and even corruption in some tribal courts.” The case of *Kennerly v. District Court of Montana* (400 U.S. 423 [1971]) exemplifies this problem as it relates to non-Indian plaintiffs in tribal courts. In that case, the U.S. Supreme Court ruled that the courts of Montana could not intervene to enforce payment of a debt owed by a Blackfeet tribal member to a non-Indian store owner on the reservation. The doctrine applied in *Kennerly* followed precedent from earlier decisions regarding tribal sovereignty arguing that, absent governing acts of Congress (for example, PL 280), states cannot infringe on the right of tribes and their members to make and adjudicate their own laws. Reflecting on this precedent in the related case

of *Security State Bank v. Pierre* (162 Mont. 298 [1973]), Montana Supreme Court Justice John C. Harrison observed, "A result of the *Kennerly* decision was to dry up credit sources throughout the state to responsible Indian citizens."⁵

Individual tribal members have trouble making credible commitments in light of cases such as *Kennerly*. Even if a tribal member is aware of this problem, U.S. courts have ruled that he or she cannot individually choose an alternative jurisdiction.⁶ Moreover, even if individual tribal members could credibly contract out adjudication on a case-by-case basis, it would be costly for each member to go through this process prior to engaging in each contract. And this approach would fail to provide security over implicit contracts such as torts.

A way out of the problem of credible commitment for both tribal governments and tribal members is for the tribe to categorically cede its sovereign judicial authority to a sovereign power with reputation capital (Haddock 1994). As discussed above, this was done without tribal consent when Congress passed PL 280. Assuming that the state courts have a stronger reputation for enforcing contracts, this avenue increases the willingness of outsiders to contract with reservation Indians.⁷ That is, PL 280 is a mechanism of credible commitment of the type described by Kydland and Prescott (1977) and North and Weingast (1989). Evidence that state judicial jurisdiction provides a more credible commitment to contracts is found in a report (Fitch Ratings 2004) that was prepared for investors wanting to evaluate the security of contracting on American Indian reservations. The report notes that investors should take "added comfort by those tribes that submit to state jurisdiction" (p. 3).

The hypotheses that follow from this reasoning are that (1) state judicial jurisdiction provides tribes and tribal members with a way of making credible commitments in contracting with nontribal entities and that (2) American Indians under PL 280 jurisdiction experience greater economic prosperity because of this commitment. We expect this greater prosperity to result from investors being willing to invest more in physical capital on the reservation, to provide credit to reservation Indians, and, to a lesser degree, to engage in more spot-market transactions on reservations under state jurisdiction.⁸

⁵ Trosper (1978) and others have raised the possibility that tribal judicial sovereignty deters lending on reservations.

⁶ In *Nelson v. Dubois* (232 N.W.2d 54 N.D. [1975]), individual acceptance of state jurisdiction was held to be invalid under the supremacy clause of the U.S. Constitution.

⁷ To be sure, PL 280 may make Indians more uneasy about doing business with non-Indians. However, Indians on reservations have fewer alternative business partners than non-Indians living outside reservations. If they refuse to contract with non-Indians for fear of partial court judgments, American Indians will forgo a greater number of potentially beneficial transactions (see Haddock and Miller 2006).

⁸ This hypothesis is an alternative to the writings of legal scholars and sociologists who argue that the transfer of jurisdiction through PL 280 has had deleterious effects on reservation Indians (see, for example, Goldberg-Ambrose 1997; Tweeten 2000; Goldberg and Champagne 2005).

3. Empirical Analysis

We employ several empirical procedures to test the hypothesis that state jurisdiction under PL 280 improves economic growth on reservations. The empirical analysis uses a subsample of the most populated reservations, which are defined as those with 1999 American Indian populations exceeding 1,000. As Table 2 shows, this limits our analysis to 81 of the 327 Indian reservations in the United States, but these 81 reservations are home to over 90 percent of the 512,431 Indians living on reservations.⁹

The primary dependent variable in our analysis is the 1969–99 per capita income growth of American Indians. Even though PL 280 was initially passed in 1953, testing the hypothesis with income growth data beginning in 1969 is suitable for three reasons. First, many optional PL 280 states did not enact enabling legislation until the 1960s, with the last state taking action in 1971 (see Table 1). Second, it took time for courts to sort out the full civil jurisdictional effects of PL 280 and to determine which states actually had jurisdiction. Court rulings beginning in 1959 and ending in the early 1970s helped to clarify these questions (see the Appendix). Third, PL 280 was amended in 1968 to allow state-initiated retrocession, but tribes were given no mechanism for securing retrocession (Goldberg-Ambrose 1997). By 1968, it was clear that the jurisdictional status of PL 280 reservations could not be changed by tribes.

3.1. Data and Descriptive Statistics

Table A1 gives summary statistics for Indian per capita incomes and per capita income growth for the reservations with Indian populations exceeding 1,000. Per capita Indian incomes in 1999 range from a low of \$4,043 on the Crow Creek Reservation in South Dakota to a high of \$17,436 on the Isabella Reservation in Michigan. Across the 81 reservations, the mean per capita income in 1999 was \$8,814. Data availability allows us to calculate income growth between 1969 and 1999 for 71 of the 81 reservations. For those 71 reservations, the Makah Reservation in Washington had the lowest real income growth, –7.5 percent, compared with the Fond du Lac Reservation in Minnesota with a high of 207 percent. Mean per capita income growth across the 71 reservations was 73.5 percent.

Because jurisdiction is confusing when reservations sprawl across boundaries between PL 280 and non-PL 280 states and because it is unclear whether the state of Washington assumed the relevant civil jurisdiction over some of the reservations in the state, we have used three definitions of state jurisdiction. Definition 1 omits the Washington reservations in cases in which there is ambiguity regarding state jurisdiction and omits reservations that sprawl PL 280 and non-PL 280 states. Definition 2 omits the same Washington reservations as

⁹ Anderson and Lueck (1992) and Cornell and Kalt (2000) also use only reservations with populations larger than 1,000. This approach has the advantage of preventing results from being strongly influenced by the incomes of a small number of Indians living on small reservations.

Table 2
American Indian (AI) Reservations by State

State	All Census Reservations		Reservations with American Indian Population > 1000	
	Reservations	AI Population	Reservations	AI Population
Alabama	2	198	0	0
Alaska	1	1,204	1	1,204
Arizona	20	244,253	11	239,014
California	98	14,219	2	3,484
Colorado	2	3,073	2	3,073
Connecticut	3	217	0	0
Florida	11	1,170	0	0
Georgia	1	55	0	0
Hawaii	5	25	0	0
Idaho	4	6,964	3	6,910
Iowa	1	619	0	0
Kansas	3	1,209	0	0
Louisiana	3	344	0	0
Maine	5	1,615	0	0
Massachusetts	2	62	0	0
Michigan	10	4,853	2	2,378
Minnesota	14	17,064	4	13,765
Mississippi	1	4,108	1	4,108
Montana	8	43,373	8	43,373
Nebraska	5	4,305	2	3,640
Nevada	25	7,297	1	1,198
New Jersey	1	0	0	0
New Mexico	22	30,044	11	25,813
New York	9	7,375	3	5,720
North Carolina	1	5,832	1	5,832
North Dakota	2	7,127	2	7,127
Oklahoma	1	6,338	1	6,338
Oregon	10	4,844	2	4,380
Rhode Island	1	7	0	0
South Carolina	1	358	0	0
South Dakota	9	44,264	8	43,947
Texas	3	1,107	0	0
Utah	4	3,087	1	2,824
Virginia	1	33	0	0
Washington	26	25,949	9	21,390
Wisconsin	11	13,446	5	10,377
Wyoming	1	6,394	1	6,394
Total	327	512,431	81	462,289

Source. U.S. Census Bureau (2000).

Note. According to the U.S. Census, a reservation is land that has been set aside for the use of the tribe by tribal treaties, agreements, executive orders, federal statutes, secretarial orders, or judicial determinations. Although Alaska and Oklahoma have large indigenous populations, most American Indians and Alaskan Natives in these states do not live on federally recognized reservations and are therefore omitted from our sample. The census does not report any American Indian reservations in the following states: Delaware, Illinois, Indiana, Kentucky, Maryland, Missouri, New Hampshire, Ohio, Pennsylvania, Tennessee, Vermont, and West Virginia. In cases in which reservations straddle multiple states, the reservation is considered part of the state in which the majority of the reservation lies.

definition 1 but assigns state jurisdiction on the basis of whether the state having the majority of the reservation's land is a PL 280 state. Definition 3 uses the same rule for multistate reservations as definition 2 but assigns jurisdiction over all Washington reservations to the state.

3.2. Comparison of Means Based on Jurisdiction

Our hypothesis is supported by the simple comparison of means in Tables 3 and 4. As Table 3 indicates, the mean 1969–99 per capita income growth for Indians was higher on reservations with state jurisdiction regardless of the jurisdictional definition used. The difference in means is most pronounced under definition 2, which shows that Indian per capita income on reservations with PL 280 jurisdiction grew 85.7 percent, compared with 70.0 percent on reservations with tribal jurisdiction. Higher levels of growth on PL 280 reservations occurred despite the fact that overall per capita incomes in states having PL 280 jurisdiction grew more slowly from 1969 to 1999 than incomes in states lacking jurisdiction. Although the differences in means are not statistically significant, the results imply that stronger growth on PL 280 reservations is not attributable to stronger statewide growth.

Table 4 compares the mean per capita income growth of reservations on the basis of jurisdiction within the mandatory states of Minnesota, Oregon, and Wisconsin, in which some reservations were exempted from PL 280 because they were deemed to have viable tribal court systems. In both Minnesota and Wisconsin between 1969 and 1999, mean per capita incomes on reservations under PL 280 jurisdiction grew over 60 percentage points more than mean per capita incomes on exempt reservations. In Oregon, per capita incomes on PL 280 reservations grew by over 100 percentage points more. Combining all three states, Table 4 shows that mean per capita income for the eight reservations subject to PL 280 grew over 75 percentage points more than the mean for the three exempt reservations. This difference in means is statistically significant by conventional standards.

3.3. Regression Analysis of 1969–99 Growth

Regression analysis allows us to control more precisely for a number of factors, in addition to jurisdiction, that may affect income growth on reservations. The empirical model is similar to that of Barro (1997), which uses cross-sectional analysis to explain differences in economic growth across countries. It is also similar to that of Cornell and Kalt (2000), which uses a cross section of reservations with Indian populations of 1,000 or more to estimate the impact of differences in tribal constitutions on 1989 unemployment levels and income growth from 1977 to 1989. The main difference between our model and that of Cornell and Kalt is that ours focuses on external adjudication rather than internal governance, while employing similar control variables.

Table 3
 Across-State Comparison of Mean Growth in Per Capita Income
 Based on Jurisdiction, 1969–99

	Reservations	For American Indians on Reservations (%)	States	For All State Residents (%)
Definition 1:				
State jurisdiction = 1	17	85.7	7	51.8
State jurisdiction = 0	47	71.5	14	58.6
Difference (<i>t</i> -statistic)		14.2 (1.07)		-6.9 (1.03)
Definition 2:				
State jurisdiction = 1	18	85.7	7	51.8
State jurisdiction = 0	49	70.0	14	58.6
Difference (<i>t</i> -statistic)		15.7 (1.23)		-6.9 (1.03)
Definition 3:				
State jurisdiction = 1	22	81.5	8	52.5
State jurisdiction = 0	49	70.0	14	58.6
Difference (<i>t</i> -statistic)		11.5 (.96)		-6.1 (.98)

Note. Data are for reservations with American Indian populations exceeding 1,000 in 1999. The 14 states lacking the relevant jurisdiction over civil disputes on Indian reservations are Arizona, Colorado, Idaho, Michigan, Mississippi, Montana, Nevada, New Mexico, North Carolina, North Dakota, Oklahoma, South Dakota, Utah, and Wyoming. The states having the relevant jurisdiction under all definitions are Alaska, California, Minnesota, Nebraska, New York, Oregon, and Wisconsin. Washington also has the relevant jurisdiction under definition 3.

Our model of growth is as follows:

$$\begin{aligned}
 \text{Indian PCI growth} = & \beta_0 + \beta_1(\text{state jurisdiction}) + \beta_2(\text{beginning period income}) \\
 & + \beta_3(\text{resource endowments}) + \beta_4(\text{human capital}) \\
 & + \beta_5(\text{economic conditions in surrounding counties}) + \varepsilon.
 \end{aligned}$$

Letting \mathbf{X} denote the matrix of controls, we assume that $\text{Cov}[\mathbf{X}, \varepsilon] = 0$ and that the $\text{Cov}[\text{state jurisdiction}, \varepsilon] = 0$, which means that our controls and court jurisdiction are exogenous to income growth. This assumption is probably appropriate because tribes did not choose state jurisdiction and because they were not selected on the basis of their potential for economic growth. The model makes no assumption about the form of $\text{Var}[\varepsilon \mid \text{state jurisdiction}, \mathbf{X}]$. The analysis employs White's correction to compute standard errors that are robust to heteroskedasticity and reports *t*-statistics computed using the Hubert-White cluster method to handle the possibility that errors are spatially correlated across reservations within states.

Table 5 shows the ordinary least squares estimates for 1969–99 income growth under two specifications and three definitions of state jurisdiction. Columns 1, 3, and 5 only control for 1969 Indian income. Columns 2, 4, and 6 include reservation-level controls to account for differences in natural resource endowments, land tenure, levels of education, geographic remoteness, and economic

Table 4
Within-State Comparison of Mean Growth in Per Capita Income
Based on Jurisdiction, 1969–99

	Reservations	For American Indians on Reservations (%)	For All Residents in Adjacent Counties (%)
Minnesota:			
State jurisdiction = 1	3	133.5	86.7
State jurisdiction = 0	1	70.6	80.1
Difference		62.9	6.6
Oregon:			
State jurisdiction = 1	1	123.5	48.4
State jurisdiction = 0	1	15.7	59.2
Difference		107.8	-10.8
Wisconsin:			
State jurisdiction = 1	4	126.6	76.7
State jurisdiction = 0	1	65.3	80.2
Difference		61.3	-3.5
Combined:			
State jurisdiction = 1	8	128.8	74.4
State jurisdiction = 0	3	50.3	75.4
Difference (<i>t</i> -statistic)		78.5 (2.43)	-1.0 (.10)

Note. Data are for reservations with American Indian populations exceeding 1,000 in 1999. In Minnesota, the Red Lake Reservation lacks state jurisdiction. In Oregon, the Warm Springs Reservation lacks state jurisdiction. In Wisconsin, the Menominee Reservation lacks state jurisdiction. The *t*-statistics are not applicable for the difference in means within each individual state because there are an insufficient number of observations.

conditions in counties surrounding the reservation. The summary statistics and definitions for each control variable are provided in Table A1.

Across all specifications, the effect of state jurisdiction on income growth is positive, statistically significant, and robust to the inclusion of control variables and to different definitions of state jurisdiction. The regression coefficients across the columns imply that state jurisdiction increased Indian per capita incomes by at least 30 percent between 1969 and 1999.

A few of the control variables shown in Table 5 are noteworthy. Consistent with Barro's (1997) findings in a cross-country setting, the negative coefficients on the 1969 levels of Indian incomes imply convergence in reservation incomes, which means that poorer reservations have grown at a faster rate than richer reservations. The positive coefficient on adjacent-county per capita income growth from 1969 to 1999 implies that reservations tend to benefit from exogenous economic trends in the region. Other coefficients indicate that the larger, typically more isolated reservations have had slower growth and that reservations endowed with significant energy resources and natural amenities have had faster growth.

Several additional empirical tests can be used to determine whether the results are driven by outliers in the sample or biased by omitted and nonobservable variables. In all cases we find the positive effect of PL 280 on economic growth to be robust.

Table 5
Regression Estimates of 1969–99 American Indian Per Capita Income Growth

Independent Variable	Definition 1			Definition 2			Definition 3		
	(1)	(2)	(3)	(4)	(5)	(6)			
Intercept	160.15	173.50	157.77	171.83	157.88	168.51			
State jurisdiction (= 1 if state has jurisdiction)	38.92	43.64	38.13	38.16	35.48	31.06			
Robust <i>t</i> -statistic	3.18	3.38	3.29	3.08	3.45	2.86			
Cluster <i>t</i> -statistic (by state)	2.81	3.68	2.82	3.23	2.79	2.72			
Reservation-level controls:									
American Indian per capita income, 1969	-.02 (6.66)	-.02 (5.63)	-.02 (6.70)	-.02 (5.70)	-.02 (7.52)	-.02 (6.14)			
Log of reservation acres (constant across time)	...	-8.02 (3.36)	...	-7.88 (3.29)	...	-7.37 (3.25)			
Percent of reservation land in fee simple (constant across time)	...	.08 (.46)	...	.12 (.59)	...	.15 (.90)
Energy resources dummy (constant across time)	...	36.83 (3.62)	...	33.81 (3.33)	...	29.56 (2.87)			
Natural amenity endowment (constant across time)	...	3.49 (1.66)	...	3.32 (1.64)	...	3.26 (1.77)			
Adult population with high school degree, 1969 (%)	...	.19 (.30)	...	.29 (.46)	...	.19 (.31)
Surrounding-area controls:									
Distance to nearest metropolitan area, 1969 (miles)	...	-.05 (1.29)	...	-.06 (1.44)	...	-.04 (1.21)			
Adjacent-county population density, 1969	...	.04 (.29)	...	.07 (.47)	...	.12 (.83)
Change in adjacent-county population density, 1969–99 (%)	...	-.16 (1.35)	...	-.17 (1.38)	...	-.15 (1.47)			
Adjacent-county PCI, 1969	...	.004 (.81)	...	.004 (.85)	...	.003 (.66)
Adjacent-county PCI growth, 1969–99	...	.81 (1.93)	...	.78 (1.85)	...	.81 (2.00)
N	64	60	67	63	71	67			
Adjusted <i>R</i> ²	.41	.64	.40	.63	.42	.63			

Note. Some columns have fewer observations than others because data for some variables are unavailable. Absolute values of White's robust *t*-statistics are shown in parentheses. PCI = per capita income.

Table 6
Differences in American Indian Mean Per Capita Income (\$) by State
Jurisdiction for Full and Trimmed Samples

Income	State Jurisdiction = 1	Reservations	State Jurisdiction = 0	Reservations	t-Statistic for Difference
Full sample:					
1969	6,147	22	4,829	49	3.13
1999	10,215		7,943		4.63
Growth, 1969–99 (%)	81.5		70.0		.96
Minnesota, Oregon, and Wisconsin:					
1969	4,898	3	5,631	8	.91
1999	10,900		8,169		2.09
Growth, 1969–99 (%)	128.8		50.5		2.43
Trimmed sample:					
1969	5,077	17	5,047	44	.09
1999	10,024		8,119		3.42
Growth, 1969–99 (%)	102.0		64.0		3.44

Note. Data are for reservations with American Indian populations exceeding 1,000 in 1999. All comparisons use definition 3 of state jurisdiction. The trimmed sample drops the five wealthiest reservations with state jurisdiction and the five poorest reservations without state jurisdiction based on 1969 per capita income. The resulting mean levels of 1969 income are not significantly different from each other. Excluded state jurisdiction reservations are Colville and Makah (Washington), Hoopa Valley (California), and Alleghany and Cattaraugus (New York). Excluded tribal jurisdiction reservations are Jemez Pueblo and Santo Domingo (New Mexico), San Carlos and Tohono O'odham (Arizona), and Uintah and Ouray (Utah).

Table 6 provides evidence that the better performance of reservations with state jurisdiction from 1969 to 1999 was not due to unobservable factors that might have caused greater growth prior to PL 280. Under the full sample, the table shows that PL 280 reservations did start with higher average incomes, which suggests that state jurisdiction could be biased toward reservations poised for success without PL 280. However, in Minnesota, Oregon, and Wisconsin, PL 280 reservations began poorer on average in 1969 and outgrew exempt reservations by a wide margin. A trimmed sample using PL 280 and non-PL 280 reservations with no statistical difference in mean incomes in 1969 yields a similar result. Furthermore, the coefficient on state jurisdiction (28.25) estimated with the trimmed sample¹⁰ is essentially the same as in earlier specifications (see Table 5, column 6). The consistency of the results between the trimmed and untrimmed sample suggests that unobserved factors responsible for growth before 1969 are not biasing our estimates on growth after 1969.

Second, to control for the possibility that reservations in a particular state might have unobservable cultural, institutional, or economic characteristics that would bias the estimates, we ran regressions omitting all reservations within a state, one state at a time. The resulting coefficient estimates¹¹ on state jurisdiction

¹⁰ See Dominic Parker, Table i: 1969–99 Regression Results for Trimmed Sample versus Full Sample (http://www2.bren.ucsb.edu/~dparker/PL280_website_tables.pdf).

¹¹ See Dominic Parker, Table ii: The Effect of Omitting All Reservations in Each State on the State Jurisdiction Coefficient, 1969–99 (http://www2.bren.ucsb.edu/~dparker/PL280_website_tables.pdf).

range from a low of 23.15 (omitting South Dakota) to a high of 40.43 (omitting Washington), bracketing the coefficient estimated with all reservations included (31.06). All coefficient estimates are statistically significant at least at a 5 percent level.¹²

3.4. Regression Analysis by Individual Decades

Table 7 shows the effect of state jurisdiction on Indian per capita income growth in separate regressions for each of the 3 decades in the sample, 1969–79, 1979–89, and 1989–99. All specifications employ definition 3 of state jurisdiction, which yielded the weakest support for our hypothesis in the previous regressions.

We estimate separate regressions for each decade for several reasons. First, this allows us to examine the effects of PL 280 over time. Second, it lets us use reservations in our sample for which we lack income data for 1969. Third, it allows us to control for reservation gaming in the 1989–99 regressions, which, by and large, did not exist before the late 1980s (see Johnson 2006). To control for the effect of gaming in the third decade, we use the number of slot machines per capita on reservations. Fourth, greater data availability in the later decades allows us to control for other measures of reservation institutions and culture as robustness checks.

Table 7 indicates that state jurisdiction has a positive effect on economic growth in all 3 decades, but it is only statistically significant in the first and third. The larger and significant coefficients between 1969 and 1979 suggest that the impact of PL 280 was greatest when the law was first being implemented. The smaller and insignificant coefficients on PL 280 jurisdiction between 1979 and 1989 suggest that the effect of the law was tapering off with time.

The renewed significant effect of PL 280 in the 1989–99 decade is probably attributable to economic shocks due to gaming. It suggests that PL 280 tribes were better positioned to capitalize on gaming and the attendant demand for more commerce on reservations because they could credibly commit to contracts. The positive and significant coefficient on the number of slot machines per capita in 1989 is consistent with Evans and Topoleski's (2002) findings that reservation Indians benefit economically from gaming.

Additional regressions indicate that the results shown in Table 7 are robust to the inclusion of other controls and smaller reservations.¹³ In particular, including the measures of political institutions across reservations that were employed by Anderson and Parker (2006) does not significantly impact the effect

¹² We have run other tests for robustness eliminating reservation economies heavily dominated by gaming and found that the effect of state jurisdiction on 1969–99 growth remains positive and significant (see Dominic Parker, Table iii: The Effect of Omitting Reservations with Casinos on the State Jurisdiction Coefficient, 1969–1999 (http://www2.bren.ucsb.edu/~dparker/PL280_website_tables.pdf).

¹³ See Dominic Parker, Table iv: The Effect of Including Other Measures of Reservation Institutions and Culture on the State Jurisdiction Coefficient, and Table v: 1989–1999 Regression Results Including Small Reservations (http://www2.bren.ucsb.edu/~dparker/PL280_website_tables.pdf).

of state jurisdiction. Controlling for acculturation with the total population of American Indians, the percentage of non-Indians living on reservations, or the percentage of reservation residents speaking a native language also has little effect on the state jurisdiction coefficients.¹⁴ The effects of state jurisdiction are also robust to the inclusion of reservations with Indian populations between 250 and 1,000, which include, among others, a handful that are near large urban centers and earn substantial per capita gambling income.¹⁵

In summary, regardless of which control variables or which reservations are included in the regressions, the impact of PL 280 on Indian per capita incomes is consistently positive and strong. The fact that it appears stronger in the decade immediately after PL 280 is fully implemented suggests that credible commitments are quickly integrated into the institutional environment. When new investment opportunities, such as those stimulated by casino gaming, appear on reservations, a stable contracting environment allows Indian populations to better capitalize on those opportunities.

4. Conclusion

After controlling for several other variables, per capita income for Indians on reservations subject to PL 280 jurisdiction grew by 30 percentage points more than per capita income for Indians on non-PL 280 reservations between 1969 and 1999. A number of factors in addition to the 1969–99 regressions suggest that credible commitments through state jurisdiction caused the better performance of PL 280 reservations. First, there is anecdotal evidence that non-Indian investors and contractors prefer the relative security of state jurisdiction. Second, there is no evidence that Congress's selection of PL 280 tribes was biased toward tribes that would have had faster growth in the absence of the law. Third, state jurisdiction had its largest impact on Indian incomes in the decade-long period most immediately following the uniform implementation of PL 280.

We recognize that our findings contrast sharply with the legal and sociology literature emphasizing the negative effects of limiting tribal sovereignty by giving criminal judicial jurisdiction to states. Goldberg-Ambrose (1997), for example, argues that PL 280 has exposed American Indians to bias in state courts, created gaps in jurisdiction that states are reluctant to fill, and reduced Bureau of Indian Affairs funding for affected tribes. For these reasons, she argues that "tribes in PL 280 states are at a disadvantage compared with tribes elsewhere in the United States" (p. 37). We acknowledge that tribal judicial sovereignty has its benefits and make no claim as to whether the benefits of judicial sovereignty are greater or less than the benefits of a more stable contracting environment under PL 280. We also acknowledge that tribes may favor other means for commitment

¹⁴ Kuhn and Sweetman (2002) examine the effects of acculturation on the employment and wages of Aboriginals in Canada and find evidence that greater assimilation improves economic outcomes.

¹⁵ See Dominic Parker, Table v: 1989–1999 Regression Results Including Small Reservations (http://www2.bren.ucsb.edu/~dparker/PL280_website_tables.pdf).

Table 7
Regression Estimates of American Indian Per Capita Income Growth over 3 Different Decades

Independent Variable	1969-79			1979-89			1989-99		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)		
Intercept	111.67	81.13	39.28	91.58	61.67	24.12	10.94		
State jurisdiction	22.23	22.03	13.51	1.48	13.99	15.11	13.96		
Robust <i>t</i> -statistic	2.80	1.84	1.99	.22	2.21	2.39	2.23		
Cluster <i>t</i> -statistic (by state)	3.61	1.96	1.46	.19	1.93	1.91	1.77		
Reservation-level controls:									
American Indian per capita income ^a	-.014 (8.21)	-.014 (5.10)	-.006 (3.42)	-.009 (4.83)	-.005 (3.90)	-.009 (5.00)	-.008 (4.75)		
Log of reservation acres (constant across time)	...	2.74 (.97)	...	-4.21 (3.13)	...	-.28 (.17)	.38 (.22)		
Percent of reservation land in fee simple (constant across time)	...	-.05 (.26)	...	.03 (.29)	...	-.04 (.49)	-.09 (.93)
Energy resources dummy (constant across time)	...	12.89 (1.03)	...	5.31 (1.54)	...	8.51 (1.71)	7.80 (1.54)		
Natural amenity endowment (constant across time)	...	-.35 (.23)	...	2.94 (2.81)	...	-.45 (.49)	-.31 (.35)		
Adult population with high school degree ^b (%)	...	-.09 (.18)	...	.75 (3.77)	...	.87 (2.74)	.86 (2.71)
Slot machines per American Indian ^c	...	...	...	...	...	12.36 (2.69)	19.97 (2.73)
Change in slot machines per American Indian ^d	...	...	...	...	...	...	15.94 (1.55)
Surrounding-area controls:									
Distance to nearest metropolitan area ^b	...	-.07 (1.99)	...	-.02 (.92)	...	-.07 (2.31)	-.06 (1.91)		
Adjacent-county population density ^b	...	-.07 (.81)	...	.16 (2.62)	...	.02 (.36)	.01 (.24)
Change in adjacent-county population density ^e (%)	...	-.40 (1.92)	...	-.49 (1.24)	...	.15 (.84)	.11 (.67)
Adjacent-county per capita income ^b	...	.003 (1.15)	...	-.001 (.48)	...	.000 (.24)	.000 (.26)
Adjacent-county per capita income growth ^e	...	-.37 (1.19)	...	-.19 (.66)	...	.24 (.75)	.24 (.71)
N	71	67	78	75	80	78	78		
Adjusted R ²	.40	.48	.25	.61	.14	.46	.48		

Note. All regressions employ definition 3 of state jurisdiction. Some columns have fewer observations than others because data for some variables are unavailable. Absolute values of White's robust *t*-statistics are shown in parentheses.

^aColumn 1 and 2 = 1969, columns 3 and 4 = 1979, columns 5-7 = 1989.

^bColumn 2 = 1969, column 4 = 1979, columns 6 and 7 = 1989.

^cNot applicable for 1969 and 1979; columns 6 and 7 = 1989.

^dNot applicable for 1969 and 1979; column 7 = 1989-99.

^eColumn 2 = 1969-79, column 4 = 1979-89, columns 6 and 7 = 1989-99.

besides state courts (see Haddock and Miller 2006). We have simply provided evidence showing that the greater degree of credible commitment available under PL 280 promotes more economic growth.

The finding that PL 280 reservations have experienced greater income growth is consistent with numerous cross-country empirical studies that find a positive correlation between indices of a stable rule of law and economic growth (see Acemoglu, Johnson, and Robinson 2001; Hall and Jones 1999; Barro 1997; Keefer and Knack 1997). The problem with cross-country analysis, however, is that the rule of law is endogenous, which thus forces scholars to use instrumental variables to draw casual inference (see, for example, Acemoglu, Johnson, and Robinson 2001; Hall and Jones 1999). This procedure has been criticized by skeptics (see Glaeser et al. 2004) who argue that favorable indices of a rule of law do not truly measure fundamental differences in governance institutions.

Glaeser et al. (2004, p. 298) suggest that “researchers would do better focusing on actual laws . . . that could be manipulated by a policymaker to assess what works,” which is precisely what a cross-reservation approach allows. By focusing on the actual law that imposed state jurisdiction on reservations, the data used here have two distinct advantages over cross-country comparisons. First, reservation economies operate in the relatively more homogenous institutional setting of the United States. This takes out much of the noise affecting growth rates across countries. Second, the reservation comparison is well suited for institutional analysis because tribal institutions are, in the main, determined by the federal government rather than by the tribes themselves, which therefore reduces the endogeneity problem.

This study provides a template for studying how a stable rule of law affects Indian reservation economies by focusing on an aggregate measure of economic activity, namely, per capita income. More disaggregate measures of investment, such as that used by Galiani and Scharfrodsky (2006) to examine the effects of clear land titles on the housing investments made by poor Argentine landholders, or measures of the impact of PL 280 on credit availability could shed light on what it will take to lift reservations from poverty. Public Law 280 by itself is not a magic elixir in the growth recipe, and it may have detrimental effects on the cultural sovereignty of tribes, but the results of this study suggest that the institutional environment on Indian reservations warrants more theoretical and empirical study.

Appendix

Court Cases Clarifying the Scope of Public Law 280

In the precedent-setting 1959 case of *Williams v. Lee* (358 U.S. 217 [1959]), the U.S. Supreme Court ruled that civil suits by non-Indians against Indians over disputes arising on reservations could not be heard in state courts absent an act of Congress (such as PL 280). In that case, a non-Indian man who operated

a general store on the Navajo Reservation attempted to sue a Navajo man in the Arizona court system to collect for goods he sold on credit. The Navajo man motioned to dismiss on the grounds that the courts of Arizona had no authority to hear the case. The courts of Arizona denied his request, but the U.S. Supreme Court reversed, ruling that exclusive jurisdiction was held by the Navajo courts. The ruling affirmed that when a plaintiff brings an action against an Indian and the action arises in Indian country, state courts cannot adjudicate unless the state has PL 280 or similar jurisdiction.¹⁶

In *Kennerly v. District Court of Montana* (400 U.S. 423 [1971]) the U.S. Supreme Court insisted on exacting compliance with PL 280 procedures for optional states to assume jurisdiction in Indian country. In 1967, the Blackfeet tribal council passed a resolution stating that the “Tribal Court and the State shall have concurrent . . . jurisdiction of all suits wherein the defendant is a member of the tribe” (400 U.S. 425). After a state court adjudicated a debt collection matter brought by a reservation store owner against tribal members (the details of the case are remarkably similar to those in *Williams v. Lee*), the Montana Supreme Court professed to apply the rule set forth in *Williams* and held that there was no infringement of tribal self-governance because of the resolution. The U.S. Supreme Court reversed, saying the infringement test set forth in *Williams* applied only to governing acts of Congress. In Montana, PL 280 could be a “governing act,” but the required assumption of state jurisdiction needed to be based on affirmative state legislation, which was lacking.¹⁷

Another important class of cases involves those between tribal governments and non-Indian firms. The U.S. Supreme Court has ruled in a number of instances that tribal governments enjoy sovereign immunity from suit. For example, the court points out in *Kiowa Tribe v. Manufacturing Techs* (523 U.S. 751, 754 [1998]) that “as a matter of federal law, a tribe is subject to suit only where Congress has authorized the suit or the tribe has waived its immunity.”¹⁸

Although PL 280 did not explicitly attenuate the sovereign immunity of a tribe, it did provide a legislative backdrop under which litigants wanting to sue tribal enterprises might obtain access to state courts. This point is made clearer

¹⁶ Rulings that rejected state court claims of jurisdiction based on *Williams v. Lee* include *Valdez and United States Fidelity Insurance v. Johnson* (68 N.M. 476, 362 P.2d 1004 [1961]), *Sigana v. Bailey* (282 Minn. 367, 164 N.W.2d 886 [1969]), *Security State Bank v. Pierre* (162 Mont. 298, 511 P.2d 325 [1973]), and *Schantz v. White Lightning* (502 F.2d 67 [8th Cir. 1974]). In addition, in the 1965 case of *Littell v. Nakai* (344 F.2d 486, 490 [9th Cir. 1965]), the U.S. Court of Appeals held that federal courts could also not adjudicate civil suits held by non-Indians against Indians. The Court of Appeals based their rationale on *Williams v. Lee*, arguing that “federal court jurisdiction would be equally disruptive of the policy [laid out in *Williams v. Lee*] as would state court jurisdiction.”

¹⁷ Further, the Supreme Court’s majority opinion noted that the tribal consent requirements required under the act as amended would not be satisfied if the Montana legislature now passed affirmative legislation because the amendments say that consent must be manifested in a majority vote of tribal members, not simply a resolution of the tribal council.

¹⁸ For other rulings upholding tribal sovereign immunity, see, for example, *Santa Clara Pueblo v. Martinez* (436 U.S. 49 [1978]) and *Oklahoma Tax Commission v. Citizen Band of Potawatomi Indian Tribe* (498 U.S. 505 [1991]).

by contrasting a court ruling in Minnesota (a mandatory PL 280 state) with a similar case heard in Idaho (an optional PL 280 state). In *Duluth Lumber and Plywood Co. v. Delta Development, Inc.* (281 N.W.2d 377 [Minn. 1979]), the courts of Minnesota ruled that the state had jurisdiction over a suit filed by Duluth Lumber against the Indian Housing Authority of the Fond du Lac Indian Reservation. The Minnesota courts argued that the Indian Housing Authority did not have sovereign immunity from suit and that PL 280 authorized state courts to hear the case. Kane (2005) describes a case similar in facts but heard in the state of Idaho. The Idaho case pitted a non-Indian-owned construction company against the tribally owned Duck Valley Housing Authority. In that case, the Idaho Supreme Court held that “a contractual clause waiving sovereign immunity did not rise to the level of a resolution accepting state jurisdiction of a contract dispute arising in Indian Country” (Kane 2005, p. 12). In other words, the Idaho court held that PL 280 jurisdiction was a necessary condition for the state to adjudicate.

Table A1
Variable Definitions, Summary Statistics, and Sources for Reservations with American Indian Populations Greater than 1,000 in 1999

Variable	N	Mean	Min	Max	SD	Description
American Indian real per capita income (1999 \$)						Real per capita of American Indians living on reservations (U.S. Census Bureau 1970, 1980, 1990, 2000)
1969	71	5,238	2,610	10,628	1,739	
1979	78	7,236	2,511	13,324	2,092	
1989	80	6,817	3,674	14,648	1,926	
1999	81	8,814	4,043	17,436	2,484	
American Indian per capita income percent growth						Real per capita income growth rates of American Indians living on reservations (U.S. Census Bureau 1970, 1980, 1990, 2000)
1969-99	71	73.54	-7.45	207.55	46.43	
1969-79	71	44.30	-28.91	170.62	36.50	
1979-89	78	-2.17	-38.87	98.59	25.20	
1989-99	80	31.69	-19.82	137.95	24.64	
State jurisdiction: Definition 1	73	.26	0	1	.44	Equals one if state has jurisdiction over civil disputes, otherwise zero; excludes reservations sprawling Public Law 280 and non-Public Law 280 states and reservations in Washington subject to 1963 legislation
Definition 2	76	.26	0	1	.44	Same as definition 1 except jurisdiction is assigned over reservations sprawling Public Law 280 and non-Public Law 280 states on the basis of where the majority of the reservation lies
Definition 3	81	.31	0	1	.46	Same as definition 2 except jurisdiction over Washington state reservations subject to 1963 legislation is assigned to the state
Log of reservation acres	81	12.38	6.72	16.56	1.87	Natural log of reservation acres (U.S. Census Bureau 2000)
Percent fee-simple land	81	29.32	0	98.51	33.41	Percentage of reservation land area owned in fee simple by Indians and non-Indians

Energy resources tribe	81	.40	0	1	.49	Equals one if the tribe has been a member of the Council of Energy Resources Tribes, otherwise zero (Ambler 1990)
Natural amenity endowment	80	1.90	-3.38	11.15	3.16	Ranking of natural amenities in U.S. counties based on topography, water resources, and climate; higher scores denote more desirable natural amenities (U.S. Department of Agriculture, Economic Research Service, Natural Amenities Scale [http://www.ers.usda.gov/Data/NaturalAmenities/natamenf.txt])
Percent of population with high school degree						Percentage of the American Indian population over 25 with a high school degree (U.S. Census Bureau 1970, 1980, 1990, 2000)
1969	68	25.11	3.13	54.11	9.99	
1979	78	32.25	12.37	68.35	7.48	
1989	79	65.78	28.56	86.69	10.02	
Slot machines per American Indian, 1989	80	.13	0	5.91	.80	Number of slot machines in tribal casinos on the reservation divided by the American Indian population
Change in slot machines per American Indian, 1989-99	80	.10	-2.48	1.39	.42	Number of 1999 slot machines in tribal casinos on the reservation divided by the 1999 American Indian population minus the 1989 version of this variable
Distance to nearest metropolitan area						Distance, by road, from the center of the reservation to the nearest metropolitan area with a population of at least 100,000
1969	79	198.05	9	741	156.06	
1979	79	158.18	4	548	124.04	
1989	80	116.60	3	341	82.92	
Adjacent-county population density						Population per square mile of nonreservation land within the reservation county or counties and of all counties adjacent to the county or counties in which the reservation is contained (U.S. Census Bureau 1970, 1980, 1990, 2000)
1969	71	24.67	1.96	222.15	36.91	
1979	78	35.55	1.91	258.16	48.36	
1989	81	39.94	1.82	268.56	55.22	

Table A1 (Continued)

Variable	N	Mean	Min	Max	SD	Description
Adjacent-county population density percent growth						Percentage change in the population density of counties adjacent to the reservation as defined above (U.S. Census Bureau 1970, 1980, 1990, 2000)
1969-99	71	66.46	-19.82	248.81	65.38	
1969-79	71	24.19	-15.63	95.12	23.18	
1979-89	78	10.35	-9.28	38.48	12.90	
1989-99	81	17.38	-27.31	55.25	16.79	
Adjacent-county per capita income (1999 \$)						Per capita income of nonreservation residents living in the same county and any county adjacent to the county or counties in containing the reservation (U.S. Census Bureau 1970, 1980, 1990, 2000)
1969	71	11,144	7,132	15,832	1,728	
1979	78	14,909	9,199	24,948	2,551	
1989	81	16,037	11,368	24,845	2,722	
Adjacent-county per capita income growth (%)						Per capita income growth rates of counties adjacent to the reservation as defined above (U.S. Census Bureau 1970, 1980, 1990, 2000)
1969-99	71	68.73	37.23	108.92	16.00	
1969-79	71	32.70	4.42	78.39	10.93	
1979-89	78	8.51	-17.79	28.30	9.24	
1989-99	81	18.09	-1.67	47.23	8.34	

Note. Consumer Price Index data are from the Bureau of Labor Statistics. Percentage of fee-simple land was calculated from land tenure data in individual reports sent to us by the real estate divisions of each regional Bureau of Indian Affairs office. In the few cases in which the sum of trust land exceeds the census acreage, we assume that the reservation has no fee-simple acres. The primary source used to identify casinos on reservations is a gamblers' Web site last visited in 2004 (<http://www.gamblinganswers.com/casinos/country/US>). The data are available from the authors on request. We gathered data on the opening dates of casinos with LexisNexis searches of newspaper articles in relevant locales. The U.S. Census Bureau was used to identify metropolitan areas, and Internet mapping tools were used to estimate driving distances from reservations.

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