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Fiscal Impact of American Indian Gaming on Non-Indian Local Governments

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Abstract

Intense growth in American Indian gaming over the past two and a half decades has resulted in suggestions of impact on non-Indian communities with a resulting growth in tribal-local government interaction. Although there is mounting evidence of both positive and negative socio-economic impacts on non-Indian communities as a result of Indian gaming operations, to date, there has been very little exploration of the actual fiscal impact on non-Indian governments as a result of these operations. This thesis serves to examine this impact.

This study uses a combination of an extensive literature review, tribal-local government survey, GIS techniques and a quantitative examination of data ranging from casino factors to the Census of Governments to explore this topic. The primary method of this examination includes a longitudinal difference in difference model looking at the impact of the opening of an American Indian gaming operation between the years of 1983 and 1997 on non-Indian government revenues and expenditures within a 50 mile radius of the operation.

The results of this research indicate that at an aggregate level there is no significant correlation between revenues and/or expenditures in non-Indian governments (within a 50 mile radius of an American Indian gaming operation) and the opening of American Indian gaming operation. There is, however, evidence to support increased sales and property taxes as well as decreased local welfare expenditures correlated to the opening of an American Indian gaming operation. The model also demonstrates a correlation between the opening of an American Indian gaming operation and decreased State intergovernmental revenue transfers.

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Chapter 1: Introduction

I. Introduction

What is the fiscal impact of American Indian gaming operations on neighboring non-Indian governments? Indian gaming has become a sizable enterprise over the past two decades. There are 562 federally recognized American Indian tribes within the United States that operate as sovereign nations providing services to their citizens. Of these, 224 operate gaming operations for a total of 354 Indian gaming operations in 28 states (National Indian Gaming Association, n.d.). The monetary impact of these activities for tribal entities is significant with a total of 19.4 billion dollars in revenue in 2004 (National Indian Gaming Commission, n.d.). Given the magnitude of these activities it is not surprising that Indian gaming[2] (like other forms of gaming) has generated arguments regarding the effects it might have on the areas surrounding these operations. Issues surrounding Indian gaming are both salient and controversial. As evidence of the saliency of this issue, in a review of over 120 articles on tribal and non-tribal government interaction there were at least 53 articles directly related to tribal and non-tribal[3] municipal government interactions, specifically with regard to gaming operations.

One area of particular controversy with regard to Indian gaming is the suggested impact it has on the non-Indian community. In many ways, it is simply a "Tragedy of the Commons" argument as to whether "common" resources such as roads leading to casinos bear overexploitation if the benefit of the casino does not result in resources devoted to

[2] American Indian gaming, Indian gaming and Native American gaming may all be used to reference gaming conducting by Federally recognized American Indian tribes within the continental US.
[3] Tribal/Non-tribal will be used: Tribal (American Indian Tribes) and Non-tribal (Non American Indian Governments).

the maintenance of that road (Hardin, 1968, pp. 1243-1248). If an Indian casino located on tribal lands attracts non-Indian patrons from non-tribal lands, who will pay for any increased traffic needs experienced by the adjacent non-Indian community?

Although each community, tribal and non-tribal is unique, there are more similarities than differences in these arguments. There have been arguments suggesting both positive and negative effects from Indian gaming operations. In the review of the literature the suggested externalities in non-Indian communities related to Indian gaming included infrastructure and development issues. These proposed negative externalities have led to the growth of a number of intergovernmental transfers or revenue sharing arrangements aimed at addressing or pacifying these issues.

When these interactions step beyond gaming development, they often center on negotiations, agreements and disputes related to the impact of Indian gaming operations on the adjacent non-Indian governments and community. These discussions are obviously not falling on deaf ears. By 2005, 16 of the 28 states had negotiated revenue sharing[4] arrangements into their compacts with tribal communities (Alaska, Arizona, California, Connecticut, Idaho, Louisiana, Maine, Michigan, Minnesota, New Mexico, New York, North Carolina, Oregon, South Carolina, Washington and Wisconsin) (Meister, 2006). Out of these, 7 states have documented revenue sharing arrangements (formal or informal) with local governments (Arizona, Idaho, Louisiana, Michigan, Minnesota, Oregon and Washington). Many of these agreements have occurred in very recent years.

[4] Although intergovernmental transfers may be a more suitable description, revenue sharing is the commonly found terminology in this literature.

The basis for these revenue sharing agreements is often very subjective. There appear to be relatively few financial models clearly demonstrating negative fiscal impacts not offset by positive effects, specifically with regard to local governments. Much of what has been written regarding the impact of Indian gaming focuses on the socio-economic impact, not the fiscal impact or changes in governmental costs with relation to Indian gaming operations. Therefore, this work will serve to objectively examine the impact of Indian gaming operations on non-Indian government revenues and expenditures through a "difference in difference" model. It will look at revenue and expenditure changes in communities within a 50 mile radius of an Indian gaming operation and those outside this area. This thesis serves to argue that although there may be demonstrable impact from Indian gaming operations on non-Indian communities, it is only appropriate to suggest revenue sharing agreements where negative effects and costs to the impacted governments can be demonstrated to outweigh the positive effect and that these revenue sharing agreements do not constitute "rent seeking" (Krueger, 1974, pp. 291-303) by demanding unjustified revenues. The primary research question is:

> *What is the effect of American Indian Class II and III gaming*[5] *operations on non-Indian local government expenditures and revenues within a 50 mile radius of these operations?*

Secondary to this:

1. *If there is an effect on local government expenditures and revenues that is correlated to the opening of an Indian gaming operation, is it a negative or positive effect?*

[5] "The term "class III gaming" means all forms of gaming that are not class I gaming or class II gaming (Title 25, Chapter 29, Section 2703, 8)." Class I would include "..social games solely for prizes of minimal value or traditional forms of Indian gaming engaged in by individuals as a part of, or in connection with, tribal ceremonies or celebrations (Title 25, Chapter 29, Section 2703, 6)". Class II would include bingo and card games (IGRA, Sec 2703, 7).

2. *To what degree do increases in local government revenues that can be attributed to the opening of an Indian gaming operation potentially offset any additional associated expenditure?*
3. *Is there any evidence that the local government fiscal effects of the opening of an Indian gaming operation are directly tied to specific expenditures (crime, social welfare and/or infrastructure) or revenue sources (taxes: incomes, sales, property)?*[6]
4. *What role do state-local intergovernmental revenue exchanges have on the fiscal effect of gaming? Are tribal-state revenue sharing agreements reflected in the data such that there is a trickle down effect from the state to the local area or do all fiscal affects stem from changes in the local economy?*
5. *What role does time play in the fiscal effects of Indian gaming? Example: Does the longer a gaming operation has been open affect the impact it has on local government expenditures or revenues?*
6. *Is there a geographic component to this effect? Does the degree of rurality (as indicated by the scalar Urban Influence Codes (UIC)) of a community impact the effect?*

This dissertation seeks to answer these questions through a complex quantitative model, stimulated by a thorough review of the literature. This dissertation will examine American Indian policy, including highlights from the Indian Gaming Regulatory Act. This dissertation will not, though, argue the politics of Indian gaming. This area has been well explored by authors such as Judy Cornelius and William Eadington (1998); Steven Andrew Light and Kathryn Rand (2007); and Dale Mason (2000).

II. Statement of Significance

The primary significance for this research is the need for objective research to guide policy discussions and support equitable policy decisions. This is important particularly with regard to those decisions which necessitate compensatory contributions from tribes to non-tribal governments, given the potential impact these contributions could have on either entity. It is important to search for a reliable mechanism to estimate the governmental costs posed by Indian gaming for the purposes of:

[6] In order to mitigate any state specific effects the comparison group will be chosen from the same states as the treatment group.

1. Providing an objective measure of related local government revenues and expenditures.
2. Promoting voluntary and mutually negotiated compensation for costs incurred by non-Indian adjacent governments not recouped in related revenue changes.

Without this, both American Indian and non-Indian governments may face less than equitable circumstances, which can lead not only to tension between the communities, but result in expensive legal battles. Further, these tensions create a hostile environment that reduces the capacity for mutually beneficial community development.

III. Overview of Methodology

The questions posed in this dissertation will be examined through a longitudinal "difference in difference" regression model which examines the impact of a specific event. This model utilizes panel data on local governmental finances from the Census of Governments (COG). These data are combined with data on the opening of Indian Gaming Operations (The Taylor Policy Group's Gaming Data[7]), Decennial Census, County Business Patterns and Urban Influence Codes (UIC). The local government data from the COG is aggregated at the county level using the county federal information processing standard code (FIPS). Data for communities with gaming operations opening between 1983 and 1997 (treatment group) will be contrasted with data for similar communities (comparison group) not receiving an Indian gaming operation during this time period. The treatment group is determined through the use of GIS. To control for the vast differences between metropolitan and non-metropolitan communities, this research will only focus on non-metropolitan communities (as defined by the UIC) as they are more often in direct contact with tribes and share more similar characteristics.

[7] Obtained from Jonathan Taylor.

IV. Outline of Dissertation

In Chapter 2 we begin this dissertation with a discussion of the broader context in which Indian gaming occurs. This includes a brief overview of U.S. American Indian policy and a detailed look at the Indian Gaming Regulatory Act (IGRA). This chapter demonstrates the long relatively varied history of United States American Indian policy and sets the stage for the broader context in which tribes and local non-tribal communities operate. The chapter concludes by examining governance in tribal and non-tribal municipal governments and economic development in American Indian and non-Indian communities. This chapter establishes the basis for current tribal-local relations and the connection between economic development and public finance, showing how development activities can potentially impact neighboring communities.

In Chapter 3 we will examine current tribal and local government relations, especially as they relate to Indian gaming. Included is a survey of tribal-local government relations. This will firmly establish the way in which they relate, providing a foundation for understanding the potential for impact and mitigation. This chapter then moves to a more pointed discussion of the current anecdotal evidence for and against any mitigated[8] or unmitigated impact from Indian gaming. This chapter concludes with evidence of fiscal impact and known examples of impact mitigation.

In Chapter 4 we begin to shape the quantitative analysis for this dissertation. This chapter outlines in detail the research questions posed, data used and how the model was developed. Here we explore the each of the 5 different data sources: Census of Governments, Decennial Census, County Business Patterns, Urban Influence Codes and

[8] Offset or compensated for.

The Taylor Policy Group's Indian gaming data. We also look more closely at the use of the difference in difference model and define the form of the regression equation. Finally, this chapter discusses the sampling of the data used.

In Chapter 5 we begin by descriptively examining the key variables. This includes looking at total revenue, sales and property taxes. Income tax revenue is not included given a wide variance in the collection of this revenue source at the municipal level and the limited collection in non-metropolitan areas. We continue this examination by looking at the impact on county area expenditures. This includes total expenditures, social welfare, infrastructure, transportation and police. Chapter 5 concludes with an examination of the impact of opening an Indian gaming operation on revenues, expenditures and the ratio of total revenues to total expenditures in these communities.

In Chapter 6 we pull together the evidence of these chapters to provide clear results of the fiscal impact on non-Indian governments presented by the operating of an Indian gaming operation in an adjacent community. This research will describe the direction, magnitude and potential sources of impact. It will also examine the potential for positive impacts that may mitigate any negative impacts imposed on non-Indian governments adjacent to Indian gaming operations. This information can be used by both tribes and policy makers to guide discussions regarding development of Indian gaming operations and any potential revenue sharing agreements that might ensue.

Chapter 2: US American Indian Policy, Governance, Economic Development and Public Finance

I. Introduction

In order to understand the potential for fiscal impact on non-tribal municipal governments from development activities, specifically gaming on American Indian reservations, it is necessary to have a basic understanding of the politics and conditions that govern the fiscal environment in which Indian gaming occurs. Why do we need to know about these matters? It is not necessary to simply suggest a fiscal impact, but it is necessary to suggest an "unmitigated" impact. We have to know first how it is possible to have an unmitigated impact. This includes understanding the history of American Indian policy in the United States, including Indian gaming policy. Also, in order to suggest a mitigated or unmitigated impact on non-Indian governments from Indian gaming operations, it is necessary to establish the connection between governance, public finance and economic development. This is necessary to suggest that there is something that can occur such as a business development that can directly or indirectly influence public finance. Essentially what drives local government revenues and expenditures? In tribal communities this is somewhat simpler as there is often a direct connection as tribal governments can often act as corporate entities. In non-tribal governments, this can be a bit more complex and demands an overview of both theoretical and applied arguments for factors that impact both economic development and public finance. Beyond simply outlining American Indian Policy, this chapter will establish that there is a clear connection between economic development and public finance; second, there is clearly room to suggest that tribal development can potentially impact outside communities as

any development activity of significant size can; third, there is motive for local governments to seek revenue sources given the increasing demands they face.

II. United States American Indian Policy

There have been six clearly recognizable policy periods in U.S. American Indian Policy:

Table 1: United States American Indian Policy Periods[9]

Period	Time Span
Treaty Making	1492-1828
Relocation and Removal	1828-1887
Allotment and Assimilation	1887-1934
Indian Reorganization	1934-1953
Termination	1953-1968
Self-Determination	1968-Present

(Pevar, 1992, pp. 2-9)

The policy perspective of the United States towards American Indians has been continually changing. American Indian Policy has not always appeared to carry a consistent theme as will be demonstrated by the differences in each of the policy periods. The Relocation and Removal, Allotment and Assimilation and Termination periods all demonstrate clear national level control of tribes, whereas the Treaty Making, Indian Reorganization and Tribal Self-Determination periods demonstrate much looser national control and the control of Indian Affairs being nested within tribes. This balancing act between national and tribal control involves issues relating to federalism. Here we examine how policy towards American Indians developed in the U.S. in an effort to

[9] There is discrepancy in the literature in reference to the first three periods, some view these as only two periods referred to as Treaty Making and Formative. I opted to utilize Pevar's description of the periods starting in 1828, and to keep the initial periods combined, as the division did not serve great purpose.

understand the arguments for and against impact from Indian gaming on non-tribal municipal governments.

a. Role of Federalism

First, federalism is an important concept in the discussion of American Indian policy. The American political system is defined as a federal system, "...one in which constitutional authority is divided between a national government and state governments: each is assumed to derive its powers directly from the people and therefore to have sovereignty (final authority) over the policy responsibilities assigned to it (Patterson, 1996, p. 30). This concept further directs that the federal government should not interfere in the policies of the state (Patterson, 1996, p. 36). The powers granted in this system to the national government are expressed in the implied powers granted in Article 1 of the constitution and the implied powers rest on the "necessary and proper clause" (Patterson, 1996, pp. 37-38). State authority is vested in reserved powers found in the 10th Amendment granting states those powers not expressively given to the national government (Patterson, 1996, p. 39). At times American Indians, within the concept of Federalism, have held a separate status similar to that of states or sovereign nations (Treaty Making, Indian Reorganization and Self-Determination Periods) and at other times not (Allotment & Assimilation and Termination).

b. Policy Periods

i. Treaty Making

The foremost policy developed towards American Indians finds its roots in colonial times. Upon the arrival of the Europeans was the Doctrine of Discovery. This policy,

> Promulgated in its basic in 1493 by Pope Alexander IV in two bulls, Inter Caetera, which granted Spain all lands not under a Christian prince, and Inter Caetera II, which set a demarcation line at one hundred leagues west of the Azores and the Cape Verde Islands, beyond which all future discoveries of land not held by a Christian prince on Christmas 1492, would belong to Spain (Deloria, 1985, p. 240).

This quote is important because American Indians were not Christian. Therefore they did not hold rights to their land and the rights to American Indian land as of Christmas 1492 were held by Spain. In this the Pope became God's representative, thus giving him ultimate authority in all matters (O'Brien, 1989, p. 38).

Under the concepts implied in the Doctrine of Discovery it would appear that American Indians should be subjects of the national government in place in U.S. territory. However, contrary to this between 1607 and 1776 tribes were treated as sovereign entities and there were approximately 175 treaties enacted between colonists and tribes (Utter, 1993, p. 45). These treaties were signed with tribes, with tribes acting as independent agents themselves not subjects of a national government. The first national attempt aimed at controlling American Indians as subjects developed when the Department of Indian Affairs was created in 1775 and restricted and controlled Indian involvement in the Revolutionary War (O'Brien, 1989, p. 49). According to Utter, as the agency sought to manage American Indians it also added negotiating capacity for treaties as the U.S. negotiated with tribes as independents. The first treaty between the United States and an American Indian tribe (Delaware) was in 1778 and treaty making between the US and tribes did not officially end until 1871 (Utter, 1993, pp. 45-53).

ii. Relocation and Removal

During the Relocation and Removal period U.S. policy towards American Indians became institutionalized within the Constitution and within the federal system. Power over Indian affairs is transferred during this time from the states to the national government. Prior to the development of the U.S. Constitution, the Articles of Confederation dictated that states in and of themselves could manage the tribes with their boundaries (O'Brien, 1989, p. 49). However, with the advent of the U.S. Constitution, this relationship was re-aligned through the Indian Commerce Clause (U.S. Constitution art I, s8, cl. 3) and this clause dictated the relationship between tribes and the new country "to regulate commerce with foreign nations, and among the several states, and with Indian Tribes (Tribal Sovereignty, 1993, p. 24)." According to Deloria, this established the concept of tribal sovereignty by separating the tribes from the states and placing them independently in this framework. This sovereignty, however, was limited as was that of the states in relation to the national government. Although the Department of War negotiated with tribes as foreign nations, they were also under the authority of the national government (Deloria, 1985, p. 240). This is the beginning of a long history of conflict over state versus federal control of American Indians.

The Removal period which began in the 1830s demonstrated another era of national control over American Indians. During this period two strains of American Indian policy developed, one through law and the other through executive and Congressional policy. This period is noted by Vine Deloria as "the first instance in which

a political platform became realized on the national agenda" regarding American Indians (Deloria, 1985, p. 242). Prior to, this most dealings with American Indians were situational and centered on a specific issue or tribe. The Removal Act, which was aimed at moving tribes west of the Mississippi in order to accommodate a growing American population, was a direct effort to deal with all tribes in one manner. This bill was passed by only 6 votes due to its potentially conflictual nature with previous treaties and policy declarations (Deloria, 1985, p. 242).

The conflict around the Removal Act includes two key court opinion issues by Justice Marshall in 1831 and 1832. In 1831, Justice Marshall ruled in Cherokee v. Georgia that American Indian tribes were not sovereign nations, but were "domestic dependent" nations. In Worcester v. Georgia in 1832, (Justice Marshall) the court ruled that tribes were sovereign nations. These cases were important not only in the manner in which they established the basis for tribal sovereignty but, also because they were national attempts to interfere in and manage state vs. tribal disputes. In these cases, Justice Marshall made it clear that states rights were limited in reference to American Indian tribes. "In 1832 the Supreme Court held that state laws "can have no force" within an Indian reservation unless Congress has authorized the state to apply them there (Pevar, 1992, p. 111)."

Even after the tribes had been removed to the West, conflict continued and between 1866 and 1891, there were "more than one thousand battles" between the Western Tribes and the United States (O'Brien, 1989, p. 62). This was in great part the result of settlers in pursuit of land and gold, encroaching on tribal lands. In 1871, treaty making with Tribes was officially ended on March 3 by an act of Congress stating,

"hereafter, no Indian nation or tribe within the territory of the United States shall be acknowledged or recognized as an independent nation, tribe or power with whom the United States may contract by treaty (O'Brien, 1989, p. 71)." At this point, with treaties not an option and land needs growing, a shift in policy development was necessary, leading to the period of Allotments and Assimilation.

iii. Allotments and Assimilation

The period of Allotments and Assimilation began in 1887. This period is marked by a clear transition to mass legislative handling of tribes as one group and was clearly focused on assimilating American Indians for the purpose of securing space for the growing Euro-American population. One of the mechanisms implemented in the attempt for assimilation was the Dawes Act of 1887 (Petosky, n.d., p. 34). According to O'Brien, the Dawes Act attempted assimilation through property ownership, farming and the United States concept of individualism, by dividing land among individual Indians (O'Brien, 1989, p. 77). This secured space for the growing population by allowing for any leftover land to be used for other purposes (O'Brien, 1989, p. 77). By allotting individual land ownership, it was hoped that Indians would learn the value of private ownership, thus reinforcing the concept of individualism. Land that remained was available for purchase by the government. As land was removed from the tribes this diminished one of their most valuable resources (O'Brien, 1989, p. 78). This process also dramatically changed the process of governance between American Indians, American Indian tribes and the federal government:

> Politically, the allotment process seriously eroded the role and authority of tribal government. In earlier times the federal government had dealt with tribal leaders

> and tribal governments when providing goods and services to tribes. After the passage of the Dawes Allotment Act, the government furnished supplies, food and payments directly to individuals, ignoring tribal governments. Tribal governments subsequently declined in importance, the vacuum that was left being filled by the BIA agent on the reservation.
>
> (O'Brien, 1989, p. 78)

No longer was there the necessity for interaction between the tribe and the federal government. Now assistance could go directly to the individual and this weakened the American Indian's need for tribal government. In 1903, the national government's sole control over tribal affairs was further enforced when the United States Supreme Court in the Lonewolf opinion re-embedded the concept of absolute plenary power by the United States over tribes, allowing for complete control of all tribal relations and assets (Churchill, 1997, p. 291).

Prior to 1924, the concept of egalitarianism or "a belief in human equality especially with respect to social, political and economic rights and privileges" was not extended to American Indians through citizenship (Webster Dictionary). In 1924, the Indian Citizenship Act was passed giving all Indians full citizenship. Although they are to be considered full citizens, this is not to interfere with their tribal citizenship (Deloria, 1998, p. 3). This Act changed the development of American Indian policy, because American Indians could be affected by policies aimed not solely at them, but in those aimed at all citizens. This restricted the need for separate policy, and throughout the New Deal, American Indians are dealt with within policies enacted for the benefit of the general public.

iv. Reorganization

From the Reorganization period forward we see the national government's complete authority over tribal governments reiterated with almost all Indian affairs being handled at the national level. The period of Indian Reorganization began in 1928 with arrival of the Meriam Report that detailed the horrific conditions plaguing the Indian population and led the government to recognize that assimilation had not worked (Utter, 1993, pp. 254-255). Following this was the Indian Reorganization Act of 1934. (Petosky, n.d., p. 34) The Indian Reorganization Act of 1934 established constitutions for those tribes desiring to do so. In accordance with the Act, most tribes developed constitutions and governments similar to that of the US federal government. This policy, which the US enacted to develop institutions within tribes, was completely contrary to some tribes' cultural values. The Navajo[10] present an example. According to O'Brien when the Navajo tribe was assessing whether or not to adopt an IRA constitution, many traditional tribal members would not vote because they did not believe in the process of voting (O'Brien 1989: 2).

v. Termination

In the Termination period from 1943 to 1961, there was a drastic return towards assimilation and another classic example of the value of individualism within the United States (Petosky, n.d, p. 34). In 1943 the Senate surveyed Indians, finding conditions similar to those referenced in the Meriam Report (Utter, 1993, p. 255). With attributing these conditions to the ineffectiveness of the Bureau of Indian Affairs and believing that

[10] Arizona

some tribes no longer needed national protection, House Resolution 108 in 1953 terminated tribes, and their relationship to the United States government (Utter, 1993, p. 39). This policy returned American Indians to the status of individuals responsible to the United States governmental structure, with no rights specific to their tribe. This policy, however, failed in general, and by the 1960s government policy had turned to self-determination, although terminated tribes still attempt to achieve federal recognition in present times. During this period, criminal jurisdiction over American Indians came into question. Who possesses the right to control behaviors of American Indians, tribes, the national government or state governments? This question was answered most directly in 1953 with Public Law 280, which mandated six states (Alaska, California, Minnesota, Nebraska, Oregon and Wisconsin) to assume criminal jurisdiction in regards to tribal members and reservation territory, other states were given the choice of adapting this policy or variations on this policy. Simply said, some states hold criminal jurisdiction in reference to tribal members, federal jurisdiction covers all tribal members, and civil jurisdiction is left in the hands of the tribe (Pevar, 1992, pp. 129-131, 158-160). Considering that federal jurisdiction covers all tribal members in those states not participating in Public Law 280, American Indians are covered by federal jurisdiction and tribal jurisdiction.

vi. Tribal Self-Determination

The self-determination period from 1961 to the present is a continuation of national level control over American Indian affairs and is marked most clearly by two pieces of generalized legislation applying to all tribes. The first is the Indian Civil Rights Act of 1968. This legislative Act in many ways allows tribes to adopt civil rights

pursuant to their cultural beliefs and not the beliefs of the United States government. This was exemplified in 1978 in the case of Santa Clara Pueblo[11] v. Martinez. (Tribal Sovereignty, 1993, p. 46) This case resulted when a Santa Clara woman's children were denied tribal membership as their father was not a tribal member. The Santa Clara Pueblo trace tribal membership in a paternalistic fashion, regardless of whether or not this is in violation of other laws or cultural norms. The court upheld this decision, respecting a tribe's right to have rules and regulations inconsistent with the broader public as directed by the Indian Civil Rights Act of 1968 (Tribal Sovereignty, 1993, p. 46).

The second important piece of legislation was introduced in 1975, the Indian Self-Determination and Education Act. This Act encompassed an ideological perspective that resulted from treaty re-assessment and reports of destitute conditions on American Indian reservations. This Act was aimed at rehabilitating Indian education programs that had been allowed to deteriorate and to aid tribes in self-determination by allowing them to administer these programs, further this Act was also important in that it allowed tribes to operate outside of federal contracting laws and extend civil service benefits to workers (Deloria, 1998, p. 220).

National versus state control over tribal functions once again surged to the forefront with the advent of Indian gaming in the 1980s. In 1982, the United States Supreme Court ruled that Indian bingo operations could continue as long as the state laws in which the reservation is located allowed bingo (Oswalt, 1996, p. 69). In 1987, the US Supreme Court again ruled on the side of American Indians in California v. Cabazon Band of Mission Indians[12]. In this ruling the court once again denied states the ability to

[11] California
[12] California

regulate American Indian gaming (National Gambling Impact Study, 1999, pp. 2-9). In Oneida Tribe of Indians v. Wisconsin the federal district court also supported this philosophy under the premise that the state only had the right to intervene in criminal law issues and not in civil law. The court asserted that gaming fell under civil law (McFadden, 1996, p. 809). The policy that resulted is the 1988 Indian Gaming Regulatory Act, which dictates that if a state in itself does not allow gaming then the tribe is not allowed to participate in gaming. The Indian Gaming Regulatory Act is the latest legislation, which demonstrates the difficulties posed with regard to the vagueness of powers granted to the national and state governments within the federal system.

Historically, U.S. policy towards American Indians has fluctuated from assimilation to trust responsibility and tribal sovereignty. The rights of federal, state and tribal governments are not wholly distinguishable within the federal system. This might rest upon the limited constitutional law governing the relationships between tribal, state and national government as most Indian policy in the United States is derived from legislation and domestic law. Evidence of this is seen in state and national conflicts as early as Justice Marshall's decisions and as late as the Indian Gaming and Regulatory Act. It might also appear that American Exceptionalism[13] affects the development of American Indian policy through the emphasis in American culture on the individual as seen during the Assimilation and Termination periods. However, the lack of egalitarian principles and liberty in the Removal period and citizenship laws of American Indians are not supportive of the exceptionalist creed of America.

[13] "Simply stated, American Exceptionalism is a theory which asserts that certain American institutions and practices are so distinctive that a specifically discrete set of explanations are required to understand American history (including political thought) (Abbott, 1995, p. 17)."

Through the recount of the development of US Indian policy we enhance our view of the environment in which tribes and local governments coexist. We see a clear pattern of 'us' and 'them' with no reference to local relations being defined. Does this then dictate that the tribes and local governments interact as sovereigns? As we move forward in Chapter 3, we will examine the more specific functioning of these governments and the interrelationships.

III. Gaming Policy (IGRA)

There are a plethora of articles discussing gambling and its impact on American Indian reservations. And for many reservations gaming has become the prominent base for unprecedented levels of reservation economic development.

Games of chance have played a part in American Indian life since pre-history. The Iroquois[14] played lacrosse, betting on the outcome (Oswalt, 1996, p. 407). The Chipewyan's[15] had a hand guessing game (Oswalt, 1996, p. 92). The Tlingit[16] also had a hand guessing game played by teams, which involved wagering their possessions on the outcome (Oswalt, 1996, p. 253). These games occurred well before the European concept of legalized gambling or gaming arrived in America.

In more recent times, gaming in Indian Country has taken on the form of legalized casino gaming. The first tribe to actively pursue some form of large-scale gaming was the Seminoles[17]. The Seminoles had gaming in the form of high stakes bingo as early as 1979 and by 1982, their bingo operation had an annual net of 2.7 million dollars (Utter, 1993, p. 134). According to Oswalt, by 1984 as many as 80 tribes ran bingo operations.

[14] Northeast
[15] Canada
[16] Northwest
[17] Florida

By 1985, 100 tribes in 19 states had bingo operations. By 1986, Indian gaming had become the largest unregulated legal business in the United States and between 1985 and 1995, the number of American Indian bingo operations doubled (Oswalt, 1996, p. 69). Currently, tribes with gaming operations have doubled, 224 tribes are engaged in Indian gaming (National Indian Gaming Association, n.d.) and gaming revenues increasing by 256% since 1995 (National Indian Gaming Commission, n.d. b).

Legal precedence regarding Indian gaming has also grown during this period. In 1982, the United States Supreme Court ruled that Indian bingo operations could continue as long as the state laws (in which the reservation is located) allowed bingo (Oswalt, 1996, p. 69). In 1987, we have the California v. Cabazon Band of Mission Indians ruling as mentioned previously. According to McFadden, in Oneida Tribe of Indians[18] v. Wisconsin, the federal district court also supported this philosophy under the premise that the state only had the right to intervene in criminal law issues, not in civil law on American Indian Reservations. The court asserted that gaming fell under civil law (McFadden, 1996, p. 809). This was a very important assertion. In most states, the state can only legally intervene in criminal matters; otherwise states hold no jurisdiction over civil matters.

The 1988 Indian Gaming Regulatory Act (IGRA) gives states a mechanism to influence tribal gaming. This act dictates the manner in which almost every aspect of American Indian gaming is to be handled. It determines who holds power and control over not only how gaming revenues are to be achieved, but also how revenues are to be spent. This policy also created and delegated control of fundamental aspects of Indian gaming to the American Indian Gaming Commission. Furthermore, this act also requires

[18] Wisconsin

state-tribal compacts for gaming, allowing for revenue sharing agreements to be fostered. These compacts are important to understanding the fiscal impact of Indian gaming on non-Indian governments as compacts are one of the primary tools for formalizing[19] revenue sharing agreements.

a. Policy Objectives

The policy objectives of the Indian Gaming Regulatory Act are clearly stated in Section 2702 of the act. They are:

1. to provide a statutory basis for the operation of gaming by Indian tribes as a means of promoting tribal economic development, self-sufficiency, and strong tribal governments;
2. to provide a statutory basis for the regulation of gaming by an Indian tribe adequate to shield it from organized crime and other corrupting influences, to ensure that the Indian tribe is the primary beneficiary of the gaming operation, and to assure that gaming is conducted fairly and honestly by both the operator and players; and
3. to declare that the establishment of independent Federal regulatory authority for gaming on Indian lands, the establishment of Federal standards for gaming on Indian lands, and the establishment of a National Indian Gaming Commission are necessary to meet congressional concerns regarding gaming and to protect such gaming as a means of generating tribal revenue.

(Title 25, Chapter 29, Section 2702).

[19] Formalized used to indicate those revenue sharing agreements that are legally binding by some outside authority and persistent across time.

Through the IGRA, the combined regulatory power of the tribe, state, commission and federal government, these objectives can be achieved.

Intentional or not, IGRA removes to some degree a tribe's independence in regulating and governing their own sources of economic development. This occurs by allowing the state to impact the tribe's decision to pursue gaming. If a state in itself does not allow gaming then the tribe is not allowed to participate in gaming. This clearly imposes the choices of the state upon the tribe. If the state chooses not to negotiate a class III gaming compact with the tribe, the tribe cannot file suit against the state. This makes the process of obtaining a compact increasingly more difficult and expensive. Furthermore, states may negotiate revenue sharing agreements for issuing the compact. In Connecticut, 25% of the gross revenues from tribal gaming operations go to the state, in New Mexico 16%, Nevada 9.5% and in New Jersey 6.25% (Giovanna, n.d.). In addition to this, a State can suggest or mandate conditions under which they will 'agree' to allow on and off reservation Indian gaming. These 'conditions' have implications at the local level. For example, in Minnesota for off reservation gaming the State requires, "County and local governments must support the casino..." and "Tribes must agree to make specified financial reimbursements to county and local governments" (Walters, 2000, p. 01B). In California, new compacts have a focus on local governance.

> The compacts then require that agreements be reached between tribes and affected communities for off-reservation mitigation and public service responsibilities, including law enforcement provided by local governments. These agreements are subject to binding arbitration of disputes between tribes and local government, which encourages both sides to take reasonable positions about gaming

> expansion. Equally important, the agreements are enforceable in court. (Jacob, 2004, p. B9)

Another result of IGRA is that tribes are now assessed fees to support the commission. The policy does not limit the amount of fees that can be assessed to a tribe; however it does give the Commission the power to deny or remove licensing if the fees are not paid (McFadden, 1996, p. 809).

b. Process of Governance

The Indian Gaming and Regulatory Act directly changed the process of governance. Gaming began as a tool created by and utilized by tribes to enhance their economic development. With the creation of IGRA, an entirely new process of governance over gaming began. American Indian gaming is now under the control of 3 different entities. Class I gaming which includes traditional tribal games is still under the governance of the tribe. The National American Indian Gaming Commission and the tribe now regulate class II gaming, which includes bingo. Class III gaming "means all forms of gaming that are not class I gaming or class II gaming" and is most often referred to as casino gaming and high-stakes gambling (Title 25, Chapter 29, Section 2703). This form of gaming is now under the control of the tribe, commission, state and federal government.

c. Control and Decision Making

The Indian Gaming and Regulatory Act does not change the ownership of American Indian gaming; it reinforces the concept of tribal ownership. However, it does provide a platform in which tribal capacity for seeking outside investors can be limited. IGRA dictates many changes in the control of gaming as a resource within American

Indian gaming relevant to issues of sovereignty by removing tribal control and awarding these powers to the commission, state and federal government.

The National Indian Gaming Commission maintains the power of issuing a gaming license. The Commission is headed by a chairman "...appointed by the President with the advice of the Senate..." and further supported by a committee of "two associate members who shall be appointed by the Secretary of the Interior" (Title 25, Chapter 29, Section 2704, b). The chairman maintains the upper hand in class II gaming, with the right to close gaming, "levy and collect fines", "approve tribal ordinances or resolutions" and "management contracts" (Title 25, Chapter 29, Section 2705). The Committee supports the actions of the chairman and also maintains the rights to monitor and inspect Class II gaming facilities (Title 25, Chapter 29, Section 2706).

The Commission can allow the tribe to conduct self-regulation of Class II gaming activities if the tribe has proven that: its accounting is accurate, it is "safe, fair and honest" in operations and there is no criminal activity. Furthermore, the tribe must demonstrate that it has sole proprietary interest, meaning that the revenues from gaming go directly to tribal government operations, tribal welfare, and charity or to "promote tribal economic development" (Title 25, Chapter 29, Section 2710).

The regulations above also apply to Class III gaming but, Class III gaming also includes additional regulations. In this case tribes must approach their state and request a tribal-state compact be established to permit such gaming. The state is expected to negotiate with the tribe in "good faith". Once the state has approved a compact, it must also be approved by the U.S. Secretary of the Interior. The state cannot refuse to negotiate a compact for Class III gaming if the state allows Class III gaming elsewhere in

the state. Class III gaming on Indian reservations is then subject to be taxed by the tribe at a level comparable to that at which the state taxes other gaming facilities. The state, however, cannot "tax, fee or charge" Class III gaming operations on reservations. If the state and tribe encounter difficulties in negotiating a compact, the federal government can assign a mediator. Both the tribe and the state must submit a compact to the mediator. The mediator then chooses one of the compacts. The Secretary of Interior must also approve the compact in light of federal law (Title 25, Chapter 29, Section 2710).

IGRA also directly impacts the management of gaming facilities on reservations. The Chairman must approve all management contracts. Prior to approving the contracts the Chairman has the right to information involving the contractor. This includes their experience and financial statements (Title 25, Chapter 29, Section 2711).

d. Use of Tribal Gaming Revenues

Revenues from gaming have not suffered many changes as a result of the IGRA and these revenues continue to increase at a significant pace. The tribe is required to use the funds for five purposes:

1. to fund tribal government operations or programs
2. to provide for the general welfare of the Indian tribe and its members
3. to promote tribal economic development
4. to donate to charitable organizations
5. to help fund operations of local government agencies

(Title 25, Chapter 29, Section 2710)

The tribe may choose to allocate revenues for per capita payments to members. However, these payments are subject to federal taxes (Title 25, Chapter 29, Section

2710). This is an important aspect involving the policy, because traditionally American Indians have not been subject to federal or state taxation.

IV. Tribal Governance, Economic Development and Public Finance

In the following discussion we will see that we have different types of governments (tribes and cities and counties) providing services to their populace. Each of the different types of governments shares a rather different history that has shaped their development and the governance power of each varies. Outside these differences though, there are three common threads. First, both tribal and non-tribal government is an extension of a larger government that has seen growth in their independence over the years. For tribes this revolves around the movement to self-determination and for non-tribal governments this is a result of the expansion of their role possibly tied with the devolution movement. Second, each is facing the need for resources to meet the increasing demands of their populace. The availability of these resources clearly has the potential to impact local governance. Third, each is playing a larger role within the global economy. What role these differences and similarities play in their relations and the impact they have on one another is yet to be explored.

American Indian tribes practice self-government and are outside both the scope of state and local governance and taxation. American Indian tribes functions as "quasi-sovereign" nations with political powers and jurisdictional responsibilities. Many tribes have constitutions fostered initially by the Indian Reorganization Act (IRA) of 1934. This Act may very well be viewed as the rebirth of tribal self-governance (Haas, n.d.). Not all tribes opted to be covered by this Act, but for those that did, it provided economic

development resources including access to funds and designation as a corporation for development purposes (Robertson, 2001).

This is a very important point. Although economic development and government finance are tied together in both tribal and non-tribal communities, in tribal communities this connection is often much more concrete with tribal governments acting as corporations. To some degree Indian governments hold considerably more power and responsibility than some non-Indian local governments and may more closely parallel the responsibilities of a combined federal, state and local government. Unlike non-Indian local governments, the states play an extremely limited role in tribal governance. Tribal governments hold a direct federal-tribal relationship and in most regards have little regulations or intervention from state governments. In addition, in most cases American Indian tribes are outside the scope of state and local taxation. There are variations in the role of tribal governments, but overall tribes have the capacity within their jurisdiction to define membership, establish tribal laws or codes and administer justice, regulate business within their jurisdiction and enact taxes (O'Brien, 1989, pp. 197-233). They are responsible for administering social services to their populace, in combination with those services provided by the federal government (O'Brien, 1989, pp. 238-254).

Economic development in tribal communities is difficult at best. Tribes continue to suffer from historical difficulties, such as those that have resulted from the reservation movement. These difficulties make prosperous economic endeavors very appealing. Demographic and socio-economic characteristics from the 2000 Census are presented in Tables 2-5.

Table 2: Educational Attainment

Geographic area	Population 16 to 19 years--Percent not enrolled in school and not a high school graduate	Population 18 to 24 years--Percent enrolled in college or graduate school	Population 25 years and over			Population 25 to 34 years--Percent with bachelor's degree or higher
			Percent with less than a 9th grade education	Percent high school graduate or higher	Percent with bachelor's degree or higher	
American Indian	15.1	16.3	10.7	72.8	13.3	10.7
Rural	9.2	21.7	7.9	78.8	16.4	16.4
Urban	10	36.4	7.5	80.8	26.6	29.9
US	9.8	34	7.5	80.4	24.4	27.5

Table 3: Percent in Labor Force and Percent Unemployed

Geographic area	Population 16 years and over--Percent in labor force			Civilian labor force--Percent unemployed
	Total	Female		
		Total	With own children under 6 years	
American Indian	56.5	52.2	60.1	13.6
Rural	63.1	56.4	63.2	4.9
Urban	64.1	57.8	61.6	6
US	63.9	57.5	61.9	5.8

Table 4: Median Income and Per Capita Income

Geographic area	Median income in 1999 (dollars)		Per capita income in 1999 (dollars)	Median earnings in 1999 of full-time, year-round workers (dollars)	
	House-holds	Families		Male	Female
American Indian	29,097	31,929	12,452	29,193	22,253
Rural	40,041	45,914	19,285	33,972	23,511
Urban	42,574	51,285	22,198	38,094	28,337
US	41,994	50,046	21,587	37,057	27,194

Table 5: Those With Income Below Poverty Level

Geographic area	Income in 1999 below poverty level			
	Percent of population for whom poverty status is determined			Percent of families
	All ages	Related children under 18 years	65 years and over	
American Indian	28.4	35.5	20.7	23.5
Rural	11	13.8	11	8.3
Urban	12.7	16.8	9.5	9.4
US	12.4	16.1	9.9	9.2

American Indian communities are less educated, have lower incomes and more than double the unemployment and poverty when compared to other communities. Rural communities although similar in other aspects to urban communities, were also less educated. Numerous individuals and groups have theorized why poverty levels are high

and per capita income is low among Indian tribes. Issues include access to employment, cultural barriers, policy circumstances and human capital needs. Research would suggest that tribal economic development is aided by a "cultural match" in their institutions, deregulatory status and access to capital, but at the same time economic development is inhibited by limited market access and tribal infighting.

Historically, many of the activities on Indian lands were driven by outside forces. In more recent years, self-determination has brought about a change in the dynamic of Indian development. In *American Indian Policy of Government and Economic Development*, edited by Lyman H. Legters and Fremont J. Lyden, there is a chapter "Redefinition of Property Rights on American Indian Reservations: A Comparative Analysis of Native American Economic Development" by Joseph Kalt and Stephen Cornell. Its authors assert, "The central change in Indian economic affairs that self determination has brought is that for first time, development programs are being designed directly by Indian tribes instead of the federal government (Legters & Lydon, 1994, p. 122)."

With the aforementioned change in framework (external to internal economic development drivers) the research in this area has become more focused on the internal dynamics within tribes that drive economic development. Kalt and Cornell acknowledge that a tribe's ability to economically develop is differentiated by cultural and political factors. These authors, as well as Miriam Jorgensen (2000) and Jonathan Taylor (2000), have produced significant research in the examination of economic development in American Indian communities. Central to their work is the connection between

institutions, culture and economic development. In "Where's the Glue? Institutional Basis for American Indian Development" Cornell and Kalt begin to develop their theories

> First, we have argued that institutions of self-government are the key to (i.e., the necessary condition for) economic development by sovereign societies. This follows since it is the system of incentives and constraints that emanate from institutions that promote or inhibit specialization and exchange, and promote or inhibit destructive rent seeking.
>
> Second, we have argued that culture "matters in a particular way: Cultural norms for the glue that holds a society's formal and informal institutions of social control and organization together. Granting the conclusion that successful economic development requires effective institutions that can channel resources and effort into productive ends, we could reasonably expect that a society's formal institutions would be more effective the closer is the match of those institutions to the informal institutions that emanate from cultural norms.
>
> (Cornell & Kalt, 1991, p 20-21).

They further develop this argument suggesting the following are "Necessary and sufficient for Economic Development on American Indian Reservations":

1. Specialization and Exchange: A willingness to specialize and engage in trade with the broader off reservation economy.
2. Limits to Power: A formal non-Athenian[20] governmental structure that provides some mechanism of confining the government to the third-party enforcer role and shuts down rent seeking;

[20] "Athenian democracies (known as general councils in Indian Country) provide no separation of powers or other organizational constraints on rent seeking through the political arena (Cornell 1995, p. 21)."

3. Cultural Legitimacy: A match between cultural norms governing political affairs and the present formal governmental institutions.
4. Resources: A non-trivial stock of at least one resource (e.g., human capital, natural resources).

(Cornell & Kalt 1995, p. 25).

They suggest that economic development in these communities can be undermined or enhanced by the degree of "cultural match" between the community and institution (Cornell & Kalt 1995, p. 23). They add, that,

> However, because tribes differ so much culturally one from the other, the formal governmental structures that are legitimate for one tribe may not be for another. As a result, tribes with the same governmental form perform differently in the development arena; and these differences can be explained by differences in the underlying social contract regarding the norms of legitimate authority (Cornell & Kalt, 1995, p. 48).

This argument comes to full fruition in more recent works, with the discussion of "Nation Building" as a platform for economic development in tribal communities.

> A "nation-building" approach to development doesn't say "let's start a business." Instead, it says "let's build an environment that encourages investors to invest, that helps businesses last, and that allows investments to flourish and pay off." A "nation-building" approach requires new ways of thinking about and pursuing economic development. Telling the planning office to go get some businesses going doesn't begin to crack the problem. The solutions lie elsewhere: in the design and construction of nations that work. (Cornell & Kalt, n.d., p. 8)

The ties between culture and the pursuit of Indian gaming have been established to be relatively strong (Jorgensen, 2000, p. 30). This study finds,

> On the one hand, it seems that the power of this cultural determined taste cannot be understated. On the other hand, careful examination of the model and empirical results shows something else of great importance—that having a cultural taste for bingo participation does not predestine later choices. The reason for building in culturally based preferences was to see how they played against other forces. The finding is that the tastes coded by GAMEINDEX support choices that are already tilting in one direction or offer a devil's advocate-like pull away from choices that are tilting in the other direction. They do not fully determine choice nor are they irrelevant in the face of market forces. Indeed, "high enough" opportunity costs can still win the day.
>
> (Jorgensen, 2000, p. 32)

Beyond the dynamics of culture and institutions, there are advantages for tribes pursuing economic development. Tribes can establish a federally chartered corporation for the management of tribal enterprises (Legters & Lydon, 1994, pp. 123-126). "That is, in a number of important respects reservations are far more "deregulated" at least with respect to non-tribal governments that the vast bulk of the rest of the economy (Legters & Lydon, 1994, p. 126)." Although tribes have had difficulty attracting capital and the Bureau of Indian affairs controlled economic development has rarely been successful, "The essence appears to be that the combination of more secure property rights, the access to (potentially) profitable market niches, and the ability to take control of tribal resources from federal and state governments have meant that the tribes themselves are

increasingly bearing the opportunity cost of their investment in management decisions (Legters & Lydon, 1994, p. 127)."

Another interesting source, *Economic Development as the Foundation for Self Determination,* by Theresa Julnes (as cited in Legters & Lydon, 1994) suggests that for self-determination to occur it is first necessary for there to be economic development. This study was based on a survey that sample leaders of tribal nations and tribal corporations on issues relevant to economic development. "The purpose of this study was to report how development decisions in Native Nations have been made and manage the past and to examine what obstacles may be hindering future economic development (Legters & Lydon, 1994, p. 151)." Julnes points out in the beginning that tribal government is often less bureaucratic than other state and local governments and therefore the enterprises they pursue also tend to be less bureaucratic. This theory raises an interesting question when tribes have greater participation in a larger market that potentially requires them to adopt a larger bureaucracy to maintain these enterprises, how will this impact tribal governance? The study had the following findings:

1. Almost all tribes said that they lack capital (96%), 83 percent said they lacked financial resources, 76 percent said they lacked trained personnel, and 57 percent perceived a lack of natural resources that could be developed (Legters & Lydon, 1994, p. 155).
2. Over 94 percent of the respondents felt their tribe needed programs to help develop technical skills they were to undertake development plans. Nearly 92 percent expressed a need or desire for programs to help develop management skills to assist in economic development plans. Nearly 87 percent felt that help

was needed from both outside agencies and internal kinship groups. Approximately 82 percent indicated that they needed help from outside consultants for both planning and implementing economic development. Fewer than 51 percent of the tribes felt they had the information necessary to develop market products (Legters & Lydon, 1994, p. 156).

3. Over two-thirds of the responding tribal governments reported some economic development (see question No.4. However, nearly 60 percent reported that economic development provided 10 percent or less of the funds needed to finance their government. (see question No. 2) Additionally over 60 percent of these tribes netted less than $250,000 from these efforts. Fewer than 10 percent made over $1,000,000,000 on such ventures. (see question No. 6) Thus, while many tribes have profited from economic development, few have made enough money to support the tribe's self-governance (Legters & Lydon, 1994, p. 156).

We glean from this that tribes are still in great need of capital of all types and educational programs to enhance the capacity to generate and utilize resources. Given this knowledge, what are the existing sources of capital for tribal governments? One source of tribal capital is government grants. However, it appears that these grants may be under direct scrutiny from a variety of different angles. Tribal grants from federal agencies in 1998 as were from:

- BIA
- Health and Human Services
- Department of Education
- Department of Housing and Urban Development

- Remaining agencies

(GAO, 1998, pp. 10-11)

A significant portion of the monies received by tribes comes from the BIA's Tribal Priority Allocations Fund. In "Indian Programs: Tribal Priority Allocations Do Not Target the Neediest Tribes", the Government Accountability Office (GAO) investigates at the request of the Senate Committee on Appropriations that tribes with additional resources should become more sufficient and that these allocations should go to the neediest tribes (GAO, 1998, p. 1). The GAO responds that, "To determine an equitable distribution among the tribes, several types of data may be considered, such as (1) the economic status of each tribe, (2) the needs of each tribe, and (3) the government's responsibility to each tribe (GAO, 1998, p. 2)." The GAO acknowledges that the information needed to make these decisions is not readily available. Information on tribal revenues, as recorded within the Single Audit Act is unreliable (GAO, 1998, p. 8). They also noted that in order to determine government responsibility all relevant treaties would need to be reviewed (GAO, 1998, p. 10).

Tribes also generate revenues directly and indirectly through business activities and taxation. Total revenue from American Indian/Alaskan Native business excluding those that are tribally owned in 2002 was $26.9 billion, with California having the most AI/AN businesses and revenues (U.S. Census, 2006b). Where do these revenues come from? According to the Census report they stem from (in rank order) "construction", "other services (except public administration)", "health care and social assistance", "professional, scientific and technical services" and "retail trade" (U.S. Census, 2006b). According to John Ritter they,

> ... go after tourist dollars with campgrounds and resorts. They market Native American arts. They develop mineral deposits and oil and gas production. They nurture small businesses on the reservation. (Ritter, 2000, p. 21)

This statement is supported by numerous articles, which provide recent evidence of these endeavors. Reservation leaders are becoming increasingly active in pursuing other business opportunities as demonstrated by the council representing the Mandan, Hidatsa and Arikara[21] touring businesses (Triola, 1999, p. 18). The Blackfeet[22] have established a bank, with the intention of attracting revenues and developing jobs (Ritter, 2000, p. 21). Dennis Banks, of the Leech Lake Indian Reservation[23] is negotiating to potentially sell his maple syrup to Japanese food markets (Furst, 2000, p. 1). Northwest Native Designs, created by Ernie Apodaca is marketing Native American furniture designed by various Native artists (Montana, 2000). And of course, revenues come from gaming. As mentioned previously, Indian gaming currently generates over 19 billion dollars in revenue (National Indian Gaming Commission, n.d.).

Finally, there are two barriers to economic development worthy of mention. First, tribes need market access for development. Given the rural nature of most tribes, one potential mechanism for connecting to the market is internet technology. The use of satellite web links helps remove the barriers such as the lack of telephone connections in isolated rural areas, and allow tribes such as the Navajo and Hopi to access the internet (Sink, 2000). These advances could remove reservation boundaries and allow for internet based education and jobs to enter. To date though, these advances have not influenced tribes to enter the online gambling arena.

[21] North Dakota
[22] North Dakota
[23] Minnesota

Second, another potential barrier supported by anecdotal evidence is that of both non-tribal and tribal development competition. Tribes can face competition from other governments and businesses. For example, the Ho-Chunk's[24] gaming revenue has decreased by 80% because of riverboat gaming competition (Kenworthy, 2005). Tribes also face competition from other tribes. "Where once we could count on such efforts being pursued only by state and local governments, we now see such efforts being pursued by tribes against one another" (Doyle, 2000, p. 4b). This statement is referencing inter-tribal competition resulting from the pursuit of casino land in Wisconsin. Gaming is not the only root of infighting. The Seminoles have also been party to this behavior as they have tried to resolve conflict between Seminoles with and without African ancestors over a $56 million dollar payoff for land taken in 1820 (Glaberson, 2001, p. 1). In more recent years similar racial tensions have come to surface in the Cherokee[25] community (Reid, 2007, p. 31). Not only are tribes competing over land and money, they are also competing for resources as demonstrated by the Torres Martinez Band[26] and Cabazon Band of Mission Indians. These two groups both want to build power plants. However, limited water and electricity supplies could mean that only one will win. This situation also draws forth another, issue-jurisdiction. The Torres Martinez Band's plans question who will license the project, in light of sovereignty issues, believing this should be the federal government or specifically the Bureau of Indian Affairs (Kraul, 2000). As demonstrated above, tribes not only have to compete with the local community they must also compete with one another.

[24] Wisconsin
[25] Oklahoma
[26] California

We see here that tribal governance and economic development are very clearly tied together given the structure of tribal governments. Although often difficult, tribes are engaging in economic development activities that bear the potential to impact other communities. Like other non-metropolitan communities, tribes face challenges including limited market access and competition from other development actors. Gaming has clearly become a very significant form of economic development for tribal governments, in what has historically been an extremely challenging environment.

V. Non-Tribal Municipal Governance, Economic Development and Public Finance

Tribes are clearly pursuing development activities. How then is it, that tribal development activity could impact non-tribal governments? In order to answer this question we need to understand the overall structure of non-tribal municipal governance, how municipal governments generate revenues, decide upon expenditures and what role economic development activities play in these factors.

First, there are 87,849 local governments in the United States (Census of Governments, 2002, p. 1). These are divided into 3, 034 counties, 35,937, towns, and municipalities and 48,878 special district governments. Each of the different governing types holds different responsibilities to their constituents. Powers to govern at a local level are given from all levels of government (local, state and federal) (Kemp, 2002, p. 70). Historically, counties have functioned to provide state services and have had very little direct authority, unless they have "home-rule" which provides for greater authority (Kemp, 2002, p.119). Most counties are headed by 3-5 person committees elected locally (Kemp, 2002, p.120). There are four prominent types of city governance: "strong mayor, commission type, mayor-council and council-manager (Kemp, 2002, p.65)". The

responsibilities of cities and their development are tied to the urban migration of the second half of the 19th century.

There is a diversity of theories on not only what drives local government finance, but how local government revenues and expenditures impact one another. Some assumptions seem relatively safe to make. Given that local governments are an extension of the state, one could safely assume the State (and any policies that impact the state) could have an impact on local government finances. In addition to this a state may limit a local government's capacity to tax. For example, in many states the state restricts the use of 'non-property taxes' and limits the amount of property tax that can be collected (exceptions include home-rule states) (Florestano, 1981, pp. 122-123). Local government taxes are also self limiting through competition with other local governments. Fear of the populace fleeing to an area with lower local taxes may keep local governments from increasing their tax rates (Florestano, 1981, p. 123). Although local government financing and budgeting is highly diversified and informal in many cases some generalizations can be made (Mikesell, 1999, pp. 118-119). For local governments the biggest part of their budget is education expenditures, while the remainder of their budget is fragmented with welfare and police expenditures only accounting for approximately 10% of the budget (Mikesell, 1999, p. 116). Local governments often face balanced budget requirements, although they have rather difficult hurdles to overcome when implementing new financial decisions (Mikesell, 1999, pp. 123-124). Local governments also have limited abilities to run deficits (Mikesell, 1999, pp. 125).

Like tribal governments, non-tribal governments also face impact from local development. Sources of local government revenues include property taxes (decreasing),

"current charges" or user fees (increasing) and "intergovernmental fiscal transfers" (Kemp, 2002, p. 133). It seems logical to suggest that anything that impacts the populace or businesses in a given area has the potential to impact government revenues and expenditures, since these are reliant on the populace and/or business base.

To what degree revenues influence expenditures and vice versa are not always clear. There are three prevalent theories:

1. Revenues and expenditures change together.
2. Revenues change first.
3. Expenditures change first.

(Holtz-Eakin, Newey & Rosen, 1989, p. 415)

Holtz-Eakin et al. suggest that the first hypothesis is incorrect. Their research suggests although revenues can influence expenditures, expenditures do not influence revenues to the same degree (Holtz-Eakin et al., 1989, p. 428).

Given the reliance on community aspects such as business and population growth (development), we must now ask what drives development in these communities and how these developments then impact the community. Development efforts in non-Indian communities face similar challenges. One primary theory is "location theory". This theory suggests that there are a lot of factors that influence where businesses locate, and that the diversity of these factors has increased with the changes in technology (Bingham, 1993, p. 3). Given that this research focuses on non-metropolitan communities, many of these theories are less applicable as they are largely centered on metropolitan communities (Bingham, 1993, p. 61). Of the 3,034 counties in the US, over 2,000 are considered non-metropolitan ("Measuring Rurality: Urban Influence Codes," 2003).

Non-metropolitan or rural communities arose as more single purpose, unlike the more diverse metropolitan environment (Bingham, 1993, p. 61). Lorna Aldrich and Lorin Kusmin found the following factors to be related to rural economic growth in the 1980s:

Table 1 -- Factors that may affect rural economic growth

Policy factors

- Taxation
- Public spending
- Public capital stocks
- Branch banking laws
- Availability of industrial-revenue bond financing

Other factors

- Wage levels
- Unionization levels
- Unemployment levels
- Labor force quality (measured by education)
- Proximity to higher education institution
- Access to highways, airports, and other transportation
- Proximity to metropolitan area
- Per capita or family income
- Population size and density
- Urbanization
- Minority population concentration
- Temperature and precipitation
- Energy prices
- Industry mix or concentration
- Availability and price of land
- Labor productivity
- Local fire protection ratings
- Small business activity measures
- Population age distribution measures

Source: Compiled from Kusmin (1994), pp 16-21.

(as cited in Aldrich & Kusmin, 1997, p. 2)

The overall message from Aldrich and Kusmin is that rural economic growth centers on private business needs and the more favorable the environment for business, the greater the growth potential. Positive growth factors include, "…low initial labor costs

(earnings per job), retirement county status, high education spending per pupil, and the presence of a passenger service airport within 50 miles.", "..State right-to-work laws, the percentage of adults who had completed high school, and access to the interstate highway system.", and negative growth factors include "…large transfer payments to county residents and the relative size of the African-American population.." (Aldrich & Kusmin, 1997, p. 1). It seems safe to say, that given the importance of transportation and market access, rural locations are at a disadvantage when it comes to economic development (Bingham, 1993, p. 3).

All of this suggests that given that Indian gaming has the potential to impact both the populace and business climate, it bears the potential to influence the fiscal nature of non-Indian governments surrounding them, while the conditions in the communities surrounding the gaming operation also have the potential to influence the gaming operation. Given that rural communities are often "single purpose", Indian gaming may very well provide an economic stimulus in cases where there has been a decline in the original purpose, such as a loss of a manufacturing plant. In these cases non-Indian communities may benefit. Given the advantages of more limited regulation in tribal communities, tribal communities may have an advantage over non-tribal communities in business opportunities allowing them to pursue endeavors that may transfer resources from the surrounding community to the reservation community.

As we discuss the potential for mitigated and unmitigated impact, we must bear in mind any potential "rent-seeking" or unsubstantiated demands for tribal resources. What could cause local governments to engage in such behaviors? The role of counties has been expanding in recent times. One of the greatest challenges given this expanded role

is finding resources to meet these expanding needs (Kemp, 2002, p. 121). Cities, like counties, are facing an expanded role in local governance compared to their role historically. Cities' responsibilities have continued to grow and have necessitated resources beyond those initially provided for by property taxes (Kemp, 2002, p. 63). After the Great Depression these needs were aided by federal assistance until the end of the 1970s when pressure to downsize the federal government contributions ended general assistance. The prevailing trend over the past two decades has been one of "self-reliance" and cost reductions (Kemp, 2002, p.64).

On the flip side of the coin, as previously mentioned local governments frequently argue tribes face an unfair advantage in attracting business ventures. First, inter-jurisdictional competition is by far not a new phenomenon.

> States, regions and cities are engaged in a very aggressive competition for new investment and the retention of existing businesses. This competition has been ongoing since the inception of the country. It is precipitated by the mobility of capital and the institutional structure of the United States. While private capital is free to move from city to city, state to state, and even nation to nation, the economic health of the majority of communities in the United States is dependent on the ability of those political jurisdictions to retain and attract private capital (Peterson 1981; Jones and Bachelor 1993). (as cited in Louishomme, 2005, p. 63)

This competition in many ways must be intensified in rural areas where there are a very limited number of resources or business development opportunities. Second, to obtain an edge in this competitive environment, local governments may employ a variety of techniques.

> In the drive to retain and attract private capital, subnational governments in the United States, including states, regions and cities, engage in a wide variety of activities and spend a substantial amount of public dollars. The range of economic development programs administered by these jurisdictions range from traditional "smoke stack chasing" activities such as grants of free or low-cost land, tax abatement, tax increment financing, industrial revenue bonds, and custom tailored job training programs – what Eisinger (1988: 10) calls "supply-side incentive" programs – to activities that are intended to foster modernization of production facilities, the transition of academic and scientific knowledge into business opportunities, and expansion of export markets - what Eisinger (1988) calls entrepreneurial policies. (Louishomme, 2005, p. 4)

Are tribes at an advantage when it comes to "supply-side incentives"? At this point there is yet to be any decisive research in this area. Yes, tribes may provide tax incentives to businesses, but are they greater than the tax incentives provided by non-tribal governments? Further, do these supply side incentives matter?

> Despite the enormous amount of public revenues involved, there is no systematic evidence that this investment results in the creation of new jobs, the reduction of unemployment, or is a critical factor in corporate location decisions. Indeed, there is strong evidence that these expenditures do not stimulate economic growth or influence corporate location decisions.(Louishomme, 2005, p. 65)

The answer appears to be maybe or maybe not.

As the preceding paragraphs suggest there is clearly motivation for both counties and cities to seek new revenue sources. Whether or not they see tribes as a potential

revenue source and the degree to which tribes possess a 'supply-side incentive' advantage is yet to be seen. In addition to these competitive angles, there are non-revenue seeking changes that counties and cities have sought to assist with the decreasing revenues and expenditures ratio. Given that both counties and cities facing increasing resource issues, some counties and cities have begun consolidating services (Kemp, 2002, p. 135) and there are also models of "regional" governance (Kemp, 2002, p. 161). These regional governance models bear relevance to the topic of this thesis. They can closely parallel some of the needs and issues faced by tribal communities with regard to their local government neighbors. When discussing the importance of regional cooperation Hershberg says,

> The fear and frustration felt by so many suburbanites about the problems of big cities is understandable, but their economic interests are not well served by turning their backs and ignoring the troubles next door. Such a course guarantees that problems will grow, opportunities will be lost, and, in the long run, everyone will be worse off. The time has come to recognize the mutual interests across the region and to begin a rational dialogue about what is required to work with each other to shape a prosperous future (as cited in Kemp, 2002, p. 177).

To what degree this statement rings true for tribes and local governments can only be partially explored here, for the complexity of this suggestion demands volumes. Regardless, it seems safe to say it has some bearing given the increasing importance of local "regions" in the global economy (Kemp, 2002, p. 179).

VI. Conclusion

There are numerous tribes in the US that function as "quasi-sovereign" entities directly adjacent to communities within the scope of municipal governments. The way in which these tribes operate is governed by a long history of somewhat conflictual US policy. Given that formal Indian policy for the most part only dictates a federal-tribal relationship many of the activities between tribes and local governments are off the radar and happen in an informal manner. The Indian Gaming Regulatory Act is one of the more significant Indian policies put forth in the latter half of this century. This Act has direct bearing on the potential utilization and operation of Indian gaming facilities. This Act directly influences the way in which Indian gaming operations are established and the manner in which the revenues from Indian gaming are used. The potential for unmitigated fiscal impact from Indian gaming on non-tribal municipal governments is rooted in the unique and complicated political environment that surrounds Indian communities. Within the broader scope of United States Indian policy, we have communities with their own distinct characteristics operating adjacent to one another. Examining the fundamentals of these governance structures aids in understanding the impact these governments could potentially have on one another. The dynamics of government finances and economic development in tribal and non-tribal communities has direct bearing on the evidence for or against un-mitigated impact from Indian gaming operations on non-tribal governments since both tribal and non-tribal governments are reliant on a tax base directly influenced by economic development. Development in tribal communities historically has been driven by external forces, most often subsidized by the federal government. In more recent times, this has changed as tribes have become

more self-sufficient. Some argue that tribal development is influenced by cultural, political and historical elements and often enhanced by their deregulated status, but limited by their lack of market access and capital. Governments in tribal communities are subsidized by both the federal government and tribal development activities. A key difference is the ability tribes have to utilize their deregulated status. Given the focus on non-metropolitan communities in this dissertation, these factors are relatively similar for non-tribal governments. Non-tribal municipal governments are reliant on property and sales tax revenue in combination with a decreasing amount of intergovernmental transfers from federal and state governments. They too face path-dependent trajectories with a limited access to capital. Both tribal and non-tribal governments face increasing resource demands and have deployed various tactics to try to improve community economic development. The degree to which either community has an advantage in this effort is not clear. What is clear is that the literature suggests cooperative "regional" efforts can be advantageous especially in the global perspective. Chapter 3 explores in depth how tribal and local governments interact.

Chapter 3: Tribal/Local Government Interaction and Specific Examples of Asserted Impact and Mitigation

I. Introduction

Does the socioeconomic impact of Indian gaming extend beyond the reservation boundaries? This chapter examines the manner in which tribes and local governments interact with one another, providing for mechanisms of mitigation and collaboration. It explores specific examples of suggested impact and mitigation from a variety of sources. It looks at relations between tribes and local governments to outline the dynamics of their relationships and begin to search for concrete examples of impact and mitigation. Second, it examines the evidence for a socio-economic impact of Indian gaming on non-tribal communities. Third, it looks for evidence of a fiscal impact. Finally, it examines any existing mitigation efforts. This will answer the question of whether there is a need or justification for these revenue-sharing arrangements.

II. Tribal and Non-Tribal Municipal Government Relations

Tribes are traditionally viewed as outside the scope of intergovernmental relations in the US. But, in reality, tribes directly interact with all levels of government. Although few examples of tribal intergovernmental relations exist in the literature, this literature still can provide the foundation for understanding intergovernmental relations in general. The literature highlights three models of intergovernmental relations:

1. Coordinate-Authority Model--local authority nested within the state, national authority separate.
2. Overlapping-Authority Model--National, state, and local authority overlap and intersect.

3. Inclusive-Authority--Local authority nested in state authority and state authority nested in national authority.

(O'Toole, 2000, p. 75)

It is not surprising that tribes are not included in the formal models. Some authors have suggested that a more formal relationship be established.

> The formal status of American Indians in the U.S. federal system continues to be a social, political, and legal enigma; however, it is not our intention to enter into this fray (see, e.g., Emenhiser, 2002). Rather, we suggest that in attempting to incorporate this fourth type of government into the IGR framework some issues of "fit" arise, especially when judged against how other governments fit in the intergovernmental maze. The fact that tribal governments bring different considerations to our understanding of IGR is to be expected. Nevertheless, we would argue that much is to be gained by taking a broader perspective. The relations of Native American groups with other governments in the federal system are becoming increasingly noticeable and intertwined, especially as they pertain to the emergence of Indian gaming and the perceived economic stakes with which it is associated (e.g., Brosnan, 1996; Jorgensen, 1998; O'Brien, 2002). Although the role of American Indians in the American political system has been approached from a number of useful perspectives, including understanding their actions as organized interest groups (Mason, 2000), a vast majority are members, first and foremost, of tribal governments. It is these governments, propelled in large measure by the economics of gaming that are helping to usher in a new era in IGR, especially with respect to the American states.

(as cited in Mays & Taggart, 2005, p.75)

The relations between tribes and local governments are explored here in order to understand how these relations affect fiscal impact and further how they provide for a venue for mitigation for any possible impact from tribal activities.

Although there initially may appear to be a "dearth" of scholarly information on tribal-local relations (Collard, 2006, p. 4), there is actually a wealth of information contained within less conventional pieces of literature. Information on tribal and non-tribal relations is found most often through case studies, newspaper articles and internet accounts. Outside of cases studies, there are very little actual textual accounts of tribal and non-tribal government relations unless it is deeply embedded in literature surrounding specific topic areas such as land management and gaming. After an extensive review of journalistic sources, it becomes clear that there are a multitude of relations between tribes and local government spanning a diverse number of topics. By using Lexis-Nexis to search newspaper accounts for the past five years, one can find numerous articles on tribal and non-tribal government relations. Search terms included American Indian, tribe, local government, city and county in a variety of orders. This search was then supplemented by internet searches which yielded several additional articles. Altogether over 120 articles were collected and reviewed. Most often the accounts involved issues of governance, politics, land, taxes, environment, infrastructure and gaming. None of these topics should be considered to be mutually exclusive as almost all are tied to each other at some point. But these categories seem to be helpful in distinguishing some of the more unique aspects of each type of interaction. Interactions

outside the gaming arena help to provide for context in which gaming operations occur. Overall the interactions tended to fall into three broad categories:

- Initial Interactions-These were usually simply informative exchanges between the two groups.
- Secondary Interactions-These included negotiations, agreements and disputes post some event or development.
- Final Interactions-These include lawsuits and/or the exchange of goods in response to a secondary interaction.

Many of the interactions crisscrossed these groups making it difficult to clearly pin them to one particular group, however this grouping does help organize our thoughts somewhat. Further, the literature search provides a fairly comprehensive albeit incomplete list of types of interaction between tribes and local governments. These interactions include interaction at cities, counties and districts and span no less than 11 states (Kansas, Washington, New York, California, Iowa, Montana, Utah, Nebraska, Mississippi, Virgina and Texas).

a. Governance

There is clear evidence for relations between tribes and local governments. In 2005, Laura Evans, from the University of Michigan, wrote *Influencing Powerful Partners: American Federalism and Strategies of Tribal Governments.* This dissertation looks at the relations between federal, state, local and tribal governments and concludes, "The broader implications here are that the cultivation of expertise and the use of institutional niches can allow marginalized interests to expand their political influence (Evans, 2005, p. 270)." The second dissertation in 2006 by James Collard, of the

University of Missouri-St. Louis, titled *Tribal-Municipal Cooperation in Oklahoma* takes a more applied approach. Collard used a survey to examine tribal-local relations in Oklahoma and concluded that…

> … while there is general agreement that cooperation between tribal and municipal officials is important, there is very little regular contact between tribal and municipal officials in Oklahoma. Next, racism is still a serious barrier to tribal-municipal cooperation. It is demonstrated by many municipal officials' incorrect perceptions concerning the lower educational and income levels of Native Americans in the state, especially as they are compared with the study's targeted cities. Third, trust and respect are critical elements in the tribal – municipal relationship; however, the major determinant of how important municipal officials view cooperation with the tribes is the citizens' views concerning the relationship. Fourth, there is no relationship between the socio-economic characteristics, such as median household income level and educational level and the importance municipal officials place on cooperation with the tribes. Finally, there are significant differences between the tribal and municipal leaders concerning the salient issues. The most important difference is that while the tribal leaders list sovereignty as the number one issue, the municipal leaders list it last.
> (Collard, 2006, 195)

Also, in "The Opinions of Cities and Counties on the Impact of Gambling Casinos on their Communities", conducted by the state of Minnesota, we see evidence of cooperation. This study assessed local opinions regarding Indian gaming facilities. Using a survey, it provided insight into the interactions between tribes and local governments.

The survey covered 137 cities within a 20 mile radius of an Indian casino, achieving an 81 percent response (McCormack, 1997, p. 1). Question Number 5 asked, "Does your unit of government have any signed agreements with nearby tribal governments, casino management, or other tribal government (McCormack, 1997)?" The agreements or negotiations described by city governments include: casino, fire protection, water, sewer, animal control, police, inspections, airport improvements and operations, and road improvement. Four local governments responded that they had signed agreement with the tribes and eight had discussions with the tribes regarding mutual issues.

Given the elements of self-governance tribal sovereignty provides, it is no surprise that tribes find themselves in relationships with other governments. Some of these relationships are formally established between paired governments as is the relationship between the Swinomish[27] tribe and Seattle, which have an official "government to government" agreement (Kamb, 2004, p. B1). Others are a bit larger and may include a tribe and several local governments, such as the "Memorandum of Understanding" between the Seneca-Cayuga[28] tribe, Cayuga County and Auburn City, New York ("Seneca-Cayuga's Release…," 2004). Finally, there are a few examples of very large group agreements like that of the "Great Lakes Declaration" which engaged federal, state, local and tribal governments in a formal agreement ("Cabinet Members, Governors, Mayors…," 2004). However, many relationships between governments are less formal then these and relate directly to specific situations. In some cases, local governments need authority from the state to enter into agreements with tribes ("A Fruitful Partnership…," 2000, p. B08).

[27] Washington
[28] Oklahoma

Not only do tribes and local governments interact in the above fashion, but tribal members may engage in direct participation in local governments under their dual citizenship. If this ability seems hindered, a tribe(s) can sue as the Omaha and Winnebago[29] did with regards to employment with the Thurston County government ("Tribes Accuse County…," 2004).

Tribes and local governments may also interact when one of the governments attempts to assert its authority over the others constituents. For example, the Yakama[30] implemented an alcohol ban on their reservation, asserting that this ban also included non-Indian residents within reservation boundaries (Murphy, 2000, p. 02A). This type of attempt is increasing given the "checker boarding" that occurred during the allotment period. The battles between Thurston County residents and the Winnebago and Omaha tribes also present another interesting example of this issue and exemplify growing tribal self-governance. The Winnebago have assumed EPA pesticide regulations within the reservation boundaries which has upset non-Indian residents, who would be subject to those regulations (Hammel, 2003, p. 1A). These government-to-government conflicts can also occur with relation to the provision of services. For example, Thurston County is required to provide fire services to the Omaha reservation, but does not have the authority to impose fines or sanctions (Hammel, 2003, p. 1B).

Tribes and local governments interact politically with increasing frequency. As both groups come to recognize the importance of the other in their community-related endeavors, it makes it natural to assume they will actively pursue their interests. The only accounts found document tribal groups attempting to influence non-tribal elections.

[29] Nebraska
[30] Washington

For example, tribes may provide funds for candidates or agendas and bills in local political races (e.g. McGreevy, 2002, p. 3; Arner, 2004, p. B10). Tribal issues may also play a role in a non-tribal election over the candidate's stance on tribal related activities (e.g. Podger, 2004, p. B4). Tribes may also become very vocal and active in questioning those elected (e.g. "Economic Boycott…", 2004). Finally, tribes may be actively engaged by the outside governments in things such as redistricting (e.g.. Humphrey, 2001). Finally, in a more extreme example it is possible for a tribe and local government to merge in times of hardships as several Alaskan communities are considering (Gay, 2003, p. A1).

b. Land Relations

As we begin to see in the above discussion of interaction surrounding governance and politics, land is an important resource that drives tribal and non-tribal interaction. Tribal land is in most cases outside the jurisdiction of local governments, but land can still be given, argued over and negotiated for. The city of Eureka, California returned land to the Wiyot[31] tribe. This land was returned as a form of restitution for a massacre of the tribe in 1860. (Barnard, 2004) It is more common for tribes to buy back ancestral lands. With increasing economic resources, tribes according to the Denver Post are buying significant portions of non-reservation land (Miniclier, 2000, p. B01). Many local governments are concerned with issues of zoning, taxation and externalities of particular land use. As touched upon briefly, once tribal land is taken into trust by the US federal government, local jurisdiction is removed at least for issues of land use. This legal stance is exemplified in the case of Aquinnah-Gay Head Community Association which sued

[31] California

the Wampanoag[32] tribe over a shed built on tribal land (Burge, 2004, p. B1). The suit seeks issue not with the shed, but the fact that the tribe did not request a permit to build the shed, following a series of questionable negotiations between the tribe, state and township. The township claimed that the tribe gave up its zoning rights and agreed to subject itself to town zoning regulations and procedures. The court's response was, "However, absent clear consent by the Tribe to such judicial intervention, this Court is constrained to conclude that the Town received a right but no remedy (Burge, 2004, p. B1)." Thus, the township has no power to enforce its regulations. This case is a bit more complicated then most of the zoning issues encountered as there is a mitigating agreement to discuss. More often it is a clear cut issue with the local government having no rights to zoning regulation on tribal land although the local governments tend to take these issues to commissions and courts frequently.

This leads to another frequently argued issue between tribes and local governments, land acquisition. Once tribes acquire land, if it is placed into trust, it is not only removed from local jurisdictional control but also removed from local taxation. As discussed above jurisdictional issues are common, but two of the unique stories found involve individuals and companies requesting that tribes acquire land to put it in to trust which would allow private parties to do things with the land otherwise not allowed or condoned by the local government. In one case, an individual land owner offered to sell his land to a tribe in order that a gas station could be built there, which the local government had denied zoning for twice (Heffter, 2004, p. H8). A similar case involved a company wanting to open a landfill. That company offered significant compensation to the tribe in exchange for its taking over the land and bringing it under trust status

[32] Massachusetts

(Davenport, 2004, p. B01). Finally, land acquisition also poses a threat to local governments as the acquisition removes the land from tax rolls and according to some gives tribes an unfair advantage (Olson, 2000, p. 3B). On the flip side, some governments may feel that by releasing land to tribal trust they will gain benefit from the endeavors the tribes uses that land for, as did Roseburg City Council when they supported the Cow Creek tribe decision to use land to build a convention center (Duncan, 2004).

Not all land related issues between local and tribal governments are negative. We see cases such as the city of Eureka giving land to the tribe and such good will stories as Snohomish County, Washington changing zoning regulations in areas surrounding tribes to be more conducive to tribal cultural values (Brooks, 1999, p. B1). Land use issues can also be a catalyst for establishing government to government relationships between local and tribal governments, as seen in Snohomish County where there is now regular interaction between the groups ("Briefly…," 2004, p. H4).

c. Taxes

Taxes are certainly an issue that drives some tribal and non-tribal government interaction. Since tribal lands are exempt from many forms of taxation how does this apply to lands tribes have more recently purchased? For example in Nebraska in 1998,

> …such land can be taxed unless Congress specifically says otherwise. The ruling is a victory for state and local governments seeking to protect their tax bases and a setback for tribes across the nation that have been using reservation-gambling revenues to rebuild their land base. State and local governments generally cannot tax reservation land owned by a tribe, but the Supreme Court previously has

> recognized an exception for on-reservation land not held in federal trust – land the tribe is free to sell without any restriction. Monday's decision fine-tuned that exception by narrowing it. (Blackwood, 1998, p. 5).

There are specific interactions regarding restaurant (Morain, 2001, p. 6), cigarette (Wack, 2003) and gas taxes ("Lawsuit Seeks Showdown…," 2006). In the case of cigarette taxes, these debates have become very heated. These tax issues can also be legally complex. For example in Wisconsin with regard to Oneida gas stations,

> Those gas stations and convenience stores outside the 32 acres had to pay property taxes. Yet, there is no mechanism for collecting those taxes from a sovereign nation, another court decreed.
>
> The Indian nation subsequently paid about $5 million to the city of Oneida, the equivalent of the property taxes it owed from 1988 to 2005, after signing a compact with the city. The nation offered similar deals to other jurisdictions. But Madison County couldn't abide the conditions offered in a compact, such as allowing the nation to have its own building codes on non-nation land, DiVeronica says. The county voted not to sign a compact with the tribe and has not received any "tax" money. (Perlman, 2007)

d. Environment and Infrastructure

Hand in hand with governance, interactions over land and taxes are interactions over the environment and infrastructure. Most of the articles in this area relate to water in one way or another. Most heated conflicts center on water rights claims. These conflicts appear to engage numerous participants as demonstrated by the Snake Basin water issue in which, at least "...two dozen local governments including cities, counties

and highway and school districts..” question the water rights of the Nez Perce[33] tribe (“Idaho Supremes Allow…”, 2004). Not only do water rights issues address who holds the right, but how much may be charged for utilization of the resource. In the Southwest many cities lease water rights from tribes. A study discussed a situation with the Catawba[34] tribe and Rock Hill, in which Rock Hill imposed an ‘impact fee’ after a water rate had been negotiated causing difficulty for the tribe as it already had contracts on the land (“Catawbas Sue…,” 2004). The second situation involved a tribe that was working towards building its own water treatment plant because it felt some tribal members would not be able to afford the city rates (“Brief News Stories…,” 2004).

Also, tied to water rights but in a bit of a different way are interactions over salmon. Two articles were found that discuss cooperative efforts between tribes and local governments over water issues tied to salmon (Barnard, 2004; “Agreement Signed to Remove…,” 2004). In the article regarding Port Angeles and the Lower Elwha Klallam[35], although overall interaction seemed cooperative, there was some disagreement between the city council and mayor on the topic (“Agreement Signed to Remove…,” 2004). Similar is a conflict between the Miccosukee[36] tribe and South Florida Water Management District. The tribe has sued the District over water pollution that is impacting the Everglades (Carlson, 2004).

Another sub-area of interaction with regards to the environment and infrastructure is environmental impact statements (ex. Mueller, 2004). Similar to this are articles on environmental issues (also see Brown, 2004, p. A14; Wetzel, 2004). Finally, in an article

[33] Idaho
[34] South Carolina
[35] Washington
[36] Florida

on Ponca[37] tribe and Kay County and Osage County, we see a tribal and local government working in cooperation for the benefit of the local community to build a bridge ("Tribe, Two Counties…," 2004). Another example that demonstrates this type of cooperation is "The Northwoods NiiJii Enterprise Community, inc. (NNEC, Inc.)" which consists of tribal and non-tribal communities in Wisconsin that have joined together for economic development purposes (Thompson, 2003). Although examples of infrastructure related interactions were minimal, one might wonder if this is an example of: "The fights often go unnoticed because they are important only to the Indians waging them or to their immediate neighbors (Kimberly, 2000, p. 1)." This suggests that interactions with a limited number of actors may receive less attention than other interactions. Maybe not only do the "fights" go unnoticed, but even less noticed are the cooperative engagements for infrastructure improvement that lack sensationalism. Given the closing of the gap between tribal and non-tribal lands, these interactions may no longer continue to go unnoticed (Miller, 2004, p. A17).

e. Cultural Resources

Another rich area of interaction often lost in larger struggles and negotiations over land use is that of cultural resources, often but not always embedded in land use issues. At the root of some of these interactions are required permits with reference to the archaeological significance of the land under development. When these permits are not sought, struggles erupt such as the case in Cumberland, Rhode Island. The council approved a walking trail without having the appropriate archaeological assessments and permits filed, upsetting the tribe because of the possible disturbance to tribal artifacts on the land (Lewis, 2004). This threat to cultural artifact preservation is even greater at the

[37] Nebraska

individual level, when counties often do not require individuals to seek such permits (Fausset, 2001, p. 4). Tribes may fight back with lawsuits (Leventis, 2004, p. B01; Whitehead, 2003), but not all cases are conflictual. The St. Charles Parish changed its development plan to protect possible cultural artifacts of the Chitimacha[38] (Swerczek, 2003, p. 1). Another good example is found in Boulder, Colorado where the city has given tribes power over cultural artifacts when found on "city open space" (Good, 2002, p. 25A). Although many of these issues are predominantly land related, other issues exist as well. For example, there was a movement to rename "Andrew Jackson Highway" because it offended tribes (Griffin, 2001, p. A10).

III. Tribal/Local Government Relations Survey

In an attempt to better illuminate the above relations a survey (Appendix A) was sent out to a sample of tribes and local governments from the literature fore-mentioned.

The sample for this research was gathered through the above referenced review of the literature which included searches of Lexis-Nexis and Internet searches on key words such as American Indian, Tribal, City, County and Local Government spanning approximately the past 7 years altogether that eventually yielded the original sample for this work. A supplemental sample was constructed using a similar search only on more recent dates, since the time since the research had originated spanned almost 2 years. Overall more than 120 cases of tribal local government interaction were uncovered.

The initial goal for the sample was a total of 50 pairs of tribal-local governments interacting over a specific situation or issue were collected through a literature review from newspapers, journals and Internet news sources. With duplicates removed this

[38] Louisiana

endeavor actually resulted in 34 tribes and 46 local governments including counties, cities and towns in the original sample. After duplicates were removed the secondary sample included an additional 20 tribes and 29 local governments. The disproportionate number of local government is a result of tribes interacting with more than one local government. Methodologically this sample would be described as a non-probability purposive sample. The goal here was to create an inclusive heterogeneity sample of the span of tribal-local government interaction and not to generate a random sample supportive of probability methodologies. This sample was used to create an outline of tribal-local government interaction that summarized the situations and types of interactions that occur given the situation lending itself to identifying for future research a sub sample meeting a proportional quota of the original sample as identified in the above section. Given the methodology used there was an over sampling of gaming interactions, as gaming interactions are often more likely to find themselves sensationalized in the media. This is in contrast to interactions over social services or general community functions.

Those cases identified in the above sample were approached with a survey (Appendix A)[39] that addressed the questions to be answered in this dissertation and provided greater detail of the interaction(s) over the specified situation or issue suggested by the literature. [40] The first deployment of the survey was as follows:

1) Initial contact with Tribal or Local Government's most senior official (Chief, Mayor and/or Administrator) via email or phone requesting their participation in study.

[39] Note the survey directions varied slightly given the method of completion.
[40] Since contacts in this survey will be appointed or elected government officials it is therefore exempt from the human subjects review process. Appropriate paperwork is on file with the Internal Review Board at UMSL.

2) Present three methods of survey completion: online, mail or via telephone.
3) Given the preferred method of participation administer the survey.
4) Make follow-up contact via email method if available at least once more over a period of 30 days and one phone attempt for those groups without email.

Once a contact agreed to participate the survey was delivered according to the method requested:

- Online/Email Survey
    - Email link to survey to appropriate individual as ascertained by initial contact.
- Mail Survey
    - Use US mail to deliver the Survey and return envelopes.
- Phone Survey
    - Mail or email survey for review then contact appropriate individual to complete survey over telephone.

In the first survey effort only 1 person requested a mail survey and 1 person requested an emailed version of the survey. Neither of these respondents returned a completed survey. Thus, in the second survey effort the process was simplified with a request to complete on online survey with the link directly to the survey embedded and simplified instructions. Emails for tribes and local governments were found using telephone, internet and the BIA tribal leaders directory. An option for alternative completion was given but again those requesting alternative options yielded limited results. Two people requested phone interviews, of which one was completed. One person requested an email

survey but did not return it. Three email attempts were made. Respondents were given the option to indicate a desire for confidentiality.

The Survey engine used to collect the online version of the survey was TestPilot. This software produces a CSV file, which was transferred to a Microsoft Excel/Access and Stata for initial analysis. The limited phone interviews did not follow the survey questionnaire perfectly so was not included in these results.

This data is examined using basic descriptive measures including textual description, summary counts, means, modes and medians. Of the more than 129 surveys sent out via email, phone and mail there were only 15 responses directly to the survey. There was one phone interview and 2 generic responses. Thus the survey resulted in a response rate of 14%. One local government responded twice. Of those that responded to the survey 9 were local governments and 5 were tribal governments. Twelve of these responses stemmed from the first survey attempt and only 3 from the second. These responses span the time frame of October 2004 to March of 2005. Although the responses were limited, they bear noting given the consensus reached in some of the responses.

Table 6: Government Type

Please describe your governance structure

	Total
American Indian nation government	5
Non-American Indian government	9
	14

The interactions covered by those who responded to the survey included judicial authority, taxes, land, economic development, social services and joint infrastructure related activities. More often these interactions were simply an information exchange.

Half or more involved negotiations, agreements and disputes. Less than a quarter involved lawsuits or an exchange of goods. More than half indicated these interactions were ongoing and of those almost half indicated they had been interacting for 6 or more years. Half of the respondents indicated the interaction was cooperative and three quarters of the respondents indicated there was some level of conflict involved. None of the respondents felt that the impact from the interaction was one sided. All indicated either both benefited or neither benefited. The question referencing negative consequences also followed this pattern.

Table 7: Interaction as a Whole

What type of interactions did this situation or issue involved? (Check all that apply)

Information Exchange	Total
No	1
Yes	13
	14
Negotiations	Total
No	5
Yes	9
	14
Agreements	Total
No	5
Yes	9
	14
Disputes	Total
No	7
Yes	7
	14
Lawsuits	Total
No	11
Yes	3
	14
Exchange of Goods	Total
No	12
Yes	2
	14
Other	Total
No	10
Yes	4
	14

What was the approximate length of this situation or issue from start to finish. Meaning not just an independent phone call, but the overall process of interacting regarding the specific situation or issue?

	Total.
No Answer	1
Less than 1 year	4
1-3 years	0
4-5 years	0
6+ years	0
ongoing	9
	14

If you describe the situation or issue as ongoing, please indicate for how long interactions regarding this have been occurring:

	Total.
No Answer	4
Less than 1 year	0
1-3 years	2
4-5 years	2
6+ years	6
	14

How often does your government interact with the corresponding government?

	Total.
No Answer	1
Frequently	6
Often, but would not say frequently.	5
Not very often.	2
Almost never	0
	14

How cooperative was the interaction(s) regarding the specific situation or issue?

	Total
No Answer	5
Very Cooperative	4
Somewhat Cooperative	4
Not very Cooperative	1
Not at all Cooperative	0
	14

Who benefited from the results of the interaction(s) over the specific situation or issue?

	Total
No Answer	2
Local Non-American Indian Community Benefited	0
American Indian Community Benefited	0
Both Benefited	8
Neither Benefited	4
	14

How much conflict was there during the interactions over the specific situation or issue?

	Total
No Answer	2
Quite a bit of Conflict	2
Some Conflict	6
Not very much Conflict	1
No Conflict	3
	14

Where there negative affects of the interaction(s)?

	Total
No Answer	4
Yes, negative effects on the Local Government's Non-tribal Community.	
Yes, negative effects on the Tribal Community.	
Yes, negative effects on both the Local Government's Non-tribal Community and Tribal Community.	4
No, no negative effects on either community.	6
	14

Of those who indicated they had experienced governmental changes in the past 5-10 years all but one felt these changes were positive. Four of the 7 those who responded to the question "Do you feel these changes have affected your government's interaction with the corresponding government?" felt that government changes did indeed impact their interactions.

Table 8: Government Factors

Has your government structure changed in the past 5-10 years?

	Total
No	7
Yes	7
	14

How recently has it changed?

	Total
No Answer	6
Within the past year.	1
1-5 years ago.	6
5 or more years ago.	1
	14

Would you define these changes as_____ for the government as a whole?

	Total
No Answer	7
Positive	5
Negative	1
Both	1
	14

Do you feel these changes have affected your government's interaction with the corresponding government?

	Total
No Answer	7
No	3
Yes	4
	14

Most of the responding governments (8 out of 12) indicated the economic circumstances in their government were different from the government with which they had interaction. Of these 6 indicated they felt these differences impacted their interactions. Ten of the 14 governments indicated the economic circumstances in their government had changed in the past 5-10 years. Seven of the 10 governments experiencing these changes felt they impacted their interactions.

Table 9: Economic Factors

Are the economic circumstances in your government similar or different to the economic circumstance in the corresponding government?

	Total
No Answer	2
Similar	4
Different	8
	14

Do you feel this similarity or difference has impacted your government's specified interaction with the corresponding government?

	Total
No Answer	3
No	5
Yes	6
	14

Does your government have more influence over economic resources, does the corresponding government have more influence over them, or do they each have about the same influence?

	Total
No Answer	3
Corresponding government has more influence over economic resources.	4
My government has more influence over economic resources.	5
Each has about the same amount of influence.	2
	14

Has the economic circumstances of your government changed in the past 5-10 years? Examples: Additional tax revenues assessed, decrease in tax base, isolation of other revenues, etc.

	Total
No	4
Yes	10
	14

Do you think these changes have effected your government's interaction with the corresponding government?

	Total
No Answer	4
No	3
Yes	7
	14

Have you noted any changes in the corresponding government's economic circumstances in the past 5-10 years?

	Total
No Answer	2
No	4
Yes	8
	14

For most of the respondents interaction with the corresponding government was not a new phenomenon (9 out of 13). All but one of the 13 governments felt that past interactions influenced current interactions. Almost half indicated the interaction referenced gaming.

Table 10: Historic Interaction

Has your government interacted with the corresponding government prior to the specified interaction(s)?

	Total
No Answer	1
No	4
Yes	9
	14

Were these interactions regarding:

Gaming	Total
No	8
Yes	6
	14

Land Purchase/Development/Use	Total
No	4
Yes	10
	14

Environment/Utilities	Total
No	8
Yes	6
	14

Political/Jurisdictional	Total
No	8
Yes	6
	14

Social Services	Total
No	9
Yes	5
	14

Archaeology/Cultural Resources	Total
No	9
Yes	5
	14

Other	Total
No	12
Yes	2

Do you believe your government's past interactions with the corresponding government have influenced the corresponding government's interaction over the specified situation or issue?

	Total
No Answer	3
No	1
Yes	10
	14

When asking the question "Do you feel your community and the corresponding government's community share similar worldviews and values as they live their daily lives?" responses were fairly equally distributed across the spectrum. The only response not noted was that they were "Very Different", meaning that all of the governments felt there was some cultural similarity. All of the governments felt that these similarities and differences had some impact on the interactions with more than half of those responding indicating these similarities and differences strongly impacted their interactions.

Table 11: Culture

Do you feel your community and the corresponding government's community share similar worldviews and values as they live their daily lives?

	Total
No Answer	4
Very Similar	3
Somewhat Similar	4
Not Very Similar	3
Very Different	0
	14

Do you feel these similarities (differences) have impacted the pairs interactions?

	Total
No Answer	4
Strongly impacted interactions	6
Moderate impact on interactions	2
Minimal impact on interactions	2
No impact on interactions	0
	14

Given the limited response rate there were very few areas in which there were notable differences in the responses given government type. One distinction, only half

of local governments indicated the interaction was ongoing, but all tribal governments indicated the interaction was ongoing. Also, local government more often indicated changes in economic circumstances in the past 5-10 years when compared to tribes. Local governments more often indicated the interaction was "Very Cooperative" and also that there was "Quite a bit of Conflict". It is clear from the literature and survey that tribes and local governments do indeed interact and have the potential to impact each other's community and that these interactions frequently reference gaming.

IV. Evidence from Gaming Related Tribal-Local Government Relations

Clearly, tribes and non-tribal communities interact as we have established so far in this chapter. Next, we explore how they interact with regard to gaming. Interactions between tribes and local governments with reference to gaming are most often found in newspapers and internet searches. There were 52 articles about gaming related tribal-local government interaction. Most of the articles discussing relations over gaming between tribal and non-tribal communities focus on casino development. Of those articles, 20 reflected cooperation, 17 reflect conflict and 5 could be considered neutral. The articles discuss casino development in 10 states. Most articles on tribal/non-tribal government cooperation center on approvals for gaming plans and financial arrangements between local governments and tribes. These negotiations and arrangements find the root in the Indian Gaming and Regulatory Act, which requires tribes to seek a state compact before proceeding with gaming ventures. These compacts may require local level agreements or compensation.

Approvals for gaming plans can include formal agreements and negotiations as seen in the case of the Agua Caliente Band of Cahuilla Indians[41] and Palm Springs, where tribes received land use approval from the city's planning commission ("Panel Approves Tribe's…," 2004). These negotiated agreements can also include things such as blessings, informal approvals and, as one article calls it, a "memorandum of understanding" ("Park City Pursuing...," 2004). These are cases when the tribe received what appears to often be informal approval to go forward with approaching the state for a compact or general casino plans. In cases such as Park City and Orangeburg, the local government perceived economic benefit for their community and thus supported the tribe's pursuit (Dys, 2003, p. 1B). In fact, City's may actually compete over the location of a tribal casino as is the case in New Bedford and Middleboro[42] (Maguire, 2007). These cases of cooperative effort not only occur under mandates such as those dictated by tribal-state compacts, but also through agreements as demonstrated by two of the other groups. In the case of the Los Coyotes[43] and Barstow, although the tribe faced no requirements for city approval, they worked together voluntarily (Donovan, 2003). Finally, the Viejas[44] tribe and the city of Del Mar took cooperation to the full extent by forming a partnership to negotiate with a casino enterprise (Christine, 2004, p. 10). It is important to note that these partnerships not only encompass tribes and the local governments, but may include the state (deFiebre, 2001, p. 5B). Cooperative agreements between tribes and local governments may be focused primarily on financial compensation. The tribe compensates the local government because of gaming

[41] California
[42] Massachusetts
[43] California
[44] California

operations. For example, the Puyallup[45] tribe agreed to contribute $ 1 million annually to the city of Fife (Tucker, 2004, p. B01). Tribes may be strategic in pursuing cooperation, as well. Wisconsin tribes chose to pursue agreement with counties before, rather than going town to town (Jones, 2000, p. 01A).

Conflict often stems from issues of tribal sovereign immunity, the exclusion of lands from local regulations, gaming externalities and finally conflict between different tribes. Sovereign immunity is something that often poses an issue for local authorities as seen in the case of the Cherokee Nation of Oklahoma negotiations with the Oklahoma Horse Racing commission (Bellamy, 2004). Before agreeing to approve the Cherokee license request, the commission asked them to forgo their sovereign immunity and face the same risks as a private business would in such an activity. Tribal sovereign status is often at the source of conflict over land regulation in acquisition and land control. Many tribes are located in relatively remote areas not suitable for gaming operations, so they seek land outside their reservation lands. If the lands they acquire are placed into trust, they are removed from the authority of local governments. Local governments may attempt to solidify these relations inside the state level gaming compact, allowing them to maintain some level of control. In cases where this hasn't been accomplished local governments have resorted to tactics such as blocking building permits or denying utilities. San Diego took the approach of denying building permits. Although the county could not control the tribe, they could control the non-tribal contractors building on the tribal lands and did just that preventing the contractors from receiving the needed permits to begin construction. (Barfield, 2000, p. A-1) In Florence, Oregon they took the approach of denying utilities as a way of exerting some control ("City, Tribe Reopen

[45] Washington

Talks," 2003). The issue of off-reservation has become increasing salient. Gaming on lands acquired after the passing of Title 25 are restricted from gaming use unless they meet "exceptions". These exceptions include:

1. contiguous to or within reservation boundaries
2. acquired after the SOI determines acquisition to be in the best interest of the tribe and not detrimental to the local community and the governor of the state concurs
3. acquired for tribes that had no reservation on the date of enactment of IGRA
4. acquired as part of a land claim settlement
5. acquired as part of an initial reservation for a newly recognized tribe
6. acquired as part of the restoration of lands for a tribe restored to federal recognition

(Murphy, 2006)

Efforts to restrict these exceptions met no success in the 109th Congress ("Interior Department Wary…," 2007).

Another potent area of conflict involves real or perceived gaming externalities. First, tied directly to the above discussion of land acquisition is the choice of location for a gaming operation. Tribes and local governments do not always agree on where best to locate a gaming operation. For example, the city of Buffalo, New York wanted to see the Senecas[46] build a casino in the city where economic growth is needed, but the tribe intended to build its casino in a suburban area (Thompson, 2004). Further, issues of infrastructure impacts, environmental impacts and crime bring about tension when the governments fail to see eye to eye (Green, 2001, p. B1; Kelley, 2001, p. 1).

[46] New York

Finally, if conflicts between tribes and local governments were not enough, tribes also face conflict from fellow tribes who sense unwanted competition ("Deck Stacked Against…," 2004). This would include a situation in which the Golden Hill Paugussetts[47] and the Schaghiticokes[48], both "courted" the city of Bridgeport in an effort to win support for casino developments (Cummings, 2004).

Tribal/non-tribal government interaction over gaming can focus on management and impact of the casino operations. Management issues can be jurisdictional, as, for example, in Inyo County which county overstepped its bounds by searching casino payroll records (Egelko, 2002, p. A18). The higher court ruling supported the tribe's right to self governance and restricted jurisdiction of counties on tribal lands.

Positive impacts from gaming operations most often include financial contributions to local governments, socioeconomic impacts such as declining unemployment to sizeable renovations in struggling towns. Direct contributions are usually large such as the Coushatta[49] tribe "… is expected to contribute 7 million annually…(Maggi, 2001, p. 1)." Not only do these revenues go directly to cities and counties, but in some cases find their way to schools and community groups ("Tulalip Tribes Give…," 2000, p. B3; "American Indian Tribe Pays…," 2003). Finally, cities like Crescent City, California experienced overwhelming renovation and economic restoration as the result of tribal gaming revenues (Gelfand, 2003, p. 24).

There are plenty of conflicts over gaming impacts. These may be over infrastructure needs that are lacking such as road changes or from overall environmental

[47] Connecticut, note this Tribe was denied federal recognition and denied it's land claims in December 2006 (Toensing, 2006).
[48] The Schaghticokes received federal recognition then had it repealed upon an appeal from the State ("Schaghticokes Deserve Recognition", 2005)
[49] Texas

impacts such as traffic or noise (DeArmond & Gaudette, 2003, p. A01). Not only are there direct conflicts regarding those types of impacts with local communities, but both tribes and local communities appear to walk a think line legally and politically. Changes in administrations can alter the climate for these arrangements (Precious, 2001, p. A1).

V. Socio-Economic Impact

Many studies of casino gaming suggest that gaming operations do indeed have a fiscal and economic impact in non-Indian communities (Eadington, 1998: 187). Some would even argue that it is a negative economic impact (Gazel, 1998: 83). The social impacts however, are often a bit less clear. Amidst the numerous socioeconomic studies related to Indian gaming there are three predominant literature sources on the socioeconomic impact of Indian gaming on non-Indian communities.

First, in "The Social and Economic Impact of Native American Casinos", Julie H. Topoleski found that there were negative and positive effects on counties with and near (within a 50 mile radius) Indian gaming operations. Positive effects included increased job growth and decreased mortality. Job growth in counties with gaming was influenced by time, "...the fourth year, we estimate a statistically significant increase in the jobs/adult ratio of 0.021, which is about 3.8 percent of the median value…" and geographic distance to the casino played a roles as well "...is a smaller increase in employment of three percent for counties within 50 miles of casinos (Topoleski, 2003, p. 88)." Mortality rates fell 2.3 percent 4 years after the casino opening (Topoleski, 2003, p. 90).

Negative effects included an increase in bankruptcy and crime. Topoleski found, "Four years after a casino opens, bankruptcy rates are up 10 percent in counties with a

casino and seven percent in counties within 50 miles of a casino (Topoleski, 2003, p. 89)." The impact on crime appears relatively complex and is affected by both time since opening and geography:

> Looking separately at the eight broad categories of crime in the UCR, we find that there are no significant changes in murders, assaults, or arsons per 100,000 people for either casino counties or counties within 50 miles of a casino. Casino counties saw a 12 percent increase in motor vehicle theft by four or more years after a casino opens, and counties within 20 miles saw a smaller, 6 percent increase, but this increase is only statistically significant at the 10 percent level. Larceny per 100,000 people increased by 7 percent four or more years after opening in casino counties, but for counties within 50 miles of an Indian casino, there is no significant change in the larceny rate. Rapes per 100,000 increased by a statistically significant 15 percent in casino counties, but there is no increase for counties within 50 miles. Interestingly, the burglary rate decreases for both counties with and within 50 miles of a casino. The decrease is 4 percent for casino counties, but this decrease is not statistically significant. For counties within 50 miles, there is a statistically significant 6 percent decrease. These decreases may suggest that 92 people are turning to crime less as their employment prospects improve. The change in robberies per 100,000 is not statistically significant for casino counties four or more after opening, but earlier years show significant increases. For counties within 50 miles of a casino, robberies increased by 24 percent, but this is significant at only the 10 percent level. (Topoleski, 2003, pp. 91-92)

Second, in "The National Evidence on the Socioeconomic Impacts of American Indian gaming on Non-Indian communities", J.B. Taylor, M.B. Krepps and P. Wang found an increased positive impact (including an increase in local government earnings) in areas with Indian casinos as compared to those with non-Indian casinos. The authors argue that this can be attributed to the existing environment where Indian gaming operations are located. "Further analysis reveals that this effect is driven by the fact that Indian casinos are more likely to be located in relatively economically depressed areas displaying lower average incomes prior to casino introduction (Taylor et al., 2000, p. 2)." This study used a "…dataset constructed by the National Opinion Research Center (NORC) at the University of Chicago on behalf of the National Gambling Impact Study Commission (NGISC) (Gerstein, Volberg, Harwood, and Christansen, 1999) (as cited in Taylor et al., 2000, p. 6)."

> Gerstein et al., were commissioned by the NGISC to undertake an analysis of 100 communities across the country over the period 1980-1997 to uncover any systematic relationships between the introduction of a nearby casino and various social and economic indicators (NGISC, 1997). They gathered a random sample of 100 communities, of which 40 saw a casino introduced within 50 miles by the end of the period,[10] and then tested the association of a casino introduction with the movement of 32 measures of social and economic status. (Taylor et al., 2000, p. 13)

One interesting finding from the Gerstein et al. study, relative to this thesis, is that there is a slight decline in local government employment in these communities (Taylor et al., 2000, pp. 14-15). Taylor et al. found that, "On the other hand, local government earnings

decline by 4% for casinos generally; however, they rise by 6% in communities where proximate Indian casinos are introduced (Taylor et al., 2000, p. 27)."

Third, in "Opinions of Cities and Counties on the Impact of Gambling Casinos on Their Communities", McCormack, P & Reed, G. found that respondents to their survey felt that the casinos had a positive effect on the community in the areas of jobs and tourism. On the flip side, respondents also felt that there were negative effects such as increases in crime and traffic (McCormack et al., 1997, p. 3).

From these three studies, it is clear there is some perceived impact in the non-Indian community. All of these show positive impacts and two of these studies suggest evidence of a negative impact.

VI. Fiscal Impact

The studies examining the socio-economic impact of Indian gaming may or may not support revenue sharing agreements. To date the literature on the fiscal impacts of Indian gaming operations on non-Indian governments has been relatively limited.[50] Arguments for public sector impacts from private sector activities though, are not new. Like the studies focused on other developments one could debate that Indian gaming has the potential to impact its host community and adjacent community by spurring job growth as well as detract from these communities by drawing resources from other areas (zero sum arguments). Numerous studies have been done examining everything from the impact of stadium developments to that of high-rise apartment complexes. Whether or not these types of developments bring benefit to the host community or communities adjacent to them can be debated according to which research one subscribes. For

[50] One specific argument made by Anders in 1998 is that, "For example, since Indian Casinos do not pay taxes, lost tax revenue may have stimulated some state legislatures to legalize riverboats that can be taxed (Anders, 1998: 105)".

example, a study of the Brooklyn Arena/High Rise development project suggested that although initial claims indicated a gain of $812.7 million to the state and local governments, the authors thought that this would actually be a loss of $506 million (Kim & Peebles, 2004, pp. iii-iv).

In addition to the findings of Gerstein et al. (1999) and Taylor et al. (2000), one of the few scholarly references found regarding the fiscal impact of gaming, focused on non-Indian gaming in Mississippi. In *Resorting to Casinos*, Edward J. Clynch et al. examines the impact of casinos on local expenditures in, "The Impact of Casino Gambling on Municipal Revenue, Expenditures and Fiscal Health". These authors theorize that casino revenues stabilize or decline and the size of casino industry matters; that there are positive impacts on public works, capital expenditures, public safety expenditures, reserve funds and non-essential services; and negative effects on millage rates and long term debt (Herrmann, 2006, pp. 86-89). Their theory on the stabilization/decline of casino revenues is based on the similar pattern with regard to lottery revenues (Herrmann, 2006, p. 83). They theorize an impact on public works, capital expenditures, reserve funds and non-essential services under the premise that given the unpredictability of casino revenues local governments will be hesitant to use these resources for reoccurring budget items (Herrmann, 2006, p. 84). They find evidence in their data to support all of these theories except that regarding long term debt (91-97). They also found that the stabilization/decline of revenues argument did not fare as well in areas with a larger casino market, where revenues continue to grow (Herrmann, 2006, p. 91). In addition these authors suggest that those poorer communities may be willing to take more of a gamble in their reliance on casino revenues (Herrmann, 2006, p.

82) and that "...over-saturation of casinos in a market can lead to decreasing revenues for municipalities in which the original, sometimes larger casinos were built (Herrmann, 2006, p. 83)." It's notable that in Mississippi revenues are distributed in accordance to the Mississippi Gaming Control Act (Herrmann, 2006, p. 85) and that the Choctaw gaming operations were excluded from this study since they are not under these regulations (Herrmann, 2006, p. 99). The authors do reference the New York Empire Opportunity Fund, "In the state of New York taxes on Indian casinos support at least 50 percent of the Empire Opportunity Fund that supports project grants to municipalities and non profit agencies to spur economic development (Odato 2002) (as cited in Herrmann, 2006, p. 84)."

Beyond this, the impact may very well vary given how reliant a local government is on particular revenues streams. For example in Oklahoma where communities are very reliant on sales taxes, when tribes pursue activities such as gaming that distract from other taxable activities there may be a stronger impact (Collard, 2006b).

Sources of information on the fiscal impact of Indian gaming are most often found in broader economic impact studies and newspaper articles. These broader economic impact studies exist on two levels: national reports and tribe specific reports. The first of these broader, national-level reports is the National Gambling Impact Study Commission Report produced in 1999. Chapter 6 of this report is specifically dedicated to Indian gaming and has a section on Local Community Impacts. Here, the authors discuss the various Indian gaming related issues with regard to local communities. These include resource sharing, social and economic impacts. The report briefly touches on the potential fiscal impact with a reference from Supervisor Dianne Jacob of San Diego,

California regarding the government's law enforcement costs (National Gambling Impact, 1999, pp. 6-13 to 6-14). The second report of this nature is the National Indian Gaming Association's annual (biennial 1998-2000) report, the most recent being, "An Analysis of the Economic Impact of Indian Gaming in 2004". This report is more specific and indicates that Indian gaming generated "...an additional $100 million in local taxes and revenue through increased sales and other taxes and governmental services agreements (National Indian Gaming Association, 2004, p. 11)".[51] In addition, this report indicates that 553,000 jobs have been created that could have some impact on local government finances, especially considering the rural nature of most Indian gaming operations (National Indian Gaming Association, 2004, p. 10). Finally, the Analysis Group's semi-annual report titled, "Casino City's[52] Indian Gaming Industry Report", details many of the economic and fiscal aspects of Indian gaming. It also indicates, "…report estimates Indian gambling directly and indirectly contributed $19.4 billion in wages nationally, 539,000 jobs, $6.2 billion in tax revenue and additional revenue sharing with governments of $900 million. He estimates total economic output from the industry at $52.3 billion (Stearns, 2005)."

In addition to these broader, national level reports there are numerous economic impact analyses done for specific tribes and local communities. These reports use a variety of models to measure and look at impact from the following perspectives:

1. Predictive vs. post development
2. Longevity of impact (impact from operation development and impact from continuing operations)

[51] Taxation of Indian gaming directly varies depending on whether or not the tribe is "incorporated" and what type of "incorporation has occurred (Internal Revenue Service).
[52] Casino City is not a place.

3. Level of impact (Federal, State and Local)
4. Magnitude of impact
5. Direction of impact (positive/negative)[53]
6. Impact area

These reports as a whole most often attributed fiscal impact to three sources: increased tax revenue, decreased social service needs and direct contribution from the tribes.

1. In Arizona, economic impact analysis of Indian gaming suggests, "state and local governments reap $40 million in tax collections" (Cornell & Taylor, 2001, p. 8).

2. A study examining the economic impact of the Grande Casinos at Mille Lacs[54] and Grand Casino Hinckley found that in the counties near the casino (Reeves, 1996):

- No major cost increases for counties (Reeves, 1996, p. 7)
- Net tax capacity increased at a greater rate than the state as a whole (Reeves, 1996, p. 7)
- Property tax capacity has increased (Reeves, 1996, p. 10-11)
- Did not financially impacted police services, since the casino offsets additional burden (Reeves, 1996, p. 19-20)

3. A study looking at the economic impact of Indian gaming on metropolitan Green Bay found (Alesch, 1997):

[53] No negative impacts have been found in these reports. One interesting study reviewed, however, that demonstrated a negative impact was The Economic and Social Impacts of NIMBYs (Rephann, 1996). He found that casinos were "deadbeats" (9) which is "Deadbeats don't pay the full cost of their infrastructure and public service needs. They leave others in the area footing part of the bill. This situation may arise when NIMBYs receive substantial relocation subsidies or do not compensate the community for facility externalities that increase public service expenditures (3)."

[54] Minnesota

- No local government burden from Tribal land acquisition efforts, although continued land acquisition poses concern for local communities(Alesch, 1997, p. 21)
- Evidence of tribal services, contracts for services and direct contributions to local government offsetting externality costs (Alesch, 1997, p. 21-22)

4. In Oregon an economic impact study looking at the impact of the "...Chinook Winds Casino and Convention Center on Lincoln City" found (Econorthwest, 1999):

- "ECONorthwest concludes that because of Chinook Winds, the Government of Lincoln City received $675,055 in additional revenues and spent an additional $318,233 in fiscal year 1998/99. The fiscal impact on the City Government was a net benefit of $356,822 in fiscal 1998/99 (Econorthwest, 1999, p. 38)."

5. In Texas a 'prospective' study of the impact of Indian gaming found an expected yearly increase of local revenues of at least $9.6 million (Perryman Group, 2003, p. 18).

In a study examining the impact in New Mexico, the findings suggest that people's spending habits change incrementally with the number of Indian casinos, having the ability to impact sales taxes (Popp & Stehwien, 2002, pp. 320-330). This study also establishes the effect of Indian casinos on neighboring counties:

> Besides the effects on the host county, the presence of casinos can have an affect on neighboring counties. This is particularly true because most of the casinos are located on the border of the home county and the most populated neighboring county. The casinos will draw individuals from the neighboring county as the individuals substitute away from goods and services generating taxable gross receipts in the residence county toward gaming in the non residence county. The value of the

> coefficient associated with the first casino opening in a neighboring county,*Dnc*1, is negative, indicating a 1.3% decrease in the generation of taxable gross receipts. The sign of the coefficient associated with the second casino opening in a neighboring county, *Dnc*2, is positive, indicating a 3.5% increase in the generation of taxable gross receipts. This could be explained by the fact that individuals visit the more populated county to visit and spend time in multiple casinos and also spend on other goods and services that are taxable. (Popp & Stehwien, 2002, p. 328)

Beyond these more formal studies the literature review on tribal-local government relations yielded additional examples of both potential and actual fiscal impact. For example, a casino in Lenwood, CA was estimated to possibly generate $1 million a year in bed taxes (Donovan, 2003)". Another study of the potential impact from the Catawba's operation estimated "..$5 million in new individual income and sales tax revenues… (Hendren, n.d.)." A deal with the Chippewa tribe was argued to add "..at least $70 million to local tax rolls…(Lisheron, 1999, p. 1).

All the literature reviewed gives some indication of fiscal impact. What remains in question is the magnitude of impact and to what degree any negative impacts are mitigated by the positive effect of Indian gaming.

VII. Impact Mitigation

The literature on impact mitigation for fiscal impacts from Indian gaming operations is relatively limited. This is most likely due to the relative newness of this phenomenon. IGRA stipulates that:

> (4) Except for any assessments that may be agreed to under paragraph (3)(C)(iii) of this subsection, nothing in this section shall be interpreted as conferring upon a

> State or any of its political subdivisions authority to impose any tax, fee, charge, or other assessment upon an Indian tribe or upon any other person or entity authorized by an Indian tribe to engage in a class III activity. No State may refuse to enter into the negotiations described in paragraph (3)(A) based upon the lack of authority in such State, or its political subdivisions, to impose such a tax, fee, charge, or other assessment. (Title 25, Chapter 29, Section 2710)

Until the Seminole Tribe vs. the State of Florida (1996) case few revenue sharing agreements were included in state-tribal compacts. However, with this case, tribe's lost their ability to sue states for failing to negotiate in good faith (Lent, 2003, p. 1). Since this time states have gained more latitude in negotiating revenue sharing agreements as a part of the state-tribal compact process. The Interior Department has approved these compacts under the premise that states give tribes "exclusivity" in their gaming rights in exchange for revenue sharing (Lent, 2003, p. 1). According to Eric Lent in "Are states beating the house? The validity of tribal-state revenue sharing under the Indian Gaming Regulatory Act":

> While IGRA prohibits states from levying taxes or fees on tribal gaming, the Department of the Interior has nonetheless approved some gaming compacts that contain revenue sharing provisions. The Department stresses, however, that it will only approve revenue sharing compacts that provide substantial exclusivity for Indian gaming in the state. This seemingly contradictory policy is justified on the ground that tribal payments for exclusivity rights are a function of the tribes' sovereign authority as governments. Tribes have the sovereign authority to make business decisions to pay for something of value, and the Department views the

> right to exclusive gaming as an asset for which tribes may agree to pay with revenue sharing. IGRA, it is argued, does not strip tribes of their right as sovereigns to make business decisions, and paying for exclusivity is one such decision. (Lent, 2003, p. 9)

As can be interpreted from this, this is an area ripe with potential debate as to the validity of these arrangements. Another author, Richard L. Skeen, elaborates on this debate in *Tribal-State Gaming Compacts and Revenue Sharing Provisions: Are States Upping the Ante?* (Skeen, 2006). Regardless of this debate, we can examine examples of formal revenue sharing such as those embedded in tribal-state compacts and those directly developed between tribes and municipal governments such as 'Memoranda of Understanding'. Then there are less formal revenue sharing agreements as well including voluntary contributions/support from tribes to local governments.

Official government to government revenue sharing occurs or has occurred at all levels of government in the U.S. Revenue sharing at the federal level emerged from 1972 to 1987 under the State and Local Fiscal Assistance Act of 1972 (North Dakota Legislative Council, 2003) and continues in block grants today. Revenue sharing continues to prevail between federal/state and local governments with a significant portion of most local government revenue coming from state and federal aid (Table 12). And now a third source of revenue has come to the scene, tribal revenue sharing.

Table 12: Percent of Revenues and Expenditures by Category

	1982		2002	
	Non-Gaming	Gaming	Non-Gaming	Gaming
Sales Tax	1.77%	1.38%	3.51%	2.67%
State IGR	29.18%	34.28%	35.08%	37.64%
Property Tax	30.30%	27.16%	24.45%	23.76%
Capital Outlays	14.59%	13.36%	12.24%	12.76%
Construction Exp.	10.82%	9.41%	7.05%	7.76%
Highway Exp.	10.44%	11.09%	7.51%	9.42%
Welfare Exp.	1.96%	3.43%	2.09%	2.99%
Police Exp.	2.94%	2.90%	3.43%	3.41%

Formalized revenue sharing agreements between local governments and tribes appear to be relatively new, also, according to Meister's report, with most agreements appearing post 2000 (Meister, 2006, pp. 28-33). Revenue sharing or intergovernmental transfer agreements found in compacts may or may not include revenue sharing with local communities. Two examples of those that do include local communities are Arizona (12% of total revenue collected by the state from revenue sharing agreement) (Meister, 2006, p. 28) and Michigan ("Tribes share 2 percent of gaming revenue from Class III machines with local municipalities (Meister, 2006, p. 29)"). In addition to revenue sharing agreements formalized in state-tribal compacts, there are revenue sharing agreements found in "memorandums of understanding" (Indian Gaming MOU, n.d.) and more informal agreements directly negotiated between tribes and municipal governments.

The following outlines examples of revenue sharing or intergovernmental transfers between tribes, states and municipal governments as found in a review of two state-tribal compacts in each of the listed states:

California

The facilities pay into a revenue sharing fund. California mandates revenue sharing with non-gaming tribes (1.1 million) and contribution to the Special Distribution Fund. The Special Distribution Fund is used to:

> Sec. 5.2 Use of Funds. The State's share of the gaming device revenue shall be placed in the Special Distribution Fund, available for appropriation from the legislature for the following purposes: (a) grants, including any administrative costs, for programs designed to address gambling addiction; (b) grants, including any administrative costs, for the support of state and local government agencies impacted by tribal government gaming; (c) compensation for regulatory costs incurred by the State Gaming Agency and the State Department of Justice in connection with the implantation and administration of the Compact; (d) payment of shortfalls that may occur in the Revenue Sharing Trust Fund; and (e) any other purposes specified by the legislature. It is the intent of the parties that Compact Tribes will be consulted in the process of identifying purposes for grants made to local governments. (Tribal-State Compact Between the State of California and the Augustine Band of Mission Indians, 2000, pp. 9-10)

A recent audit of these funds found that these resources where not always dedicated to mitigating impacts from tribal gaming (California State Auditor, 2007).

Colorado

The Southern Ute compact indicates there is/was an assessment of impact on non-AI communities within 18 months of the start of tribal gaming and that remedies would be negotiated on the basis of this assessment (The Southern Ute Tribe - State of Colorado

Gaming Compact, 1992, p. 30). Ute Mountain agrees to do a study of impact with Montezuma County using data from the "Fox Study of 1994" as a baseline and the tribe agrees to "assist in correcting" any impact (The Ute Mountain Ute Tribe and the State of Colorado Gaming Compact, 1995, pp. 39-41).

Idaho

The Kootenai may voluntarily contribute 2 & 1/2 % of profits "...for financial support of local government programs, hospitals, education or other purposes as directed by the Council (1993 Class III Gaming Compact By and Between the Kootenai Tribe of Idaho and the State of Idaho, p. 22)".

Kansas

The tribes agree to:

> The Tribe shall consult with the appropriate State and county officials concerning maintenance and safety of roads, bridges and other infrastructure made necessary by the implementation of this compact.
>
> Upon mutual consultation and agreement between the Tribe and the state and local governments, the Tribe agrees that certain related costs of the operation of the Class III gaming facility may be paid for from the operating revenues of the tribal facility. Such costs shall be limited to the cost of increased police patrol and necessary road improvements, if any.
>
> (Tribal State Gaming Compact Between the Kickapoo Tribe of Indians of the Kickapoo Reservation in Kansas and the State of Kansas, 1995, p. 39)

Michigan

There is a 2% payment to local governments. (A Compact Between the Pokagon Band of Potawatomi Indians and the State of Michigan Providing for the Conduct of Tribal Class III Gaming By the Pokagon Band of Potawatomi Indians, 1998, pp. 18-19)

New Mexico

There is a $250,000 a year payment to the state with a 5% annual increase and 16% of net wins (Indian Gaming Compact Between the Jicarilla Apache Tribe and the State of New Mexico, 1997, p. 58; Indian Gaming Compact Between the Pueblo of Acoma and the State of New Mexico, 1997, p. 58).

New York

The revenue sharing agreements vary by tribe in New York. The Mohawk have an agreement the basis of net revenue use (Amendment to the Tribal State Compact between the St. Regis Mohawk Tribe and the State of New York, 1999, pp. 6-8) described as, "offsetting expenses associated with gaming facility in Clinton, Franklin and St. Lawrence counties (9)." The Seneca also have an agreement for revenue sharing with the state that increases as the time with a gaming operation increases from 18 to 25% (Nation State Gaming Compact Between the Seneca Nation of Indians and the State of New York, 2002, p. 15).

North Carolina

The resources from gaming in North Carolina are distributed by the Cherokee Preservation Foundation and provide vague language implying responsibility for areas ‘near’ Cherokee tribal lands.

> A non-profit foundation shall be established which shall be funded and endowed by the tribe and shall operate under the name CHEROKEE PRESERVATION FOUNDATION, whose purpose shall be to protect, preserve and enhance the natural resources, aesthetic appearance of the Cherokee tribal lands against long term degradation resulting from increased traffic and growth in connection with gaming activities, assist in the economic development for public services, recreation, entertainment and community economic development and foster employment opportunities on or near Cherokee tribal lands, provide funding for the purpose of preservation, research, study, restoration and development of the history, tradition, culture, language, arts, crafts and heritage of the Cherokee people (Second Amendment to the Tribal-State Compact Between the Eastern Band of Cherokee Indians and the State of North Caroline, 2000, pp. 7-8).

Washington

Washington State contributes:

> Up to one-half of one percent (0.5%) of the net win derived from Tribal Lottery System activities, determined on an annual basis, shall be added to any amounts payable and distributable from other class III activities under the Compact in order to meet community impacts, to the extent such Compact amounts are insufficient to meet actual and demonstrated impact costs (Appendix X State of Washington Class III Gaming Compact, p. 44))

These compacts demonstrate formal revenue sharing at both the state and local level. On some level this mandates relationships, however not without caveats. For example, in

Arizona tribes were allowed to choose which cities with which they wanted to share $5.1 million in revenue sharing ("Additional $5.1 Million," 2004).

Outside of this more formal evidence of revenue sharing in the same literature that we found evidence of tribal relations, we find evidence of gaming related impact mitigation. In a proposed deal with the Menominee[55] tribe over a casino development, the tribe suggested paying "...the city and county $168 million over a 10-year period in exchange for local support… (Cole, 1999, p. 3)". In Hesperia, CA "..city officials reached an agreement with the tribe that would generate about $6.5 million a year in revenue for the city…(Ascenszi, 2003, p. 2)". In Louisianna the Coushatta tribe, "..contributed $26 million directly to local governments from 1995 until 2000 and is expected to contribute at least $7 million for the next seven years (Maggi, 2001, p. 1)". In Michigan in 2001 Tribe's contributed over $8 million to local governments ("Receipts and Distribution," 2001, p. 1). Very recently the town of Middleborough, MA decreed they are ready to accept $7 million dollars annually for their support of an Indian casino (Goodwin, 2007). And in Niagra Falls, NY: "The mayor and City Council last week agreed to transfer $500,000 of the casino money from the Urban Renewal Agency to rebuild streets, reconstruct sidewalks and tear down dilapidated buildings throughout the city (Jewell, 2007)."

VIII. Conclusion

In this chapter, we have continued to examine the specific contexts in which Indian gaming occurs. It is obvious from the literature and survey that tribes and local governments find themselves in both cooperative and conflictual situations that may or may not result in unmitigated impacts on the non-tribal community. There is clear

[55] Wisconsin

evidence from tribal-state compacts and other sources that tribes do often provide mitigation to the non-tribal communities. Given that formal Indian policy only dictates a federal-tribal relationship, many of the activities between tribes and local governments happen in an informal manner. Also, given their long history of deprivation and disadvantage, the tribes may justifiably question mitigating conditions on non-Indian communities. This chapter shows however that although there are conflictual interactions and times when tribes resist mitigation, tribes often engage in cooperative ventures with local governments and as part of this may very well mitigate the externalities (actual or perceived) that local governments encounter as a result of tribal activities. Finally, it's clear that tribes do provide direct mitigation for impacts on the non-Indian community from Indian gaming operations.

Chapter 4: Data & Methods

I. Introduction

Having established that there is indeed the potential for tribal and non-tribal communities to impact each other, now we can examine the potential fiscal impact from Indian gaming on non-Indian governments using several relevant data sets. These include the Census of Governments, Decennial Census, County Business Patterns, Urban Influence Codes and The Taylor Policy Group's Indian gaming data. This data must then be stratified into a treatment and a comparison group during a time frame relevant to the period in which Indian gaming began. The stratification into a treatment and comparison group requires the use of GIS to join Indian gaming operations to their county locations. Finally, after intensive data work a difference in difference model can be applied to attempt to dissect the impacts from the opening of an Indian gaming operation and other influential elements.

II. Research Questions

This research intends to look at the formal relationship between the opening of an Indian gaming operation and revenues/expenditures in adjacent local governments. This research will utilize the 50 mile radius impact area used in Julie Topoleski's work. Therefore, the first hypothesis is:

> *Hypothesis 1: There is an impact on fiscal conditions from American Indian Class III gaming operations on non-Indian county expenditures and revenues within a 50 mile radius.*

What drives this hypothesis? First, the literature presented provides evidence of both a socioeconomic impact on the non-Indian community and a fiscal impact on the non-Indian community. If there is a socio-economic impact on the non-Indian

community (e.g. Eadington (1998), Gazel (1998), Topoleski (2003), Taylor (2000), McCormack (1997)), there is potential for this impact to translate to the governments that serve these populations. Following this reasoning one could assume that an impact on the non-Indian government would impact that government's expenditures and revenues. This is supported by the literature suggesting a fiscal impact on non-Indian governments (e.g. National Gambling Impact Study (1999), National Indian Gaming Association's Annual Report (2004), Casino City's Indian Gaming Report (2005), Popp and Stehwien (2002), Cornell & Taylor (2001), Reeves (1996), Alesch (1997), Econorthwest (1999), The Perryman Group (2003), Donovan (2003), Hendren (n.d.) and Lisheron (1999).

First, positive economic impacts from the gaming operation have the potential to reduce local government expenditures and increase tax revenues. If there is an increase in jobs in the non-Indian community (McCormack, 1997; Topoleski, 2003), this may result in a lowering of social welfare spending and an increase in community member's capacity for spending. This could increase the revenues from sales taxes. Negative impacts from gaming operations have the potential to increase social welfare needs and decrease potential tax revenues. The increase in bankruptcies Topoleski found could very well cause social welfare expenditures to rise and sales tax revenues to decline. The suggested increase in traffic (McCormack, 1997) could increase road related expenditures. A crime increase (Topoleski, 2003) could cause an increase in police, imprisonment and court costs (although Taylor et al. found no evidence of this).

> *Hypothesis 2: There are both positive and negative effects on specific county area expenditures and revenues that are correlated to the opening of an Indian gaming operation.*

Hypothesis 3: Increases in county revenues from income and state IGR post the opening of an Indian gaming operation offset any additional associated expenditure.

In addition to these indirect effects there are the more direct contributions such as revenue sharing funds and compact mandated contributions to state, local and tribal governments.

In addition to these suggested relationships, it is important to consider potential factors that could influence them. First, the number of years a gaming operation is open could affect both the strength and direction of the relationship between the operation and county finances. For example, a gaming operation opening might initially create new demands on infrastructure. It may take many years for the operation to become established and generate economic consequences significant enough to offset local costs. Although competition could increase with additional years, given the rural nature of Indian gaming operations it seems more likely that with passing time the operation would have more potential to take root as well as the potential for adding other tourist drawing features such as convention centers. This makes it necessary to include a measure for the number of years a casino has been operating.

Hypothesis 4: Time plays a role in the fiscal effects of Indian gaming. The length of time a gaming operation has been in business affects the impact it has on expenditures or revenues. The longer the business has been operating the more positive the impact on local government revenues and expenditures.

Second, other economic factors may have a greater influence on county finances. For example, the closing of a manufacturing plant may offset any positive influences from the opening of a gaming operation and vice versa; the attraction of additional business ventures may offset any negative influences from the gaming operation. To attempt to control for this issue, this model will use employment and population measures

as independent variables for the macro level demographic and socio-economic changes. Finally, this model will take into consideration the unique circumstances that a non-metropolitan geography presents. Given the vast difference between non-metropolitan and metropolitan communities, this model will only examine non-metropolitan communities. Not only are metropolitan/non-metropolitan communities different from one another, in metropolitan communities the impact of casino operations may be overshadowed or confused with other economic development factors, requiring additional control measures. There also may be increased competition in metropolitan areas. These non-metropolitan communities will then be stratified by the Urban Influence Codes (Urban Influence Codes 3 and higher).

> *Hypothesis 5: The more non-metropolitan a community the more likely they are to benefit from the opening of an Indian gaming operation.*

II. Data

Five data sources are used in this analysis: Census of Governments, Decennial Census, County Business Patterns, Urban Influence Codes and The Taylor Policy Group's Indian gaming data. Each of these sources has its own unique formatting and issues. The discussion which follows details the source of each set of data, collection time periods, sampling methods, geographic level and any limitations posed by the data.

a. Census of Governments

The Census of Governments will provide the revenues and expenditures data for county governments at two points, one prior to and one post the opening of the Indian gaming operations. These data were obtained from the Census Bureau[56,57] and have

[56] Craig A. Langley, Public Accounting Specialist, Bureau of the Census

[57] "The annual survey of State and Local Government Finances contains current estimates of government financial activity. Data include estimates of revenue by type, expenditure by purpose and function, debt,

been collected every 5 years since 1957. The time periods used for this analysis are 1982 and 2002. Additional time periods could be added, but this would increase the risk for unrecognized data definition changes over the course of the survey. This dataset is not a "sample". The survey is sent to all governments that meet a set of criteria that defines them as an 'independent government'. The Census Bureau takes numerous steps to limit any non-sampling errors, such as non-response or mis-coding (U.S. Census Bureau, April 20, 2007). This analysis uses an aggregate of all local government level finances in the 'county area' level, thus diminishing the need to differentiate between the way powers vary across governments and states:

> It (the data) includes ALL local governments within a county area. The only thing it excludes is state government amounts. Note that some governments (especially special districts) have Boundaries that cross county lines. We make no effort to pro-rate them among the counties they serve. Rather, we allocate all their finances to the county where they are headquartered. (John Curry, personal communication, October 10, 2006)

b. Decennial Census

Data from the Decennial Census, from 1980 and 2000 are used to provide for demographic and socio-economic variables for each community. This dataset was acquired through the Missouri Census Data Center (sf3200x and stf803x2) and provides the number employed out of the working age population, percent American Indian and

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and financial assets by type - all in detail similar to that found in the Census of Governments. Estimates are shown for state and local governments combined, as well as for local governments. (State government data are not estimates, but rather actual measures from the surveys on state government finances mentioned previously.) Geographic coverage includes estimates for all governments nationwide, as well as estimates by state area. Reports consist of viewable tables and data files that users can download from the Internet (U.S. Census Bureau, July 9, 2007)."

per capita income (Missouri Census Data Center, 2007). These are used in a multivariate model and numerous other elements for more descriptive analysis. This dataset is subject to both sampling and non-sampling errors (U.S. Census Bureau, 2006).

c. County Business Patterns

County Business Patterns (CBP) data provides for a measure of broader economic activity at the county level. The variables used are the total payroll and number of establishments in the county as a percent of the total in the state. This dataset was obtained from the University of Virginia Library's Geospatial and Statistical Data Center (Geospatial & Statistical Data Center, 2005). The data series originates from the Census Bureau. Collection for this data series began in 1946 and has been collected annually since 1964 (U.S. Census Bureau: County Business Patterns, n.d.). This research will utilize data from 1982 and 2001. This dataset can be subject to non-sampling errors and requires some degree of imputation for missing data (Coverage and Methodology, n.d.).

d. Urban Influence Codes

Urban Influence Codes will be used to isolate potential effects from the geographic location of the community. There are two predominant sets of codes used to analyze geographic indicators, the Urban Influence Codes and the Rural-Urban Continuum Codes. At the advice of an expert[58] in the utilization of these codes, this research will use the Urban Influence Codes. The Urban Influence codes were updated in 2003 (previous designation 1993). This research will use the 1993 designation. This research will focus on those communities with a "non-metropolitan" status. Aside from inferring incorrectly the potential consequences of a specific geographic codification,

[58] Conversation with Timothy D. McBride, PhD, Professor, Division of Health Management and Policy, School of Public Health, Saint Louis University and member of the Rural Policy Research Institute.

there are no errors referenced with regard to this data. This research is limited to non-metropolitan communities both to control for the differences in the treatment and comparison group and to standardize the impact from the gaming venture. For example, in a 2004 Federal Reserve Bank study, it was found that the employment impact of casinos is stronger in rural areas (Garrett, 2004, p. 21), but that the direct effect of a casino on employment can be altered by the composition of the workforce found in the area. Garrett found that "…if a casino is planning to move to a rural area that has a relatively less-skilled workforce, the casino will probably draw skilled labor from outside the area. If this labor remains outside of the local area and workers commute to the casinos, then unemployment will not change (Henderson, 2003)". This, as well as other components of rural economic growth such as specific population size, education and age (Aldrich & Kusmin, 1997) is important to this analysis, because these factors are likely to impact fiscal conditions.

Table 13: Urban Influence Codes

UIC Code	Description	Number of counties	2000 Population	Square miles	Population per sq. mile
1	Metropolitan adjacent to large metro	92	5,147,233	94,178	54.7
2	Noncore adjacent to large metro	123	2,364,159	88,229	26.8
3	Metropolitan adjacent to small metro	301	14,668,144	285,527	51.4
4	Noncore adjacent to small metro with own town	358	7,855,590	334,361	23.5
5	Noncore adjacent to small metro no own town	185	1,879,264	336,499	5.6
6	Metropolitan not adjacent to a metro area	282	9,139,821	338,256	27
7	Noncore adjacent to micro with own town	201	3,227,833	193,200	16.7
8	Noncore adjacent to micro with no own town	198	1,313,175	196,269	6.7
9	Noncore not adjacent to metro or micro with own town	138	2,247,189	488,521	4.6
10	Noncore not adjacent to metro or micro with no own town	174	999,558	285,304	3.5
	Total	3,141	281,421,906	3,537,438	79.6

(Measuring Rurality: Urban Influence Codes, n.d.)

e. The Taylor Policy Group's Gaming Data

The Taylor Policy Group data is used to isolate when the Indian gaming operation began as well as its actual zip code. The dataset from The Taylor Policy Group was collected from the Casino City Press database, National Indian Gaming Commission, state regulatory agencies, existing monographs, websites, telephone interviews, the NIGA survey and newspaper articles and obtained via a reciprocal contract. It was noted that there are some questions regarding the addresses of casinos in this file. Web based research revealed that in some cases there is disagreement regarding the physical location of the facility (Appendix B). In most cases the disagreement is minimal and places the facility in an adjacent zip code. Given the broad circumference being used it this analysis this approximation seems acceptable.

II. Model

This research will examine changes in long-term county-level expenditures and revenues from before and after the start of a class II or class III Indian gaming operation. Communities considered to be within the impact area are those within a 50 mile radius[59] of the outer boundary of the zip code of an Indian gaming operation.

a. Difference in Difference

A longitudinal "difference in difference" model with panel data is used to examine the fiscal impact of the gaming operation. The model examines a variable of interest before and after some intervening factor (Angrist & Krueger, 1999, p. 21-23, Wooldridge 2000). This model is similar to that used by Topoleski (2003). This work differs from Topoleski's socio-economic outcomes, in that the outcomes are revenues and

[59] Parameter established through work by Topoleski & Evans.

expenditures in counties prior to and after the opening of an Indian gaming operation[60]. The form of the regression equation is:

$$Y_{ct}=B_o + \delta_0 post + \beta_1 gaming + \delta_1 post*gaming + \beta_2 population + \beta_3 uicode93 + \beta_4 pay\_pct + \beta_5 est\_pct + \beta_6 pctIndian + \beta_7 empwrkag + \beta_8 pci + \beta_9 maxlocalst + \beta_{10} welfare\_co + u$$

Where:

- Y=per capita revenues, per capita expenditures (total revenues, sales tax, state IGR, property tax, total expenditures, construction expenditures, highway expenditures, welfare expenditures and police expenditures) and the ratio of per capita total expenditures to per capita total revenues.
- β_o=intercept constant (average expenditure or revenue of non-gaming community).
- δ_0Post=dummy variable representing pre (0) or post (1) period. (change in revenue or expenditure overall from pre to post period).
- $\beta_1$gaming=dummy variable representing non-gaming(0) and gaming(1) counties. (measure of difference in revenues or expenditures between non-gaming and gaming communities irrelevant of pre/post period).
- $\delta_1$post*gaming=interaction effect (measure of change in revenues or expenditures specifically related to the opening of the gaming operation).
- $\beta_2$uicode93=dummy variable indicating rural non-adjacent or rural adjacent from the Urban Influence Codes.
- $\beta_3$pay_pct=percent of total payroll in the state.

- $\beta_4$est_pct=percent of total establishments in the state.
- $\beta_5$pctIndian=percent American Indian in the county.
- $\beta_6$empwrkag=ratio of employed to working age.
- $\beta_7$pci=per capita income.
- $\beta_8$maxlocalst=dummy variable for low/high local sales tax rate[61].
- $\beta_9$welfare_co=dummy variable indicating AFDC and child welfare at the county level[62].

This model is replicated for revenues, expenditures and the ratio of expenditures to revenues. Only the total expenditures and welfare expenditures models use the AFDC/child welfare variable. Likewise, only the total revenues and sales tax revenues use the sales tax dummy variable. This model is employed as a fixed effects model controlling for the fixed effects from the 'state'. In lieu of using a software package with a specialized program for fixed or random effects, this analysis simply includes a dummy variable for each state in the data.

In addition, there are potential biases in this data with regard to the location of the casino. First, tribes choosing to open a casino may be non-random. They may be motivated by culture, economic or geographic factors. Julie Topoleski explored this in depth. She found that prior tribal economic conditions and economic growth did not influence a tribe's decision to open a casino (Topoleski, 2003, pp. 54-55). She did find that the population within a fifty mile radius of tribal headquarters positively influenced

[61] This indicator was derived from Washington Department of Revenue "Comparison of State and Local Retail Sales Taxes" http://www.taxadmin.org/fta/rate/sl_sales.html, considering high sales taxes those in top two quartiles and those with low sales taxes the bottom two quartiles..
[62] This indicator was derived from "Table 1 Administrative Authority for AFDC and Child Welfare Services, Historically by State" and "Table 2 States Know to Have Enacted or Proposed Changes in State-Local Responsibilities for Social Services, Public Assistance, and Workforce Development, 1995-1996" (Watson and Gold, 1997).

this decision (Topoleski, 2003, p. 55). Topoleski also examined the role of 'economic shocks' in influencing the interpretation of results. She found,

> If, for example, tribes that elect to open a casino are ones which experience a negative transitory shock that triggers it to open a casino, we would have a problem analogous to "Ashenfelter's Dip." Specifically, if tribes were opening casinos in response to negative transitory shocks and after some period of time returning to pre-shock levels of employment and poverty, what we would be interpreting as a positive treatment effect would actually be a return to prior levels. The fact that we cannot reject the hypothesis that pre-treatment trends are not significantly different than zero supports the idea that we are not erroneously interpreting the reversal of a negative transitory shock as a treatment effect.
>
> (Topoleski, 2003, p. 55)

Given Topoleski's work this model will operate under these assumptions.

In addition a tribe may choose to open a casino due to the influences of nearby tribes. A measure of this effect was found to be significant when examining bingo operations.

> On the one hand, a tribe may be discouraged from opening its own bingo hall if there is another Indian bingo facility within its 100-mile "watershed." But on the other hand, close proximity may lead to a demonstration or diffusion effect, such that the nearer another Indian bingo hall, the more likely the non-gaming tribe is to learn by example and enter the gaming industry itself.
>
> (Jorgensen, 2000, p. 14)

b. Sampling Design

The sample for this analysis will include class II and class III Indian gaming operations which began in the U.S. between 1983 and 1997, except for Alaska. This analysis includes both class II and class III gaming for several reasons. First, in many cases it is becoming difficult to distinguish between class II and class III gaming machines. Second, class II games represent a small but significant portion of the Indian gaming industry with 156 facilities and $2.6 billion in revenue (2005) (Meister, 2006, p. 4).

The pre-gaming period will be the 1982 Census of Governments (COG) the post-gaming period will be the 2002 COG. Approximately half of the current 354 Indian gaming operations began during this time. The comparison group consists of observations from counties in the same time period within the same state that did not have Indian gaming. The sample is further limited to non-metropolitan counties according to the Urban Influence Codes (UIC). The degree of non-metropolitan is further specified using the distinct codes provided by the UIC. Given variability in the gaming data with regard to Oklahoma and the general differences in the structure of Oklahoma and Alaska tribes this data will exclude both. This analysis will look at 19 states (Table 15) excluding:

- Arizona all counties within a 50 mile radius of an Indian gaming operation.
- Missouri since its actual Indian gaming operation is in Oklahoma which has been removed.

- California has only one county without Indian gaming within a 50 mile radius.
- Nevada has only has 2 Indian gaming communities and there are issues with comparability given the non-Indian gaming in the state.
- Oregon only has one county without Indian gaming within a 50 mile radius .
- Washington only has 2 counties without Indian gaming within a 50 mile radius.
- Wisconsin only has 1 county without Indian gaming within a 50 mile radius.

This results in the following sample:

Table 14: Sample Size

	Sample	Percent of Total Sample
Gaming County Areas	370	39.52
Non-Gaming County Areas	566	60.47

Twelve out of the 19 the states used in this analysis have some form of non-Indian gaming. Table 15 describes the total number of gaming facilities (all types) by state. This analysis does not control for any competition between non-Indian and Indian gaming.

Table 15: Gaming by State

State	Details
AL	Total of 7 gaming operations. All casinos are American Indian.
CO	Total of 49 gaming operations.
FL	Total of 146 gaming operations.
IA	Total of 19 gaming operations.
ID	Total of 14 gaming operations. All casinos are American Indian.
KS	Total of 9 gaming operations. All casinos are American Indian.
LA	Total of 25 gaming operations.
MI	Total of 25 gaming operations.
MN	Total of 35 gaming operations.
MS	Total of 29 gaming operations.
MT	Total of 136 gaming operations.
NC	Total of 2 gaming operations. All casinos are American Indian.
ND	Total of 38 gaming operations.
NE	Total of 11 gaming operations. All casinos are American Indian.
NM	Total of 26 gaming operations. All casinos are American Indian.
NY	Total of 21 gaming operations.
SC	Total of 2 gaming operations.
SD	Total of 56 gaming operations.
WY	Total of 3 gaming operations. All casinos are American Indian.

Source: Casino City http://us.casinocity.com/

c. Matching

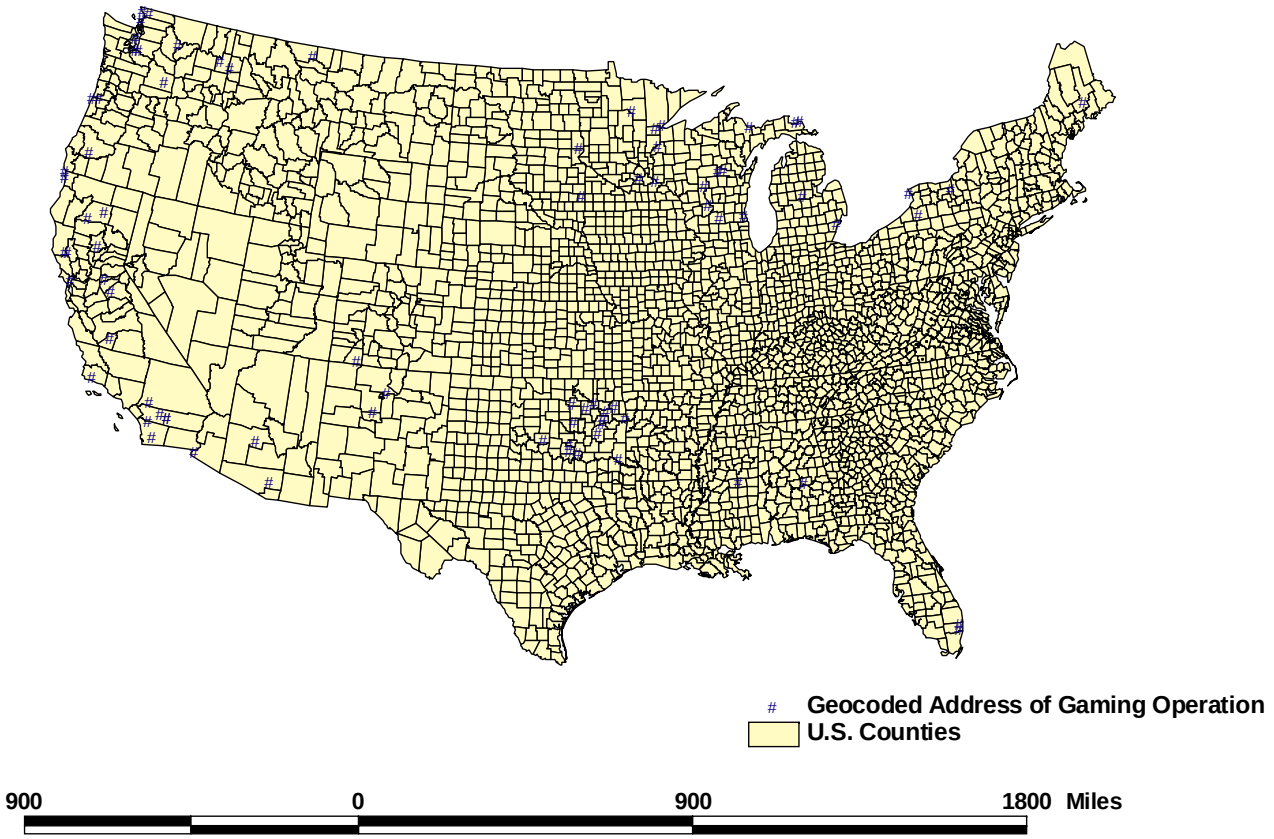
Given the potential for differences between gaming and non-gaming communities pre-gaming, propensity score based matching is used for a comparative sample. This program will simply isolate communities in both groups in pre-period that have a similar propensity to be an Indian gaming community. In this case this will be all government finance indicators and per capita income as a measure of current economic conditions in the community. This method is discussed in greater detail in Chapter 5 and Appendix G.

d. GIS Work

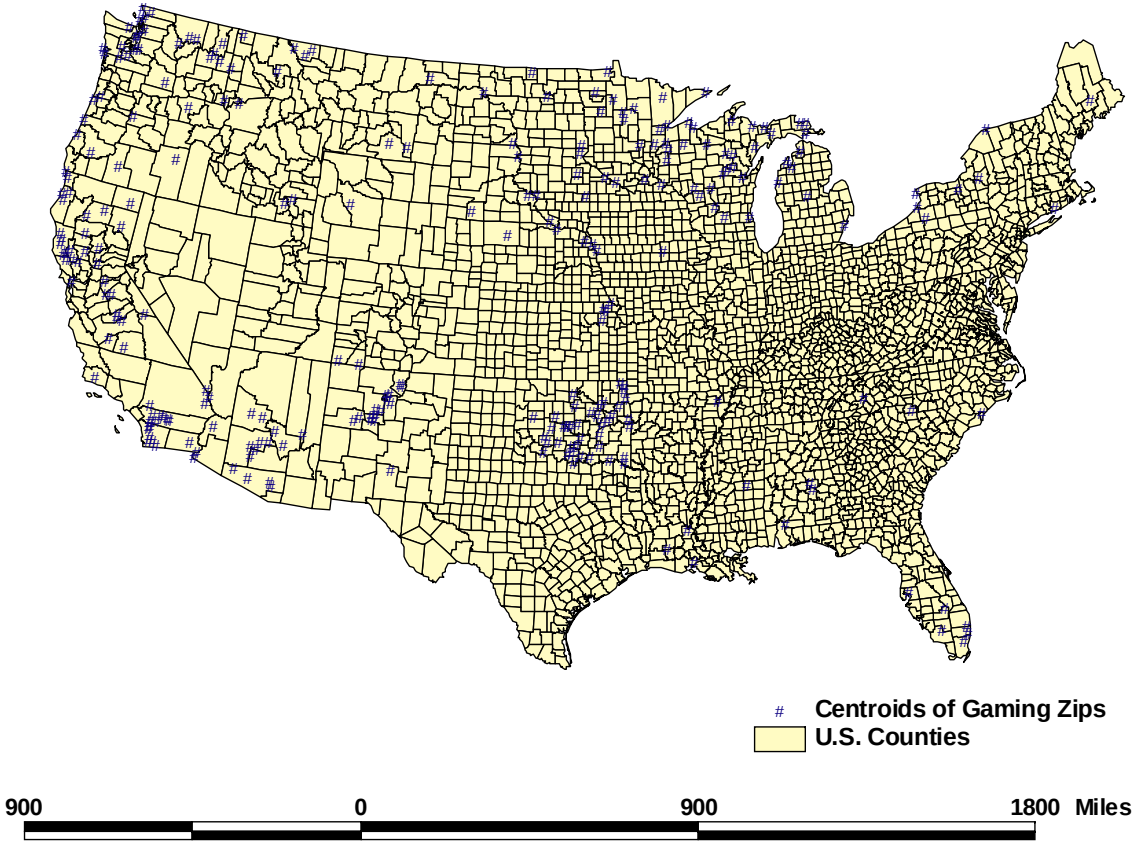
For the purposes of this thesis, the gaming data required cleaning. There were 22 zip codes with two casinos. Of these zip codes, 12 had different opening dates. In these cases, the first opening date was selected. This does not mitigate potential multiplier

effects on those casinos opened within 1-2 years of each other. In 10 cases, the casinos had the same opening date so the information was aggregated and one casino address was selected.

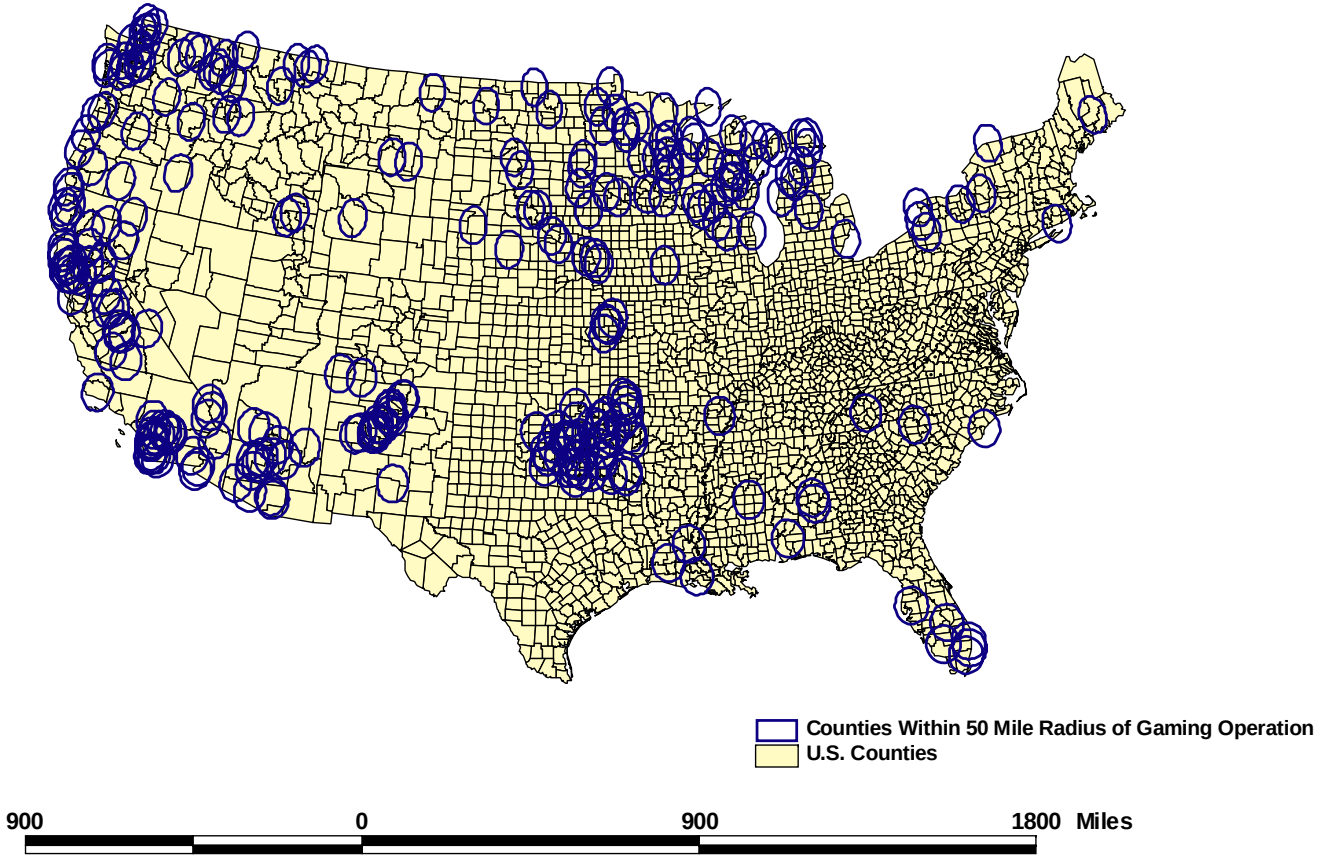
Map 1: Geocoded Addresses of Gaming Operations



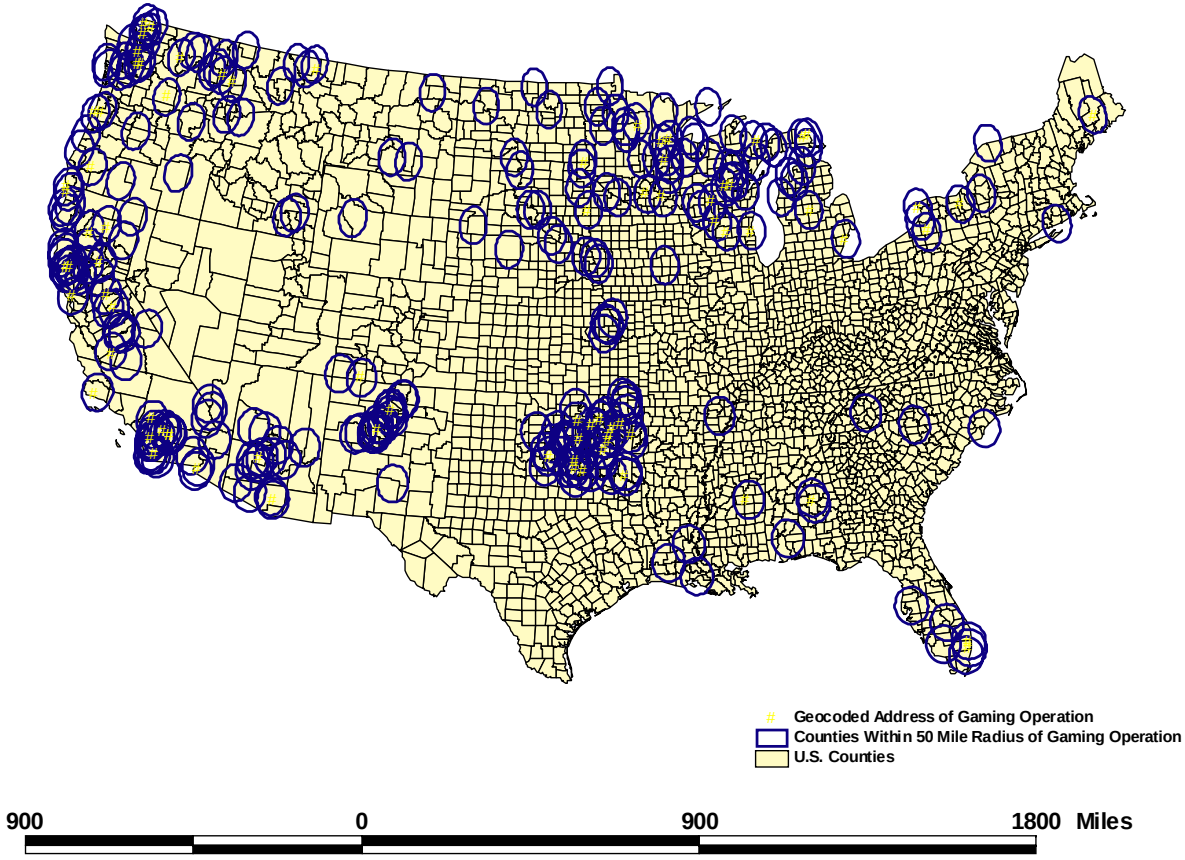
Map 2: Centroids Based on Zip Codes from Indian Gaming Operations
Not limited to thesis specific sample.



Map 3: Counties Within 50 Mile Radius of Indian Gaming Operation Zip Code Centroid
Not limited to thesis specific sample.



Map 4: A Comparison of Zip Code Centroids to Geocoded Address of Indian Gaming Operations
Not limited to thesis specific sample.



In order to determine communities within the 50 mile radius of the Indian gaming operation (treatment group), the zip code of each casino was converted to a centroid (Map 2) and merged to counties (The Zip Code, n.d.) within a 50 mile radius using the Union feature of ArcGIS (see Map 3)[63]. Geocoded addresses were not used given the poor match rate (Map1). Map 4 demonstrates that in cases were an address was found the boundaries of the 50 mile radius surrounding this address are very similar to the 50 mile radius from the zip code centroid in Map 2. These data were then exported from ArcGIS. The resulting file contains gaming counties with indication of the zip code of the gaming operation that is within a 50 mile radius of these specific zip codes. The zip code indicator in the file is used to merge the data from Step Two back to the gaming data. This creates a file of counties with gaming data for any Indian gaming operations within a 50 mile radius of that county.

The next step was to limit to the data to only one representation of the county. The data were summarized to represent one county with an indicator of the number of gaming operations within this county and an aggregation of gaming relevant variables. Then, the expenditure and revenue data from the Census of Governments and Urban Influence Codes are merged with the aforementioned file with the fips indicator. Metropolitan, as well as any counties with missing revenue and expenditure data were removed. Expenditure and revenue data are adjusted for inflation to 2002 dollars using the State and Local price index from the 2007 Economic Report of the President (Economic Report of the President, 2007, p. 239).

[63] From this point forward referred to as "gaming communities".

Data for counties without an Indian gaming operation (comparison group) are selected within the states that experienced the opening of an Indian gaming operation. The data are limited to the period of interest at this point and only to states where an Indian gaming operation opened between 1983 and 1997. All of the proceeding work results in the panel data set structure as seen in Appendix C.

e. Ethical Considerations & Limitations

Given that the data for this research are all public use files, the ethical considerations are limited.

This research has limitations with regard to both the data sources and model. The data being used, although compiled by reputable sources, does have the potential for errors. Details on the potential issues in the source data are provided within the description of each data source. There also is the potential for errors in the complex process used to merge and compile these data sources into one data table. The gaming data lack a clear variable of magnitude such as revenues. This is due to the fact that revenues from Indian gaming operations are not required to be publicly disclosed. The model is not immune to inferential criticisms.

V. Conclusion

This research uses a complex modeling process in combination with well respected data sources to produce an extremely robust model of the impact of Indian gaming operations and non-Indian gaming county areas. This difference in difference model isolates the specific effects of having a gaming operation open in or near a non-tribal community (within a 50 mile radius of the zip code of the operation) between 1983 and 1997 through the use of a panel dataset constructed from Census of Governments,

Decennial Census, County Business Patterns, Urban Influence Codes and The Taylor Policy Group's Indian gaming data. However, robust this model, it still might be subject to numerous potential data and model related errors, such as those related to sampling design and/or misspecification of the model.

Chapter 5: Analysis

I. Introduction

At this point we have established a brief history of American Indian policy and laid the foundation for the analysis set forth in Chapter 5 from the anecdotal evidence that has been discussed. It is clear at this point that there is a potential for tribal activities to impact non-tribal communities in both positive and negative ways. We have established that tribes work with non-tribal communities both collaborating on development and providing revenues to offset potential impact costs in these communities. We have also witnessed the arguments regarding uncompensated impacts including such things as infrastructure costs. In this chapter we look at the quantitative evidence to support these assertions. First, we start by looking descriptively at these communities in the pre-gaming period. Then we examine the changes in both communities from 1982 to 2002. We also look briefly at the difference between communities that house the actual operation versus those that are adjacent to it.

II. Sample Analysis

One of the first steps in examining the quantifiable data behind this hypothesis is to examine the similarities and/or differences between the two groups being compared. This data yielded 566 non-gaming counties and 370 gaming counties (counties within a 50 mile radius of the gaming operation zip code centroid). Of the 370 gaming counties 61 actually had gaming operations within their boundaries.

a. Aggregate

Overall, there are some differences between the treatment and comparison group, but as whole they appear to be relatively comparable. The mean population in gaming

communities is very similar to that in non-gaming counties 20,204 vs. 18,242. Mean revenues are lower per capita in all categories in gaming communities, except for State intergovernmental revenue which is $944.34 per capita in gaming communities, vs. $837.36 in non-gaming communities. Mean total expenditures are nearly identical in the two communities. Welfare expenditures in gaming communities are nearly double those of the non-gaming communities $93.24 vs. $54.72 per capita (Table 16).

Table 16: Descriptive Characteristics 1982

	Non-Gaming				Gaming			
	N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
Game (1,0)	566	0.00	0.00	0.00	370	1.00	1.00	1.00
Population	566	516	157770	18242	370	440	112660	20204
Urban Influence Code	566	3	9	7	370	3	9	7
Total Revenue	566	$817.40	$30,436.33	$2,869.84	370	$341.88	$9,377.65	$2,754.37
Sales Tax	566	$0.00	$1,425.71	$50.74	370	$0.00	$1,196.83	$38.01
State IGR	566	$226.15	$3,886.89	$837.36	370	$66.86	$2,388.86	$944.34
Property Tax	566	$70.30	$3,867.16	$869.43	370	$34.23	$4,290.49	$748.03
Total Expenditures	566	$806.25	$34,729.47	$2,796.09	370	$301.51	$12,025.84	$2,719.10
Capital Outlays	566	$5.77	$7,970.54	$407.98	370	$0.00	$8,975.13	$363.24
Construction Exp.	566	$0.00	$7,852.17	$302.49	370	$0.00	$8,923.87	$255.80
Highway Exp.	566	$0.00	$3,000.16	$291.80	370	$0.39	$1,961.44	$301.45
Welfare Exp.	566	$0.00	$747.94	$54.72	370	$0.00	$728.39	$93.24
Police Exp.	566	$12.85	$421.67	$82.24	370	$0.00	$333.35	$78.89
Percent of Total Payroll in State	566	0.00%	11.63%	0.54%	370	0.00%	12.13%	0.70%
Percent of Total Establishments in State	566	0.01%	7.08%	0.73%	370	0.02%	9.83%	0.91%
Percent American Indian	566	0.00	58.10	0.63	370	0.00	93.40	3.67
Ratio Employed to Working Age	566	33.70%	89.95%	71.85%	370	32.89%	88.61%	70.21%
Per Capita Income	566	$5,196.00	$20,588.00	$9,840.94	370	$4,504.00	$13,650.00	$9,520.62

As would be expected gaming communities have a higher percentage of American Indians (expected as they most likely include or are adjacent to an American Indian reservation). Although, this model does not rely solely on the similarity of the two groups for comparison it is still beneficial to examine the degree to which these two groups diverge. For closer examination of this an independent samples t-test was performed to determine if there were significant differences in key variables between the comparison (non-gaming) and treatment group (gaming). Prior to this examination it is first necessary to determine if the distribution of the key variable is normal (Appendix D).

Table 17: Independent Samples T-Test of the Explanatory Variables 1982

Group Statistics	Gaming (0,1)	N	Mean	Std. Deviation	Std. Error Mean	Sig. (2-tailed)	95% Confidence Interval of the Difference	
							Lower	Upper
Population	0.00	566.00	18241.71	17801.46	748.25	0.11	-4339.18	414.19
	1.00	370.00	20204.20	18584.09	966.14			
Urban Influence Code	0.00	566.00	7.45	1.44	0.06	0.47	-0.12	0.27
	1.00	370.00	7.38	1.53	0.08			
Total Revenues	0.00	566.00	2869.84	1658.97	69.73	0.23	-72.91	303.86
	1.00	370.00	2754.37	1002.12	52.10			
Sales Tax	0.00	566.00	50.74	111.55	4.69	0.08	-1.58	27.05
	1.00	370.00	38.01	105.27	5.47			
State IGR	0.00	566.00	837.36	361.14	15.18	0.00	-157.70	-56.24
	1.00	370.00	944.34	422.76	21.98			
Property Tax	0.00	566.00	869.43	659.56	27.72	0.00	44.27	198.54
	1.00	370.00	748.03	456.89	23.75			
Total Expenditures	0.00	566.00	2796.09	1732.76	72.83	0.45	-124.45	278.43
	1.00	370.00	2719.10	1170.17	60.83			
Capital Outlays	0.00	566.00	407.98	554.84	23.32	0.23	-28.98	118.45
	1.00	370.00	363.24	572.41	29.76			
Construction Exp.	0.00	566.00	302.49	515.62	21.67	0.19	-23.47	116.85
	1.00	370.00	255.80	562.76	29.26			
Highway Exp.	0.00	566.00	291.80	226.75	9.53	0.50	-37.87	18.57
	1.00	370.00	301.45	195.92	10.19			
Welfare Exp.	0.00	566.00	54.72	94.64	3.98	0.00	-53.65	-23.39
	1.00	370.00	93.24	141.29	7.35			
Police Exp.	0.00	566.00	82.24	43.09	1.81	0.22	-2.03	8.73
	1.00	370.00	78.89	37.60	1.95			
Percent of Total Payroll in State	0.00	566.00	0.01	0.01	0.00	0.05	0.00	0.00
	1.00	370.00	0.01	0.01	0.00			
Percent of Total Establishments in State	0.00	566.00	0.01	0.01	0.00	0.02	0.00	0.00
	1.00	370.00	0.01	0.01	0.00			
Percent American Indian	0.00	566.00	0.63	3.25	0.14	0.00	-4.03	-2.06
	1.00	370.00	3.67	11.21	0.58			
Ratio Employed to Working Age	0.00	566.00	0.72	0.08	0.00	0.00	0.01	0.03
	1.00	370.00	0.70	0.09	0.00			
Per Capita Income	0.00	566.00	9840.94	1851.33	77.82	0.01	91.86	548.77
	1.00	370.00	9520.62	1557.79	80.99			

Here we see there is significant difference in the means of the two groups on the following characteristics: property tax, state IGR, welfare expenditures, percent of total payroll in the state, percent of total establishments in the state, percent American Indian, and ratio of employed to working age and per capita income. Some of these differences are to be expected such as those with regard to percent American Indian and welfare expenditures. The differences in the percent of total payroll in the state and percent of total establishments in the state, although significant indicate that all of the rural communities in this sample on average represent less than 1% of payroll and establishments in the state. The correlations between these independent variables runs the risk of providing large standard errors in the model, the size of the sample however, can counteract this issue[64].

b. State by State Comparison

A state by state comparison yields greater difference between gaming and non-gaming communities. The number of counties within a state within a 50 mile radius of the zip code of a gaming operation ranges from 4 to 63 (Table 18).

[64] See Richard Williams's notes for a good explanation of the effects of multicollinearity http://www.nd.edu/~rwilliam/stats2/l11.pdf.

Table 18: Rural Counties Within Range of Indian Gaming Operation by State

State	Non-Gaming Counties	Gaming Counties	Total Counties
AL	24	6	30
CO	42	8	50
FL	23	4	27
IA	63	24	87
ID	21	21	42
KS	76	12	88
LA	22	18	40
MI	12	36	48
MN	5	63	68
MS	57	18	75
MT	30	13	43
NC	45	13	58
ND	19	30	49
NE	58	25	83
NM	12	8	20
NY	8	8	16
SC	21	9	30
SD	12	50	62
WY	16	4	20
Total	566	370	936

The greatest number of counties within range of an Indian gaming operation is in Minnesota where 63 out of 68 counties are within range. Appendix E outlines the descriptive characteristics by state.

III. Comparative Analysis 1982-2002

Between 1982 and 2002 some the differences between gaming and non-gaming communities appear to lessen, with the communities being relatively similar in most areas (Table 19).

Table 19: Descriptive Characteristics 2002

	1982		2002		% Change 1982-2002		
	Non-Gaming	Gaming	Non-Gaming	Gaming	Non-Gaming	Gaming	Difference
			Mean				
Population	18242	20204	19826	22042	8.69%	9.09%	0.41%
Urban Influence Code	7	7	7	7	0.00%	0.00%	0.00%
Total Revenue	$2,869.84	$2,754.37	$4,151.11	$3,933.25	44.65%	42.80%	-1.85%
Sales Tax	$50.74	$38.01	$145.64	$104.95	187.02%	176.15%	-10.87%
State IGR	$837.36	$944.34	$1,456.14	$1,480.50	73.90%	56.78%	-17.12%
Property Tax	$869.43	$748.03	$1,014.89	$934.37	16.73%	24.91%	8.18%
Total Expenditures	$2,796.09	$2,719.10	$4,085.76	$3,917.30	46.12%	44.07%	-2.06%
Capital Outlays	$407.98	$363.24	$499.97	$499.66	22.55%	37.56%	15.01%
Construction Exp.	$302.49	$255.80	$288.24	$303.95	-4.71%	18.82%	23.53%
Highway Exp.	$291.80	$301.45	$306.84	$368.91	5.16%	22.38%	17.22%
Welfare Exp.	$54.72	$93.24	$85.19	$117.21	55.69%	25.71%	-29.97%
Police Exp.	$82.24	$78.89	$140.33	$133.76	70.64%	69.56%	-1.08%
Percent of Total Payroll in State	0.54%	0.70%	0.49%	0.64%	-8.95%	-7.90%	1.05%
Percent of Total Establishments in State	0.73%	0.91%	0.68%	0.86%	-7.01%	-6.01%	1.00%
Percent American Indian	0.63	3.67	0.91	4.85	45.29%	32.28%	-13.00%
Ratio Employed to Working Age	71.85%	70.21%	76.92%	78.05%	7.05%	11.16%	4.11%
Per Capita Income	$9,840.94	$9,520.62	$16,295.52	$16,334.77	65.59%	71.57%	5.98%
			Median				
Population	12719	14204	13279	14319	4.40%	0.81%	-3.59%
Urban Influence Code	8	8	8	8	0.00%	0.00%	0.00%
Total Revenue	$2,595.59	$2,547.76	$3,767.12	$3,568.69	45.14%	40.07%	-5.06%
Sales Tax	$6.86	$0.21	$92.55	$28.24	1248.21%	13062.45%	11814.24%
State IGR	$786.90	$850.16	$1,360.90	$1,335.23	72.94%	57.06%	-15.89%
Property Tax	$822.12	$722.47	$924.18	$890.35	12.42%	23.24%	10.82%
Total Expenditures	$2,512.14	$2,470.85	$3,773.55	$3,568.39	50.21%	44.42%	-5.79%
Capital Outlays	$270.02	$261.07	$365.28	$407.79	35.28%	56.20%	20.92%
Construction Exp.	$181.24	$165.18	$177.29	$212.89	-2.18%	28.89%	31.07%
Highway Exp.	$266.49	$280.42	$269.07	$333.55	0.97%	18.95%	17.98%
Welfare Exp.	$19.35	$37.77	$12.11	$22.49	-37.42%	-40.44%	-3.03%
Police Exp.	$73.55	$73.13	$126.39	$121.35	71.84%	65.93%	-5.90%
Percent of Total Payroll in State	0.23%	0.26%	0.19%	0.24%	-18.30%	-9.69%	8.61%
Percent of Total Establishments in State	0.43%	0.55%	0.38%	0.49%	-12.89%	-11.04%	1.85%
Percent American Indian	0.20	0.40	0.40	0.70	100.00%	75.00%	-25.00%
Ratio Employed to Working Age	72.81%	72.33%	78.69%	79.68%	8.09%	10.17%	2.09%
Per Capita Income	$9,763.00	$9,608.50	$16,238.00	$16,354.50	66.32%	70.21%	3.89%

Comparing means, in general in 2002 revenues per-capita in gaming communities appear to be slightly lower than there non-gaming counterparts. Total revenues, sales taxes and State IGR appear to be increasing at a slower pace in non-gaming communities; whereas property taxes are increasing at a faster pace in gaming communities. Total expenditures are relatively comparable in gaming versus non-gaming communities with a slightly slower increase in total expenditures in gaming communities. Construction expenditures in non-gaming communities decreased, but increased by 19% in gaming communities. Highway expenditures in gaming communities increased at a faster pace in gaming communities (22%), versus 5% in non-gaming communities. While welfare expenditures remain higher in gaming areas, they increased at a far lesser percent than that seen in non-gaming communities. In gaming communities welfare expenditures increased 25% where as in non-gaming communities they increased 56%. Now similar to that of non-gaming communities, per capita income in gaming communities increased at a slightly greater pace. When examining the median change:

- state IGR grew more in non-gaming counties
- sales and property tax grew more in gaming counties
- capital outlays, construction expenditures and highway expenditures grew more in gaming counties
- the percent of state payroll declined less in gaming counties.

So although the numbers may look rather different, some of the similar messages prevail.

Given this analysis is only descriptive at this point it does not indicate a correlation or cause. Thus, one cannot conclude that gaming is the root source of any of these changes only that there is difference in these changes between the two

communities. For example, this analysis cannot indicate that gaming was the cause for a slower rate of increase in revenues in gaming communities. It may very well be that these communities were at a disadvantage prior to gaming and simply have not overcome these hurdles. On the flip side, as another example, this analysis cannot suggest that gaming slowed the rate of welfare increase in gaming communities. It could very well be that there were a greater number of long term welfare recipients in these communities which have been removed from welfare benefits not by choice.

One final element left to examine descriptively is whether or not directly containing versus being adjacent to an Indian gaming operation has an impact on these factors.

Table 20: County Level Descriptive Characteristics of Counties that Contain an Indian Gaming Operation within their Boundaries

	1982		2002	
	N	Mean	Mean	% Change from 1982
Population	61	22,126.98	24,985.28	12.92%
Urban Influence Code	61	7.41	7.41	0.00%
Total Revenue	61	$2,735.52	$3,968.04	45.06%
Sales Tax	61	$49.11	$95.73	94.93%
State IGR	61	$1,029.00	$1,604.12	55.89%
Property Tax	61	$658.38	$810.98	23.18%
Total Expenditures	61	$2,706.80	$3,908.10	44.38%
Capital Outlays	61	$326.14	$455.91	39.79%
Construction Exp.	61	$220.33	$283.00	28.44%
Highway Exp.	61	$272.30	$355.30	30.48%
Welfare Exp.	61	$125.60	$144.67	15.19%
Police Exp.	61	$78.48	$137.42	75.11%
Percent of Total Payroll in State	61	0.84%	0.80%	-5.84%
Percent of Total Establishments in State	61	1.16%	1.12%	-3.30%
Percent American Indian	61	10.76	14.37	33.46%
Ratio Employed to Working Age	61	67.85%	74.74%	10.15%
Per Capita Income	61	$9,365.26	$15,789.28	68.59%

By isolating the changes in counties with a gaming operation within their border we see some evidence towards the argument that the effects may vary with the exact location of the gaming operation. Sales taxes increased at a slower pace in communities with a gaming operation, when compared to those within a 50 mile radius and those outside a 50 mile radius. There is a far greater increase in sales tax when comparing gaming counties as whole versus those counties with a gaming operation within their border (Table 21). Construction and highway expenditures increased at a faster pace in communities with a gaming operation within their border. Welfare expenditures only increased 15% in these communities versus 26% in communities within a 50 mile radius Indian gaming operation and 56% in those not within a 50 mile radius. The remaining characteristics in communities that directly house gaming operations are similar to those immediately adjacent to these operations.

Table 21: Differences in Change Given Distance to Gaming Operation

	Non-Gaming	Gaming (Within 50 Mile Radius)	Gaming (Within County)
Population	8.69%	**9.09%**	**12.92%**
Urban Influence Code	0.00%	0.00%	0.00%
Total Revenue	44.65%	42.80%	45.06%
Sales Tax	187.02%	**176.15%**	**94.93%**
State IGR	73.90%	56.78%	55.89%
Property Tax	16.73%	24.91%	23.18%
Total Expenditures	46.12%	44.07%	44.38%
Capital Outlays	22.55%	37.56%	39.79%
Construction Exp.	-4.71%	**18.82%**	**28.44%**
Highway Exp.	5.16%	**22.38%**	**30.48%**
Welfare Exp.	55.69%	**25.71%**	**15.19%**
Police Exp.	70.64%	**69.56%**	**75.11%**
Percent of Total Payroll in State	-8.95%	-7.90%	-5.84%
Percent of Total Establishments in State	-7.01%	-6.01%	-3.30%
Percent American Indian	45.29%	32.28%	33.46%
Ratio Employed to Working Age	7.05%	11.16%	10.15%
Per Capita Income	65.59%	71.57%	68.59%

IV. Propensity Score Matching

As referenced in Chapter 4, a propensity score sample can be used for comparative purposes by generating a more 'comparable' comparison group. One of the assumptions of a difference in difference model is that without intervention the treatment and comparison group experiences similar changes. This necessitates the treatment and comparison group be similar in nature in the pre-period. In order to explore the degree to which the full sample varies from a more precisely matched sample the gaming and non-gaming communities is matched using propensity score matching.[65] This matching

[65] SPSS Propensity Match, "Core elements of these programs were created by Raynald Levesque (http://pages.infinit.net/rlevesqu/). Levesque's program was adapted for use with propensity matching by John Painter (www.unc.edu/~painter).", *Notes on SPSS Propensity Matching*.

technique uses probabilities from a logistic regression on the treatment indicator, looking for communities that have a similar probability of being in the treatment group. The characteristics used in this model including aggregate and specific revenues and expenditures. After performing this matching function we have a gaming community sample of 370 compared to a non-gaming sample of 196 (Table 22 and 23). This would suggest that the program could not isolate a one-to-one match for each gaming community from the total sample of non-gaming communities. Overall, the averages of characteristics in the gaming versus non-gaming communities are relatively different even after propensity score matching. This could be due to the non-matched gaming communities or this may indicate that matching on probabilities based on government fiscal characteristics may not have been the best approach. The results of the multivariate models using this sample are provided in Appendix G.

Table 22: Descriptive Characteristics 1982 Post Matching

	Non-Gaming				Gaming			
	N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
Game (1,0)	196	0.00	0.00	0.00	370	1.00	1.00	1.00
Population	196	813	71141	16268	370	440	112660	20204
Urban Influence Code	196	4	9	8	370	3	9	7
Total Revenue	196	$1,395.69	$30,436.33	$3,251.64	370	$341.88	$9,377.65	$2,754.37
Sales Tax	196	$0.00	$1,425.71	$63.61	370	$0.00	$1,196.83	$38.01
State IGR	196	$226.15	$2,191.81	$739.74	370	$66.86	$2,388.86	$944.34
Property Tax	196	$70.30	$3,867.16	$1,060.39	370	$34.23	$4,290.49	$748.03
Total Expenditures	196	$1,290.07	$34,729.47	$3,134.20	370	$301.51	$12,025.84	$2,719.10
Capital Outlays	196	$34.36	$7,970.54	$527.51	370	$0.00	$8,975.13	$363.24
Construction Exp.	196	$0.00	$7,852.17	$414.77	370	$0.00	$8,923.87	$255.80
Highway Exp.	196	$1.34	$1,031.55	$281.79	370	$0.39	$1,961.44	$301.45
Welfare Exp.	196	$0.00	$221.00	$29.55	370	$0.00	$728.39	$93.24
Police Exp.	196	$12.85	$421.67	$88.36	370	$0.00	$333.35	$78.89
Percent of Total Payroll in State	196	0.00%	11.63%	0.64%	370	0.00%	12.13%	0.70%
Percent of Total Establishments in State	196	0.02%	6.99%	0.81%	370	0.02%	9.83%	0.91%
Percent American Indian	196	0.00	3.40	0.42	370	0.00	93.40	3.67
Ratio Employed to Working Age	196	47.40%	89.95%	73.60%	370	32.89%	88.61%	70.21%
Per Capita Income	196	6,033.00	20,588.00	10,451.95	370	4,504.00	13,650.00	9,520.62

Table 23: Descriptive Characteristics 2002 Post Matching

	Non-Gaming			Gaming		
	N	Mean	% Change from 1982	N	Mean	% Change from 1982
Game (1,0)	196	0.00		370	1.00	
Population	196	17,447.22	7.25%	370	22,041.54	9.09%
Urban Influence Code	196	7.53	0.00%	370	7.38	0.00%
Total Revenue	196	$4,457.71	37.09%	370	$3,933.25	42.80%
Sales Tax	196	$177.78	179.48%	370	$104.95	176.15%
State IGR	196	$1,444.68	95.30%	370	$1,480.50	56.78%
Property Tax	196	$1,108.38	4.53%	370	$934.37	24.91%
Total Expenditures	196	$4,370.50	39.45%	370	$3,917.30	44.07%
Capital Outlays	196	$556.51	5.50%	370	$499.66	37.56%
Construction Exp.	196	$328.40	-20.82%	370	$303.95	18.82%
Highway Exp.	196	$313.00	11.08%	370	$368.91	22.38%
Welfare Exp.	196	$53.99	82.68%	370	$117.21	25.71%
Police Exp.	196	$145.20	64.34%	370	$133.76	69.56%
Percent of Total Payroll in State	196	0.57%	-11.15%	370	0.64%	-7.90%
Percent of Total Establishments in State	196	0.75%	-7.56%	370	0.86%	-6.01%
Percent American Indian	196	0.68	61.88%	370	4.85	32.28%
Ratio Employed to Working Age	196	79.73%	8.33%	370	78.05%	11.16%
Per Capita Income	196	$16,894.57	61.64%	370	$16,334.77	71.57%

So far we have begun to describe the differences between non-gaming and gaming county areas. The analysis at the point begins to lend evidence to some of the anecdotal and evidence based arguments examined in prior chapters. On the positive side we begin to see evidence for increased job growth as found by Topoleski given the slightly greater increase in the ratio of employed to working age population in gaming communities. We do not see support for the suggestion that the increase in crime Topoleski found has a cost factor for these governments. In addition a slightly lower

increase in total revenue is in support of authors such as Anders, Siegel, Yacoub, Madhusudhan, Mason and Stranahan who argue that Indian gaming operations decrease revenues to state and local governments (Popp & Stehwien, 2002, p 321). Contrary, though, to some of these arguments, sales tax revenues actually increased in gaming communities. In this next section we explore these arguments as well as the argument that Popp and Stehwien (2002) make regarding the increase of a negative impact given the existence of multiple casinos more closely and further illuminate the specific questions of this thesis.

V. Multivariate Analysis

After descriptively examining the characteristics of these communities each of the hypotheses was examined using an OLS regression model. Note, the fixed effects coefficients are found in Appendix F.

> *Hypothesis 1: There is an impact on fiscal conditions from American Indian Class II and III gaming operations on non-Indian county expenditures and revenues within a 50 mile radius.*

As demonstrated in Chapter 4 there is evidence of a direct impact on county area revenues. Tribes such as the Federated Indians of Graton Rancheria and the Puyallup tribe have given substantial contributions to local government with regard to casino development and operations.

Table 24: Total Revenues

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.616163898	0.379657949	0.3695	1398.9725

	Unstandardized Coefficients	Std. Error	t	Sig.
(Constant)	891.4778	431.7846	2.0646	0.0391
Gaming (1, 0)	-75.0977	133.6071	-0.5621	0.5741
Post Period	277.4763	144.8300	1.9159	0.0555
DID Estimator	-379.1620	258.9272	-1.4644	0.1433
Dummy for Urb. Infl. 1=Rural Adj., 0=Rural NonAdj	-325.6061	77.5284	-4.1998	0.0000
Total Slots in County Area	-0.1071	0.0503	-2.1312	0.0332
Number of Yrs AI Gam.	33.6857	18.9054	1.7818	0.0749
Number AI Gam. Ops.	15.7413	48.0836	0.3274	0.7434
Pct. State Payroll	33966.1019	7774.1005	4.3691	0.0000
Pct. State Establishments	-46395.9262	8731.8136	-5.3134	0.0000
Percent Indian	6.2571	4.5792	1.3664	0.1720
Ratio Emp. to Wrking Age	1410.8619	548.0177	2.5745	0.0101
Per Capita Income	0.1430	0.0193	7.4258	0.0000

Looking at total revenues we see that the model accounts for 38% of the variation in revenues and that the DID Estimator[66] is insignificant. We cannot reject the null hypothesis. Total slots in the county area had a significant ($p < .05$), if not very small (β=-0.1071) inverse relationship with total revenues. The number of years a county area had a gaming operation had an 'almost' significant positive relationship with total revenues (β=33.6857, p=.0749). Other factors that showed a significant relationship to county area total revenues included: percent of state payroll, percent of establishments in the state, rural adjacent/rural non-adjacent, ratio of employed to working age and per capital income. Note that the percent of payroll in the state demonstrated a positive significant relationship with total revenues, while the percent of establishments in the

[66] The DID estimator refers to the difference in difference estimator which is a dummy variable constructed by multiplying the dummy variable for gaming by the dummy variable indicating pre/post period.

state had an inverse significant relationship. This would imply that having a greater number of smaller employers has an inverse impact on total county area total revenues.

We also note in chapter 4 several arguments for potential increases in expenditures in county areas with regard to the operation of an Indian casino. These examples are most often tied to the more specific areas discussed later in this chapter.

Table 25: Total Expenditures

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.6079704	0.369628008	0.359355786	1411.6793

	Unstandardized Coefficients	Std. Error	t	Sig.
(Constant)	700.5193	435.7065	1.6078	0.1081
Gaming (1, 0)	-76.3941	134.8206	-0.5666	0.5710
Post Period	309.7740	146.1455	2.1196	0.0342
DID Estimator	-395.5966	261.2790	-1.5141	0.1302
Dummy for Urb. Infl. 1=Rural Adj., 0=Rural NonAdj	-329.4603	78.2326	-4.2113	0.0000
Total Slots in County Area	-0.1067	0.0507	-2.1039	0.0355
Number of Yrs AI Gam.	35.7440	19.0771	1.8737	0.0611
Number AI Gam. Ops.	19.6732	48.5204	0.4055	0.6852
Pct. State Payroll	34679.1799	7844.7122	4.4207	0.0000
Pct. State Establishments	-44500.5482	8811.1241	-5.0505	0.0000
Percent Indian	9.7600	4.6208	2.1122	0.0348
Ratio Emp. to Wrking Age	1518.1992	552.9953	2.7454	0.0061
Per Capita Income	0.1385	0.0194	7.1277	0.0000
AFDC/Child Welf. at County Level	881.8672	182.9561	4.8201	0.0000

Again, looking at total expenditures we see the DID estimator is insignificant indicating suggesting again, that we cannot reject the null hypothesis. The model accounts for 37% of the variation in expenditures. We see results similar to those for revenues, most likely due to the correlation between revenues and expenditures. In addition to this we see that the percent of the population that is Indian has a significant positive relationship with expenditures (β=9.76, $p < .01$) this would indicate that for a one unit increase in the

percent of the population that is Indian there is a $9.76 dollar increase in expenditures per capita. This model also demonstrates that there is a significant relationship between having AFDC/Child Welfare provided at the county level and expenditures.

Neither the model of revenues nor of expenditures supports hypothesis 1. We cannot reject the null hypothesis that there is not a significant impact from the opening of a gaming operation on local government revenues and expenditures. In addition to this, this research examined whether or not the DID estimator had a significant effect on the ratio of expenditures to revenues. Both samples yielded no significant impact from the DID estimator.

VI. Specific Impacts

The anecdotal evidence points to the potential impact (from Indian gaming) on sales taxes, property taxes, construction expenditures, highway expenditures, welfare expenditures and police expenditures. This evidence drives the next hypothesis.

> *Hypothesis 2: There are both positive and negative effects on specific county area expenditures and revenues that are correlated to the opening of an Indian gaming operation.*

The operation of an Indian gaming facility has the potential to impact sales taxes by diverting spending from items taxable at the local level. The study by Popp and Stehwien (2002) suggest this relationship may be altered by the number of casinos and the dynamics of the surrounding community (Popp & Stehwien, 2002, pp. 328-330). The flip side of this argument is that by creating a destination spot these casinos attract patrons who otherwise might not spend their resources in these areas.

Table 26: Sales Tax

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.7620	0.5806	0.573798107	110.9306

	Unstandardized Coefficients	Std. Error	t	Sig.
(Constant)	-195.8344	34.2381	-5.7198	0.0000
Gaming (1, 0)	7.8746	10.5943	0.7433	0.4574
Post Period	-110.8220	11.4842	-9.6500	0.0000
DID Estimator	42.0960	20.5315	2.0503	0.0405
Dummy for Urb. Infl. 1=Rural Adj., 0=Rural NonAdj	-21.3920	6.1476	-3.4797	0.0005
Total Slots in County Area	-0.0153	0.0040	-3.8409	0.0001
Number of Yrs AI Gam.	-4.8558	1.4991	-3.2392	0.0012
Number AI Gam. Ops.	4.9062	3.8128	1.2868	0.1983
Pct. State Payroll	1058.3900	616.4424	1.7169	0.0862
Pct. State Establishments	-1140.6585	692.3837	-1.6474	0.0996
Percent Indian	1.2187	0.3631	3.3563	0.0008
Ratio Emp. to Wrking Age	-158.1370	43.4547	-3.6391	0.0003
Per Capita Income	0.0330	0.0015	21.6394	0.0000

This model accounted for 58% of the variation in sales tax revenues. This model supports the latter argument. The DID is significant at the $p < .05$ level. The $\beta=42.0960$ indicates that the opening of a gaming operation is positively correlated with an increase in sales tax revenues of $42 per capita, which helps to offset a loss of $110 in sales taxes in the post period.. In contrast, however, there is a significant inverse relationship between total slots in the county area and the number of years the county has had a gaming operation and sales tax revenues. This would suggest that there might be a point at which the returns from the opening gaming operation begin to retract be it from the opening of additional casino's or continued operation. This lends support to Popp and Stehwien's (2002) argument.

> The opening of the first casino in a county imparts a negative, if small, effect on the total taxable gross receipts generated in that county. At the same time, it affects the neighboring counties by lowering the total taxable gross receipts generated in that county by 1.3%. The second casino opening in a county significantly impacts taxable gross receipts, decreasing them by 6.2%. The second casino opening affects the neighboring county, but in a positive way. Because most casinos are located close to the county line with a county of higher population, this may suggest that individuals spend more time and money in the higher population county while spending some time at
> the casinos.
> (Popp & Stehwien, 2002, p. 329)

There is also a small, but significant increase in sales taxes in relation to the percent Indian. Other significant factors included: rural adjacent/non-adjacent, ratio of employed to working age and per capita income.

The arguments surrounding an inverse impact of Indian gaming on property taxes are rooted in the argument that as tribes buy land they remove it from the tax base. We could also argue that there is the potential for an increase in property taxes if the casino provides for growth in the non-tribal area.

Table 27: Property Tax

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.7492	0.5613	0.5542	407.1203

	Unstandardized Coefficients	Std. Error	t	Sig.
(Constant)	483.8396	125.6553	3.8505	0.0001
Gaming (1, 0)	-9.7496	38.8815	-0.2508	0.8020
Post Period	-322.3612	42.1475	-7.6484	0.0000
DID Estimator	93.4672	75.3514	1.2404	0.2150
Dummy for Urb. Infl. 1=Rural Adj., 0=Rural NonAdj	-108.0436	22.5618	-4.7888	0.0000
Total Slots in County Area	-0.0182	0.0146	-1.2471	0.2125
Number of Yrs AI Gam.	-4.6464	5.5017	-0.8445	0.3985
Number AI Gam. Ops.	-0.1709	13.9930	-0.0122	0.9903
Pct. State Payroll	16114.6195	2262.3705	7.1229	0.0000
Pct. State Establishments	-26076.9591	2541.0782	-10.2622	0.0000
Percent Indian	-4.6109	1.3326	-3.4601	0.0006
Ratio Emp. to Wrking Age	296.1378	159.4807	1.8569	0.0635
Per Capita Income	0.0695	0.0056	12.3975	0.0000

This model accounts for 56% of the variation in property taxes. The DID estimator is insignificant indicating that there was not a significant correlation between property taxes and the opening of a gaming operation. Significant factors included whether or not the community was rural adjacent or non-adjacent, percent of total payroll in the state, percent of total establishments in the state, percent Indian and per capita income. It is not surprising that there is an inverse relationship between the percent Indian and property taxes given that a portion of this population would live on reservation and not be paying local property taxes.

The arguments in support of an impact on construction expenditures are more limited. The literature suggests that the opening of an Indian casino may spawn the need for enhancement of other services and infrastructure in a county area.

Table 28: Construction Expenditures

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.324140563	0.105067104	0.090483733	441.5569

	Unstandardized Coefficients	Std. Error	t	Sig.
(Constant)	-258.7781	136.2839	-1.8988	0.0577
Gaming (1, 0)	-44.5541	42.1703	-1.0565	0.2909
Post Period	-308.3608	45.7126	-6.7456	0.0000
DID Estimator	6.9118	81.7251	0.0846	0.9326
Dummy for Urb. Infl. 1=Rural Adj., 0=Rural NonAdj	-29.1029	24.4702	-1.1893	0.2345
Total Slots in County Area	-0.0046	0.0159	-0.2895	0.7722
Number of Yrs AI Gam.	3.8808	5.9671	0.6504	0.5155
Number AI Gam. Ops.	-0.9163	15.1766	-0.0604	0.9519
Pct. State Payroll	8040.6494	2453.7350	3.2769	0.0011
Pct. State Establishments	-8818.6567	2756.0174	-3.1998	0.0014
Percent Indian	5.2244	1.4453	3.6147	0.0003
Ratio Emp. to Wrking Age	26.4611	172.9705	0.1530	0.8784
Per Capita Income	0.0450	0.0061	7.4073	0.0000

This model accounts for very little of the variation in construction expenditures, 10.5% and DID estimator was insignificant. Significant factors included the percent of total payroll in the state, percent of total establishments in the state, the percent Indian and per capita income.

In contrast, the arguments suggesting an impact on highway expenditures are much more common. Since many of these casinos are in rural areas these communities complain that the roads can't meet the demands of the increased utilization caused by the casino.

Table 29: Highway Expenditures

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.6799	0.4623	0.4535	167.4990

	Unstandardized Coefficients	Std. Error	t	Sig.
(Constant)	-2.9988	51.6976	-0.0580	0.9537
Gaming (1, 0)	-18.5526	15.9968	-1.1598	0.2463
Post Period	-105.0154	17.3405	-6.0561	0.0000
DID Estimator	30.4313	31.0014	0.9816	0.3264
Dummy for Urb. Infl. 1=Rural Adj., 0=Rural NonAdj	-49.3961	9.2825	-5.3214	0.0000
Total Slots in County Area	-0.0207	0.0060	-3.4314	0.0006
Number of Yrs AI Gam.	4.0964	2.2635	1.8097	0.0705
Number AI Gam. Ops.	2.6792	5.7571	0.4654	0.6417
Pct. State Payroll	5306.0736	930.7931	5.7006	0.0000
Pct. State Establishments	-10812.9380	1045.4601	-10.3428	0.0000
Percent Indian	-1.2577	0.5483	-2.2940	0.0219
Ratio Emp. to Wrking Age	302.4539	65.6142	4.6096	0.0000
Per Capita Income	0.0158	0.0023	6.8600	0.0000

The model accounts for 46% of highway expenditures. The DID estimator is not significant, however total slots is. This might suggest that the relationship between gaming and highway expenditures is more complex with reference to size of the operation. There is an inverse significant correlation between total slots and highway expenditures (β=-0.0207, $p < .001$). This would suggest that the greater the number of slots, the lower the highway expenditures. Additional significant factors include rural adjacent/non-adjacent, percent of total payroll in the state, percent of total establishments in the state, percent Indian, ratio of employed to working age and per capita income.

There are arguments that support both a negative and a positive impact with relation to fiscal spending on welfare expenditures. For example Topoleski (2003) found both evidence for increased bankruptcy and at the same time evidence of increased job

growth. Topoleski also found evidence for an impact on police related expenditures. Since the passage of the Citizenship Act in 1934 tribal members have also been eligible for welfare benefits as citizens of the US and the state. As tribal individuals obtain employment it is more likely that they will be removed from the welfare rolls, lessening the burden of the state. According to Anders, this has been the case in Michigan where between 1987 and 1991 welfare payments in counties with gaming decreased by 14 percent. In Wisconsin under the same circumstances welfare payments dropped 26 percent (Anders 1998: 559). "In Minnesota, roughly 37% of the tribal gaming employees had received state or federal welfare assistance prior to their employment and another 31% were drawing unemployment compensation. (Lawrence, 1995)." How does the reduction in social welfare use impact local government welfare expenditures?

Table 30: Welfare Expenditures

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.7091	0.5029	0.4948	112.6506

	Unstandardized Coefficients	Std. Error	t	Sig.
(Constant)	60.0522	34.7689	1.7272	0.0843
Gaming (1, 0)	-26.5671	10.7585	-2.4694	0.0136
Post Period	45.3418	11.6623	3.8879	0.0001
DID Estimator	-61.1770	20.8498	-2.9342	0.0034
Dummy for Urb. Infl. 1=Rural Adj., 0=Rural NonAdj	1.7612	6.2429	0.2821	0.7779
Total Slots in County Area	0.0018	0.0040	0.4366	0.6625
Number of Yrs AI Gam.	4.9820	1.5223	3.2726	0.0011
Number AI Gam. Ops.	11.7767	3.8719	3.0416	0.0024
Pct. State Payroll	375.0544	626.0001	0.5991	0.5492
Pct. State Establishments	-605.3006	703.1188	-0.8609	0.3894
Percent Indian	-0.3795	0.3687	-1.0291	0.3036
Ratio Emp. to Wrking Age	-40.8002	44.1285	-0.9246	0.3553
Per Capita Income	-0.0020	0.0016	-1.2814	0.2002
AFDC/Child Welf. at County Level	305.1638	14.5997	20.9020	0.0000

This model accounts for 50% of welfare expenditures. The DID estimator is significant (β=-61.1770, $p < .01$). This suggests that the opening of the gaming operation is correlated decreased welfare expenditures per capita. Although total slots are insignificant, the number of years with a gaming operation and the number of gaming operations share a significant positive correlation with welfare expenditures. It is surprising the ratio of employed to working age does not share a significant correlation with welfare expenditures; one would expect that the more employed the population the lower the welfare expenditures in the community. One additional significant factor is AFDC/Child Welfare at the county level, which suggests costs increase when AFDC/Child Welfare is provided for at the county level.

Finally, given Topoleski's finding regarding an increase in crime we look at police expenditures.

Table 31: Police Expenditures

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.6908	0.4772	0.468661909	51.7380

	Unstandardized Coefficients	Std. Error	t	Sig.
(Constant)	-2.1004	15.9686	-0.1315	0.8954
Gaming (1, 0)	5.5434	4.9412	1.1219	0.2621
Post Period	-18.8619	5.3562	-3.5215	0.0004
DID Estimator	-3.9094	9.5759	-0.4083	0.6831
Dummy for Urb. Infl. 1=Rural Adj., 0=Rural NonAdj	-10.8171	2.8672	-3.7727	0.0002
Total Slots in County Area	-0.0026	0.0019	-1.3971	0.1625
Number of Yrs AI Gam.	0.1921	0.6992	0.2748	0.7835
Number AI Gam. Ops.	0.1789	1.7783	0.1006	0.9199
Pct. State Payroll	641.0030	287.5084	2.2295	0.0259
Pct. State Establishments	-912.5695	322.9273	-2.8259	0.0048
Percent Indian	0.1935	0.1694	1.1428	0.2533
Ratio Emp. to Wrking Age	-55.9623	20.2673	-2.7612	0.0058
Per Capita Income	0.0123	0.0007	17.3083	0.0000

This model accounts for 48% of the variation in police expenditures. Neither the DID estimator nor any of the other gaming related variables have a significant relationship with police expenditures. Significant factors included rural adjacent/non-adjacent, percent of total payroll in the state, percent of total establishments in the state, ratio of employed to working age and per capita income.

The above models support hypothesis 2 that the opening of an Indian gaming operation affects specific revenues and expenditures. Revenue streams affected include sales taxes, property taxes and State intergovernmental revenues (when looking at both the full sample and the propensity score sample). The only expenditure clearly affected was welfare.

VII. Impact on State IGR

Is there evidence here to support a 'trickle down' effect from state-tribal compacts? That is do states pass on the revenues collected per these contracts to local governments?

> *Hypothesis 3: Increases in county revenues from income and state IGR post the opening of an Indian gaming operation offset any additional associated expenditure.*

Table 32: State IGR

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.7529	0.5668	0.5598	388.1680

	Unstandardized Coefficients	Std. Error	t	Sig.
(Constant)	758.4764	119.8058	6.3309	0.0000
Gaming (1, 0)	16.1163	37.0715	0.4347	0.6638
Post Period	870.7671	40.1855	21.6687	0.0000
DID Estimator	-226.0017	71.8436	-3.1457	0.0017
Dummy for Urb. Infl. 1=Rural Adj., 0=Rural NonAdj	-20.3152	21.5115	-0.9444	0.3451
Total Slots in County Area	0.0081	0.0139	0.5806	0.5616
Number of Yrs AI Gam.	12.1647	5.2456	2.3190	0.0205
Number AI Gam. Ops.	12.8532	13.3416	0.9634	0.3355
Pct. State Payroll	4558.4790	2157.0527	2.1133	0.0347
Pct. State Establishments	-10429.4349	2422.7860	-4.3047	0.0000
Percent Indian	-1.0946	1.2706	-0.8615	0.3891
Ratio Emp. to Wrking Age	531.0757	152.0566	3.4926	0.0005
Per Capita Income	-0.0436	0.0053	-8.1679	0.0000

This model accounts for 57% of the variation in State intergovernmental revenue (IGR). The DID estimator shares a significant inverse correlation with State IGR (β=-226.0017, $p < .01$). This indicates that the opening of a gaming operation is correlated with a decrease of $226 in State IGR per capita. There is also a significant positive relationship between the number of years with a gaming operation and State IGR (β=12.1647, $p < .05$). This suggests that the longer a gaming operation has been in place, the greater the State IGR. Additional significant factors include percent of total payroll in the state, percent of total establishments in the state, ratio of employed to working age and per capita income. This model does not support hypothesis 3 that there is a 'trickle' down affect in State IGR that offsets any additional expenditures.

VIII. Role of Specific Independent Factors

Finally, what role does time and geographic location play in the fiscal impact of Indian gaming operations?

> *Hypothesis 4: Time plays a role in the fiscal effects of Indian gaming. The longer a gaming operation been in business affects the impact it has on expenditures or revenues. The longer the business has been operating the more positive the impact on the county.*

The table below details the coefficients and significance of the time with gaming operation by model. It's notable that although only significant in 3 models (Sales Tax, Welfare Expenditures and State IGR), it is 'almost' significant in 3 additional models (Total Revenues, Total Expenditures and Highway Expenditures)

Table 33: Time with Gaming Operation

Model	Unstandardized Coefficients	Std. Error	t	Sig.
Total Revenues	33.6857	18.9054	1.7818	0.0749
Total Expenditures	35.744	19.0771	1.8737	0.0611
Sales Tax	-4.8558	1.4991	-3.2392	0.0012
Property Tax	-4.6464	5.5017	-0.8445	0.3985
Construction Expenditures	3.8808	5.9671	0.6504	0.5155
Highway Expenditures	4.0964	2.2635	1.8097	0.0705
Welfare Expenditures	4.982	1.5223	3.2726	0.0011
Police Expenditures	0.1921	0.6992	0.2748	0.7835
State IGR	12.1647	5.2456	2.319	0.0205

> *Hypothesis 5: The more non-metropolitan a community the more likely they are to benefit from the opening of an Indian gaming operation.*

The role of metropolitan status and the opening of a gaming operation appear to be insignificant in both rural adjacent and non-adjacent communities. The factor is insignificant in all models.

With regard to hypothesis 4 and 5, preliminary examination of the role of time with a gaming operation lends evidence that time plays a role, however models with

varying metropolitan status did not show any significant variation with regard to the DID estimator.

IX. Conclusion

This chapter clearly demonstrates that although relatively limited there are potentially both positive and negative impacts from the opening of an Indian gaming operation on non-Indian local governments. There was not a significant correlation between the DID estimator and aggregate revenues and expenditures from the opening of an Indian gaming operation. There were however, depending on the sample impacts on sales taxes, property taxes, welfare expenditures and State intergovernmental revenues. The result of the full sample model (versus the propensity score model) indicated the opening of an Indian gaming operation had a positive effect on sales taxes suggesting that the opening of an Indian gaming operation may indeed generate additional revenues in these communities. The result of the propensity score model in Appendix G indicated that the opening of an Indian gaming operation results in increased property taxes suggesting that the opening of a gaming operation is correlated with an increase the property value of off reservation taxable property. This is validated by the inverse relationship between the percent of the population which is American Indian and property taxes. Both samples demonstrated the opening of a gaming operation is inversely correlated with welfare expenditures at the local government level. Finally, both models suggest that the opening of a gaming operation is inversely correlated with State IGR. The full sample model where State IGR shares a positive relationship with the years the community has a gaming operation and the propensity score model where State IGR shares a positive relationship with the total number of gaming operations suggests that

this relationship may be more complex. It may be the 'trickle' down effect takes longer to show up in the data or that it is reliant on number of operations. Further, it may be that these models are simply missing a key factor which is established tribal/local government revenue sharing that impacts the state's decision regarding intergovernmental revenues sharing with local governments.

Chapter 6: Conclusion

I. Introduction

Through this research we have woven a complicated tale of governance and economic development. We establish the basis for current tribal-local relations by looking at both the history of American Indian policy and current tribal-local government relations. We see a series of conflictual national policies that make it hard for tribes to establish culturally appropriate institutions capable of sustained economic development and in this make it challenging for local governments to understand and see validity in these policies and institutions. Given the limited policies directed at the relations between state/local governments and tribes we see a blossoming of informal relations sometimes solidified in forms such as "memoranda of understanding". The Indian Gaming Regulatory Act provides little if no direction for the relations between tribes and local governments regarding gaming.

Given the close ties between governance and economic development it becomes clear that governments are susceptible to the influence of local economic endeavors, including those outside their immediate jurisdiction. Clearly tribes have faced a greater responsibility for the care of their populace, given their "semi-sovereign" status, although with recent devolution movements local governments are continuing to face increasing demands as well. Given the challenges of economic development in tribal communities as well as rural communities, gaming is a very lucrative endeavor. Not only does it provide for jobs for the community members, it can be a destination point and potential stimulus for tourism.

We begin to see how these foundations have laid the ground for tribal-local relations. Tribes are generally considered outside the scope of intergovernmental relations in the United States. However, as resources enable them greater participation there are recommendations that this change (as cited in Mays & Taggart, 2005, p. 75). Demonstrated here are complex relations that span a variety of topics. These relations most often appear to center around land and gaming related issues. Relations over gaming appear to be almost equally cooperative and conflictual. In these relations we see clear evidence of impact mitigation through negotiated payments from tribes either directly to local governments or awarded to the state that then disperses these revenues to local governments. These relationships are illuminated by a limited survey (14 responses) of tribal and local governments. Most of these respondents indicated the relations were information exchanges and not an exchange of goods. Most relations were cooperative and both groups benefited, although most of the governments indicated their economic circumstances were different from the government with which they were interacting. A majority indicated that their government's economic circumstances had changed within the past 5-10 years. History clearly influenced these interactions.

Although there is debate about the degree and direction of socio-economic impact from Indian gaming, there appears to be consensus that their most likely is some impact on communities surrounding Indian gaming operations. Employment and crime related impacts seem to be popular. Although studies of non-Indian gaming operations have shown negative impacts, some would argue this relationship is not transferable to Indian gaming communities since the dynamics of these communities are so different from the communities where gaming operations are traditionally found. Given the ties established

between the socio-economic conditions of the community and governance, once can assume that this would imply a fiscal impact. The literature however documenting a fiscal impact is limited. The National Indian Gaming association reports an additional $100 million in local revenue as a result of Indian gaming (National Indian Gaming Association, 2004, p. 11). Smaller economic impact studies demonstrate primarily positive fiscal impacts on local governments as well, suggesting that negative impacts are mitigated by the tribes. There is some suggestion in the literature that the number of Indian gaming operations plays a role in how the operation(s) impact their surrounding communities. These economic impact studies as well as tribal-state compacts give evidence to mitigation for any real or perceived impacts in local communities. The specificity and breath of this mitigation varies greatly between communities and states.

II. Revisiting the Primary Research Questions: Assumptions and Findings

The primary purpose of this dissertation was to examine evidence for or against a fiscal impact on non-Indian governments from the opening of an Indian gaming operation. To enhance the validity of these results two samples were used. The first was a sample of gaming communities in 19 states. The second was a sample using propensity score matching to isolate communities that had a similar probability of being a gaming community. Given the limited match in the propensity score sample, this research places the emphasis on the results of the full sample, while still sharing the results of the propensity score sample. The first question explored was:

> *What is the effect of American Indian Class II and III gaming operations on non-Indian local government expenditures and revenues within a 50 mile radius of these operations?*

This question led to the hypothesis:

> *Hypothesis 1: There is an impact on fiscal conditions from American Indian Class III gaming operations on non-Indian county expenditures and revenues within a 50 mile radius.*

The quantitative models employed here would suggest that at an aggregate level there is not a significant correlation between non-Indian government expenditures and revenues within a 50 mile radius and the opening of an Indian gaming operation. This includes no significant correlation with the ratio of expenditures to revenues. Thus we cannot answer:

> *To what degree do increases in local government revenues that can be attributed to the opening of an Indian gaming operation potentially offset any additional associated expenditure?*

Given the limited evidence for impact on aggregate revenues and expenditures, one might infer that the system is working fine as is. Maybe there is no need for additional policy interventions or mandated impact mitigation. Does this mean there is no need for impact mitigation? Not necessarily. These models may very well be failing to pick up the significance of existing impact mitigation effects. Looking at the next question and hypothesis:

> *Is there any evidence that the local government fiscal effects of the opening of an Indian gaming operation are directly tied to specific expenditures (crime, social welfare and/or infrastructure) or revenue sources (taxes: incomes, sales, property)*

Hypothesis:

> *Hypothesis 2: There are both positive and negative effects on specific county area expenditures and revenues that are correlated to the opening of an Indian gaming operation.*

The model(s) used here do appear to indicate that there is indeed correlation between specific revenues and expenditures. Using the full sample the model indicated that the

opening of an Indian gaming operation is positively correlated with sales taxes. This relationship did not maintain significance when looking at the propensity score sample. In reverse the full sample does not show a significant correlation between property taxes and the opening of an Indian gaming operation, but the propensity score shows a positive correlation between the two. Both samples suggest that there is an inverse correlation between the opening of an Indian gaming operation and welfare expenditures. That is, the opening of an Indian gaming operation is correlated with a decrease in local welfare expenditures.

> *What role do state-local intergovernmental revenue exchanges have on the fiscal effect of gaming? Are tribal-state revenue sharing agreements reflected in the data such that there is a trickle down effect from the state to the local area or do all fiscal affects stem from changes in the local economy?*

Both samples show a significant relationship between the opening of an Indian gaming operation and State intergovernmental transfers. Both models indicate that with the opening of the gaming operation there is a decrease in State intergovernmental transfers. This is directly opposite the hypothesis:

> *Hypothesis 3: Increases in county revenues from income and state IGR post the opening of an Indian gaming operation offset any additional associated expenditures.*

The logic or reason for this is room for future research. Descriptively, out of 79 county areas that had a decrease in state intergovernmental revenues, they were almost evenly split between gaming and non-gaming communities. The average decrease in non-gaming communities was 14% versus a 12% decrease in gaming communities. State IGR increased almost 2 percentage points more in non-gaming communities (in communities

with an increase in state IGR) and in non-gaming communities the maximum increase was considerably higher 18% versus 6% in gaming communities.

The next question and hypothesis surrounded the role of time in these models.

> *What role does time play in the fiscal effects of Indian gaming? Example: Does the longer a gaming operation has been open affect the impact it has on local government expenditures or revenues?*

Hypothesis:

> *Hypothesis 4: Time plays a role the fiscal effects of Indian gaming? The longer a gaming operation been in business affects the impact it has on expenditures or revenues. The longer the business has been operating the more positive the impact on local government revenues and expenditures.*

In a number of these models the time a gaming operation has been in effect is significant or near significant. This indicates that the longevity of the operation may very well be a significant factor in the impact of the operation. There appears to be both negative and positive impacts in the long run.

> *Is there a geographic component to this effect? Does the degree of rurality(as indicated by the scalar Urban Influence Codes (UIC)) of a community impact the effect?*

Although the degree of rurality clearly impacts expenditures and revenues, when running separate models to explore the changes in the relationship between the independent and dependent variables, when looking at either rural adjacent or rural nonadjacent, there does not appear to be any great difference in these relationships. Thus, this research did not support the hypothesis:

> *Hypothesis 5: The more non-metropolitan a community the more likely they are to benefit from the opening of an Indian gaming operation.*

III. Limitations

There were several limitations to this research. First, the data is limited by the errors and biases found in the original data sources. These include both sampling and non-sampling errors and imputation of missing data. One of the greatest limitations is the lack of revenues for gaming operations. The size of the gaming operation can only be inferred from the number of slots. This may or may not be the best proxy, given that this work looks at both Class II and Class III gaming. In addition given the r-squared results in the models it is clear that there are many additional factors that would need to be included to account for a large portion of revenues and expenditures. Finally, this research was unable to account for potential competition between Indian and non-Indian gaming.

IV. Future Research

There is great potential for future research on this topic. At on the outset of this research these issues were just beginning to surface in the literature. Since that time though, the number of articles discussing these issues has grown dramatically. Most recently in the August 2007 issue of Governing Magazine an article titled, *Tribes and Tribulations: Localities are struggling to deal with the issues that arise from being adjacent to Indian lands,* by Ellen Perlman examined the impacts of Indian gaming on local areas finding very similar situation as those presented here from early in the decade (Perlman, 2007). Perlman stresses the importance of the uniqueness of these relationships given varying circumstances under which tribes and local governments interact. Future research could benefit from better exploration of ways to control for or represent these differences in the models.

The models presented here move us towards a more objective account of these issues. It's near certain that with the 2007 release of the Census of Governments; these models may very well provide different findings given the increase in impact mitigation post the mid-1990's. These models could be greatly enhanced by more deeply exploring the concepts of proxies for revenues as well as attempting to isolate whether or not there are existing mitigation agreements within these communities. These models may also dilute a more dramatic impact on a given government type, for example cities vs. counties given the use of aggregate 'county area' revenues and expenditures. These governments vary in both their responsibilities and resources. This model could also be enhanced by looking at differences in these relationships given the varying distances from the actual gaming operation. Finally, future research could include examining the areas excluded from this research and including urban areas.

Appendix A: Surveys and Survey Letter

Survey Letter

I'm contacting you to request your participation in a survey designed to examine Tribal-Local government interaction. A literary source indicated your government has had interaction with …….. government regarding ……. I'm hoping you might be willing to answer some questions regarding the interaction(s) involved in this situation or issue?

This survey is part of a dissertation titled: The New Paradigm of United States American Indian Policy: Tribal-Local Government Interaction. This dissertation is aimed at further illustrating the interactions that occur between Tribal and non-tribal governments in an effort to better understand what elements play a role in these interactions. The goal is to provide American Indian Nations, Local governments and policy-makers information for the purpose of creating effective and amicable policies.

Upon completion of the survey I will be asking selective governments to provide additional details as necessary.

There are three options for completing the survey.

1. Completed online.
2. Completed via mail.
3. Completed via the telephone.

The online survey is presented in 6 group's demographics, interaction details, government, culture, policies and economics. It shouldn't take more than 10-15 minutes to complete. If there are certain questions you feel more comfortable discussing over the phone please contact me at the number below.

Participation in this survey is voluntary and you may stop participating at any point. Only myself and the ITS staff at Saint Louis University have access to the information you submit, however unless you indicate so I will not maintain these responses as confidential. This research has been approved by the Institutional Review Board at the University of Missouri-St. Louis.

If you're willing to participate please let me know which method works best for you. You may respond to this email or contact me at 1-888-502-1749.

Sincerely,

Courtney Andrews

PhD Candidate, Political Science, University of Missouri St. Louis

Survey Instrument (Mail Version)

The purpose of this questionnaire is to understand how American Indian Governments and local governments including City governments, Mayors offices, County governments, Municipal boards interact over issues or situations of mutual concern, such as land use, utilities, economic development etc. The term interaction is used in this case to reference all interactions (phone conversations, meetings, paper correspondence, etc) regarding the specific topic, issue or situation we discussed in our phone or email conversation. For example the issue or situation may be composed of a set of interactions regarding a negotiation over an economic development project. The "Economic Development Project Situation" would include all interactions (phone call, correspondence, meetings) pertaining to that situation. The results of this survey will provide a clearer picture to policymakers of how to promote cooperative interactions between American Indian and local governments. As opportunities for American Indian governments and local governments continue to increase it is critical that policymakers develop of full understanding of the dynamics of these interactions so as to best promote appropriate policies, which do not threaten American Indian sovereignty.

Please take 10-15 minutes to complete this brief survey with regards to the specific topic, issue or situation referenced in our initial phone or email conversation. If you would like to take the survey online you can do so at: http://fxap2.slu.edu/servlet/TestPilot3/surveys/019/FinalV_All.tp3. You may choose to withdraw from the survey at anytime and the results will not be used. If you would like to remain confidential please check the box at the end indicating so. Also, please indicate if you would like to receive a copy of the survey results. I can also provide more details of my findings if requested, for use by your government.

Thanks in advance for your participation!

Courtney Andrews, PhD candidate UM-St. Louis, andrewsc@studentmail.umsl.edu,

1-888-502-1749

Directions: Please answer each question to the best of your ability. There are several different question types.

The "Corresponding Government" refers to the government you are interacting with over this specific issue or situation.

On the essay questions if you need additional space feel free to use additional paper. On the Yes or No questions I've provided a place for comments and explanation if you are willing to provide additional information.

You do not have to answer all questions, only those you feel comfortable responding to.

If you have any questions or need clarification please do not hesitate to ask. When completed return the survey in the stamped/addressed envelope which was included with the survey.

1. Name: _____

2. Title:

_____

3. Government Name/Phone Contact Number

_____

_____

_____

4. Email Address: _____

5. Please describe your governance structure: Circle your answer(s).

a. American Indian nation government
b. Non-American Indian government
Other:

6. Please indicate who the corresponding government is that you have been interacting with over the specific situation or issue and briefly describe in your own words the interaction you had with the corresponding government local regarding the specific situation or issue referenced in our prior phone conversation. This could be as simple as a single letter or phone conversation, or could be comprised of years of interactions over the specific situation.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____
_____

7. What type of interactions did this situation or issue involved? Circle all that apply.

Circle your answer(s).

a. Information Exchange
b. Negotiations
c. Agreements
d. Disputes
e. Lawsuits
f. Exchange of Goods
g. Other

8. What was the approximate length of this situation or issue from start to finish. Meaning not just an independent phone call, but the overall process of interacting regarding the specific situation or issue? Circle your answer(s).

a. Less than 1 year
b. 1-3 years
c. 4-5 years
d. 6+ years
e. ongoing

9. If you describe the situation or issue as ongoing, please indicate for how long interactions regarding this have been occurring: Circle your answer(s).

a. Less than 1 year
b. 1-3 years
c. 4-5 years
d. 6+ years

10. How cooperative was the interaction(s) regarding the specific situation or issue? Circle your answer(s).

a. Very Cooperative
b. Somewhat Cooperative
c. Not very Cooperative

d. Not at all Cooperative
Other:

11. Who benefited from the results of the interaction(s) over the specific situation or issue? Circle your answer(s).

a. Local Non-American Indian Community Benefited
b. American Indian Community Benefited
c. Both Benefited
d. Neither Benefited
Other:

12. How much conflict was there during the interactions over the specific situation or issue? Circle your answer(s).

a. Quite a bit of Conflict
b. Some Conflict
c. Not very much Conflict
d. No Conflict

13. Where there negative affects of the interaction(s)? Circle your answer(s).

a. Yes, negative effects on the Local Government's Non-tribal Community.
b. Yes, negative effects on the Tribal Community.
c. Yes, negative effects on both the Local Government's Non-tribal Community and Tribal Community.
d. No, no negative effects on either community.
Other:

14. How often does your government interact with the corresponding government? Circle your answer(s).

a. Frequently
b. Often, but would not say Frequently.
c. Not very often.
d. Almost never.

15. Has your government interacted with the corresponding government prior to the specified interaction(s)? Circle your answer(s).

Yes
No

How often has this interaction occurred previously?:

16. Were these interactions regarding: Circle all that apply.

a. Gaming
b. Land Purchase/Development/Use
c. Environment/Utilities
d. Political/Jurisdictional
e. Social Services
f. Archaeology/Cultural Resources
e. Other

17. Do you believe your government's past interactions with the corresponding government have influenced the corresponding government's interaction over the specified situation or issue? Circle your answer(s).

Yes
No

Comments:

18. Were there any other events that occurred prior to the more recent interactions that you feel influenced the specified interaction your government had with the corresponding government?

_____
_____
_____
_____
_____
_____
_____
_____

19. What do you believe most strongly impacted your interactions and relations with the corresponding government?

_____
_____
_____
_____
_____

_____
_____

20. Please describe what you feel the community impact was from these interactions or the specific situation or issue on the surrounding community?

_____
_____
_____
_____
_____
_____
_____
_____
_____

21. In your municipal elections who do voters have the opportunity to vote for? Circle all that apply.

a. Chief/Mayor
b. Council Members
c. Other Elected Officials
d. Board of Commissioners

22. Optional: What is your government's annual revenues and expenditures?

_____
_____
_____
_____

23. What is the primary source(s) of your government's revenues?

_____
_____
_____
_____

24. Has your government structure changed in the past 5-10 years? Circle your answer(s).

Yes
No

Comments:

25. How recently has it changed? Circle your answer(s).

a. Within the past year.
b. 1-5 years ago.
c. 5 or more years ago.

26. Would you define these changes as_____ for the government as a whole? Circle your answer(s).

a. Positive
b. Negative
c. Both
Other:

27. Do you feel these changes have affected the your government's interaction with the corresponding government? Circle your answer(s).

Yes
No

Did they make it easier or more difficult?:

28. Please describe in your own words how these changes effected the interaction with the corresponding government.

_____
_____
_____
_____
_____
_____
_____
_____

29. Do you feel your community and the corresponding government's community share similar worldviews and values as they live their daily lives? Circle your answer(s).

Very Similar
Somewhat Similar
Not Very Similar
Very Different

30. Do you feel these similarities (differences) have impacted the pairs interactions? Circle your answer(s).

Strongly impacted interactions
Moderate impact on interactions
Minimal impact on interactions
No impact on interactions

31. Please describe specifically how these similarities or differences have effected the interaction:

_____
_____
_____
_____
_____

32. Are the economic circumstances in your government similar or different to the economic circumstance in the corresponding government? Circle your answer(s).

a. Similar
b. Different
Other:

33. Do you feel this similarity or difference has impacted the your government's specified interaction with the corresponding government? Circle your answer(s).

Yes
No

Comments:

34. Does your government have more influence over economic resources, does the corresponding government have more influence over them, or do they each have about the same influence? Circle your answer(s).

a. Corresponding government has more influence over economic resources.
b. My government has more influence over economic resources.
Each has about the same amount of influence.
Other:

35. Has the economic circumstances of your government changed in the past 5-10 years? Examples: Additional tax revenues assessed, decrease in tax base, isolation of other revenues, etc. Circle your answer(s).

Yes
No

Comments:

36. Do you think these changes have effected your government's interaction with the corresponding government? Circle your answer(s).

Yes
No

Comments:

37. Have you noted any changes in the corresponding government's economic circumstances in the past 5-10 years? Circle your answer(s).

Yes
No

Do you feel these changes impacted the interaction(s)?:

38. Would you like the results of this survey to be sent to you? Circle your answer(s).

Yes
No

Should the results be sent via email or US mail? If US mail please indicate mailing address.:

39. Would you like your answers to remain confidential? Circle your answer(s).

Yes
No

Appendix B: Examination of Discrepancies in Facility Locations

Poarch Creek (first zip 36504 second zip 36502)
Reservation appears to be in 36504
http://www.eda.gov/ImageCache/EDAPublic/documents/pdfdocs/02alabama_2epdf/v1/02alabama.pdf
This site also lists the casino as in 36504.
http://www.merchantcircle.com/business/Creek.Bingo.Palace.251-368-8007
http://500nations.com/casinos/alCreek.asp (Good website for tribal casinos).

Oneida (first zip 51455 second zip 54313)
http://www.oneidabingoandcasino.net/?page_id=56&parent_page_id=13 has mailing address 51455 and shipping address 54313)

Creek Nation Casino Tulsa (first zip 74170 second zip 74137)
Site has casino in 74137 http://www.500nations.com/casinos/okCreekTulsaCasino.asp

Ute Mountain Casino (first zip 81321 second zip 81334)
Site has casino in 81331 and reservation in 81334.
http://www.500nations.com/casinos/coUteMountain.asp
Site has casino mailing address in 81334.
http://www.utemountaincasino.com/map.html

Bannock Peak (first zip 83203 second zip 83204)
Site has casino in 83203
http://www.500nations.com/bingo/idShoshoneBannockBingo.asp
Site has casino in 83204.
http://www.casinocity.com/us/id/forthall/bannock/

Gila River (first zip 85246 second zip 85226)
Site has casino in 85226
http://www.500nations.com/casinos/azGilaRiverCasinoWildhorse.asp
Site has casino in 85226
http://www.casinocity.com/us/az/chandler/gilarive/

Pechanga (first zip 92589 second zip 92592)
Site has casino in 92592 http://www.500nations.com/casinos/caPechanga.asp
Site has casino in 92592 http://pechanga.casinocity.com/

Spirit Mountain (first zip 97347 second zip 97396)
Site has casino in 97347 http://www.500nations.com/casinos/orSpriritMountain.asp
Site has casino in 97396 http://www.casinocity.com/us/or/willamina/spirmoun/.

Border Town (first zip in MO second in OK)

Casino City does show this as an OK gaming facility
http://www.casinocity.com/us/or/willamina/spirmoun/
But this shows it in MO
http://www.500nations.com/casinos/moBorderTown.asp

Appendix C: Data Example

FIPS	COG Year	State	County	Urban Influence Code	Population	Post	Gaming (0, 1)	Opening Year	Total Slots	Total Tablegames	Total Poker Seats	Total Bingo Seats
1019	1982	AL	Cherokee County	6	19525	0	0					
1019	2002	AL	Cherokee County	6	23988	1	0					
8033	1982	CO	Dolores County	10	1669	0	1					
8033	2002	CO	Dolores County	10	1844	1	1					
46063	1982	SD	Harding County	12	1670	0	0					
46063	2002	SD	Harding County	12	1353	1	0					
56029	1982	WY	Park County	11	23263	0	1					
56029	2002	WY	Park County	11	25786	1	1					
56045	1982	WY	Weston County	9	7789	0	0					
56045	2002	WY	Weston County	9	6644	1	0					

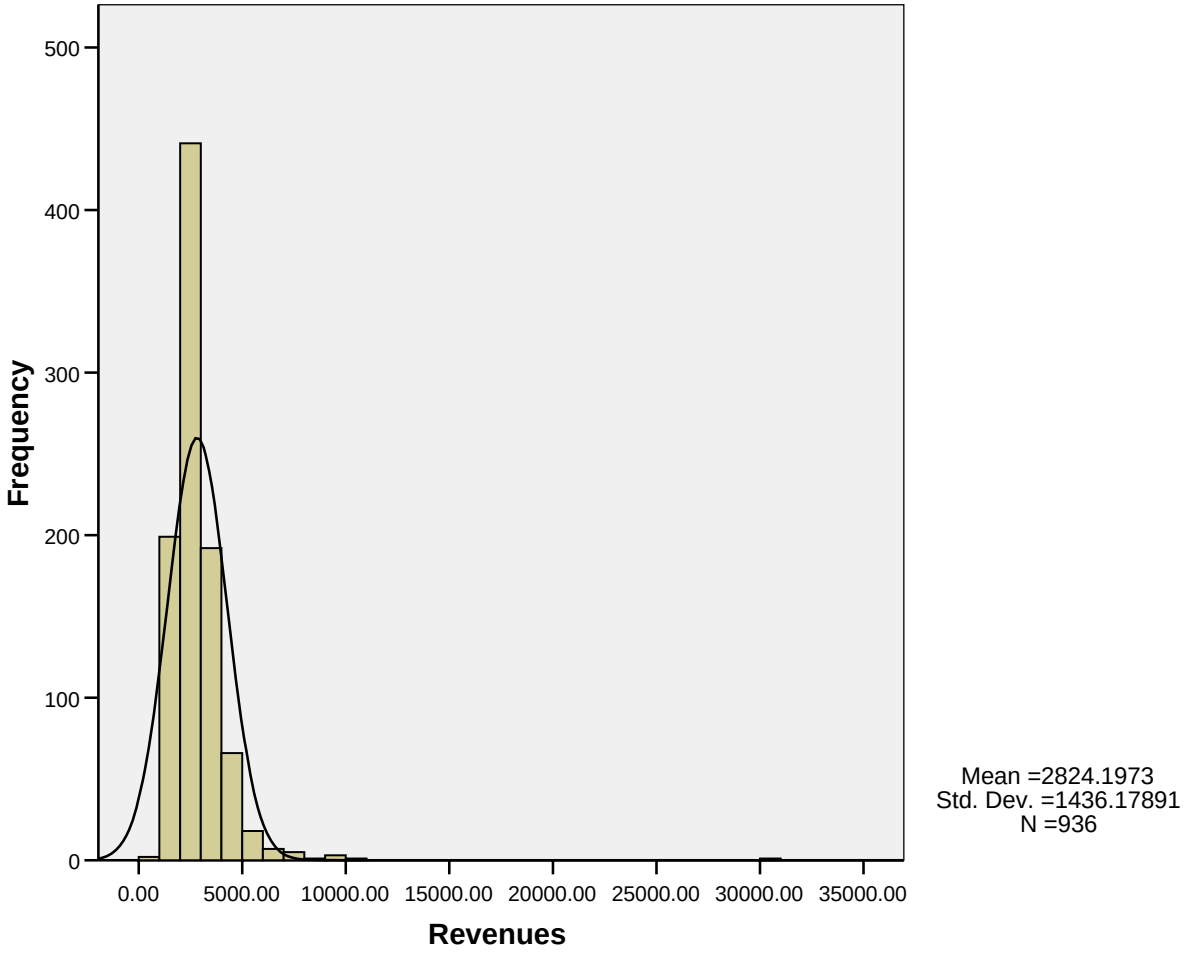
FIPS	COG Year	State	County	Urban Influence Code	Population	Post	Gaming (0, 1)	Years Gaming	Number of Operations	Total Revenue	Sales Tax	State IGR
1019	1982	AL	Cherokee County	6	19525	0	0			1406.730751	78.35343131	596.919372
1019	2002	AL	Cherokee County	6	23988	1	0			1713.189928	149.1579123	926.421544
8033	1982	CO	Dolores County	10	1669	0	1			3153.421031	61.48109065	1771.77324
8033	2002	CO	Dolores County	10	1844	1	1			4202.277657	85.68329718	2182.21258
46063	1982	SD	Harding County	12	1670	0	0			2834.256859	0	799.892751
46063	2002	SD	Harding County	12	1353	1	0			3437.546194	126.3858093	932.742054
56029	1982	WY	Park County	11	23263	0	1			4528.602527	4.491149548	883.473275
56029	2002	WY	Park County	11	25786	1	1			5881.09827	14.73667882	1674.3969
56045	1982	WY	Weston County	9	7789	0	0			3703.558214	197.6093343	924.572157
56045	2002	WY	Weston County	9	6644	1	0			7389.072848	155.3281156	4430.46357

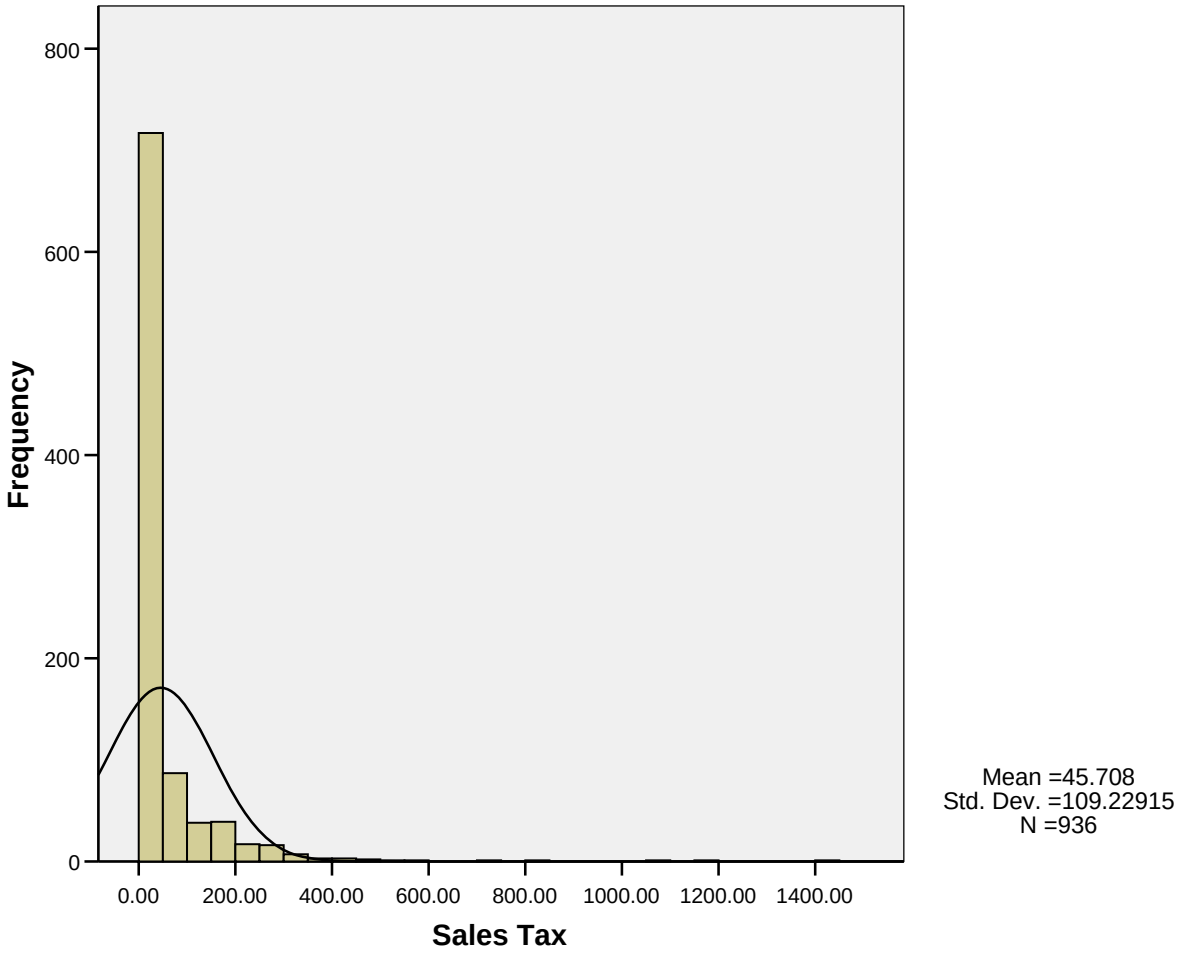
FIPS	COG Year	State	County	Urban Influence Code	Population	Post	Gaming (0, 1)	Total Expenditures	Capital Outlays	Construction Expenditures	Highway Expenditures	Welfare Expenditure
1019	1982	AL	Cherokee County	6	19525	0	0	1344.81243	58.66952052	32.67911403	111.0325453	4.0132245
1019	2002	AL	Cherokee County	6	23988	1	0	1634.859096	49.39969985	30.26513257	182.8414207	2.75137568
8033	1982	CO	Dolores County	10	1669	0	1	3190.309686	371.1222199	150.9081316	903.2131136	274.988150
8033	2002	CO	Dolores County	10	1844	1	1	5446.854664	2533.08026	2391.54013	551.5184382	155.639913
46063	1982	SD	Harding County	12	1670	0	0	2630.932166	237.956922	233.4882474	731.7454643	6.70301188
46063	2002	SD	Harding County	12	1353	1	0	3499.630451	182.5572801	153.7324464	888.3961567	1.478196
56029	1982	WY	Park County	11	23263	0	1	3861.185625	805.1989547	451.6011269	192.8788333	8.26050720
56029	2002	WY	Park County	11	25786	1	1	5316.567129	735.7868611	449.2748003	187.4272861	2.71465136
56045	1982	WY	Weston County	9	7789	0	0	3267.140993	464.92087	190.4235403	389.9490863	2.39526465
56045	2002	WY	Weston County	9	6644	1	0	7125.075256	2801.02348	2378.236002	221.5532812	24.8344370

FIPS	COG Year	State	County	Urban Influence Code	Population	Post	Gaming (0, 1)	Percent of Total Payroll in State	Percent of Total Establishments in State	Percent American Indian	Ratio Employed to Working Age	Per Capita Income
1019	1982	AL	Cherokee County	6	19525	0	0	0.002110319	0.003564289	0.1	0.67117567	928
1019	2002	AL	Cherokee County	6	23988	1	0	0.001494368	0.003566355	0.4	0.685198896	1554
8033	1982	CO	Dolores County	10	1669	0	1	0.000123764	0.000377837	3.6	0.678018576	919
8033	2002	CO	Dolores County	10	1844	1	1	4.76584E-05	0.000337583	3.4	0.729055258	1710
46063	1982	SD	Harding County	12	1670	0	0	0.000739741	0.001890705	0.6	0.784067086	876
46063	2002	SD	Harding County	12	1353	1	0	0.000355168	0.001539614	1.5	0.934156379	1279
56029	1982	WY	Park County	11	23263	0	1	0.040816241	0.058455422	0.5	0.780877111	1232
56029	2002	WY	Park County	11	25786	1	1	0.041768128	0.062970791	0.4	0.783296285	1802
56045	1982	WY	Weston County	9	7789	0	0	0.01297105	0.015460502	0.6	0.743333333	1256

56045	2002	WY	Weston County	9	6644	1	0	0.007191543	0.011976372	1.8	0.748255234	1736

Appendix D: Distribution of Key Variables

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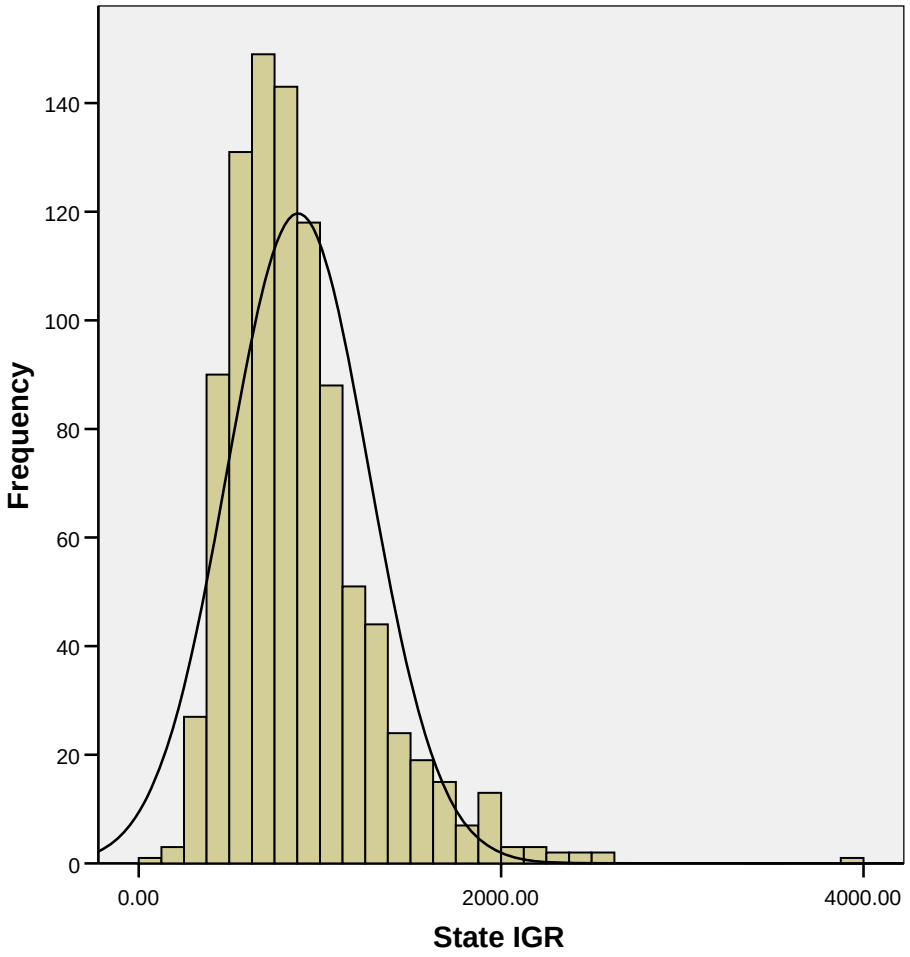
N =936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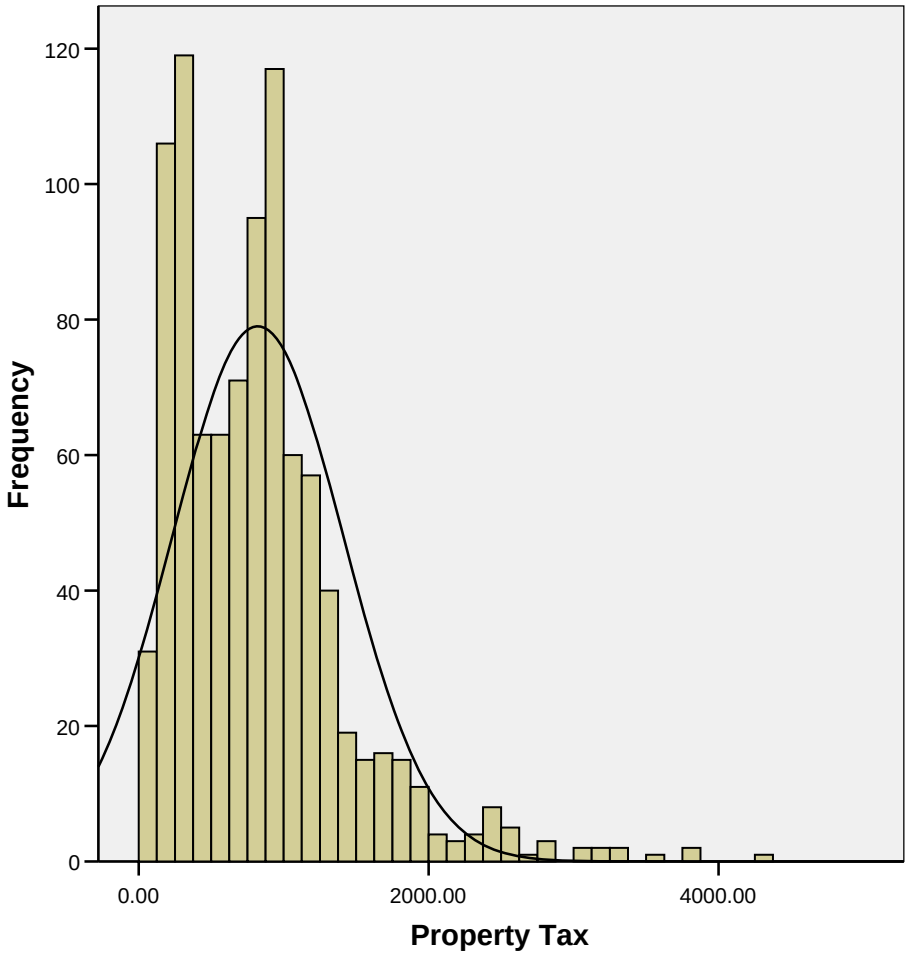
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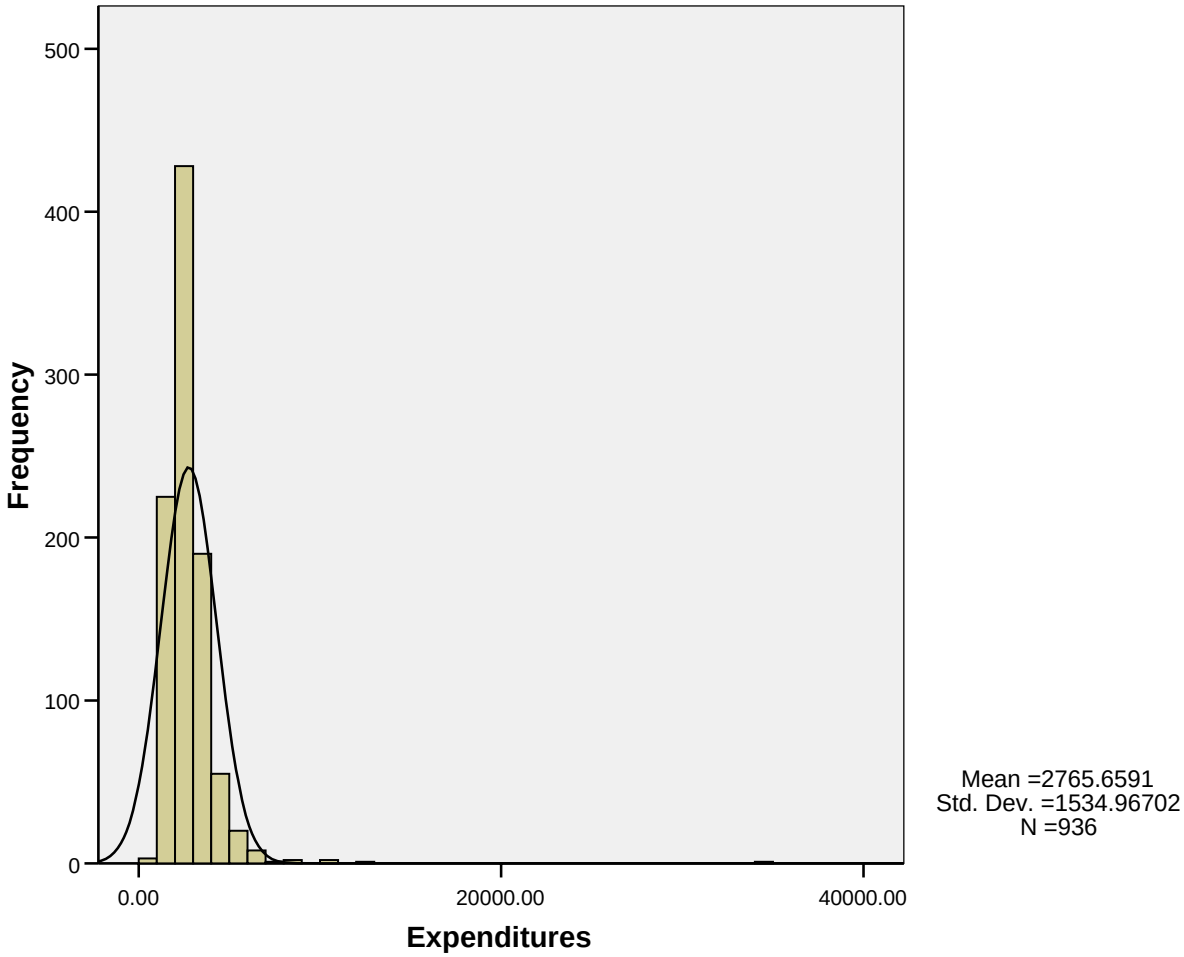
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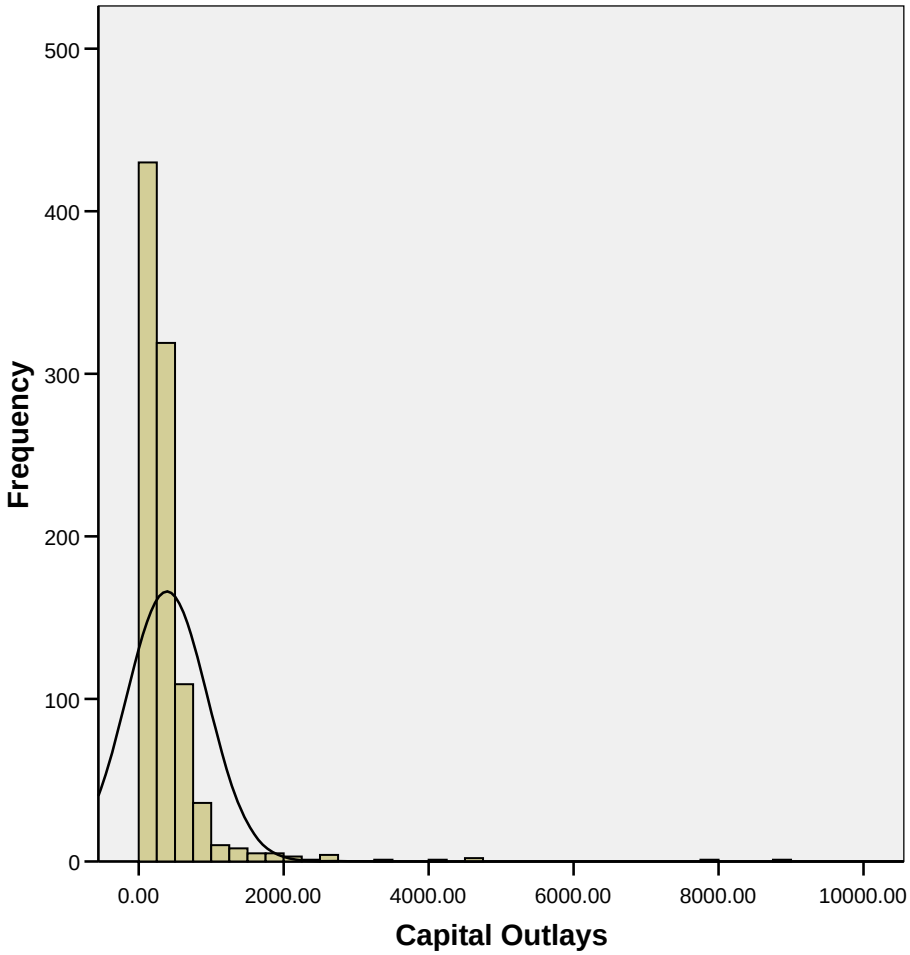
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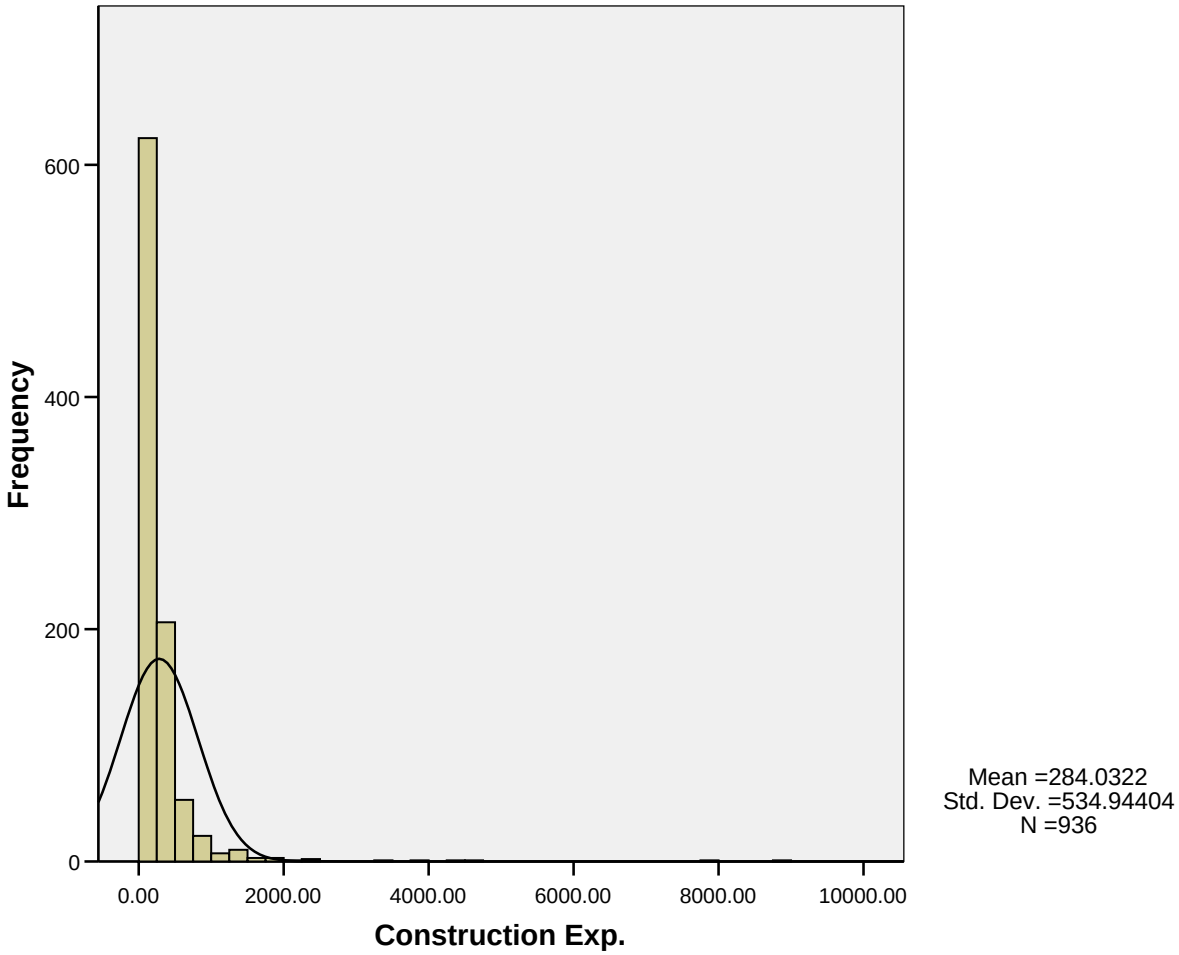
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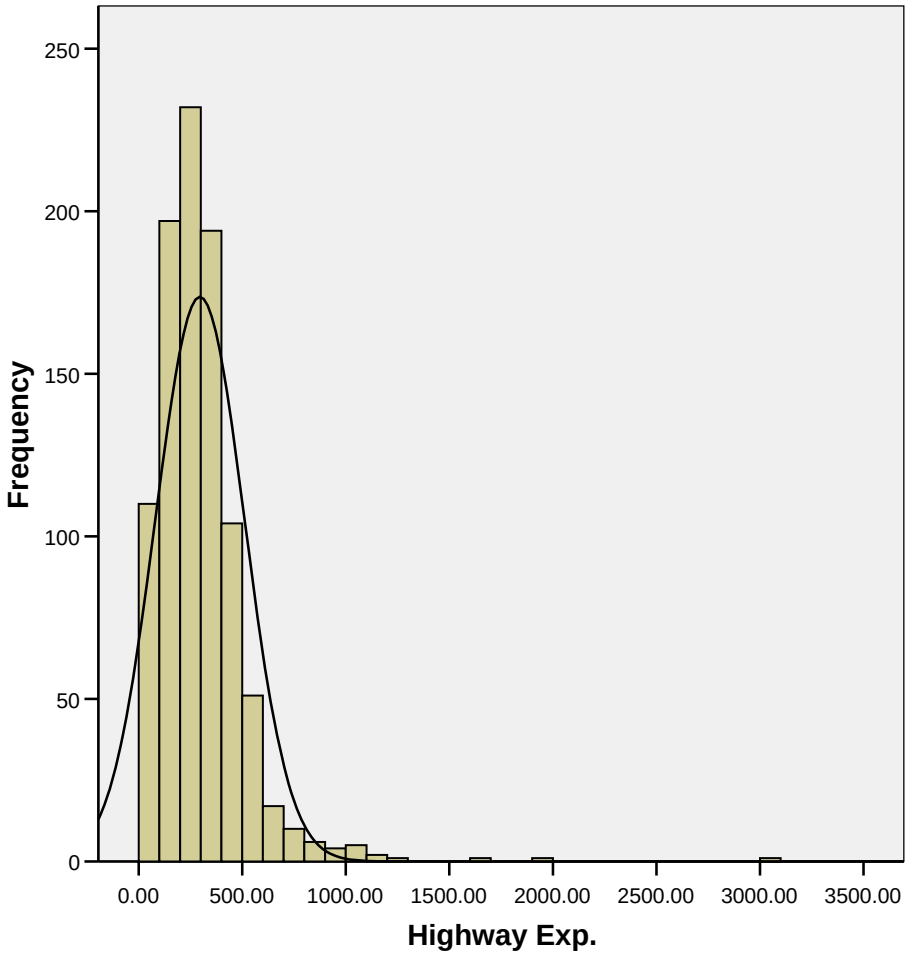
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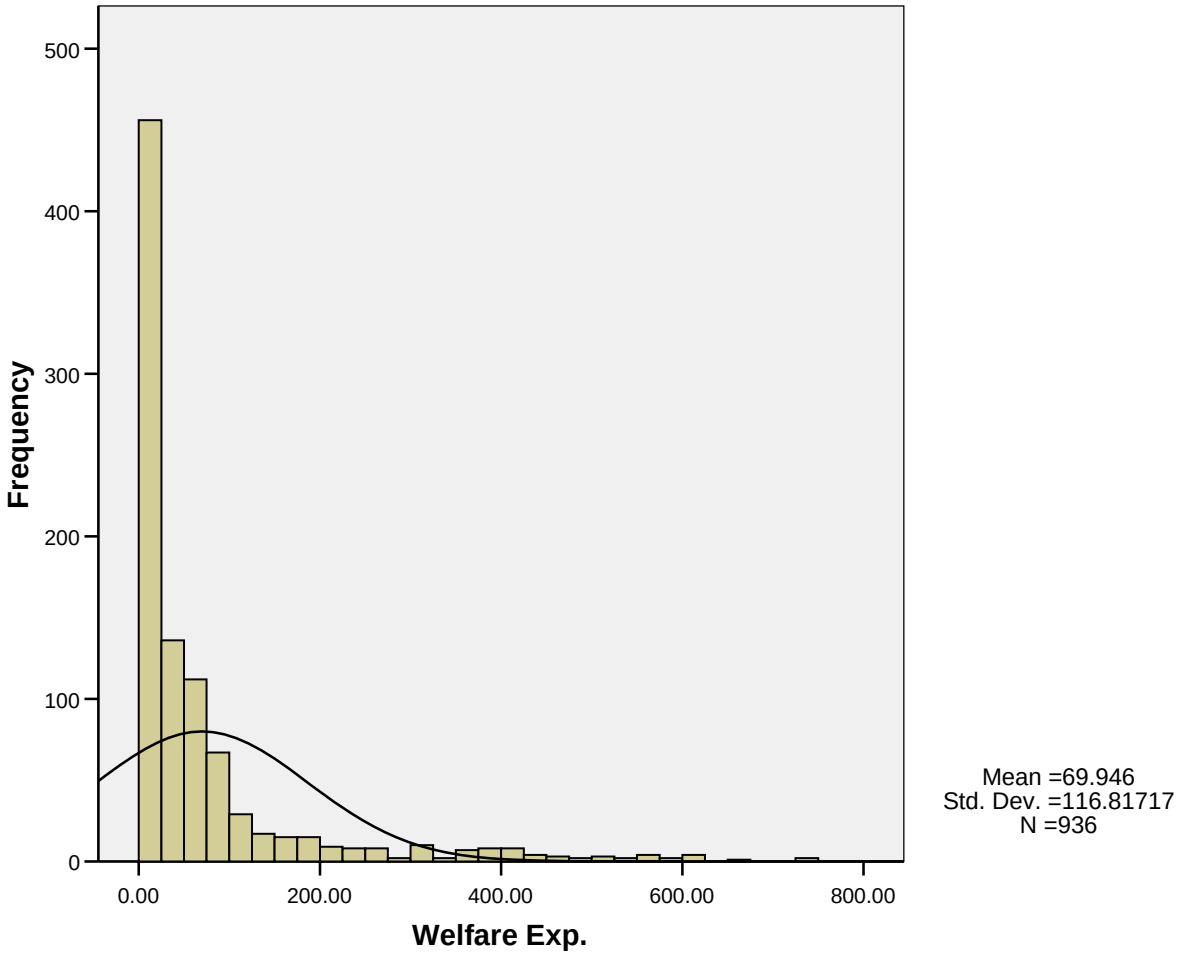
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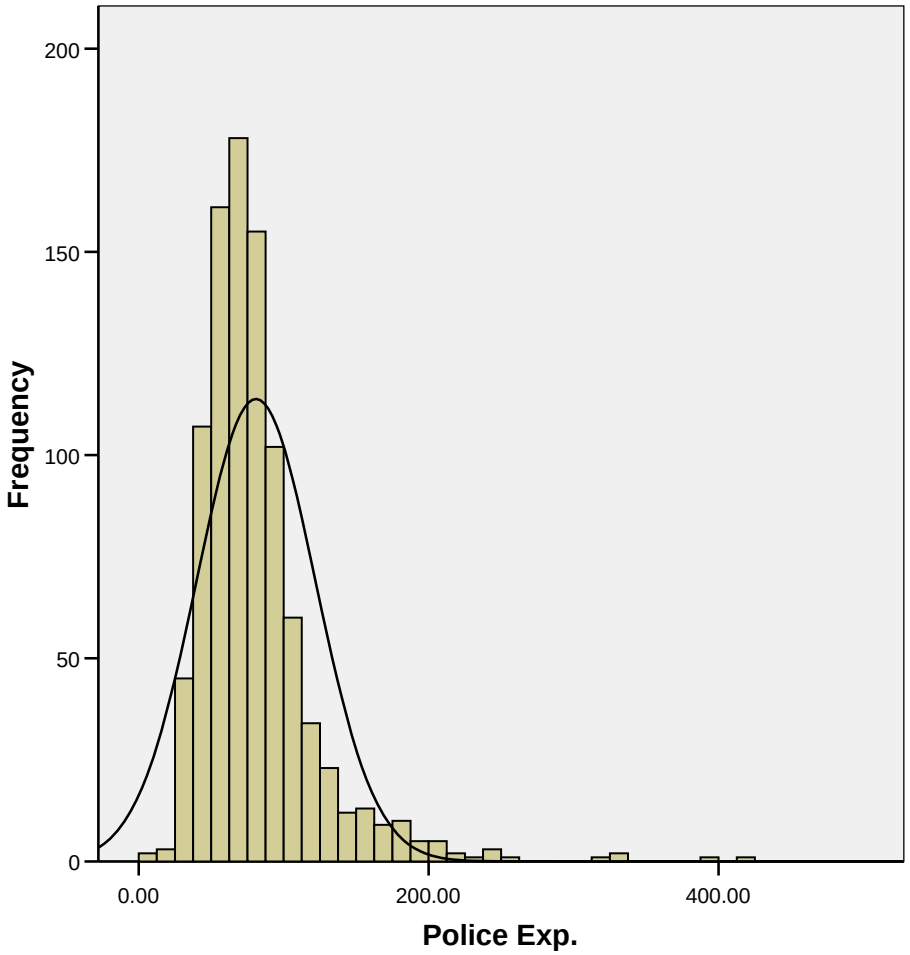
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Appendix E: 1982 Descriptive Characteristics by State

		Non-Gaming				Gaming			
		N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
AL	Game (1,0)	24	0.00	0.00	0.00	6	1.00	1.00	1.00
	Population	24	11,007.00	67,978.00	29,497.46	6	15,054.00	37,474.00	22,699.33
	Urban Influence Code	24	4.00	9.00	6.42	6	6.00	9.00	7.50
	Total Revenue	24	1,408.14	3,836.11	2,010.09	6	1,446.90	2,837.51	1,978.49
	Sales Tax	24	29.72	264.77	121.27	6	33.15	115.85	78.90
	State IGR	24	601.30	1,257.42	755.99	6	684.84	966.55	820.59
	Property Tax	24	70.30	141.44	103.00	6	65.38	285.31	130.65
	Total Expenditures	24	1,290.07	3,669.88	1,929.67	6	1,372.97	10,714.21	3,355.46
	Capital Outlays	24	38.30	622.05	178.46	6	103.45	8,975.13	1,615.87
	Construction Exp.	24	23.28	452.10	139.88	6	46.14	8,923.87	1,556.85
	Highway Exp.	24	101.67	256.10	155.88	6	123.18	209.61	156.44
	Welfare Exp.	24	0.00	6.03	2.13	6	0.00	5.96	1.94
	Police Exp.	24	34.05	76.09	55.62	6	45.33	75.08	57.34
	Percent of Total Payroll in State	24	0.00	0.02	0.01	6	0.00	0.01	0.00
	Percent of Total Establishments in State	24	0.00	0.02	0.01	6	0.00	0.01	0.01
	Percent American Indian	24	0.00	0.50	0.12	6	0.00	4.60	1.35
	Ratio Employed to Working Age	24	0.57	0.72	0.66	6	0.54	0.66	0.62
	Per Capita Income	24	6,033.00	9,760.00	8,441.92	6	6,190.00	8,610.00	7,883.50

		Non-Gaming				Gaming			
		N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
CO	Game (1,0)	42	0.00	0.00	0.00	8	1.00	1.00	1.00
	Population	42	1,629.00	94,152.00	12,333.17	8	440.00	29,346.00	7,319.63
	Urban Influence Code	42	4.00	9.00	7.48	8	7.00	9.00	8.63
	Total Revenue	42	2,223.80	7,049.38	3,765.23	8	2,583.89	4,860.12	3,577.61
	Sales Tax	42	5.15	1,425.71	231.06	8	70.05	391.32	233.33
	State IGR	42	296.86	1,659.67	993.33	8	695.82	2,018.71	1,212.08
	Property Tax	42	468.42	2,870.86	1,207.44	8	528.38	1,890.07	1,159.41
	Total Expenditures	42	2,177.76	7,372.96	3,862.53	8	2,897.00	5,087.19	3,723.85
	Capital Outlays	42	134.23	2,701.39	781.11	8	373.48	859.76	549.81
	Construction Exp.	42	38.59	2,375.82	538.22	8	0.00	767.24	282.82
	Highway Exp.	42	137.75	1,031.55	434.87	8	176.09	1,961.44	785.92
	Welfare Exp.	42	38.48	489.25	186.06	8	0.00	313.31	155.69
	Police Exp.	42	38.61	421.67	139.80	8	89.56	333.35	170.16
	Percent of Total Payroll in State	42	0.00	0.02	0.00	8	0.00	0.01	0.00
	Percent of Total Establishments in State	42	0.00	0.03	0.00	8	0.00	0.01	0.00

	Percent American Indian	42	0.00	1.70	0.54	8	0.00	9.60	2.59
	Ratio Employed to Working Age	42	0.61	0.88	0.74	8	0.68	0.89	0.73
	Per Capita Income	42	7,693.00	20,588.00	11,558.38	8	9,191.00	13,333.00	10,875.50

		Non-Gaming				**Gaming**			
		N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
FL	Game (1,0)	23	0.00	0.00	0.00	4	1.00	1.00	1.00
	Population	23	4,126.00	53,613.00	17,047.48	4	6,261.00	66,797.00	36,461.75
	Urban Influence Code	23	5.00	9.00	6.74	4	3.00	6.00	5.25
	Total Revenue	23	1,092.23	3,619.82	2,301.38	4	2,098.38	3,647.27	2,924.81
	Sales Tax	23	4.31	55.36	29.34	4	0.00	37.24	19.89
	State IGR	23	710.57	1,682.73	1,186.43	4	527.15	1,114.74	831.02
	Property Tax	23	142.54	632.19	321.21	4	552.75	855.75	734.34
	Total Expenditures	23	1,178.72	3,441.74	2,292.74	4	1,999.67	3,919.10	3,004.64
	Capital Outlays	23	113.04	963.42	315.51	4	190.47	943.67	476.60
	Construction Exp.	23	6.95	844.92	157.26	4	18.67	758.19	347.35
	Highway Exp.	23	81.65	721.03	225.27	4	69.41	229.17	162.59
	Welfare Exp.	23	0.00	79.89	9.39	4	9.85	41.43	21.08
	Police Exp.	23	61.28	149.69	92.16	4	128.10	175.76	156.01
	Percent of Total Payroll in State	23	0.00	0.00	0.00	4	0.00	0.00	0.00
	Percent of Total Establishments in State	23	0.00	0.00	0.00	4	0.00	0.01	0.00
	Percent American Indian	23	0.00	1.30	0.37	4	0.40	5.50	1.83
	Ratio Employed to Working Age	23	0.34	0.72	0.63	4	0.61	0.71	0.65
	Per Capita Income	23	6,325.00	9,766.00	8,253.52	4	7,882.00	13,246.00	10,279.00

		Non-Gaming				**Gaming**			
		N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
IA	Game (1,0)	63	0.00	0.00	0.00	24	1.00	1.00	1.00
	Population	63	5,556.00	56,359.00	17,777.92	24	8,744.00	72,292.00	22,721.75
	Urban Influence Code	63	5.00	9.00	7.41	24	5.00	9.00	6.54
	Total Revenue	63	1,878.18	4,637.63	2,943.77	24	1,997.41	3,474.18	2,631.42
	Sales Tax	63	0.00	4.57	0.25	24	0.00	1.47	0.09
	State IGR	63	621.91	1,414.87	886.71	24	608.32	1,082.98	861.94
	Property Tax	63	662.24	1,345.12	952.53	24	720.08	1,163.06	911.35
	Total Expenditures	63	1,839.75	8,658.46	2,853.80	24	1,840.58	3,616.71	2,487.99
	Capital Outlays	63	101.22	4,687.08	430.49	24	169.51	662.59	331.60
	Construction Exp.	63	56.51	4,612.58	342.59	24	74.46	528.69	244.42
	Highway Exp.	63	155.66	626.38	345.19	24	179.22	503.74	314.68
	Welfare Exp.	63	6.61	619.63	63.76	24	4.39	140.49	43.66
	Police Exp.	63	38.16	109.39	75.68	24	47.32	94.84	67.14

Percent of Total Payroll in State	63	0.00	0.02	0.00	24	0.00	0.02	0.01
Percent of Total Establishments in State	63	0.00	0.02	0.01	24	0.00	0.02	0.01
Percent American Indian	63	0.00	0.50	0.11	24	0.00	3.80	0.27
Ratio Employed to Working Age	63	0.67	0.84	0.76	24	0.67	0.87	0.76
Per Capita Income	63	8,552.00	12,807.00	11,083.35	24	10,229.00	12,967.00	11,352.08

		Non-Gaming				**Gaming**			
		N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
ID	Game (1,0)	21	0.00	0.00	0.00	21	1.00	1.00	1.00
	Population	21	804.00	53,958.00	11,563.81	21	3,279.00	67,081.00	22,136.24
	Urban Influence Code	21	6.00	9.00	7.86	21	5.00	9.00	7.62
	Total Revenue	21	1,345.39	4,062.11	2,219.88	21	1,421.59	4,073.01	2,214.15
	Sales Tax	21	0.00	11.41	2.57	21	0.00	168.45	11.41
	State IGR	21	566.49	1,867.34	913.39	21	345.22	1,269.34	790.61
	Property Tax	21	248.87	946.46	466.94	21	242.53	1,131.97	550.20
	Total Expenditures	21	1,292.11	3,947.35	2,215.68	21	1,411.64	3,699.97	2,183.92
	Capital Outlays	21	57.53	1,451.50	362.95	21	44.46	515.26	223.30
	Construction Exp.	21	11.00	1,393.34	276.11	21	14.01	476.94	149.88
	Highway Exp.	21	89.95	1,051.34	250.13	21	86.44	550.20	230.15
	Welfare Exp.	21	0.00	23.32	9.44	21	2.59	185.26	21.57
	Police Exp.	21	33.97	168.83	87.94	21	51.38	178.39	91.48
	Percent of Total Payroll in State	21	0.00	0.05	0.01	21	0.00	0.12	0.02
	Percent of Total Establishments in State	21	0.00	0.07	0.01	21	0.00	0.07	0.02
	Percent American Indian	21	0.00	3.10	0.69	21	0.10	6.00	1.43
	Ratio Employed to Working Age	21	0.45	0.78	0.69	21	0.57	0.78	0.69
	Per Capita Income	21	6,999.00	11,298.00	9,102.48	21	7,435.00	13,650.00	10,080.29

		Non-Gaming				**Gaming**			
		N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
KS	Game (1,0)	76	0.00	0.00	0.00	12	1.00	1.00	1.00
	Population	76	1,792.00	64,352.00	9,590.88	12	6,653.00	37,792.00	16,363.00
	Urban Influence Code	76	4.00	9.00	8.16	12	3.00	9.00	6.25
	Total Revenue	76	1,755.62	7,869.12	3,405.01	12	1,972.14	4,561.54	2,577.95
	Sales Tax	76	1.07	192.60	18.89	12	4.32	61.86	22.92
	State IGR	76	226.15	785.51	477.83	12	509.18	953.52	703.52
	Property Tax	76	336.36	3,549.05	1,538.03	12	507.44	1,436.07	837.21
	Total Expenditures	76	1,781.05	5,268.32	3,225.18	12	1,961.85	3,977.05	2,448.41
	Capital Outlays	76	146.85	1,631.39	410.14	12	139.31	532.40	279.05

	Construction Exp.	76	31.65	1,381.69	290.64	12	49.31	426.04	197.28
	Highway Exp.	76	110.59	793.28	384.26	12	143.84	412.91	233.11
	Welfare Exp.	76	0.00	440.25	15.84	12	0.00	107.39	15.24
	Police Exp.	76	38.35	199.20	89.43	12	39.06	93.72	63.96
	Percent of Total Payroll in State	76	0.00	0.03	0.00	12	0.00	0.01	0.00
	Percent of Total Establishments in State	76	0.00	0.03	0.00	12	0.00	0.01	0.01
	Percent American Indian	76	0.00	2.50	0.37	12	0.10	5.00	1.42
	Ratio Employed to Working Age	76	0.48	0.90	0.79	12	0.70	0.82	0.76
	Per Capita Income	76	9,133.00	13,329.00	10,981.14	12	9,517.00	11,333.00	10,308.00

		Non-Gaming				**Gaming**			
		N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
LA	Game (1,0)	22	0.00	0.00	0.00	18	1.00	1.00	1.00
	Population	22	8,191.00	84,663.00	24,158.86	18	9,896.00	68,801.00	32,248.50
	Urban Influence Code	22	3.00	9.00	6.32	18	5.00	8.00	6.28
	Total Revenue	22	1,449.30	2,870.45	2,063.61	18	1,109.42	5,339.81	2,746.00
	Sales Tax	22	83.25	322.58	185.46	18	3.01	1,196.83	328.15
	State IGR	22	709.69	1,361.42	1,067.85	18	724.72	1,896.93	1,043.60
	Property Tax	22	74.42	401.60	206.99	18	87.77	1,243.29	299.46
	Total Expenditures	22	1,332.59	2,736.33	2,007.45	18	1,106.00	5,122.86	2,535.58
	Capital Outlays	22	27.32	544.62	170.87	18	36.63	1,287.32	359.81
	Construction Exp.	22	1.86	482.22	117.83	18	16.75	1,176.70	293.96
	Highway Exp.	22	84.47	230.06	137.38	18	69.74	1,112.47	223.77
	Welfare Exp.	22	0.00	23.36	5.26	18	0.00	133.19	12.28
	Police Exp.	22	38.25	108.82	81.65	18	58.62	329.51	119.05
	Percent of Total Payroll in State	22	0.00	0.01	0.00	18	0.00	0.03	0.00
	Percent of Total Establishments in State	22	0.00	0.02	0.00	18	0.00	0.02	0.01
	Percent American Indian	22	0.00	2.90	0.21	18	0.00	1.30	0.26
	Ratio Employed to Working Age	22	0.53	0.68	0.60	18	0.33	0.71	0.59
	Per Capita Income	22	6,851.00	9,546.00	8,282.14	18	6,702.00	12,240.00	9,314.94

		Non-Gaming				**Gaming**			
		N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
MI	Game (1,0)	12	0.00	0.00	0.00	36	1.00	1.00	1.00
	Population	12	9,802.00	57,492.00	37,800.17	36	2,015.00	73,719.00	24,807.00
	Urban Influence Code	12	4.00	9.00	6.33	36	5.00	9.00	7.78
	Total Revenue	12	1,514.57	3,721.93	2,211.25	36	1,740.89	4,142.53	2,508.72
	Sales Tax	12	0.00	0.00	0.00	36	0.00	0.00	0.00

	State IGR	12	453.68	803.44	601.22	36	350.39	1,334.66	700.89
	Property Tax	12	590.69	1,147.53	880.31	36	447.29	1,508.45	948.39
	Total Expenditures	12	1,524.99	4,174.88	2,354.50	36	1,700.65	4,369.80	2,502.50
	Capital Outlays	12	13.93	1,927.06	295.47	36	55.68	875.21	215.70
	Construction Exp.	12	0.51	1,885.32	239.34	36	1.32	792.43	130.40
	Highway Exp.	12	87.35	350.47	205.91	36	124.32	865.05	299.87
	Welfare Exp.	12	7.14	126.11	54.97	36	4.44	111.93	47.11
	Police Exp.	12	39.46	96.01	70.80	36	51.97	148.45	79.26
	Percent of Total Payroll in State	12	0.00	0.01	0.00	36	0.00	0.01	0.00
	Percent of Total Establishments in State	12	0.00	0.01	0.00	36	0.00	0.01	0.00
	Percent American Indian	12	0.20	0.80	0.43	36	0.10	9.00	1.20
	Ratio Employed to Working Age	12	0.44	0.72	0.63	36	0.46	0.73	0.60
	Per Capita Income	12	8,730.00	11,896.00	10,324.42	36	7,925.00	11,867.00	9,666.42

		Non-Gaming				**Gaming**			
		N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
MN	Game (1,0)	5	0.00	0.00	0.00	63	1.00	1.00	1.00
	Population	5	13,485.00	35,555.00	24,278.20	63	3,720.00	52,755.00	20,094.49
	Urban Influence Code	5	7.00	8.00	7.60	63	3.00	9.00	6.98
	Total Revenue	5	2,735.70	4,558.94	3,618.08	63	2,038.10	9,377.65	3,699.06
	Sales Tax	5	0.00	40.42	8.13	63	0.00	7.35	0.33
	State IGR	5	1,041.99	1,976.74	1,418.57	63	716.33	2,388.86	1,499.70
	Property Tax	5	501.84	823.80	673.44	63	346.28	1,171.38	625.05
	Total Expenditures	5	2,536.13	4,562.89	3,507.98	63	1,986.22	12,025.84	3,738.26
	Capital Outlays	5	329.12	488.51	415.58	63	110.53	3,489.47	478.51
	Construction Exp.	5	148.23	370.48	244.99	63	30.86	3,262.77	275.82
	Highway Exp.	5	252.54	584.04	416.04	63	136.27	839.61	410.52
	Welfare Exp.	5	0.00	600.90	226.42	63	0.00	666.18	314.46
	Police Exp.	5	60.98	106.54	86.84	63	55.80	153.64	91.03
	Percent of Total Payroll in State	5	0.00	0.01	0.00	63	0.00	0.01	0.00
	Percent of Total Establishments in State	5	0.00	0.01	0.01	63	0.00	0.02	0.00
	Percent American Indian	5	0.00	0.50	0.16	63	0.00	18.40	1.39
	Ratio Employed to Working Age	5	0.74	0.80	0.77	63	0.58	0.83	0.73
	Per Capita Income	5	9,626.00	11,799.00	10,895.00	63	7,133.00	13,493.00	9,913.60

		Non-Gaming				**Gaming**			
		N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
MS	Game (1,0)	57	0.00	0.00	0.00	18	1.00	1.00	1.00
	Population	57	2,403.00	72,636.00	24,163.91	18	8,770.00	78,066.00	24,655.39

Urban Influence Code	57	4.00	9.00	7.30	18	6.00	9.00	7.61
Total Revenue	57	1,232.01	9,212.26	2,182.96	18	1,185.97	2,750.13	1,939.13
Sales Tax	57	0.00	25.13	6.06	18	0.14	32.45	8.17
State IGR	57	647.27	2,525.84	916.68	18	614.09	1,579.41	861.27
Property Tax	57	161.84	1,428.05	294.44	18	178.20	384.42	253.66
Total Expenditures	57	1,120.72	5,990.46	2,045.94	18	1,163.71	2,663.26	1,918.99
Capital Outlays	57	22.27	949.16	241.07	18	50.20	599.53	254.58
Construction Exp.	57	0.00	721.37	183.75	18	23.93	569.87	201.37
Highway Exp.	57	115.98	585.61	252.45	18	91.71	476.21	226.57
Welfare Exp.	57	0.00	115.34	7.48	18	0.00	13.34	4.67
Police Exp.	57	27.79	96.96	51.59	18	31.08	89.38	50.21
Percent of Total Payroll in State	57	0.00	0.05	0.01	18	0.00	0.04	0.01
Percent of Total Establishments in State	57	0.00	0.04	0.01	18	0.00	0.04	0.01
Percent American Indian	57	0.00	0.50	0.07	18	0.00	10.60	1.04
Ratio Employed to Working Age	57	0.54	0.78	0.65	18	0.57	0.71	0.64
Per Capita Income	57	5,553.00	10,706.00	7,830.54	18	6,149.00	9,913.00	7,670.33

		Non-Gaming				**Gaming**			
		N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
MT	Game (1,0)	30	0.00	0.00	0.00	13	1.00	1.00	1.00
	Population	30	637.00	45,372.00	8,211.50	13	2,775.00	75,242.00	18,204.46
	Urban Influence Code	30	6.00	9.00	7.90	13	7.00	9.00	8.23
	Total Revenue	30	1,583.68	5,553.41	2,935.27	13	2,139.20	4,806.00	2,858.40
	Sales Tax	30	0.00	23.11	0.77	13	0.00	0.90	0.07
	State IGR	30	239.75	910.73	590.82	13	212.15	1,002.47	645.24
	Property Tax	30	546.42	3,867.16	1,534.81	13	639.05	2,660.55	1,346.02
	Total Expenditures	30	1,536.97	6,899.44	2,736.01	13	2,016.55	4,241.44	2,692.56
	Capital Outlays	30	66.39	4,047.35	335.04	13	107.53	690.76	319.00
	Construction Exp.	30	12.59	3,910.51	236.26	13	23.46	391.62	183.80
	Highway Exp.	30	82.78	1,651.93	312.82	13	120.45	571.64	274.33
	Welfare Exp.	30	7.64	416.78	60.29	13	16.85	93.50	34.10
	Police Exp.	30	40.04	184.72	100.36	13	58.95	120.10	93.37
	Percent of Total Payroll in State	30	0.00	0.06	0.01	13	0.00	0.11	0.02
	Percent of Total Establishments in State	30	0.00	0.07	0.01	13	0.00	0.10	0.02
	Percent American Indian	30	0.00	31.80	2.65	13	0.20	36.90	5.48
	Ratio Employed to Working Age	30	0.59	0.83	0.72	13	0.53	0.82	0.69
	Per Capita Income	30	7,324.00	11,908.00	9,808.47	13	8,106.00	12,393.00	10,458.46

		Non-Gaming				Gaming			
		N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
NC	Game (1,0)	45	0.00	0.00	0.00	13	1.00	1.00	1.00
	Population	45	4,059.00	103,114.00	31,835.87	13	6,878.00	84,487.00	35,873.23
	Urban Influence Code	45	3.00	9.00	6.73	13	3.00	9.00	6.31
	Total Revenue	45	1,168.38	3,689.49	1,941.14	13	1,093.76	2,887.67	1,908.97
	Sales Tax	45	20.84	216.17	65.35	13	42.03	98.85	69.73
	State IGR	45	597.93	1,370.52	898.47	13	657.37	1,098.41	808.29
	Property Tax	45	165.65	886.38	330.13	13	153.93	377.24	268.98
	Total Expenditures	45	1,064.33	3,504.59	1,925.24	13	1,141.66	2,751.39	1,860.52
	Capital Outlays	45	5.77	702.69	182.41	13	31.52	758.19	205.40
	Construction Exp.	45	0.00	533.85	144.20	13	14.49	736.61	167.52
	Highway Exp.	45	0.00	73.27	24.94	13	3.40	39.30	21.24
	Welfare Exp.	45	57.75	161.60	89.61	13	44.23	92.72	71.93
	Police Exp.	45	12.85	181.21	61.60	13	31.83	75.87	53.69
	Percent of Total Payroll in State	45	0.00	0.01	0.00	13	0.00	0.01	0.00
	Percent of Total Establishments in State	45	0.00	0.01	0.00	13	0.00	0.01	0.01
	Percent American Indian	45	0.00	34.90	1.52	13	0.10	24.20	3.17
	Ratio Employed to Working Age	45	0.53	0.80	0.68	13	0.60	0.81	0.69
	Per Capita Income	45	7,069.00	11,994.00	8,863.84	13	7,042.00	10,952.00	9,175.69

		Non-Gaming				Gaming			
		N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
NE	Game (1,0)	58	0.00	0.00	0.00	25	1.00	1.00	1.00
	Population	58	516.00	49,344.00	10,000.79	25	810.00	35,820.00	7,914.04
	Urban Influence Code	58	5.00	9.00	8.26	25	5.00	9.00	8.08
	Total Revenue	58	1,693.77	30,436.33	3,657.57	25	1,626.80	4,921.08	2,930.45
	Sales Tax	58	0.00	110.05	9.25	25	0.00	43.51	8.64
	State IGR	58	376.35	907.09	559.62	25	404.97	936.88	569.81
	Property Tax	58	753.97	2,558.26	1,233.85	25	653.75	2,401.25	1,096.44
	Total Expenditures	58	1,666.15	34,729.47	3,823.64	25	1,603.81	4,532.23	2,943.24
	Capital Outlays	58	34.36	7,970.54	607.95	25	90.81	794.96	333.70
	Construction Exp.	58	0.00	7,852.17	490.39	25	28.56	663.31	210.37
	Highway Exp.	58	112.33	767.36	373.29	25	135.35	579.91	363.28
	Welfare Exp.	58	11.45	363.49	65.06	25	20.48	122.49	48.85
	Police Exp.	58	29.78	149.69	65.63	25	20.91	101.82	60.64
	Percent of Total Payroll in State	58	0.00	0.03	0.00	25	0.00	0.02	0.00
	Percent of Total Establishments in State	58	0.00	0.04	0.01	25	0.00	0.03	0.01
	Percent American Indian	58	0.00	1.70	0.19	25	0.00	33.90	1.98

	Ratio Employed to Working Age	58	0.67	0.90	0.80	25	0.71	0.85	0.78
	Per Capita Income	58	7,543.00	13,193.00	10,442.55	25	7,758.00	12,076.00	9,578.44

		Non-Gaming				**Gaming**			
		N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
ND	Game (1,0)	19	0.00	0.00	0.00	30	1.00	1.00	1.00
	Population	19	1,129.00	28,107.00	5,974.26	30	3,486.00	59,935.00	10,492.77
	Urban Influence Code	19	6.00	9.00	8.21	30	6.00	9.00	7.97
	Total Revenue	19	2,035.02	8,837.14	3,091.26	30	1,851.10	4,946.09	2,524.08
	Sales Tax	19	0.00	0.00	0.00	30	0.00	4.79	0.23
	State IGR	19	721.12	3,886.89	1,255.26	30	754.19	2,061.77	1,155.71
	Property Tax	19	487.18	1,129.71	751.15	30	264.11	1,093.93	666.03
	Total Expenditures	19	1,905.18	6,836.18	2,761.85	30	1,749.65	3,534.33	2,344.96
	Capital Outlays	19	100.05	2,334.24	501.96	30	58.54	978.78	295.03
	Construction Exp.	19	13.74	1,498.33	366.38	30	2.89	861.41	193.94
	Highway Exp.	19	207.53	3,000.16	564.01	30	89.79	1,068.58	363.08
	Welfare Exp.	19	0.00	109.03	68.72	30	38.75	172.34	71.55
	Police Exp.	19	26.32	259.36	73.91	30	16.32	112.75	65.39
	Percent of Total Payroll in State	19	0.00	0.05	0.01	30	0.00	0.08	0.01
	Percent of Total Establishments in State	19	0.00	0.05	0.01	30	0.00	0.08	0.01
	Percent American Indian	19	0.00	2.50	0.32	30	0.00	64.70	6.88
	Ratio Employed to Working Age	19	0.66	0.85	0.74	30	0.59	0.83	0.71
	Per Capita Income	19	7,759.00	13,825.00	9,992.16	30	6,221.00	12,921.00	9,656.20

		Non-Gaming				**Gaming**			
		N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
NM	Game (1,0)	12	0.00	0.00	0.00	8	1.00	1.00	1.00
	Population	12	1,016.00	64,227.00	20,714.92	8	2,666.00	88,833.00	29,304.00
	Urban Influence Code	12	5.00	9.00	7.67	8	5.00	9.00	6.75
	Total Revenue	12	1,848.10	3,951.61	2,896.77	8	2,063.81	3,190.30	2,666.18
	Sales Tax	12	16.74	141.71	81.02	8	3.00	143.74	67.60
	State IGR	12	1,165.63	2,519.04	1,661.28	8	1,129.31	2,370.28	1,730.80
	Property Tax	12	120.85	581.45	261.15	8	80.99	473.73	233.20
	Total Expenditures	12	1,834.47	4,445.98	2,846.31	8	2,286.62	5,733.84	3,006.96
	Capital Outlays	12	128.58	1,640.30	535.93	8	174.48	2,056.57	549.40
	Construction Exp.	12	46.66	1,435.27	438.26	8	73.49	1,927.59	434.16
	Highway Exp.	12	94.05	374.51	196.15	8	46.99	464.85	158.39
	Welfare Exp.	12	0.00	19.55	3.40	8	0.00	94.38	27.87
	Police Exp.	12	72.26	238.69	121.46	8	34.00	157.87	98.13
	Percent of Total Payroll in State	12	0.00	0.07	0.01	8	0.00	0.08	0.02

	Percent of Total Establishments in State	12	0.00	0.06	0.02	8	0.00	0.06	0.02
	Percent American Indian	12	0.00	1.40	0.50	8	0.00	65.70	14.94
	Ratio Employed to Working Age	12	0.55	0.74	0.66	8	0.44	0.66	0.58
	Per Capita Income	12	6,576.00	11,821.00	9,347.92	8	5,814.00	9,930.00	7,526.63

		Non-Gaming				**Gaming**			
		N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
NY	Game (1,0)	8	0.00	0.00	0.00	8	1.00	1.00	1.00
	Population	8	4,982.00	157,770.00	58,219.13	8	24,747.00	112,660.00	63,374.75
	Urban Influence Code	8	5.00	6.00	5.75	8	5.00	8.00	6.38
	Total Revenue	8	2,475.60	4,743.36	3,444.54	8	2,617.97	3,688.00	3,233.70
	Sales Tax	8	4.43	370.49	238.59	8	0.77	289.53	199.71
	State IGR	8	800.44	1,487.29	1,122.59	8	1,156.15	1,910.18	1,544.85
	Property Tax	8	721.22	3,193.67	1,404.50	8	657.90	1,025.36	833.67
	Total Expenditures	8	2,565.64	5,042.46	3,546.19	8	2,601.90	3,895.79	3,315.58
	Capital Outlays	8	196.22	538.36	336.25	8	240.27	511.43	357.52
	Construction Exp.	8	119.99	430.64	226.43	8	172.89	426.22	256.28
	Highway Exp.	8	203.77	1,134.10	485.71	8	227.80	386.25	333.24
	Welfare Exp.	8	323.42	747.94	478.94	8	319.43	728.39	508.16
	Police Exp.	8	35.62	100.88	59.03	8	25.86	67.31	45.80
	Percent of Total Payroll in State	8	0.00	0.01	0.00	8	0.00	0.00	0.00
	Percent of Total Establishments in State	8	0.00	0.01	0.00	8	0.00	0.00	0.00
	Percent American Indian	8	0.10	0.30	0.20	8	0.10	4.80	0.79
	Ratio Employed to Working Age	8	0.58	0.73	0.67	8	0.53	0.74	0.64
	Per Capita Income	8	9,341.00	11,331.00	10,218.38	8	9,005.00	9,765.00	9,341.13

		Non-Gaming				**Gaming**			
		N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
SC	Game (1,0)	21	0.00	0.00	0.00	9	1.00	1.00	1.00
	Population	21	7,413.00	82,909.00	31,935.33	9	20,671.00	54,088.00	38,979.33
	Urban Influence Code	21	5.00	8.00	6.43	9	4.00	6.00	5.44
	Total Revenue	21	817.40	3,122.69	1,759.07	9	1,731.06	2,483.47	2,113.60
	Sales Tax	21	0.00	13.50	1.99	9	0.00	6.83	2.86
	State IGR	21	359.94	986.72	732.55	9	578.17	941.56	693.53
	Property Tax	21	87.80	489.05	297.81	9	290.88	540.06	372.53
	Total Expenditures	21	806.25	3,359.36	1,800.57	9	1,701.53	2,455.12	2,063.61
	Capital Outlays	21	27.79	586.67	200.07	9	66.02	492.89	189.35
	Construction Exp.	21	0.00	571.42	161.37	9	34.20	425.43	149.58
	Highway Exp.	21	15.25	52.16	31.77	9	26.51	115.79	49.67

	Welfare Exp.	21	0.00	29.41	6.99	9	1.06	48.38	10.83
	Police Exp.	21	39.73	95.87	62.31	9	53.96	85.46	67.39
	Percent of Total Payroll in State	21	0.00	0.02	0.01	9	0.00	0.02	0.01
	Percent of Total Establishments in State	21	0.00	0.03	0.01	9	0.00	0.01	0.01
	Percent American Indian	21	0.00	1.50	0.21	9	0.10	0.20	0.11
	Ratio Employed to Working Age	21	0.47	0.78	0.68	9	0.70	0.81	0.75
	Per Capita Income	21	6,993.00	11,722.00	8,187.19	9	7,679.00	10,296.00	9,322.44

		Non-Gaming				**Gaming**			
		N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
SD	Game (1,0)	12	0.00	0.00	0.00	50	1.00	1.00	1.00
	Population	12	1,670.00	37,045.00	9,565.33	50	1,421.00	24,958.00	7,287.48
	Urban Influence Code	12	6.00	9.00	8.17	50	6.00	9.00	8.30
	Total Revenue	12	1,537.16	3,229.28	2,304.00	50	341.88	7,449.04	2,430.55
	Sales Tax	12	0.00	106.84	36.00	50	0.00	127.29	30.90
	State IGR	12	321.67	911.38	575.48	50	66.86	808.32	552.28
	Property Tax	12	431.23	1,429.23	976.62	50	34.23	2,514.40	903.65
	Total Expenditures	12	1,388.42	2,997.62	2,126.45	50	301.51	10,291.00	2,296.21
	Capital Outlays	12	43.48	453.20	256.27	50	0.00	4,510.68	353.36
	Construction Exp.	12	36.43	426.19	227.89	50	0.00	4,484.48	311.75
	Highway Exp.	12	121.34	833.73	335.40	50	0.39	813.84	289.26
	Welfare Exp.	12	3.17	30.76	11.63	50	0.00	103.02	10.34
	Police Exp.	12	44.74	97.58	67.60	50	0.00	156.21	62.40
	Percent of Total Payroll in State	12	0.00	0.07	0.01	50	0.00	0.04	0.01
	Percent of Total Establishments in State	12	0.00	0.06	0.01	50	0.00	0.04	0.01
	Percent American Indian	12	0.00	58.10	5.76	50	0.00	93.40	12.09
	Ratio Employed to Working Age	12	0.59	0.85	0.74	50	0.49	0.88	0.76
	Per Capita Income	12	5,196.00	10,571.00	8,498.00	50	4,504.00	12,327.00	8,182.14

		Non-Gaming				**Gaming**			
		N	Minimum	Maximum	Mean	N	Minimum	Maximum	Mean
WY	Game (1,0)	16	0.00	0.00	0.00	4	1.00	1.00	1.00
	Population	16	3,109.00	45,750.00	16,182.63	4	5,142.00	38,492.00	18,219.75
	Urban Influence Code	16	6.00	9.00	7.81	4	8.00	9.00	8.25
	Total Revenue	16	2,891.24	10,951.24	5,407.52	4	3,794.31	6,199.07	4,985.91
	Sales Tax	16	1.65	417.21	162.70	4	2.89	196.51	53.04
	State IGR	16	564.76	2,191.81	1,232.37	4	595.57	1,469.96	963.68
	Property Tax	16	440.31	3,847.13	1,904.64	4	1,377.63	4,290.49	2,841.66

Total Expenditures	16	2,950.13	6,772.48	4,655.77	4	3,419.83	4,399.34	4,076.21
Capital Outlays	16	518.01	2,529.37	1,129.68	4	426.63	917.42	698.40
Construction Exp.	16	216.96	2,117.48	801.31	4	158.49	514.54	295.81
Highway Exp.	16	106.54	1,069.66	375.04	4	194.22	345.04	263.14
Welfare Exp.	16	0.00	26.76	3.67	4	0.72	9.41	3.11
Police Exp.	16	93.00	227.26	171.66	4	129.76	205.04	164.29
Percent of Total Payroll in State	16	0.00	0.12	0.03	4	0.00	0.06	0.03
Percent of Total Establishments in State	16	0.01	0.07	0.03	4	0.01	0.08	0.04
Percent American Indian	16	0.20	1.20	0.64	4	0.40	11.50	3.55
Ratio Employed to Working Age	16	0.65	0.82	0.76	4	0.75	0.81	0.77
Per Capita Income	16	10,333.00	15,790.00	12,795.00	4	11,958.00	12,415.00	12,188.00

Appendix F: State Fixed Effects

Table 24: Total Revenues

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.616163898	0.379657949	0.3695	1398.9725

	Unstandardized Coefficients	Std. Error	t	Sig.
WY_D	2031.5064	264.7391	7.6736	0.0000
LA_D	-145.2611	230.1037	-0.6313	0.5279
MI_D	-428.7326	207.3243	-2.0679	0.0388
MN_D	738.2026	181.3093	4.0715	0.0000
MS_D	-582.6263	187.4273	-3.1085	0.0019
MT_D	-363.1436	193.1585	-1.8800	0.0603
NE_D	394.5446	154.0538	2.5611	0.0105
NM_D	256.6392	269.6645	0.9517	0.3414
NY_D	719.0448	287.3999	2.5019	0.0124
NC_D	-861.4955	183.7477	-4.6885	0.0000
ND_C	-537.9573	186.6705	-2.8819	0.0040
SC_D	-696.2001	229.4239	-3.0346	0.0024
SD_D	-912.1093	183.3942	-4.9735	0.0000
Al_D	-822.6366	233.9217	-3.5167	0.0004
CO_D	657.1443	185.6456	3.5398	0.0004
FL_D	-389.3803	245.8583	-1.5838	0.1134
ID_D	-474.9445	200.0438	-2.3742	0.0177
IA_D	-557.5016	152.3618	-3.6591	0.0003

Table 25: Total Expenditures

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.6079704	0.369628008	0.359355786	1411.6793

	Unstandardized Coefficients	Std. Error	t	Sig.
WY_D	1493.9108	267.1437	5.5922	0.0000
LA_D	-89.5041	232.1937	-0.3855	0.6999
MI_D	-239.4801	209.2075	-1.1447	0.2525
MS_D	-523.5205	189.1297	-2.7680	0.0057
MT_D	-1291.8960	216.0992	-5.9783	0.0000
NE_D	503.3419	155.4531	3.2379	0.0012
NM_D	347.1076	272.1138	1.2756	0.2023
NY_D	250.5467	294.4177	0.8510	0.3949
NC_D	-1584.5670	205.7020	-7.7032	0.0000
ND_C	-1494.8055	206.9740	-7.2222	0.0000
SC_D	-1429.5937	247.4348	-5.7777	0.0000
SD_D	-870.5006	185.0600	-4.7039	0.0000
Al_D	-1463.8285	247.0938	-5.9242	0.0000
CO_D	-62.2120	211.4683	-0.2942	0.7686
FL_D	-308.4879	248.0914	-1.2434	0.2139
ID_D	-428.6331	201.8608	-2.1234	0.0339
IA_D	-492.6899	153.7456	-3.2046	0.0014
AFDC/Child Welf. at County Level	881.8672	182.9561	4.8201	0.0000

Table 26: Sales Tax

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.7620	0.5806	0.573798107	110.9306

	Unstandardized Coefficients	Std. Error	t	Sig.
WY_D	71.0101	20.9923	3.3827	0.0007
LA_D	329.1274	18.2459	18.0384	0.0000
MI_D	-80.3149	16.4397	-4.8854	0.0000
MN_D	-52.7977	14.3768	-3.6724	0.0002
MS_D	15.3827	14.8619	1.0350	0.3008
MT_D	-50.9175	15.3164	-3.3244	0.0009
NE_D	6.7975	12.2156	0.5565	0.5780
NM_D	124.1449	21.3829	5.8058	0.0000
NY_D	216.6481	22.7892	9.5066	0.0000
NC_D	68.1007	14.5702	4.6740	0.0000
ND_C	-33.4757	14.8019	-2.2616	0.0238
SC_D	2.5121	18.1920	0.1381	0.8902
SD_D	68.0983	14.5421	4.6828	0.0000
Al_D	143.2404	18.5487	7.7224	0.0000
CO_D	237.7735	14.7206	16.1524	0.0000
FL_D	78.4824	19.4952	4.0257	0.0001
ID_D	-40.3116	15.8624	-2.5413	0.0111
IA_D	-48.6883	12.0814	-4.0300	0.0001

Table 27: Property Tax

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.7492	0.5613	0.5542	407.1203

	Unstandardized Coefficients	Std. Error	t	Sig.
WY_D	627.5228	77.0427	8.1451	0.0000
LA_D	-786.8080	66.9633	-11.7498	0.0000
MI_D	-500.1380	60.3342	-8.2895	0.0000
MN_D	-600.3584	52.7635	-11.3783	0.0000
MS_D	-705.6996	54.5439	-12.9382	0.0000
MT_D	40.0733	56.2118	0.7129	0.4760
NE_D	-41.3590	44.8318	-0.9225	0.3564
NM_D	-733.2700	78.4761	-9.3439	0.0000
NY_D	42.3013	83.6373	0.5058	0.6131
NC_D	-830.7654	53.4731	-15.5361	0.0000
ND_C	-360.9229	54.3237	-6.6439	0.0000
SC_D	-643.2320	66.7655	-9.6342	0.0000
SD_D	-210.2926	53.3702	-3.9403	0.0001
Al_D	-1002.5999	68.0744	-14.7280	0.0000
CO_D	-153.0978	54.0254	-2.8338	0.0046
FL_D	-672.0018	71.5482	-9.3923	0.0000
ID_D	-507.4373	58.2155	-8.7165	0.0000
IA_D	-413.2930	44.3394	-9.3211	0.0000

Table 28: Construction Expenditures

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.324140563	0.105067104	0.090483733	441.5569

	Unstandardized Coefficients	Std. Error	t	Sig.
WY_D	422.4487	83.5595	5.0557	0.0000
LA_D	150.4659	72.6275	2.0717	0.0384
MI_D	7.5452	65.4377	0.1153	0.9082
MN_D	195.9044	57.2266	3.4233	0.0006
MS_D	121.7020	59.1576	2.0573	0.0398
MT_D	8.4744	60.9665	0.1390	0.8895
NE_D	181.6626	48.6239	3.7361	0.0002
NM_D	298.8916	85.1140	3.5117	0.0005
NY_D	272.7933	90.7119	3.0072	0.0027
NC_D	62.8803	57.9962	1.0842	0.2784
ND_C	64.8042	58.9187	1.0999	0.2715
SC_D	102.5197	72.4129	1.4158	0.1570
SD_D	123.9369	57.8846	2.1411	0.0324
Al_D	213.7690	73.8326	2.8953	0.0038
CO_D	287.8791	58.5952	4.9130	0.0000
FL_D	126.8001	77.6001	1.6340	0.1024
ID_D	117.3456	63.1397	1.8585	0.0633
IA_D	105.3495	48.0899	2.1907	0.0286

Table 29: Highway Expenditures

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.6799	0.4623	0.4535	167.4990

	Unstandardized Coefficients	Std. Error	t	Sig.
WY_D	82.5156	31.6972	2.6032	0.0093
LA_D	-70.8410	27.5503	-2.5713	0.0102
MI_D	-2.6520	24.8229	-0.1068	0.9149
MN_D	167.1440	21.7082	7.6996	0.0000
MS_D	-15.4272	22.4407	-0.6875	0.4919
MT_D	-17.9524	23.1269	-0.7763	0.4377
NE_D	46.6568	18.4449	2.5295	0.0115
NM_D	3.6957	32.2869	0.1145	0.9089
NY_D	132.6835	34.4104	3.8559	0.0001
NC_D	-263.1791	22.0001	-11.9626	0.0000
ND_C	158.5175	22.3501	7.0925	0.0000
SC_D	-202.0269	27.4689	-7.3547	0.0000
SD_D	38.2171	21.9578	1.7405	0.0819
Al_D	-84.9120	28.0074	-3.0318	0.0025
CO_D	136.7599	22.2273	6.1528	0.0000
FL_D	-61.8571	29.4366	-2.1014	0.0357
ID_D	23.5534	23.9513	0.9834	0.3255
IA_D	10.1858	18.2423	0.5584	0.5767

Table 30: Welfare Expenditures

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.7091	0.5029	0.4948	112.6506

	Unstandardized Coefficients	Std. Error	t	Sig.
WY_D	-0.0953	21.3178	-0.0045	0.9964
LA_D	-17.4926	18.5288	-0.9441	0.3453
MI_D	61.7962	16.6945	3.7016	0.0002
MS_D	-20.7837	15.0924	-1.3771	0.1686
MT_D	-254.7562	17.2445	-14.7732	0.0000
NE_D	48.2497	12.4050	3.8895	0.0001
NM_D	-23.2077	21.7144	-1.0688	0.2853
NY_D	225.7802	23.4942	9.6100	0.0000
NC_D	-164.2930	16.4148	-10.0088	0.0000
ND_C	-235.9540	16.5163	-14.2861	0.0000
SC_D	-317.9127	19.7451	-16.1009	0.0000
SD_D	1.5072	14.7676	0.1021	0.9187
Al_D	-327.2486	19.7178	-16.5966	0.0000
CO_D	-105.3099	16.8750	-6.2406	0.0000
FL_D	-16.7293	19.7974	-0.8450	0.3982
ID_D	4.6290	16.1083	0.2874	0.7739
IA_D	29.7197	12.2687	2.4224	0.0155
AFDC/Child Welf. at County Level	305.1638	14.5997	20.9020	0.0000

Table 31: Police Expenditures

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.6908	0.4772	0.468661909	51.7380

	Unstandardized Coefficients	Std. Error	t	Sig.
WY_D	74.5830	9.7908	7.6177	0.0000
LA_D	41.1924	8.5099	4.8405	0.0000
MI_D	-28.0587	7.6674	-3.6595	0.0003
MN_D	19.0540	6.7053	2.8416	0.0045
MS_D	14.3340	6.9316	2.0679	0.0388
MT_D	32.5399	7.1436	4.5551	0.0000
NE_D	-22.1328	5.6973	-3.8847	0.0001
NM_D	56.0484	9.9730	5.6200	0.0000
NY_D	-38.7639	10.6289	-3.6470	0.0003
NC_D	-9.8771	6.7955	-1.4535	0.1463
ND_C	-20.3895	6.9036	-2.9535	0.0032
SC_D	7.3435	8.4847	0.8655	0.3869
SD_D	-7.9783	6.7824	-1.1763	0.2396
Al_D	-4.9390	8.6511	-0.5709	0.5681
CO_D	61.3549	6.8657	8.9364	0.0000
FL_D	63.4078	9.0925	6.9736	0.0000
ID_D	27.7064	7.3982	3.7450	0.0002
IA_D	-14.5563	5.6348	-2.5833	0.0099

Table 32: State IGR

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.7529	0.5668	0.5598	388.1680

	Unstandardized Coefficients	Std. Error	t	Sig.
WY_D	957.5811	73.4562	13.0361	0.0000
LA_D	248.4899	63.8461	3.8920	0.0001
MI_D	278.4527	57.5256	4.8405	0.0000
MN_D	838.3828	50.3073	16.6652	0.0000
MS_D	109.1738	52.0048	2.0993	0.0359
MT_D	67.0345	53.5950	1.2508	0.2112
NE_D	-169.8546	42.7448	-3.9737	0.0001
NM_D	1134.6394	74.8229	15.1643	0.0000
NY_D	795.0487	79.7439	9.9700	0.0000
NC_D	293.4973	50.9838	5.7567	0.0000
ND_C	239.4108	51.7948	4.6223	0.0000
SC_D	34.9880	63.6575	0.5496	0.5826
SD_D	-311.0434	50.8858	-6.1126	0.0000
Al_D	51.5440	64.9054	0.7941	0.4272
CO_D	424.2115	51.5104	8.2354	0.0000
FL_D	343.1440	68.2174	5.0302	0.0000
ID_D	338.1856	55.5055	6.0928	0.0000
IA_D	154.2719	42.2753	3.6492	0.0003

Appendix G: Propensity Score Models

Using the propensity score sample to examine total revenues the DID estimator continues to be insignificant. Significant factors include total slots, percent of state payroll, percent of establishments in the state, rural adjacent/rural non-adjacent and per capita income. Total slots again demonstrated an inverse relationship with total revenues.

Table 34: Total Revenues (PS Sample)

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.59354631	0.352297223	0.3346486	1571.362

	Unstandardized Coefficients	Std. Error	t	Sig.
(Constant)	1549.1301	649.3321	2.3857	0.0172
Gaming (1, 0)	-221.9433	187.1550	-1.1859	0.2359
Post Period	-18.5138	236.1061	-0.0784	0.9375
DID Estimator	-192.5949	322.9871	-0.5963	0.5511
Dummy for Urb. Infl. 1=Rural Adj., 0=Rural NonAdj	-306.6937	112.4726	-2.7268	0.0065
Total Slots in County Area	-0.1188	0.0583	-2.0377	0.0418
Number of Yrs Al Gam.	24.9316	21.8650	1.1403	0.2544
Number Al Gam. Ops.	18.1959	57.4278	0.3168	0.7514
Pct. State Payroll	25717.2261	9942.4220	2.5866	0.0098
Pct. State Establishments	-36494.3350	11892.7115	-3.0686	0.0022
Percent Indian	9.5633	5.8139	1.6449	0.1003
Ratio Emp. to Wrking Age	1286.8992	832.4604	1.5459	0.1224
Per Capita Income	0.1769	0.0282	6.2757	0.0000
WY_D	1180.8978	350.2536	3.3716	0.0008
KS_D	-983.7617	239.8595	-4.1014	0.0000
LA_D	-880.5256	314.6930	-2.7980	0.0052
MI_D	-1155.1201	252.1497	-4.5811	0.0000
MS_D	-1403.2048	307.5481	-4.5626	0.0000
MT_D	-1168.2900	291.4777	-4.0082	0.0001
NE_D	-255.0796	240.5368	-1.0605	0.2892
NM_D	-718.3479	385.4639	-1.8636	0.0626
NY_D	-162.2869	438.9637	-0.3697	0.7117
NC_D	-1797.4261	291.2497	-6.1714	0.0000
ND_C	-1486.6345	267.6072	-5.5553	0.0000
SC_D	-1449.2908	363.7450	-3.9844	0.0001
SD_D	-1705.4217	237.6420	-7.1764	0.0000
Al_D	-1551.6868	335.0596	-4.6311	0.0000
CO_D	-295.6570	321.3477	-0.9201	0.3577
FL_D	-1003.2027	494.5055	-2.0287	0.0427

ID_D	-1311.3475	282.2904	-4.6454	0.0000
IA_D	-1391.5088	243.5818	-5.7127	0.0000

When using the propensity score sample to examine expenditures the DID estimator remains insignificant. This model's results are similar to that in the full sample with total slots, percent of state payroll, percent of establishments in the state, rural adjacent/rural non-adjacent and per capita income and AFDC/Child Welfare provided at the county level being significant factors.

Table 35: Total Expenditures (PS Sample)

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.58243886	0.339235026	0.3212305	1598.141

	Unstandardized Coefficients	Std. Error	t	Sig.
(Constant)	-63.0946	689.4833	-0.0915	0.9271
Gaming (1, 0)	-195.3840	190.3444	-1.0265	0.3049
Post Period	75.8160	240.1298	0.3157	0.7523
DID Estimator	-247.9689	328.4913	-0.7549	0.4505
Dummy for Urb. Infl. 1=Rural Adj., 0=Rural NonAdj	-306.6524	114.3893	-2.6808	0.0075
Total Slots in County Area	-0.1120	0.0593	-1.8903	0.0590
Number of Yrs AI Gam.	28.3107	22.2376	1.2731	0.2033
Number AI Gam. Ops.	15.5440	58.4064	0.2661	0.7902
Pct. State Payroll	28684.2256	10111.8570	2.8367	0.0046
Pct. State Establishments	-36571.0309	12095.3825	-3.0236	0.0026
Percent Indian	11.4280	5.9130	1.9327	0.0535
Ratio Emp. to Wrking Age	1129.8307	846.6469	1.3345	0.1823
Per Capita Income	0.1686	0.0287	5.8842	0.0000
WY_D	2230.3735	347.2880	6.4223	0.0000
KS_D	674.3588	246.5600	2.7351	0.0063
LA_D	718.6009	346.6686	2.0729	0.0384
MI_D	644.5323	303.5290	2.1235	0.0339
MS_D	163.5166	326.5923	0.5007	0.6167
MT_D	-1465.9279	296.4449	-4.9450	0.0000
NE_D	1558.2840	232.4514	6.7037	0.0000
NM_D	984.9647	401.8510	2.4511	0.0144
NY_D	67.3600	446.4443	0.1509	0.8801
NC_D	-1812.5103	296.2130	-6.1189	0.0000
ND_C	-1679.7332	272.1677	-6.1717	0.0000

SC_D	-1453.4893	369.9438	-3.9289	0.0001
AI_D	-1443.7213	340.7696	-4.2366	0.0000
CO_D	-195.8049	326.8240	-0.5991	0.5492
FL_D	758.7831	523.0826	1.4506	0.1472
ID_D	299.4359	291.7794	1.0262	0.3050
IA_D	334.4309	256.9630	1.3015	0.1934
AFDC/Child Welf. at County Level	1796.6738	241.6918	7.4337	0.0000

When using the propensity score sample to examine sales taxes the DID estimator becomes insignificant. Significant factors included total number of slots, number of years with a gaming operation, rural adjacent/non-adjacent, ratio of employed to working age and per capita income. The total number of slots again showed an inverse relationship with sales tax revenues.

Table 36: Sales Tax (PS Sample)

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.778031039	0.605332298	0.594578	118.5671

	Unstandardized Coefficients	Std. Error	t	Sig.
(Constant)	-260.9886	48.9953	-5.3268	0.0000
Gaming (1, 0)	22.0184	14.1218	1.5592	0.1192
Post Period	-97.2363	17.8154	-5.4580	0.0000
DID Estimator	20.7918	24.3710	0.8531	0.3938
Dummy for Urb. Infl. 1=Rural Adj., 0=Rural NonAdj	-16.4502	8.4866	-1.9384	0.0528
Total Slots in County Area	-0.0161	0.0044	-3.6614	0.0003
Number of Yrs AI Gam.	-4.7817	1.6498	-2.8983	0.0038
Number AI Gam. Ops.	4.8984	4.3332	1.1304	0.2585
Pct. State Payroll	2232.0675	750.2051	2.9753	0.0030
Pct. State Establishments	-2694.0147	897.3641	-3.0021	0.0027
Percent Indian	1.1969	0.4387	2.7284	0.0065
Ratio Emp. to Wrking Age	-172.5254	62.8133	-2.7466	0.0061
Per Capita Income	0.0344	0.0021	16.1779	0.0000
WY_D	126.6276	26.4284	4.7913	0.0000
KS_D	46.9656	18.0986	2.5950	0.0096
LA_D	386.9202	23.7451	16.2947	0.0000
MI_D	-28.0374	19.0259	-1.4736	0.1409
MS_D	62.5613	23.2060	2.6959	0.0071
MT_D	-3.8475	21.9934	-0.1749	0.8612

NE_D	53.2073	18.1497	2.9316	0.0034
NM_D	182.7723	29.0852	6.2840	0.0000
NY_D	259.8439	33.1220	7.8451	0.0000
NC_D	117.0647	21.9762	5.3269	0.0000
ND_C	18.3759	20.1923	0.9100	0.3630
SC_D	26.2945	27.4464	0.9580	0.3383
SD_D	124.7613	17.9313	6.9578	0.0000
AI_D	192.1168	25.2819	7.5990	0.0000
CO_D	393.9554	24.2473	16.2474	0.0000
FL_D	116.4804	37.3129	3.1217	0.0018
ID_D	10.2492	21.3002	0.4812	0.6305
IA_D	-6.8080	18.3795	-0.3704	0.7111

Using the propensity score sample to examine property taxes the DID estimator becomes significant demonstrating that there is a significant positive correlation between property tax revenues and the opening of a gaming operation. The β=196.0887 ($p < .01$) indicates that the opening of a gaming operation is correlated with an increase in property tax revenues of $196 per capita. Additional significant factors included rural adjacent/non-adjacent, percent of total payroll in the state, percent American Indian and per capita income. The percent of the population which was American Indian again showed an inverse relationship with property taxes.

Table 37: Property Tax (PS Sample)

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.762275903	0.581064553	0.569649	394.9134

	Unstandardized Coefficients	Std. Error	t	Sig.
(Constant)	-163.2430	163.1896	-1.0003	0.3174
Gaming (1, 0)	-26.6051	47.0356	-0.5656	0.5718
Post Period	-452.3753	59.3380	-7.6237	0.0000
DID Estimator	196.0887	81.1728	2.4157	0.0159
Dummy for Urb. Infl. 1=Rural Adj., 0=Rural NonAdj	-129.4206	28.2665	-4.5786	0.0000
Total Slots in County Area	-0.0155	0.0146	-1.0601	0.2893
Number of Yrs AI Gam.	-5.6834	5.4951	-1.0343	0.3012
Number AI Gam. Ops.	-7.5912	14.4327	-0.5260	0.5990
Pct. State Payroll	13389.7520	2498.7207	5.3586	0.0000
Pct. State Establishments	-22867.4321	2988.8657	-7.6509	0.0000
Percent Indian	-4.3902	1.4611	-3.0046	0.0027
Ratio Emp. to Wrking Age	355.8939	209.2132	1.7011	0.0892
Per Capita Income	0.0738	0.0071	10.4177	0.0000
WY_D	1337.0394	88.0254	15.1892	0.0000
KS_D	549.6147	60.2813	9.1175	0.0000
LA_D	-159.5498	79.0884	-2.0174	0.0439
MI_D	112.5622	63.3701	1.7763	0.0760
MS_D	-152.1601	77.2927	-1.9686	0.0492
MT_D	645.6739	73.2539	8.8142	0.0000
NE_D	549.0324	60.4515	9.0822	0.0000
NM_D	-74.3988	96.8744	-0.7680	0.4427
NY_D	251.4896	110.3200	2.2796	0.0228
NC_D	-259.4589	73.1966	-3.5447	0.0004
ND_C	241.5939	67.2548	3.5922	0.0003
SC_D	-13.1950	91.4161	-0.1443	0.8853
SD_D	363.2897	59.7240	6.0828	0.0000
AI_D	-380.7954	84.2069	-4.5221	0.0000
CO_D	422.0449	80.7608	5.2259	0.0000
FL_D	59.8971	124.2787	0.4820	0.6299
ID_D	110.1404	70.9450	1.5525	0.1208
IA_D	193.2665	61.2168	3.1571	0.0016

Using the propensity score sample to examine construction expenditures yields results similar to that of the full sample. Percent of total establishments in no longer significant, while gaming (β=-124.2986, $p < .05$) and the percent American Indian (β=4.5014, $p <$

.01) become significant. While the gaming factor indicates construction expenditures are lower with the presences of a gaming operation, the latter suggests that the larger the percent of the population that is American Indian the larger the construction expenditures. This might possibly suggest that the correlation of an Indian gaming operation and local government construction expenditures is tied to the size of the American Indian population in the area.

Table 38: Construction Expenditures (PS Sample)

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.354643917	0.125772308	0.101951	502.5507

	Unstandardized Coefficients	Std. Error	t	Sig.
(Constant)	61.2824	207.6684	0.2951	0.7680
Gaming (1, 0)	-124.2986	59.8556	-2.0766	0.0381
Post Period	-391.4132	75.5111	-5.1835	0.0000
DID Estimator	91.2901	103.2972	0.8838	0.3770
Dummy for Urb. Infl. 1=Rural Adj., 0=Rural NonAdj	-27.0093	35.9708	-0.7509	0.4529
Total Slots in County Area	-0.0034	0.0186	-0.1825	0.8552
Number of Yrs AI Gam.	2.5684	6.9928	0.3673	0.7135
Number AI Gam. Ops.	2.9070	18.3665	0.1583	0.8743
Pct. State Payroll	6642.9428	3179.7702	2.0891	0.0369
Pct. State Establishments	-5673.7249	3803.5088	-1.4917	0.1361
Percent Indian	4.5014	1.8594	2.4209	0.0156
Ratio Emp. to Wrking Age	-92.4604	266.2362	-0.3473	0.7284
Per Capita Income	0.0483	0.0090	5.3535	0.0000
WY_D	164.0271	112.0176	1.4643	0.1434
KS_D	-212.1515	76.7115	-2.7656	0.0058
LA_D	-84.2068	100.6446	-0.8367	0.4030
MI_D	-197.7621	80.6421	-2.4523	0.0143
MS_D	-127.1894	98.3596	-1.2931	0.1962
MT_D	-302.8964	93.2199	-3.2493	0.0012
NE_D	35.4169	76.9281	0.4604	0.6453
NM_D	-29.1493	123.2785	-0.2365	0.8131
NY_D	106.7774	140.3887	0.7606	0.4471
NC_D	-170.0368	93.1470	-1.8255	0.0682
ND_C	-163.1636	85.5857	-1.9064	0.0569
SC_D	-116.9746	116.3324	-1.0055	0.3149
SD_D	-62.2897	76.0023	-0.8196	0.4126

AI_D	62.2866	107.1583	0.5813	0.5612
CO_D	211.1894	102.7729	2.0549	0.0401
FL_D	-103.2735	158.1520	-0.6530	0.5139
ID_D	-190.4148	90.2817	-2.1091	0.0352
IA_D	-85.7055	77.9020	-1.1002	0.2715

Using the propensity score sample also yielded similar results to the full sample when examining highway expenditures, with the addition of a significant relationship between the number of years with a gaming operation and highway expenditures. This was a positive relationship indicating that as the number of years with a gaming operation increases, highway expenditures increases as well (β=-4.4909, $p < .05$).

Table 39: Highway Expenditures (PS Sample)

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.707365578	0.500366061	0.486752	155.9394

	Unstandardized Coefficients	Std. Error	t	Sig.
(Constant)	182.0477	64.4386	2.8251	0.0048
Gaming (1, 0)	25.9703	18.5729	1.3983	0.1623
Post Period	-95.4479	23.4308	-4.0736	0.0000
DID Estimator	19.4853	32.0527	0.6079	0.5434
Dummy for Urb. Infl. 1=Rural Adj., 0=Rural NonAdj	-55.1243	11.1616	-4.9387	0.0000
Total Slots in County Area	-0.0237	0.0058	-4.0921	0.0000
Number of Yrs AI Gam.	4.4909	2.1698	2.0697	0.0387
Number AI Gam. Ops.	0.4782	5.6990	0.0839	0.9331
Pct. State Payroll	4976.0103	986.6693	5.0432	0.0000
Pct. State Establishments	-9968.7205	1180.2127	-8.4465	0.0000
Percent Indian	-1.7399	0.5770	-3.0157	0.0026
Ratio Emp. to Wrking Age	208.3894	82.6120	2.5225	0.0118
Per Capita Income	0.0174	0.0028	6.2064	0.0000
WY_D	-107.4918	34.7586	-3.0925	0.0020
KS_D	-149.0095	23.8033	-6.2600	0.0000
LA_D	-229.0372	31.2296	-7.3340	0.0000
MI_D	-167.6078	25.0229	-6.6982	0.0000
MS_D	-204.9542	30.5206	-6.7153	0.0000
MT_D	-195.8834	28.9258	-6.7719	0.0000
NE_D	-105.2860	23.8705	-4.4107	0.0000
NM_D	-176.9922	38.2528	-4.6269	0.0000
NY_D	-125.6137	43.5620	-2.8836	0.0040

NC_D	-428.5792	28.9031	-14.8281	0.0000
ND_C	-57.5568	26.5569	-2.1673	0.0304
SC_D	-375.5611	36.0974	-10.4041	0.0000
SD_D	-147.2499	23.5832	-6.2438	0.0000
Al_D	-251.8573	33.2508	-7.5745	0.0000
CO_D	19.6097	31.8900	0.6149	0.5387
FL_D	-252.6033	49.0739	-5.1474	0.0000
ID_D	-165.8906	28.0140	-5.9217	0.0000
IA_D	-154.6991	24.1727	-6.3998	0.0000

Again, using the propensity score sample to examine welfare expenditures results in similar results with the DID estimator being significant at the $p < .01$ level (β=-48.8690). Other significant factors are this same as the full sample with the addition of the gaming factor now being significant. Both models support the conclusion that the opening of a gaming operation is correlated with a reduction in local government welfare related expenditures.

Table 40: Welfare Expenditures (PS Sample)

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.829025813	0.687283799	0.678763	80.31674

	Unstandardized Coefficients	Std. Error	t	Sig.
(Constant)	38.5831	34.6509	1.1135	0.2657
Gaming (1, 0)	-22.8557	9.5660	-2.3893	0.0170
Post Period	24.5166	12.0680	2.0315	0.0424
DID Estimator	-48.8690	16.5088	-2.9602	0.0031
Dummy for Urb. Infl. 1=Rural Adj., 0=Rural NonAdj	-2.7293	5.7488	-0.4748	0.6350
Total Slots in County Area	-0.0003	0.0030	-0.1143	0.9090
Number of Yrs Al Gam.	4.6019	1.1176	4.1177	0.0000
Number Al Gam. Ops.	12.1046	2.9353	4.1238	0.0000
Pct. State Payroll	72.9365	508.1851	0.1435	0.8859
Pct. State Establishments	-202.5098	607.8698	-0.3331	0.7391
Percent Indian	-0.1321	0.2972	-0.4445	0.6568
Ratio Emp. to Wrking Age	-46.7025	42.5494	-1.0976	0.2726
Per Capita Income	0.0004	0.0014	0.2959	0.7674
WY_D	-6.2610	17.4534	-0.3587	0.7199
KS_D	-13.1238	12.3912	-1.0591	0.2898

LA_D	-5.5867	17.4223	-0.3207	0.7485
MI_D	58.5954	15.2543	3.8413	0.0001
MS_D	-5.0514	16.4133	-0.3078	0.7583
MT_D	-294.4400	14.8982	-19.7634	0.0000
NE_D	39.0196	11.6822	3.3401	0.0009
NM_D	-24.6132	20.1956	-1.2187	0.2232
NY_D	204.4512	22.4367	9.1124	0.0000
NC_D	-176.2695	14.8866	-11.8408	0.0000
ND_C	-236.1346	13.6782	-17.2636	0.0000
SC_D	-305.2178	18.5920	-16.4166	0.0000
Al_D	-328.2257	17.1258	-19.1655	0.0000
CO_D	-173.1651	16.4250	-10.5428	0.0000
FL_D	-7.9584	26.2882	-0.3027	0.7621
ID_D	6.1232	14.6638	0.4176	0.6763
IA_D	24.5664	12.9140	1.9023	0.0574
AFDC/Child Welf. at County Level	308.2596	12.1466	25.3784	0.0000

Using the propensity score model to examine police expenditures provides somewhat different results. The gaming (β=10.7800, p= 0.0881) and rural adjacent/non-adjacent (β=-6.4701, p=0.0885) factors are now 'almost' significant. The only other significant factors were the ratio of employed to working age and per capita income.

Table 41: Police Expenditures (PS Sample)

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.732093681	0.535961158	0.523317	53.01958227

	Unstandardized Coefficients	Std. Error	t	Sig.
(Constant)	4.9210	21.9092	0.2246	0.8223
Gaming (1, 0)	10.7800	6.3148	1.7071	0.0881
Post Period	-25.1423	7.9665	-3.1560	0.0016
DID Estimator	-3.1676	10.8980	-0.2907	0.7714
Dummy for Urb. Infl. 1=Rural Adj., 0=Rural NonAdj	-6.4701	3.7950	-1.7049	0.0885
Total Slots in County Area	-0.0023	0.0020	-1.1895	0.2345
Number of Yrs Al Gam.	0.0896	0.7378	0.1215	0.9034
Number Al Gam. Ops.	-0.9029	1.9377	-0.4660	0.6413
Pct. State Payroll	447.7314	335.4688	1.3346	0.1823
Pct. State Establishments	-685.1964	401.2738	-1.7076	0.0880
Percent Indian	0.2591	0.1962	1.3210	0.1868
Ratio Emp. to Wrking Age	-57.4812	28.0882	-2.0465	0.0409
Per Capita Income	0.0132	0.0010	13.9324	0.0000
WY_D	55.9866	11.8180	4.7374	0.0000

KS_D	-22.6327	8.0931	-2.7965	0.0053
LA_D	16.0117	10.6181	1.5080	0.1319
MI_D	-45.9395	8.5078	-5.3997	0.0000
MS_D	-19.9759	10.3770	-1.9250	0.0545
MT_D	10.8461	9.8348	1.1028	0.2703
NE_D	-39.7793	8.1160	-4.9013	0.0000
NM_D	30.2278	13.0060	2.3241	0.0203
NY_D	-62.8485	14.8111	-4.2433	0.0000
NC_D	-35.0562	9.8271	-3.5673	0.0004
ND_C	-45.5059	9.0294	-5.0398	0.0000
SC_D	-20.9439	12.2732	-1.7065	0.0882
SD_D	-27.6725	8.0183	-3.4512	0.0006
Al_D	-24.4619	11.3053	-2.1638	0.0307
CO_D	81.7020	10.8426	7.5352	0.0000
FL_D	125.6350	16.6852	7.5297	0.0000
ID_D	4.7866	9.5248	0.5025	0.6154
IA_D	-40.0316	8.2187	-4.8708	0.0000

Looking at the propensity score sample to examine State IGR we see similar results. The DID estimator again shares a significant inverse relationship with State IGR (β=-269.7944, $p < .001$) and also a significant positive relationship between the total number of gaming operations and State IGR (β=27.1419, $p < .05$). Additional significant factors include the percent of total establishments in the state, ratio of employed to working age and per capita income.

Table 42: State IGR (PS Sample)

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.79207384	0.627380968	0.617228	366.6943

	Unstandardized Coefficients	Std. Error	t	Sig.
(Constant)	1602.7709	151.5286	10.5773	0.0000
Gaming (1, 0)	50.2555	43.6746	1.1507	0.2501
Post Period	931.7756	55.0979	16.9113	0.0000
DID Estimator	-269.7944	75.3725	-3.5795	0.0004
Dummy for Urb. Infl. 1=Rural Adj., 0=Rural NonAdj	-33.8613	26.2467	-1.2901	0.1973
Total Slots in County Area	0.0135	0.0136	0.9919	0.3215
Number of Yrs Al Gam.	8.0463	5.1024	1.5770	0.1151

Number AI Gam. Ops.	27.1419	13.4014	2.0253	0.0431
Pct. State Payroll	1117.6917	2320.1711	0.4817	0.6301
Pct. State Establishments	-6282.8766	2775.2921	-2.2639	0.0238
Percent Indian	-0.8313	1.3567	-0.6127	0.5402
Ratio Emp. to Wrking Age	387.5698	194.2636	1.9951	0.0463
Per Capita Income	-0.0393	0.0066	-5.9810	0.0000
WY_D	81.7261	81.7355	0.9999	0.3176
KS_D	-841.4505	55.9738	-15.0329	0.0000
LA_D	-619.7568	73.4370	-8.4393	0.0000
MI_D	-599.2128	58.8419	-10.1834	0.0000
MS_D	-818.7915	71.7697	-11.4086	0.0000
MT_D	-706.7212	68.0194	-10.3900	0.0000
NE_D	-987.4030	56.1319	-17.5908	0.0000
NM_D	22.9588	89.9521	0.2552	0.7986
NY_D	147.0878	102.4369	1.4359	0.1513
NC_D	-595.6676	67.9662	-8.7642	0.0000
ND_C	-638.0109	62.4490	-10.2165	0.0000
SC_D	-827.5824	84.8838	-9.7496	0.0000
SD_D	-1158.4295	55.4563	-20.8890	0.0000
AI_D	-794.3712	78.1898	-10.1595	0.0000
CO_D	-379.6303	74.9900	-5.0624	0.0000
FL_D	-715.0086	115.3982	-6.1960	0.0000
ID_D	-537.2535	65.8755	-8.1556	0.0000
IA_D	-668.3104	56.8424	-11.7572	0.0000

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