



Fiscal Impact of the 2006 Tribal Gaming Compacts  
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## FISCAL IMPACT OF THE 2006 TRIBAL GAMING COMPACTS

### EXECUTIVE SUMMARY

Our analysis of the amended Pechanga, Morongo, Agua Caliente and Sycuan tribal gaming compacts signed by Governor Schwarzenegger in 2006 indicates that:

- The amount of revenue received by the state from the 2006 tribal gaming compacts very likely will fall short, and perhaps well short, of the “more than \$9 billion” estimated by the proponents of the compacts.
- The four tribes can expect to collect about \$1.5 billion each year in additional slot machine revenue. The majority of this new revenue will be diverted to the expanded casinos from other, generally taxable, economic activities. We estimate that the new slot machine revenue diverted from other sources within the economy will lead to an annual reduction of about \$138 million in state and local tax revenue. This reflects the loss of tax revenues on leisure and entertainment expenditures as well as expenditures at other gaming venues that are shifted to the newly expanded casinos.
- Overall, the net annual fiscal impact of the proposed casino expansions on state and local governments ranges from a gain of about \$165 million to a loss of approximately \$60 million, depending on the amount of time machines are treated as “in operation” for purposes of the state fee calculation.<sup>1</sup>
- The proponents’ estimate of the total amount of revenue to be paid to the state does not take account of the fundamental economics of the gaming industry and fails to acknowledge the possibility that an ambiguity in the compact language could result in reduced payments to the state. We estimate that these factors could reduce revenue from the compacts by as much as 66 percent relative to the \$9.9 billion originally estimated by the administration.
- In calculating payments to the state based on the net win of new machines, the compacts appear to allow the tribes to multiply the average net win by the average number of slot machines *in operation* in the casino, rather than the average number of machines present *on the casino floor*. By taking advantage of this ambiguity in the compact language and only operating certain machines during peak periods, the tribes could dramatically reduce the amount of revenue paid to the state.
- The proposed casino expansions are likely to result in a small increase in overall state employment. About 1,800 jobs will be created as a result of the casino expansions, to the extent that the casinos attract visitors and additional revenue from Las Vegas. However, the largest economic impact (corresponding to about 88,000 jobs) will simply be a shift in employment from competing California businesses to the expanded casinos and related businesses. Although these job losses would be offset by increases in employment at the

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<sup>1</sup>The high end of the range assumes that new slot machines are “in operation” full time. The low end of the range assumes that the machines are treated as “in operation” for Friday and Saturday evening.

expanding casinos, they would nevertheless constitute an economic dislocation for the affected businesses and workers.

- Overall, we estimate that the compacts will generate between about \$150 million and \$375 million per year (less than 1 percent of the state's general fund budget) consisting of a fixed payment of \$122.6 million per year (for existing machines) and a variable payment of about \$28 million to \$253 million per year, depending on the interpretation of the compact language.<sup>2</sup> These additional revenues would be offset by a reduction in state and local tax receipts equal to about \$138 million per year.

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<sup>2</sup> The amount of the annual payment has been estimated here. The actual amount would depend on how fast the tribes roll out new machines and what rate of inflation is assumed.

## INTRODUCTION

On July 10, 2007, Governor Schwarzenegger signed four bills ratifying the amended tribal gaming compacts for the Pechanga Band of Luiseño Indians; the Sycuan Band of the Kumeyaay Nation; the Agua Caliente Band of Cahuilla Indians and the Morongo Band of Mission Indians tribes.<sup>3</sup> The amended compacts were signed by the Governor in August 2006; the Legislature ratified the agreements nearly a year later. The Governor also signed memoranda of agreement with the tribes that are separate from the amended compacts and deal with such issues as child and spousal support, workers compensation, problem gambling and internal controls.

The amended compacts modified provisions of compacts the state had entered into with these four tribes (as well as 57 other tribes) in 1999 and extended the duration of the compacts from 2020 to 2030. Specifically, the new compacts would allow the four tribes to significantly increase the number of slot machines at their casinos and would require that a percentage of the net win from the additional machines be paid to the state of California. Although the tribes have stated that the compacts will generate more than \$9 billion for the state, this estimate has received little scrutiny. The rate at which the tribes install new machines, the appetite of Southern Californians for additional slot machine gambling, and the way in which the compact language is interpreted by the tribes and the courts could all result in lower payments to the state.

In addition, the offsetting reductions in revenues for state and local governments that these compacts will also cause have not been previously identified. Just as Californians will spend more at the newly expanded casinos, they will inevitably spend less on other goods and services. For the most part, these foregone expenditures carry with them a significant fiscal impact for state and local governments. Fewer restaurant meals, movie tickets, and other taxable expenditures will all result in lower tax receipts and fewer jobs at these affected businesses.

Finally, it is important to note that the analysis presented here does not consider any increases in costs for state and local governments. These costs, for everything from road maintenance to emergency response to public safety, can constitute a significant source of increased expenditures, primarily for local governments.

As voters and policy makers evaluate the relative merits of the proposed casino expansions, it is important to note that it is the net effect – not just the positive effects – that should be considered.

## DISCUSSION

### **Fee Provisions of the 2006 Compacts Likely Will Not Generate the Level of Revenue Advertised**

In August 2006, the administration estimated that the four compacts would generate up to \$9.9 billion in new revenue for the state over the then-expected 24-year life of the agreements.<sup>4</sup> For the reasons discussed below, it is very likely that the amount of revenue received by the state will fall short, and perhaps well short, of this estimate.

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<sup>3</sup> These compact amendments were negotiated with the Governor in 2006 and ratified by the Legislature in 2007. In this document, they will be referred to as the 2006 compacts.

<sup>4</sup> These figures exclude revenues from the San Manuel compact, which was approved with similar terms but has not been challenged with a referendum.

Table 1 shows the revenue estimates and number of new gaming devices expected to be in operation in order to generate this level of revenues for each of the four 2006 compacts. Even though the compacts authorized higher numbers of devices for several of the tribes, the administration attributed the \$9.9 billion in estimated additional revenue to the placement of fewer devices in operation. In our calculations we assumed that the number of devices identified by the administration as accounting for the estimated \$9.9 billion in additional revenues would be in operation as of July 1, 2008, with one exception. For the Agua Caliente tribe, because adding more than 2,000 new devices requires the construction of a new casino, we assumed that 2,000 rather than 3,000 new devices would be added.

**Table 1: Selected 2006 Tribal Gaming Compacts**

Tribe	Revenue (billions)	Existing Devices	Additional Devices Authorized by Compacts	Additional Devices Assumed to be Operating to Generate \$9.9 Billion over 24 Years <sup>5</sup>
Agua Caliente	\$1.8	2,000	3,000	3,000
Morongo	\$2.8	2,000	5,500	3,000
Pechanga	\$3.7	2,000	5,500	3,000
Sycuan	\$1.6	2,000	3,000	3,000

The additional revenue received by the state as a result of these amended compacts likely will be significantly lower than estimated by the administration for two reasons. First, because the number of customers using these gaming devices likely will not grow at the same pace as the number of machines added by the tribes, there will be a reduction in the “win per unit,” which is the yardstick by which a portion of the revenue paid by the tribes to the state is determined. Second, an ambiguity in the language of the compacts appears to permit the tribes to exclude additional devices for purposes of calculating payments to the state.

As shown in Table 2, payments to the state under the 2006 compacts consist of two parts: (1) a fixed annual payment for operation of each tribe’s existing devices and (2) a payment based on a percentage of the “net win” per machine for the new devices. The net win is the gross revenue from slot machines minus payouts to winners and licensing fees. The compacts require the tribes to calculate the average net win per slot machine for each quarter and multiply that by the average number of slot machines operated in that quarter.<sup>6</sup>

**Table 2: Calculation of Payments to the State under the 2006 Compacts**

Tribe	Annual Payment for Existing Devices (millions)	Percent of Net Win for New Devices over 2,000 up to 5,000	Percent of Net Win for New Devices over 5,000
Agua Caliente	\$23.4	15%	N/A
Morongo	\$36.7	15%	25%
Pechanga	\$42.5	15%	25%
Sycuan	\$20.0	15%	N/A

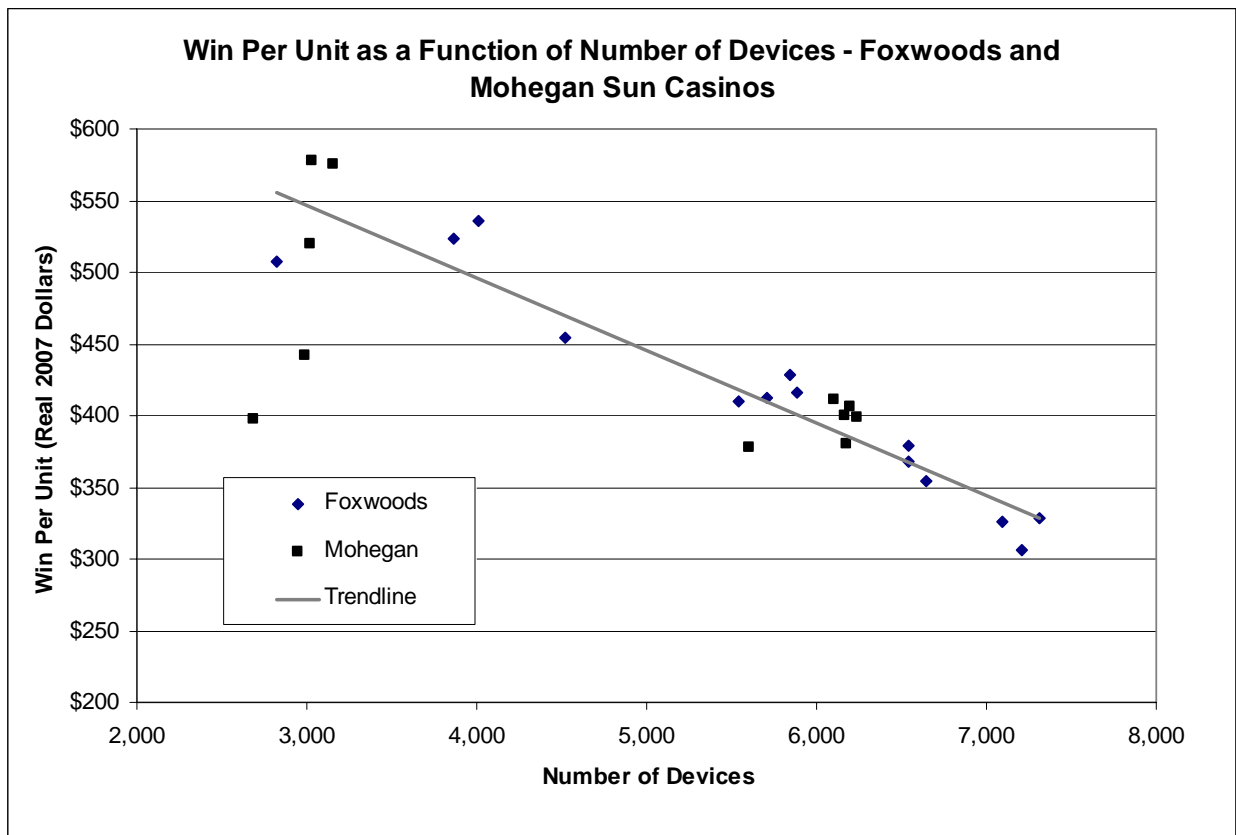
<sup>5</sup> Press releases issued by the Administration during August 2006 reference an estimate by the Department of Finance of up to \$9.9 billion in additional state revenue from these four compacts combined over the then-expected 24-year life of the compacts based on the number of additional devices shown being operated. Additional revenues were estimated to be generated if additional devices above these levels were placed in operation.

<sup>6</sup> Section 4.3.1. of the amended compacts.

***Dilution Effect Will Reduce Win Per Unit***

An analysis of the effect of additional gaming devices in other casinos indicates that the introduction of additional slots or other gaming devices tends to reduce the net win per machine. We analyzed the impact of the addition of slots over the period from 1994 through 2007 on win per unit (WPU) at the Foxwoods and Mohegan Sun casinos in Connecticut using data reported to the state.<sup>7</sup> A regression analysis was performed to determine how adding devices changed the WPU at those casinos. In both cases, the number of devices increased by more than 100 percent, from just under 3,000 in each casino to more 6,000 over this timeframe. The results, shown in Figure 1, indicate that the elasticity, or “dilution factor,” associated with the addition of new devices is about -0.32. In other words, for each 10 percent increase in the number of devices, WPU decreased by about 3.2 percent. These results are based on a relatively small set of observations, but there is a strong statistically significant relationship between the number of devices and the WPU. The regression controlled for unemployment, population, and per capita personal income, as well as changes over time and across the two casinos. Appendix A presents our detailed regression results.

**Figure 1: Win Per Unit as a Function of Number of Devices**



This dilution factor permits us to assess the impact of the addition of new devices on the WPU for the devices to be added under the 2006 compacts.

<sup>7</sup> <http://www.ct.gov/dosr/cwp/view.asp?a=3&q=290840&doserNav=|>

Although California’s tribal casinos do not report publicly the win per unit for their machines, the fees imposed under the new compacts allow us to estimate the WPU. As shown in Table 3, the annual payment for existing devices under the 2006 compacts was divided by the reported percentage of 2005 revenues represented by the fixed payment to yield an estimate of the total net revenue from each tribe’s gaming devices. This figure was then divided by the number of existing devices (2,000) to yield the win per device per year, and finally by 365 to yield the win per unit per day.<sup>8</sup>

Once the imputed win per unit is determined, the dilution effect of the addition of new machines on win per unit can be calculated. Because the win per unit is likely to decrease as more machines are added, any revenue estimates based on the current win per unit will be overstated. Table 5 (page 9) presents the results of the dilution effects analysis.

**Table 3: Calculation of Estimated Win Per Unit Per Day**

	Agua	Pechanga	Morongo	Sycuan
Annual Payment for Existing Devices per 2006 Compacts (millions)	\$23.4	\$42.5	\$36.7	\$20.0
Reported Percentage of 2005 Revenue Represented by Fixed Payment <sup>9</sup>	9%	10%	10%	10%
Imputed Existing Revenue (millions)	\$260	\$425	\$367	\$200
Imputed Win Per Unit Per Day (2005 dollars)	\$356	\$582	\$503	\$274

**Compact Language is Ambiguous Regarding the Calculation of Net-Win Payments**

In order to calculate the payments to the state under the 2006 compacts, the tribes are required to multiply average net win per device by the average number of new devices operated in that quarter.<sup>10</sup> The average net win per device is calculated by dividing total net win by the average number of devices present on the casino floor.

However, because of an ambiguity in the language, the compacts appear to allow the tribes to multiply the average net win by the average number of slot machines *in operation* in the casino, rather than the average number of machines *present* on the casino floor. If some slot machines are roped off during weekdays, for example, they would not be “in operation.” This lower number (machines in operation versus machines present on the casino floor) is multiplied by the average net win per machine to calculate the payments to the state, resulting in lower payments. By taking advantage of this ambiguity in the compact language and only operating certain machines during peak periods, the tribes could dramatically reduce the amount of revenue paid to the state.

Table 4 (next page) shows the potential effect of this ambiguity on the revenues paid to the state. Without knowing the extent to which the tribes will take advantage of the ambiguity in the compact

<sup>8</sup> Because these amounts were calculated in terms of 2005 dollars, they were then adjusted to reflect the value of the win per unit in 2008 dollars.

<sup>9</sup> For Agua Caliente compact identifies the fixed payment as 9 percent of 2005 net win. For the other tribes, the compacts do not specify a percentage of net win as being represented by the fixed payments. However, the Governor’s legal affairs secretary is quoted in an August 30, 2006 media report as saying that the state will receive a flat fee of 10 percent of slot machines.

<sup>10</sup> Section 4.3.1. of the amended compacts.

language, it is not possible to precisely predict the level of revenues the state will receive. Table 4 illustrates the impact on revenues of various durations machines are treated as in operation for purposes of calculating state revenue payments.

**Table 4: Impact of Machines “in Operation” Versus “on the Floor” on State Revenues**

Periods When Devices are "in operation"	Every Day	Thursday - Sunday	Friday - Sunday	Friday and Saturday Nights Only
Time New Devices Are in Operation	100%	57%	43%	11%
Reduction in Net Win Payments to State	0%	-43%	-57%	-89%
Reduction in Total Payments to the State	0%	-29%	-38%	-60%

In addition, language in the 2006 compacts removes the need for these net win calculations to be certified by independent auditors not connected to the gambling facility or tribe. Instead, the 2006 compacts allow these results to be certified by the tribe’s own chief financial officer or any other representative. Thus, an extra level of independent oversight of the net win calculations has been removed.

**Total Revenue to the State Dependent on Interpretation of Compact Language**

Even under the most optimistic interpretation of the compact language, if the new devices authorized under the 2006 compacts are “in operation” every day, the compacts would only generate \$8.4 billion,<sup>11</sup> a nearly 15 percent reduction in revenues compared to the administration’s projection, due to the dilution effect of the new machines on win per unit and the timing of the rollout of the new machines. If, instead, the new machines are in operation Friday and Saturday nights only, revenue to the state could be as little as \$3.37 billion, representing a 66 percent reduction from the administration’s estimate of \$9.9 billion.

**TRANSFER OF ECONOMIC ACTIVITY TO EXPANDED CASINOS**

As a result of the new compacts, the four tribes will generate significant additional slot machine revenue. Some of this new revenue will represent an overall increase in economic activity for the state, primarily as a result of Californians choosing to visit the newly expanded casinos in lieu of taking trips to Las Vegas or otherwise spending money outside of the state. As discussed below,

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<sup>11</sup> This figure reflects the fact that the Legislature did not ratify the agreements until nearly a year after they were approved by the administration and the pendency of the referendum of the compacts. There is no guarantee that the number of new devices we assumed in the calculation will actually be placed in operation. The Agua Caliente compact authorizes 1,000 additional devices in each of two existing casino locations and an additional 1,000 at a new location on tribal lands. In testimony before the State Senate Governmental Operations Committee in April 2007 representatives of the tribe suggested that it might be up to a year before the devices at the second existing location (Palm Springs) would be in operation and did not address the timing of the final 1,000 new devices. Similarly, representatives of the Pechanga tribe suggested that they would not immediately expand to 5,000 devices (including 2,000 existing devices), but rather add 1,500 new devices (for a total of 3,500). And the representative of the Sycuan tribe indicated that they could add only 1,000 devices in their current facility.

however, the majority of this new revenue will be diverted to the expanded casinos (which generally do not pay sales or income taxes) from other, generally taxable, economic activities.

### Estimating Total Additional Slot Machine Revenue

We estimate that installation of the number of additional devices identified above will generate about \$1.52 billion in additional slot machine revenue at the four tribes' expanding casinos. Because the tribes do not report their revenue or WPU data, these numbers are derived by combining the known details about current revenues and planned expansions with our own analysis of the effects of slot machine expansions on the WPU of all the machines in the surrounding market.<sup>12</sup> Table 5 presents the estimated current and projected future WPU and total slot machine revenue for the four 2006 compact tribes.

**Table 5: Estimates of Additional Slot Machine Revenue (2008 Dollars)**

	Agua Caliente	Pechanga	Morongo	Sycuan	Total
<i>Current Slots</i>	2,000	2,000	2,000	2,000	
<i>Current WPU per day</i>	\$389	\$636	\$549	\$299	
<i>Current Revenue</i>	\$284,109,020	\$464,408,975	\$401,030,809	\$218,545,400	\$1,368,094,204
<i>Additional slots<sup>13</sup></i>	2,000	3,000	3,000	3,000	
<i>New WPU per day</i>	\$343	\$561	\$484	\$264	
<i>Total Revenue</i>	\$500,866,877	\$1,023,405,878	\$883,741,075	\$481,602,766	\$2,889,616,596
<b><i>Additional Revenue</i></b>	<b>\$216,757,857</b>	<b>\$558,996,903</b>	<b>\$482,710,266</b>	<b>\$263,057,366</b>	<b>\$1,521,522,392</b>

### Calculating the Impact on Other Sectors of the Economy

The fiscal and economic impact of additional revenue spent at expanded tribal casinos depends primarily on the source of the new expenditures. New revenue from out-of-state residents or from money that Californians would otherwise have spent outside of the California economy or saved, on the one hand, will tend to generate net positive fiscal and economic impacts. Revenue diverted from elsewhere in the state's economy, on the other hand, will instead represent a shift of economic activity and does not tend to generate additional fiscal and economic benefits.

In spite of the unprecedented expansion in regional and tribal gaming that has occurred over the past decade, relatively little research has been done on the effect of these expansions on affected areas of consumer spending. In California and other jurisdictions where tribes are not required to report their revenues, this lack of data compounds the difficulty of evaluating the overall net fiscal effects of casino expansions.

<sup>12</sup> As discussed above, our analysis of the effect of additional slot machines in Connecticut's gaming market, Foxwoods and Mohegan Sun, showed that a 10% increase in slot machines led to a 3.2% decrease in the net win of every slot machine.

<sup>13</sup> As previously discussed, we assumed that the number of devices identified by the administration as accounting for the estimated \$9.9 billion in additional revenues would be in operation, with one exception. For Agua Caliente, because adding more than 2,000 new devices requires the construction of a new casino, we assumed that 2,000 rather than 3,000 new devices would be added.

Nevertheless, the research that does exist generally points to the following:<sup>14</sup>

- Comparable research in other states indicates that approximately four-fifths of the revenue spent at regional casinos comes from other sources within the local economy
- The revenues diverted from other local businesses tend to come largely from non-gaming sources.

Building on the existing research, our analysis seeks to estimate the fraction of the new casino revenue that is actually recaptured spending from out of state and the fraction that is substituted from in-state taxed economic activity. We then estimate the extent of the resulting fiscal and economic effects. We do this in four steps:

1. Assess the extent to which California tribal casinos are perceived as substitutes for Las Vegas casinos
2. Estimate the percent of money diverted from California gambling substitutes, savings, and other taxed entertainment
3. Calculate the reduction in tax revenue attributable to each substituted dollar
4. Estimate the number of jobs lost/transferred to the expanding casinos

### ***Can California Casinos Compete with Las Vegas?***

The economic impact of any casino depends heavily on the extent to which it is successful in drawing visitors from surrounding regions or keeping local residents from making their gambling and travel/leisure expenditures elsewhere. The available economic evidence strongly indicates that, except for established destination gambling spots like Las Vegas, most casinos tend to draw money primarily from local/regional residents.<sup>15</sup> Data indicate that, in spite of the significant growth of California tribal casinos over the past decade, these casinos are generally not viewed as good substitutes for Las Vegas “destination” gaming locations. Nor does the data indicate that visitors to California come to the state in appreciable numbers in order to gamble at tribal casinos.

#### *Foregone Trips to Las Vegas by Residents and Non-Residents*

Analysis of Las Vegas visitor data finds that, where the gambling Mecca is concerned, “there is no substitute” (to borrow a phrase from car maker Porsche). When asked whether they were likely to decrease their trips to Las Vegas given the expansion of casinos outside of the Las Vegas market, only a very small percentage of Southern Californians indicated that they were less likely to visit Las Vegas. In fact, since the advent of large scale Indian casino gambling in California in 2000, the fraction of Southern Californians indicating that they were likely to visit Las Vegas less often has declined, from 3 percent to 0 percent.<sup>16</sup>

Not only are Southern Californians unlikely to substitute trips to a local casino for trips to Las Vegas, California tourism survey data indicate that California casinos tend to draw primarily

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<sup>14</sup> See “The Regional Economic Impacts of Casino Gambling: Assessment of the Literature and Establishment of a Research Agenda.” Adam Rose and Associates 1998.

<sup>15</sup> For a discussion of this problem, see Kindt, John Warren. “Legalized Gambling Activities: The Issues Involving Market Saturation.” *Northern Illinois University Law Review*. Vol. 15. 1995

<sup>16</sup> GLS Research. *Las Vegas Visitor Profile: Southern California and International Visitors Version, 2001-2006*. Las Vegas Convention & Visitors Authority.

California residents.<sup>17</sup> This survey data indicates that only 5 percent of non-resident visitors list gambling as one of the primary purposes of their trips to California.<sup>18</sup> Indeed, California's neighbors (Nevada, Arizona, and Oregon) all have gaming venues of their own, and there is little reason to expect residents of these states to prefer California's gaming venues to their own.

The reason for these survey responses is straightforward: while both Las Vegas casinos and California Indian casinos offer gambling, their overall products are substantially different, reducing the likelihood that Californians regard them as substitutes. Las Vegas is a "destination" resort, offering a high concentration of extravagant "theme" casinos, entertainment, shopping, and non-gambling entertainment.<sup>19</sup> In fact, surveys of Las Vegas visitors show that only 10 percent cited gambling as their primary reason for visiting, with nearly half reporting that their primary motivation was "vacation/pleasure." Las Vegas' appeal also stems from the large number of casinos that it offers in a compact area. Las Vegas visitor survey data reveal that most visitors take advantage of this breadth of casino offerings, visiting an average of 6.2 casinos during their visit. Indian casinos, in addition to being smaller and less extravagant, are typically much farther from their nearest competitors.

Because visitors do not gamble in every casino that they visit, this suggests that Las Vegas tourists are at least partly attracted by the opportunity to experience the variety of theme casinos that Las Vegas offers. Indian casinos, lacking both a concentration of properties as well as the spectacle that Las Vegas casinos offer, are not viewed as substitutes for Las Vegas by many Californians, and consequently in their eyes do not compete with "the Strip."

*National Data Indicate that Indian Casinos are Not a Substitute for Las Vegas*

Gambling outside of Las Vegas has grown at an explosive rate during the past decade. Currently, Indian casinos are estimated to generate approximately 3.75 times as much gaming revenue as Las Vegas Strip casinos generate.

If these Indian casinos are good substitutes for traditional Las Vegas casinos, this explosive growth should have come – at least in part – at the expense of Las Vegas casinos. As Figure 2 (next page) illustrates, however, revenues at Las Vegas Strip casinos have been remarkably unaffected by the explosion in Indian casino gambling.

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<sup>17</sup> Analysis of California Travel & Tourism data from 2001 to 2005 show that on average 86% of casino visitors are residents and 14% are non-residents. This matches closely a self-admittedly biased sample taken for the Agua Caliente casino where 12.6% of patrons were from out of state in 2002. For the rest of the analysis, we treat non-resident spending shifts as identical to resident shifts for simplicity sake since both populations are largely diverting current spending instead of recapturing money. This simpler methodology provides only a 1% higher estimate of revenue loss than a more complex methodology that treats residents and non-residents separately.

<sup>18</sup> DK Shifflet & Associates. *California Domestic Travel Report, 2005 and 2004*. California Travel & Tourism Commission

<sup>19</sup> To the extent that California Indian casinos expand and become more like Las Vegas casinos, they may be able to compete more effectively with these "destination" facilities.

**Figure 2: Las Vegas Strip and Indian Casino Revenue**

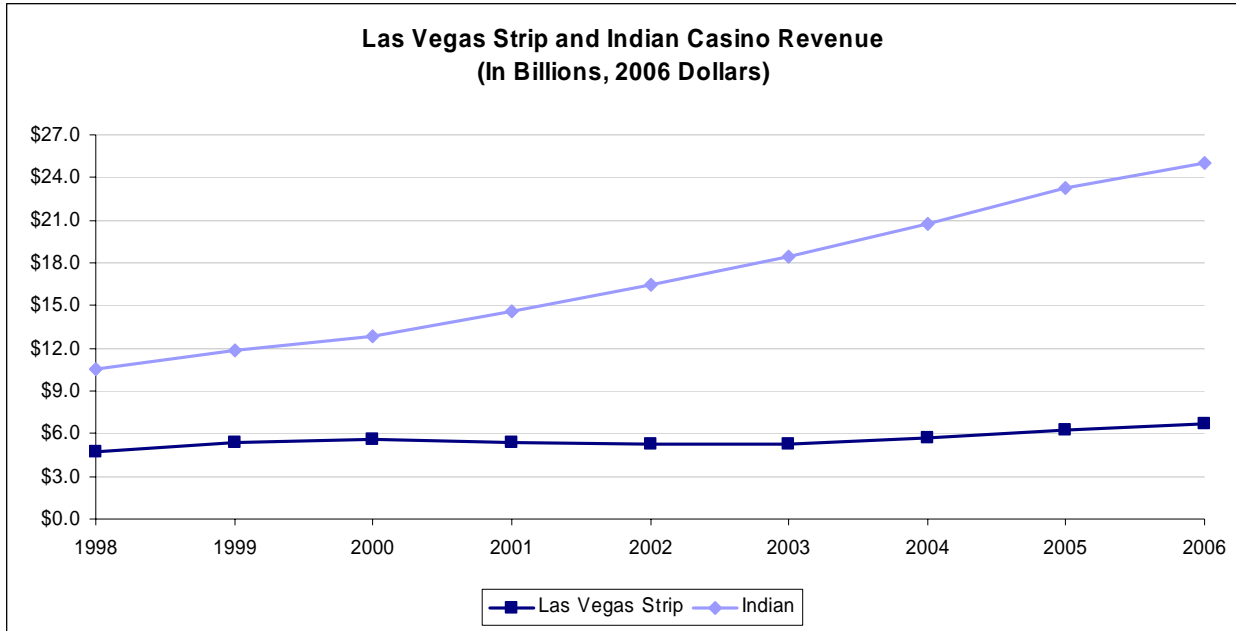
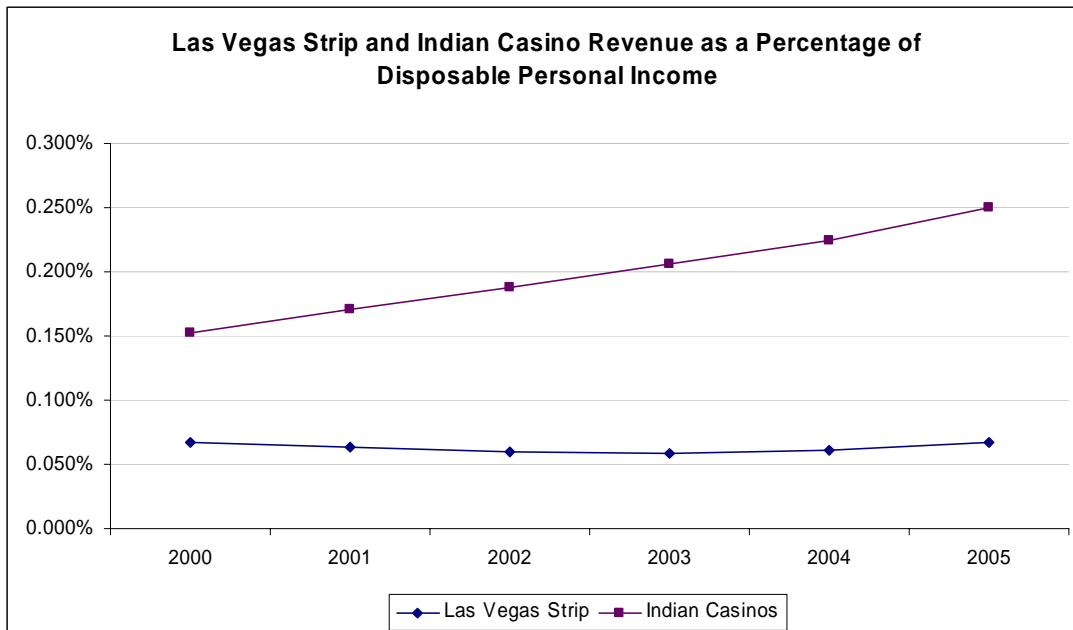


Figure 3 provides another perspective on the same data, showing casino revenues as a percent of United States disposable personal income. Las Vegas Strip casino revenues have remained between about 0.06 percent and 0.07 percent of personal income. During the same period, however, all other casino revenues, including all other regional and Indian casinos, grew from a combined share of 0.15 percent to 0.25 percent of personal income. These data provide strong evidence that the expenditures at regional casinos have not been substituted from expenditures at Las Vegas casinos.

**Figure 3: Las Vegas Strip and Indian Casino Revenue as a Percent to Personal Income**



*Substitution Effect Estimate*

Given the low substitution rate between Las Vegas casinos and Southern California Indian casinos, we estimate, based on available survey and economic data, that approximately two percent of the increased slot machine revenue stemming from the new compacts, or \$27.4 million dollars, is captured from Las Vegas, either from Californians foregoing trips to Las Vegas or non-resident tourists visiting California in order to gamble.<sup>20</sup>

*A Penny Spent is not a Penny Saved*

We also accounted for the fact that some additional casino spending will come from a reduction in savings. Given the extremely low savings rate of today's Americans, a dollar of disposable income diverted to casino gaming would only reduce savings by .4 percent. However, we have accounted for this substitution effect in our analysis.

***Revenue Diverted from Other Consumer Spending***

After accounting for the new money that would flow into the state from recaptured resident or newly captured non-resident visitors or decreased savings (which constitute "new" economic activity for the state) we move on to tallying the amount of money that would be diverted from other taxable in-state activities. These other activities can be grouped into two categories: gambling substitutes and other taxable entertainment.

*Substitution from Other In-state Gambling Venues*

Just as the release of a new soft drink is likely to draw spending away from other soft drink products, new slot machines will divert money from other gambling activities, including card clubs, horseracing, the lottery, and other competing Indian casinos. We estimate that more than a quarter of the additional revenue to be earned by the new slots will come from other gambling activities.

Among the affected gaming venues, we find that other casinos will feel the largest effects of these casino expansions. These casinos are in direct competition with the expanding casinos for slot machine patrons.

*Defining the Market*

Agua Caliente, Morongo, Pechanga and Sycuan are all based in the high casino density market of Southern California. Just outside of the metropolitan areas of San Diego and Los Angeles in Riverside and San Diego counties, these tribes compete with 18 other tribal casinos for gaming expenditures. The farthest distance between any two casinos is 160 miles. This region alone accounts for 49 percent of the California's slot machines, with a current total of over 29,000 machines. Aside from the four newly expanding tribes, three other tribes – Pala, Pauma, and Viejas – signed compacts in 2004 allowing unlimited slot expansions. San Manuel received legislative endorsement just this year for an additional 5,500 slots. Other tribes in the region account for the remaining slot

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<sup>20</sup> As noted previously, to the extent that California Indian casinos become more like Las Vegas casinos in the future, they may be able to attract additional visitors who would otherwise have visited Las Vegas. To the extent that this occurs, the substitution of revenue from Las Vegas to California casinos would increase, and with it the positive fiscal and economic effects of California casino expansions.

machines. The amended compacts allow Agua Caliente, Morongo, Pechanga, and Sycuan to add 17,000 slots to the region. Figure 4 (next page) shows the location of these 22 competing casinos.

Figure 4: Southern California Market



*Can the Region Absorb More Slots?*

The casino market in California, although relatively new, may be approaching saturation as a result of the rapid expansion over the past decade. This means that future casino expansions, rather than generating new gaming revenue, may come largely from “cannibalizing” existing gaming revenues. We estimate that patrons in Southern California are already spending 0.59 percent of their disposable income at Indian casinos.<sup>21</sup> This is above the national average of 0.5 percent, indicating that the market is trending toward saturation. Consequently, as the number of slots increases, the number of people seeking those games will not keep pace. We estimate that planned installations of additional slots in 2008 – constituting 65 percent of the new machines allowed by the compacts – will increase gaming spending in the region to 0.8 percent of disposable income. As a result, the market likely will be at or near saturation

Evidence from other parts of the country that experienced large increases in regional gaming indicates that the large increase in slots envisioned by the 2006 compacts will increase competition and result in a decline in patronage at neighboring casinos. The opening of three new casinos in New York, for example, led to a 28 percent decline in the number of New Yorkers visiting the

<sup>21</sup> Southern California includes the Los Angeles, San Diego, San Bernardino and Riverside metropolitan areas.

world's two largest destination resort casinos, Foxwoods and Mohegan Sun.<sup>22</sup> New slot machines in Pennsylvania and New York had an immediate negative impact on the well-established gambling center of Atlantic City. Atlantic City responded through planned improvements to its own casinos, but has still experienced a 1.9 percent decline in overall revenues between June 2006 and June 2007.<sup>23</sup>

Evidence also indicates that smaller and less accessible casinos that rely extensively on the overflow from larger casinos may experience significant dislocations. In Las Vegas, the Stations Casinos serving local Las Vegas customers in the suburbs have enjoyed 203 percent growth since 1992, while the traditional – but more distant and older – local market of downtown Las Vegas has experienced a 34 percent decline. In addition, downtown casinos have removed 32 percent of their slot machines. Reno, Nevada has experienced a 24 percent decline in revenue declines every year since 2000, when regional Indian gaming in northern California began its expansion. During the same period, the number of slot machines on Reno casino floors has declined 31 percent.

#### *The Dilution Effect: Impact of Expansions on Net Win*

In the face of increased competition and a larger number of slot machines, we estimate that the large increase in slots in Southern California will decrease the net win from slot machines throughout the market due to finite demand for casino gaming in the face of a significant increase in the supply of slot machines.

As discussed earlier in this report, the introduction of additional slots or other gaming devices tends to reduce the net win per machine. An analysis of the impact of the addition of slots over the period from 1994 through 2007 on win per unit (WPU) at the Foxwoods and Mohegan Sun casinos in Connecticut indicates that the elasticity, or “dilution factor,” associated with the addition of new devices is about -0.32.

Applying this result to the Southern California region, we find that the planned expansions would increase the number of slot machines by 37 percent, and would decrease WPU by 11.84 percent. Overall, we estimate that nearly 16 percent, or \$249 million, of all new revenue at the expanding casinos will be diverted from surrounding casinos.

We also examined the impact of planned casino expansion on other forms of gambling, including horse racing, card clubs and the state lottery. Existing research indicates that these forms of gambling are viewed as substitutes for Indian casino gaming, but to a lesser extent than competing casinos.<sup>24</sup> Based on this previous research, we estimate that approximately 10 percent of the new slot machine revenue at the expanding casinos will come from these sources.

#### *Reduced Spending on Taxed Entertainment*

Other substitution research has focused primarily on the fraction of spending siphoned away from taxable entertainment (aside from gambling). According to a literature review by Adam Rose & Associates, this substitution effect has been anywhere from 35 percent to 100 percent.<sup>25</sup> Our

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<sup>22</sup> Barrow, Clyde W. *New England Casino Gaming Update, 2007*. Center for Policy Analysis. March 2007.

<sup>23</sup> Rutherford, Larry, “Atlantic City Casino Revenues Keep Dropping.” *CasinoGamblingWeb.com* Jul 11, 2007

<sup>24</sup> See Adam Rose and Associates, “The Regional Economic Impacts of Casino Gambling: Assessment of the Literature and Establishment of a Research Agenda” (Nov 1998). See also, WEFA group 1998.

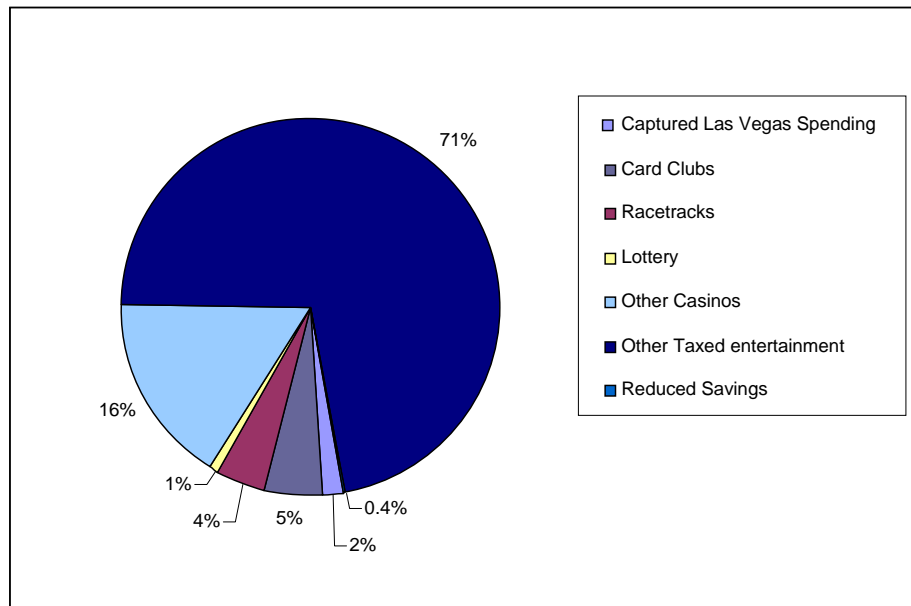
<sup>25</sup> Rose and Associates, op. cit.

research indicates that after accounting for savings, other gambling, and the capture of Las Vegas traffic approximately 71 percent of new slot revenue will come from taxed entertainment or other taxable purchases.

*Substitution Effects Summary*

Figure 5 summarizes our findings on the sources of the additional slot machine revenue. For each dollar of additional revenue collected by the four expanding tribes, we estimate that 98 cents will come from other segments of the California economy, the majority from competing casinos and other non-gambling forms of entertainment.

**Figure 5: Sources of New Slot Revenue**



***Impact on the State: Reduced Revenues***

When a dollar is diverted from elsewhere in the local or regional economy, it carries with it a fiscal and economic impact. We estimated the amount of taxes collected from each source: the lottery, card clubs, race tracks, and taxable sales. More than \$111 million per year would be lost from reductions in expenditures for these activities.

For other casinos, we estimated reduction in slot machine revenue (reduced WPU due to the dilution effects) and calculated the decrease in net win and corresponding reduction in payments to the state. Given the varied revenue-sharing terms of the 1999, 2003 and 2004 compacts, some tribal revenue sharing with the state would not be affected by a decrease in the profitability of their slot machines, while others' would. In the end, we estimate that the state would see \$14 million less each year in revenue from these competing casinos.

In addition to the increased slot machine revenue, the four expanding casinos would see an increase in non-gaming revenue. Using available revenue data from two Southern California tribes, we estimated that for every dollar spent on slot machines, 13 cents were spent on non-gaming activities such as food and entertainment. These increased revenues displace (to some extent) food and

entertainment revenues that would have been spent in taxed facilities, except for those displaced from other non-taxed Indian casinos. These displaced revenues equal almost \$13 million dollars per year.

### ***Impact on the Industries: Job Losses***

Finally, we translated the decreased (substituted) revenues into a rough estimate of job losses in the affected industries. Using an estimated hourly wage figure for common recreational employment positions, we found that more than 86,000 jobs would be lost in the affected industries. Although these job losses would be offset by increases in employment at the expanding casinos, they would nevertheless constitute an economic dislocation for the affected businesses and workers. Table 6 presents the overall fiscal and economic impacts of these substitution effects.

**Table 6: Reductions in Government Revenue and Jobs by Industry Source**

<b>Source</b>	<b>Government Revenue</b>	<b>Jobs</b>
<i>Card Clubs</i>	\$8,809,615	-4,064
<i>Racetracks</i>	\$12,307,426	-3,251
<i>Lottery</i>	\$5,629,633	-813
<i>Other Casinos</i>	\$14,097,779	-13,294
<i>Other Taxed entertainment</i>	\$97,166,223	-66,974
<i>Las Vegas &amp; Savings<sup>26</sup></i>	\$0	1,788
<b>TOTAL</b>	<b>\$138,010,675</b>	<b>-86,608</b>

## **CONCLUSION**

The 2006 compacts have been presented by both the administration and the affected tribes as a boon for the state's coffers. Our analysis indicates, however, that the revenue estimates presented may well significantly overstate the actual fiscal impact of the compacts. In addition, the "more than \$9 billion" figure routinely presented by the tribes refers only to the gross positive impact of the compacts, but does not include the offsetting, negative effects resulting from the transfer of fiscal and economic activity from elsewhere in the state's economy.

We estimate that the compacts will generate between about \$150 million and \$375 million per year, consisting of a fixed payment of \$122.6 million per year (for existing machines) and a variable payment of about \$28 million to \$253 million per year, depending on the interpretation of the compact language. The fixed portion of the fee represents payment for machines currently authorized, and increases from about \$72 million annually under the tribes' current compacts, according to the Legislative Analyst.

The variable payment to the state, which is a function of the number of machines in operation at a casino, is more difficult to estimate precisely because of an ambiguity in the compact language. This

<sup>26</sup> The positive revenue impacts caused by Las Vegas spending and savings shifts have already been accounted for by tribal estimations. We provide here only the missing offsets.

ambiguity appears to allow the tribes to multiply the average net win by the average number of slot machines *in operation* in the casino, rather than the average number of machines present *on the casino floor*. By taking advantage of this ambiguity and only operating certain machines during peak periods, the tribes could dramatically reduce the amount of revenue paid to the state. We estimate that if the machines were “in operation” only Friday and Saturday evenings, the amount of the variable payment to the state would decrease from \$253 million to just \$28 million per year.

Of the roughly \$1.5 billion the four tribes can expect to collect each year in additional slot machine revenue a portion will represent an overall increase in economic activity for the state. The majority of this new revenue, however, will be diverted to the expanded casinos from other, generally taxable, economic activities. We estimate that the new slot machine revenue diverted from other sources within the economy will lead to an annual reduction of \$138 million in state and local tax revenue. This reflects the loss of tax revenues on leisure and entertainment expenditures that are shifted to casino gambling.

Overall, the net annual fiscal impact of the proposed casino expansions on state and local governments ranges from a gain of about \$165 million to a loss of approximately \$60 million, depending on the amount of time machines are treated as in operation for purposes of the state fee calculation.

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**APPENDIX A: DILUTION EFFECTS REGRESSION RESULTS**

## Model Description

Estimation Method	RanTwo
Number of Cross Sections	2
Time Series Length	14

## Fit Statistics

SSE	0.1739	DFE	20
MSE	0.0087	Root MSE	0.0932
R-Square	0.6534		

## Variance Component Estimates

Variance Component for Cross Sections	0
Variance Component for Time Series	0.005373
Variance Component for Error	0.011359

Hausman Test for  
Random Effects

DF	m Value	Pr > m
1	.	.

## Parameter Estimates

Variable	DF	Estimate	Standard Error	t Value	Pr >  t	Label
Intercept	1	3.948002	7.0114	0.56	0.5796	Intercept
log_devices	1	-0.32303	0.0897	-3.60	0.0018	
Unemployment	1	-0.05649	0.0360	-1.57	0.1323	Unemployment
Population	1	1.817E-6	2.434E-6	0.75	0.4638	Population
PCPI	1	-0.00003	0.000027	-1.02	0.3186	PCPI

## **ABOUT THE AUTHORS**

### **TIM GAGE**

Tim Gage is a highly-regarded public servant, having spent over 24 years as a fiscal advisor with both houses of the California Legislature and as the Director of the California Department of Finance.

Mr. Gage was appointed Director of Finance in 1999 after over 20 years of legislative budget experience. In this capacity, he directed a staff of 350 in the development of the state's \$100 billion budget, and oversaw its progress through the legislative process. He also directed representation of the Administration on 70 state boards and commissions and negotiated several major legal settlements.

In the Legislature, Mr. Gage served for four years as the chief fiscal advisor to two Presidents pro Tempore of the California State Senate, where he coordinated development of budget and fiscal issues for the Senate. Mr. Gage also organized a major welfare-to-work conference involving business leaders, academics, non-profit organizations, and activists. Prior to moving back to the Senate, Mr. Gage served for seven years as the chief consultant to the Assembly Ways and Means Committee, where he oversaw preparation of the state budget for the Assembly and the analysis of all financial legislation heard by the committee.

Before moving to the Assembly, Mr. Gage spent six years as the assistant fiscal advisor to the President pro Tempore of the Senate and three years as a Program Analyst in the Office of the Legislative Analyst. During his tenure in state service, Mr. Gage has specialized in state-local fiscal relations and tax policy.

Since resigning as Director of Finance in January 2003, Mr. Gage has consulted for various clients. He subcontracted with Montague DeRose and Associates, co-Financial Advisor to the State Treasurer on the state's recent sale of Economic Recovery Bonds. Other clients include LA Tomorrow, the Foundation for American Communications, the California Association of Nonprofits and the Service Employees International Union.

In March 2003, Mr. Gage was appointed by Governor Davis to a three-year term as a member of the Board of Governors of the California Independent System Operator, the state's public benefit corporation responsible for managing the flow of electricity on California's high-voltage electric power grid. Governor Schwarzenegger reappointed Mr. Gage to the board in February 2007.

Mr. Gage received a Bachelor of Arts degree in Philosophy with honors from Harvard College and a Master of Public Policy degree from the Goldman School of Public Policy at the University of California at Berkeley.

**MATTHEW NEWMAN**

Matthew Newman is a joint founder of the Blue Sky Consulting Group. Mr. Newman specializes in analysis of both state and local fiscal policy issues. He has expertise in developing simulation and forecasting models, including work for the California Legislature, where he developed the first modern property tax forecasting model used by the state's Legislative Analyst's Office. He also conceptualized, designed and implemented the CSUS Forecast of the Sacramento Region, the first econometric forecasting model for the Sacramento Region.

Mr. Newman was the founding Executive Director of the California Institute for County Government (CICG), a nonpartisan public policy research organization supported by the California State Association of Counties (CSAC), the California State University system, and the California State University, Sacramento (CSUS). While at CICG, Mr. Newman specialized in analyzing complex public policy issues and presenting the results to policy makers in a clear, concise, and readily accessible format. He conducted empirical research projects in a broad range of areas relevant to local government in California and maintained an extensive database of local government financial, economic, and demographic statistics.

Mr. Newman had oversight responsibility for all CICG research projects and directed the institute's strategic planning and fundraising activities. Mr. Newman was responsible for the publication of four dozen research reports, articles, and publications while at CICG. He developed the institute's Digital Clipping Service, a news clipping service used by more than 3,000 top level state and local officials each day.

Prior to working at CICG, Mr. Newman worked as a Senior Consultant for LECG, an international economics and public policy consulting firm. While at LECG, Mr. Newman analyzed complex public finance issues, including an assessment of the causes of the Orange County bankruptcy and a statistical analysis of the Bank of America's California paying agent activities. Mr. Newman's work on the BofA case was instrumental in recovering nearly \$200 million for California state and local governments.

Mr. Newman also served as a Policy Analyst for California's Legislative Analyst's Office, where he published studies of California's property tax, county fiscal constraints, and the earned income tax credit. Mr. Newman also analyzed the allocation of local funding streams, including the formula used to allocate the Proposition 172 Public Safety Sales Tax revenues and the AB 8 property tax allocation formula.

Mr. Newman is a Phi Beta Kappa, magna cum laude graduate of the College Honors program at the University of California at Los Angeles and holds a Master of Public Policy degree from Harvard University's Kennedy School of Government.

**TRISHA MCMAHON**

Trisha McMahon joined the Blue Sky Consulting Group in 2006, after receiving her masters degree from UC Berkeley's Goldman School of Public Policy. Her studies focused on the interplay between policy and communications, as well as skill-building in research and survey design. While at the Goldman School, she conducted analysis on spectrum policy for Free Press and the Consumer Federation of America, provided options for grassroots-think tank collaboration to the Rockridge Institute, and delivered an embryonic stem cell policy brief to Congress on behalf of 200 Democrats. While at Berkeley, Trisha was the Managing Editor of the school's policy journal, Policy Matters.

Prior to graduate school, Trisha toiled in the heat of Atlanta as a Research Analyst with the Democratic Party of Georgia, providing opposition research for state legislative candidates. Trisha graduated with Honors from the University of Arizona with a degree in International Studies, and spent time studying in Russia, England, Boston, and Washington, DC.