

Report for the Greater Baltimore Committee

The Impact of Casinos on Crime and other Social Problems:

An Analysis of Recent Experiences

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Executive Summary

As Maryland debates the possibility of allowing casino gambling, a principal concern has been that gaming (the preferred term) will bring with it a substantial, perhaps even vast, increase in crime and a variety of related problems. For example, compulsive gambling might turn some respectable citizens into felons, while the concentration of intoxicated patrons late at night provides an attractive crime target. The same factors promoting a possible increase in crime also might trigger a number of other social problems. For example, compulsive gamblers may be poor parents and spouses, generating higher rates of child abuse and neglect, domestic violence and marital breakdown.

No existing study provides much guidance as to the extent to which casinos actually generate these problems or whether, perhaps, they occur only in some casino communities. The principal reason for that is the recency of most casinos; outside of Nevada and Atlantic City, there were no casinos prior to 1988 and most of the new casinos began operating after 1991.

This report offers an analysis of the available data on the experiences of communities that have established casinos in the past decade. It is based on analysis of official data for about 20 cities, plus other information collected in site visits to the St. Louis metropolitan area (comparable to Baltimore in size and composition) and to the Mississippi Gulf Coast cities of Biloxi and Gulfport (with a large tourist oriented casino industry). In those two areas I interviewed a number of officials and social service providers, as well as viewed the public safety aspects of some casinos. The purpose of the report is to assist the Greater Baltimore Committee in making an assessment of the likely consequences for Baltimore of allowing casinos to operate in or near the city.

Crime

The discussion of crime associated with casinos has been dominated by Atlantic City's experience. The overall crime rate in Atlantic City increased greatly after the introduction of casinos. Whereas in 1977, Atlantic City ranked as number 50 among US cities with populations of more than 25,000, within two years of the introduction of large scale casinos in 1978, it led the nation. This has been the principal evidence for the claim that casinos breed crime.

Since 1988 four Midwestern states (Illinois, Iowa, Indiana, and Missouri) have allowed riverboat casinos in some towns, as have two Southern states (Louisiana and Mississippi). These casinos are found in a variety of settings; big cities (e.g. New Orleans and St. Louis), suburban towns (e.g. Joliet and Aurora, Ill.) and small towns (e.g. Tunica, Ms. and Clinton, Iowa). The total wagering from all these casinos was \$5 billion in 1995, compared to \$3.8 billion in Atlantic City and \$7.4 billion in Nevada; Illinois and Mississippi accounted for about 60 percent of the riverboat casino win.

Using FBI data (the Uniform Crime Reports), I compared per capita crime rates before and after casinos are introduced in a town. A summary analysis is presented in Figures 1 and 2. For each city the per capita rate for a specific offense was set at an index of 100 for the year in which casinos were first operating and the rates for each of the two years before and two years after were scaled to that 100. The same was then done for a matched group of non-casino cities in Illinois and Missouri, using as year 0 the year of introduction of the casino in the town nearest to them. These non-casino towns serve as a rough control for other events that might have affected crime in the same period in the region.

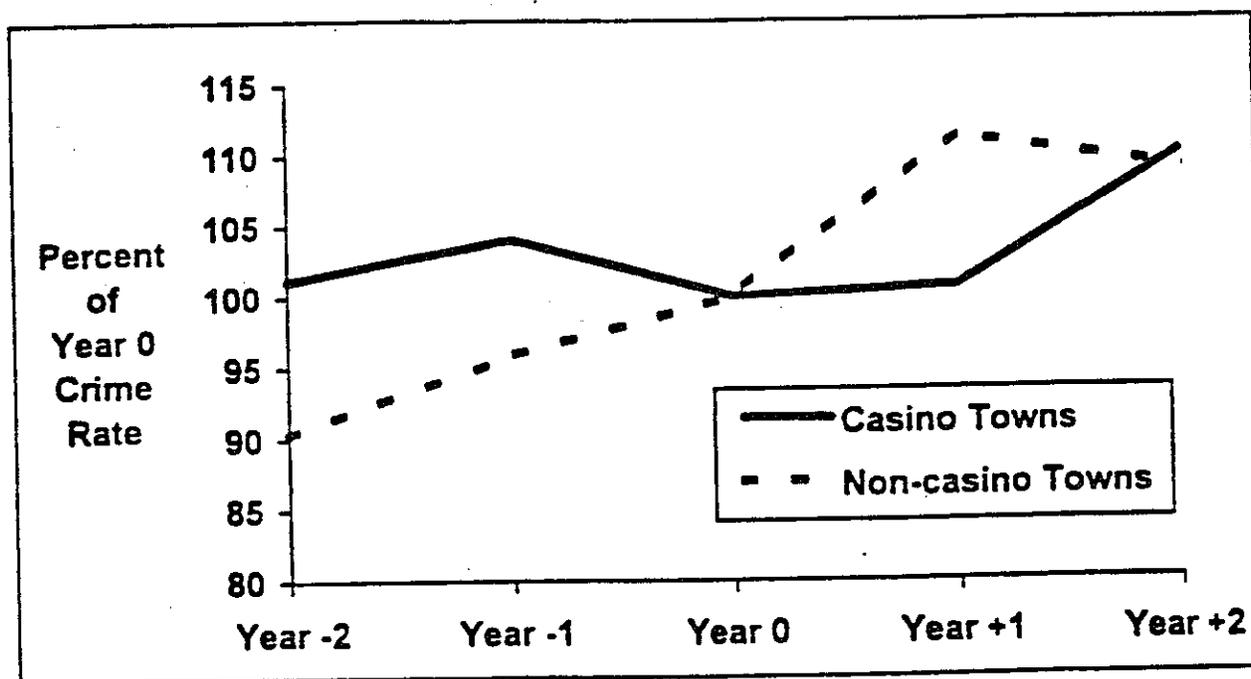
Figure 1 compares trends in violent crimes (assault and burglary) in 7 casino towns¹ and 8 non-casino towns². The casino towns included all those with more than 20,000 population for

¹ The casino towns are Alton, Aurora, Joliet, Peoria, Rock Island [all in Illinois] and Lake Charles and New Orleans in Louisiana.

which we had data on two full years following introduction of the casinos and for which the annual revenue per capita was more than \$100; the second restriction was to exclude places where casinos were so small as to be unlikely to have a measurable effect. In casino towns the violent crime rate is almost unchanged in the first year after introduction of casinos (generally 1991-1993) but rises by about 10 percent in the next year. For the non-casino towns the pattern was slightly different; there was a 10 percent increase in the first year and then a slight decline in the second year. Over the two year period the total crime increase was less than in the casino towns.

Figure 1

Violent Crime rates per capita for casino towns and non-casino towns

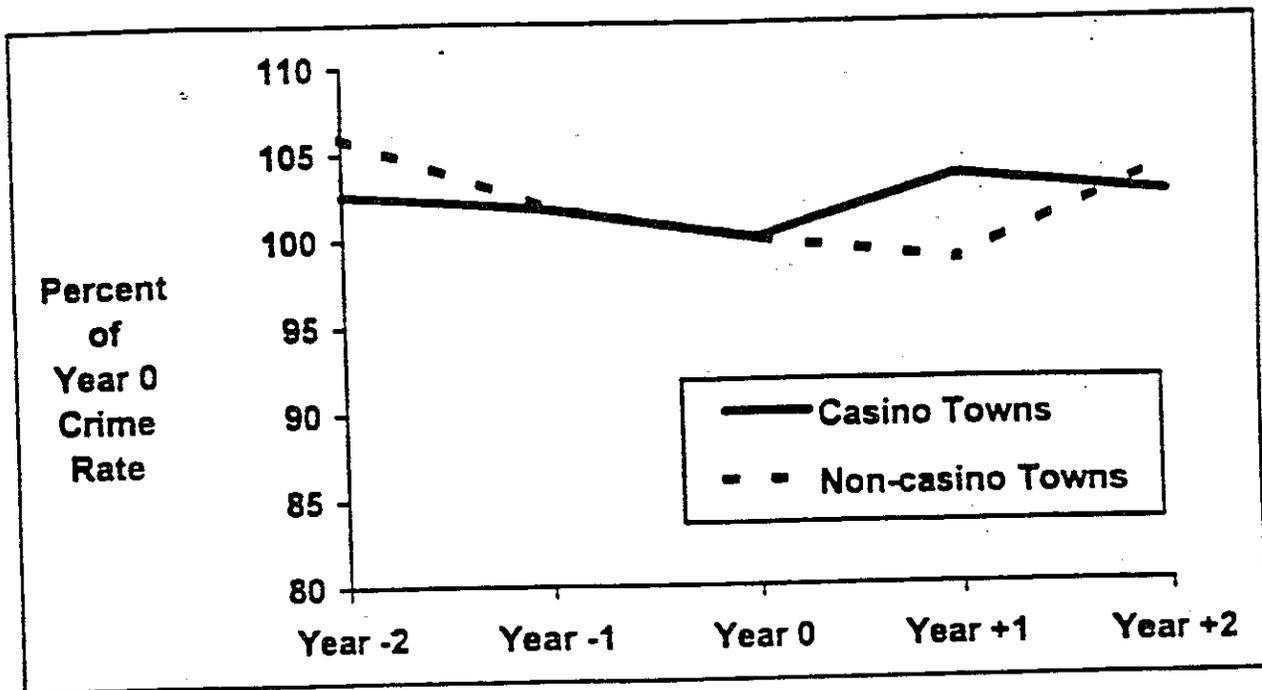


For property crimes (burglary, larceny and auto theft), presented in Figure 2, the pattern is reversed; the first post-casino year sees a modest increase and the second year a very slight decrease, while non-casino towns have the opposite timing.

² The non-casino towns are Bloomington, Champaign, Decatur, Rockford, Springfield [all in Illinois] and Columbia, St. Joseph and Springfield [all in Missouri]

Figure 2

Property Crime rates per capita for Casino and Non-casino towns



These are only some of a variety of graphic analyses that are contained in the body of the Report. In some other analyses, for example when towns are weighted by their population size and when certain crimes are separated out, the differences are greater, with casino towns showing either a larger increase in crime or a lower reduction in crime than the non-casino cities. But in no case is there any evidence that casinos have had a major impact (e.g. an increase of one quarter) on the crime rates of towns or metropolitan areas in which they are located. In some cases the lack of increase in recorded crime was no doubt influenced by the sharp growth in the size of the city police force, financed by the increased city revenues.

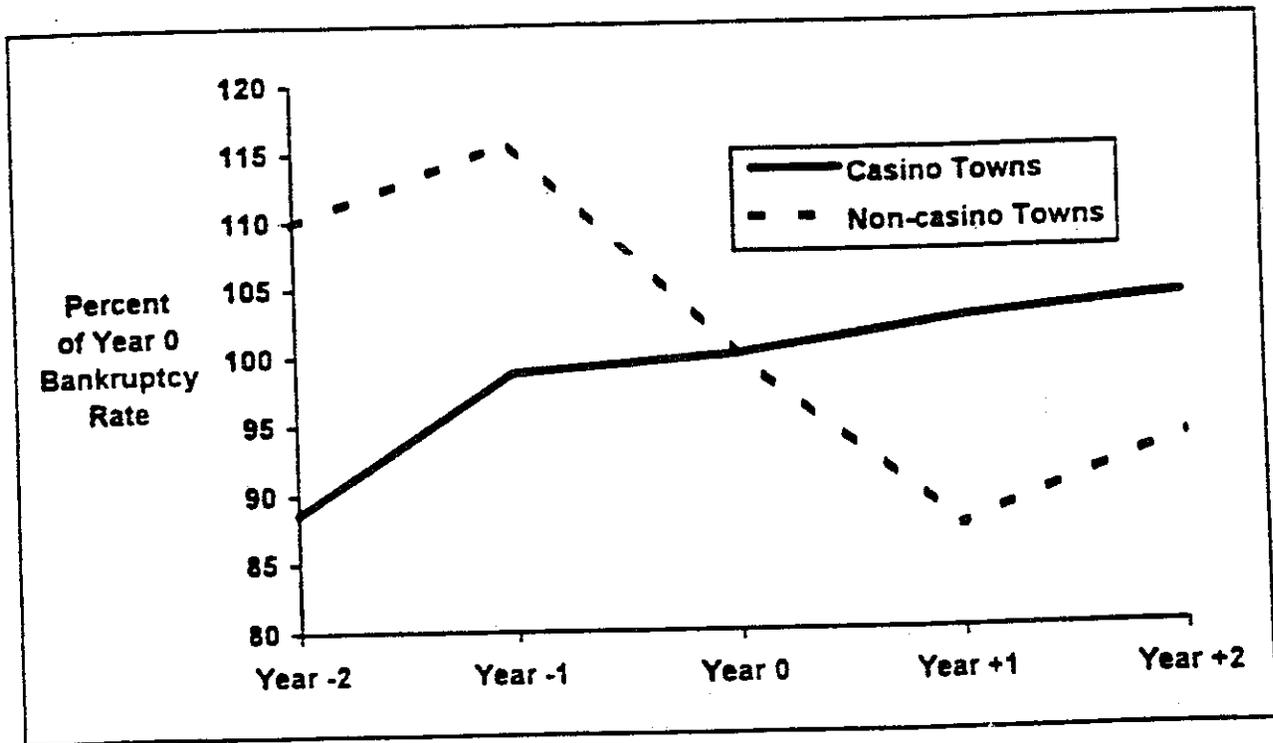
Other Social Problems

Data on social problems other than crime are not available on such a consistent basis. Inferences about the extent of child abuse, family break-up etc. cannot be drawn in a systematic fashion. But the interview data suggest that social service agencies in the Gulf Coast and the St. Louis metropolitan area have experienced a very modest increase in the demands for their services.

For example, the principal agency providing mental health services in the Gulf Coast of Mississippi reported that no more than 1 percent of its caseload involved gambling problems; nor did the officials believe many cases had even an indirect relationship to gaming activities. The principal concerns were with alcohol related problems, exacerbated by the availability of free drinks in the casinos, and by the round-the-clock work employment that casinos generate, but even those were seen as fairly moderate in number and case loads had not risen noticeably. In St. Louis the local units of the Missouri family services agencies expressed their surprise at how little indication they had of any effect from casinos; they had been prepared to see numerous compulsive gambling cases and other problems from the arrival of the casinos. Case loads again had not risen

Figure 3

Bankruptcy in Casino and Non-casino towns



The bankruptcy data are somewhat more ambiguous. Again this series exhibits a great deal of year to year variation, affected by many factors, including the business cycle. Figure 3 presents the data, again aggregating separately over casino cities and non-casino cities. The casino

towns show only a slight increase over the two year period but this contrasts with a substantial decline for the non-casino towns in the same period. However large movements like these are not uncommon; the same groups of cities show marked differences even before the introduction of casinos. But it is somewhat surprising that the growth in the economic base of the casino towns as a group did not lower bankruptcy rates compared to the control group.

Conclusion

There is surprising consistency in both the statistical and interview data. Casinos have had quite modest effects on the measured social problems of the cities in which they have been introduced in recent years. St. Louis, the most comparable metropolitan area to Baltimore, reported negligible crime or other problems related to the presence of a modest-sized casino industry (\$250 million in 1994). It is important to emphasize that casino gaming in that area has been almost exclusively for locals and has been isolated from the tourist and entertainment industries more generally.

None of the cities is as dominated by casinos as Atlantic City. The \$100,000 in gaming revenue per capita in Atlantic City would be equivalent to a \$50 billion gaming industry in Baltimore City, ignoring the rest of the metropolitan area population. Even the most successful of the new sites, Biloxi, with a larger population than Atlantic City, has a casino industry scarcely one eighth as large; gaming revenues per capita are just \$10,000. The analysis presented here, which cannot be authoritative in part because the casinos in these other towns and cities are still so recent, suggests that a casino industry of \$1 to \$2 billion, equivalent to \$2,000 to \$4,000 per capita and the high range for most estimates, is unlikely to generate a major increase in crime or other social problems in Baltimore City or the Baltimore metropolitan area. The long-run effects might be more substantial but Atlantic City's experience suggests that much of the crime impact is incurred in the first few years.

Introduction

As the state of Maryland continues to debate the possibility of allowing casino gambling, a principal concern has been that gaming (the preferred term) will bring with it a substantial, perhaps even vast, increase in crime and a variety of related problems. Casinos appear to create conditions which are attractive for crime. For example, large numbers of people carrying large quantities of cash, frequently depart the facility late at night, often somewhat intoxicated and careless. Moreover casinos may turn otherwise respectable citizens into felons; large losses in a short period of time and an obsessive urge to return to the tables to recoup those losses are possibly the trigger for embezzlements and other desperate criminal acts.

The same factors promoting a possible increase in crime also might trigger a number of other social problems. For example, compulsive gamblers may be poor parents and spouses, generating higher rates of child abuse and neglect, domestic violence and marital breakdown. Personal bankruptcy rates might rise sharply. Alcohol-related problems may also increase because casinos offer free liquor to most patrons. It is easy to raise the specter of vast increases of crime and related social problems in the struggle as to whether cities and states should allow the development of casinos.

All this is hypothetical. No existing study provides much guidance as to the extent to which casinos actually generate these problems or whether, perhaps, they occur only in some casino communities. The principal reason for that is the recency of most casinos; outside of Nevada and Atlantic City, there were no casinos prior to 1988 and most of the new casinos began operating after 1991.

This report offers an analysis of the available data on the experiences of communities that have established casinos in the past decade. It is based on analysis of official data for about 20 cities, plus other information collected in site visits to the St. Louis metropolitan area and to the

Mississippi Gulf Coast cities of Biloxi and Gulfport, during which I interviewed a number of officials and social service providers, as well as viewed the public safety aspects of some casinos. The purpose of the report is to assist the Greater Baltimore Committee in making an assessment of the likely consequences for Baltimore of allowing casinos to operate in or near the city.

Preliminary Considerations

Casinos are not all alike for the purposes of potential crime connections. Some are intended to attract distant visitors, some to service principally the local population. Some are large and have a variety of other attractions attached to them, typically restaurants, hotels and halls for entertainers; others are just basic gaming halls, with very little adornment and fast food services just to allow players to continue comfortably at the tables, not much different from the current facilities run by charitable organizations in Prince George's County. Some of the new "riverboat" casinos are true boats, that leave the docks while others are "dockside facilities", with no more capacity to leave the shore than Donald Trump's Taj Mahal.

These dimensions are all important. The tourist oriented casinos bring a lot of strangers to town, potentially attractive targets for theft of various kinds and thus possibly attracting new offenders to the city, while the casino servicing local patrons may do no more than put the citizenry at risk in a particular location and time, perhaps only moderately enhancing the efficiency of crime. Casinos that actually leave the dock have much less trouble policing who is in the casino, in particular in keeping underage gamblers out.

Scale clearly matters. The Chicago metropolitan area, with a 7.7 million population, has casinos in three towns within it (Joliet, Aurora and Elgin). Total gaming revenues (i.e. the amount that players leave in the casino) amounted to \$550 million in 1994, i.e. \$70 per capita. It would be surprising if these casinos made a major difference to crime rates in Chicago, simply because they constitute such a small presence. In contrast, Biloxi, with a population of about 50,000 has eight

casinos with a total revenue of \$500 million, or \$10,000 per capita, more than 100 times as much; the potential for increased crime is very much larger. In making these comparisons, it is important to note that Atlantic City with a population of 37,000 had a total win of \$3.7 billion in 1995, equivalent to \$100,000 per capita.

Community and location characteristics also matter. Foxwoods, the Connecticut casino run by the Mashantucket Pequot Indians, has gaming revenues of about \$800 million in 1994. The casino offers the possibility of transforming that community because it is located in an isolated rural valley, many miles from the nearest city; few of the players even stay overnight in the area and the casino's hotel is also in the rural setting, offering only modest predatory crime opportunities. Both criminals and victims have to be imported and the setting is inhospitable to the offenders. This is very different from the potential associated with a downtown Baltimore casino.

Arguments can be offered for casinos generating increases in almost every type of crime. Larceny and other property crime could be driven up by the needs of desperate bettors; robbery might rise because of the weakening of protective behavior by drunken patrons. With the increased alcohol consumption, rape might also increase, as well as drunk driving. Casinos might also expand the market for loansharking; tapped out gamblers, desperate for money to return to the tables, might be particularly attractive targets for lenders who are willing to use violence to collect on loans at extortionate interest rates.

Crime

The discussion of crime associated with casinos has been dominated by Atlantic City's experience. For example, the Florida Department of Law Enforcement, in making a case against allowing casinos in that state, showed that rape, robbery, aggravated assault and larceny had all increased much more sharply in Atlantic City than in the rest of New Jersey between 1977 (the

year before the first casino) and 1990¹. The increases (roughly a tripling in the rate for aggregate crime) occurred despite a near doubling in the size of the city police force. Certainly, the overall crime rate in Atlantic City has increased greatly since the introduction of casinos; by the standard measure of crimes per capita, it became the most crime-ridden city in the nation. Whereas in 1977, Atlantic City ranked as number 50 among US cities with populations of more than 25,000, within two years of the introduction of large scale casinos in 1978, it led the nation. The relevant data for the early years are presented in Table 1.

Table 1

Crime rates for Atlantic City, 1978-1982

| Year | Index Crimes | Average Daily Population* | Number of Police Employees |
|------|--------------|---------------------------|----------------------------|
| 1978 | 3,996 | 102,407 | 343 |
| 1979 | 5,511 | 113,747 | 426 |
| 1980 | 10,277 | 128,551 | 451 |
| 1981 | 11,369 | 149,021 | 469 |
| 1982 | 12,952 | 159,634 | 534 |

Source: Albanese, Jay "The Effect of Casino Gambling on Crime" *Federal Probation* 1984

*Includes residents and visitors

However the claims about Atlantic City usually ignore the fact that the population base for these calculations by the FBI is simply the number of residents, as is always the case for crime statistics. The resident population in recent years has been about 37,000; each day now approximately 80,000 visitors come to the casino, offering targets for crime, as well as potential offenders. However, as shown in the third column of Table 1, the increase in the average daily population was much less than the increase in total crime; moreover the increase occurred despite a large growth in the size of the police force. On the other hand, it is important to note that the rise

¹ E.g. Florida Department of Law Enforcement *The Question of Casinos in Florida: Increased Crime: Is*

was much less for violent crimes as shown in Table 2. Homicides scarcely rose at all (though there is considerable year to year variation), while the 1983 figure for assaults was only 50 percent higher than in 1978, roughly in line with the increase in the average daily population.

Table 2

Homicides and Assaults, Atlantic City, 1977-1983

| | Homicide | Assault |
|------|----------|---------|
| 1977 | 10 | 257 |
| 1978 | 10 | 256 |
| 1979 | 9 | 265 |
| 1980 | 11 | 331 |
| 1981 | 15 | 418 |
| 1982 | 20 | 447 |
| 1983 | 3 | 375 |

Source: *Uniform Crime Reports*

There have also been claims of vast increases in some other casino locations; the skyrocketing rate of disorderly conduct, fights and DUIs in Central City, Colorado has been much cited; though it has a population of only 350. Deadwood, South Dakota, where a large number of casinos offering limited stakes gaming opportunities have been established, also gets cited as illustrating the devastating impact of casinos on crime; arrests went up 260% from 1989 to 1994. Note though that this was an increase from 229 to 829, since Deadwood is a very small rural community.

One common characteristic of these three communities (Atlantic City, Central City and Deadwood) is that each of them is dominated by the casinos; the gaming industry has become by

far the largest employer in each location. For a major city contemplating the establishment of a small number of casinos, these are scarcely compelling comparisons.

Fortunately for these purposes, the number of cities available for comparison purposes has expanded substantially in the last five years. Four Midwestern states (Illinois, Iowa, Indiana, and Missouri) now allow riverboat casinos in some towns, as do two Southern states (Louisiana and Mississippi). These riverboat casinos, some of them in large, dockside facilities with only the most tenuous claim to be riverboats, are found in a variety of settings; big cities (e.g. New Orleans and St. Louis), suburban towns (e.g. Joliet and Aurora, Ill.) and small towns (e.g. Tunica, Ms. and Clinton, Iowa). The total wagering from all these casinos was almost \$5 billion in 1995, compared to \$3.8 billion in Atlantic City and \$7.4 billion in Nevada. Two states, Illinois and Mississippi, accounted for about 60 percent of the 1995 riverboat casino win. The growth rate of the riverboat sector of the industry is extremely high; the 1994 revenues were only \$3 billion and Indiana will open a number of new casinos in 1996, almost guaranteeing continued rapid growth.

Table 3 lists the cities with river boat casinos that were open by mid 1994, along with the population, 1994 or 1995 casino revenues where available and population. In our analysis we did not include cities with a population of less than 20,000, on the basis that such communities would indeed be transformed by any substantial casino operation and the official statistics, using resident population as the base, would be of questionable reality. Very small cities also seemed less relevant for understanding the possible impact of casinos in Baltimore. We did not include any cities with tribal casinos, simply because no data on revenues of these casinos are published, apart from the slot machine revenues of Foxwoods, the Mashantucket Pequot casino in Connecticut².

The data are too scarce and the relevant variables too numerous to allow for rigorous statistical analysis. Instead we can only present general graphical analyses. We do this in two

² The Foxwoods slot machine data are available because the state of Connecticut receives 20 percent of the win in return for not allowing any other slot machines in the state.

Table 3: Cities with riverboat casinos

Population, Metro Status, 1994 casino revenues, year operation began.

| | City/County | 1994 Population | Metropolitan Status | 1995 Gaming Revenue (in 000s) | First Year of Operation |
|-----------|-------------------|-----------------|---------------------|-------------------------------|-------------------------|
| IL | Alton | 32,952 | Suburban | 81,547 | 1991 |
| | Aurora | 107,195 | Suburban | 146,456 | 1993 |
| | East St. Louis | 38,404 | City | 128,197 | 1993 |
| | Elgin | 82,076 | Suburban | 204,092 | 1994 |
| | Jo Daviess County | 21,886 | Rural | 17,909 | 1992 |
| | Joliet | 79,860 | City | 403,930 | 1992 |
| | Massac County | 14,884 | Rural | 83,395 | 1993 |
| | Peoria | 115,346 | City | 94,626 | 1991 |
| | Rock Island | 40,828 | City | 18,154 | 1992 |
| IA | Clinton | 29,201(90) | City | 18,000* | 1991 |
| | Davenport | 98,441 | City | 65,000* | 1991 |
| | Dubuque | 59,117 | City | 18,000* | 1991 |
| | Sioux City | 82,666 | City | 13,000* | 1993 |
| LA | Baton Rouge | 226,595 | City | 20,543* | 1994 |
| | Lake Charles | 71,733 | City | 125,127* | 1993 |
| | New Orleans | 493,990 | City | 223,030* | 1993 |
| | Shreveport | 198,298 | City | 78,311* | 1994 |
| MS | Bay St. Louis | 10,605 (89) | Rural/Sub? | | 1992 |
| | Biloxi | | City | 483,181 | 1992 |
| | Coahoma County | | Rural | | 1994 |
| | Greenville | 44,937 | City | | 1993 |
| | Gulfport | | City | | 1993 |
| | Natchez | 19,519 (93) | City | | 1993 |
| | Tunica County | | Rural | | 1992 |
| Vicksburg | 21,704 | City | | 1993 | |
| MO | Kansas City | 439,089 | City | 21,146* | 1994 |
| | St. Louis | 390,437 | City | 25,084* | 1994 |

* = 1994 gaming revenue

stages, first looking at time trends for the casino cities themselves and then comparing these trends for some similarly situated cities in Illinois and Missouri. We focus on Midwestern comparisons because of data availability. For example Mississippi does not regularly report city level offense data to the FBI, leaving only Illinois with numerous substantial casino towns. Some Missouri

cities were added for comparison purposes because the available set of medium size cities in Illinois was so limited.

A variety of more detailed graphic analyses are presented in Appendix 3, along with individual city data; that Appendix also describes procedures for handling issues such as whether a community was part of a large metropolitan area, the imputation of missing data and accounting for the scale of a casino. Here I present just a few analyses, starting with the most summary statistics.

Using FBI data (the Uniform Crime Reports), I compared per capita crime rates before and after casinos are introduced in a town; these are presented in Figure 1. For each city the per capita rate for a specific offense was set at an index of 100 for the year in which casinos were first operating and the rates for each of the two years before and two years after were scaled to that 100. The same was then done for the matched group of non-casino cities in Illinois and Missouri, using as year 0 the year of introduction of the casino in the town nearest to them. These non-casino towns serve as a rough control for other events that might have affected crime in the mid-West. In these comparisons each town is equally weighted, large and small; the unit of analysis is the town and we are inquiring how a town is affected.

Two general categories are presented; property crime (larceny, burglary and auto theft) and violent crime (assault and robbery). Each crime types is given equal weight within its category; this is equivalent to saying that each type of violent crime was equally important but that an individual assault, which are much more numerous than robberies, is less serious than an individual robbery. Rape, arson and homicide are generally omitted because they are so infrequent in smaller cities that they show great year to year variation unrelated to any changes in conditions or policy.

Figure 1

Violent Crime rates per capita for casino towns and non-casino towns

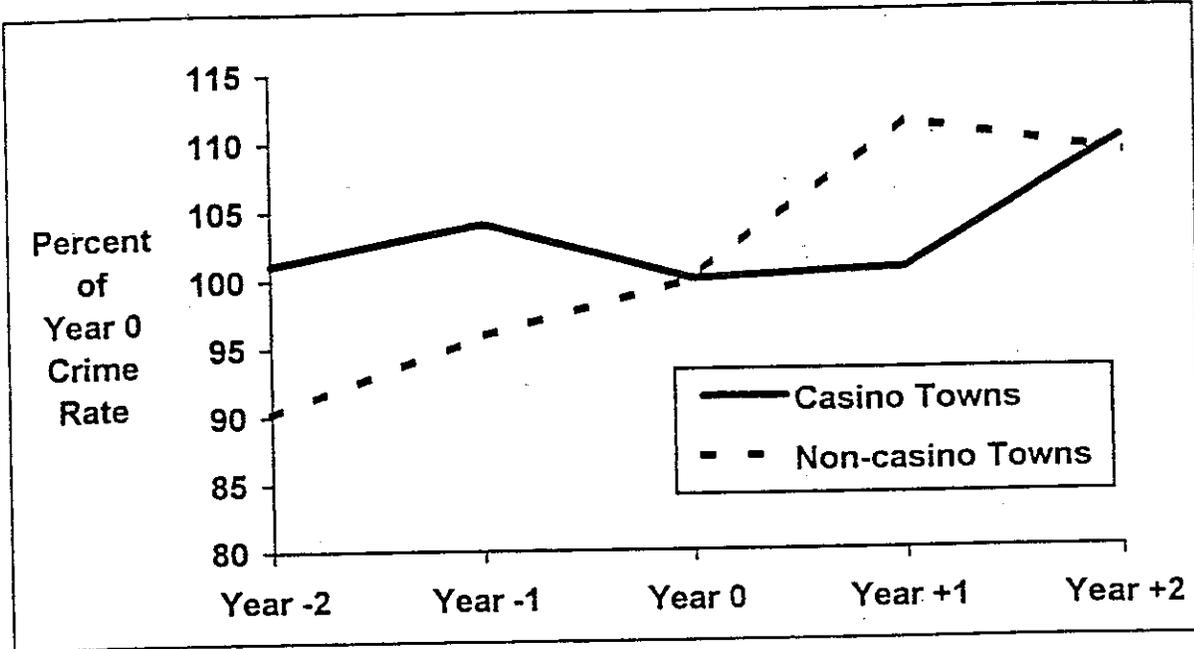


Figure 2

Property Crime rates per capita for Casino and Non-casino towns

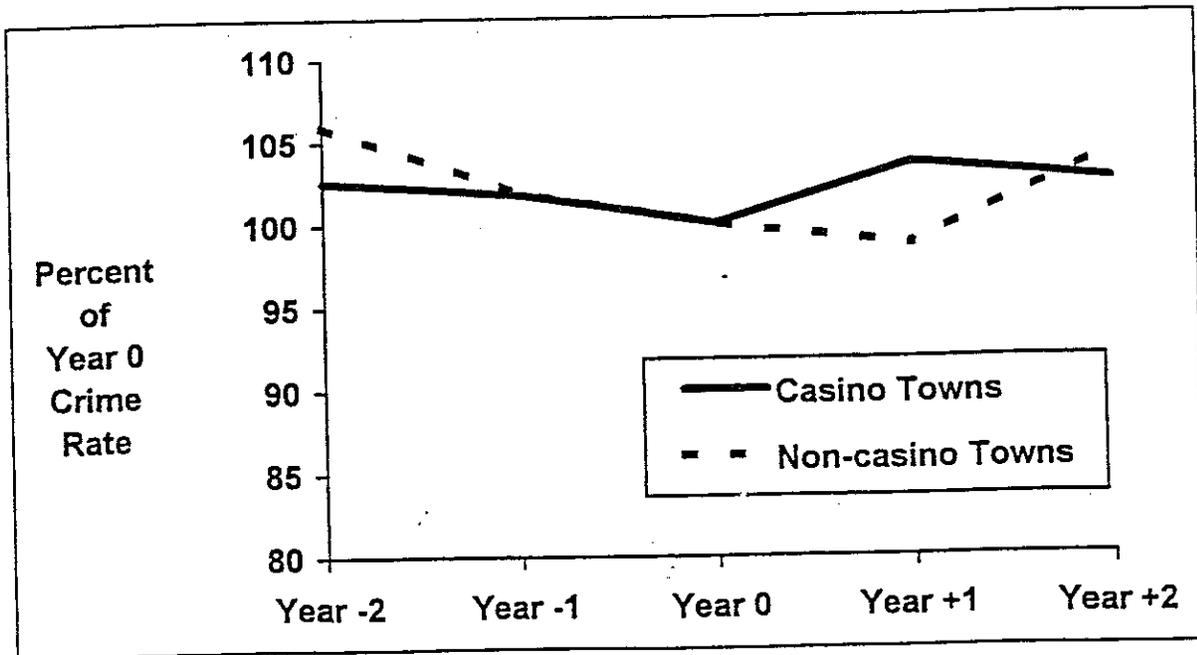


Figure 1 compares trends in violent crimes in 7 casino towns³ and 8 non-casino towns⁴. The casino towns included all those for which we had data on two full years following introduction of the casinos and for which the annual revenue per capita was more than \$100, so as to ensure that we were including only places where the casino industry was large enough to make a difference. In casino towns the rate for violent crimes is almost unchanged in the first year after introduction of casinos (generally 1991-1993) but rises by about 10 percent in the next year. For the non-casino towns the pattern was slightly different; there was a 10 percent increase in the first year and then a slight decline in the second year. Over the two year period the total crime increase was less in the casino towns.

For property crimes (burglary, larceny and auto theft), presented in Figure 2, the pattern is reversed; the first post-casino year sees a modest increase and the second year a very slight decrease, while non-casino towns have the opposite timing. The variation was even modest than for violent crime, the high point being scarcely 5 percent more than base figure.

Next I looked at individual offense types within the general categories of property crime and violent crimes). The first panel in each of the next two Figures aggregates across the casino towns for individual offenses. The second panel aggregates across the comparison cities for the same offenses.

The patterns are mixed. Burglary actually declines in casino towns, while robbery and larceny are essentially unchanged. There are notable increases for auto theft and assault but less than twenty percent in both cases. Moreover both offenses show similar increases in the non-casino towns. Homicides were down for the non-casino towns but the numbers in individual cities are so small (mostly less than 20 per annum) that they vary a great deal on a year to year basis, as

³ The casino towns are Alton, Aurora, Joliet, Peoria, Rock Island [all in Illinois] and Lake Charles and New Orleans in Louisiana.

⁴ The non-casino towns are Bloomington, Champaign, Decatur, Rockford, Springfield [all in Illinois] and Columbia, St. Joseph and Springfield [all in Missouri]

can be seen in the two panels of Figure 5; for example, the non-casino towns experienced a doubling of homicides in a two year period, followed by a forty percent decline in the following year.

Figure 3

Per capita rates for specific property crimes for cities before and after the year of introduction of a casino

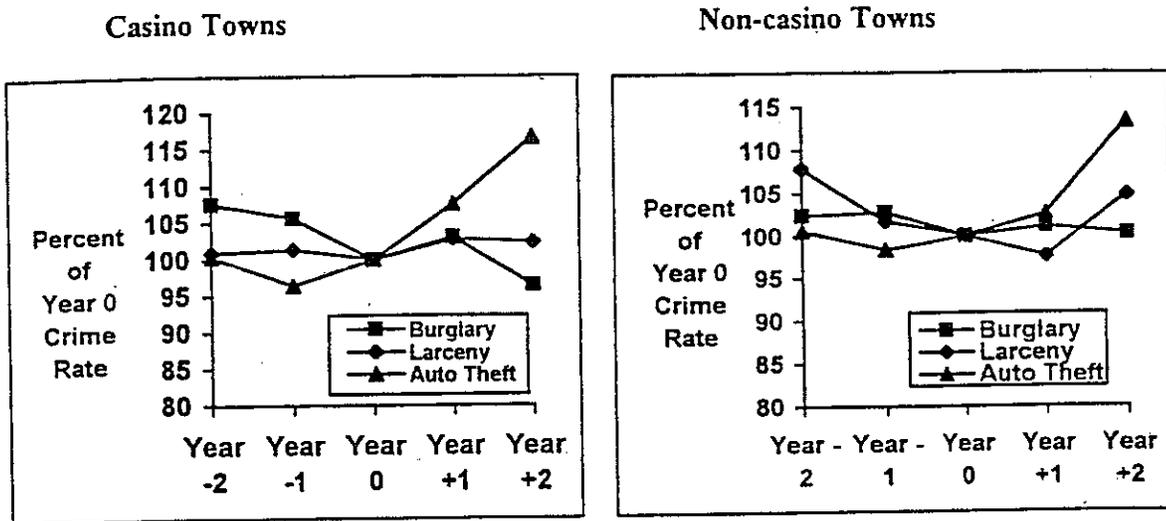
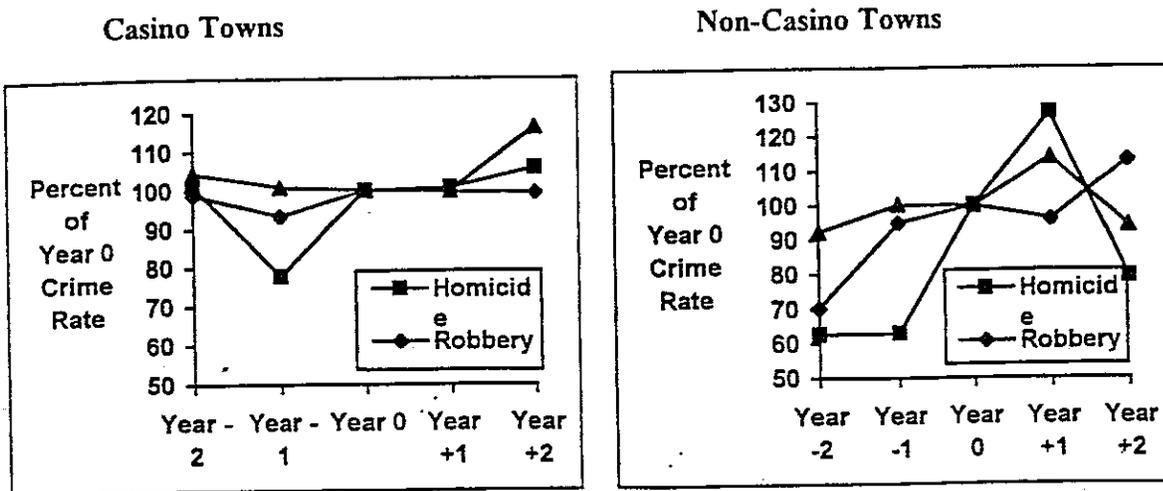


Figure 4

Per capita rates for specific violent crimes for cities before and after the year of introduction of a casino



This analysis covers a very small number of cities because there were five years of crime data for few and we only included those with relatively high casino winnings per capita. We can

increase the number of cities in the analysis slightly by weakening the requirements for number of years. These analyses are reported in Appendix 3 but show no significant change in pattern.

In summary, the changes in crime rates for casino towns have a very mixed pattern. What is consistent though is that they are quite modest; none of the casino cities has suffered a very large increase in crime as the result of the introduction of casinos, comparable to the Atlantic City experience.

For small communities, casinos can represent a dramatic expansion in economic base. Some choose to use the ensuing increase in tax revenues to greatly increase public safety expenditures, particularly police. Thus in Biloxi and East St. Louis, described in detail in Appendix I, the police department have been approximately doubled in personnel in less than three years and have seen major improvements in salaries and equipment. Biloxi did it as a matter of strategy, to meet what was seen as a potentially important threat to the community fabric. In East St. Louis, crime was already an enormously important problem; a large share of any additional resources for the city clearly had to go to improving public safety. But these are reminders of the fact that crime statistics on their own do not provide a complete assessment of the consequences of casinos for public safety; crime may be subject to more stringent control as a result of the growth of the city's economic base. The data are too sparse to disentangle the effect of casinos from those of increases in expenditures on policing.

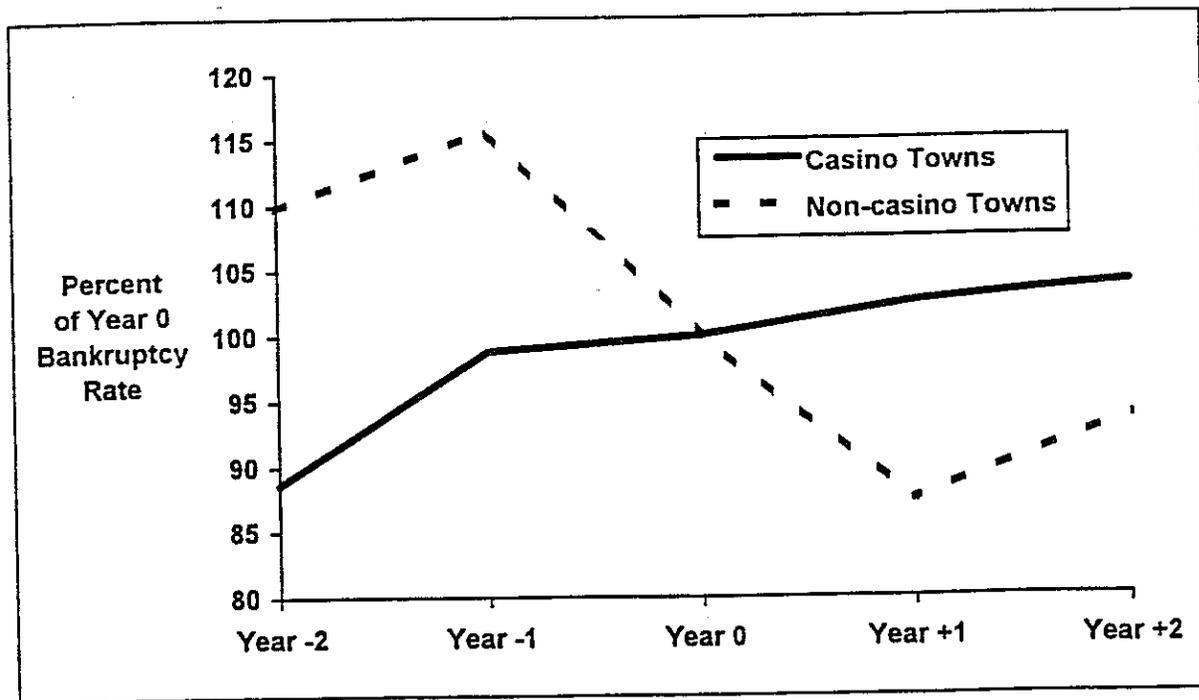
One aspect of the potential crime consequences of casinos that deserves special attention is physical safety. Parking lots are potentially important sources of vulnerability. Since most patrons drive to the casino and when they depart, somewhat intoxicated at night, they are at risk of both victimization for robbery or as dangerous drivers. Interviews in both the St. Louis area and the Mississippi gulf towns suggest that casinos are aggressive in dealing with both potential problems; in the case of drunk driving the existing legal doctrines with respect to the liability of servers provides a strong incentive.

Other Social Problems

Data on social problems other than crime are not available on such a consistent basis. Inferences about child abuse, family break-up etc. cannot be drawn in a systematic fashion. But the interview data, described in detail in Appendix 1, suggest that social service agencies in the Gulf Coast and the St. Louis metropolitan area have experienced a very modest increase in the demands for their services. The principal concerns are with alcohol related problems, exacerbated by the availability of free drinks in the casinos, and by the round-the-clock work employment that casinos generate, but even those were seen as fairly moderate in the two areas.

Figure 5

Bankruptcy in Years Before and After Introduction of a Casino



Bankruptcy data are available on a county basis annually, though we still have a limited sample because few towns have had two full years beyond casino introduction. The data are somewhat more ambiguous than the crime figures. Again this is a data series with a lot of annual variation, reflecting many factors, including the business cycle. Figure 5 presents the data, aggregating

separately casino and then non-casino cities. The casino towns as a group show only a slight increase over the two year period but this contrasts with a substantial decline for the non-casino towns in the same period. However large movements like these are not uncommon; the same groups of cities show marked differences even before the introduction of casinos.

Individual town data show the inconsistency of the patterns. Aurora and Joliet show higher rates than before the casino. Peoria shows a much higher rate than in any year before casinos but the trend was already sharply upward during the pre-casino years. East St. Louis shows a lower rate than the year before casinos. For five non-casino towns we see two with higher and three with lower rates two years after the casinos arrive. Thus this indicator is somewhat worse for the casino towns but the differences are not large.

Conclusion

There is surprising consistency in both the statistical and interview data. Casinos have had quite modest effects on the measured social problems of the cities in which they have been introduced in recent years. It is important to note that none of the cities were as dominated by casinos as Atlantic City. In particular, St. Louis, the most comparable metropolitan area to Baltimore, reported negligible crime or other problems related to the presence of a medium-sized casino industry (about \$250 million in 1994; \$100 per capita), though it is important to again emphasize that casino gaming in that area has been almost exclusively for locals and has been isolated from the tourist and entertainment industries more generally.

The findings from this study are hardly definitive. The sample of cities for which we have crime data for all relevant years is small. Systematic data on social problems other than crime are almost non-existent. Interviews with, and data from, social service agencies in two areas are the principal source of insight into how the casinos have affected child abuse and neglect or domestic violence; these data are very soft. Also, most of the cities have had casinos for only two to four years and, notwithstanding the dramatic changes that occurred in Atlantic City within two years

(e.g. index crimes almost tripled), some of the major problems may only be observed over the long-term. The casinos may attract in offenders from out of town or they may increase the attractiveness of predatory crime for new cohorts of high risk youth.

Nonetheless, I would be surprised if the long-term were in fact very different from the short-run. Casinos improve the employment opportunities for low skill workers; the pay and conditions are relatively attractive and the result may be that crime is reduced more by the employment effects than it is increased by the increased attractiveness of targets, if the latter is at all real. That employment effect may also account for the lack of observable increase in the demand for family services.

In considering what is the relevant comparison community it is worth noting again that Atlantic City has gaming revenues of \$100,000 per capita; if Baltimore City had a casino industry of that size it would handle about \$50 billion per annum. Even the Biloxi intensity, \$10,000 per capita, would represent a \$5 billion Baltimore industry, larger than Atlantic City in absolute size. If casinos do not come to dominate the city, the existing data suggest that the introduction of casinos is unlikely to have a substantial effect on crime and related social problems in Baltimore.

APPENDIX 1

Community Descriptions

Crime and other statistical measures are helpful but for a complex phenomenon, such as the social impact of casinos are given more meaning when put in the community context. To provide that, I visited St Louis and the Gulf Coast in Mississippi, interviewing principally public officials (in both criminal justice and social service agencies) and mid-level casino officials involved in security operations. The Gulf Coast of Mississippi represents the single most successful concentration of new casinos outside of Atlantic City and Nevada.; most of the gaming occurs in Biloxi. St. Louis was chosen because it is a city and metropolitan area of about the same size as Baltimore⁵, with broadly similar demographics and a medium sized casino industry.

Gulf Coast, Mississippi

Biloxi and Gulfport are adjoining cities along the gulf coast of Mississippi. Biloxi is an old sin city, already notorious for gaming in the late 19th century and always tourist oriented. In contrast Gulfport is a very staid community, with a military base and associated facilities as the principal economic activities.

Biloxi

Economics and Finance

Biloxi is a city in which casinos seem to have supplemented a substantial but stagnant tourist industry and where the distribution of revenues from casino taxes (3.2% on gaming total, allocated directly to the city) have provided the city with a large enough increase in funding that it has been able to expand services so as to satisfy the community. It has eight casinos, with 1995 gaming revenues of \$483 million.

⁵ The St. Louis Metropolitan Statistical Area has a population of 2.54 million, compared to Baltimore's 2,46 million. Both have relatively small center cities; St. Louis is 400,000 and Baltimore xxx,000

The casinos themselves are handsome, substantial structures which clearly cater to a wide range of players. The floors of the casinos are roomy, there are large theaters attached offering marquee entertainment (e.g. Wayne Newton and Suzanne Somers) and there are many different kinds of restaurants, some quite upscale. It seems that an increasing share of local social life is occurring in the casinos and their facilities. The casinos are all on the waterfront and, though close to the city, are somewhat detached from it because they are on the other side of a very busy Rte. 90. Other hotels are being constructed and there are numerous restaurants outside the casinos and outside the casino area that seem to be doing a good business. The substantial waterside strip from Gulfport to Biloxi is prosperous looking.

The Biloxi casino industry grew rapidly from 1992 to 1994 and has stagnated since then. 1994 saw a major shake-out of smaller and weaker casinos. A local 1995 booklet⁶ states that the County has 6,450 hotel and motel rooms and 360 restaurants. The Golden Nugget and the Imperial Palace will open large new facilities in the next year, adding 2,000 hotel rooms and apparently heralding a second wave of major investment that will lead to a large increase in the size of the Biloxi industry; the other towns in the region show little interest in large expansion. Conventions are a substantial source of business; estimated dollar expenditures by convention delegates rose from \$44 million in 1991 to \$66 million in 1994, despite only modest increase in number of delegates. Overall tourist numbers have doubled since 1992, from 1.5 million to 3 million in 1994.

Biloxi's population is estimated to have grown from about 46,000 in 1990 to about 54,000. This is a local estimate; the Census doesn't show such an increase but figures for new housing etc. support the claim of a roughly 20 percent rise in population. The casinos bring in 15,000-20,000 visitors on a weekday during the summer and maybe 10 times as many during the weekends.

Casino industry provides about 10,000 jobs directly; it is estimated that one third of the employees are local Biloxians; one third relocated to Biloxi to work and live. The other third live elsewhere in the region. The regional airport has seen substantial growth; from 100,000 persons in 1992 to 250,000 in 1994; all of the growth is from charters rather than scheduled flights, indicative of the role of casinos, which often sponsor such flights.

Biloxi was a very low wage city before the casinos. Seafood processing and tourist industry provided near minimum wage, usually without benefits. The casino industry offered \$6-7 for entry level, plus good benefits. This rise in prevailing wages does not seem to have much affected the sea-food industry which has been badly affected by the growth of aquaculture in Asia but has recently recovered market share with quick freezing techniques.

The city did a survey on local priorities when casinos started; public safety, infrastructure (water, sewer etc.) and recreation. Revenues have been substantial, both directly and indirectly; e.g. the city used \$800K in Community Development Block Grant funds to buy a site that has since been developed by a casino and is yielding \$3.5 million annually; that money goes primarily but not exclusively for social services. The casinos are viewed as good corporate citizens in the community; they support local charitable groups.

Casinos are restricted to a few sites that have a prior development history, since a 1964 ruling said that the shore was publicly owned and there is a requirement that the casinos be in the water. There are five unimproved sites available and two may already have been acquired for development.

Some observers perceived local businesses, even in the tourist industry, as having done well from the growth of the casino business. The exception were the evening entertainment places, such as beer parlors which could not compete with the free entertainment offered by the casinos.

⁶*Biloxi: A General Market Analysis*

The Biloxi police chief was originally strongly opposed to casinos. However the revenue has produced a massive expansion in the size of police department; from 73 officers in 1991 to 134 and it has new cars and very modern equipment. Salaries have been raised, so that it has become the best paid department in the region. All this reflects the transformation of the city's finances by the casinos; before their arrival Biloxi government was in such poor financial shape that local businesses would not repair police cars without a cash payment in advance.

Crime

Crime rates show no strong trend since the creation of the casino industry, though 1994 figures for specific types of crime are usually higher than any other years. Homicide is down generally, again with the exception of 1994; there were 6 in 1994 compared to 4 in 1993 and 3 in 1995. Robbery and larceny do have an upward trend, robbery nearly doubling from 1990 to 1995. The police suspect that many of the robbery reports by casino patrons represent an effort to cover up casino losses but they cannot prove that. Larceny may be up because locals have not adapted to large influx of strangers and are not security conscious; for example, they are still reluctant to routinely lock their cars. The police also suspect that the construction crews, seen as an alien population, account for a significant component of the increase. Embezzlements within the casino have presented a new challenge to both the police and the county prosecutor's office and there have been more reports of embezzlements and credit card frauds from local small businesses. Though rape figures didn't show this, some observers suspected that there were many more rapes but if they involved casino visitors, perhaps the problem was being taken home.

Arrests for driving under the influence have risen sharply. The police believe that this represents both an increase in actual drunk driving but also the high priority on its part to deal with the heavy drinking subsidized by the casinos. Drug arrests are also up.

Initially a large number of prostitutes came to the casinos and some escort services started. The police believe that aggressive arrest policies moved the prostitutes out. They also used various

licensing authorities to close down the escort services; however a look at the local telephone book showed 7 still advertising. There now remain only two strip joints in the city, down from 20 in the pre-casino days. Though loansharking was expected to become a problem, there has so far been no evidence of it.

The police have little indication of local problems with gambling addiction. For example, this does not seem to come up when officials meet with local citizens groups, who are much more likely to get complaints about casino-related nuisance like car doors being slammed late at night.

The casinos have large parking structures immediately adjacent. These are heavily patrolled at night. Valet parking is also quite extensive and the valet service is reputedly fairly aggressive about preventing intoxicated patrons from driving their own cars; they will offer to provide a cab and, if the patron persists, will withhold the car keys until after calling the local police. A recent out-of-court settlement of \$2.5 million to the estate of a woman killed by a drunk driver who had been at a casino has reinforced the casino's incentives for taking this problem seriously.

Other Social Problems

Local human service agencies also reported no serious problem with gambling addiction itself, somewhat to their own surprise⁷. The largest local mental health agency thought that it had about 30 to 40 clients with gambling problems, in a case load for the whole region of about 4,000; moreover there had been at least a modest number of cases even before the casinos arrived. An agency providing services for battered women reported that calls for service increased sharply from less than 4,000 in 1992 to about 10,000 in 1995. However the agency believed that this was at least partially the result of increased awareness of the services; the population had also expanded. The head of the agency said that occasionally someone will complain that her husband blew a

⁷ Interviews were conducted with the heads of two non-profit agencies, one dealing with abused women and children, the other with mental health problems generally.

paycheck but there was no suggestion that this was happening regularly. The increased accessibility of alcohol was a much greater cause of concern.

A significant concern voiced by various observers was the erratic hours of casino employees; this tends to increase marital stress. Men frequently come off duty at 2 am a little wired up and go out with the boys for some drinking at another casino; the alcohol is essentially free. That causes problems when the husband arrives home at 7 am. Similarly, there is sometime tension because women are now earning much more than before; this causes jealousy on the part of some males. Surprisingly, the mental health agency reported no significant increase in substance abuse related problems and thought it had seen only a modest increase in marital discord.

There are now 21 pawn shops in the city, compared to only 8 prior to the casinos. Though the Biloxi police were unsure as to who was using these stores, a glance through a sample of 50 successive pawnshop tickets in Gulfport showed 70 percent were from Biloxi, Gulfport or adjacent towns. For the first time there are 24 hour pawnshops and pawnshops that accept cars and car titles.

Gulfport

Gulfport has two casinos and receives a much smaller share of its city revenues from the casino industry than does Biloxi. The Copa is a small casino, with only about 2,500 visitors daily and no hotel. The other, the Gulfport Grand, is the largest in this area, with a 17 story hotel attached and about 2,000 employees; it has attracted both real estate development and new population into the city. The casinos are adjacent to a very sleepy downtown; it has apparently been sleepy for some years. Few retail establishments are active in the downtown area but the buildings appear to be in good shape. Local restaurants have been hurt but chains (e.g. Appleby's, Olive Garden) have started new outlets here.

The Police Department does not seem to have grown much: perhaps from 72 to 84. Crime statistics are thrown off by annexation of an additional 22,000 citizens from county in January 1994; some comparisons are available for the "old city".

There is a distinct consciousness of gambling related problems; the local expression for gaming indebtedness is being "into the boats". For example, the police told stories of prominent citizens brought low by gaming debts. A leading attorney had to kick his son out of the law firm because the son got into debt for \$2 million. The police department had to prosecute an officer who had stolen \$2,000 in order to finance gambling. There was a one man wave of bank robberies in the area; the robber gambled most of it away at casinos. Then there are the stories of more ordinary citizens getting into trouble: a pharmacist who filed a false report of robbery to conceal gambling debts, a suicide by a plumber who gambled away \$1,000 that he could not afford. The same pawnshop increase has been seen in Gulfport as in Biloxi.

Crime statistics provide an ambiguous picture. Domestic disputes rose from 2972 in 1992 to 5,013; however the population base rose substantially, perhaps 50 percent. The case load for Dept. of Human Services fell by 20, from about 900; caseworkers (according to a police dept. document) believe that higher employment has reduced abuse but has increased neglect. Attempted suicides rose from 24 in 1992 to 75 in 1994, though successful suicides actually fell; it is not clear what process generates these statistics and I could not get details in individual cases that would allow assignment of causes.

Though there was some concern about increased prostitution, statistics showed only a modest rise; 7 arrests in 1992 and 10 in first half of 1995. Escort services are said to have started; the phone book lists 5 in Gulfport and 7 in Biloxi. Detectives estimated that there are now 15 pawnshops in the old city, compared to 6 pre-casino, with ticket volume up 80 percent.

Alcohol related problems have risen substantially. It appeared that the valet parking services at the casino were aggressive in calling police if drunk patron insists on driving; they will

generally not hand over keys until the police have been notified. In general they stressed the increased availability of alcohol in the community as a significant problem. Since Gulfport has had little entertainment itself, in contrast to Biloxi, the casinos are becoming important centers for locals as well.

The police perceived the casinos as not very co-operative with the police. For examples a casino tried to persuade a rape victim, a mother whose child may have been molested in the child care facility and a women who saw a man exposing himself etc. not to file complaints with the police department. The MS Gaming Commission has very narrow jurisdiction; really only direct gaming problems (cheating, use of slugs etc.). Credit card frauds etc. are still local police responsibility, though the local police no longer have a presence in the casinos themselves. It was not clear whether there had been a significant increase in this kind of white collar crime though, as reported to the police. False reporting of robberies is particularly burdensome because it is hard to investigate offenses that did not occur.

Interpretation

It was striking just how little evidence there was of problems directly attributable to gambling in either city. No observer could point to any sign that substantial numbers of residents, even including those who had moved there to work for the industry, were gambling so heavily that it was causing problems to them or their families. Equally interesting is the centrality of alcohol in both cities' concerns and the consequences of large number of employees working odd hours. The character of the community changes in some ways that are troubling and in some ways that trouble people simply because they are new. The growth of pawnshops was probably the most disturbing indicator of local problems.

It ought not be hard to keep crime down in Biloxi with an 80 percent increase in police personnel and a quadrupling of the police budget. Though the increase in tourism is substantial, the increased population flow (less than 10,000 persons per day) is much smaller than the resident

population. While the casino industry looks large for this town, it is barely 15 percent the size of the Atlantic City industry and Biloxi's population is 20 percent larger.

St. Louis

There are four casinos in the St. Louis metropolitan area. The largest ones are on the Illinois side of the river, in Alton. (\$81 million gaming revenues in 1995) and in East St. Louis (\$128 million); I visited these. Smaller ones are in St. Louis itself and in suburban St. Charles.

Alton

The casino (the Alton Belle) sits on the waterfront right below the downtown area; it is about a half hour drive from downtown St. Louis. The town has only 33,000 inhabitants and the downtown is characterized by small stores, including many selling local antiques and memorabilia. It feels like an old and gently fading river town.

The casino can take about 1,000 players at a time and is open either 20 or 22 hours a day. It makes cruises of one to one and a half hours and players do not have to come off the boat after a cruise. It is a very downscale facility, with drinks served only in plastic cups and the food on offer being Taco Bell-Kentucky Fried Chicken. On a Monday later afternoon I was the only person in the casino with a tie. The facility is physically dominated by slot machines (including bingo and video poker), with just a few card games; in fact slot machines account for nearly 80 percent of total revenues.

There is a five acre parking lot about 5 blocks from the casino, along a main road. Bus tours are a significant factor; some do a tour that includes Branson, Mo. (the major center for country and western music in the country now) with a stay overnight at the Holiday Inn in Alton. Even with that, local observers did not think the casinos were the principal source of guests for the hotel. The vast majority of players appear to be from the St. Louis metropolitan area. Table stakes, even on a Monday afternoon, were as high as \$500. Credit is available; my guide

remembered one player having a limit of \$90,000. Players accumulate frequent play points with membership cards.

The casino watches for sign of intoxication. An intoxicated player will be offered a cab; if that is refused and the player demands to drive his own vehicle, casino informs him that it will notify the Police Department. It does indeed do so if he persists but this is a rare event..

The Police Department believes that the Alton Belle has generated absolutely no increase in crime. Initially the department put an extra three officers down at the waterfront but they have been withdrawn because there is not enough for them to do. The casino has a large security force (96 personnel, of whom 56 are full-time) and there are five Illinois State Police (ISP) on board. The ISP scrutinize for under age players and will hand over arrestees (kids caught actually gambling on the boat) to the Alton police. In fact there are scarcely any referrals. This is explained by the fact that there are only two entry ways to the casino and ISP has someone stationed checking for ID; the state requires that everyone have an ID with them while in the casino.

The local police could remember only two "major" crimes associated with the casino; one was a credit card scheme, the other involved tampering with slot machines. Counterfeit notes show up occasionally but never in batches, so there is not apparently a ring. Trespassing is the principal crime showing an increase. The police see no sign of prostitution, loansharking, drugs associated with the casino. The police department is about to get its first increase in manpower in 25 years; a rise from 66 to 71 and later to 73. This has been funded entirely by the casino money.

East St. Louis

Again there is not even a hint of crime increases related to the local casino, which I visited with one of the police department staff. The chief said that the issue was never raised by civic groups when he made speeches, or by his officers. He could only name isolated cases of fraud that he had heard about. His view was that the casino had brought only good to the city; it had allowed

the the police department to expand from 58 to 94 and it had been able at last to buy modern cars and was installing computers.

The casino itself is a larger version of the Alton Belle. It can accomodate about 2,500 players. It leaves the dock every two hours or so for a one hour cruise; if the boat is very crowded, players may have to leave after one two hour spell but this is unusual. The floor is dominated by slot machines, with a modest number of table games. Limits for the tables seem to be about \$500, but they will be raised to \$1,000 for a high roller or on a crowded Saturday evening. The ambience is again of a very lower middle class entertainment; there are no entertainment facilities associated with the casino.

It is in a section of the waterfront that is far from any other commercial activity. The parking lot accomodates about 4,000 cars and is used extensively by commuters, since a Metrolink stop is right at the casino. Indeed, Metrolink was originally developed to serve the casino. The lot is surrounded by a high wire fence but what adjoins is just undeveloped brush. Most players come by car.

The casino makes the usual claim about aggressive policing of juveniles boarding the boat. Everyone has to pass through a turnstyle, having bought a \$2 ticket which provides revenue to the state. They are scrutinized at that point by a security guard. There was some disagreement about how often juveniles had to be turned over to the police. Intoxicated players would be asked to leave the casino and if they attempted to drive their car, it would be blocked by the security guards and the East St. Louis PD notified to make an arrest. The parking lot is patrolled by a number of foot security guards and as well as two vehicles. The casino has nearly 100 security guards, half of them ex police and the relationship with the police department was good.

The police official who showed me around had recently returned to the city after a 10 or 15 year military career. He had heard nothing about local gambling problems, though he mentioned two suicides, one possibly not local, related to gambling losses.

St. Louis

The casino itself here is quite small, with total revenues of only \$xx million. However, it seemed worth learning whether there was any spill-over of crime or other problems from the nearby casinos.

The St. Louis Police Department had absolutely no evidence of casino related crime, even indirectly. The Department had beefed up its downtown patrol by 23 but that also reflected opening of the Kiehl Center (a major sports facility) and another facility as well. There had been some increase in theft out of autos downtown but probably just because there more autos were now parked in the area at night. Two high profile suicides were related to casino gambling but that was all. The PD is not allowed on the boat which has one Missouri State Police officer. Very few juvenile arrests for attempting to play in the casinos.

Social Service Agencies

The county branch of the state family services agency had anticipated a major problem with the arrival of casinos, has no sign at all that caseload has been affected. There is no indication of changing demographics (i.e. more middle class) or stories of casino play as responsible for problems, even though with their increased attention to the family and not just the child, they would expect to pick that up.

The city agency responded in the same way. Again, it has no indication of gambling contributing to its case load. The head of the relevant unit noted that case workers probably don't ask, since they assume that drugs are the principal factor when they come across serious child abuse problems.

Observations

These are low rent casinos, clearly aimed at a very local clientele. They offer none of the facilities that might entice distant, high stakes players. To that extent they offer no clue as to what might happen if Baltimore developed a casino industry aimed at building its tourist base. On the

other hand, they do provide a good test of the effects on those at greatest risk of problems resulting from heavy gambling, namely the poor: these are friendly environments, offering subsidized food and drink, potential big prizes and low stakes gambling. Perhaps a glitzier place would be more attractive to the poor and near-poor, just as it is to the wealthier but that seems likely to be a small effect. The complete lack of awareness of gambling-related problems on the part of anyone I talked to, even in St. Louis itself where no one would be biased by having the city very dependent on the casino industry, was quite striking.

APPENDIX 2

Data Sources

The FBI operates the Uniform Crime Reports (UCR) system, providing data on the number of offenses known to the police; these are available for most of the casino communities. However there are problems in using these data, beyond those that reflect the frailties of police reporting systems generally. First, some cities had made changes in their reporting systems, shifting from "offenses known to the police" to "incident reporting"; not only might this lead to differences in the data series just as a result of changed definitions but the change had not been accomplished smoothly in some cities. For example, the city of Clinton, Iowa saw a dramatic reduction in the reported number of burglaries in 1991, the first year of operation of a casino; from between 334 and 529 in the previous four years, the figure fell to 35 in 1991 and then to about 16 in the next three years. We assume that this is a statistical artifact and did not use such series in our analysis. Second, not all cities reported to the UCR every year. Mississippi does not regularly report to the FBI; we were able to obtain crime data only from certain cities that responded to our phone enquiries. In Illinois the 1995 figures for a number of cities had to be obtained through the Illinois Criminal Justice Information Authority. The 1995 UCR provides data for only four Illinois cities.

Data on casino revenues were taken from Ernst and Young's annual report *Gaming Revenues*. That report provided very detailed data for most casinos, allowing aggregation to the level of city or metropolitan area. However, data for Mississippi casinos were not available from Ernst and Young; nor were we able to obtain these data from the state gaming authority. The state agency did provide monthly gaming revenues for the two major regions of the state; the Gulf Coast and the the Delta. We were able to supplement this with city specific data from the Biloxi city government. Data are not available for the level of winnings of tribal casinos, so they could not be included in the analysis; the slot machine win for the Mashantucket Pequot casino in Ledyard are

available only because the state has guaranteed a monopoly on slots in the state, in return for a share of winnings from these machines.

Ernst and Young have not yet published their 1995 report. Thus we had 1995 data for only a few casinos; these generally came from state regulatory authorities. For purposes of analysis this is not a major omission; we expect crime to lag casino growth, so that towns in which 1995 gaming revenues showed a large increase (decreases being quite rare) would not yet have crime data reflecting the impact of that increase.

Bankruptcy data are available at the county level from the Administrative Office of the US courts and were promptly provided. It was not possible to obtain data on a variety of other social indicators that we initially sought: child abuse and neglect, marital breakdown, foster care placements.

Population data were obtained from a variety of sources, including the Census Bureau, for 1990, and local authorities for some cities in other years. Though the time period covered is short for demographic changes in most circumstances, the sudden growth of a major entertainment industry in a medium size city might lead to substantial in-migration. Thus we attempted where possible to obtain estimates for cities such as Biloxi from local sources, rather than rely on the somewhat mechanical estimates developed by the Census Bureau for non-census years.

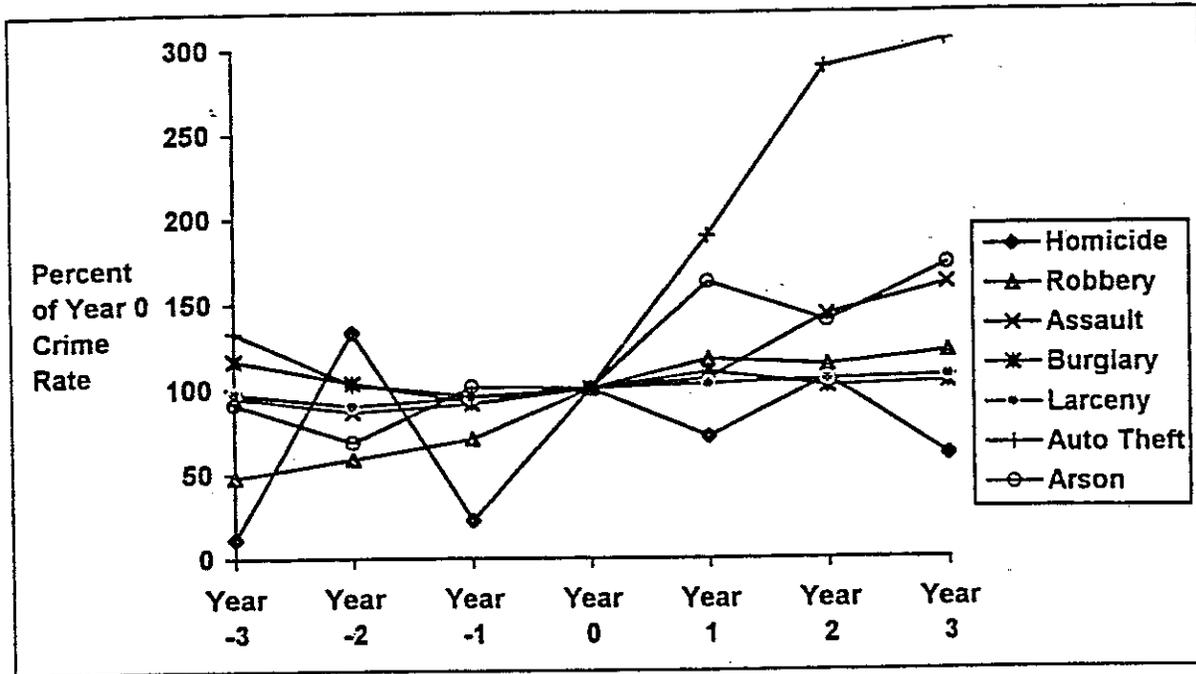
APPENDIX 3

City Level Crime Data

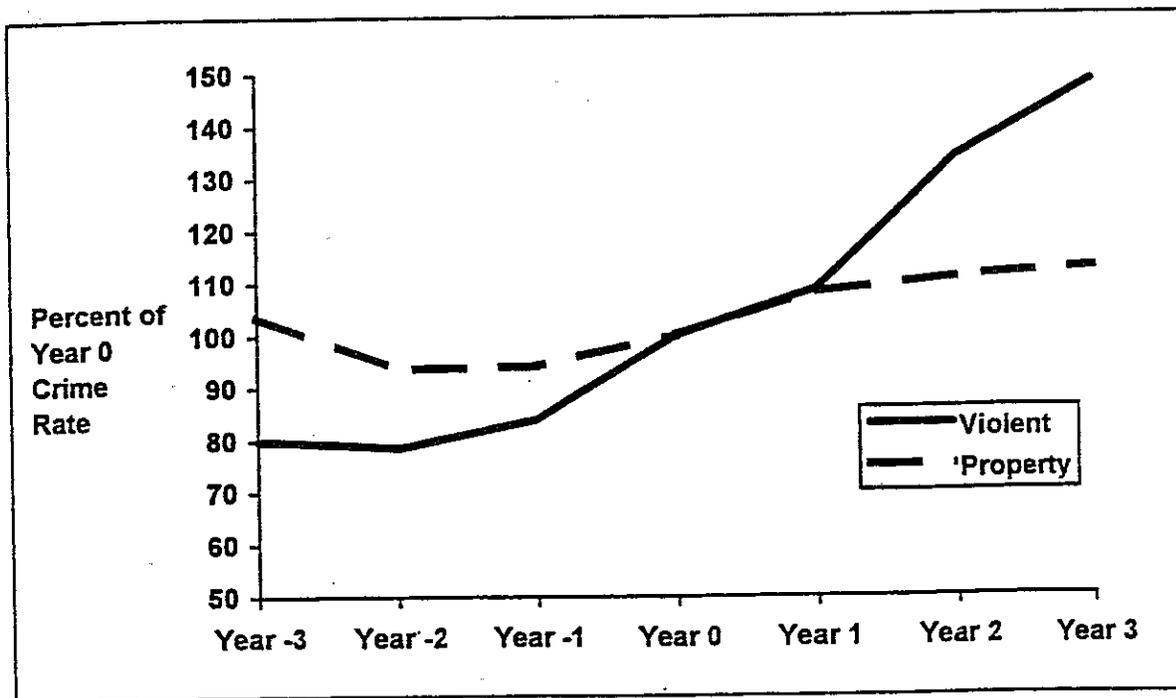
We present here a series of graphs for individual cities. The first graph for each city gives the offense rate normalized to 100 in the year casinos were introduced, for three years before the introduction of casinos and up to three years after the arrival of casinos. Data are presented for up to seven offenses (homicide, rape, arson, burglary, larceny, robbery and assault); these offenses constitute Part I offenses in the Uniform Crime Reports. The second graph aggregates the offenses into two categories; property crimes and violent crimes for each city.

Metropolitan areas represented a major problem for the analysis. Some theories of the links between crime and casinos emphasize that it is the communities from which the players come that should be affected by increased crime; if gaming turns players to crime, then it is primarily their home communities that will be affected. Other links are specific to the community in which the casino is located; for example, if casino patrons make attractive targets for predators. The St. Louis metropolitan area has four casinos in it; we included some of the individual towns and the metropolitan area as well, so as to pick up both possible effects. In fact both St. Louis and Chicago, the two largest metropolitan areas, have such low gaming revenues per capita that they were dropped from later analyses.

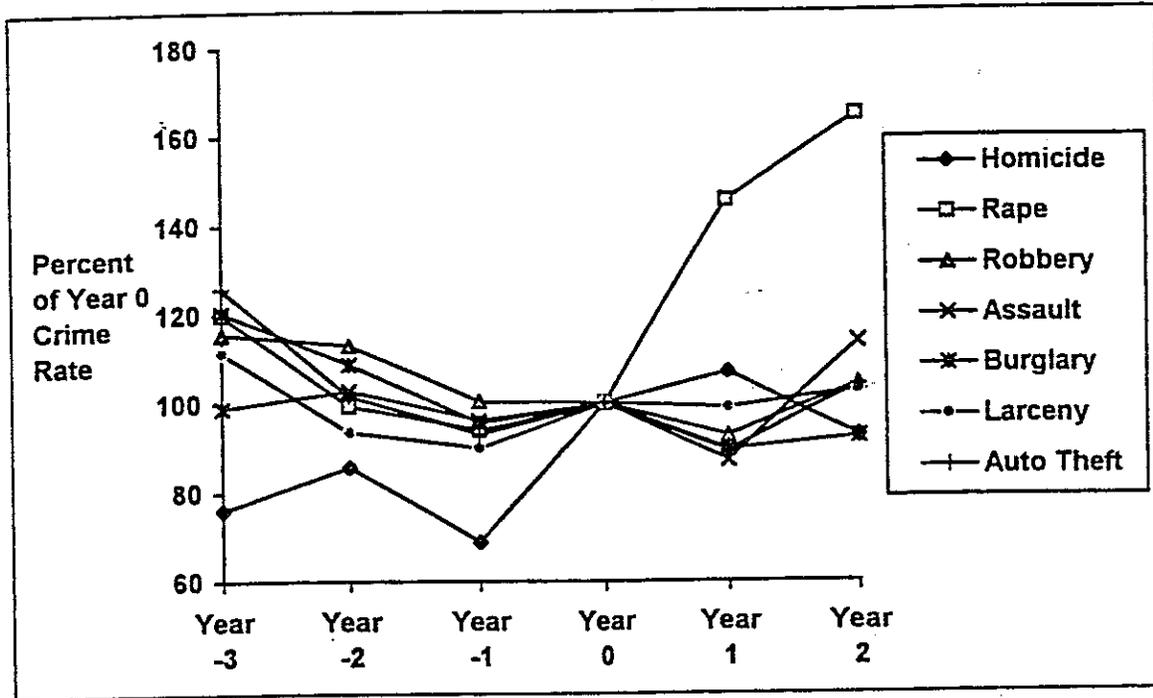
Crime in Peoria, Illinois



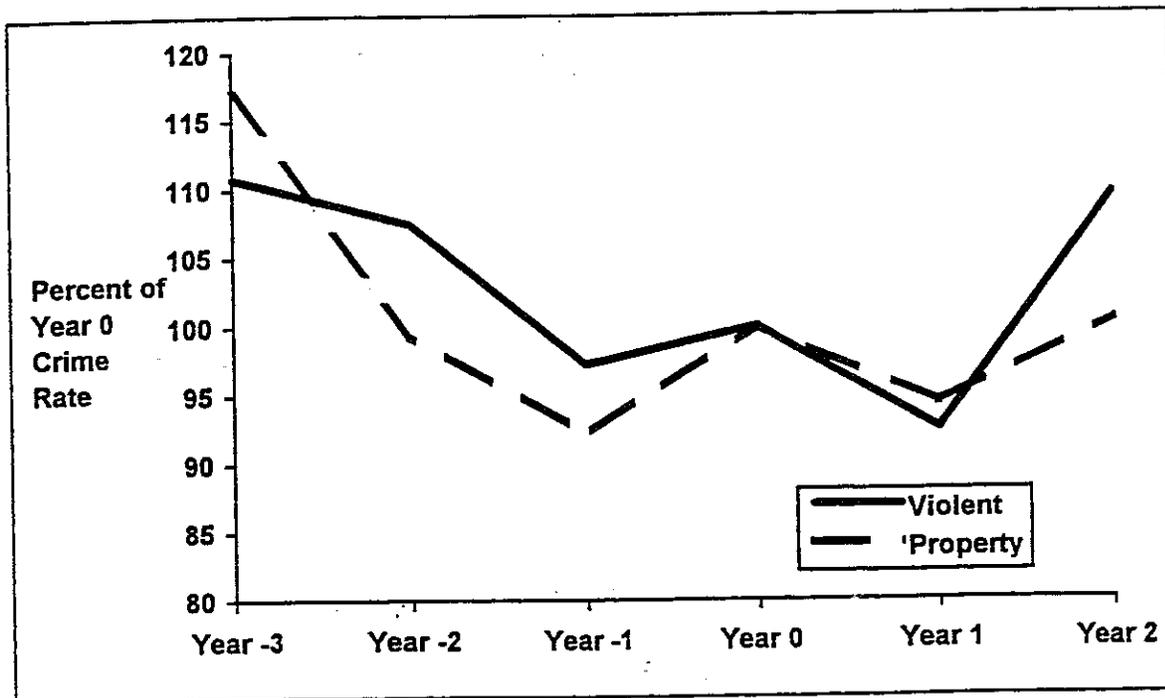
Property and Violent Crime in Peoria, Illinois



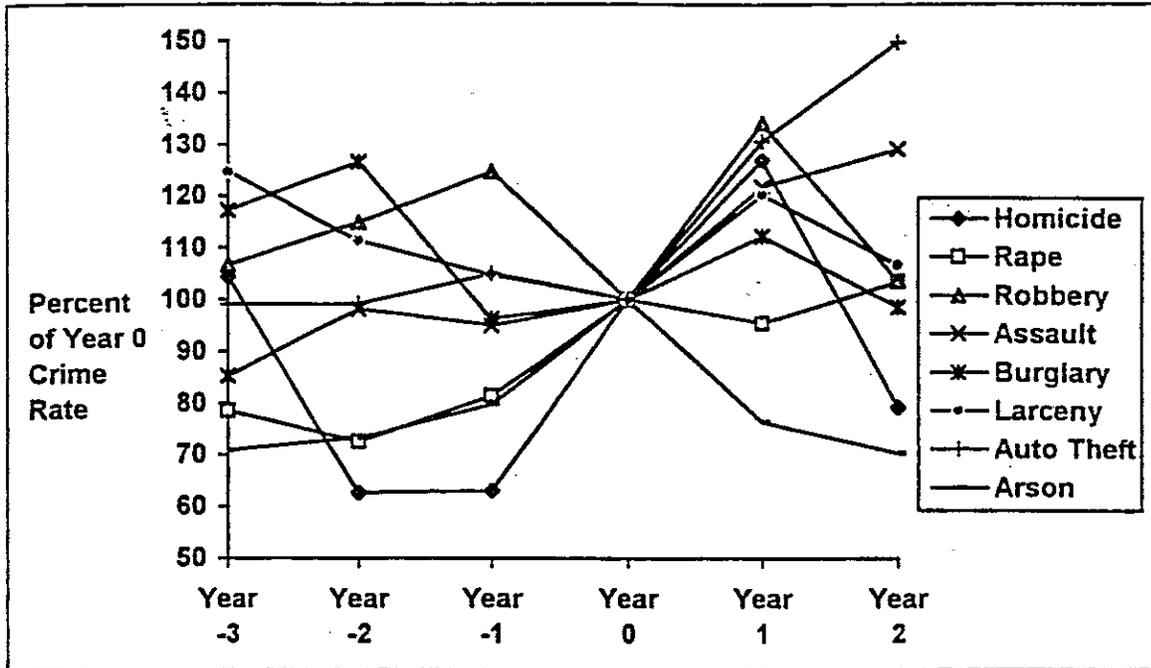
Crime in New Orleans, Louisiana



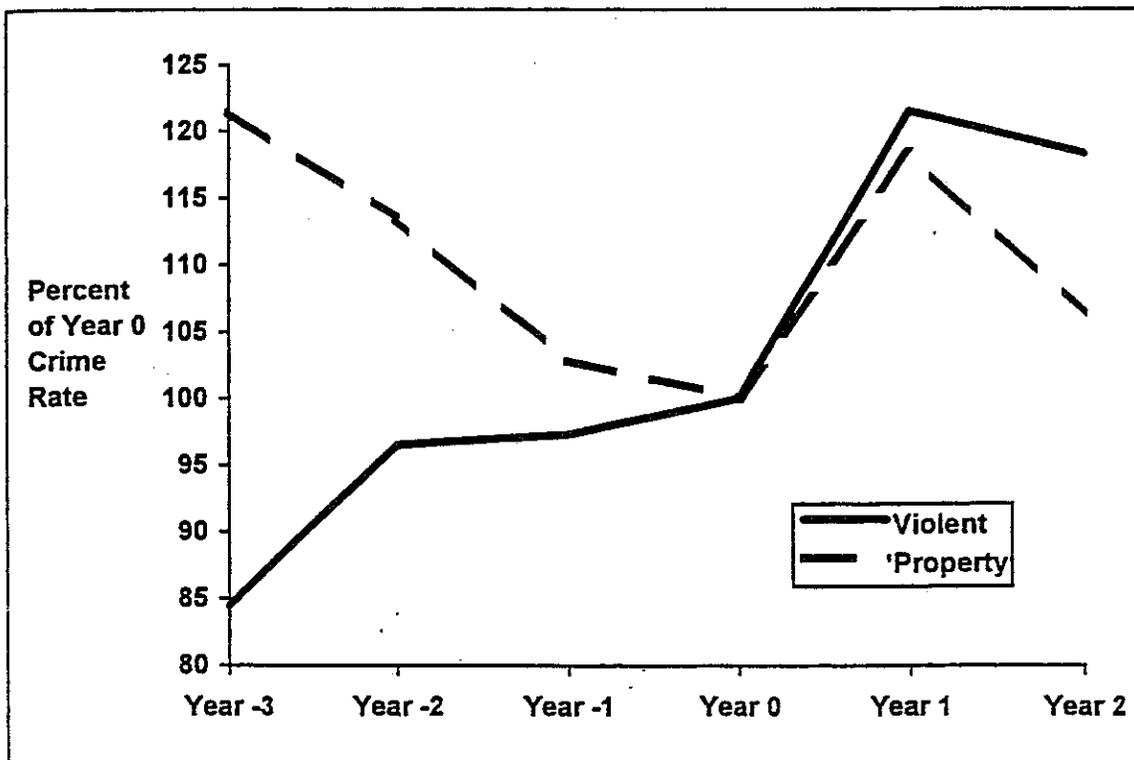
Property and Violent Crime in New Orleans, Louisiana



Crime in Springfield, Missouri (Non-casino)



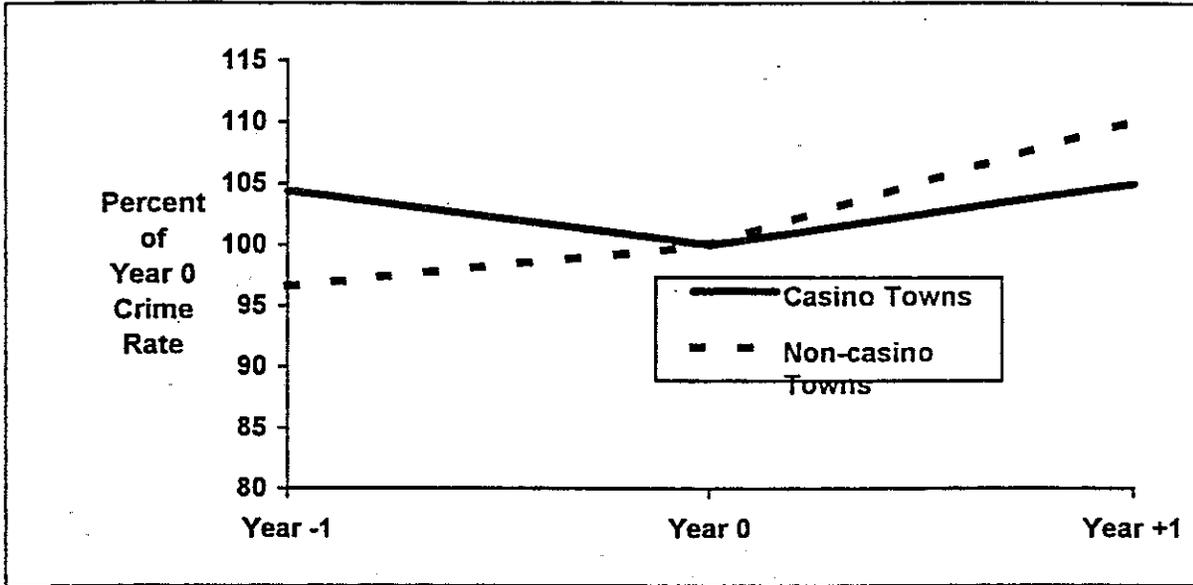
Property and Violent Crime in Springfield, Missouri



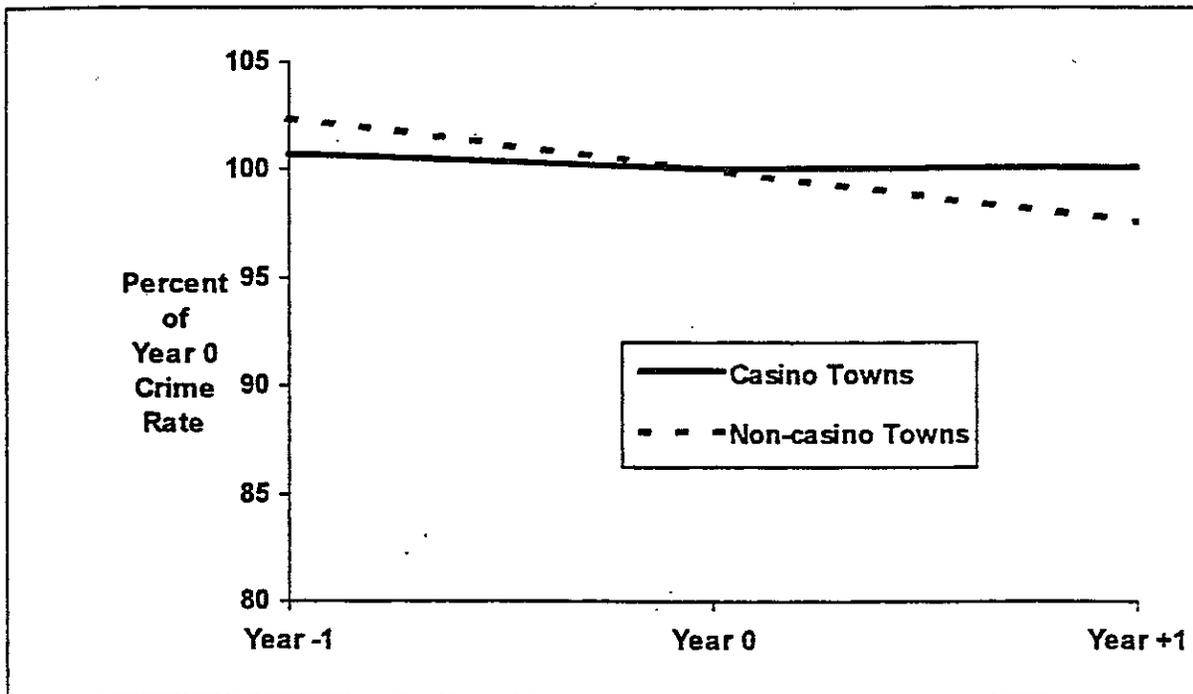
APPENDIX 4

One-Year Looks at Casino and Non-casino Towns

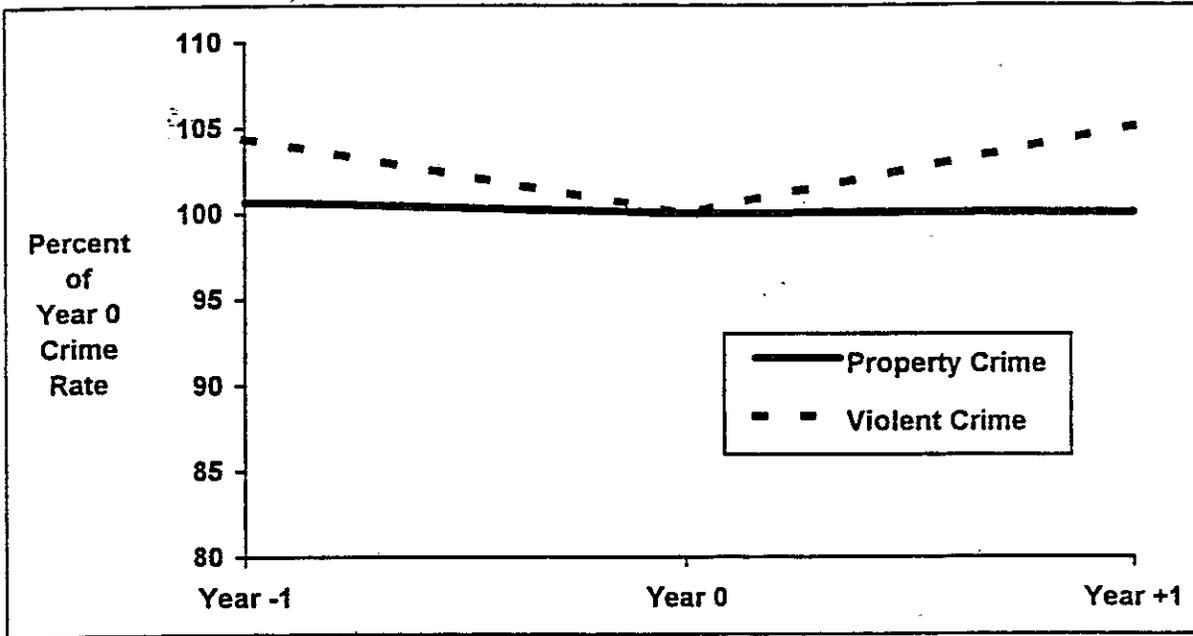
Violent Crime in Casino and Non-casino Towns



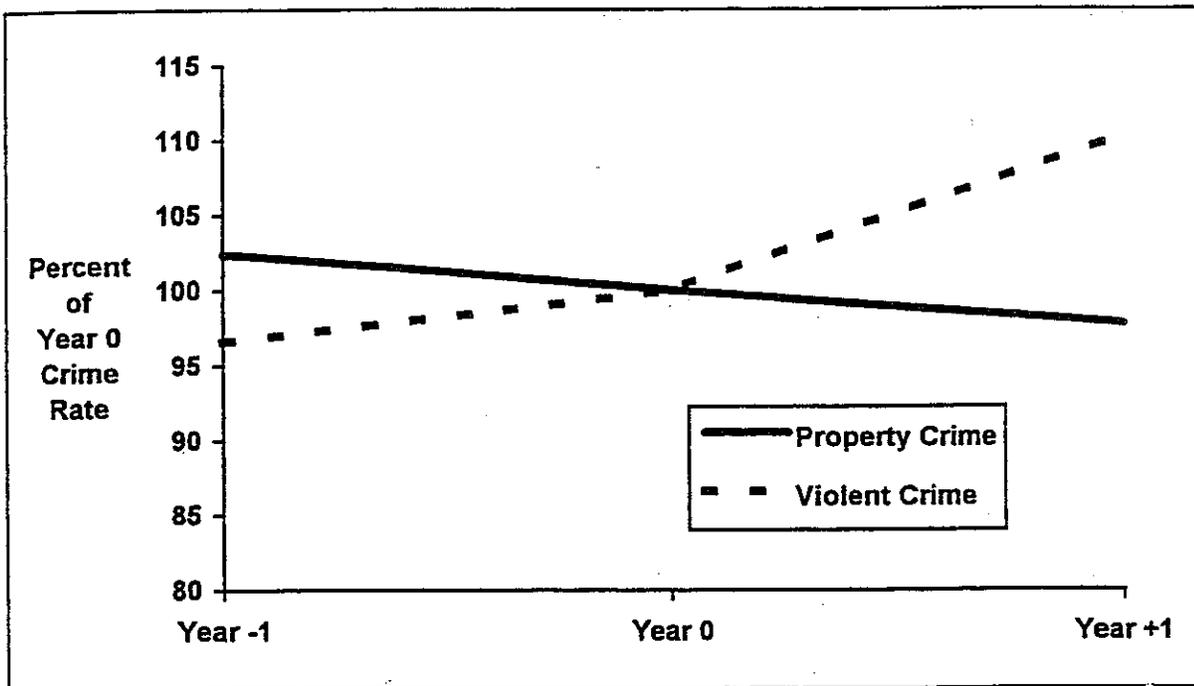
Property Crime Rates, Casino and Non-Casino Towns



Crime Rates in Casino Towns



Crime Rates in Non-casino Towns



Bankruptcies in Casino and Non-casino Towns

