

CHAPTER 5
GAMBLING COSTS

INTRODUCTION

Gambling costs fall into two broad categories. The first category includes costs to the government, or governments, to regulate gambling. The second category (external costs) includes the costs to other people or entities in Louisiana – including governments, businesses, and citizens in the State – that result from the actions of gamblers, particularly problem gamblers. The first category is relatively easy to quantify and measure. The second category is much more difficult to quantify, so it will be explored more fully.

REGULATORY COSTS

This section presents the costs of regulating and policing the gambling industry. In Louisiana, gambling is regulated at the state level. There are direct costs to establish and run the Louisiana Gaming Control Board and the other agencies that regulate the industry. Additionally, the Louisiana State Police and the Louisiana Attorney General's office are involved in the regulation and policing of the gambling industry.

Table 5-1 presents the direct regulatory costs of the gambling industry in Louisiana as reported by the various agencies.

The costs of regulating, policing and, in the case of the lottery, running the game, amounted to \$50.02 million in 1998. These costs must be offset against government revenue that is collected from the gambling industry.

TABLE 5-1
1998 STATE REGULATORY COSTS
(IN MILLIONS)

<u>Agency</u>	<u>Costs</u>
State Police	\$19.80
Attorney General's Office	3.51
Racing Commission	5.84
Louisiana Lottery Corporation ¹	19.38
Louisiana Gaming Control Board	1.49
TOTAL	\$50.02

Source: Various State Agencies

¹ Since the Louisiana Lottery Corporation actually runs the Louisiana Lottery, the costs include the administrative costs of running the lottery instead of regulatory costs that would be incurred if the lottery were run by a private company.

EXTERNAL COSTS

This section presents the external costs that result from gambling in the State.

Those costs include the following components:

1. Increased crime and related costs such as police and other criminal justice system expenditures that are a result of gambling activity, especially problem gambling activity.
2. Increased personal and small business bankruptcies and related personal and government costs that result from gambling.
3. Increased costs to business due to employee theft, employee absenteeism and reduction in worker productivity that result from gambling.
4. Increased social costs that result from gambling. Social costs could include family problems, personal depression, and suicide.

People with gambling disorders can develop considerable gambling related debts, commit crimes to obtain money to gamble or pay gambling debts, default on debts, lose productivity at work, and develop other medical and psychological disorders secondary to the stress of their gambling-related financial problems. Although the majority of these behaviors cause suffering principally for the gambler and their immediate family, some of

these behaviors will result in financial burdens to the general public. Costs that people with gambling disorders cause others in society, who are not directly impacted by the gambler's behavior, are defined as external costs. At present, researchers can only estimate the external costs of people with gambling disorders. With the exception of some prison costs, this study will only estimate the social costs of adults aged 18 and over with gambling disorders. (An estimate for underage gambling social costs is included in Appendix E.)

Before proceeding, some important definitions are presented to facilitate the understanding of this section:

Disordered Gambling:	Gambling that results in life problems either mild or severe, both Levels 2 and 3 gambling.
Level 1 Gambling:	Social or recreational gambling without significant life problems.
Level 2 Gambling:	Gambling that results in moderate personal or social consequences.
Level 3 Gambling:	Gambling behavior that results in multiple serious life problems consistent with a DSM-IV diagnosis of pathological gambling.
Level 4 Gambling:	Gambling behavior that results in life problems serious enough to cause the person to seek assistance by professional treatment or through self- help groups such as GA (Gambler's Anonymous) or other treatment.
Prevalence:	The percentage of a population that is affected by a phenomenon at a given time.

Pathological Gambling: Pathological gambling is the most severe form of gambling disorder and was first defined in the Diagnostic and Statistical Manual, Version III by the American Psychiatric Association in 1990. An individual who fulfills 5 out of the following 10 diagnostic criteria is diagnosed as a pathological gambler: (1) preoccupation with gambling; (2) a need to increase the excitement produced by gambling; (3) restlessness or irritability when unable to gamble; (4) repeated unsuccessful efforts to control, cut back, or stop gambling; (5) gambling in an effort to get back money lost during gambling on a previous day; (6) gambling in an effort to escape a dysphoric mood; (7) lying to cover up gambling; (8) jeopardizing a significant job, relationship, or educational opportunity by gambling; (9) engaging in illegal activity to finance gambling; and (10) going to someone else to relieve a desperate financial situation produced by gambling similar to dependence on a drug or alcohol.

Problem Gambling: Problem gambling is a milder version of a gambling disorder which is not defined by the American Psychiatric Association, but could be considered to be similar to the abuse of alcohol or a drug. Problem gamblers would satisfy only two, three, or four of the 10 diagnostic criteria. Researchers are currently investigating whether there should be a cutoff point for problem gambling, as there is for pathological gambling. This article will use the term “problem gambling” to refer to the less serious condition.

GAMBLING PREVALENCE STUDY

A gambling prevalence study was conducted to determine the extent of gambling by Louisiana residents and the percentage of the population estimated to be non-problem, problem, and probable pathological (pathological) gamblers. This study contained a replication of a 1995 prevalence study conducted in Louisiana and included the South Oaks Gambling Screen (SOGS). (See Appendix D for a complete report on the 1998 prevalence analysis and a comparison to the 1995 study.) The SOGS has been used in all major gambling prevalence studies in the past 15 years. The series of questions that make up the SOGS are designed to determine the level of any gambling problem that

may exist and measure problem gambling prevalence. Prevalence rates are based on the proportion of respondents who score on increasing numbers of items that make up the lifetime and current (or past year) scale of the SOGS. In addition to the SOGS, the 1998 prevalence study uses the Fisher screen to determine problem and pathological gambling behavior according to the DSM-IV criteria. DSM-IV is the currently accepted problem gambling measure used by the American Psychiatric Association (see Appendix D for a discussion of the Fisher screen results).

Table 5-2 presents information about the proportion of respondents who score on an increasing number of items on the lifetime and current SOGS. Table 5-2 also summarizes the prevalence of lifetime and current problem and probable pathological gambling based on established criteria for discriminating between respondents without gambling-related difficulties and those with moderate to severe problems.

According to the most recent population estimates from the United States Bureau of the Census (1999), the population of Louisiana in 1997 was 4,368,967 and 72.6% of these individuals were aged 18 and over. Based on these figures, we estimate that between 79,300 (2.5%) and 130,000 (4.1%) Louisiana residents aged 18 and over can be classified as lifetime problem gamblers. In addition, we estimate that between 57,100 (1.8%) and 101,500 (3.2%) Louisiana residents aged 18 and over can be classified as lifetime probable pathological gamblers.

Based on current prevalence rates and confidence intervals as well as census information, we estimate that between 50,700 (1.6%) and 95,100 (3.0%) Louisiana residents aged 18 and over can be classified as current problem gamblers. In addition, we estimate that between 31,700 (1.0%) and 69,800 (2.2%) Louisiana residents aged 18 and over can be classified as current probable pathological gamblers.

TABLE 5-2
SCORES ON LIFETIME AND CURRENT SOGS ITEMS

<u>Number of Items</u>	<u>Lifetime</u> (N=1800)	<u>Past Year</u> (N=1800)
Non-Gamblers (Level 0)	30.2%	38.5%
Non-Problem Gamblers (Level 1)	63.9%	57.5%
0	46.2	46.4
1	13.1	8.3
2	4.6	2.8
Problem (Level 2)	3.3%	2.3%
3	2.2	1.7
4	1.1	0.6
Probable Pathological (Level 3)	2.5%	1.6%
5	0.7	0.6
6	0.5	0.3
7	0.2	0.1
8 or more	1.1	0.6
<u>Combined Problem/ProbPath</u>	<u>5.8%</u>	<u>3.9%</u>

Source: Louisiana Gambling Prevalence Study, 1998

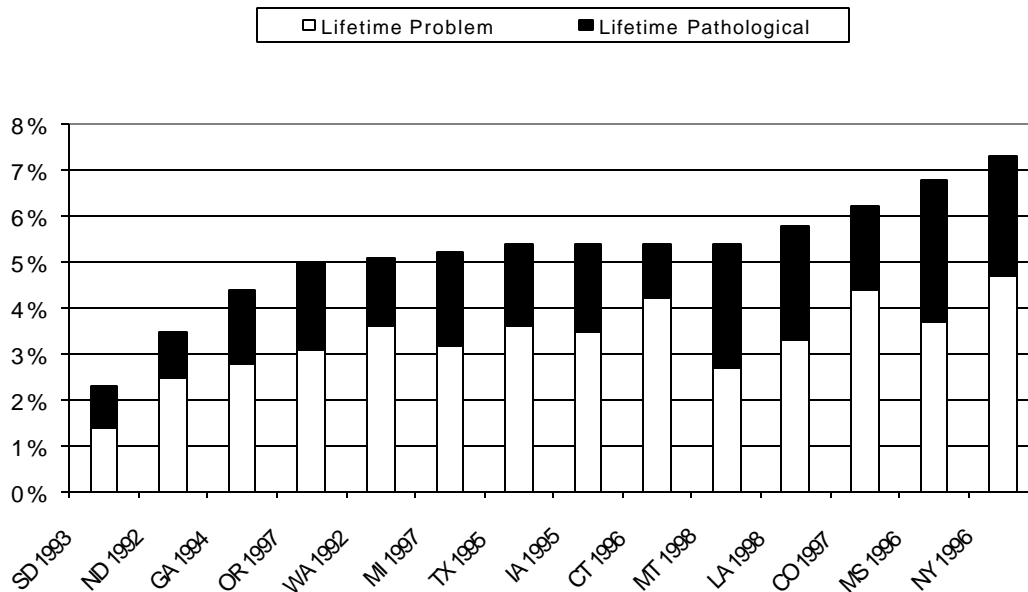
For the purposes of estimation of external costs, point estimates are used in the analyses. The point estimates used are 5.8% (lifetime) and 3.9% (current or past year) combined problem and probable pathological gamblers in Louisiana.

As in other jurisdictions, lifetime and current prevalence rates are significantly different among sub-groups in the population (see Appendix D). Substantial differences in lifetime and current prevalence rates by age, ethnicity, marital status, education and employment status were found.

Comparing Louisiana's prevalence figures with those of other states in the U. S. helps to put Louisiana's prevalence rates into perspective. The jurisdictions where problem gambling surveys have been done in the United States differ substantially in the types of

gambling available, in levels of gambling participation and in the demographic characteristics of the general population. Figure 5-1 shows prevalence rates of lifetime problem and probable pathological gambling in all of the United States jurisdictions where surveys based on the South Oaks Gambling Screen have been completed since 1990 and where prevalence rates have been calculated in a comparable manner. In states where replication surveys have been completed, the most recent prevalence rates are shown.

FIGURE 5-1
LIFETIME PREVALENCE RATES IN THE UNITED STATES

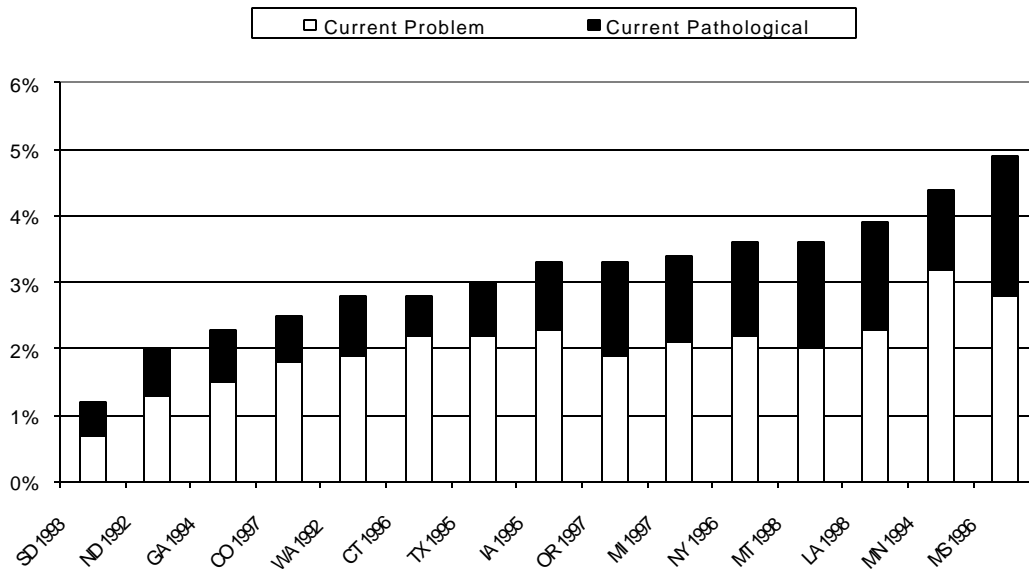


Source: Louisiana Gambling Prevalence Study, 1998

Figure 5-1 shows that the lifetime prevalence rate of problem and probable pathological gambling in Louisiana is higher than lifetime rates in other states where surveys have been carried out except New York, Mississippi and Colorado. Among Southern states, lifetime prevalence rates are higher in Mississippi and Louisiana than in Georgia and Texas.

Figure 5-2 shows prevalence rates of current problem and probable pathological gambling in all of the United States jurisdictions where surveys based on the South Oaks Gambling Screen have been completed since 1990 and where prevalence rates have been calculated in a comparable manner. Again, in states where replication surveys have been completed, the most recent prevalence rates are shown. Figure 5-2 shows that the current prevalence rates of problem and probable pathological gambling in Louisiana are higher than current prevalence rates in most other states where prevalence surveys have been conducted, with the exception of Minnesota and Mississippi.

FIGURE 5-2
CURRENT PREVALENCE RATES IN THE UNITED STATES



Source: Louisiana Gambling Prevalence Study, 1998

In considering these data, it is worth noting that the prevalence of current probable pathological gambling (the black portion of each bar) is higher in Louisiana than in Minnesota. Instead, the prevalence of current probable pathological gambling in Louisiana is equal to Montana and Oregon, where electronic gambling devices are

widespread. However, the prevalence of current probable pathological gambling in these states is higher in Mississippi than in all other states where similar surveys have been carried out.

We also compare the prevalence rates in Louisiana with national and international prevalence rates. A recent meta-analysis of studies in North America presented prevalence rates for several different population groups based on the South Oaks Gambling Screen. Table 5-3 compares prevalence rates from the Louisiana survey with the North American prevalence rates in the meta-analysis as well as with a recent national survey in Sweden (Volberg & Moore 1999).

TABLE 5-3
COMPARING PREVALENCE RATES INTERNATIONALLY

	Louisiana 1998	North America ¹	Sweden 1997
Lifetime Problem	3.3	3.4	2.7
Lifetime Probable Pathological	2.5	1.7	1.2
Current Problem	2.3	2.2	1.4
Current Probable Pathological	1.6	1.1	0.6

Source: Louisiana Gambling Prevalence Study, 1998

¹ From Shaffer, Hall & Vander Bilt (1997: 38). Includes Louisiana 1995. Lifetime and Current Problem groups are based on SOGS scores of 1 to 4 points.

Table 5-3 shows that the lifetime and current prevalence rates of **problem** gambling in Louisiana in 1998 are similar to problem gambling rates averaged over approximately 30 studies in North America between 1986 and 1996. The lifetime and current prevalence rates of **probable pathological** gambling in Louisiana in 1998 are somewhat higher than the lifetime and current prevalence rates averaged over North America. All of the prevalence rates in Louisiana in 1998 are substantially higher than

the prevalence rates identified recently in Sweden, a country where gambling participation is extremely high but where legal gambling is comprised largely of non-continuous activities, such as large jackpot lottery games and a weekly televised bingo game.

SOCIAL/EXTERNAL COST ESTIMATION

The research team used a five-step process to estimate these external costs. The first step calculated the average social costs per year of a person in treatment in Louisiana for a gambling disorder based on a survey completed by volunteers in Louisiana Gambler's Anonymous (GA) or in current treatment for gambling problems. The second step used standard and other quantitative measures of gambling behavior to estimate how closely the people with gambling problems identified in the 1998 prevalence study of the Louisiana adult population resembled the GA/Treatment sample. The third step estimated the social cost of gambling disorders for the 1998 prevalence study survey sample using a proportionate model of social costs for community samples. The fourth step extrapolated the prevalence study sample's social costs to the entire adult population of Louisiana for 1998. The fifth step used results from the 1995 and 1998 Louisiana gambling disorder prevalence surveys to estimate the proportion of revenues that each form of legalized gaming derived from people with gambling disorders.

There are two important points that must be made to fully understand the costs of gambling. First, there are many societal costs that are impossible to quantify. Unquantifiable, or unmeasurable, costs could include family problems, depression, and the like. These costs are important and should be considered in any benefit/cost analysis but they are not quantifiable and, therefore, cannot be compared directly to the dollar benefits identified in Chapter 4. Second, there is a timing problem in identifying these

costs. It may take quite a few years before some costs are transformed from costs to the individual alone to costs to society. Consider the following example – a relatively affluent individual with a substantial gambling problem is losing thousands of dollars a year gambling. Initially, the person may withdraw money from savings, borrow on credit cards or other sources, or not purchase other things. At this point, all of the costs of the person's gambling problem are internal and not considered as part of the benefit/cost analysis. Eventually, if the pattern continues, past savings will be gone, credit card debt will be at the limit, and necessary purchases will be affected. At that point, the individual may turn to other kinds of behavior to support his or her gambling losses. These behaviors may include personal bankruptcy, embezzlement, and theft. When this happens, the costs become social and should be counted in the benefit/cost analysis.

METHODOLOGY

The first step of the process of calculating the social costs of gambling used the Thompson and Gazel's gambling disorder social cost model. This method was also used in other studies of the social costs of gambling, such as those done for Wisconsin and Connecticut. The research team produced a GA/Treatment survey similar to surveys used in previous social cost studies. (See Appendix E for a copy of the GA/Treatment survey.) In January 1999, Reece Middleton, the Executive Director of the Louisiana Council on Compulsive Gambling, distributed the survey to GA meetings statewide and all sites of state-financed outpatient gambling treatment. The GA/Treatment survey included the SOGS. Also included were demographic questions similar to the telephone survey demographic questions and other social cost questions (developed by the Louisiana State University Medical Center at Shreveport, Gambling Studies Unit in a previous study of

gambling behavior in Indiana). Seventy-eight completed surveys were returned in time for the current analysis.

Social costs were calculated in nine categories: 1) work productivity losses from missed or impaired work, 2) unemployment compensation, 3) unemployment productivity losses, 4) bad debt, 5) theft, 6) civil court procedure (including bankruptcy), 7) criminal justice, 8) welfare, and 9) treatment. The specific calculations used for each category to determine the cost per year per Louisiana Level 4 gambler are described below:

Lost Productivity Costs. Only employed respondent data were used in lost productivity calculations.

Full-time workers reported the number of days missed from work per month because of their gambling. The total days missed per month was converted to hours per year and multiplied by the average United States hourly wage for 1997, determined from the Statistical Abstract of the United States 1997. This figure was divided by the number of total respondents.

Part-time workers reported the number of days missed from work per month because of their gambling. The total days missed per month was adjusted for part-time work and converted to hours per year. This figure was multiplied by the average United States hourly wage for 1997 and then divided by the number of total respondents.

Full-time workers also reported days per month of decreased productivity due to gambling. The maximum number for any one person was held at 21 days per work month since many people reported productivity losses for weekends. The number of hours per day for part-time workers were also adjusted to reflect part-time work. This number was adjusted by 50% to derive at a decreased productivity day total. This was converted to hours per year and multiplied by the average United States hourly wage for 1997. This figure was divided by the number of total respondents.

Part-time workers also reported days per month of decreased productivity due to gambling. The maximum number for any one person was held at 21 days per work month since many people reported productivity losses for weekends. The number of hours per day were also adjusted to reflect part-time work. This number was then adjusted by 50% to derive at a decreased productivity day total. This was converted to hours per year and multiplied by the average United States hourly wage for 1997. This figure was divided by the number of total respondents.

Unemployment Costs. Respondents reported the number of months of unemployment compensation received due to gambling problems over their lifetime. This was multiplied by the average Louisiana monthly unemployment compensation as determined from the U. S. Statistical Abstract. This figure was divided by the disordered gambling person years, which is the number of respondents times the median gambling career length. The median gambling career length is the number of years that people in the sample reported having gambling problems. This was calculated by subtracting the age at which the individual experienced problems as a result of gambling from the age the individual began treatment or started attending Gamblers Anonymous meetings.

Productivity Losses From Unemployment Costs. The total months of unemployment due to gambling reported by all respondents was multiplied by the average United States hourly wage. This figure was divided by the disordered gambling person years.

Bad Debts Costs. The total amount of bad debts respondents reported that they did not repay because of their gambling was divided by the disordered gambling person years.

Theft Costs. The total amount of thefts respondents reported that they did not repay because of their gambling was divided by the disordered gambling person years.

Civil Court Procedure Costs. Previous studies estimated that each court case cost society \$3,750. This cost represents cost of public counsel (many gamblers will not have funds and, therefore, require public counsel), costs of judicial and other court personnel salaries, and court facilities. The total number of bankruptcy cases and other civil cases reported by respondents was multiplied by \$3,750 per case and totaled. This figure was divided by the disordered gambling person years.

Criminal Justice Costs. The respondents reported gambling related criminal arrests, trials, and months of probation. Previous studies have used \$500 per arrest, \$3,750 per trial, and \$2,800 per year of probation. The total costs in each category were calculated and divided by the disordered gambling person years. Incarceration costs were separately determined.

Welfare Costs. The respondents reported number of months of welfare resulting from their gambling problems. Previous studies used \$460 per month for welfare costs. The total for the year was calculated by multiplying the total months reported times \$460 per month. This figure was divided by the disordered gambling person years.

Treatment Costs. The respondents reported costs of outpatient and inpatient treatment for gambling problems. The total costs for both types of treatment were summed and divided by the disordered gambling person years.

RESULTS

The annual societal costs of one Level 4 problem gambler in Louisiana are summarized in Table 5-4.

TABLE 5-4
A SUMMARY OF THE ANNUAL SOCIETAL
COSTS OF ONE LEVEL 4 PROBLEM GAMBLER IN LOUISIANA

<u>Category</u>	<u>Costs</u>
Employment Costs	\$5,968
a. lost work hours (employed only)	5,809
b. unemployment compensation	33
c. lost productivity/unemployment	127
Bad Debts	1,246
Thefts	1,929
Civil Court Costs	457
Criminal Justice Costs	935
a. costs of arrests	53
b. costs of trials	192
c. costs of probation	157
d. costs of incarceration	533 ¹
Welfare Costs	27
Treatment	396
<u>Total Annual Social Costs</u>	<u>\$10,958</u>

Source: Louisiana GA/Treatment Study, 1998 and Agencies (Appendix E)

¹ See Estimation of 1998 Louisiana Incarceration Costs of Gambling Disorders (page 91).

The second step involved determining the social cost of gambling disorders in the prevalence survey sample. Over 200 respondents of the original 1,800 adults called in the 1998 prevalence survey to determine the prevalence of gambling disorders in Louisiana were recalled and asked 20 additional questions on gambling-related behavior. This group is referred to as the “panel-back” survey. (See Appendix E for the panel-back survey questions.) The panel-back survey was developed to determine the degree of similarity between the Level 2 and Level 3 gamblers found in the telephone survey and the Level 4 gamblers surveyed in the GA/Treatment sample. If the two groups of

gamblers are similar in their gambling behavior, then the average social costs of the GA/Treatment sample can be extrapolated to the Level 2 and 3 gamblers found in the population of the telephone survey to determine the statewide social costs of gambling disorders.

However, if the two samples are very dissimilar, then only a proportion of the social costs found in the GA/Treatment sample can be extrapolated to the Level 2 and 3 gamblers found in the population. The two groups were compared using SOGS scores and the quantitative measures of gambling used in the panel-back survey. The panel-back questionnaire included average amounts of time and money spent gambling, average gambling debt, average number of days missed from work and average number of days of reduced productivity at work, and total number of arrests and times sued related to gambling activities.

The GA/Treatment sample and the disordered gamblers identified in the prevalence study **were not identical** in SOGS scores or other quantitative measures of gambling behavior (see Appendix E). Consistently, the Level 4 gamblers in the GA sample were more severe in SOGS scores and other measures of gambling behavior. Thus, the data do not support directly extrapolating the Level 4 gambler's social costs to the disordered gamblers identified in the telephone survey.

An alternative method would be to attribute **proportions** of the Level 4 gambler's (GA/Treatment sample gamblers) social cost to the disordered gamblers (Level 2 and 3 gamblers in the panel-back sample). The only social cost that the Level 2 gamblers in the panel-back survey acknowledged was impaired productivity. The social costs of gambling debt and more severe loss of productivity were acknowledged by the Level 3 gamblers in the panel-back sample.

Therefore, we developed a two-step model for attributing Level 4 gambling annualized social costs to the telephone prevalence survey sample using two components, lost productivity cost and other social costs. The first step is to calculate the lost productivity cost, which is the only **past year cost** measured by the GA/Treatment survey (see Table 5-5). This cost is attributed to the disordered gamblers (**current** problem and probable pathological) in the telephone prevalence survey sample by multiplying a Productivity Graduated Multiplier (the proportion of their past year SOGS score to the average SOGS score (13.8) of the GA/Treatment sample) times the average productivity cost per Level 4 gambler. The total cost per person is then extrapolated to the adult population of Louisiana of 3,171,870 (age eighteen and older) to yield a total lost productivity cost statewide for each SOGS score.

The second step is to calculate the other social costs (the **annualized lifetime costs**). These costs are attributed to the disordered gamblers (**lifetime** problem and probable pathological) in the telephone prevalence survey sample by multiplying a Graduated Multiplier times the average lifetime productivity and societal costs per Level 4 gambler (see Table 5-6). These costs were summed to produce the total cost per person for each SOGS score. The total cost per person is then extrapolated to the adult population to yield a total cost statewide.

The 1998 productivity and annualized lifetime costs were summed to provide the 1998 total statewide social cost estimate of \$485.64 million – \$254.60 million in annual productivity lost (see Table 5-5) and \$231.04 million in annualized social costs (see Table 5-6).

TABLE 5-5
PRODUCTIVITY COSTS OF GAMBLING STATEWIDE

SOGS Score	Number of Disordered Gamblers	Productivity Graduated Multiplier	Total Costs Per Person	Costs (in millions)
3	31	22%	\$1,260.02	\$68.83
4	11	29%	1,680.03	32.57
5	11	36%	2,100.04	40.71
6	6	43%	2,520.05	26.64
7	2	51%	2,940.05	10.36
8	5	58%	3,360.06	29.60
9	0	65%	3,780.07	-
10	1	72%	4,200.08	7.40
11	0	80%	4,620.09	0
12	2	87%	5,040.09	17.76
13	1	94%	5,460.10	9.62
14	0	101%	5,880.11	-
15	1	108%	6,300.12	11.10
Total	71		\$49,140.91	\$254.60

Source: Louisiana Prevalence Study, 1998, GA/Treatment Study, 1998,
and Table 5-4

TABLE 5-6
ANNUALIZED LIFETIME SOCIAL COSTS OF GAMBLING STATEWIDE

SOGS Score	Number of Disordered Gamblers	Graduated Multiplier	Productivity Costs Per Person	Societal Costs Per Person	Total Costs (in millions)
3	41	21.7%	\$34.58	NA	\$2.50
4	19	28.9%	46.11	NA	1.54
5	13	36.2%	57.63	\$1,803.93	42.64
6	9	43.4%	69.16	2,164.71	35.43
7	4	50.6%	80.69	2,525.50	18.37
8	7	57.8%	92.21	2,886.29	36.74
9	3	65.1%	103.74	3,247.07	17.71
10	1	72.3%	115.27	3,607.86	6.56
11	0	79.5%	126.79	3,968.64	–
12	3	86.8%	138.32	4,329.43	23.62
13	2	94.0%	149.84	4,690.21	17.06
14	1	101.2%	161.37	5,051.00	9.19
15	2	108.5%	172.90	5,411.79	19.68
Total	105		\$1,348.60	\$39,686.43	\$231.04

Source: Louisiana Prevalence Study, 1998, GA/Treatment Study, 1998, and Table 5-4

ESTIMATION OF 1998 LOUISIANA INCARCERATION COSTS OF GAMBLING DISORDERS

Community samples such as the one used in this study, by definition, exclude members of the population in inpatient treatment, detention, or prisons. The social costs estimate in the present study captures social cost information from those in treatment and from those in the community. Absent from that estimation was a very important constituent of social costs due to gambling – those individuals whose gambling activities have led to their arrest, court conviction, and incarceration.

Gambling disorders and crime are closely associated. Researchers surveying Gamblers Anonymous or gambling-disorder-treatment populations find a significant proportion of gamblers who acknowledge criminal activity as a means to finance their

gambling. Researchers surveying prison populations find a significant portion of prisoners report symptoms consistent with gambling disorders. The GA/Treatment sample used in this study produced a very low estimate of incarceration costs – the low costs of incarceration obtained from the social cost estimate of the GA/Treatment populations may occur because gamblers whose criminal activities have led to their arrests and court convictions are currently incarcerated and are, therefore, not a part of the sample.

Therefore, a separate analysis was developed to estimate incarceration costs of gambling disorders in Louisiana in 1998. A study was performed in an adult prison in Louisiana in 1996. Survey questions in the study asked whether the current arrest was due to a gambling-related crime. Gambling-related crime includes gambling offenses and crime to obtain money to finance gambling activity or to repay a gambling-related debt. The study's results indicated that 10% of adult non-violent crimes committed by those in prison was gambling related.

Incarceration costs were calculated using the equation shown in Table 5-7. First, the Louisiana 1998 daily cost of one adult residing in prison is multiplied by the total days spent in 1998 in Louisiana adult prisons by non-violent offenders. This number is multiplied by the percentage of adult non-violent population in prison for gambling-related crime to yield the total 1998 cost of gambling-related adult incarceration. The same formula is also used to determine the costs for the Louisiana Technical Institute, a facility for non-violent juvenile offenders. The other social costs in this study were only estimated for people 18 years old and older due to the difficulty of surveying juveniles via a telephone survey. Since the incarceration costs are available through the use of a different methodology, they were included in the analysis.

TABLE 5-7
INCARCERATION COSTS

	Cost per Day		Total person Days		Percent Gambling-Related Crime		Total Cost
Adult Prison	\$35.86	X	4,954,348	X	10.00%	=	\$17,766,292
LTI ¹	\$71.86	X	669,752	X	11.6%	=	<u>\$5,586,000</u>
Total						=	<u>\$23,352,292</u>

Source: Department of Public Safety and Corrections and Authors' Calculations

¹ Louisiana Technical Institute is a program for nonviolent juvenile offenders.

This estimate is conservative, because it is restricted to average costs of incarceration only. If these people were not in prison, we would expect that a significant portion would be in full- or part-time employment. Incarceration implies an additional social cost of lost productivity. Also, the incarceration estimate does not reflect the impact of their imprisonment on their families and possible increased dependence by family members on social services.

COMPARISONS TO OTHER STATES

Previous studies have collected data almost exclusively from Caucasian males, consistent with the historical evidence that Level 3 gambling behavior is highly associated with males. This study's data are almost equally split between males and females, more consistent with contemporary national and Louisiana studies that find an increasing female prevalence of gambling disorders. This study's female data coupled with our findings that female gambling careers are different and their social costs are higher and different than their male counterparts makes this study unique.

However, we will discuss our findings in comparison to previous studies to provide context. Table 5-8 provides a comparison of the Louisiana GA/Treatment sample results to data available from Connecticut and Wisconsin studies on gambling debt levels and careers (see Appendix E for full references to these studies). Data from previous studies have found that female gamblers have less debt, shorter career lengths, and begin gambling at a later age than their male counterparts. These findings are consistent with the Louisiana data.

The average Louisiana Level 4 gambler, based on our sample, starts his/her gambling, participates in weekly gambling, and experiences borrowing and disordered gambling later than the Wisconsin and Connecticut samples. In addition, the Louisiana gambler has less treatment time and lower lifetime gambling debt than the other states. This is, in all probability, due to the recent addition of many forms of gambling to the Louisiana economy. The Louisiana gambler is older, has a longer length of disordered gambling, and more gambling debt the year before entering treatment than Wisconsin but is younger, has less gambling debt the year before treatment, and a shorter duration of disordered gambling than Connecticut.

TABLE 5-8
COMPARISONS FOR MEDIAN GAMBLING CAREER HALLMARKS FOR
WISCONSIN, CONNECTICUT, AND LOUISIANA

<u>Characteristic</u>	<u>Wisconsin (Median)</u>	<u>Connecticut (Median)</u>	<u>Louisiana (Median)</u>
Age Gambling Began	20	16	25
Age Weekly Gambling Began	31	21	34
Age First Borrowed to Gamble	33	27	38
Age Gambling Problems Began	35.5	29	37
Length of Disordered gambling	3 years	9 years	4 years
Time in GA	1.45 years	2 years	.375 year
Age Now	43	47	44
Lifetime Gambling-Related Loss	\$45,000	\$82,500	\$37,500
Year before GA Loss	\$12,000	\$20,000	\$17,500

Source: Louisiana GA/Treatment Study, 1998 and Connecticut and Wisconsin Studies (see Appendix E)

A comparison of Louisiana's social cost components with Connecticut's and Wisconsin's is presented in Table 5-9. The Louisiana social costs per year are between the Wisconsin and Connecticut results. A previous study found common patterns in Wisconsin and Connecticut social costs with over four-fifths of the variation in costs represented by more theft and bad debts in Connecticut. The Connecticut study's predominantly male respondents had longer gambling careers and greater indebtedness than their male counterparts in Wisconsin, which may explain their heavier reliance on non-personal financial sources to sustain their gambling activity. Louisiana's social costs fit the Wisconsin pattern with significantly less theft and bad debt compared to the Connecticut respondents, and lower arrest, trial, and probation costs than Connecticut.

TABLE 5-9
A SUMMARY OF THE ANNUAL SOCIETAL
COSTS OF ONE LEVEL 4 PROBLEM GAMBLER

Costs	Connecticut	Wisconsin	Louisiana
Employment Costs			
a. lost work hours	\$1,770	\$1,329	\$5,809
b. unemployment compensation	488	488	33
c. lost productivity/unemployment	1,666	1,666	127
Bad Debts	2,300	1,487	1,246
Thefts	7,219	1,733	1,929
Civil Court Costs	536	535	457
Criminal Justice Costs			
a. costs of arrests	71	38	53
b. costs of trials	458	179	192
c. costs of probation	333	152	157
d. costs of incarceration	556	534	533 ¹
Welfare Costs	523	347	27
Treatment Costs	114	377	396
Total Annual Social Costs			
Per Compulsive Gambler	\$16,034	\$8,635	\$10,958

Source: Louisiana GA/Treatment Study, 1998 and Connecticut and Wisconsin Studies

¹ See Estimation of 1998 Louisiana Incarceration Costs of Gambling Disorders (page 91).

The **pattern** of social costs found in Louisiana are different than the Wisconsin and Connecticut patterns. The major differences are in employment costs, civil court costs, unemployment costs, and welfare costs.

The major area of variation in the Louisiana employment costs are lost work hours or productivity. Two differences account for the larger productivity costs. The first is methodological. The Louisiana study asked about impaired productivity in addition to missed days of work, which doubled the productivity costs. The second difference is Louisiana respondents reported significantly more lost days due to gambling than the respondents in the other states.

The civil court costs, unemployment costs, and welfare costs are lower in the Louisiana study because the Louisiana respondents were asked whether the negative outcome was due to gambling. The other studies did not ask this question and attributed all court costs, unemployment costs, and welfare costs to gambling. The differences in civil court costs are probably gender related. Louisiana females reported fewer divorces and debt-related civil suits than their male counterparts. Louisiana respondents reported high amounts of months on welfare and unemployment, but only attributed a small percent of their welfare and unemployment months to gambling problems, which accounts for the smaller Louisiana costs.

One interesting observation on social costs in all three states is that treatment is a small percentage of total social costs. Treatment costs are 0.7%, 4.4%, and 3.6% in Connecticut, Wisconsin, and Louisiana, respectively. Treatment comprises less than five percent of social costs in all three states.

GAMBLING REVENUE DERIVED FROM PEOPLE WITH GAMBLING DISORDERS

In the analysis of the gambling industry on the State, one important factor to consider is the proportion of total gambling spending that is derived from problem gamblers. It is clear that the gambling industry has a very large presence in the State of Louisiana. Policy makers should have information on how much of this spending comes from problem gamblers. The Louisiana prevalence study contains adequate information to make this calculation for all of the various forms of gambling.

The methodology is straightforward based on the direct results of the prevalence study. Everyone surveyed who had gambled during the past year was asked to report how much money they spent on gambling for each form of gambling within the last year. Total gambling expenditures from Louisiana residents for each form of gambling is equal

to the average amount spent in the last year on gambling by problem gamblers times the number of problem gamblers (defined by the prevalence study) plus the average amount spent in the last year on gambling by non-problem gamblers times the number of non-problem gamblers (defined by the prevalence study). The proportion of gambling spending that is derived from problem gamblers is equal to the average amount spent in the last year on gambling by problem gamblers times the number of problem gamblers (defined by the prevalence study) divided by total gambling expenditures as calculated above.

The equation below summarizes the calculation of the proportion of gambling spending by problem (disordered) gamblers:

$$P^i = \frac{(D^i \times N \times PR)}{(D^i \times N \times PR) + (S^i \times N \times (1-PR))}$$

Where:

P^i = The proportion of total spending that comes from problem gamblers for each form of gambling.

D^i = The average amount spent on each form of gambling by problem gamblers.

S^i = The average amount spent on each form of gambling by non-problem gamblers.

N = Total number of people in the sample.

PR = Prevalence rate; i.e., the proportion of the sample that are problem gamblers.

$1-PR$ = The proportion of the sample that are not problem gamblers.

$(D^i \times N \times PR)$ = Total gambling spending by problem gamblers.

$(S^i \times N \times (1-PR))$ = Total gambling spending by non-problem gamblers.

$(D^i \times N \times PR) + (S^i \times N \times (1-PR))$ = Total gambling spending.

The amount of expenditures by problem gamblers in Louisiana on each form of gambling activity for 1995 and 1998 are provided in Table 5-10. There are some important results in Table 5-10. **In 1998, according to the Louisiana Prevalence Study conducted for this study, 29.9% of all Louisiana spending on riverboat casinos comes from problem and pathological gamblers.** Assuming that the out-of-state gamblers follow the same pattern, 30% of all revenue coming into Louisiana's riverboat casinos comes from problem gamblers. **Likewise, 42.3% of all Louisiana spending on Indian reservation casinos comes from problem and pathological gamblers. For video poker, the proportion is 27.1%.** These are important facts to keep in mind in the overall evaluation of casino gambling in the State.

TABLE 5-10
PROPORTION OF TOTAL SPENDING FROM PROBLEM AND PATHOLOGICAL GAMBLERS FOR EACH GAMBLING ACTIVITY

Games	1995			1998		
	Problem	Path	Total	Problem	Path	Total
Pari-mutuel	18.2%	46.8%	65.0%	1.8%	6.3%	8.1%
Lottery	7.9	3.5	11.4	16.3	3.3	19.7
River Casino	6.9	11.1	18.0	18.3	11.6	29.9
Charity	17.6	6.3	23.9	5.3	6.4	11.7
Indian Casino	6.3	2.5	8.8	33.8	8.5	42.3
Electronic	16.7	9.9	26.6	18.4	8.7	27.1
Out of State	4.0	13.4	17.4	11.9	8.4	20.3
Private ¹	14.4	12.7	27.1	8.1	17.0	25.1
Telephone/Internet	0	0	0	0	10.5	10.5
Other	8.4	5.2	13.6	0	0	0
Total	11.2	14.1	25.3	15.5	9.6	25.1

Source: Louisiana Prevalence Study, 1998 and Louisiana GA/Treatment Study, 1998

¹ Private includes card games, games of chance, games of skill, and sports betting.

It is also possible, from the data presented in Table 5-10, to identify trends in gambling activity from 1995 to 1998. It is clear that there is a movement away from pari-mutuel gambling and charitable gambling by problem gamblers. **For these two forms of gambling, the proportion contributed by problem gamblers decreased from 65.0% to 8.1% and 23.9% to 11.7%, respectively. Those declines have been matched by increases in the proportion for riverboat and Indian casinos, from 18.0% to 29.9% and 8.8% to 42.3%, respectively.**

The total percentage spent on gambling by disordered gamblers has remained approximately the same – 25.3% compared to 25.1% even though the prevalence of disordered gamblers has decreased in 1998. **The most significant difference is the dramatic increase in the proportion of spending coming from Level 2 gamblers (from 11.2% to 15.5%) to rates that exceed the gambling proportion of Level 3 gamblers in 1998 (9.6%). The increased spending of Level 2 Louisiana gamblers in 1998 could signal an increase in the severity of disordered gambling by this group as a whole, and may argue for increased social costs for this group of gamblers. The increased spending could also chronicle the progression of an addictive disease in this group of gamblers.**

The major differences in the pattern of gambling in Louisiana between 1995 and 1998 is 1) the shift from pari-mutuel gambling by disordered gamblers to casino gambling (mostly Indian casinos), 2) the decrease in private forms of gambling in 1998 by all groups of gamblers, and (3) the increase in out-of-state gambling overall. In general, from 1995 to 1998 in Louisiana, casino gambling diverted revenues from other forms of legalized and private gambling and benefited from the expenditures of

disordered gamblers the most of any form of legalized gaming. Indian casinos seem to benefit the most from the shift in gambling patterns.

CONCLUSIONS

The social costs of Level 4 gambling disorders per person per year found in Louisiana are consistent with previous studies. The major categories of social costs found in this study are also consistent with previous studies, with productivity losses, theft, bad debt and criminal justice costs comprising the majority of social costs. The treatment cost of gambling disorders is a small part of the total social cost (less than four percent in Louisiana). **The social costs of gambling disorders in Louisiana in 1998 were substantial, approximately \$485 million dollars. A large part of the casino gambling benefits were derived from expenditures by disordered gamblers in Louisiana. Two trends were identified in Louisiana gambling: 1) the increase in women with gambling problems and their higher social costs and 2) the dramatic increase in gambling expenditures of people with milder forms of gambling disorders (Level 2 gamblers). These findings indicate that social costs of gambling disorders may rise, possibly dramatically in the future.**