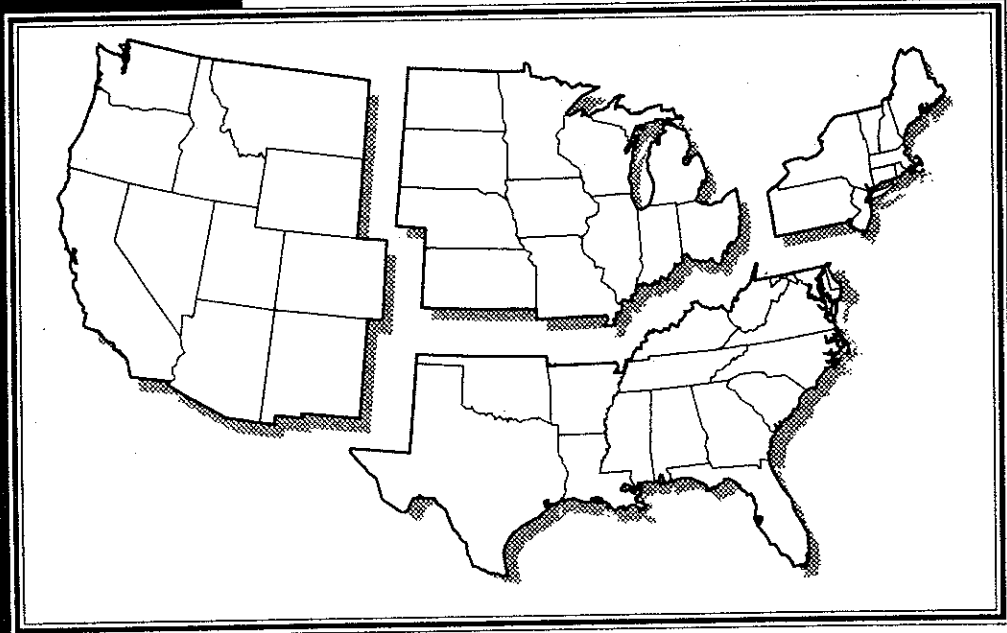


June 1997



**A STUDY CONCERNING THE
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ON THE CITIZENS OF THE STATE OF
CONNECTICUT**

Prepared for:

State of Connecticut

Department of Revenue Services

Division of Special Revenue

Prepared by:

WEFA Group

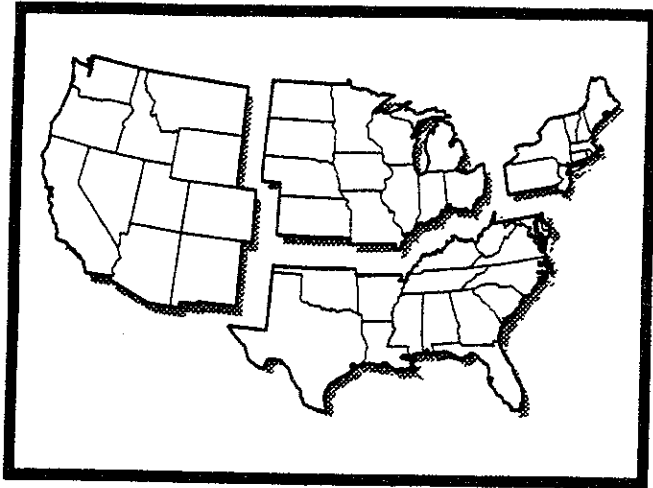
With Subcontract Assistance from:

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Table Of Contents

Page

Background and Introduction

Executive Summary

- 1. Findings..... 1
- 2. Recommendations 11

Chapters

- 1. Review and Analysis of Legalized Gambling in Connecticut..... 1-1
 - Gross Wagering and State Revenues 1-1
 - Connecticut Gross Wagering 1-3
 - Connecticut General Fund Revenues 1-4
 - History of Sales, Handle and Revenues for the Five-Years,
FY1992 - 1996 1-6
 - The Lottery 1-6
 - Administration and Games Offered 1-6
 - Sales Trends 1-7
 - Advertising 1-9
 - Percent of Disposable Income Spent on the Lottery 1-11
 - Off-Track Betting 1-12
 - Administration and Locations 1-12
 - Handle Trends 1-12
 - Pari-Mutuel 1-14
 - Administration and Locations 1-14
 - Sources of Handle for the Connecticut Pari-Mutuel Industry 1-14
 - On-Track Handle Trends 1-16
 - Charitable Gambling 1-19
 - Native American Casino Gambling 1-21
 - Impact of Foxwoods on Other Forms of Gambling in Connecticut 1-23
 - Substitution, Saturation and Projections 1-24
 - Introduction 1-24
 - Findings of Substitution and Saturation 1-26
- 2. The Net Contribution of Legalized Gambling to the Economy of the State
of Connecticut 2-1
 - Summary of the Net Economic Contribution of Legalized Gambling 2-1
 - Measuring the Economic Contribution of Legalized Gambling: Methodology 2-3

Table Of Contents (Continued)

	Page
The Net Economic Contribution of Charitable Gambling	2-6
The Net Economic Contribution of the State Lottery.....	2-7
The Net Economic Contribution of Gambling at Pari-Mutuel Facilities and the OTB System	2-9
Direct Spending at Pari-Mutuel and OTB System	2-10
Employment and Wages Generated by the Direct Pari-Mutuel and OTB Spending	2-13
Indirect Economic Contribution of Wagering at Pari-Mutuel Establishments.....	2-15
Conclusion	2-16
The Net Economic Contribution of Gambling at the Foxwoods Casino	2-17
Direct Casino-Related Spending.....	2-17
Employment and Wages Generated by the Direct Spending at Foxwoods.....	2-21
Indirect Economic Contribution of Gambling at Foxwoods.....	2-23
Conclusion	2-25
 3. Telephone Survey of Connecticut Residents' Gambling Behavior and Opinion.....	 3-1
Introduction	3-1
Purpose.....	3-1
Qualitative Research: Focus Groups	3-3
Survey Design	3-3
Sample	3-4
Weighting	3-4
Interpretation of the Results	3-6
Participation in Legalized Gambling.....	3-7
Participation	3-7
Any Form of Gambling.....	3-7
Lottery	3-8
Jackpot Lotto	3-8
The Instant Lottery	3-8
Powerball.....	3-8
The Daily Numbers.....	3-8
Cash Lotto	3-8
Play Four	3-8
Horse-Racing/Harness-Racing.....	3-8
Raffle/Sports Betting/Other Non-Casino Games.....	3-8
Raffle	3-9

Table Of Contents (Continued)

	Page
Card Games	3-9
Office Game Pools	3-9
Bingo	3-9
Bowling, Pool, Golf	3-9
Video Poker	3-9
Las Vegas Night	3-9
Bet with a Sports Bookie	3-9
Casino Gambling	3-9
Greyhound Races	3-10
Jai Alai	3-10
OTB	3-10
Lottery	3-13
Participation	3-13
Preferences	3-13
Expenditure	3-15
Casino Gambling	3-17
Participation	3-17
Expenditure	3-18
Other Forms of Gambling	3-18
Participation	3-18
Expenditure	3-19
Attitudes Toward Legalized Gambling	3-19
Internet Usage in Gambling	3-26
Gambling-Related Sites on the Internet	3-26
Legality of Internet Gambling	3-26
Connecticut Residents' Access to the Internet	3-28
Connecticut Residents' Awareness of Gambling on the Internet	3-29
Betting on the Internet - Occurrence and Interest	3-29
Respondent Profile	3-30
Comparison with Connecticut Poll Surveys, 1981 to 1994	3-34
4. The Impact of Legalized Gambling In Connecticut on the Economies of Depressed Areas, on Crime and on the Regressiveness of State Taxation	4-1
The Economic Opportunity Provided by Native American Casinos to Residents of Economically Depressed Regions in Connecticut	4-1

Table Of Contents (Continued)

	Page
The Relationship Between Gambling and Crime, Including the Relationship Between Legal and Illegal Gambling.....	4-3
Gambling and Crime	4-3
The Relationship of Legalized and Illegal Gambling	4-9
Evidence from the November 1996 Telephone Survey of Connecticut Residents	4-12
Regressivity in Connecticut Gambling	4-13
Overview	4-13
Literature Review	4-15
Results for Connecticut	4-17
5. The Prevalence of Pathological Gambling in Connecticut	5-1
Introduction	5-1
Measurement of Pathological Gambling	5-3
Survey Interpretation.....	5-7
Comparison of Pathological Gambling in Connecticut with Other States	5-11
Demographic Profile, Gambling Preferences and Participation of Telephone Survey Respondents, Classed by SOGS Scoring Range ...	5-12
Summary, Conclusions and Recommendations	5-16
6. The Social Costs of Pathological Gambling	6-1
Introduction	6-1
Literature Review	6-2
Indebtedness and Bankruptcy.....	6-2
Workplace Costs	6-4
Insurance Costs	6-4
Crime.....	6-5
Welfare Costs	6-5
Physical Disorders Among Pathological Gamblers: Medical Costs	6-7
Suicide Attempts and Thoughts of Suicide Among Pathological Gamblers	6-7
Psychiatric Disorders and Other Addictions Among Pathological Gamblers.....	6-8
Family Issues	6-9
Calculation of Social Costs of Pathological Gambling in the Wisconsin Study.....	6-10

Table Of Contents (Continued)

	Page
Applying the Wisconsin Study's Calculation of the Social Costs of Pathological Gambling to Connecticut	6-11
Assessing Social Costs in Connecticut from the Intercept Survey.....	6-14
Assessing Social Costs from the Survey of Pathological Gamblers	6-18
Introduction	6-18
A Profile of 112 Pathological Gamblers in Connecticut.....	6-19
The Gambling Histories of the Respondents	6-22
Implications	6-24
Games They Played.....	6-24
Losses Incurred at the Games and Moneys Owed	6-26
Other Costs	6-29
Assessing the Costs of Pathological Gambling from the Treatment Group/GA Survey.....	6-31
7. Education, Prevention and Treatment.....	7-1
Causes of Pathological Gambling.....	7-1
Biological/Physiological Theories and Treatment.....	7-1
Psychological Theories and Treatment.....	7-3
Treatment Success	7-5
Research on Youth Gambling.....	7-5
Attitudes Toward Youth Gambling in Connecticut.....	7-7
Treatment of Pathological Gamblers	7-8
Inpatient Treatment Programs	7-8
Outpatient Treatment Programs.....	7-8
Related Programs.....	7-9
Gamblers Anonymous.....	7-9
The National Council on Problem Gambling	7-9
Education	7-10
Casino-Sponsored Programs.....	7-11
Connecticut Programs and Funding	7-11
Funding	7-11
The Connecticut Division of Special Revenue	7-12
The Connecticut Council on Problem Gambling	7-13
The Compulsive Gambling Treatment Program.....	7-14
Gamblers Anonymous.....	7-16
Success Rate	7-16
The Southeastern Connecticut Problem Gambling Task Force	7-17

Table Of Contents (Continued)

	Page
Private Counseling Services	7-17
Programs In Other States	7-18
Conclusions and Recommendations	7-22
8. The Intercept Survey: Demographics and Gambling Behavior	8-1
Purpose	8-1
Methodology	8-1
Nature of the Intercept Survey Results	8-2
Comparisons of Responses to the South Oaks Gambling Screen (SOGS) in the Different Surveys	8-2
Results	8-4
Demographics	8-4
Gambling Behavior	8-5
Lottery	8-5
Horse Racing	8-5
Charitable Gambling	8-5
Native American Casinos	8-5
Pari-Mutuels	8-6
OTB	8-6

Bibliography

Appendices

Appendix A	Questionnaire Used in the Telephone Survey
Appendix B	Questionnaire Used in the Intercept Survey at Gambling Venues
Appendix C	Questionnaire Used in the Pathological Gamblers Survey
Appendix D	The Gamblers Anonymous 12 Steps of Recovery
Appendix E	Diagnostic Criteria for Pathological Gambling from the American Psychological Association Diagnostic and Statistical Manual, Fourth Edition (DSM-IV)

Table Of Contents (Continued)

- Appendix F Home Page of the Connecticut Division of Special Revenue
State Lottery Web Site Addresses
Home Pages of Connecticut Legalized Gambling Sites
 The Connecticut Lottery
 Plainfield Greyhound Park
 Shoreline Star Greyhound
 Foxwoods Resort Casino
 Mohegan Sun Casino
- Appendix G Connecticut Zip Code Rankings by Per Capita Income in 1996:
Lowest 40% of Zip Code Areas
- Appendix H Substitution and Saturation: A Statistical Approach

EXECUTIVE SUMMARY

1. Findings

◆ **Legalized gambling is a major industry in the US and in Connecticut.**

A broad variety of gambling options are available in the State, including the State Lottery, pari-mutuel betting at greyhound tracks and jai alai frontons, betting at Off-Track Betting (OTB) branches and simulcast facilities, video facsimile machines and table games at two Native American casinos, and charitable gaming.

In calendar 1995, Connecticut accounted for 3.5% of all legal wagering in the US and 3.2% of the revenue or win. By comparison, the State accounted for only 1.7% of the nation's personal income.

Calendar 1995 (Billions)		
	US	Connecticut
Total Amount Wagered	\$545	\$19
Revenue (Win)	\$40.4	\$1.3

◆ **Gambling is a major recreational pastime for Connecticut residents.**

The present report investigated the gambling participation and attitudes concerning legalized gambling among residents of the State of Connecticut. For this purpose, a random telephone survey of approximately 1,000 persons was conducted in November 1996. According to the results of the 1996 telephone survey, 88% of the State's residents participated in legal gambling activities at least once during the year prior to the survey. A survey completed in 1991 found an 86% participation rate. Because both survey results have a $\pm 3\%$ margin of error, WEFA finds no statistically significant change in the rate of gambling participation.

The 1996 telephone survey showed that over the previous 12 months the Lottery had the highest participation rate (74%). Many citizens (4%) bet at Connecticut OTB and pari-mutuel facilities. Many more participated in charitable gaming events: raffles (59%), bingo (11%) and Las Vegas nights (4%).

Many residents (38%) also visited Foxwoods Resort Casino and Mohegan Sun Casino. Smaller numbers visited casinos (12%) and racetracks (6%) in other states. Eleven percent played at least one out-of-state lottery game.

◆ **The presence and success of the Mashantucket Pequot Tribal Nation's Foxwoods Resort Casino has differentiated Connecticut's gambling environment from other jurisdictions. In late 1996, a second Native American Casino, the Mohegan Sun, opened in the State.**

Having been a high-stakes bingo parlor since 1986, Foxwoods began casino operations in February 1992 with the addition of table games. In January 1993, the Mashantucket Pequot Tribe agreed to pay a percentage of video facsimile machine revenues to the State in exchange for the exclusive right to operate such devices. Two major casino expansions were completed in September 1993 and June 1994.

While a number of other states have Native American gambling casinos, none have achieved the success of the Foxwoods operation. In part, this success resulted from the fact that Foxwoods was the only casino in New England until October 1996 when the Mohegan Sun opened.

- ◆ **Legalized gambling has been a high growth industry in Connecticut. Total gross wagering has increased by more than 953% between FY1992 and FY1996, growing from just under \$2 billion to more than \$20 billion.**

\$ Million	Gross Wagering		Gross Revenue*	
	FY1992	FY1996	FY1992	FY1996
Total	\$1,959	\$20,629	\$366	\$1,265
Lottery	\$544	\$707	\$221	\$262
Pari-Mutuel	\$259	\$109	\$48	\$21
Jai Alai	\$186	\$64	\$34	\$13
Greyhound	\$73	\$45	\$14	\$9
OTB	\$175	\$244	\$34	\$49
Charitable	\$58	\$59	\$20	\$18
Bingo	\$31	\$33	\$7	\$7
Sealed Tickets	\$11	\$13	\$3	\$3
Other	\$17	\$13	\$10	\$8
Foxwoods Casino**	\$923	\$19,510	\$43	\$914
Video Facsimiles	\$0	\$7,804	\$0	\$595
Table Games†	\$923	\$11,706	\$43	\$320

Note that numbers may not add due to rounding

* Gross revenue is based on the following: for Lottery, transfers to the General Fund (gross sales less prizes and commissions); for Pari-Mutuel and OTB, take-out (amount wagered less return to bettors); for Charitable Gaming, net profit to sponsors (gross receipts less State tax, cost of prizes and services); for Foxwoods, casino win (amount not returned to bettors.)

** Bingo and other types of betting at the casino have not been included because of insufficient data to develop an estimate. Wagering at Foxwoods on Connecticut pari-mutuel activity has been referenced in the discussion of pari-mutuel handle trends.

† WEFA's estimate of gross wagering on table games at Foxwoods. Publicly available data for Foxwoods gambling activities are limited to video facsimile machine gross wagering (handle), revenue (win) and number of machines. See footnote 1 in Chapter 1 for an explanation of this estimate.

Along with the enormous growth in the amount of wagering, there has been a striking shift in the mix of gambling. As the above table shows, gambling at Foxwoods has accounted for almost all the growth in both gross wagering and gross revenue during the FY1992 through FY1996 period. While gambling at Foxwoods was experiencing substantial growth, the other forms of gambling achieved only modest growth, 8% during the same period. The amount wagered at Foxwoods rose by \$18.59 billion over these five years, while gross wagering on all forms of gambling combined increased by \$18.67 billion.

- ◆ **Since the introduction of Native American casino gambling at Foxwoods in FY1992, casino gross wagering has become the largest segment of gambling revenue in Connecticut. Due primarily to Foxwoods, gross revenue of all Connecticut's legal gambling industries approached \$1.3 billion in FY1996, approximately 3.5 times the total level in FY1992.**

Before the opening of Foxwoods, the Lottery accounted for the largest amount of wagering among the forms of legalized gambling in the State. That immediately changed when Foxwoods began casino operations, and Native American casino wagering emerged even more strongly when Foxwoods introduced video facsimile machines in 1993.

As a share of total gross wagering in the State, the amount bet in Native American casinos in Connecticut (i.e., Foxwoods) rose from 47% in FY1992 to 95% in FY1996. Video facsimile machine win, which was non-existent in FY 1992, reached \$595 million in FY1996. Estimated table win was \$320 million, up from an estimated \$43 million in FY1992. The growth of Foxwoods gambling revenues, in part, reflects both spending by Connecticut residents who, without Foxwoods, might have traveled to out-of-state casinos, and a significant amount spent by visitors from outside Connecticut.

- ◆ **Wagering on State Lottery games rose at an average annual rate of 6.8% during the FY1992-FY1996 period, but trends varied significantly among the various games offered.**

As a result of the growth of Native American casino gambling (i.e., Foxwoods) from zero at the beginning of the decade to 95% of all wagering in Connecticut in FY1996, the other forms of gambling have declined in relative terms, i.e., as a proportion of total wagering. For instance, the Lottery's share of gross wagering in Connecticut fell from 28% in FY1992 to 3% in FY1996. Nevertheless, Lottery sales were able to achieve overall growth of 30% during this five-year period. Gross wagering on the Lottery rose from \$544 million in FY1992 to \$707 million in FY1996.

The main impetus to growth in Lottery sales was the introduction of higher priced instant tickets -- games costing \$2 or more -- in FY1995 and FY1996. Prior to these years, Lottery sales had been nearly stagnant, rising less than 2% annually between 1987 and 1994. On-line games -- Daily Number/Play Four, Cash 5, Lotto, and (starting in FY1996) Powerball -- are at a mature stage in their product life cycle, and their growth potential is limited. Adjusted for inflation, on-line Lottery sales actually fell during the FY1992-FY1996 period, and, when Cash 5 and Powerball became available, the effect was to undercut sales of Lotto.

- ◆ **On-track pari-mutuel wagering has been declining rapidly. On-track pari-mutuel handle in Connecticut was \$259 million in FY1992 and \$109 million in FY1996.**

Pari-mutuel gambling at the State's greyhound tracks and jai alai frontons has shown a substantial decrease over the last five years. The total amount wagered on jai alai at the frontons declined from \$186 million in FY1992 to \$64 million in FY1996; the total amount wagered on greyhound racing at the tracks has declined from \$73 million to \$45 million over the same period.

- ◆ **The pari-mutuels have countered this trend by offering their product (jai alai and greyhound racing) at other locations and by offering OTB at their facilities.**

Pari-Mutuel Handle and OTB Handle Related to Pari-Mutuels		
	FY1992	FY1996
Track/Fronton	\$259	\$109
Export: OTB ¹	16	44
Export: Other ²		10
Subtotal, Product	\$275	\$163
OTB at Track/Fronton ³	10	63
Total	\$285	\$226
¹ Wagering on greyhound racing and jai alai games at Connecticut OTB outlets ² Wagering on greyhound racing and jai alai games at Foxwoods and out-of-state. ³ Wagering at OTB facilities at the pari-mutuels.		

Source: Division of Special Revenue

Wagering on greyhound racing and jai alai games at OTB outlets, Foxwoods and out-of-state gaming facilities provided an increase in handle over the period of \$38 million, somewhat offsetting the decline in track/fronton handle of \$150 million. Further, the OTB facilities at the pari-mutuels provided an additional \$53 million in handle. Of this amount, \$39 million was from the two simulcast facilities at Bridgeport and Plainfield.

- ◆ **OTB handle increased by \$69 million over the period and growth in handle at the simulcast facilities accounted for 78% of this growth.**

OTB handle grew by an average 8.4% per year, or from \$175 million in FY1992 to \$244 million in FY1996. Most of this growth comes from increased wagering at simulcast facilities. In FY1996, approximately 60% of the total OTB handle was wagered at simulcast facilities.

- ◆ **Charitable gaming provides approximately \$18 million per year to non-profit organizations.**

Charitable gaming consists of raffles, bingo, bazaars, sealed tickets and Las Vegas nights. Charitable game sales ranged between \$58 million and \$62 million during the five-year period. In FY1996, organizations operating charitable games earned \$18 million, down from \$20 million in FY1992.

- ◆ **Legalized gambling generated over \$420 million in revenues for the State General Fund in FY1996.**

Of the total contributions from legalized gambling to the State's General Fund in FY1996, the State Lottery accounted for 62% and Foxwoods Casino accounted for 35%.

Connecticut FY1996 General Fund Revenues From Legalized Gambling						
	Lottery	Pari-Mutuels¹	OTB	Charitable Games	Foxwoods	Total
Total (Millions)	\$262.05	\$1.70	\$6.61	\$1.72	\$148.70	\$420.79
Percent of Total	62.3%	0.4%	1.6%	0.4%	35.3%	100.0%

¹ Represents General Fund contribution from on-site activity.

Source: 1995-97 Economic Report of the Governor plus unpublished data.

General Fund revenues from legalized gambling accounted for 4% of the total in FY1996.

WEFA has estimated that the effective tax rate on win from both table games and video facsimile machines at Foxwoods Casino is 16%, as compared to 7% for Nevada casinos¹ and 9% for New Jersey casinos.²

In FY1997, Connecticut's two Native American casinos are expected to generate \$205 million in General Fund revenues. Of this amount, \$85 million is earmarked for towns based on a set of formulas, primarily related to Payments In Lieu Of Taxes on State property, Private Colleges and Chronic Disease Hospitals, and to property tax relief. In addition, Foxwoods and Mohegan Sun reimburse \$8 million to State agencies for expenses associated with regulation and oversight.

Connecticut Native American Casinos' FY1997 Budget Impact (Millions):	
General Fund*	\$205
The Portion Paid to Towns:	\$85
Additional Direct Payments to State Agencies:	
Connecticut State Police	\$5
Division of Special Revenue	\$2
Connecticut Dept. of Liquor Control	\$1
Total	\$8

* WEFA estimate.

◆ **Foxwoods Casino estimates that the majority of visitors come from outside the State.**

Foxwoods Casino, which reported attracting 18 million visitors in calendar year 1995, estimates that the majority, 55%, of its visitors come from out-of-state.

¹ Nevada has a complex system of gaming taxation, using graduated scales for both taxes on gaming revenue (paid monthly) and for gaming licenses and operator fees. The 7% figure is derived from dividing Nevada's total gaming revenue in calendar 1995 by the State's total receipts for gaming taxes, licenses and fees in that year.

² New Jersey levies an 8% tax on gaming revenues. Additionally, the State has a re-investment requirement that 1.25% of gross gaming revenues be put into projects expressly approved by the State.

In the November 1996 telephone survey, 38% of Connecticut residents reported visiting a Native American casino in Connecticut, and 12% had visited a casino outside the State in the past 12 months.

- ◆ **Foxwoods has negatively impacted the pari-mutuels, but no discernible impact was found on other forms of legalized gambling in the State.**

WEFA found that Foxwoods had no observable effect on most forms of non-casino gambling. There was a temporary reduction of betting attributed to Foxwoods, by less than 10%, at Plainfield Greyhound Park in calendar 1993 and 1994, and by 5% or less at the jai lai facilities between calendar 1993 and 1996.

- ◆ **While the growth in all forms of gross wagering is expected to moderate, further growth through FY2001 is expected. Total wagering is projected to increase to \$34.6 billion by FY2001, a 67% increase from FY1996.**

	FY1997	FY1998	FY1999	FY2000	FY2001
Lottery	\$760	\$802	\$841	\$882	\$926
Pari-Mutuels (track/fronton)	\$84	\$74	\$64	\$55	\$49
Jai Alai	\$51	\$46	\$40	\$35	\$33
Greyhound	\$33	\$28	\$24	\$20	\$16
OTB	\$256	\$255	\$254	\$254	\$254
Charitable	\$59	\$58	\$59	\$59	\$60
Native American Casinos	\$26,235	\$30,449	\$31,770	\$33,077	\$33,369
Total	\$27,393	\$31,638	\$32,988	\$34,327	\$34,658

* This projection assumes no change from end-1996 in the number of gambling facilities, the number of Lottery games, or the character of each gambling activity (such as the way games are promoted).

Source: WEFA Group

The level of Native American casino video facsimile win by the year 2001 implied by this forecast is \$1.0 billion. The Native American casinos are expected to continue to dominate legalized gambling in the State, as wagering at these venues increases by 71% by FY2001 from the level recorded in FY1996. Wagering on Lottery games in this 'status quo' scenario increases by 31% over the same period. OTB and pari-mutuel wagering will continue their long-term decline, decreasing by 14% over the five-year period. The OTB system is projected to increase slightly, 4%, while pari-mutuel wagering will decline by 45% as jai alai and greyhound racing decline by 51% and 64%, respectively. Charitable gaming is expected to remain approximately constant.

◆ **Legalized gambling, primarily at Native American casinos, has been an economic engine for the State.**

Over the last five years, legalized gambling has steadily increased its contribution to (or share of) economic activity in the State. The gambling sector is a major contributor to and force behind economic growth in the State. In calendar 1991, legalized gambling generated 2,985 additional jobs throughout the State's economy paying wages and salaries of \$61.6 million. With the opening of Foxwoods Casino in calendar 1992, the total number of jobs created increased to 11,452 and then increased again to 18,102 jobs in calendar 1993, 18,123 jobs in calendar year 1994, 22,584 in calendar year 1995, and 24,811 in calendar year 1996.

Total Net Employment and Income Generated by Connecticut's Legalized Gambling Activities						
Calendar Year	1991	1992	1993	1994	1995	1996¹
Contribution of Legalized Gambling						
Total Employment²	2,985	11,452	18,102	18,123	22,584	24,811
Net Change		8,467	6,650	21	4,461	2,227
Total Wages and Salaries³	\$61.6	\$234.9	\$382.1	\$408.7	\$559.0	\$680.3
Net Change		\$173.3	\$147.2	\$26.6	\$150.3	\$121.3
Connecticut Employment and Income						
Total Employment (thousands)⁴	1,555	1,526	1,531	1,544	1,564	1,579
Net Change		(29,042)	5,000	12,533	20,525	15,192
Total Wages and Salaries⁵	\$49.3	\$51.2	\$52.3	\$53.9	\$56.6	\$59.5
Net Change (millions)		\$1,900	\$1,100	\$1,600	\$2,700	\$2,900
¹ Estimate. ² Full- and part-time jobs. ³ Total annual wages and salaries in millions of dollars. ⁴ Source: US Bureau of Labor Statistics. ⁵ In billions of dollars, as reported by US Bureau of Economic Analysis.						

These jobs represent *net additional economic activity* (adjusted for the displacement of some jobs and spending from other activities to gambling) -- employment and wages that would not exist in the absence of the legalized gambling.

Between 1991 and 1993, legalized gambling was responsible for the creation of slightly more than 15,000 jobs. Over this same period, total employment in the State actually declined by 24,000. Considering that Foxwoods Casino was the direct or indirect source of most of the gambling-related employment, in these years Foxwoods actually outperformed the entire State in terms of job creation.

As the jobs generated by legalized gambling increased in number so did the wages and salaries, to \$234.9 million in 1992 and then to \$382.1 million in 1993. From 1991 to 1996, total employment created by legalized gambling rose by 731%, and the wage income created by this employment rose 1004%. The corresponding growth in statewide employment and wage income was 1.5% and 21%, respectively.

Total employment and wage income generated by legalized gambling increased in both 1995 and 1996. The number of jobs generated by legalized gambling rose to 22,584 in 1995 and increased again to 25,211 in 1996 and was driven primarily by the construction of the Mohegan Sun Casino and increased employment at Foxwoods. As the employment impact increased so did the income effect with wage income generated by legalized gambling increasing to \$559 million in 1995 and then to \$680.3 million in 1996.

It is important to note that the Native American casinos, while dominating legalized gambling in the State of Connecticut, did not supply the only significant gambling related positive economic impact. In 1996, the State's OTB and pari-mutuel industries also contributed a total of some 1,500 direct and indirect jobs, paying \$28.4 million in wages and salaries. Finally, although the State Lottery is not a source of net *additional* economic activity, it had a budget of \$29.6 million in FY1996. Of that amount the Lottery spent \$20.4 million for items including advertising, telecommunications, and other professional services that generate additional jobs in Connecticut.

◆ **Legalized gambling's impact on illegal gambling is uncertain.**

Making an estimate of the impact of legalized gambling on illegal gambling is highly problematic due to lack of reliable estimates of illegal gambling. Based on the November 1996 telephone survey of Connecticut residents, there is little indication of widespread illegal gambling.

◆ **Legalized gambling provides both opportunities and costs for Connecticut's citizens.**

Most of the economic opportunity provided by Native American casinos goes to economically depressed areas. Seventy-one percent of the wages and salaries paid by Foxwoods goes to residents in the 122 lowest income ZIP code areas. This represents 40% of Connecticut's 309 ZIP code areas. Together these 122 ZIP code areas comprise 46% of Connecticut's population and 33% of the State's personal income.

The opening of Foxwoods Casino has driven up the number of crimes, especially property crimes, in the locality. However, this observed increase is associated with the influx of large numbers of visitors.

◆ **There is little evidence of regressivity in casino gambling expenditures. Spending on lottery does exhibit some regressivity for certain income groups. Based on the results of the 1996 telephone survey, gamblers in the middle income ranges reported spending the greatest percentage of their income on gambling. These percentages average less than 2.5% of income for each income group.**

Regressivity in the context of this study refers to the contention that gambling expenditures decline as a proportion of income as income rises.

The telephone survey of Connecticut residents conducted as part of this study revealed that the respondents' spending on gambling as a percentage of total income does not vary in any simple way with income. WEFA examined regressivity only for Lottery and casino gambling because there were insufficient numbers of respondents who reported participating in other forms of gambling.

Spending on casino gambling as a percentage of income appears to be flat over the range of income classes except for increased spending in the \$25,000 to \$30,000 income category to 1.7% of income compared to 0.4% to 0.8% of income for all other income categories. This indicates that casino gambling does not exhibit regressivity.

In contrast, Lottery spending does exhibit regressivity for the very lowest income groups. Lottery players earning less than \$10,000 per year reported spending an average of 1.6% of their income on the Lottery and those earning \$10,000 to \$15,000 reported spending 1.3%, and those earning \$15,000 to \$25,000 reported spending 0.6% to 0.7%.

But, as with casinos, the highest spending levels for lottery are found in the middle income categories. Those earning \$20,000 to \$30,000 reported spending 2.0% of income on the Lottery. Those earning \$30,000 to \$40,000 reported spending 2.5% of income. Those in the highest income groups reported spending between 0.3% and 0.5% of income on the Lottery.

◆ **Pathological gambling, as a percent of the population, appears to have been unaffected by the increase in wagering between 1991 and 1996.**

Results of the telephone survey conducted in November 1996 show that there are approximately 15,000 Connecticut adults, or 0.6% of the State's adult population, whose survey responses indicate they are probable pathological gamblers. This finding, however, falls within a wide statistical margin of error, so that the actual number may be anywhere from 3,000 to 27,000. The number of pathological gamblers currently in the State treatment program in Connecticut is only 150. However, people receiving treatment for other conditions and people receiving treatment through private practitioners may also be receiving treatment for pathological gambling.

The most recent previous survey of the Connecticut population to address this issue, conducted in 1991, determined the prevalence of probable pathological gambling only on a lifetime (rather than current) basis. On this basis, WEFA's survey results indicate a smaller percentage of the adult population can be considered probable pathological gamblers than found by the 1991 survey (1.2% versus 2.7%).

This apparent reduction in the lifetime probable pathological gambling rate may have a number of causes. Both surveys have substantial margins of error. Second, the sample used in the 1991 survey was weighted on fewer variables than the 1996 survey. Given these factors, the two surveys' findings are not fully comparable, and it is not clear that the reported change in prevalence rates represents a statistically significant difference. Even so, it is worth noting that probable pathological gambling rates may actually have fallen in Connecticut, and have certainly not risen, during a period in which one of the largest casinos in the world was opened in the State.

◆ **WEFA found significant adverse personal financial impacts on pathological gamblers and their families.**

As part of this study, WEFA administered a questionnaire to 112 pathological gamblers in treatment. The principal purpose of this undertaking was to elicit information on the costs of pathological gambling, both personal costs to individuals affected by the pathology and the cost imposed on society by pathological gambling. The results of the questionnaire revealed a significant level of unpaid debt, bankruptcies and treatment costs related to pathological gambling. Casino table games and sports betting with bookies were the forms of gambling most often cited by the respondents as giving them their problems.

◆ **In the present study, WEFA was unable to develop a satisfactory dollars estimate of the social cost of pathological gambling in Connecticut.**

An estimate of the social cost of pathological gambling in Connecticut was not provided in this report for several reasons. First, it is difficult to distinguish between personal costs to individuals (pathological gamblers and their families) and actual additional costs of the disorder borne by society as a whole.

Second, there were only 12 individuals in the telephone survey of the general population who indicated probable pathological gambling on a lifetime basis. To generalize social costs from such a small number of individuals is not possible.

Third, the group of gamblers in treatment, to whom we administered a supplemental questionnaire designed to gather information on costs, are not comparable to the small number of telephone survey respondents classed as probable pathological gamblers. The pathology of those in treatment had reached an advanced stage when they sought help, while the few probable pathological gamblers uncovered in the telephone survey of the general population indicated what appears to be a much less severe pathology. A dollar social cost estimate would involve projecting the average cost figures obtained from responses to a questionnaire administered to pathological gamblers in treatment.

◆ **WEFA found that research into the causes and treatment of pathological gambling is in its infancy. Further, information pertaining to success rates among pathological gamblers in treatment is generally lacking.**

Since 1980, the American Psychiatric Association has recognized pathological gambling as a specific clinical impulse control disorder. However, at this time there is no scientific consensus on a single theory of causation or particular preferred treatment method.

There appears to be no information on the success rate among pathological gamblers who have been in treatment in Connecticut. WEFA was able to find only one outcome measurement study on the treatment of pathological gamblers, conducted in Minnesota.

The Minnesota study followed 944 pathological gamblers for four years through six different programs. Both approach and length of treatment varied. Four out of five treatment completers reduced their gambling frequency. In terms of gambling problem severity as measured by the South Oaks Gambling Screen, 65% moved from the pathological to normal range after treatment.

◆ **Survey results and statistical analysis suggest that advertising has some effect on participation in legalized gambling.**

In the telephone survey, 24% of respondents said advertising was somewhat or very influential in choosing a form of gambling in which to participate. In WEFA's regression analysis of 10 years of quarterly data, advertising of lotto jackpots showed a clear effect on sales of Lotto. Public announcements of Lotto jackpots appear to be the most effective form of Lottery advertising.

◆ **Whether the market for Internet gambling is ever tapped hinges on a determination of the legal status of such gambling. Moreover, in the November 1996 telephone survey of Connecticut residents, few respondents expressed interest in Internet gambling.**

At present there are legal, technological, and security obstacles to the large-scale expansion of Internet gambling. The Attorney General of Connecticut has cited both Federal law and State statutes as the basis for his conclusion that Internet gambling is a violation of the law. The National Association of Attorneys General has reported that under current Federal law the status of Internet gambling is ambiguous. What appears to be the first case addressing the legalities of Internet gambling is now moving forward in Minnesota.

Internet gambling is actually available on several sites in Europe and the Caribbean. The first US Internet lottery operation, conducted by the Coeur d'Alene tribe in Idaho, is scheduled to begin in the summer of 1997. WEFA's research indicated that consumers tend to be skeptical about Internet gambling at this time. In the telephone survey of Connecticut residents, 30% of the respondents said they had access to the Internet. But only about one in ten of this group indicated any awareness of Internet gambling sites; moreover, only 5% of this small subset expressed interest in using the Internet for gambling.

The US commercial gaming industry is divided over whether Internet gambling represents a growth opportunity they should pursue. Legal uncertainties and competitive issues are keeping many established gaming entities on the side lines.

The prospect of Internet gambling implies increased access to gambling opportunities far beyond what has typically been available. This raises issues of great social concern, particularly with respect to pathological gambling and underage gambling.

2. Recommendations

◆ **The present study was unable to produce generalizable data on the social costs of pathological gambling or the demographic profile of pathological gamblers. A survey of at least 6,000 adults is required in order to obtain reliable information on these topics.**

A general population survey of at least 6,000 adults would be required to find a sample of probable pathological gamblers large enough to provide the statistically valid demographic detail necessary to develop a measure of social cost. If such a survey were conducted, the results could have the following useful applications:

- a) The prevalence estimate generated by a larger survey would have a considerably lower margin of error.

- b) The sample of probable pathological gamblers would be large enough to generate a more meaningful demographic profile of such individuals.
- c) If follow-up research were conducted on those indicating probable pathological gambling, there would be opportunities to augment the level of knowledge on an insufficiently understood disorder. First, there would be an opportunity to verify the validity of the screening instrument. Also, by comparing persons at the lower threshold for pathological gambling with others whose indications place them decisively above this threshold, it might be determined whether pathological gambling displays a continuum of progressively more severe stages. This information would be helpful in generating a formula for estimating the costs of pathological gambling in the general population. Finally, a sample from this subgroup of the survey could be recruited for a pilot program evaluating treatment methods.

◆ **There is a need for clinical studies in Connecticut that trace treatment programs for pathological gamblers over time and compare various treatment methods.**

The State's estimated population of current probable pathological gamblers, even at the low estimate of 3,000 far exceeds the approximately 150 known to be currently in treatment in the State. The reasons why more pathological gamblers are not receiving treatment should be better understood. Another basic need is for research to measure the effectiveness of existing treatment programs, compare various treatment methods over time, and obtain more precise information on which treatment options produce the most lasting benefit. There is little available evidence either confirming or refuting the effectiveness of current treatment practices.

◆ **To reduce the rate of pathological gambling and the harm associated with it in the future, WEFA recommends that the State of Connecticut attach a high priority to education and prevention efforts aimed at youth and to research into the prevalence and impact of teen gambling in Connecticut.**

Studies consistently show that most pathological gamblers initiate gambling behavior when young. Research also shows that adolescents have a high frequency of gambling participation. The State has not yet implemented any gambling education programs, either in curricular format or structured as ancillary presentations, although efforts to expedite such programs are underway. WEFA believes that development of in-school methods to enhance understanding of gambling and its consequences among young people could be a cost-effective way to address the long-term problem of pathological gambling.

Reliable statewide information on the level of youth gambling in Connecticut is not currently available. Research is needed to ascertain the prevalence and impact of teen gambling in the State. Spot checks on the effectiveness of current laws against underage gambling, perhaps using supervised teens in a "buy" program at State Lottery outlets, would also provide relevant information. In general, the behavior patterns that underlie the inception of youth gambling, as well as the degree to which underage gambling is a risk factor for the onset of pathological gambling, need to be better understood. WEFA believes these are significant topics which would be worthwhile to investigate in future studies.

1. REVIEW AND ANALYSIS OF LEGALIZED GAMBLING IN CONNECTICUT

Gross Wagering and State Revenues

Legalized gambling in Connecticut began in 1971 with legislation authorizing a statewide lottery, an off-track betting system and horse racing. Legislation passed in 1972 authorized greyhound racing and jai alai. Now, twenty-five years later, the following types of gambling are available:

- Lottery games including Instant (scratch-off tickets), Daily Numbers, Play 4, Lotto, Cash 5 – formerly Cash Lotto – and Powerball;
- Off-track betting including branches, simulcast, and telephone betting;
- Pari-mutuel wagering including greyhound racing at Plainfield and Bridgeport and jai alai at Milford;
- Charitable gaming including Bingo, Sealed Tickets, Las Vegas Nights, Raffles, and Bazaars, and
- Two Native American casino resorts (Foxwoods Resort Casino and Mohegan Sun).

WEFA estimates¹ that the grand total wagered in these activities was \$20.6 billion in FY1996.

Total wagering on all forms of gambling in Connecticut has gone from \$1.1 billion or 0.35% of the US gross wagering on gambling in calendar year (CY) 1991 to \$19.3 billion or 3.54% of US gross wagering in CY1995 (see **Table 1.1**).²

The rapid growth of gross wagering in Connecticut from CY1991 through CY1995 is due primarily to the introduction of casino gaming at the Mashantucket Pequot Tribe's Foxwoods Resort Casino. For the US as a whole, gambling on Native American Reservations is only a part of the total growth.

Nationally, riverboats and the Nevada and New Jersey casinos continue to account for most of the growth in total dollars wagered. Together, these three categories accounted for \$53.6 billion out of \$67.6 billion in the growth of total US gross wagering,

¹ Publicly available data for Foxwoods gambling activities are limited to video facsimile machine gross wagering (handle), revenue (win) and number of machines. To estimate table game handle and win, WEFA utilized the average ratio of handle and win of video facsimiles to the total of table games and video facsimiles games for the Nevada and New Jersey casinos over the period, 1991-1995. These average ratios are 0.40 for handle and 0.65 for win. Table game handle and win prior to September 1993 were estimated from trend as video facsimile handle was constrained by the number of machines before that time. For the months of January and February 1993, video facsimile handle was also estimated as these data were not available before March 1993.

² Calendar year data is used in order to compare Connecticut data accurately with that of other states. Calendar year data for 1996 is not yet available.

from 1994 to 1995, compared with \$8.0 billion growth in Native American Gaming for the same period.³

	CY1991	CY1992	CY1993	CY1994	CY1995	Annual Average Percent Change CY1991 - 1995
Connecticut	\$1,055	\$3,967	\$9,148	\$15,106	\$19,289	106%
Nevada	\$166,342	\$167,953	\$182,202	\$210,932	\$226,361	8%
New Jersey	\$72,658	\$74,555	\$76,483	\$78,717	\$86,431	4%
Total US	\$300,065	\$325,609	\$389,828	\$477,002	\$544,575	16%
% CT	0.35%	1.22%	2.35%	3.17%	3.54%	

¹Gross wagering includes casino handle, lottery sales, off-track betting handle, and pari-mutuel handle.

Source: Christiansen/Cummings Associates, 1992-6;
WEFA Group Estimates of Casino Gambling

At 4.25% of Connecticut's total General Fund revenues in fiscal year (FY) 1996, State revenues from gambling activities are the fourth largest source of State revenue after the Personal Income Tax, the Sales and Use Tax and the Corporation Tax. Primary gambling contributors to total General Fund revenues are the State Lottery (2.64%) and Native American Gaming (1.50%). While the total of all gambling activities has increased over the last five years, growth in State revenues from gambling has been slightly slower than the overall growth in General Fund revenues (see **Table 1.2**).

Fiscal Year	1992	1993	1994	1995	1996	Annual Average 1991-1996
Gambling Revenues	2%	7%	21%	16%	7%	10%
General Fund Revenues	27%	2%	5%	7%	17%	11%

¹ See Table 1.5 for General Fund revenues and gambling revenue dollar amounts.

Source: 1995-97 Economic Report of the Governor plus unpublished data.

In nominal dollars (not adjusted for inflation), Connecticut General Fund revenues in FY1996 grew by 70.4% over their level in FY1991. The corresponding increase in the State's revenues from gambling was 62.7%.

³ Christiansen/Cummings Associates, 1996.

Connecticut Gross Wagering

	FY1992	FY1993	FY1994	FY1995	FY1996	Annual Average Percent Change FY1992 - 96
Lottery	\$544	\$553	\$552	\$671	\$707	7%
OTB	\$175	\$164	\$178	\$225	\$244	9%
Pari-Mutuel On-Track	\$259	\$194	\$165	\$144	\$109	-20%
Charitable	\$58	\$60	\$60	\$62	\$59	1%
Foxwoods Casino						
Video Facsimiles	0	\$954	\$4,499	\$6,609	\$7,804	na
Table Games ¹	\$923	\$4,175	6,920	\$9,914	\$11,706	89%
Total Foxwoods ²	\$923	\$5,129	\$11,419	\$16,523	\$19,510	114%
Total	\$1,959	\$6,100	\$12,374	\$17,625	\$20,629	80%

Note that numbers may not add due to rounding.

¹ Figures are estimates (see footnote 1 page 1-1) for Foxwoods as the casino is only required to report video facsimile win.

² Foxwoods total reported here is limited to video facsimiles and table games. Bingo and other types of betting at the casino have not been included because of insufficient data to develop an estimate. Wagering at Foxwoods on Connecticut pari-mutuel activity has been referenced in the discussion of pari-mutuel handle trends.

Source: Connecticut Division of Special Revenue;

WEFA Group estimates of Native American casino gambling

The sales and handle data for the different forms of legalized gambling in Connecticut for the five years from FY1992 through FY1996 in **Table 1.3** show the dramatic changes in the mix of gambling activities that has occurred over that time.

Almost the entire \$163 million Lottery sales increase between FY1992 and FY1996 was caused by the introduction of Instant Lottery tickets costing more than \$1.

Of the \$69 million OTB increase between FY1992 and FY1996, \$52 million occurred at the simulcast facilities and \$20 million because of an expansion of telephone betting while branch handle fell by \$4 million.

Pari-Mutuel On-Track handle decreased by \$150 million because of a continuing trend in attendance which led to the closure of Hartford Jai-Alai and the current suspension of greyhound racing at Bridgeport.

Charitable gaming has not shown a substantial change over the period, fluctuating in a narrow band around \$60 million

The opening of Foxwoods Casino Resort in January 1992 dramatically changed the gambling landscape in Connecticut. Foxwoods began with table games only and video facsimile machines were added a year later in January 1993. Table games brought in an estimated \$923 million in handle in FY1992 and reached \$11.7 billion in FY1996. Video facsimile handle reached \$7.8 billion in FY1996 for an estimated combined total of \$19.5 billion for video facsimile machines and table games. With the opening of the Mohegan Sun Casino in October 1996, the combined total of table games and video facsimiles over a full year is expected to be 50% higher than for Foxwoods alone.

Connecticut General Fund Revenues

\$ Million						
Fiscal Year	Lottery	On-Track Pari-Mutuels¹	OTB²	Charitable Games	Native American Gaming	Total
Revenues						
1992	\$221.30	\$16.52	\$14.40	\$1.50		\$253.72
1993	\$221.70	\$11.31	\$16.20	\$1.74	\$30.00	\$280.95
1994	\$217.25	\$2.36	\$5.79	\$1.81	\$113.00	\$340.21
1995	\$249.65	\$2.00	\$6.13	\$1.75	\$135.72	\$395.26
1996	\$262.05	\$1.70	\$6.61	\$1.72	\$148.70	\$420.79
Percentage Of Total Gambling Revenues						
1992	87.2%	6.5%	5.7%	0.6%	0.0%	100.0%
1993	78.9%	4.0%	5.8%	0.6%	10.7%	100.0%
1994	63.9%	0.7%	1.7%	0.5%	33.2%	100.0%
1995	63.2%	0.5%	1.6%	0.4%	34.3%	100.0%
1996	62.3%	0.4%	1.6%	0.4%	35.3%	100.0%
Percentage Of Total General Fund Revenues³						
1992	2.99%	0.22%	0.19%	0.02%	0.00%	3.43%
1993	2.93%	0.15%	0.21%	0.02%	0.40%	3.71%
1994	2.75%	0.03%	0.07%	0.02%	1.43%	4.30%
1995	2.95%	0.02%	0.07%	0.02%	1.60%	4.66%
1996	2.64%	0.02%	0.07%	0.02%	1.50%	4.25%

¹ General Fund revenues from pari-mutuels for FY1994 and thereafter are not comparable to revenues prior to FY1994. PA 93-322 significantly reduced the tax rates on pari-mutuel handle effective FY1994.

² General Fund revenues from the OTB system for FY1994 and thereafter are not comparable to fiscal years prior to 1994. Prior to FY1994, OTB revenues are presented without deductions for OTB operating expenses. PA 93-322, which authorized the Division of Special Revenue to sell the OTB system at the end of FY1993, imposed a tax of 3.5% on OTB handle.

³ See Table 1.5 for General Fund revenues.

Source: 1995-97 Economic Report of the Governor plus unpublished data.

Table 1.4 shows that gambling revenues were 4.2% of General Fund revenues in FY1996, a percentage which has changed little over the past 5 years. However, because of the large contribution from Native American gaming starting in FY1993, the share of the total from each of the other gambling activities has been reduced considerably over this period. For example, the Lottery provided 87% of the total of FY1992, but 62% of the total in FY1996.

Lottery transfers to the General Fund increased by \$41 million between FY1992 and FY1996.

Prior to FY1994, when the State operated the OTB system, General Fund transfers were stated without deduction for OTB operating expenses. In FY1994 and subsequent years, General Fund transfers are based on a 3.5% tax on gross handle paid by the OTB licensee. OTB revenues have increased since FY1994, but only from \$5.8 to \$6.6 million.

General fund transfers from the tax on on-track pari-mutuel handle have declined from

\$16.52 million in FY1992 to \$1.70 million in FY1996 as a result of declining handle and the reduction in pari-mutuel tax rates which became effective in FY1994.

In FY1996, the charitable gaming contribution to the General Fund was \$1.72 million. It is interesting to note that this is the first time charitable gaming General Fund revenues have exceeded those from the tax on on-track pari-mutuel handle.

When video facsimile machines were introduced at Foxwoods in FY1993, Native American gaming contributed \$30 million, or 11% of the total of \$281 million in General Fund contributions arising from legalized gambling. By FY1996, Foxwoods contributed \$149 million, or 35% of the total of \$421 million. With the addition of the Mohegan Sun Casino in October 1996, the contribution from Native American gaming to General Fund revenues is expected to rise to \$205 million in FY1997 or 46% of the total.

While State General Fund revenues from legalized gambling are the fourth largest revenue source, as shown in **Table 1.5** they are a relatively small part of the State budget -- less than 5% of total General Fund revenues over the last five years.

Over the FY1991 to FY1996 time period, State General Fund revenues increased by 70% and State gambling revenues increased by 63%. State gambling revenues as a percent of General Fund revenues rose in FY1994 and FY1995 due to the opening of Foxwoods and increased Lottery games. While the percentage contribution from both the Lottery and Foxwoods fell in FY1996, the recent addition of the Mohegan Sun Casino is expected to increase the total percentage contribution from gambling activities for FY1997 and beyond.

Table 1.5 Total General Fund Revenues			
Millions of Dollars			
	General Fund Revenues	Gambling Revenue	Gambling Percentage
FY1992	\$7,389	\$253.72	3.4%
FY1993	\$7,569	\$280.95	3.7%
FY1994	\$7,914	\$340.21	4.3%
FY1995	\$8,477	\$395.26	4.7%
FY1996	\$9,911	\$420.79	4.2%

Source: 1995-97 Economic Report of the Governor plus unpublished data.

History of Sales, Handle and Revenues for the Five-Years, FY1992 - FY1996

The Lottery

Administration and Games Offered

During the five-year period covered by this study, the Connecticut Division of Special Revenue (DSR), in cooperation with the Gaming Policy Board (GPB), operated the Connecticut Lottery. Although this organizational structure has served the State well over the years, there were concerns raised about the Lottery's ability to respond to market forces and the apparent conflict in the DSR's dual role as both operator and regulator of the Lottery.

In response to these concerns a study was undertaken during FY1996 to assess the feasibility of privatizing or otherwise modifying the organizational structure of the Lottery. The result was passage of legislation, Public Act 96-212, which created the Connecticut Lottery Corporation (CLC) for the purpose of assuming the operation of the Lottery "free from the budgetary and other constraints that affect State agencies" in order to maximize State revenues. Accordingly, on July 1, 1996 the CLC assumed operation of the Lottery, and the DSR became the regulator of the CLC.

Table 1.6 Startup Dates and Selected Facts About Connecticut Lottery Games

Game	Startup Date	Drawings per Week	Allocation of Sales			Odds of Winning the Top Prize
			Prizes	Agents ¹	State	
Daily Numbers ²	March 1977	7	50%	5%	45%	1:1,100
Play 4	October 1980	7	50%	5%	45%	1:10,000
Lotto	November 1983	2	53%	5%	42%	1:7,059,052
Cash 5 ²	April 1992	3	58%	5%	37%	1:324,632
Powerball ³	November 1995	2	50%	5%	45%	1:54,979,155

¹ Lottery agents receive incentive payments in addition to their commission. The types of incentives have changed over time. Among the incentives offered have been a bonus for cashing winning tickets, unannounced visits to agents that provide a bonus if the appropriate promotional material is displayed, and incentive payments for sales increases.

² Both the Daily Numbers and Cash 5 offer special types of wagers (the Daily Deal and Cash Kicker, respectively) with higher percentages of sales allocated to prizes.

³ The State's share includes payments to M.U.S.L., the multi-state lottery organization that operates Powerball (payments vary by year: FY1996, \$989,000; FY1997, \$1,659,000; FY1998, \$1,670,000). These payments are held in escrow to be returned to the State upon the termination of its participation in Powerball.

Source: Connecticut Division of Special Revenue

As **Table 1.6** shows, two of the five games offered (Cash 5 and Powerball) started within the last five years. As shown in **Table 1.7**, these new games generate the least ticket sales of the games offered.

Sales Trends

Game	1992	1993	1994	1995	1996
On-line Games					
Daily Num/Play 4	\$195	\$207	\$204	\$195	\$181
Lotto	\$220	\$203	\$154	\$171	\$140
Cash 5	\$9	\$33	\$31	\$45	\$49
Powerball	-	-	-	-	\$42
Subtotal On-line Games	\$424	\$442	\$389	\$411	\$411
On-line Game Sales as a Percent of Total Lottery Sales	78%	80%	70%	61%	58%
Annual Percent Change		4.2%	-12.0%	5.7%	0.0%
Instant	\$120	\$110	\$163	\$260	\$296
Instant Game Sales as a Percent of Total Lottery Sales	22%	20%	30%	39%	42%
Annual Percent Change		-8.3%	48.2%	59.5%	13.8%
TOTAL	\$544	\$553	\$552	\$671	\$707
Annual Percent Change		1.6%	-0.1%	21.5%	5.4%

Note: Lottery games are generally categorized into one of two groups: on-line⁴ and Instant games.
Source: Connecticut Division of Special Revenue

As shown in the **Table 1.7**, total Lottery sales increased by \$163 million between FY 1992 and FY 1996. This increase is almost entirely attributable to Instant games, which increased by \$176 million over this period, rising from 22% of the total in FY1992 to 42% of the total in FY1996. On-line games, by contrast, actually declined by \$13 million overall from FY 1992 to FY 1996, although there were year-to-year fluctuations in the sales of different games.

The increase in Instant Lottery sales began during 1994 with the introduction of the first successful \$2 game, Mega Money, in March of that year. The success of the new game resulted in an increase in Instant Lottery sales of \$53 million in FY 1994. This increase also reversed a \$49 million decline in total lottery sales in the first six months of FY 1994 compared to the same period in the prior year, with the result that total sales for the entire fiscal year almost equaled those of FY 1993.

Subsequent \$2 games, and the introduction of \$3 (January 1995) and \$5 (August 1995) games have fueled increases in Instant Lottery sales of \$97 million in FY1995 and \$36 million in FY1996, and an estimated \$34 million for FY1997.

Instant Lottery sales gains were not solely the result of the availability of higher priced tickets. The Division of Special Revenue implemented a number of other initiatives concurrently with the offering of the new higher priced games. Among these were: issuance of new games every two weeks on average; issuance of two new games at a time, each at a different price point; an increase in the number of games on sale in any given week; and an increase in prizes from 65% to 70% of sales in some, but not all, games.

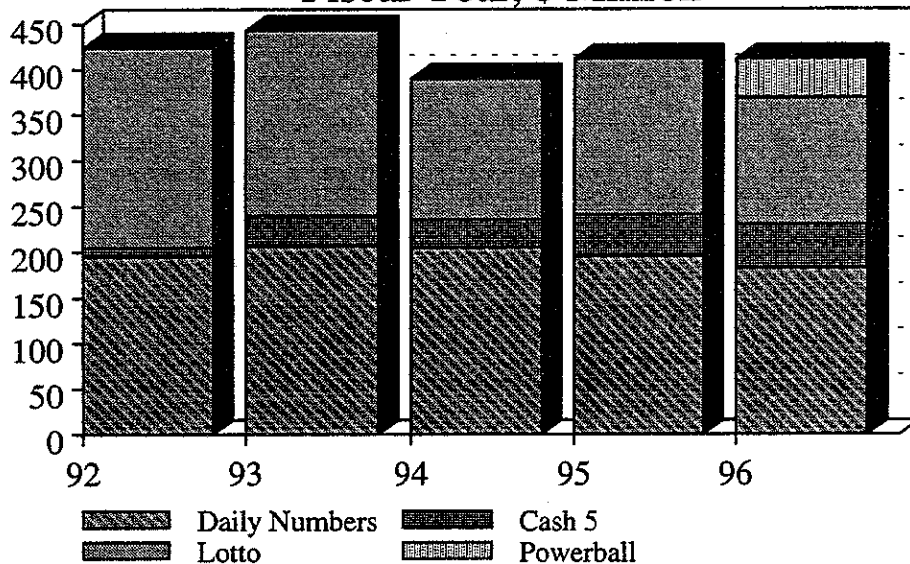
As **Table 1.7** also shows, over the same period on-line sales, after reaching \$442

⁴On-line games include Daily Numbers, Play 4, Lotto, Cash 5, and Powerball.

million in FY1993, declined to \$411 million in FY1996, which represented a net decline over the five years of \$13 million. This decline occurred despite the introduction of two new on-line games: Cash Lotto (now called "Cash 5") in April 1992 and Powerball in November 1995.

The drop in on-line sales in 1994 was due primarily to Lotto. Lotto is a "jackpot-driven" game, meaning that sales are dependent to a large extent on the achievement of large jackpots. The game design assumes a certain number of "rollovers" which cause the jackpot to build to the levels needed to generate publicity and result in a dramatic increase in sales. The number of rollovers was substantially below the expected level in FY 1994, resulting in lower jackpots and a consequent decline in sales.

Total On-Line Lottery Sales by Game Fiscal Year, \$ Million



Comparison of on-line sales for FY1995 and FY1996 displayed in the **chart** above shows dramatically how Cash 5 and Powerball have cannibalized Lotto sales. Increases in Cash 5 and Powerball have been almost exactly offset by decreases in Lotto. WEFA's analysis, presented in the last section of this chapter, verified the diversion of Lotto sales to Powerball and Cash 5.

Over the years, many strategies for increasing Lotto sales have been tried. In April 1985, Lotto was changed from a 6 in 36 game to a 6 in 40 game to increase rollover and jackpot levels. In April 1986, a second weekly drawing on Tuesdays was added to the existing drawing on Fridays. In September 1989, Lotto was changed to a 6 in 44 game, which it is currently.

In response to play being drawn away from Lotto by the introduction of Cash 5 the previous April, Lotto jackpots were augmented in July 1992 by increasing the percentage of sales that went into the jackpot from 27% to slightly over 34% and by directing some unclaimed prize funds into the jackpots.

These changes have extended the life of the game. However, the effects of the diversion to other Lottery games, and the difficulty of maintaining interest in jackpots below \$5 million (as discussed in Chapter 3) make further sales declines appear likely.

Other states with Lotto games have tried many of the same strategies and have had as little success as Connecticut. The Pennsylvania Lottery conducted a study of Lotto and Cash 5 operations in those states that have been offering the games continuously since FY1989.⁵ The data show that Lotto sales fell every year between FY1989 and FY1994, though sales did increase in FY1995. Combined sales for Lotto and Cash 5 across these states fell slowly between FY1989 and FY1992, and then held fairly steady.

Advertising

Because of State budgetary constraints, Lottery advertising expenditures were reduced from \$4.1 million in FY1991 to \$1.8 million in FY1992. Due to the success of the Instant games, the DSR was able to demonstrate the need for an increased advertising budget. Subsequently, advertising expenditures gradually increased to \$3.3 million in FY1996 (see **Table 1.8**). Most of the initial decrease in advertising affected Lotto and Instant games. Advertising spending on Instant games remained below its FY1992 level until FY1995.

	FY1991	FY1992	FY1993	FY1994	FY1995	FY1996
Lotto	\$1,396	\$349	\$890	\$899	\$1,071	\$1,548
Instant	\$2,293	\$1,024	\$553	\$785	\$1,340	\$1,430
Daily	\$429	\$31	\$71	\$38	\$108	\$102
Cash 5		\$374	\$16	\$296	\$308	\$189
Powerball						\$73
Total	\$4,118	\$1,777	\$1,530	\$2,018	\$2,828	\$3,342

Note that FY1991 is included in this table for comparison purposes.

Source: Connecticut Division of Special Revenue

⁵ Kline, 1996

In **Table 1.9**, expenditures on lottery advertising are compared with lottery sales for 30 states.

Table 1.9 State Lottery Advertising and Sales Ranked by Percent of Sales				
	FY1996	CY1996	Advertising	Rank
	Media Advertising	Lottery Sales	as a Percent of Sales	
	(Millions)			
Indiana	\$17.3	\$621	2.8%	1
Arizona	\$6.2	\$259	2.4%	2
Iowa	\$3.9	\$190	2.1%	3
Nebraska	\$1.5	\$82	1.8%	4
Minnesota	\$6.1	\$376	1.6%	5
Montana	\$0.5	\$32	1.6%	6
California	\$35.6	\$2,292	1.6%	7
Kentucky	\$7.4	\$543	1.4%	8
Louisiana	\$3.9	\$289	1.3%	9
Florida	\$28.5	\$2,117	1.3%	10
Maine	\$1.9	\$149	1.3%	11
Virginia	\$11.7	\$924	1.3%	12
New York	\$44.2	\$3,611	1.2%	13
Colorado	\$4.0	\$331	1.2%	14
Washington	\$4.5	\$390	1.2%	15
New Hampshire	\$1.8	\$163	1.1%	16
Texas	\$30.5	\$3,430	0.9%	17
Pennsylvania	\$13.8	\$1,674	0.8%	18
Kansas	\$1.4	\$182	0.8%	19
Maryland	\$6.8	\$1,113	0.6%	20
Connecticut	\$3.3	\$707	0.5%	21
Oregon	\$5.0	\$1,097	0.5%	22
Vermont	\$0.3	\$75	0.4%	23
Ohio	\$9.5	\$2,380	0.4%	24
Michigan	\$5.2	\$1,438	0.4%	25
West Virginia	\$1.7	\$720	0.2%	26
Rhode Island	\$0.9	\$455	0.2%	27
New Jersey	\$2.4	\$1,588	0.2%	28
South Dakota	\$0.6	\$520	0.1%	29
Illinois	\$1.8	\$1,637	0.1%	30

Source: IG&WB, Jan 1997.

As **Table 1.9** shows, sixteen of the thirty states spent one percent or more of sales on advertising. Connecticut ranked twenty-first, spending one-half of one percent of sales. In terms of percent of sales, more than half the states spend more than twice as much on advertising their lotteries as Connecticut spent on advertising.

Percent of Disposable Income Spent on the Lottery

Table 1.10 compares the percentage of state personal disposable income⁶ spent on the Connecticut Lottery and on the lotteries of neighboring states. Connecticut ranks in the middle of the states shown.

	CY1991	CY1992	CY1993	CY1994	CY1995	Annual Average Percent Change
Connecticut	0.71%	0.72%	0.63%	0.78%	0.78%	2.3%
Maine	0.53%	0.61%	0.64%	0.69%	0.79%	10.5%
Massachusetts	1.33%	1.48%	1.75%	1.96%	1.98%	10.6%
New Hampshire	0.46%	0.51%	0.46%	0.49%	0.57%	5.7%
New York	0.56%	0.59%	0.61%	0.69%	0.75%	7.5%
Rhode Island⁷	0.37%	0.71%	1.78%	3.66%	4.13%	82.5%
Vermont	0.52%	0.56%	0.52%	0.59%	0.73%	8.6%

Source: Christiansen/Cummings Associates, 1992-96; WEFA Group

The reduction in Connecticut's percent of disposable personal income spent on the Lottery from 0.72% in CY1992 to 0.63% in CY1993 was the result of lower than expected Lotto jackpots and a reduction in Instant game sales. Increasing Lotto jackpots and the issuance of Mega Money in CY1994 caused the percentage to rise to 0.78% in 1994.

The increase in the percentage of disposable income spent on the Lottery in Connecticut has been associated with the increasing share of spending on Instant games as compared to on-line games (see **Table 1.7**). The percentage spent on Instant games rose from 22% in FY1992 to 42% in FY1996. In Massachusetts, whose residents spend nearly 2% of their disposable income on that State's lottery, the split between Instant and on-line games was 69% to 31% in CY1994 as compared to the split in Connecticut of 35% to 65%, nearly the reverse.

⁶ Personal Disposable Income is defined as Total Personal Income minus Taxes, Fees, and Transfers Abroad. It represents the amount of money people have available to spend.

⁷ The Rhode Island Lottery installed Video Lottery Terminals (VLTs), which are similar to video facsimile machines, in Rhode Island pari-mutuel facilities beginning in 1992. Rhode Island is one of only four states that have VLTs, the others being Oregon, South Dakota and West Virginia. For this reason, the Rhode Island percentages in **Table 1.9** are not comparable to those of the other states shown.

Off-Track Betting

Administration and Locations

Off-Track Betting (OTB) is the wagering on pari-mutuel events from a remote site. OTB is the second largest form of non-casino gambling in Connecticut (behind the lottery) with nearly \$250 million wagered in FY1996.

State statutes authorize a total of 18 OTB facilities. Of the 18 authorized, 15 are currently operational. Four of these 18 facilities are simulcasts whose locations are specified by statute. The locations of the simulcast facilities are Sports Haven in New Haven, the Bradley Teletheater in Windsor Locks, Plainfield Greyhound Park, and Shoreline Star in Bridgeport. The simulcast facilities at Plainfield and Bridgeport were opened in November 1991 and December 1992, respectively.

The other 14 authorized OTB facilities must be branches, facilities without simulcasting. Of these, one opened at the jai alai facility in Milford and one at the former jai alai facility in Hartford, both in October 1993. In addition, a telephone betting system is also operational.

Normally, off-track betting wagers placed in Connecticut are commingled with all wagering on races at the track where the race occurs. Takeout⁸ is determined by the source track's rules. However, when Connecticut wagers cannot be commingled, the takeout is set by Connecticut statute and is based on the type of wager. Currently, the takeout is 17% for "win-place-show," 19% for features, and up to 25% for "exotic" wagers with the exact percentage authorized by the Gaming Policy Board (currently set at 20%).

The most significant development for OTB over the past five years was its privatization on July 1, 1993 when Autotote Enterprises, Inc. purchased the system from the State for \$20 million.

The State imposes a tax of 3.5% on the total handle, to be paid by the OTB licensee. Of the 3.5%, the State retains 2.5% and the remaining 1% is distributed to the municipalities where the OTB facilities are located. Additionally, a tax equal to one-half of the breakage to the dime is imposed on the OTB licensee. Breakage results from the rounding down of payoffs to the nearest ten cents. For example, if a payoff to a particular winner is \$32.77, the actual amount paid out would be \$32.70.

Handle Trends

Since the OTB was privatized at the beginning of FY1994, OTB handle has increased by \$80 million (see **Table 1.11**).

Growth in handle at the four OTB simulcast facilities (Bridgeport, New Haven, Plainfield and Windsor Locks) accounted for \$61 million of the \$80 million increase. Of that \$61 million, \$20 million occurred at Bridgeport, and \$26 million occurred at the New Haven facility.

In March 1992, while the State operated the system, New Haven simulcast operations were moved to the Coliseum. The move was associated with the selection of a new

⁸ Takeout is equal to handle less prizes returned to patrons. Additional revenue for the Association and the State includes breakage and outs, which are unclaimed prizes.

vendor to operate the OTB system for the State. The prior vendor owned the New Haven Teletrack.

However, the small size and poor location of the facility reduced the amounts wagered. In April 1995, nearly two years after purchasing the OTB system from the State, the OTB licensee purchased the former New Haven Teletrack. The licensee made substantial renovations to the facility, adding a number of amenities including a sports bar and administrative offices, and renamed the facility Sports Haven. In its first full year of operation, FY1996, New Haven simulcast facility operations generated handle of \$45 million.

In early calendar 1994, the licensee expanded telephone betting to out-of-state patrons, rapidly expanding to 43 states. As a result, handle increased from \$3 million in FY1993 to \$22 million in FY1995. By the end of calendar 1995, however, Autotote had reduced the number of states to 15 in response to their concern about being in compliance with all State and federal laws.

OTB branch handle declined from its high of \$77 million in FY1992 to \$73 million by FY1996, falling from 44% of OTB handle to 30%. Had not new branches opened at the jai alai facilities in Hartford and Milford in October 1993, OTB branch handle would have fallen further. These branches produced \$14 million in handle in FY1996.

Table 1.11 OTB Handle for Fiscal Years 1992 Through 1996					
(\$ Million)					
Facility	FY1992	FY1993	FY1994	FY1995	FY1996
1) OTB Branches	\$77	\$75	\$69	\$73	\$73
2) Simulcast Facilities	\$95	\$86	\$105	\$130	\$147
3) Telephone Betting	\$4	\$3	\$4	\$22	\$24
Total	\$177¹	\$164	\$178	\$225	\$244
Percent of Total					
1) OTB Branches	44%	46%	39%	33%	30%
2) Simulcast Facilities	54%	52%	59%	58%	60%
3) Telephone Betting	2%	2%	2%	10%	10%
¹ Until June 1992, individual OTB facility totals included refunds. The facility subtotals shown include approximately \$2 million in refunds which could not be deducted from the facility totals. The actual FY1992 total is \$175 million.					

Source: Connecticut Division of Special Revenue

Pari-Mutuel

Administration and Locations

Statutorily authorized pari-mutuel activities in Connecticut include horse racing, greyhound racing and jai alai. Currently, only greyhound racing and jai alai are operational in the State. The State imposes a tax on the gross amount wagered at each facility based on a sliding scale of 2% to 4%, except for the Bridgeport Greyhound Track which has a flat 2% tax. Additionally, a tax equal to one-half of the breakage to the dime is imposed on each facility.

The State, from the tax revenue it collects, makes payments to the towns hosting each facility. Towns with populations in excess of 50,000 receive an amount equal to 1% of the gross amount wagered at the facility, and towns with populations less than 50,000 receive one half of 1%. However, beginning in FY1993, the Northeast Connecticut Economic Alliance has received 0.2% of the gross amount wagered at Plainfield Greyhound Park, and the town has received 0.8%.

In 1994, legislation was passed which requires that any OTB facility that takes wagers on, or simulcasts greyhound racing or jai alai events, must give preference to activities conducted by a Connecticut licensee over out-of-state products. The legislation does not allow the operator of the OTB system to simulcast or take wagers on out-of-state greyhound racing or jai alai products while the same activity is being conducted in the State.

Although wagering may take place when no similar in-State activity is being conducted, simulcasting within forty miles of a facility which conducts the same activity may not take place without the in-State facility's consent. The OTB operator must also obtain written consent to accept wagers at any OTB facility within forty miles of any in-State facility conducting such events.

In Fiscal 1992, there were jai alai facilities located in Bridgeport, Hartford, and Milford, and at a greyhound track at Plainfield. Hartford terminated its jai alai operations in September 1995 because of declining attendance and handle. In May 1995, Bridgeport ceased its jai alai operations to convert its facility to a greyhound track. The new track opened November 1, 1995 as the Shoreline Star Greyhound Park. Shoreline Star filed for Chapter 11 bankruptcy reorganization in July 1996 and remains under chapter 11 protection. Shoreline Star requested and received permission to suspend greyhound racing for the winter in early December 1996, but expects to re-open.

When they both operated as jai alai's, the Milford and Bridgeport facilities had alternating seasons, because of their close proximity. Generally, Milford operated during the summer/fall months while Bridgeport was operational in the winter/spring months. During the period from 1992 through 1995, total annual performances between the two remained at about 470.

Sources of Handle for the Connecticut Pari-Mutuel Industry

As discussed in more detail under "On-Track Handle Trends", below, the pari-mutuel facilities experienced significant declines in on-track handle during the five-year period of this study. During this same period, however, there were significant changes in the sources of handle for these facilities. First, as already described, the pari-mutuels added OTB to the gambling options at their facilities. Second, they expanded their

efforts to market their product off-site. Their product is now being offered through the Connecticut OTB system, at Foxwoods Casino, and out-of-state.

These changes served to offset the impact of declining on-track handle trends and require that an understanding of the industry must take into consideration the handle generated from all sources, including on-track OTB wagered at the facility as well as wagering on the facilities' product through the OTB system and at other locations.

Assessing the economic impact on these changes on each facility's ownership is further complicated by the fact that there are different cost implications associated with each type of wagering option and venue.

The following table shows the handle associated with each pari-mutuel facility's jai alai or greyhound product, including the amount wagered at the fronton or track, in the OTB system, at Foxwoods, and at out-of-state locations. In addition, the table shows OTB wagering at each facility's on-site OTB branch or simulcast facility.

Table 1.12 Pari-Mutuel Handle and Other Handle Related to Pari-Mutuels						
	\$ Million					Annual Average Percent Change FY1992 - FY1996
	FY1992	FY1993	FY1994	FY1995	FY1996	
Plainfield						
Track	\$73	\$51	\$45	\$41	\$33	-18%
OTB Simulcast	\$10	\$12	\$15	\$18	\$18	16%
OTB Export ¹	\$16	\$21	\$20	\$22	\$21	7%
Foxwoods Export ¹					\$5	Not Applicable
Export Out-of-State ^{1,2}				\$5	\$5	Not Applicable
Total Plainfield	\$98	\$84	\$80	\$86	\$81	-5%
Bridgeport						
Fronton/Track	\$57	\$43	\$30	\$24	\$13 ³	-31%
OTB Simulcast		\$12	\$29	\$39	\$31	Not Applicable
OTB Export ¹					\$3	Not Applicable
Foxwoods Export ¹				\$0	\$0	Not Applicable
Export Out-of-State ^{1,2}					\$0	Not Applicable
Total Bridgeport	\$57	\$55	\$60	\$63	\$47	-5%
Hartford						
Fronton	\$66	\$48	\$37	\$29	\$4 ⁴	-50%
OTB Branch			\$4	\$7	\$12	Not Applicable
Total Hartford	\$66	\$48	\$41	\$37	\$16	-30%
Milford						
Fronton	\$63	\$51	\$52	\$49	\$60 ⁵	-1%
OTB Branch			\$2	\$3	\$2	Not Applicable
OTB Export ¹				\$6	\$21	Not Applicable
Foxwoods Export ¹					\$2	Not Applicable
Export Out-of-State ^{1,2}					\$0	Not Applicable
Total Milford	\$63	\$51	\$53	\$58	\$84	8%

(Table 1.12 continues on the next page)

**Table 1.12 Pari-Mutuel Handle and Other Handle Related to Pari-Mutuels
(Continued)**

	\$ Million					Annual Average Percent Change FY1992 - FY1996
	FY1992	FY1993	FY1994	FY1995	FY1996	
OTB Export ¹	\$16	\$21	\$20	\$28	\$44	29%
Total OTB Handle	\$177	\$164	\$178	\$225	\$244	8%
Percent from CT Product	9%	13%	11%	12%	18%	

¹ Export refers to wagering on greyhound racing and jai alai off-site. Plainfield has been exporting their product to the OTB system since the inception of the system, to Foxwoods since FY1996, and to various out-of-state locations, including Wonderland, MA, since FY1995. Plainfield began export to the greyhound tracks at Lincoln Downs, RI, in January 1997, to Southland, AZ, in February 1997, and to Phoenix, AZ, in March 1997. Plainfield also exports to the Amtote northeast hub in Suffolk, MA. Bridgeport briefly exported to the OTB system and to Wonderland in FY1996. The Hartford jai alai fronton never exported its product. Milford exported to the OTB system beginning FY1995, to Foxwoods beginning FY1996, and to various out-of-state venues including Newport, RI, beginning FY1997.

² Data unavailable before FY1995.

³ Partial year operation.

⁴ Closed in September 1995.

⁵ Open for first full year of operation.

* Data unavailable before FY1995.

Source: Connecticut Division of Special Revenue

The Plainfield handle totals are an example of how pari-mutuel revenue sources have changed over the past five years. On-track handle has declined by \$40 million, from \$73 million in FY1992 to \$33 million in FY1996. However, OTB wagering on Plainfield races has increased by \$5 million, from \$16 million in FY1992 to \$21 million in FY1996. The OTB total is now approximately two-thirds of the on-track total.

In addition, wagering on Plainfield races at Foxwoods and out-of-state tracks did not occur in FY1992, but produced \$10 million in handle in FY1996. Off-site wagering on Plainfield's greyhound racing product thus increased by a total of \$15 million to \$31 million in FY1996, an amount almost equal to the \$33 million on-track total.

Plainfield also benefited from an \$8 million increase in handle at the OTB simulcast facility located at the track, a gain from \$10 million in FY1992 to \$18 million in FY1996.

As demonstrated by the Plainfield example, to understand their total business activity, one must take into account all sources of handle, on-track, on-site OTB, and exports.

Handle on events at Connecticut's pari-mutuel facilities in the OTB system has grown in importance from 9% of total OTB system handle in FY1992 to 18% in FY1996.

On-Track Handle Trends

In FY1992, the three (3) jai alai facilities generated \$186 million in wagering compared to \$73 million for greyhound racing (see Table 1.13). With the closing of two out of the three facilities, jai alai produced only \$64 million in FY1996, compared with \$45 million for greyhound racing.

Average handle per performance has fallen from \$202,000 in FY1992 to \$89,000 in FY1996. This decline has not been caused by a reduction in the average handle per admission (per capita wager). What has fallen has been attendance. Admissions have fallen over the past five years from 1.79 million in FY1992 to 812,000 in FY1996 (see **Table 1.13**).

The decline in pari-mutuel attendance appears to be primarily part of a long term trend that pari-mutuel facilities everywhere have been experiencing.

As reported later in this chapter, WEFA examined the impact on on-track handle of wagering through the OTB system . WEFA found no reduction in the handle wagered on-track as a result of wagers placed through the OTB system.

Table 1.13 Pari-Mutuel Statistics for Fiscal Years 1992 -- 1996					
	FY1992	FY1993	FY1994	FY1995	FY1996
Handle	(\$Million)				
Jai Alai					
Bridgeport	\$57	\$43	\$30	\$24	\$0
Hartford	\$66	\$49	\$37	\$29	\$4
Milford	\$63	\$52	\$52	\$49	\$60
Total	\$186	\$143	\$120	\$103	\$64
Greyhound					
Plainfield	\$73	\$51	\$45	\$41	\$33
Bridgeport	\$0	\$0	\$0	\$0	\$13
Total	\$73	\$51	\$45	\$41	\$45
Grand Total	\$259	\$194	\$165	\$144	\$109
Number of Performances					
Jai Alai					
Bridgeport	240	240	197	156	0
Hartford	361	362	363	327	59
Milford	233	236	278	312	464
Total	834	838	838	795	523
Greyhound					
Plainfield	449	442	460	416	430
Bridgeport	0	0	0	0	269
Total	449	442	460	416	699
Grand Total	1,283	1,280	1,298	1,211	1,222
Handle per Performances	(\$Thousand)				
Jai Alai					
Bridgeport	\$237	\$178	\$154	\$153	
Hartford	\$184	\$134	\$102	\$90	\$70
Milford	\$271	\$218	\$186	\$158	\$129
Average	\$224	\$170	\$142	\$129	\$122
Greyhound					
Plainfield	\$163	\$115	\$99	\$99	\$76
Bridgeport					\$47
Average	\$163	\$115	\$99	\$99	\$65
Overall Average	\$202	\$151	\$127	\$119	\$89

(Table 1.13 continues on the next page)

	FY1992	FY1993	FY1994	FY1995	FY1996
Admissions	(Thousand)				
Jai Alai					
Bridgeport	344	299	211	171	0
Hartford	419	333	267	211	32
Milford	437	393	385	328	369
Total	1,201	1,025	863	709	401
Greyhound					
Plainfield	591	443	386	353	288
Bridgeport	0	0	0	0	122
Total	591	443	386	353	411
Grand Total	1,792	1,468	1,249	1,062	812
Handle per Person					
Jai Alai					
Bridgeport	\$165	\$143	\$144	\$140	\$0
Hartford	\$158	\$146	\$139	\$140	\$128
Milford	\$145	\$131	\$135	\$150	\$161
Total	\$155	\$139	\$138	\$145	\$159
Greyhound					
Plainfield	\$124	\$115	\$118	\$117	\$113
Bridgeport	\$0	\$0	\$0	\$0	\$103
Total	\$124	\$115	\$118	\$117	\$110
Overall Average	\$145	\$132	\$132	\$136	\$134

Source: Connecticut Division of Special Revenue

Charitable Gaming

Charitable gaming in Connecticut includes bingo, sealed tickets, raffles, bazaars and Las Vegas nights (limited to table games)⁹. The State taxes bingo operations and obtains revenue from the sale of sealed tickets ("pull-tabs"). All organizations conducting bingo are subject to a 5% fee on their gross receipts less prizes. The State, from the money it collects, makes payments to the municipalities in which bingo games are conducted. Payment to the municipalities is an amount equal to one-quarter of one percent of the total money wagered less prizes within that town. The remaining tax revenue goes to the State's General Fund. Organizations authorized to sell sealed tickets (which are similar to Instant lottery tickets) must pay to the State an amount equal to 10% of their resale value. The State does not receive any General Fund revenue from the conduct of raffles, bazaars and Las Vegas nights.

⁹ By law, no cash prizes may be offered at Las Vegas nights, only coupons and certificates.

Table 1.14 provides charitable gaming sales, the earnings of sponsoring organizations and General Fund revenues that the State receives from charitable gaming.

Type of Game	1992	1993	1994	1995	1996
Bingo	\$30.5	\$32.1	\$32.7	\$34.6	\$32.6
Sealed Tickets	10.7	12.9	13.6	12.9	13.0
Raffles	13.7	14.0	12.7	12.9	12.6
Bazaars	2.4	1.2	0.9	0.8	0.8
Las Vegas Nights	0.4	0.3	0.3	0.4	0.3
Total	\$57.6	\$60.5	\$60.2	\$61.5	\$59.3
Earnings of Non-Profit Organizations	\$20.0	\$20.0	\$19.6	\$19.4	\$18.3
General Fund Revenues	\$1.5	\$1.7	\$1.8	\$1.8	\$1.7

Source: Connecticut Division of Special Revenue

Charitable gaming sales have maintained remarkable consistency, remaining within \$3 million of \$60 million for the past five years. However, both the mix of games and the profitability to the sponsors have changed during this period.

By far, the most popular form of charitable gaming is bingo, accounting for 55% of total sales (see chart, next page). Bingo sales grew from \$31 million in FY1992 to \$33 million in FY1996, a \$2 million increase over the period. Bingo events were held 16,769 times in FY1996 by 560 organizations.

The second most popular charitable games are sealed tickets at 22% of charitable gaming sales. Over the period, sealed tickets have been gaining in popularity, rising from \$11 million or 19% of charitable gaming sales in FY1992 to \$13 million or 22% of the total in FY1996.

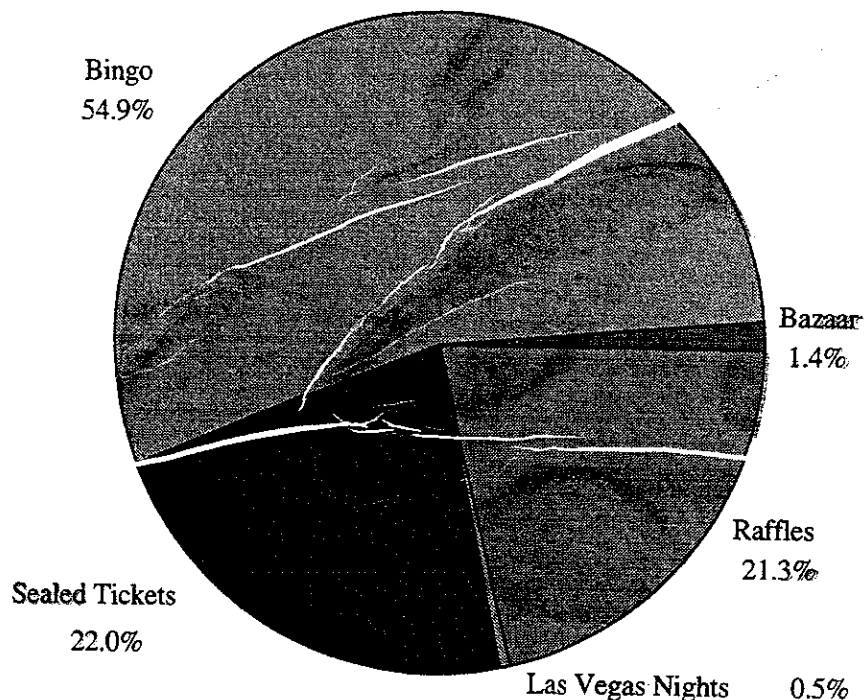
At the same time, raffles have fallen slightly from being the second most popular charitable game at \$14 million, or 24% of charitable gaming sales in FY1992, to \$13 million or 21% of charitable gaming sales in FY1996. There were 1,312 raffles in FY1996.

Charitable bazaars fell sharply in the early part of the period from \$2.4 million in FY1992 to \$1.2 million in FY1993, and have been declining since. Bazaars are now holding at just above \$800,000, for a 1.4% share. A total of 236 charitable bazaars were reported in FY1996.

Las Vegas nights have the smallest share, at \$0.3 million or only 0.5% of total charitable gaming sales. A total of 38 Las Vegas nights were reported in FY1996.

For the last five years, while General Fund revenues from charitable gaming have increased, the funds that non-profit organizations have raised through charitable games have declined, from \$20 million in FY1992 and FY1993 to \$18 million in FY1996. The decline was primarily in raffles, where sales had declined.

Charitable Games
Percentage of Total Sales, FY1996



FY1996 Total Annual Sales = \$59.34 million

Native American Casino Gambling

Connecticut is home to two Native American casinos: the Mashantucket Pequot Tribe's Foxwoods Resort Casino, which opened in February 1992 (the Mashantucket Pequot Tribe had already opened a high-stakes bingo parlor in 1986), and the Mohegan Sun Casino in Ledyard, which opened in October 1996.

In January 1993, a joint Memorandum of Understanding (MOU) was entered into by the State and the Pequot Tribe allowing the tribe to operate video facsimile machines. The MOU stipulated that a minimum of 25% of video facsimile machines' win (gross operating revenues) would be provided to the State of Connecticut. If 25% of the total video facsimile win should be less than \$100 million, the State's share would increase to as much as 30% of the win in order to reach a total of \$100 million contributed to the State.

The Mohegan Tribe received federal recognition in May of 1994, and the Tribe negotiated with the State for the operation of casino gambling. On May 17, 1994, a

Tribal-State Compact was entered into, along with a MOU for video facsimile win. On that same date, the Pequots entered into a MOU which amended their previous agreement with the State. The State/Mohegan Tribe MOU and the amended State/Mashantucket Pequot MOU contain virtually identical provisions, with both agreements providing for contributions to the State of 25% of video facsimile win, subject to minimum contribution provisions which can result in a contribution percentage of up to 30% in order to ensure a minimum contribution of \$80 million per State fiscal year (prorated for the initial year of operation in the case of the Mohegan Tribe's casino).

Table 1.15 shows handle and win for video facsimiles and table games at Foxwoods and the number of video facsimile machines.

	1992	1993	1994	1995	1996
FOXWOODS¹					
Video Facsimiles					
Average Number	0	1,192	2,826	3,862	4,011
Handle ³	0	\$954	\$4,499	\$6,609	\$7,804
Win (Casino)	0	\$82	\$375	\$543	\$595
Win per Machine (\$000)	0	\$68	\$133	\$141	\$148
State Contribution ²	0	\$30	\$113	\$136	\$149
Table Games					
Handle ³	\$923	\$4,175	\$6,920	\$9,914	\$11,706
Win (Casino) ³	\$43	\$157	\$215	\$292	\$320
Total⁴					
Handle ³	\$923	\$5,129	\$11,419	\$16,523	\$19,510
Win (Casino) ³	\$43	\$239	\$590	\$835	\$915
¹ Data are for Foxwoods only because the Mohegan Sun Casino did not open until October 1996. ² In 1994, the casino contributed an additional \$13 million to bring its payment to the State to \$113 million. ³ Video facsimile handle prior to March 1993 and table game win and handle were estimated by WEFA based on data for New Jersey and Nevada (Christiansen, 1991-1996) (see footnote 1, page 1-1). ⁴ Foxwoods total reported here is limited to video facsimiles and table games. Bingo and other types of betting at the casino have not been included because of insufficient data to develop an estimate. Wagering at Foxwoods on Connecticut pari-mutuel activity has been referenced in the discussion of pari-mutuel handle trends.					

Source: Connecticut Division of Special Revenue; WEFA Group

In FY1995, Foxwoods recorded video facsimile machine win of \$543 million resulting in a \$136 million contribution to the State (see **Table 1.15**). In FY1996, win reached \$595 million, a 9.6% increase, and the contribution to the State was \$149 million.

Video facsimile machine handle has grown dramatically as the average number of machines operating has increased. In FY1995, Foxwood's video facsimile machines produced handle of \$6.6 billion with an average of 3,862 machines. It then expanded another 18% to reach \$7.8 billion in FY1996 with 4,011 machines operating.

Monthly win per machine follows a cyclical pattern of sharp decreases in the fall and winter months followed by a steady recovery over the spring and summer. However, in observing the overall trend, it is evident that monthly win per machine has been rising over the past three years at Foxwoods, averaging \$11,700 in FY1995 and \$12,400 in FY1996. From the opening of the Mohegan Sun Casino in October 1996 through March 1997, win per machine at Foxwoods has averaged \$10,300 and at Mohegan Sun, \$9,600.

Impact of Foxwoods on Other Forms of Gambling in Connecticut

WEFA's examination of ten years of data using regression modeling is reported later in this chapter. By making use of this statistical technique, WEFA tested the possibility that the opening and operation of Foxwoods Casino Resort in Ledyard had an impact on lottery sales, OTB handle, pari-mutuel handle, and sales of charitable games.

No impact from Foxwoods was found for Lottery sales in total or for sales of any individual Lottery game. Similarly, no impact was found for OTB simulcast handle, OTB branch handle, or OTB telephone wagering.

For FY1993 and FY1994, the analysis revealed that decreases in greyhound racing handle at Plainfield of 10% and 9%, respectively, can be accounted for by Foxwoods. No evidence of a negative impact was found after that time.

Between FY1993 and FY1996, WEFA finds jai-alai handle decreased 1% to 5% as a result of Foxwoods.

There is no evidence to indicate that Foxwoods had any impact on sales of charitable gaming.

The remainder of this chapter presents WEFA's analysis as to the diversion of sales and handle from one form of gambling to another and projects gross wagering through FY2001.

Substitution, Saturation and Projections

Introduction

When there is a potential for spending on one type of gambling to be diverted to another form of gambling, this concept is referred to as substitution. For example, a person who regularly played Daily Numbers or Play 4 might shift some spending from those games to Cash 5 when the number of weekly drawings increased, or, alternatively, a person might decide to visit a Native American casino and, partly or completely, forgo spending on the various on-line games that week.

Saturation involves a related concept. All products generally follow a product-life-cycle which includes four (4) phases: introduction, growth, maturity and decline. Saturation involves the maturity and decline phases because it is the point at which all of the potential market spending for a particular product or service has been tapped.

This classic product-life-cycle of a commodity generally follows a pattern where initially during the introduction phase, sales are flat until product awareness and acceptance of the product is established. Generally, this is accomplished through advertising and marketing. During the growth phase, sales expand and, for successful products, the growth rate rapidly accelerates and product sales may increase their market share. Ultimately, sales growth slows as the product reaches its maximum market share, which will vary by product. During this maturity phase, sales peak or flatten as market saturation is reached. Finally, during the decline phase, sales begin to decline as substitute products gain acceptance or market demand declines and erodes the product's market share.

One of the difficulties in understanding the concept of saturation is that diversion of spending between games complicates the analysis. There are certain games that appear to be saturated, but additional growth may occur because of diversion of sales from other games. For example, Cash 5 sales had stabilized and begun to decline before a series of initiatives were undertaken to improve sales. However, because Cash 5 sales are largely diversion from Lotto, the gain in Cash 5 came primarily at the expense of Lotto sales.

Currently, Instant Lottery games and casino gaming are in their growth phase while charitable gaming, on-track pari-mutuel wagering and on-line Lottery games are in their maturity or decline stages. OTB simulcasting and telephone wagering appear to be in their growth phases while OTB branch handle is in the maturity phase.

To analyze substitution and saturation, and to be able to make projections, WEFA developed an econometric model of sales and handle for the various forms of legalized gambling in Connecticut. The methodology, the equations that make up the model, and the substitutions and saturation findings are described in detail in **Appendix H**. The model not only provides evidence of substitution among different forms of gambling but of product saturation for certain forms of gambling. The model also allows forecasts of gambling revenues through fiscal year 2001.

Table 1.16 presents the projections derived from these equations through fiscal year 2001 and, in part, are based upon WEFA's forecasts of population, income and unemployment in Connecticut. These projections assume no change in the number and mix of pari-mutuel and OTB facilities, the number and type of Lottery games, the method of play for each gambling activity, nor does it assume changes in the manner in

which games are marketed. These projections are status quo projections meaning that they reflect policies and player behavior between FY1987 and FY1996.

Table 1.16 Status Quo Projected Connecticut Gross Wagering, FY1997 Through FY2001*

	(Millions)				
	FY1997	FY1998	FY1999	FY2000	FY2001
Lottery					
Daily Numbers & Play 4	\$190	\$189	\$184	\$179	\$174
Cash 5	\$48	\$49	\$50	\$49	\$49
Lotto	\$94	\$91	\$89	\$90	\$91
Powerball	\$49	\$50	\$50	\$50	\$50
Total On-line	\$381	\$380	\$373	\$369	\$364
Instant	\$379	\$423	\$468	\$514	\$562
Total	\$760	\$802	\$841	\$882	\$926
OTB					
Branches	\$81	\$80	\$78	\$76	\$74
Telephone	\$17	\$17	\$16	\$16	\$16
Simulcast	\$159	\$159	\$160	\$162	\$163
Total	\$256	\$255	\$254	\$254	\$254
Pari-Mutuels					
Greyhound	\$33	\$28	\$24	\$20	\$16
Jai Alai	\$51	\$46	\$40	\$35	\$33
Total	\$83	\$74	\$64	\$55	\$49
Charitable	\$59	\$58	\$59	\$59	\$60
Native American Casinos	\$26,235	\$30,449	\$31,770	\$33,077	\$33,369
Video Facsimile Win	\$821	\$953	\$994	\$1,035	\$1,044
Total	\$27,393	\$31,638	\$32,988	\$34,327	\$34,658

*This projection assumes no change in the number of facilities, the number of Lottery games, the character, such as the way games are played, of each gambling activity, nor changes in marketing the games. These are status quo projections reflecting policies and player behavior between FY1987 and FY1996.

Source: WEFA Group

Projections of Lottery sales for the future do not take into account the formation of the Connecticut Lottery Corporation (CLC) in July of 1996, whose purpose is to respond more quickly to market changes and aggressively increase sales and General Fund Revenues.

In the projections, WEFA assumes the status quo for the majority of the variables that drive the equations:

- The number of greyhound racing performances assumed throughout the forecast was 408 performances at Plainfield Greyhound Park and 180 at Shoreline Star in Bridgeport.
- The number of OTB branches and simulcast facilities was assumed to remain at the current levels.
- Sales of Powerball were held at \$50 million for the forecast period, as the game began too recently to be able to develop an equation for it.

- Lotto advertising was held at its calendar year total for 1996 until FY2001.
- Any future initiatives undertaken by the CLC to increase Lottery sales are not taken into account.
- The average price of an Instant ticket was increased over the forecast period, reflecting the current upward trend, from the calendar 1996 fourth quarter value of \$1.87 to \$2.40 in the last quarter of FY2001. This assumes that the current upward trend in the amount of sales derived from high priced tickets will continue.

Since WEFA's analysis relied upon the historical experience associated with the various forms of gambling, the projections are only an indication of future trends to the extent that the status quo continues.

The forecast period assumes a continuation of declining on-track handle at the pari-mutuels but, should a successful initiative on the part of the pari-mutuel operators be implemented, the projections could improve.

Findings of Substitution and Saturation

WEFA's analysis of Lottery sales has identified substitution of spending among Lottery games, particularly a substitution of spending on Instant Lottery sales from Daily Numbers and Play 4. Further, as expected, we observe significant substitution of spending on both Powerball and Cast 5 sales for Lotto sales. There appears to have been no effect on lottery sales as a result of the introduction of casino gambling.

The substitution analysis also found that because of diversion to Foxwoods, greyhound track handle declined by 10% and 9% in FY1993 and FY1994, respectively, and jai alai handle declined by between 1% and 5% from FY1993 through FY1996.

WEFA's analysis also finds charitable gaming to be in its mature phase and the following forms of gambling to be in their decline state: on-line lottery sales, on-track pari-mutuel handle, and OTB branch handles.

2. THE NET CONTRIBUTION OF LEGALIZED GAMBLING TO THE ECONOMY OF THE STATE OF CONNECTICUT

Summary of the Net Economic Contribution of Legalized Gambling

As shown in Table 2.1, legalized gambling in the State of Connecticut has made a significant and positive contribution to the state's economy. In 1991, legalized gambling generated 2,985 new jobs throughout the State's economy paying wages and salaries of \$61.6 million. With the opening of the Foxwoods Casino in 1992, the total number of new jobs created by gambling increased to 11,452 and then increased again to 18,102 jobs. As the number of new jobs generated by legal gambling increased so did the wages and salaries, increasing to \$234.9 million in 1992 and then to \$382.1 million in 1993.

Calendar Year	1991	1992	1993	1994	1995	1996 ¹
Contribution of Legalized Gambling						
Total Employment²	2,985	11,452	18,102	18,123	22,584	24,811
Net Change		8,467	6,650	21	4,461	2,227
Total Wages and Salaries³	\$61.6	\$234.9	\$382.1	\$408.7	\$559.0	\$680.3
Net Change		\$173.3	\$147.2	\$26.6	\$150.3	\$121.3
Connecticut Employment and Income						
Total Employment (thousands)⁴	1,555	1,526	1,531	1,544	1,564	1,579
Net Change		(29,042)	5,000	12,533	20,525	15,192
Total Wages and Salaries⁵	\$49.3	\$51.2	\$52.3	\$53.9	\$56.6	\$59.5
Net Change (billions)		\$1,900	\$1,100	\$1,600	\$2,700	\$2,900
¹ Estimate. ² Full- and part-time jobs. ³ Total annual wages and salaries in millions of dollars. ⁴ U.S. Bureau of Labor Statistics. ⁵ Billions of dollars as reported by the U.S. Bureau of Economic Analysis.						

Between 1991 and 1993, gambling in the State of Connecticut added more than 15,000 new jobs throughout the state. Approximately 7,000 of these new jobs represented new employment opportunities at the pari-mutuel, OTB and casino facilities, while the remaining 8,000 new jobs were created throughout the State's economy, in such sectors as construction, retailing, transportation and business and personal services. While legalized gambling was adding jobs to the State's economy, aggregate employment in Connecticut was actually declining by approximately 24,000 jobs. Thus, in the absence of legalized gambling, WEFA estimates that total employment would have fallen by 39,000 jobs. This would have added almost a full percentage point to the State's unemployment rate in 1993, which averaged 6.3% for the year.

Over the same period, the new jobs generated by legalized gambling added an additional \$320.5 million in wages and salaries to the State's economy. This represented almost 11% of the gains in total wages and salaries in the State. Looking at the growth in wages and salaries generated by legalized gambling offers an even more dramatic view of the contribution of legalized gambling. Between 1991 and 1993, the gambling generated wage income increased by 520% while total wage income increased by 6.0%, only slightly above the rate of inflation.

Growth in employment and wage income slowed after 1993 as the expansion of the Foxwoods Casino slowed. However, in 1995, construction of the Mohegan Sun Casino began and, as a result, there was another surge in employment growth with casino-related activity adding 4,415 jobs in 1995 and just under 2,645 jobs in 1996. At the same time, employment at the pari-mutuel and OTB facilities declined from 1,655 gambling related employment jobs in 1993 to 1,267 jobs in 1996. By 1996 the total number of jobs in the state generated by legalized gambling had increased to 24,811, a 37.1% increase over the number of jobs created in 1993. By comparison, total employment in Connecticut increased by only 3% over the three-year period.

Wage income also experienced strong growth between 1993 and 1996. Like employment, the level of wage income generated by legalized gambling increased sharply in 1995 and 1996. Over the three-year period wage income created by gambling increased by 78%, rising to \$680.3 million in 1996. Wage income in the state grew by only 14% over the same period.

In conclusion, growth in both employment and income generated by legalized gambling has outpaced total employment and income growth throughout the state. That means that legalized gambling has steadily increased its contribution (or share) of economic activity in the state and that the gambling sector is a major contributor to and force behind economic growth in the state. While it is true that the period of peak growth was during 1992 and 1993, employment and income growth related to legalized gambling has still outpaced overall job and income growth since then.

Measuring the Net Economic Contribution of Legalized Gambling: Methodology

The input/output¹ (I/O) approach employed in this study to measure the contribution of legalized gambling is an accepted and widely used methodology in the economics profession. WEFA has either developed or contributed to numerous studies, which employ this I/O methodology, including analysis of the impact of casino gambling in such countries as Canada and Costa Rica and states such as Maine, Pennsylvania, Texas, Florida, Louisiana and others. For this study a model specific to Connecticut was developed by WEFA from US Department of Commerce data.

"Net" is an important qualifier. Our analysis focuses on the measurement of new economic activity that is created by legalized gambling in the State of Connecticut and would not have occurred without the presence of legalized gambling in the State. For example, residents of the State have the option of spending their income on a variety of goods and services; legalized gambling is just one of these options. If Connecticut residents chose to direct their current spending on legalized gambling to other entertainment opportunities in the State, there would be a change in the mix of goods and services produced in the State but not necessarily a change in aggregate economic activity. So, the net impact would be zero. This does not imply that there is no economic activity taking place, just that there is no new or net increase in economic activity.

In addition to recognizing that some aspects of spending on legalized gambling in the State represent a substitution of one type of spending for another, some forms of legalized gambling, specifically charitable gaming and the lottery, merely transfer income from one set of individuals in the State to another. In the case of charitable gaming, the express purpose of these functions is to raise money from participants and then to distribute the proceeds to other organizations or individuals in the State. Thus, in this case, consumer spending is merely shifted from one set of individuals to another.

The State Lottery presents a similar situation. Approximately 50% of the value of lottery sales is returned to players as prizes. These prizes are merely a transfer of income from players to winners. Another 45% is retained by the State. The General Fund revenues, in excess of the cost of regulation and oversight, are then used to provide services to the general population. Thus, the revenues kept by the State are also transfers from the players to the employees of the State government and to recipients of the distributions from the General Fund.

The remainder of sales after prizes and State retention is paid to the agents. The 5% fee is similar in magnitude to the margin kept by retailers from their retail sales. Consequently, this fee is a substitute for income that would have been earned by retailers/agents if the lottery expenditures had been directed toward other retail spending.

¹ The input-output approach is a method of analysis originally developed by Leontief, the 1973 Nobel Laureate in economics. It traces the revenues of an industry as they flow through the local economy, becoming revenues of other industries through inter-industry purchases and through the purchases of employees out of their income. These flows are developed from base-year data on inter-industry flows organized into an input-output table. Such tables have been used to measure impacts at national, state and sub-state levels. WEFA has used this technique to examine the impact or contribution of industries and public programs, ranging from defense procurement programs to spending by tourists and patrons of casinos.

To summarize, while there is always some positive economic activity associated with all forms of legalized gambling, our analysis focuses only on the net change in activity that is associated with the various forms of legalized gambling in the State. In the following sections of this chapter, we discuss in detail the contributions to the State's economy, if any, of the various forms of legalized gambling.

The I/O analysis of legalized gambling begins with the measurement and analysis of **direct spending** at the gambling venues. This includes the gross revenues, or "win," generated by the patrons of these operations and retained by the operators of the gambling facilities; spending on food, beverages, lodging and entertainment at the facilities; all construction and development at the sites; and spending at off-site retail facilities.

It is also important to identify net new spending in the State, i.e., spending in the State associated with gambling that would not have occurred without the various forms of legalized gambling. Spending by out-of-state visitors to the Connecticut pari-mutuel sites and Native American casinos is an obvious source of net new spending. State residents also contribute net new spending to the extent that their spending at Connecticut facilities represents expenditures that would have been made at gambling facilities in other states, such as New Jersey, or spending on entertainment in other states, such as New York, or on vacations.

This is an important point. Many consider net new spending in a state to derive solely from spending by persons from out-of-state. This is incorrect. Net new spending can come from three sources: (1) new spending in the State by out-of-state residents; (2) spending in the State by State Connecticut residents that otherwise would have occurred outside the State; and (3) spending by State residents that substitutes for other in-state spending but that produces a net positive impact as a result of the State's economic structure.

Thus, for State residents we need to identify that portion of their spending for legal gambling which is "substituted" for spending that would have occurred in the State anyway.² This would include consumer expenditures on such things as restaurants, entertainment and other forms of general retail spending. In similar analyses which WEFA has developed for other states, we have developed estimates of this substitution of gambling expenditures for other local consumption expenditures. The size of the substitution effect, and its proportion of total spending on gambling activities, is dependent upon the mix of spending by Connecticut residents on lodging, food and beverages, and other retail spending. Utilizing proprietary data provided by the casino industry for other studies undertaken by WEFA, we have determined that this in-state substitution effect has represented between 60% and 75% of resident spending.³

In Connecticut, we have estimated that the substitution effect for resident spending on pari-mutuel and OTB gambling and associated activities is 75%, i.e., \$0.75 of every dollar of revenue generated through pari-mutuel and OTB wagering by Connecticut residents is effectively a substitute for revenue that would have accrued to another Connecticut business. The percentage for the substitution effect associated with Con-

² Substitution in this context refers to the consumer's replacement of spending for goods or services in the State by spending for other goods and services at a gambling establishment.

³ WEFA, September 1996

necticut residents gambling at Foxwoods is estimated to be 60%, while the percentage substitution effect for charitable gaming and the State Lottery is estimated to be 100%.

Spending by patrons of the Foxwoods Casino has a smaller substitution effect than the spending by patrons at pari-mutuel and OTB facilities because of the broader choices of entertainment and lodging expenditures at the casino and the accessibility and option of alternative gambling at the New Jersey casinos. Thus, some spending at the Foxwoods Casino on gambling and entertainment will substitute for similar spending at out-of-state entertainment and gambling opportunities, especially in New Jersey. Consequently, the proportion of gambling spending at the casino represents a smaller substitution for local spending than the proportion of gambling spending at the pari-mutuel and OTB facilities.

As discussed above, the expenditures for charitable gaming and lottery tickets, however, represent a complete substitution for other local spending, i.e., the substitution effect is 100% because these forms of legal gambling serve to transfer income between groups within the State.

The economic contribution of legalized gambling in the State of Connecticut goes far beyond the **direct spending** and jobs created at the various gambling venues. While a substantial part of the economic contribution is directly attributable to the spending at the gambling venues, the **direct contribution**, a significant portion of the contribution also results from the spending by the operators for supplies and materials and by the employees of these facilities for consumer goods and services, the **indirect contribution**.⁴

Our analysis first focuses on the **direct contribution**. In this section of the analysis, we examine (1) the spending by patrons at the facilities and the jobs and income which are directly associated with the provision of the gambling and related services, and (2) construction and development expenditures by the casino and the jobs and income they generate. Our estimates of direct spending by patrons are adjusted for the substitution of casino spending for retail spending by residents of Connecticut. For example, Connecticut residents who participate in legalized gambling in the State will have re-directed some portion of their wagering expenditures from other consumer activities, i.e., expenditures at restaurants, for entertainment and for other consumer goods and services. Spending in Connecticut by residents of other states is considered to be a net gain in spending in the State. For example, spending by Massachusetts residents at Foxwoods is considered a net gain in spending in Connecticut.

The second area of analysis focuses on the **indirect contribution**. Using an I/O table specific to Connecticut, the impact of direct spending is traced through the Connecticut

⁴ Impact analysis separates the consequence of consumer spending and investment into two parts - the direct contribution and the indirect contribution. Direct spending is the spending of patrons at the facility or of the contractors in a capital project. The indirect contribution derives from (1) spending of the operator for purchased goods and services, such as equipment, food, and repair services, and (2) spending of the direct employees that generates other employment in the production of goods and provision of services. The indirect contribution further includes the succeeding rounds of spending by the impacted industries and employees, until all of the original spending is traced to the employment it generates. Since the focus of this study is the State of Connecticut, only jobs created within State boundaries are included in the indirect impact.

economy to quantify purchases, jobs and income which are created in the non-gambling sectors of the Connecticut economy. The ultimate impact of this spending process is determined by the business structure of the Connecticut economy including the extent to which materials are purchased and labor is employed from outside the State boundaries.

The analysis presented in the remainder of this chapter is based upon actual legal gambling expenditures at Connecticut facilities during the CY1991-CY1995 period. We have also developed estimates for CY1996 from available data. All figures presented in this section are annual calendar year totals. Most annual data reported by state government agencies are recorded on a July-June fiscal year while similar data reported by the gambling establishments is on an October-September fiscal year. In most cases monthly data were summed to calendar year totals. Where this was not possible, weighted averages of fiscal year data were taken to estimate calendar year totals.

The Net Economic Contribution of Charitable Gaming

Charitable gaming functions, such as bingo, sealed tickets and casino nights, are sponsored by a variety of religious and secular organizations for the purpose of raising money for non-profit organizations and/or the distribution to groups or people with financial needs. These functions tend to be social in nature, i.e., the primary purpose of the gambling is for entertainment with gambling losses viewed as a form of a charitable donation.

By their very nature these types of functions serve to re-distribute the income (losses of the gamblers) to the social, religious and non-profit organizations. Consequently, charitable gaming activities affect the composition of the State's economy - substituting one form of charitable donation for another - but do not result in a significant contribution to the overall State economy. It is assumed that only an insignificant amount of the money spent on charitable gaming activities represents net new spending. That is not to say that such activities do not serve a purpose. The fact that these charitable gaming functions provide a venue and opportunity for organizations and individuals to *donate* money to other organizations and individuals in need suggests that such activities serve a useful social purpose.

As shown in **Table 2.2**, the net profit to sponsors of charitable gaming peaked at \$20 million in 1992 and has fallen since to an estimated \$17.8 million in 1996. These are the funds which are available for re-distribution to designated groups and organizations as charitable donations. The State government also receives a portion of the gross receipts which are transferred to the General Fund. The State's share of gross charitable gaming receipts has fluctuated between 2.5% and 3.0% over the past six years. Transfers to the General Fund peaked in 1993 and 1994 at \$1.8 million and they have fallen slightly since to \$1.7 million in 1995 and an estimated \$1.7 million in 1996. These funds are utilized by the State government to provide goods and services to residents of the State. Thus, about one-third of the gross receipts are available for re-distribution by the sponsoring organizations and the State government. The remaining two-thirds of the receipts represent the cost of prizes and the costs associated with running the charitable events.

Table 2.2 The Contribution of Charitable Gaming to Sponsoring Organizations and the State's General Fund (in Millions)¹

Calendar Year	1991	1992	1993	1994	1995	1996 ²
Charitable Gaming Gross Receipts	\$55	\$59	\$60	\$61	\$60	\$58
Transfers to the General Fund	\$1.4	\$1.6	\$1.8	\$1.8	\$1.7	\$1.7
Cost of Prizes and Services	\$34.9	\$37.4	\$38.4	\$39.7	39.5	\$38.5
Net Profit to Sponsors	\$18.7	\$20.0	\$19.8	\$19.5	\$18.8	\$17.8

¹ Source: Division of Special Revenue, 1996
² Estimated.

The participants in charitable gaming do so because they are aware that the money that they donate (losses) will be used for some specified charitable purpose. Consequently, the participants in charitable gaming choose to forgo the consumption of other goods and services knowing that their losses will be transferred to some other groups or individuals who will use the transferred money for their own consumption of goods and services. Thus, one group's consumption of goods and services has been substituted for another's. While the mix of goods consumed may have been changed somewhat by this transfer of income, i.e., the two groups probably do not have the same preferences or needs for goods and services, it is unlikely that the overall level of purchases of goods and services in the state is significantly altered. Consequently, economic activity is not significantly increased or decreased by charitable gaming, even though there is a re-distribution of spending.

While it may be argued that aggregate consumption could be increased by charitable gaming if income is being transferred from higher income residents, who spend a smaller proportion of their income on consumer goods, to lower income residents, hard data on the income levels of the participants in charitable gaming activities and the recipients to whom funds are transferred is unavailable. Lacking such information on the income and spending habits of the two groups, it is not possible to precisely determine whether overall economic activity in the State is increased or decreased by charitable gaming. However, given the relatively small size of charitable gaming vis-à-vis income in the State, \$58 million versus \$104.1 billion in 1996, it is our assessment that while charitable gaming provides an opportunity for transferring income within the State, it generates little, if any, net contribution to aggregate economic activity in the State.

The Net Economic Contribution of the State Lottery

While the revenues of the State lottery dwarf those of charitable gaming, the objectives of the State Lottery are not unlike those of charitable gaming, to raise funds through the voluntary participation of individuals who purchase lottery tickets for the purpose of using those funds to provide a variety of government services. Those who purchase lottery tickets forgo the consumption of goods of services equal to the value of their lottery purchases for the chance of winning a greater amount of income and hence consumption. However, over the course of time, the combination of the payout of the winnings, revenues kept by the State and the payments made to the vendors is equal to the value of all ticket purchases. Thus, this is a transfer of income and consumption from lottery

ticket purchasers to the lottery winners, vendors of tickets and the State (and ultimately to individuals and groups who receive the distribution of the State's lottery revenues).

As shown in **Table 2.3**, lottery sales have steadily increased from \$538 million in 1991 to an estimated \$726 million in 1996. Between 1991 and 1993, lottery sales increased by only 2.6%. Between 1993 and 1996 sales increased 31%. The increase in the rate of growth of lottery sales since 1993 primarily reflects increased sales of Instant Lottery tickets. Beginning in 1994, the State began to offer a broader variety of Instant games with different prices. The \$2 Mega Money game was introduced in March 1994; this was followed by the addition of a \$3 game in January 1995 and a \$5 game in August of the same year.

Calendar Year	1991	1992	1993	1994	1995	1996²
Lottery Sales	\$538	\$548	\$552	\$611	\$689	\$726
Transfers to the General Fund	\$225	\$222	\$219	\$233	\$256	\$269
Prizes	\$285	\$301	\$312	\$347	\$394	\$404
Agent Commissions	\$27.6	\$23.7	\$24.0	\$31.8	\$35.1	\$35.6
Daily Average Number of Terminals	1,403	2,696	2,904	3,051	3,080	3,092

¹ Source: Division of Special Revenue, 1996
² Estimated.

Even while lottery sales were increasing between 1991 and 1993, transfers to the General Fund actually fell from \$225 million in 1991 to \$219 million in 1993. However, with the strong growth in sales after 1993, transfers to the General Fund also rose to an estimated \$269 million in 1996, an increase of 23% from 1993.

Lottery prizes have shown a growth pattern somewhat similar to aggregate sales, increasing by 4.6% per year between 1991 and 1993 and then by 9.0% per year between 1993 and 1996. In 1991, prizes accounted for 53% of total sales. This has increased slightly to 56% by 1996. Thus, over half of the funds spent on lottery tickets are returned as prizes and represent a straight transfer of income from one group of residents in the State to another group.

The State's share of lottery sales, recorded as transfers to the General Fund, has fallen from 42% in 1991 to an estimated 37% in 1996. Given that a substantial portion of the State government's expenditures represent direct transfers to individuals and the payment of wages and salaries for the provision of public services, the State government expenditures supported by lottery sales also represent a transfer of income from one group in the State to another.

The remaining funds are distributed as commissions to the sales agents. These commissions have increased from \$27.6 million in 1991 to \$35.6 million in 1996. The latter figure represents 5% of aggregate lottery sales, i.e., the sales commission rate. Since these commissions do not represent a payment for a specific set of goods, they also

can be considered as income transfers. Consequently, the activity of the State Lottery has the principal effect of transferring income between groups in the State. Like charitable gaming, the State Lottery shifts the distribution of income between but does not generate any net increase in economic activity in the State.

This does not imply that there is no positive economic activity associated with the State Lottery, rather there is no "new" economic activity. During FY1996, the lottery generated almost \$707 million in sales and \$262 million in revenues. To support the sales, oversight and regulatory responsibilities of the State, 60 jobs were necessary which paid almost \$1.9 million in wage income. In addition, the State spent over \$20.4 million in such areas as advertising, telephone and professional services. Consequently, the State Lottery is a positive contributor to Connecticut's economy, although it does not create net "new" jobs and income.

The Net Economic Contribution of Gambling at Pari-Mutuel Facilities and the OTB System

In this section we analyze the economic contribution of gambling and associated spending at pari-mutuel betting establishments in Connecticut. The analysis in this section is based on the aggregate effect of operations run by the following seven organizations: Autotote Enterprises, Inc.; Berenson Pari-Mutuel Inc.; Bridgeport Jai Alai, Inc.; Connecticut Yankee Greyhound Racing, Inc.; Milford Jai Alai and Associates; the Shoreline Star Greyhound Park, and The State of Connecticut Division of Special Revenues.

Over the 1991-96 period there have been significant changes to the pari-mutuel industry. In 1991 there was one greyhound track, three jai alai frontons, 14 State-operated OTB branches (5 of which closed by the end of 1991), one telephone OTB branch, and three simulcast facilities (including two State-operated teletheaters). In late 1992, an OTB simulcast facility was opened at Bridgeport Jai Alai and toward the end of 1993, branch operations were opened at the Hartford and Milford jai alai frontons.

During 1993, Autotote Enterprises purchased the State's off-track betting system. In 1995, the Hartford jai alai fronton closed and the Bridgeport jai alai fronton discontinued operations and re-opened as Shoreline Greyhound Park. Thus, the estimated revenues for 1996 are generated by one jai alai fronton, two greyhound parks, nine privately owned OTB branches, six simulcast facilities and a telephone betting system.

As shown in **Table 2.4**, the handle at Connecticut's pari-mutuel facilities steadily decreased throughout the period of analysis, falling from \$271.3 million in 1991 to an estimated \$94.3 million in 1996. The take-out, while also lower in 1996 than 1991, has not fallen as sharply. This is primarily the result of the reduction of the effective state pari-mutuel tax on the handle from approximately 4% in 1993 to 1.5% in 1994 and thereafter.

Between 1991 and 1993, the handle at the State's OTB system dropped from \$192.5 million to \$173.2 million, a 10% decline. On July 1, 1993, Autotote Enterprises assumed control of the OTB system. By 1996, handle had increased to an estimated \$244.5 million, a 41% increase since 1993. The take-out, defined as handle less return to bettors, less commission retainage, less breakage, also steadily increased from \$37.8 million in 1991 to a projected \$47.9 million in 1996. This represents an increase of 26.7% between 1991 and 1996.

Over the 1991-93 period, when the State owned and operated the OTB system, annual transfers to the General Fund averaged \$13.0 million, about twice the level they are today. During that period the transfers averaged just over 7% of the handle, but the State also had to pay for all operating expenses. Since 1993, annual transfers to the General Fund have averaged about \$6.4 million, about 2.7% of the handle, but the State no longer pays the operating expenses of the OTB system.

Table 2.4 Wagering and Estimated Take-out¹ from Gambling Operations at Pari-Mutuel Facilities and the Off-Track-Betting System (in Millions)²

Calendar Year	1991	1992	1993	1994	1995	1996 ³
Pari-Mutuel Facilities						
Handle	\$271.3	\$223.5	\$181.3	\$150.1	\$127.6	\$94.3
Take-out	\$50.1	\$43.0	\$36.4	\$30.0	\$25.6	\$19.0
Take-out (% of Handle)	18.5%	19.2%	20.1%	20.0%	20.1%	20.1%
OTB System						
Handle	\$192.5	\$181.2	\$173.2	\$199.7	\$238.4	\$244.5
Take-out	\$37.8	\$35.8	\$35.3	\$38.6	\$46.7	\$47.9
Take-out (% of Handle)	19.6%	19.8%	20.4%	19.4%	19.6%	19.6%

¹ Take-out is calculated as handle less return to bettors.
² Source: History of Revenues from Legalized Gaming and Related Statistics, Fiscal Years 1972 to 1996, Division of Special Revenue and income statements provided by Autotote and the pari-mutuel facilities.
³ Estimated using actual handle numbers.

Direct Spending at Pari-Mutuel and OTB System

As outlined at the beginning of this chapter, the first step of the I/O approach used in this study is to establish an estimate of direct spending at the gambling venues being analyzed. The components of direct spending include the take-out (the funds won by the betting facilities from the patrons); food and beverage revenues (the income earned by the establishments on the sale of food and beverages to patrons); and miscellaneous revenues (receipts from admissions, parking and entertainment). Each component is discussed in order, and summarized in **Table 2.5**. The revenues reported in this section are drawn from income statements provided by the pari-mutuel facilities and the OTB system.

Calendar Year	1991	1992	1993	1994	1995	1996 ¹
Revenue²	\$64.1	\$53.8	\$56.5	\$57.4	\$59.2	\$52.1
Pari-Mutuel Facilities	\$31.7	\$29.4	\$33.8	\$34.0	\$29.9	\$22.1
OTB System	\$32.4	\$24.4	\$22.7	\$23.4	\$29.3	\$30.0
Food & Beverage Revenue³	\$4.4	\$3.9	\$3.6	\$3.2	\$3.0	\$2.3
Miscellaneous Revenue⁴	\$5.5	\$5.7	\$5.5	\$7.0	\$7.3	\$6.3
Gross Direct Revenue	\$74.0	\$63.4	\$65.6	\$67.6	\$69.4	\$60.6
Pari-Mutuel Facilities	\$41.2	\$38.0	\$41.9	\$41.9	\$36.8	\$27.2
OTB System	\$32.8	\$25.4	\$23.7	\$35.7	\$32.6	\$33.4
Net Direct Spending⁵	\$57.3	\$49.2	\$50.9	\$52.4	\$57.7	\$47.0
Pari-Mutuel Facilities	\$31.9	\$29.5	\$32.5	\$32.4	\$28.5	\$21.1
OTB System	\$25.4	\$19.7	\$18.4	\$20.0	\$29.2	\$25.9

¹ Estimated.

² Revenue is calculated as take-out less state and town shares of take-out, and less state share of breakage. Reported as gross revenue from gambling operations by the pari-mutuel and OTB establishments and by the State for the period it operated the OTB. Recorded by establishment- e.g., revenue from OTB and Simulcast operations accrued by pari-mutuel establishments is recorded as pari-mutuel revenues and pari-mutuel simulcast revenues are not reported as OTB system revenues.

³ Spending by patrons on food and beverages as reported by pari-mutuel and OTB establishments. WEFA estimated food and beverage revenue at the OTB facilities during the period they were operated by the State.

⁴ Spending on items including non-gambling entertainment, parking, admissions, and programs as reported by the pari-mutuel and OTB establishments and estimated by WEFA for the period the OTB establishments were operated by the State.

⁵ Subtracts out spending that has been substituted for other local spending. Also includes \$3.9 million in construction spending by Autotote Enterprises in 1995.

Source:	Financial	Wage	Employment
Autotote Enterprises	1994-95	1994-95	1994-95
Berenson Pari-mutuel, Inc.	1991-95	1991-95	
Bridgeport Jai Alai, Inc	1991-95	1991-95	
Milford Jai Alai (previously Connecticut Jai Alai, Inc.)	1991-95	1991-95	1991-95
Shoreline Star Greyhound Park	11/95 - 9/96	11/1/96	11/1/96
Connecticut Yankee Greyhound Racing, Inc.	1991-95	1991-95	1991-96
State of Connecticut OTB	1991-93	1991-93	

Wagering and gross revenues from gambling operations at pari-mutuel facilities and the OTB system are presented in **Table 2.5**. In 1991 the total recorded handle, or amount wagered, was \$271.3 million (see **Table 2.4**). Of this amount, pari-mutuel facilities recorded a take-out of \$49.9 million. Of this amount, \$31.7 million was recorded as revenue, take-out less state and town shares of pari-mutuel commission and the state share of breakage. During the same year, the OTB system recorded total handle of \$193 million, and revenue of \$32.4 million. Jumping ahead to estimates for 1996, pari-mutuel

facilities are expected to report a total handle of approximately \$94.3 million, and revenues of \$22.1 million. The OTB system is expected to report a total handle of approximately \$244.5 million, and revenues of \$30 million in 1996.

During 1991, pari-mutuel facilities and the OTB system combined recorded food and beverage revenues of \$4.4 million, and miscellaneous revenues of \$5.5 million. Estimates made by WEFA for 1996 show combined food and beverage revenues of \$2.3 million, and miscellaneous revenues of \$6.3 million. These totals include revenues at facilities run directly by the establishments, as well as revenues derived from the sale of on-site franchise rights, i.e., the pari-mutuel facilities generally sell franchise rights for food and beverage sales to firms who specialize in such sales for a franchise fee and a percentage of sales.

The summation of the revenue, food and beverage revenue, and miscellaneous revenue is recorded as gross revenue in **Table 2.5** and represents the measure of direct spending at pari-mutuel establishments and the OTB system. In 1991, pari-mutuels recorded gross revenues of \$41.2 million, and the OTB system recorded gross revenues of \$32.8 million, for a combined gross revenue total of \$74.0 million. After falling to \$63.4 million in 1992, total gross revenues increased to \$69.4 million by 1995, driven primarily by increased revenues from the OTB system. However, WEFA has estimated that revenues for 1996 have fallen sharply to \$60.6 million due to a \$9.6 million decline since 1995 in pari-mutuel revenues and only a small, \$800,000, increase in OTB system revenues.

The next step is to adjust the annual gross direct spending figures, i.e., gross revenues, to reflect that portion of spending at pari-mutuel facilities and the OTB system that is a substitute for spending which would have occurred at other retail and entertainment establishments in the state. As noted in the discussion of substitution on page 2-4, WEFA estimates that approximately 75% of the gross revenues of pari-mutuel facilities and the OTB system is a substitute for other retail spending in the state. Using 1991 as an example, pari-mutuel facilities and the OTB system recorded gross revenues of \$74.0 million. Of this amount, \$56.7 million was redirected by individuals from retail establishments⁵. The difference between \$74.0 million and \$56.7 million is \$17.3 million, however, it would be jumping the gun to use \$17.3 million as the total net direct spending generated. According to its nature, retail trade involves the resale of goods purchased from wholesalers or producers, including operations outside state boundaries. Approximately 70% of retail spending is allocated for the purchase of retail goods by retail establishments. The remaining 30% of retail spending, the retail trade margin, is the proportion of spending that actually affects jobs and income in the State⁶. Therefore only a little more than 30% of the \$56.7 million of offset retail spending, approxi-

⁵ Though transfers to the General Fund represent spending by pari-mutuel and OTB patrons, these transfers are not included in gross spending for use in this analysis. Such taxes may be characterized as a form of income transfer, from some Connecticut residents in the form of a pari-mutuel commission for example, redistributed to other State residents in the form of government services. Therefore, for the purpose of this analysis, gross spending at pari-mutuel and OTB facilities during 1991 was \$78.0 million.

⁶ For further explanation of this adjustment and an explanation of trade margins, see WEFA, September 1996, and U.S. Input-Output Methodology, published by the US Department of Commerce.

mately \$16.7 million, is pertinent to an estimate of the economic impact of gambling establishments in Connecticut. Thus the net direct spending generated by pari-mutuel gambling operations during 1991 may be calculated by taking the \$74.0 million in gross revenues and subtracting the portion of the substitution effect which has a direct impact on jobs and income in the state, \$16.7 million, leaving net direct spending of \$57.3 million, as recorded in **Table 2.5**.

The net direct spending figures may also be interpreted as follows: if pari-mutuel and OTB wagering in the State had ceased before 1991, the loss in net revenue to Connecticut business establishments during 1991 would have been \$57.4 million. The following sections trace the direct and indirect impacts of this net direct spending on the Connecticut economy.

Annual net direct spending presented in **Table 2.5** reflects trends in the underlying revenue components as discussed above. Net direct spending declines from \$57.3 million in 1991 to \$49.2 million in 1992 as both pari-mutuel facilities and the OTB system reported declining revenues. After 1992 net direct spending increased each year, to an estimated \$57.7 million in 1995. WEFA has estimated that net direct spending fell in 1996 to \$47.0 million as a consequence of the sharp drop in handle at the state's pari-mutuel facilities. The increase in net direct spending in 1995 to \$57.7 million was primarily due to \$3.9 million in construction and renovation spending by Autotote Enterprises. Similar spending in previous years was insignificant.

Employment and Wages Generated by the Direct Pari-Mutuel and OTB Spending

Wagering at the pari-mutuel facilities and the OTB system generates direct employment including full-time management employees and part-time employees for processing wagers, selling food, providing security and other services. During 1991, as shown in **Table 2.6**, pari-mutuel facilities and the OTB system employed 1,566 full- and part-time employees and paid wages and salaries (excluding benefits and tips) of \$25.2 million. Despite the increase in revenues between 1991 and 1996, employment declined. WEFA estimates that by 1996 employment at pari-mutuel facilities and the OTB system had decreased to 1,110 and wages and salaries had declined to \$18.3 million.

The net direct employment and wage figures shown in **Table 2.6** include the negative adjustment to direct employment and wages which results from the lost employment opportunities elsewhere in the state that occur because spending is shifted from other consumer goods and services to pari-mutuel and OTB wagering. This employment offset falls from 305 jobs in 1991 to 240 jobs in 1996. It is estimated that wagering at pari-mutuel facilities and the OTB system resulted in a positive net contribution to employment of 870 jobs in 1996.

Following the pattern of revenues, net direct employment generated by wagering at pari-mutuel facilities has remained fairly steady, at an average 1,027 jobs between 1991 and 1994. As revenues began to decline in 1995 and 1996, so did net direct employment, falling from 1,011 jobs in 1994 to 649 jobs in 1996. Net direct employment generated by the state's OTB facilities fell to 161 jobs in 1993 from 196 jobs in 1991. However, since 1993, net direct employment generated by the OTB system increased to 287 jobs in 1995. In 1996 employment generated by the OTB system fell to 221 jobs. The principal reason for the decline in 1996 was the decline in construction and renovation activity by Autotote Enterprises.

The net direct wages generated by wagering at pari-mutuel facilities and the OTB system decreased from \$19.1 million in 1991 to \$13.0 million in 1996. Net direct wages generated by the State's pari-mutuel facilities fell from \$12.7 million in 1991 to \$8.2 million in 1996. Net direct wages generated by the State's OTB system decreased from \$6.4 million in 1991 to \$4.8 million in 1996.

Calendar Year	1991	1992	1993	1994	1995	1996 ³
Pari-Mutuel and OTB Wages⁴	\$25.2	\$23.9	\$25.2	\$22.7	\$21.8	\$18.3
Pari-Mutuel and OTB Employ.	1,566	1,431	1,467	1,452	1,411	1,110
Net Direct Wage Impact	\$19.1	\$18.4	\$19.6	\$16.9	\$17.2	\$13.0
Pari-Mutuel Facilities	\$12.7	\$12.1	\$12.9	\$12.7	\$11.1	\$8.2
OTB System	\$6.4	\$6.3	\$6.7	\$4.2	\$6.1	\$4.8
Net Direct Employment Impact	1,261	1,168	1,196	1,180	1,198	870
Pari-Mutuel Facilities	1,065	997	1,035	1,011	911	649
OTB System	196	171	161	169	287	221

¹ Full- and part-time jobs.
² Total annual wages and salaries in millions of dollars as reported by the Pari-Mutuel and OTB establishments and by the State for the period it operated the OTB.
³ WEFA estimates.
⁴ WEFA estimates calculated using pari-mutuel and OTB wages and salaries, and employment patterns at Connecticut pari-mutuel facilities and the OTB system. The number of jobs and implied average wage is not directly comparable to productivity and wage levels of full-time employees in other industries, due to the substantial number of part-time employees.

	Connecticut Yankee Greyhound Racing	Milford Jai Alai	Autotote Enterprises
Mutuels	57	85	244
Admissions		14	34
Players		58	
Racing	41		15
Parking			
Concessions	16	69	
Bars			
Restaurants	39		
Maintenance	15	16	50
First Aid	4		
Security	15	24	
Administrative	6	10	4
Miscellaneous	14	14	17
Total	207	290	364

Indirect Economic Contribution of Wagering at Pari-Mutuel Establishments

The indirect economic contribution of wagering at the State's pari-mutuel facilities and the OTB system is generated from two sources of spending. First, the pari-mutuel and OTB establishments purchase a variety of business services and materials from other suppliers. Second, employees of the pari-mutuel and OTB establishments, and employees of the suppliers to these facilities, use the income generated by their employment to purchase consumer goods and services. The size of the effect of employee spending is dependent upon the industrial structure of the State's economy and the degree to which Connecticut firms and residents purchase goods and services from out-of-state businesses. These factors are imbedded in the I/O model which was used to estimate these impacts.

The indirect employment contribution, by industry, is shown in **Table 2.8**. Since 1991, the indirect employment contribution has decreased from 539 jobs to 397 jobs by 1996. As apparent in the table, the service sector accounts for the majority, about 77%, of the indirect employment contribution. These impacts are generated primarily by purchases made by pari-mutuel establishments and their employees. Advertising, computer services, personnel agencies, equipment rental and leasing are a partial list of the types of business services which provide the indirect employment. The construction, manufacturing and utilities sectors provide about 17% of the indirect employment contribution, adding just under 80 jobs per year since 1994. Most of these jobs are generated by the consumer spending of the employees on housing, utility services and consumer goods. The wholesale and retail trade sectors provide the smallest contribution to the indirect employment impacts, accounting for approximately 6% of all indirect jobs.

Calendar Year	1991	1992	1993	1994	1995	1996 ¹
Const/Mfg/TCPU²	88	77	78	77	82	67
Wholesale & Retail Trade³	31	27	28	28	31	29
Services⁴	420	374	353	354	374	301
Total	539	478	459	459	487	397
Pari-Mutuel Facilities	284	261	268	263	221	160
OTB System	255	217	191	196	266	237
¹ Estimated. ² Construction, manufacturing and transportation, communications and public utilities. ³ Includes restaurants and other eating and drinking establishments. ⁴ Includes business, personal and financial services.						

The pattern of indirect job creation generated by the State's pari-mutuel facilities and the OTB system is similar to that of net direct job creation. The indirect jobs created by activities at the pari-mutuel facilities remained near an average of 270 jobs between 1991 and 1994, falling to 160 jobs by 1996. The indirect jobs generated by wagering at the OTB system declined from 255 jobs in 1991 to 191 jobs in 1993. Since then, the indirect jobs created by the OTB system increased to 266 jobs in 1995 as a result of the increased handle at the OTB system and the construction and renovation activity by

Autotote Enterprises. Indirect employment generated by the OTB system then fell to 237 jobs in 1996.

Table 2.9 displays the wages and salaries generated by this indirect employment. The service sector generates the largest volume of wages and salaries, \$7.7 million in 1996, and 72% of the total indirect impact in that year. The construction, manufacturing, transportation, communications and utilities sectors added \$2.5 million to the indirect contribution in 1996. This was 23% of the total indirect impact. The wholesale and retail trade sector only added \$0.5 million in wages, 5% of the total indirect impact. Because the construction, manufacturing and utilities sectors are relatively high wage sectors, their share of the indirect wage impact is higher than their share of the indirect employment impact.

Calendar Year	1991	1992	1993	1994	1995	1996 ¹
Const/Mfg/TCPU ²	\$2.9	\$2.6	\$2.7	\$2.7	\$3.1	\$2.5
Wholesale & Retail Trade ³	\$0.5	\$0.4	\$0.5	\$0.5	\$0.5	\$0.5
Services ⁴	\$8.9	\$7.9	\$8.1	\$8.3	\$9.5	\$7.7
Total	\$12.3	\$10.9	\$11.3	\$11.5	\$13.1	\$10.7
Pari-Mutuel Facilities	\$6.5	\$6.0	\$6.6	\$6.6	\$5.8	\$4.3
OTB System	\$5.8	\$4.9	\$4.7	\$4.9	\$7.3	\$6.4

¹ Estimated.
² Construction, manufacturing and transportation, communications and public utilities.
³ Includes restaurants and other eating and drinking establishments.
⁴ Includes business, personal and financial services.

Conclusion

In conclusion, the total contribution, direct plus indirect economic contribution, is shown in **Table 2.10**. WEFA estimates that the economic contribution of the pari-mutuel and OTB wagering industry generated 1,267 full- and part-time jobs in 1996, accounting for total wage and salaries of \$23.7 million. Of these amounts it is estimated that, in 1996, 88% (1,330) of the total number of part and full-time jobs, and 77% (\$22.0 million) of the wage and salary impact, are accounted for by jobs at the pari-mutuel facilities and the OTB establishments. The remainder is the result of the indirect effects of income and expenditures generated by the pari-mutuel and OTB establishments after adjusting for the substitution effect offsetting other local spending.

The total economic contribution of pari-mutuel and OTB gambling has decreased over the period under examination. This decline has been driven by the decrease in gambling at the State's pari-mutuel facilities. As shown in **Table 2.10**, the contribution of the State's pari-mutuel facilities to employment and income has declined steadily since 1991. As a consequence, the pari-mutuel industry's contribution to jobs and income in the State has fallen by about 35% between 1991 and 1996.

The contribution of the OTB facilities has followed a completely different course. Both the employment and income contributions have increased over the five year period. Between 1991 and 1993, both the number of jobs created and the income earned as a result of gambling at the OTB system declined. However, since 1993 the number of jobs created has increased and is now higher than their 1991 levels. After the OTB was privatized on July 1, 1993, the new licensee was able to significantly reduce payroll relative to the number of jobs. Therefore, between 1993 and 1996, income earned is essentially flat. Consequently, by 1996 we estimate that the employment contribution was 2% higher than the 1991 contribution, while the contribution to wages and salaries in 1996 was 9% lower. The OTB system now accounts for about 47% of the combined economic contribution of the pari-mutuel facilities and the OTB system. In 1991, it accounted for only 39% of the combined impact.

Finally, it is important to state that in the absence of pari-mutuel and OTB gambling, these jobs would not exist. Persons listed under both the direct employment and indirect employment categories would become unemployed. If the State had been at full employment, there might be other sectors demanding workers that could absorb these workers, but this has not been the case in Connecticut.

Table 2.10 Total Net Impact on Employment and Wages and Salaries by Pari-Mutuel and OTB Gambling¹

Calendar Year	1991	1992	1993	1994	1995	1996 ²
Total Employment	1,800	1,646	1,655	1,639	1,685	1,267
Pari-Mutuel Facilities	1,349	1,258	1,303	1,274	1,132	809
OTB System	451	388	352	365	553	458
Total Wages & Salaries³	\$31.4	\$29.3	\$30.9	\$28.4	\$30.3	\$23.7
Pari-Mutuel Facilities³	\$19.2	\$18.1	\$19.5	\$19.3	\$16.9	\$12.5
OTB System³	\$12.2	\$11.2	\$11.4	\$9.1	\$13.4	\$11.2

¹ Source: WEFA.

² Estimated.

³ Millions.

The Net Economic Contribution of Gambling at the Foxwoods Casino

In this section we analyze the economic contribution of gambling and associated spending at the Foxwoods Native American Casino only. During the 1992-95 period, Foxwoods was the only casino in operation in the state. In October 1996, the Mohegan Sun Casino was opened. Sufficient data for the Mohegan Sun casino was not available for inclusion in this report. Consequently, our analysis of Native American casino gambling in Connecticut is limited to the Foxwoods Casino. This analysis follows the same format as the previous section.

Direct Casino-Related Spending

Table 2.11 shows the major direct spending categories associated with gambling at the Foxwoods Casino. Foxwoods opened for table games, in 1992, having operated high

stakes bingo since 1986. The casino introduced facsimile machines in January 1993, in addition to the table games and bingo (which continue), but only a few machines were in place before March 1993. As shown in the table, WEFA has estimated that visits to Foxwoods increased from 2.3 million in 1992, when only table games and bingo were available, to an estimated 17.6 million in 1995. Based on monthly figures through October 1996, it appears that visits to the casino will decline by almost 1.5 million for the year.

Under the provisions of the Mashantucket Pequot Gaming Procedures, any information obtained by the State under its audit authority is to be considered confidential and proprietary financial information belonging to the Tribe and shall be protected from public disclosure by the State without the express written consent of the Tribe. As discussed above, a Memorandum of Understanding was subsequently signed between the State and the Tribe allowing for the operation of video facsimile machines in return for "contributions" to the State of a percentage of the gross operating revenue (or "win," defined as the total of the amounts wagered less prize payouts to patrons) of these machines. Since the amount of each monthly contribution becomes a matter of public record when it is received by the Office of the State Treasurer, the practice has been to release the gross handle and win figures reflected on the Tribe's report to the State that accompanies each monthly contribution.

Calendar Year	1991	1992	1993	1994	1995	1996²
Gross Casino Revenue (Win)	\$0	\$120.0	\$389.7	\$724.5	\$890.2	\$922.9
Revenue from Facsimile³	\$0	\$0	\$253.1	\$470.9	\$576.8	\$599.9
Revenue from Tables & Bingo	\$0	\$120.0	\$136.3	\$253.6	\$313.4	\$323.0
Casino Visits⁴	0	2.3	10.2	14.8	17.6	16.1
Casino Food & Beverage Revenue⁵	\$0	\$12.6	\$28.7	\$51.0	\$63.6	\$72.1
Casino Entertainment Expenditures⁶	\$0	\$0.6	\$2.0	\$5.6	\$6.1	\$10.4
Casino Lodging Expenditures⁷	\$0	\$0	\$0	\$11.7	\$14.6	\$16.2
Casino Construction Expenditures⁸	\$53.2	\$207.6	\$222.3	\$30.6	\$129.8	\$274.8
Net Retail Expenditures⁹	\$0	(\$6.1)	\$22.6	\$19.9	\$21.7	\$9.1

¹ Source: Data and income statements provided by Foxwoods Resort Casino, unless otherwise noted.
² Estimated.
³ Reported as win by the casino, in millions.
⁴ Millions.
⁵ Spending by casino patrons at casino restaurants and food court, in millions.
⁶ Spending by casino patrons on entertainment, such as Cinetropolis and theaters, in the casino complex as reported by the casino, in millions.
⁷ Spending on rooms only at the casino's hotel facilities, as reported by the casino, in millions.
⁸ Spending on construction and improvements to land and facilities, in millions.
⁹ Source: WEFA. Spending on all forms of retailing, including food, clothing, entertainment, etc., at non-gambling establishments by patrons of the Foxwoods Resort Casino, in millions. An estimate of displaced spending by Connecticut residents has been subtracted from gross spending estimates.

During 1993, the first year of play at video facsimiles, Foxwoods grossed \$253.1 million in win. By 1995 this figure had grown to \$576.8 million. In both 1994 and 1995, the casino experienced double-digit growth in gross revenue from video facsimiles, 95% and 22%, respectively. Even though the number of visits to the casino appears to have declined during 1996, WEFA has estimated that video facsimile revenues will increase by about 4%, to just under \$600 million. Note that visits includes patrons for both video facsimile and table games.

The casino also generates spending on food and beverages, entertainment and lodging at its facility. Patrons at Foxwoods had the opportunity to spend money on food and beverages and entertainment prior to the introduction of the facsimile machines. Lodging facilities were not available to patrons until 1993. Spending on these non-gaming services increased from \$13.2 million in 1992 to \$84.3 million in 1995. From the data available for 1996, it appears that spending on these non-gaming services will increase to \$98.7 million. While facsimile revenues continue to account for the bulk of the casino's revenues, non-gaming revenues have increased more rapidly since 1994, 45% versus 27% for facsimile machine revenues. Consequently, non-gaming revenues have steadily increased their contribution to the casino's total revenues.

There has been a steady expansion of gambling and non-gaming opportunities at the Foxwoods Casino since the opening of Casino I for table games in February 1992. Between 1991 and 1996, Foxwoods spent approximately \$593.3 million to improve land and construct and expand its facilities. In 1993, Foxwoods opened several restaurants, the resort hotel and retail shops, along with Casino II which began operations in September 1993. During 1994, the gambling space continued to increase with the opening of a new bingo hall and the expansion of space allocated to facsimile machines. In addition the Cinetropolis and the food court cafes were opened. During 1995, additional entertainment was made available with the opening of Virtual Adventures in the Cinetropolis complex. Additional hotel space was also under construction during 1996.

In 1995, construction of the Mohegan Sun Casino began. Based upon figures reported by the casino, WEFA has estimated that \$81.2 million was spent on construction activity in 1995 and \$243.8 million was spent in 1996. As a result, casino construction expenditure rose sharply in both 1995 and 1996 to \$129.8 and \$274.8 million, respectively.

Expenditures for the improvement and expansion of the Foxwoods facilities were only available for the complete five year period, FY1992 through FY1996. As a result, we have estimated the spending totals on a calendar year basis according to the opening of the facilities. Thus, the year-to-year figures shown in **Table 2.11** represent WEFA's best estimate of the actual construction activity in each of the calendar years. Based upon this allocation, construction spending at Foxwoods peaked in 1992 and 1993, exceeding \$200 million in each of those years. Construction spending fell sharply thereafter as the current casino was largely completed. Expenditures in 1994 through 1996 were largely concentrated on the construction of additional lodging facilities and small expansions of gaming and non-gaming space.

Foxwoods management provided WEFA with data on revenues generated by spending on food and beverages, entertainment and lodging at the facility by its patrons. Food and beverages account for the bulk of these non-gaming revenues, 73% in 1996. Since 1992, spending on food and beverages at the casino has increased by 472%. This principally reflects the increase in visits over the period examined, but also the increase in the average spending on food and beverage per visit from \$2.83 in 1993 to \$4.50 by 1996. Thus,

while facsimile machine revenues increased by 4% in 1996, food and beverage revenues increased by 13.3%.

Entertainment revenues are the smallest component of direct spending at Foxwoods. With the opening of the Cinetropolis complex and Virtual Adventures, entertainment revenues rose rapidly during 1994 and 1996, increasing by \$4.1 million over their 1993 level. It appears that entertainment revenues experienced the most growth, \$4.3 million, in 1996.

Lodging revenues accounted for 16% of non-gambling revenues in 1996. Lodging facilities were first available in 1994, generating \$11.7 million in revenues. Since then lodging revenues have increased to \$16.2 million in 1996, an increase of 38% over the two-year period.

With new lodging facilities under construction, lodging revenues will likely experience an increase in growth over the next few years.

In addition to the spending which occurs at the casino facilities, the patrons of the casino will also spend additional money on such items as food, gasoline, and other tourist attractions (among others) at other establishments in Connecticut. We have estimated that in 1992, about \$7.00 was spent per visit on other retailing in the state. The \$7.00 figure is based upon information obtained by WEFA for other state impact analyses of casinos in similar situations to Foxwoods, namely, located near state borders and attracting out-of-state visitors.

We assumed that this figure has increased with inflation in each of the subsequent years, rising to approximately \$8.00 by 1996. As noted above, an adjustment was also made to retail spending to account for the shift in spending by Connecticut residents from general retailing to the casino.

To make this adjustment we first needed to determine the number of visits to the casino made by Connecticut residents. Several different estimates exist. A private survey of patrons of the Foxwoods casino, undertaken in May 1996, indicated that 40% of the patrons were Connecticut residents. While this survey covered most entrances to the casino it did not completely cover all entrances from the parking garage. Since a larger proportion of in-state patrons may drive to the casino than out-of-state patrons, this estimate may understate the proportion of in-state visits. Foxwoods also keeps records on the number of in-state and out-of-state vehicles which use their parking facilities. These figures suggest that 50% of the visits to the casino are generated by Connecticut residents. However, these figures count cars, not visits. If out-of-state cars carry more patrons than in-state vehicles, then these data would over-estimate the share of in-state visits. Lacking any more precise estimates we have used a figure of 45%, as the share of the Foxwoods Casino visits generated by Connecticut residents, in this study. This proportion splits the difference between the two sources.

For 1992, when only bingo and table games were available at Foxwoods, WEFA estimates that two-thirds of the visits were made by residents of Connecticut. As noted in the discussion of substitution on page 2-4, about 60% of the spending by Connecticut residents at the Foxwoods Casino is a substitution for other retail spending in the state. This suggests that Connecticut businesses experienced a loss of \$66 million in retail expenditures in 1992 as a direct result of Connecticut residents' spending on table games and bingo at Foxwoods. By 1996, we have estimated that the amount of displaced spending had increased to almost \$360 million. After accounting for this displaced spending and

adjusting it for conversion to a trade margin concept (see the previous discussion on pages 2-12 and 2-13 of this chapter), we have estimated that the effect of Foxwoods on net retail spending at non-gambling establishments in Connecticut fluctuated between a loss of \$6.1 million in 1992 to a gain of \$22.6 million in 1993. In 1996, we have estimated that Connecticut businesses gained \$9.1 million in other retail spending by patrons of Foxwoods.

As noted in the beginning of this chapter, Foxwoods does not make public its revenues from table games and bingo. Industry-wide data⁷ suggests that slot machines in New Jersey and Nevada account for approximately 65% of casino revenues. Assuming that this same relation holds for Foxwoods, then total revenue in 1996 may have reached \$923 million.

Employment and Wages Generated by the Direct Spending at Foxwoods

The spending associated with gambling at the Foxwoods Casino has created jobs at the casino and other retail establishments. In addition, the construction activity at the casino complex has generated jobs within the construction sector. **Table 2.12** shows the jobs and wages which have been created in these sectors.

Employment created by construction activity at the casino complex peaked during 1992 and 1993 with 3,035 and 3,203 full and part-time construction jobs, respectively. The reported employment figures for construction and the other employment categories which follow combine both full-time and part-time jobs. The additions to the complex which have occurred during the 1994-96 period have generated between 400 and 700 jobs in each of those years. Average annual wages per worker in the construction sector averaged about \$21,700 over the 1991-96 period, about 20% below the average annual wage for all workers. Because Connecticut has such high manufacturing, finance and service sector wages, construction wages are below the average for the state. During the peak employment year of 1993, construction workers received \$68.3 million in wages. With the decline in employment since then, construction wages have fallen to an estimated value of \$9.5 million in 1996.

The Foxwoods casino gambling operations have provided most of the direct employment and wage contributions. As shown in **Table 2.12**, employment at the casino has steadily increased from 4,015 employees in 1992 to 9,965 in 1996. Wages have followed a similar trend, rising from \$66.9 million in 1992 to an estimated \$302.5 million in 1996.

⁷ Christiansen, 1991-1996

Calendar Year	1991	1992	1993	1994	1995	1996 ⁴
Construction Employment	730	3,035	3,203	438	2,109	4,540
Construction Wages	\$16.3	\$63.7	\$68.3	\$9.4	\$45.9	\$102.3
Casino Employment ⁵	n.a. ⁶	4,015	7,163	9,002	9,847	9,965
Casino Wages ⁵	n.a.	\$66.9	\$133.7	\$216.9	\$271.0	\$302.5
Retail Employment	0	69	1,221	1,561	1,837	1,485
Retail Wages	\$0	(\$1.1)	\$12.5	\$13.8	\$15.9	\$11.0
Total Direct Employment	730	7,119	11,587	11,001	13,793	15,590
Total Direct Wages	\$16.3	\$129.5	\$214.5	\$240.1	\$332.8	\$415.8

¹ Full- and part-time jobs.
² Average annual wages and salaries in millions.
³ Source: WEFA, unless otherwise noted.
⁴ Estimated.
⁵ Source: Foxwoods Resort and Casino.
⁶ Not available.

The average annual salary of a worker at the casino (including taxes and benefits) has risen from \$16,673 in 1992 to \$30,356 in 1996. The casino classifies its employees into nine employment categories: 1) senior management, 2) directors, 3) managers, 4) supervisors, 5) games - floor workers and dealers, 6) games support, 7) non-gaming floor workers, 8) non-gaming support, and 9) general support. In 1996, average annual wages (excluding gratuities) in each class ranged from a high of \$215,350 for senior management to \$11,442 for games - floor workers and dealers. This latter group accounts for the largest number of employees. **Table 2.13** shows the employment, total wages and the average annual wage per worker in each category as of December 1996. The difference in total casino employment between **Tables 2.12** and **2.13** reflects the fact that the figure in **Table 2.12** represents an average employment total for the year, while the figure shown in **Table 2.13** is the number of employees in the month of December. Also note that total annual wages and salaries in **Table 2.13** do not include benefits. Wages shown in **Table 2.12** on the other hand do include benefits. The employment data shown in **Table 2.12** and in **Table 2.13** does not include the 1,100 Tribal Council employees, as these are not casino employees.

Net spending by casino patrons at other retail establishments has generated about 1,500 jobs per year since 1993, and about \$13 million in average annual wages and salaries. In 1992, when an estimated 90% of the patrons of the card room and bingo hall were from Connecticut, only an estimated 69 jobs were created in other retail establishments, with a net loss of \$1.1 million in average annual wages and salaries. Even though there was an increase in aggregate employment, there was a loss in income due to the shift from relatively higher paying jobs to lower paying jobs. In subsequent years, the aggregate increase in employment was large enough to offset any reduction in average wages.

Category	Number of Employees	Total Annual Wages (excluding benefits)	Average Annual Wage
Senior Management	17	\$3,660,958	\$215,350
Directors	45	\$3,235,101	\$71,891
Managers	328	\$14,373,774	\$43,822
Supervisors	833	\$28,356,792	\$34,042
Dealers & Floor Workers	2,716	\$31,075,163	\$11,442
Games Support	1,518	\$28,183,141	\$18,566
Non-games Floor Workers	515	\$6,875,122	\$13,250
Non-gambling Support	2,349	\$40,627,335	\$17,296
General Support	1,794	\$36,142,616	\$20,146
All Categories	10,115	\$192,530,002	\$19,034

¹ Source: Foxwoods.

As shown in **Table 2.12**, the direct employment contribution has steadily increased through 1996. Direct employment created by casino gambling has increased from 730 jobs in 1991 to almost 16,000 jobs through 1996. In terms of wages and salaries, the direct contribution of casino gambling has also steadily increased each year since 1991. We have estimated that total direct wages and salaries generated by gambling at Foxwoods and the construction of the Mohegan Sun Casino will have risen to \$415.8 million in 1996.

Indirect Economic Contribution of Gambling at Foxwoods

The indirect economic contribution of gambling at the Foxwoods Native American Casino is generated from two sources of spending. First, the casino, construction companies and the other retail establishments purchase a variety of business services and materials from other suppliers. Second, the employees of these firms purchase a range of consumer goods and services using the income generated by their employment. The size of the effect of employee spending is dependent upon the industrial structure of the State's economy and the degree to which Connecticut firms and residents purchase goods and services from out-of-state businesses. These factors are included in the I/O model which was used to generate these impacts.

The indirect employment contribution, by sector, is shown in **Table 2.14**. Since 1993, the indirect employment contribution has risen from 4,860 jobs to almost 8,000 by 1996. The year-to-year differences reflect the changing mix in direct spending. In 1992 and 1993 and again in 1995 and 1996, when direct construction activity was at its peak, the manufacturing sector contributed its highest level of indirect employment. During these years, the construction-related manufacturing industries, such as fabricated metals, construction equipment, lumber, cement, etc., created the bulk of the indirect manufacturing jobs. During 1994, when construction activity slowed, the manufacturing sector's indirect contribution also fell.

Calendar Year	1991	1992	1993	1994	1995	1996²
Construction	4	43	107	153	201	204
Manufacturing	259	1,046	1,325	638	1,273	1,754
TCPU³	18	120	249	297	370	412
Wholesale - Retail Trade	63	284	401	280	290	333
FIRE⁴	17	151	205	425	497	533
Business Services	22	215	478	648	762	813
Food & Beverage Estabs	6	52	114	170	214	211
Other Services	66	776	1,981	2,872	3,499	3,694
Total	455	2,687	4,860	5,483	7,106	7,954

¹ Source: WEFA.
² Estimated.
³ Transportation, communications and public utilities.
⁴ Finance, insurance and real estate.

As shown in **Table 2.14**, the business and other services sectors now account for the majority of the indirect employment contribution (approximately 57%). These impacts are generated primarily by casino and employee purchases. Advertising, computer services, personnel agencies, equipment rental and leasing are a partial list of the types of business services which provide the indirect employment generated by Foxwoods in the State. The other services sector, which includes such businesses as automotive repair, movie theaters, health services, accounting and management consulting services, has generated the largest indirect employment contribution. The jobs created in construction, in the transportation, communication and public utilities sector (TCPU) and in the finance, insurance and real estate sector (FIRE) have been generated by the increased demand for new or renovated business establishments and homes, loans and insurance services and the expanded use of utility services such as sanitation, telecommunications and electricity.

Table 2.15 displays the wages and salaries generated by this indirect employment. It is not surprising that manufacturing workers receive a high share of indirect wages and salaries in 1992 and 1993 since this sector provided large employment impacts. In addition, the state's average annual manufacturing wage is high, over \$43,000 in 1995 and 50% above the average annual wage in the State.

The other services sector has provided the highest indirect impact on wages and salaries, having generated \$91.6 million in wages in 1996, 38% of the total indirect impact. Combined, the manufacturing and other services sectors have accounted for more than 72% of the wages and salaries generated by the indirect impacts.

Calendar Year	1991	1992	1993	1994	1995	1996 ²
Construction	\$0.1	\$0.9	\$2.3	\$3.3	\$4.1	\$4.6
Manufacturing	\$9.6	\$40.9	\$52.7	\$26.3	\$51.9	\$82.1
TCPU³	\$0.6	\$3.8	\$8.1	\$10.0	\$13.3	\$15.4
Wholesale - Retail Trade	\$1.3	\$5.7	\$8.3	\$5.9	\$6.5	\$7.2
FIRE⁴	0.4	\$3.8	\$9.4	\$13.1	\$16.8	\$18.7
Business Services	\$0.4	\$3.6	\$9.2	\$13.0	\$16.6	\$18.3
Eating & Drinking Estabs	\$0.1	\$0.6	\$1.3	\$2.0	\$2.6	\$2.9
Other Services	\$1.4	\$16.8	\$45.4	\$66.6	\$84.1	\$91.6
Total	\$13.9	\$76.1	\$136.7	\$140.2	\$195.9	\$240.8

¹ Source: WEFA.
² Estimated.
³ Transportation, communications and public utilities.
⁴ Finance, insurance and real estate.

Conclusion

To summarize, **Table 2.16** shows the total, direct plus indirect, economic contribution of gambling at the Foxwoods Native American Casino and the construction of the Mohegan Sun Casino. Our analysis indicates that casino gambling and construction activity generated a total economic contribution of 23,544 jobs in 1996, which paid \$657 million in wages. It is estimated that in 1996 the Foxwoods Casino directly accounted for 42% of the total number of jobs, 9,965, and 46% of the wages and salaries, \$302 million, generated by the economic impact of the casino.

As with WEFA's estimates of the economic impact of pari-mutuel facilities and the OTB system in the state, these estimates represent the total net impact of Foxwoods on the state. These jobs and wages & salaries would not exist without Foxwoods.

Calendar Year	1991	1992	1993	1994	1995	1996 ²
Total Employment	1,185	9,806	16,447	16,484	20,899	23,544
Total Wages & Salaries³	\$30.2	\$205.6	\$351.2	\$380.3	\$528.7	\$656.6

¹ Source: WEFA.
² Estimated.
³ Millions.

3. TELEPHONE SURVEY OF CONNECTICUT RESIDENTS' GAMBLING BEHAVIOR AND OPINION

Introduction

Purpose

As part of this study, a telephone survey of Connecticut residents was conducted to measure Connecticut citizens' participation in and attitudes toward gambling. By design, the results of this study can be projected to the adult population of Connecticut 18 years of age and older. The survey was carried out during November 1996 by International Communications Research (ICR) of Media, PA.

The telephone survey was one of three surveys conducted as part of this study.¹ Of these, the telephone survey is the primary research instrument used. The approach utilized many of those findings described in this chapter

The following were the key issues addressed in the telephone survey:

- Participation in legal gambling is high.

Ninety six percent (96%) of Connecticut residents 18 years or older have participated in some form of gambling sometime in their lives - 80% in the lottery, 66% in casino gaming, 34% in horse/harness racing, 28% in jai alai, 18% in greyhound racing, and five percent in the OTB. In the past year, 88% of residents had gambled - 74% on the lottery, but only 38% in casino gaming, 6% in horse/harness racing, 3 % in jai alai, 2% in greyhound racing and 1% in OTB.

- Frequency of playing varies by game.

Over the past 12 months, 60% - 75% who played the Connecticut lottery had played once a month or less, depending on the game. In contrast, 87% of those attending a Connecticut Native American casino went nine or fewer times, and, of those attending a greyhound racing performance, 73% attended fewer than 6 times.

- The amount of money spent on each gambling activity varies with frequency of play and with several major demographic characteristics.

Five percent (5%) of those playing the Connecticut Lottery accounted for 56% of sales; the distributions are similar for other forms of gambling. Men account for a greater share of spending on the lottery than women; those over 55 years old also spend more in comparison to their share of the total adult population. Education appears to be the major demographic determinate of Lottery spending: those with a high school education or less are 52% of the adult population but account for 71% of lottery spending.

¹ The two other surveys are as follows: (1) An in-person survey at the Connecticut Native American Casinos, at the Plainfield Greyhound facility, at the Milford Jai Alai fronton, at the Windsor Locks Teletheater, and at five OTB branches. This survey is described in Chapter 8. (2) A survey of pathological gamblers who are members of Gamblers Anonymous. This survey is described in Chapter 6.

- Participation by Connecticut residents in out-of-state gaming is low.

There is negligible participation in lottery games outside Connecticut by Connecticut residents while one in ten of those who have been to a casino have visited a casino outside Connecticut.

- The majority of respondents thinks there are just the right number of gambling locations and Lottery sales agents.

Fifty four percent (54%) thought there were just the right number of gambling locations; 25% thought there were too many. In the case of Lottery sales agents, 69% thought there were just the right amount; 25% thought there were too many.

- Few disapprove of gambling or the way gambling is advertised.

Only 12% strongly disapproved of the types of Lottery games available; 16% expressed strong disapproval of the other forms of legalized gambling available in Connecticut. Fifty three percent (53%) said advertising was not at all influential in choosing a form of gambling in which to participate. Seventy eight percent (78%) believe there is no problem in the way legalized gambling is currently advertised in Connecticut.

- While many consider underage gambling to be a problem, few had placed bets for these individuals.

Forty percent (40%) felt underage or teen gambling in Connecticut is a somewhat serious or very serious problem.

Four and one half percent (4.5%) had placed bets for underage individuals.

- Awareness of, interest in and/or use of the Internet for gambling is low.

While 30% have access to a personal computer with access to the Internet, only one respondent was aware that there were sites where they could gamble on the Internet. Over 90% of those with access expressed no interest in using the Internet to gamble.

- Personal and household demographics affecting gambling include age, sex, income, education, marital status, presence of children, employment status, and race.

The demographics of gambling participants over the past year were similar to those of the adult population as a whole. The interesting variation is in lottery spending. Men spend significantly more than women, and older adults (55 years and over) spend more than that spent by lower age groups. Those with incomes between \$30,000 and \$49,000 spend significantly more and those earning \$50,000 to \$75,000 spend significantly less. Those with a high school or technical school education or less spend significantly more than do those individuals who are employed. Respondents from two income families with no children represent nearly five times as much spending (23%) as their share of the adult population (5%). However, single parents represent 6% of spending compared to 11% of the adult population.

In the remainder of this chapter we provide the approach and results of the telephone survey, with the exception of the following:

- Substitution and Saturation Implications -- Chapter 1

- Legal and Illegal Gambling -- Chapter 4
- Regressivity -- Chapter 4
- Prevalence of Pathological Gambling -- Chapter 5

Qualitative Research: Focus Groups

The first step in the research process was to conduct two focus groups with Connecticut residents: one with persons who gamble actively and one with persons who participate in limited or no gambling activities. Participants in the groups were randomly recruited from the population and screened for eligibility based on several factors including their participation in various gambling activities both in and outside the State of Connecticut. Each focus group lasted two hours and was conducted by an experienced focus group moderator.

The groups were designed to identify and confirm the range of relevant issues to be addressed in the quantitative research. Issues discussed included such topics as the types of gambling activities people participate in, motivations for participating in various gaming activities, likes and dislikes about various activities, typical wagers, perceptions of the quality and variety of gambling options in Connecticut, the positive and negative aspects of legalized gambling, and advertising effectiveness.

The results of the focus groups were considered in the design of the survey instruments and were helpful in prioritizing the issues to address in the survey, ensuring that the most relevant issues were captured, and guiding the terminology used in the survey instruments.

From the issues developed in the qualitative research and the detailed requirements of this study, ICR then developed a quantitative instrument to measure specific issues. In this research, we have focused on demographics and lifestage including double-income-no-children, single parent and retired categories. Analyses sometimes include lifestyle issues, but the sample was not large enough to assess those issues in this research.

The survey questionnaire were modified based on input from the Division of Special Revenue, who in turn queried interested parties in the state, along with input from other contributors to the study.

Survey Design

Interviewing for the telephone survey commenced on October 30, 1996 and was completed on November 10. On average, each interview took approximately 17 minutes to conduct.

Sample

A sample of 1,000 respondents was selected for the telephone interview. The sampling error on 1,000 interviews is $\pm 3.1\%$ at the 95% level of confidence. This means that if the study were conducted among all residents of the state of Connecticut, 95 out of 100 times the entire population's results would fall within three percentage points of the survey. However, information about subgroups would be less accurate. For instance, if a sub group such as participants in a particular gambling activity were 10% of the total sample (100 respondents), the margin of error would be $\pm 10\%$ (± 10 respondents).

ICR employs the Genesys sampling system which is a fully-replicated, stratified, single-stage random-digit-dialing (RDD) sample of telephone households. A single-stage sample is the best type of sample. It essentially looks at the universe of households with a telephone and selects from that universe. Other samples may have a multi-stage selection process which may have additional stages of selection. They may include a geographic region, or represent specific sized communities as a representation of other communities that are of the same population. Using a single-stage approach results in a better representation, a true independent sample, and greater accuracy. Telephone numbers are computer generated for the sample and loaded into on-line sample files accessed directly by the computer system.

Within each sample household, a single respondent is often randomly selected using a computerized procedure based on the "Last Birthday Method" of respondent selection. This procedure has proven best since it randomly selects an adult in the household. It has been proven that women tend to answer the phone most frequently. With the Last Birthday Method, a male should have an equal chance of being selected for the interview. Even with this method, however, women tend to be selected more often than men. The ICR approach is to request to speak with the male in the household (18 or older in this case) with the most recent birthday. In the actual telephone survey, males and females were given a quota based on their representation in the general public.

Weighting

This study was weighted to provide statewide representative and projectable estimates of the adult population of Connecticut 18 years of age and older based on US Census figures. The data was weighted by Gender, Age, Education and Race to reflect the demographics of the State of Connecticut.

In **Table 3.1**, we compare the demographics of the 1996 survey sample with those of the 1991 survey sample.² The unweighted 1996 sample is very similar to the 1991 sample. The present study, as noted above, weighted the 1996 sample to more accurately reflect the population. The following is the procedure used in the 1991 survey:

A random digit dial (RDD) sample was purchased proportionate to the number of residents in each of the eight counties in the State. Residents were contacted by telephone and asked to participate in a telephone survey on legalized gaming in the state. The interviewer asked to speak to the adult in the household with the closest birthday. Individuals working in the gaming industry, for marketing

² Christiansen-Cummings, 1992

research or consulting firms, the State, or advertising agencies were excluded from the study.

Table 3.1 Differences Between the 1991 and 1996 Surveys

	1996 Survey					1991 Survey Sample		1996 Weighted - 1991 Sample
	Unweighted Sample		Weighted Sample		Value of Weights ¹	Number	Percent	Percent
	Number	Percent	Number	Percent				
Education								
Total	994	100%	992	100%		1000	100%	0%
Less than high school	60	6%	195	20%	3.24	77	8%	12%
High school graduate	315	32%	303	30%	0.96	281	28%	-2%
Some college	242	24%	197	20%	0.81	220	22%	-2%
College graduate	223	22%	174	18%	0.78	215	22%	-4%
Graduate school	125	13%	98	10%	0.78	135	14%	-4%
Technical school	24	2%	22	2%	0.92	54	5%	-3%
Refused	5	1%	4	0%	0.75	18	2%	-1%
Income²								
Less than \$15,000	80	8%	111	11%	1.39	83	8%	3%
\$15,000-24,999	107	11%	132	13%	1.23	122	12%	1%
\$25,000-49,999	284	29%	280	28%	0.99	302	30%	-2%
\$50,000-74,999	165	17%	140	14%	0.85	166	17%	-3%
\$75,000 and up	195	20%	158	16%	0.81	102	10%	6%
Uncertain	163	16%	171	17%	1.05	225	23%	-5%
Age²								
18-24	120	12%	139	14%	1.16	107	11%	3%
25-34	228	23%	216	22%	0.95	223	22%	-1%
35-44	248	25%	181	18%	0.73	248	25%	-7%
45-54	156	16%	139	14%	0.89	157	16%	-2%
55-64	97	10%	122	12%	1.26	105	11%	2%
65 and over	131	13%	185	19%	1.42	147	15%	4%
Refused	14	1%	9	1%	0.66	13	1%	0%
Gender								
Male	461	46%	476	48%	1.03	480	48%	0%
Female	533	54%	516	52%	0.97	520	52%	0%
Residence								
Fairfield	223	22%	213	21%	0.95	250	25%	-4%
Hartford	253	25%	247	25%	0.98	260	26%	-1%
Litchfield	67	7%	61	6%	0.91	50	5%	1%
Middlesex	52	5%	52	5%	1.00	40	4%	1%
New Haven	216	22%	227	23%	1.05	240	24%	-1%
New London	72	7%	79	8%	1.10	80	8%	0%
Tolland	33	3%	36	4%	1.09	40	4%	0%
Windham	29	3%	28	3%	0.97	40	4%	-1%
Uncertain	49	5%	49	5%	0.99	0	0%	5%
<p>1 Data were weighted by education, age, race and gender. Values shown in the "Weights" column for Income and Residence result from this weighting.</p> <p>2 Some income and age categories were collapsed for purposes of comparison.</p>								

Source: Telephone survey of Connecticut residents, November 1996.

All interviews were conducted during the weekend or weekday evening hours to assure a representative cross-section of Connecticut residents. In addition, interviewing was proportionate to : (a) the gender population for the state, and (b) the number of residents in each of the state's eight counties.³

The 1992 study did not, apparently, apply a post-survey weighting to the results to make the sample as consistent as possible with the demographics of the Connecticut population. As **Table 3.1** indicates, the weights on the 1996 sample were quite large in some cases to take care of under sampling of particular populations. The largest weight is that for "Less than high school" (3.24), followed by "Age 65 and over" (1.42).

Because the weighting issue results in significant differences between the two studies with regard to age, education and income, care must be taken in comparing the results of the two surveys.

Interpretation of the Results

Responses to questions as to how often one attends or plays a particular form of gambling, or how much one spends, by their nature are not always accurate because of the difficulty that respondents have in recollecting or estimating an accurate value. Further, most of the total sales and wagering on any particular form of gambling comes from a small fraction of the bettors (see **Table 3.2**). The survey is not large enough to sample this small fraction sufficiently to obtain accurate numbers on amount spent.

Proportion of Respondents		Lottery		Casino		
		Percentage of Respondents	Cumulative	Percentage of Spending	Cumulative	Percentage
First	20%	20%	0.3%	0.3%	0.5%	0.5%
Next	20%	40%	1.2%	1.5%	1.3%	1.8%
Next	20%	60%	3.6%	5.1%	2.8%	4.6%
Next	20%	80%	10.5%	15.6%	10.7%	15.3%
Next	10%	90%	13.6%	29.2%	12.0%	27.3%
Next	5%	95%	15.0%	44.2%	16.2%	43.5%
Next	4%	99%	33.7%	77.9%	32.3%	75.8%
	Last 1%	100%	22.1%	100%	24.2%	100%
Number of Respondents in the Last 1%		7		4		

Source: Telephone survey of Connecticut residents, November 1996.

Table 3.3 compares the results of projecting the survey to the total population of the State with the actual Connecticut Lottery sales for the 12 months previous to the survey, the period addressed by the spending questions in the survey. The estimates are 2.57 times actual sales for Power Ball, and 0.63 times actual sales for Instant games. The total for the lottery is only 20% higher than actual sales, however. This is what one would expect from combining numbers with a high degree of error, namely that the error decreases as the number of observations increases.

³ Christiansen, 1992, Appendix O, p.2

Whether the magnitude of the error is primarily from under sampling the players who spend large amounts or from inaccuracy in respondents' estimates of their spending, the results shown in **Table 3.3** underscore the point that one must treat the survey spending results with extreme care. Comparable results for other forms of legalized gambling in Connecticut are not shown because there were too few responses to produce reasonable accuracy.

	(Millions)			
	Millions of Adults Participating	Estimated Total Spending²	Actual Annual Sales	Estimated to Annual Sales
Power Ball	0.89	\$150.1	\$58.5	257%
Instant Games	1.04	\$202.4	\$323.8	63%
Daily Numbers	0.59	\$138.2	\$124.2	111%
Play 4	0.45	\$83.3	\$59.1	141%
Cash Lotto	0.64	\$112.1	\$47.2	238%
Jackpot Lotto	1.39	\$167.9	\$101.1	166%
Total Lottery	1.84	\$854.0	\$713.9	120%

¹ Sales over the year previous to the survey, ending 10/26/96.
² Projection based on weighted telephone survey percentages and US Census estimate of 2.477 million for the Connecticut population 18

Sources: Connecticut Division of Special Revenue

Telephone survey of Connecticut residents, November 1996

For statistical reasons, therefore, the absolute levels of spending should not be considered accurate. "Greater than" or "less than" comparisons of percentages of total spending can be made where the differences are statistically significant, but absolute dollar amounts should be used only with great care.

Participation in Legalized Gambling

Participation

Respondents were asked whether they had participated in various forms of gambling (Lottery, Horse-Racing/Harness-Racing, Casino Gaming, Greyhound Races, Raffle/Sports Betting/Other Non-Casino Games, Jai Alai, and OTB) at least once in their lives. Based on their responses, they were characterized as either gamblers (gambled at least once in life) or non-gamblers.

Next, if the response was affirmative, they were asked whether and how many times they had participated in each form of gambling in the previous 12 months. Respondent participation levels in various forms of gambling are outlined below.

Any Form Of Gambling

A majority of respondents (96%) have gambled at least once in their life, either in Connecticut or outside Connecticut while a slightly smaller number (88%) had gambled in the year prior to the sample (see **Table 3.4**). The gambling activities they had participated in include one or more of the following: Lottery, Horse-Racing/Harness-

Racing betting, Casino Gaming, Greyhound Races, Raffle/Sports Betting/Other Non-Casino Games, Jai Alai, and OTB.

Lottery

Over three-quarters (81%) of respondents have participated in various forms of Lottery and just under three quarters (74%) in the past year. In general, the demographics of lottery participation match those of the adult population.

Lotto

Two-thirds (66%) of respondents have participated in Lotto and over half (56%) had participated in the past year.

The Instant Lottery

About one-half (51%) of respondents have participated in the Instant Lottery and under half (42%) had played in the past year. Participation levels were notably higher among those employed.

Powerball

About four in ten (39%) respondents have participated in Powerball and slightly fewer (36%) in the past year. Note that the game had been offered for less than a year in Connecticut at the time of the survey.

The Daily Numbers

About one-third (33%) of respondents have participated in the Daily Numbers and one-quarter (24%) had played in the past year.

Cash Lotto

About one-third (32%) of respondents have participated in Cash Lotto and one-quarter (26%) participated in the past year.

Play Four

One-quarter (25%) of respondents have participated in Play Four and under two in ten (18%) had played in the past year. Participation levels were notably higher among those in the middle (\$30,000 to \$49,999) and highest (\$75,000 and over) income groups than the population as a whole.

Horse-Racing/Harness-Racing

About one-third (34%) of respondents have placed a wager at a Horse-Racing/Harness-Racing track but only six percent participated in the past year.

Raffle/Sports Betting/Other Non-Casino Games

Raffles (79%) had the highest lifetime participation of any single activity in this group and the highest 12-month participation (59%) as well. Card Games (49% lifetime, 19% past year) and Office Game Pools (45% lifetime, 23% past year) also had relatively high participation levels.

Raffle

Over three-quarters (79%) of respondents have participated in a Raffle at least once in their life and six in ten (59%) had participated in the past year. Participation was notably higher among whites.

Card Games

About half (49%) the respondents have participated in Card Games where money was wagered and two in ten (19%) participated in the past year. Participation levels were notably higher among men, those aged 18 - 54 years, those less educated, and non-whites.

Office Game Pools

Over four in ten respondents (45%) have participated in Office Game Pools and one-quarter (23%) had participated in the past year. Participation levels were notably higher among men, 18-54 year-olds, and those employed.

Bingo

One-third (33%) of respondents have participated in Bingo at religious or local organizations and one-in-ten (11%) had participated in the past year. Participation levels were notably higher among women, younger and older respondents (18-34, 55 years and older), and those with less than a college education.

Bowling, Pool, Golf

About one-quarter (24%) of respondents have participated in Bowling, Pool, Golf or some other game of skill for money and one-in-ten (11%) had participated in the past year. Participation levels were notably higher among men, younger and middle age groups (18-34 and 35-54), and those employed.

Video Poker

About one in seven (15%) respondents have participated in Video Poker not at a casino and 6% had participated in the past year. Participation levels were notably higher among younger age groups (18-34) and those with less than a college education.

Las Vegas Night

About one in seven (14%) respondents have participated in a Las Vegas Night at a religious or local organization and 4% had participated in the past year. Participation levels were notably higher among younger and middle age groups (18-34, 35-54) and those not employed (including retirees).

Bet with a Sports Bookie

Eight percent (8%) of respondents have placed a bet with a Sports Bookie and 3% had done so in the past year.

Casino Gambling

About two-thirds (66%) of respondents have participated in Casino Gaming but only four in ten (38%) had participated in the past year. Participation levels reflect the demographics of the general population.

Greyhound Races

About one in five (18%) have participated in Greyhound Races but only two percent had participated in the past year. Participation levels were notably higher among younger gamblers (age 18 - 34) and those with more education (at least some college).

Jai Alai

About one-quarter (28%) of respondents have participated in Jai Alai but only three percent had participated in the past year.

OTB

Only five percent of respondents have participated in OTB and only one percent had participated in the past year. Note that OTB handle increased from \$178 million in FY1994 to \$244 million in FY1996 even with this small percentage participating.

Table 3.4a Participation in Legalized Gambling in the Past 12 Months

	Total	Sex		Age			Education		
		Male	Female	18-34	35-54	55+	Hi Sch/ Tech	Some College	College Grad
LOTTERY	74%	74%	74%	72%	85%	65%	75%	78%	70%
Jackpot Lotto	56%	58%	54%	52%	66%	52%	56%	59%	54%
The Instant Lottery	42%	39%	44%	37%	49%	40%	44%	45%	35%
Powerball	36%	39%	34%	33%	43%	33%	38%	41%	30%
The Daily Numbers	24%	26%	22%	22%	27%	23%	30%	23%	13%
Cash Lotto	26%	26%	26%	23%	29%	27%	30%	26%	18%
Play Four	18%	20%	16%	17%	19%	19%	22%	20%	10%
HORSE-RACING/ HARNES-RACING	6%	6%	5%	7%	5%	4%	4%	7%	7%
RAFFLE/SPORTS- BETTING/OTHER NON-CASINO GAMES									
Raffle	59%	57%	61%	56%	66%	56%	55%	66%	62%
Card games	19%	21%	18%	28%	19%	10%	21%	21%	14%
Office game pool	23%	30%	16%	32%	26%	10%	19%	26%	29%
Bingo	11%	8%	15%	12%	8%	13%	14%	10%	7%
Bowling, pool, golf	11%	18%	4%	15%	12%	4%	11%	10%	12%
Video poker	6%	7%	6%	10%	4%	4%	8%	7%	4%
Casino night	4%	4%	5%	6%	4%	2%	4%	5%	4%
Bet with a sports bookie	3%	4%	1%	2%	4%	1%	3%	1%	3%
CASINO GAMING	38%	40%	36%	38%	39%	37%	42%	38%	32%
GREYHOUND RACES	2%	3%	2%	3%	2%	1%	2%	3%	3%
JAI ALAI	3%	3%	3%	2%	4%	3%	3%	3%	2%
OTB	1%	1%	0%	1%	2%	0%	1%	2%	1%

Note: differences among demographic groups that are significant at the 95% confidence level are shown in bold face.

Source: Telephone survey of Connecticut residents, November 1996.

	Total	Income				Race		Employment	
		Less than \$30K	\$30K-\$49.9K	\$50K-\$74.9K	\$75K and over	White	Other	Employ	Unempl
LOTTERY	74%	67%	78%	79%	84%	70%	138%	80%	62%
Jackpot Lotto	56%	47%	62%	64%	65%	57%	46%	63%	42%
The Instant Lottery	42%	34%	49%	46%	44%	42%	44%	44%	36%
Powerball	36%	30%	44%	39%	44%	37%	35%	40%	27%
The Daily Numbers	24%	26%	28%	24%	20%	22%	40%	24%	23%
Cash Lotto	26%	3%	32%	31%	21%	26%	34%	27%	23%
Play Four	18%	18%	22%	14%	21%	17%	31%	20%	15%
HORSE-RACING/ HARNESS RACING	6%	4%	6%	8%	8%	6%	2%	6%	4%
RAFFLE/SPORTS- BETTING/OTHER NON-CASINO GAMES									
Raffle	59%	45%	69%	71%	75%	63%	35%	64%	49%
Card games	19%	23%	16%	16%	23%	18%	28%	20%	17%
Office game pool	23%	15%	24%	34%	37%	24%	15%	30%	7%
Bingo	11%	12%	12%	8%	7%	11%	12%	10%	15%
Bowling, pool, golf	11%	7%	11%	16%	16%	11%	13%	13%	6%
Video poker	6%	9%	5%	6%	5%	6%	9%	7%	6%
Casino night	4%	5%	4%	3%	4%	4%	8%	5%	3%
Bet with sports bookie	3%	1%	2%	4%	6%	2%	4%	3%	1%
CASINO GAMING	38%	33%	42%	46%	41%	39%	36%	40%	34%
GREYHOUND RACES	2%	3%	0%	4%	3%	2%	3%	3%	1%
JAI ALAI	3%	2%	3%	4%	3%	3%	4%	3%	2%
OTB	1%	1%	1%	2%	1%	1%	0%	1%	0%

Note: differences among demographic groups that are significant at the 95% confidence level are shown in bold face.

Source: Telephone survey of Connecticut residents, November 1996.

Lottery

The following sections of this chapter describe further detail about the responses of respondents to questions about their gambling behavior in the past 12 months.

Participation

Lotto players participated in this game a median of 10 times in the past 12 months. Players of the other Lottery games indicated playing those games between 3 and 6 times in the past 12 months.

Participation in lottery games conducted outside of Connecticut is minimal.

	Jackpot Lotto	Instant Lottery	Power-ball	Cash Lotto	Daily Numbers	Play 4
Inside Connecticut	56%	42%	36%	26%	24%	18%
Total (inside & outside CT)	57%	44%	36%	26%	25%	19%

Source: Telephone survey of Connecticut residents, November 1996.

Preferences

Instant Lottery

One dollar tickets were most popular among Instant Lottery players (64%) (see **Table 3.6**). Two dollar tickets also had reasonable appeal, as about one-quarter (27%) bought this denomination.

Table 3.6 indicates that the 7% of players who purchase five-dollar tickets provide 18% of sales while the 64% of players who purchase one-dollar tickets provide 34% of sales. A total of fewer than 18% of players purchase three- and five-dollar tickets, and these denominations are expected to be the primary source of lottery sales growth in the future.

Table 3.6 compares the percentage of sales on each of the ticket prices for Instant Lottery games with the ticket prices that the survey respondents reported purchasing. While the percentages are not comparable, if the survey responses are combined with ticket price to obtain the distribution of spending, the distribution closely follows sales. If each category of ticket purchasers bought the same number of tickets, multiplying ticket price and number of players would result in a weighted distribution of sales. Where it does not, namely for two and three dollar ticket sales, the implication is that purchasers of two and three dollar tickets buy more two dollar tickets and fewer three dollar tickets than purchasers of one and five dollar tickets buy.

It would appear from the results shown in **Table 3.6** that purchasers of two and three dollar tickets tend to spend more of their money on the three dollar tickets than on the two dollar tickets. Note that there is overlap among players. The sum of responses is 109% of those playing Instant games while only 90% answered the question.

Table 3.6 Comparison Instant Lottery Sales Over the Year Previous to the Survey by Ticket Price and Respondents Who Reported the Price Tickets They Buy

	Instant Lottery		Percentage of Players in Past 12 Months	
	Sales Previous 12 Months	Percentage of Sales	Actual Responses	Responses Weighted by Ticket Price
One Dollar	\$111.7	34%	64%	34%
Two Dollars	\$115.4	36%	27%	28%
Three Dollars	\$40.0	12%	11%	18%
Five Dollars	\$56.7	18%	7%	20%

* 10% of survey respondents who reported playing Instant Lottery games in the previous 12 months did not provide a dollar denomination. Respondents could indicate they purchased more than one denomination. The responses of the 90% who did answer the question total 109%.

Sources: Telephone survey of Connecticut residents, November 1996.
Connecticut Division of Special Revenue

Jackpot Lotto

Table 3.7 below compares the percentage of respondents that report their minimum jackpot requirement for playing Jackpot Lotto and the jackpot drawings by jackpot level.

A minimum of one in five (20%) of those who play Jackpot Lotto indicated they will not purchase tickets if the Jackpot is not \$5 million or more. Note that only 30 of 105 drawings in the 12 months prior to the survey were \$5 million or more. Jackpots in the \$5-\$9 million range were the smallest for which 13% of respondents would buy tickets.

Table 3.7 Comparison of Survey Respondents Who Answered the Question as to the Minimum Jackpot Necessary for Them to Play Jackpot Lotto With Drawings at Each Jackpot Level

Minimum Jackpot Necessary	Percent of Respondents Answering*	Number of Jackpot Lotto Drawings by Jackpot Level	
		Drawings	Percent
Up to \$5 Million	59%	75	71%
\$5 Million to \$9 Million	13%	25	24%
\$10 Million to \$19 Million	5%	5	5%
\$20 Million or More	2%		

* 21% of those who reported playing Jackpot Lotto in the Previous 12 months did not answer this question.

Sources: Telephone survey of Connecticut residents, November 1996.
Connecticut Division of Special Revenue

Powerball

Table 3.8 compares the percentage of respondents that report their minimum jackpot requirement for playing Powerball and the jackpot drawings by jackpot level. A substantial number of respondents did not report the minimum level of jackpot necessary for them to play. Therefore, the table should be interpreted with care. The two percent that reported requiring jackpots of \$100 million or more did report playing Powerball.

Table 3.8 Comparison of Survey Respondents Who Answered the Question as to the Minimum Jackpot Necessary for Them to Play Powerball With Powerball Drawings at Each Jackpot Level			
Minimum Jackpot Necessary	Percent of Respondents Answering*	Number of Powerball Drawings by Jackpot Level	
		Drawings	Percent
Up to \$30 Million	71%	75	78%
\$31 Million to \$49 Million	1%	15	16%
\$50 Million to \$99 Million	2%	6	6%
\$100 Million or More	2%		

* 24% of those who reported playing Powerball in the Previous 12 months did not answer this question.

Source: Telephone survey of Connecticut residents, November 1996.
 Connecticut Division of Special Revenue

Expenditure

Table 3.9 on the following page provides information calculated from the survey results of the spending on each game and on the Connecticut Lottery as a whole by demographic group. Each entry represents total spending reported for the demographic group, divided by total spending for all respondents. The caveat on the spending results of the survey should be remembered in interpreting this table.

For all lottery games combined, men account for more spending than women as compared to their share of the adult population, particularly for Daily Numbers and Play 4. Likewise, those 55 and over account for more spending and those under 35 account for less spending as compared to their share of the adult population. This is particularly true for Play 4.

By income, those earning \$30,000 to \$49,000 account for a greater share of spending than their representation in the adult population, except for Jackpot Lotto. A substantial number of respondents did not report their income resulting in percentages summing to less than 100%.

Except for Daily Numbers and Powerball, spending by persons who characterized themselves as White and Other follow their percentage of the adult population. In the case of Daily Numbers, Whites spend less; in the case of Powerball, they spend more.

In general, employed persons account for a greater share of spending on The Connecticut Lottery than their percentage in the adult population, particularly for spending on Cash Lotto and Powerball. In the case of educational attainment, those with a high school education or less account for much more of spending on all but Jackpot Lotto than their percentage in the adult population, and those with at least a college education account for much less.

Table 3.9 Percentage of Total Reported Lottery Spending by Demographic Group by Game

	Percent in Adult Population	Total Lottery		Instant	Daily Numbers	Play 4	Jackpot Lotto	Cash Lotto	Power- ball
		Partici- pation	Spending						
Gender									
Male	48%	48%	58%	54%	63%	68%	47%	57%	66%
Female	52%	52%	42%	46%	36%	32%	53%	43%	33%
Age									
18 - 34	36%	35%	23%	27%	21%	21%	22%	17%	29%
35 - 54	32%	37%	35%	41%	32%	23%	34%	42%	34%
55 & Over	31%	27%	41%	32%	47%	57%	44%	42%	36%
Income									
Up to 30000	32%	29%	26%	15%	30%	28%	31%	28%	29%
\$30,000 to \$49,000	21%	22%	32%	38%	32%	46%	17%	26%	36%
\$50,000 to \$74,999	14%	15%	8%	6%	9%	5%	13%	8%	8%
Over \$75,000	16%	18%	15%	22%	14%	6%	14%	19%	10%
Race									
White	85%	81%	83%	85%	74%	86%	81%	79%	93%
Other	15%	19%	13%	10%	24%	12%	16%	14%	6%
Employed									
Yes	69%	74%	77%	77%	75%	79%	68%	81%	81%
No	31%	26%	23%	23%	24%	21%	31%	18%	17%
Education									
High/Tech.	52%	53%	71%	69%	74%	87%	55%	80%	75%
Some College	20%	21%	19%	21%	20%	8%	28%	14%	15%
College Graduate	28%	26%	10%	11%	6%	5%	17%	7%	11%
Double Income, No Children	5%		23%	25%	26%	37%	13%	17%	26%
Single Parents	11%		6%	6%	1%	4%	3%	9%	11%

Source: Telephone survey of Connecticut residents, November 1996.

Two special demographic groups are reported: double-income households with no children and single parents. Respondents in double-income households with no children represent only 5% of the adult population but account for 23% of Lottery spending. Spending on nearly all games is strong, but particularly for Play 4.

Single parents represent 11% of the adult population but account for only 6% of Lottery spending. There is little spending on Daily Numbers, but their spending on Jackpot and Cash Lotto games closely mirrors their share of the adult population.

Casino Gambling

Participation

About four in ten (38%) of respondents have visited a Native American Casino in Connecticut to gamble in the past 12 months (see **Table 3.10**). About one in ten (12%) respondents have visited casinos outside of Connecticut.

	In Conn.	Outside Conn.	Total
Have visited in past 12 months	38%	12%	43%
Number of Times Visited	3.4	0.8	4.2

Source: Telephone survey of Connecticut residents, November 1996.

Video Facsimile Machines were the most commonly played games -- 32% of the respondents indicated playing these machines at Native American Casinos in Connecticut in the past 12 months (see **Table 3.11**). About one in ten (12%) indicated they had played Table Games. Bingo was much less popular at the casinos, with only 3% participating.

	Inside Connecticut Only	Outside Connecticut Only	Inside and Outside Connecticut
Video Facsimile Machines	27%	3%	6%
Table Games	10%	3%	2%
Bingo	3%	*	*

* = less than 0.5%

Source: Telephone survey of Connecticut residents, November 1996.

Significantly higher proportions of groups 55 years and above, unemployed (including retired) and those who never attended college reported using Video Facsimile Machines in Connecticut Native American casinos (see **Table 3.12**).

	Total	Sex		Age			Education		
		Male	Female	18-34	35-54	55+	Hi Sch/ Tech	Some College	College Grad
Video Facsimile Machines	32%	32%	33%	32%	26%	44%	48%	26%	20%
Table Games	12%	18%	7%	15%	12%	9%	15%	12%	10%
Bingo	3%	3%	4%	3%	2%	5%	5%	3%	1%

Note: differences among demographic groups that are significant at the 95% confidence level are shown in bold face.

Source: Telephone survey of Connecticut residents, November 1996.

Table 3.12b Games Played In Native American Casinos in Connecticut in Past 12 Months

	Total	Income				Race		Employment	
		<30K	30K- <u>49.9K</u>	50K- <u>74.9K</u>	75K+	White	Other	Employ	Unempl
Video Facsimile Machines	32%	38%	33%	36%	23%	33%	28%	31%	39%
Table Games	12%	10%	11%	13%	19%	13%	10%	13%	9%
Bingo	3%	2%	5%	2%	3%	3%	1%	3%	4%

Note: differences among demographic groups that are significant at the 95% confidence level are shown in bold face.

Source: Telephone survey of Connecticut residents, November 1996.

Expenditure

Video Facsimile Machines were the most commonly played games by those visiting casinos during the past 12 months. The median expenditure on betting among those playing Video Facsimile Machines in Connecticut was \$100, while the median expenditure on betting among those playing Table Games was \$200. The median expenditure on Bingo, among the relatively few who played in Connecticut, was \$100. Again, the ratio of the mean expenditure to the median indicates the importance of the small number of players who bet large amounts. We must emphasize again, however, that the spending data have a high degree of error. Comparison with actual spending suggests that players are reporting more than their losses but less than their wagers.

Other Forms of Gambling

Participation

Respondents who have participated in Horse-Racing/Harness-Racing, Raffle/Sports Betting/Other Non-Casino Games, Greyhound Races, Jai Alai, and OTB at least once in their life were asked how frequently they participated in these games in the past 12 months (see **Table 3.13**).

Of these games Raffles had, by far, the highest participation level (59%) among the respondents. Other games with significant participation levels included Office Game Pool (23%), and Card Games (19%). Additionally, about one in ten respondents wagered in Bowling/Pool/Golf, and Bingo.

Horse-Racing/Harness-Racing, Greyhound Races, Jai Alai, and OTB had notably lower participation levels (1% to 6%). However, comparisons of spending, particularly OTB spending, with actual revenue levels, suggest that the telephone survey might have significantly under sampled these categories, though spending estimate errors and the unknown spending by persons residing outside of Connecticut may also provide explanations for this difference.

Table 3.13 Other Forms of Gambling: Participation in Past 12 Months		
	Percent in Sample	Adults (Million)
Horse-Racing/ Harness-Racing	6%	0.15
Raffle/Bingo/Sports Betting/ Other Non-Casino Games		
Raffle	59%	1.46
Office game pool	23%	0.57
Card games	19%	0.47
Bowling, pool, golf	11%	0.27
Bingo	11%	0.27
Video poker	6%	0.15
Bet with sports bookie	3%	0.07
Casino night	4%	0.10
Greyhound Races		
Inside Connecticut	2%	0.05
Outside Connecticut	1%	0.02
Total	3%	0.07
Jai Alai		
Inside Connecticut	3%	0.07
Outside Connecticut	*	
Total	3%	0.07
OTB		
With Simulcasting	1%	0.02
Without Simulcasting	*	*
Through Telephone Wagering System	-	-

* = less than 0.5%

Source: Telephone survey of Connecticut residents, November 1996.

Expenditure

Given the small number of responses to these questions, useful estimates of spending can not be made from this data.

Attitudes Toward Legalized Gambling

As expected, customer interest in the different forms of legalized gambling in Connecticut varied. Video Facsimile Machines and Lotto were mentioned relatively more frequently as the favorite games by respondents who gamble (see **Table 3.14**). While females were relatively more drawn to video facsimile machines and bingo, males had a higher propensity to engage in Sports Betting. Among the various age groups, 18-34 year-olds had relatively higher interest in Sports Betting and pool play. Additionally, those employed had a higher propensity to participate in Sports Betting, and those unemployed or retired had a higher participation in bingo.

**Table 3.14a Favorite Game - Total and by Sex, Age, Education, Employment
(Base=Respondents who are classified as gamblers)**

	Total	Sex		Age			Education		
		Male	Female	18-34	35-54	55+	Hi Sch/ Tech	Some College	College Grad
Slot Machines	18%	12%	23%	17%	19%	17%	17%	19%	17%
Lotto	12%	12%	13%	10%	12	16	12	11	14
Sports Betting	7%	11%	3%	11%	5	4	6	7	7
Blackjack	5%	6%	4%	8%	4	2	4	6	6
Bingo	6%	2%	9%	4%	5	9	8	4	3
Instant Lottery	5%	4%	5%	6%	6	2	5	6	5
Poker	3%	5%	1%	4%	3	2	3	2	5
Pool	3%	4%	2%	7%	1	1	4	3	2

Note: differences among demographic groups that are significant at the 95% confidence level are shown in bold face.

Source: Telephone survey of Connecticut residents, November 1996.

**Table 3.14b Favorite Game - Total and by Income, Race, Employment
(Base=Respondents who are classified as gamblers)**

	Total	Income				Race		Employment	
		<30K	30K- 49.9K	50K- 74.9K	75K+	White	Other	Employ	Not Employed
Slot Machines	18%	17%	19%	23%	17%	18%	14%	17%	18%
Lotto	12%	13%	11%	12%	15%	14%	7%	12%	13%
Sports Betting	7%	5%	7%	6%	9%	6%	8%	8%	3%
Blackjack	5%	5%	4%	4%	8%	5%	6%	6%	3%
Bingo	6%	7%	8%	1%	3%	5%	6%	3%	11%
Instant Lottery	5%	6%	4%	5%	4%	5%	4%	5%	3%
Poker	3%	2%	3%	4%	6%	3%	6%	3%	4%
Pool	3%	5%	3%	2%	-	3%	4%	4%	-

Note: differences among demographic groups that are significant at the 95% confidence level are shown in bold face.

Source: Telephone survey of Connecticut residents, November 1996.

The survey asked respondents whether they approved of legalized gambling in the State. Results show a broad level of general approval among Connecticut citizens (see **Table 3.15**). Respondents were asked to register their approval of various gambling activities on a 1 to 10 scale, with 10 indicating "strong approval." When asked to rate Lottery games, 23% of all respondents gave the highest approval rating (10), and 42% gave Lottery games an approval rating of 8 or higher. Nineteen percent (19%) rate their approval of Lottery games at 3 or below, including 12% who indicated "strong disapproval" (a rating of 1). Note that this question about general approval refers to the respondents' views on whether they believe the forms of gambling activity mentioned should be present in Connecticut; a high approval rating does not necessarily indicate that respondents personally play or particularly enjoy the respective games.

The approval rating for other types of gambling, including the Native American casinos, Jai Alai, Greyhound Racing, and OTB, was only a little lower. Twenty two and four tenths percent (22.4%) gave these activities a 10, and 40% rated them 8 or higher. Maximum disapproval was expressed by 16%, while 25% rated these activities 3 or below.

**Table 3.15 Approval Ratings for Various Gambling Activities:
Survey Responses from the November 1996 Connecticut Telephone Survey**

	Approve	No Strong Opinion	Disapprove	Don't Know
Lottery Games	42%	36%	19%	3%
Other Legalized Gambling*	40%	33%	25%	2%

Respondents were asked to rate gambling activities on a scale of 1 to 10, with 10 indicating strong approval and 1, strong disapproval.

Base: Total respondents

Percentages may not sum to 100 because of rounding or refusals to respond.

* Other legalized gambling includes the Native American casinos, Jai Alai, Greyhound races, and Off-track Betting.

Source: Telephone survey of Connecticut residents, November 1996.

- While a favorable opinion on the presence of legalized gambling appears widespread, there are differences of opinion among demographic groups. Younger people (18-34) are more supportive of both Lottery games and other types of gambling. Older people (55 and above), women, and those who do not work tend to be less approving, especially of non-Lottery activities. Lower income respondents (earning less than \$30,000) are somewhat more opposed to gambling than those with higher incomes.
- While there were no significant gender differences in opinions on the Lottery, males gave a significantly higher approval rating to other forms of gambling in Connecticut than females. The proportion of males in the high approval category was 45%, compared to 36% of females.
- By age, the youngest category of respondents, those 18 to 34 years old, showed significantly greater approval of these other forms of gambling than either of the two older groups (age 35-54; age 55 and older). 45% of these younger respondents gave a high approval rating of 8 or above. Similarly, the middle-aged group of respondents (35 to 54 years old) showed a significantly higher approval than older respondents (55 and above). 39% of 35 to 54 year olds showed high approval (a rating of 8 to 10). By comparison, 31% of those age 55 and older were highly approving.

- Employment status was also associated with a meaningful difference in the level of approval expressed by respondents. The proportion of those employed who gave a high approval rating was 43%, compared to 34% of those not employed.

Other indications of overall approval, along with demographic differences, are:

- Over half of all respondents think that Connecticut has just the right amount of gambling locations (see **Tables 3.16** and **3.17**). 54.1% gave that response with respect to Native American casinos, Jai Alai, Greyhound Races and OTB, while 70% gave that response with respect to Lottery outlets. Older, not employed (including retired), and lower income people more often (up to 30%) think there are too many gambling locations.

Table 3.16a Number of Lottery Locations

	Total	Age			Education		
		18-34	35-54	55+	Hi Sch/ Tech	Some College	College Grad
Too many	25%	24%	22%	29%	30%	20%	19%
Just the right amount	69%	71%	75%	62%	66%	73%	73%
Too few	1%	2%	1%	1%	1%	1%	1%

Note: differences among demographic groups that are significant at the 95% confidence level are shown in bold face.

Source: Telephone survey of Connecticut residents, November 1996.

Table 3.16b Number of Lottery Locations

	Total	Income				Employment	
		<\$30K	\$30K- \$49.9K	\$50K- \$74.9K	\$75K+	Employ	Not Employed
Too many	25%	32%	20%	20%	19%	21%	33%
Just the right amount	69%	64%	74%	74%	75%	74%	59%
Too few	1%	2%	1%	1%	2%	1%	1%

Note: differences among demographic groups that are significant at the 95% confidence level are shown in bold face.

Source: Telephone survey of Connecticut residents, November 1996.

Table 3.17 Number of Casinos, Jai Alai, Greyhound Races, and OTB Locations

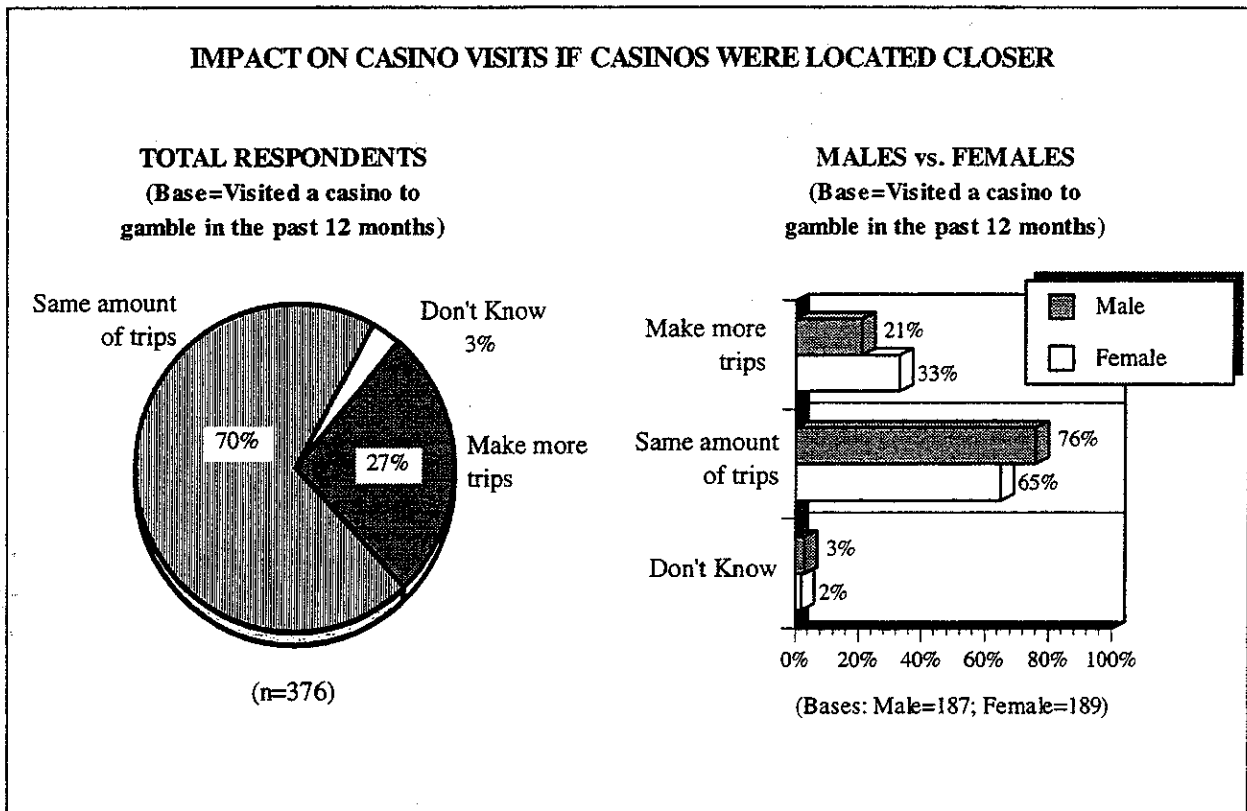
	Total	Sex		Age			Employment	
		Male	Female	18-34	35-54	55+	Employ	Unempl
Too many	25%	22%	28%	20%	23%	33%	22%	33%
Just the right amount	54%	55%	54%	61%	58%	42%	58%	44%
Too few	11%	14%	8%	12%	12%	9%	12%	9%
Don't Know/Refused	10%	9%	11%	7%	7%	17%	8%	14%

Note: differences among demographic groups that are significant at the 95% confidence level are shown in bold face.

Source: Telephone survey of Connecticut residents, November 1996.

- Of those respondents who have visited a Connecticut Native American casino to gamble in the past 12 months, 27% would visit more often if this type of facility were closer to their homes, while 70% would make the same number of trips (see chart). Those more often expressing the view that a closer location would make them more inclined to visit include women (33%), those 35-54 (32%), those earning over \$75,000 (34%), non-whites (38%), and the unemployed (36%).

Change in Casino Visits if Casinos were Located Closer to Residence



- Only 16% of respondents believe that there is a problem in the way gambling is advertised. Older people are the most critical (24%). (See **Tables 3.18 and 3.19.**)
- Of those who think there is a problem with gambling advertisements, most (23.4%) single out Lotto, with the Foxwoods Native American Casino a close second (18.2%). Ads for Jai Alai, Greyhound Races, and OTB receive the least criticism (5% or less).
- Higher income respondents (over \$50,000, and especially over \$75,000) stand out as the most critical of gambling advertisements. Non-whites are especially critical of Lotto and Instant Lottery ads.
- Among all respondents, just under one-quarter (24%) viewed game advertising as either very or somewhat influential. 35% of 18-24 year olds rated advertising somewhat or very influential, as did 21% of 35 to 54 year olds, and 15% of those 55 and older.

- Lotto play appears to have gained the most patronage among those who claimed to be influenced by gaming advertising, including jackpot announcements. This increase in Lotto play was most noticeable among White respondents and respondents who were employed. Additionally, college graduates registered a notable increase in Powerball participation as a result of advertising, which also includes jackpot announcements.

**Table 3.18 Games Played Based on Advertising Seen in The Past Month
Total and by Race, Employment, Education
(Base=respondents who claimed to be influenced by advertising)**

	Total	Race		Employment		Education		
		White	Other	Employed	Not Employed	Hi Sch/ Tech	Some College	College Grad
Lotto	22%	26%	8%	29%	7%	17%	27%	30%
Powerball	11%	9%	13%	13%	8%	7%	13%	20%
The instant Lottery	6%	5%	12%	4%	11%	7%	9%	4%
Cash lotto	5%	4%	8%	6%	2%	5%	5%	3%
Mohegan Sun Resort	4%	4%	4%	5%	4%	5%	3%	4%
Foxwoods Casino	3%	2%	5%	3%	3%	2%	7%	3%

Note: differences among demographic groups that are significant at the 95% confidence level are shown in bold face.

Source: Telephone survey of Connecticut residents, November 1996.

**Table 3.19 Percentage Analysis of Those Believing There is a Problem With the Way Gambling is Advertised
(Base=respondents who believe there is a problem with game advertising)**

Lotto	23%
Foxwoods Casino	18
The Instant Lottery	10
Mohegan Sun Resort	9
Powerball	8
Play Four	8
The Daily Numbers	7
Cash Lotto	6
Jai Alai	5

Source: Telephone survey of Connecticut residents, November 1996.

- About half (50%) of respondents agree with raising the legal age to play the Lottery, Jai Alai, the Greyhound tracks and OTB to age 21, the same age required to participate at Native American casinos in Connecticut. Agreement with this position is highest among women (54%), those over 55 (62%), those earning more than \$75,000 (55%), and those not working (56.8%). Thirty eight percent (38%) think the age requirements are fine the way they are, with the strongest agreement among non-whites. (See Table 3.20.)

- Opinions are highly divided about whether underage gambling in Connecticut is a serious problem. Forty percent (40%) say it is very or somewhat serious, while 35.6% say it is not very or not at all serious, and 24% say they don't know (see **Tables 3.21a** and **3.21b**). Those who tend to have a stronger perception of teen gambling as a very serious problem include women, persons over 55, the unemployed (including retired), and the less educated.
- A minority (5%) of respondents indicated placing bets for people under 18, such as brothers, sisters, sons, daughters, cousins, nieces, nephews, or friends. The incidence was relatively higher among younger respondents (7% of 18 to 34 year olds, 6% of 35 to 54 year olds), and non-white respondents (10% compared to 4% for whites).

Table 3.20 Opinion as to Age Requirements for Gambling

	Total	Sex		Age			Employment	
		Male	Female	18-34	35-54	55+	Employ	Unempl
The age to play the Lottery, Jai-Alai, the greyhound tracks, and OTB should be raised to 21, the same as the Casinos	50%	46%	54%	39%	52%	62%	47%	57%
The age to play at Connecticut Casinos should be lowered to 18, the same as the Lottery, Jai-Alai, and OTB	9%	11%	8%	15%	9%	3%	11%	6%
Things are fine the way they are. Lottery, Jai-Alai, the greyhound tracks, and OTB should remain at 18, and the Connecticut Casinos should remain at 21	38%	40%	36%	43%	37%	32%	39%	34%

Note: differences among demographic groups that are significant at the 95% confidence level are shown in bold face.

Source: Telephone survey of Connecticut residents, November 1996.

Table 3.21a Underage/Teen Gambling - Seriousness of Problem

	Total	Sex		Age			Education		
		Male	Female	18-34	35-54	55+	Hi Sch/ Tech	Some College	College Grad
Very/Somewhat Serious	40%	38%	43%	39%	40%	43%	46%	36%	34%

Note: differences among demographic groups that are significant at the 95% confidence level are shown in bold face.

Source: Telephone survey of Connecticut residents, November 1996.

	Total	Income				Employment	
		<\$30K	\$30K- \$49.9K	\$50K- \$74.9K	\$75K+	Employ	Unempl
Very/Somewhat Serious	40%	49%	32%	38%	37%	39%	45%

Note: differences among demographic groups that are significant at the 95% confidence level are shown in bold face.

Source: Telephone survey of Connecticut residents, November 1996.

Internet Usage in Gambling

Gambling-Related Sites On The Internet

There are at a minimum hundreds of gambling-related sites on the Internet. Numerous sports handicappers and others who sell their advice to bettors advertise their services on the World Wide Web. An even larger number of sites are advertisements for state licensed and regulated casinos, state lottery home pages, and informational sites about gambling.

In **Appendix F**, we provide copies of the Connecticut Lottery home page and those of Plainfield Greyhound Park, Shoreline Star Greyhound, Foxwoods Resort Casino and Mohegan Sun Casino as well as web-site addresses for state lotteries. Milford Jai alai also has an Internet site, but OTB does not. The first Internet lottery ticket sales in the US, operated by the Coeur d'Alene tribe in Idaho, are scheduled to open in the summer of 1997. In addition, New York is setting up an experimental site to allow Internet wagering on New York OTB.

There are off-shore sites in Europe and the Caribbean where gambling is available. In Europe, the *International Lottery in Liechtenstein Foundation* (InterLotto) sells lottery tickets across international boundaries, including a lottery offered by the International Red Cross, and the government of Gibraltar has licensed InterKeno and BingoExpress. Probably the best known international lottery offered on the Internet is the Spanish National Lottery, "EL Gordo", advertised as the largest lottery in the world and the one with the best odds. Finland offers its lottery over the Internet, but it is available only to Finnish residents.

There are many Internet gambling opportunities offered under the sponsorship of Caribbean countries, including Antigua and Barbuda, Curacao, Dominica, the Dominican Republic, Grenada and, apparently, the Bahamas.

A gambler using an Internet betting site generally has to transfer funds to the operator via credit card. The gambler then accesses funds in a pre-established account created with the transferred funds. In contrast, the lotteries take the bets directly from one's credit card.

Legality of Internet Gambling

At present there are legal, technological, and security obstacles to the large-scale expansion of Internet gambling. 18 U.S.C. ¶ 1084 of the US Federal Code provides federal criminal penalties for "knowingly using a wire communications facility for the

transmission in interstate or foreign commerce of bets or wagers or information assisting in the placing of bets or wagers.”

The Attorney General of Connecticut has cited this and Section 53-278(d) of the Connecticut Code as the basis for his conclusion that Internet gambling is a violation of both Connecticut and federal law. The National Association of Attorneys General (NAAG), however, noted in a report that the federal statute has “a number of ambiguous provisions” and needs to be amended.⁴

According to the NAAG report, states must use existing laws and precedents or enact laws where they do not exist. What appears to be the first case challenging the legality of Internet gambling is moving forward in Minnesota.⁵ There, District Judge John S. Connolly ruled in December 1996 that the state Attorney General of Minnesota may seek an injunction against a Nevada operator of an on-line sports betting service to keep unlawful gambling advertisements from entering the state.

US Senator Jon Kyl (R-Arizona), joined by Senators Feinstein (D-California), Hutchinson (R-Arkansas), Grassley (R-Iowa), and Johnson (D-South Dakota), on March 19, 1997 introduced S.474, the Internet Gambling Prohibition Act of 1997, to revise the US Code along the lines suggested by the NAAG. The proposed Act would set fines of “not more than \$10,000” and prison terms “not more than two years” on “whoever, being engaged in the business of betting or wagering knowingly uses a communication facility for the transmission or receipt in interstate or foreign commerce of bets or wagers, information assisting in the placing of bets or wagers, or a communication that entitles the transmitter or receiver to the opportunity to receive money or credit as a result of bets or wagers.”

Further, fines of “not more than \$5,000” and imprisonment of “not more than one year” are set for “whoever knowingly uses a communication facility for the transmission or receipt in interstate or foreign commerce of bets or wagers, information assisting in the placing of bets or wagers, or a communication that entitles the transmitter or receiver to the opportunity to receive money or credit as a result of bets or wagers.” Excluded from the definition of betting are securities transactions, contracts of indemnity or guarantee, and contracts for life, health and accident insurance. Excluded from penalties are news reports and betting that is legal under state laws, such as the Autotote telephone betting system.

The legality of Internet gambling is only one of the issues involved. Consumers have yet to demonstrate confidence that on-line betting can be technically efficient and can incorporate adequate security safeguards. The present lack of regulation is not keeping gambling sites off the Internet, but does provide a potential opening for unscrupulous operators and rigged games. Consumers tend to be skeptical about on-line gambling at this time, and the US commercial gaming industry is divided over whether regulated Internet gambling represents a growth opportunity they should pursue.⁶ The North American State and Provincial Lotteries organization, as of March 1997, had not taken a position on whether to endorse either the regulation or the prohibition of Internet gambling activity (Stanek, 1997).

⁴ NAAG, 1996

⁵ ARCI, 1997

⁶ Connor, 1997

The prospect of gambling via the Internet implies increased access to gambling opportunities vastly beyond what has typically been available. This raises issues of great social concern, particularly with respect to pathological gamblers and underage gamblers. While it may be possible, through adequate screening of the individual gambler, for organizations offering gambling over the Internet to screen out underage gamblers or residents of states where the form of gambling being offered is illegal, teenagers are extremely adept at circumventing such safeguards.

Connecticut Residents' Access to the Internet

About one third of the respondents to the survey had Internet access. Expectedly, Internet usage was relatively more prevalent among younger, more educated, employed, and higher income respondents (see **Table 3.22**).

About one-third (30%) of all respondents indicated having Internet access through a personal computer (see **Tables 3.22a** and **3.22b**). Significantly higher proportions of 18-34 and 35-54 year-olds, compared to 55 years and older, indicated having access. Additionally, significantly higher proportions of those with at least some college education had access, as did those earning \$30,000 or more per year, and those employed.

	Total	Age			Education		
		18-34	35-54	55+	Hi Sch/ Tech	Some College	College Grad
Have a personal computer with access to the Internet	30%	39%	38%	12%	15%	37%	55%

Note: differences among demographic groups that are significant at the 95% confidence level are shown in bold face.

Source: Telephone survey of Connecticut residents, November 1996.

Table 3.22b Access to the Internet

	Total	Income				Employment	
		<\$30K	\$30K- \$49.9K	\$50K- \$74.9K	\$75K+	Employ	Unemploy
Have a personal computer with access to the Internet	30%	12%	27%	44%	64%	38%	13%

Note: differences among demographic groups that are significant at the 95% confidence level are shown in bold face.

Source: Telephone survey of Connecticut residents, November 1996.

Connecticut Residents' Awareness of Gambling on the Internet

In general, awareness of gaming on the Internet was very low among respondents with Internet access (see **Table 3.23**). About one in ten respondents were aware of Internet gambling sites. Though the numbers are small, men do exhibit a greater propensity to pursue gambling-related activities on the Internet.

Respondents who had access to the Internet were asked questions related to their usage of the Internet for gaming related activities and also their awareness of gaming sites on the Internet. Few indicated awareness of gaming related activities; about one in ten (11%) indicated awareness of gambling sites on the Internet.

**Table 3.23 Awareness of Gambling on the Internet
(Base=respondents who have access to the Internet)**

	Total	Sex	
		Male	Female
Used the Internet to chat with other people who gamble	1%	3%	-
Used the Internet to obtain information on gambling	4%	7%	1%
Aware of gambling sites on the Internet	11%	12%	11%

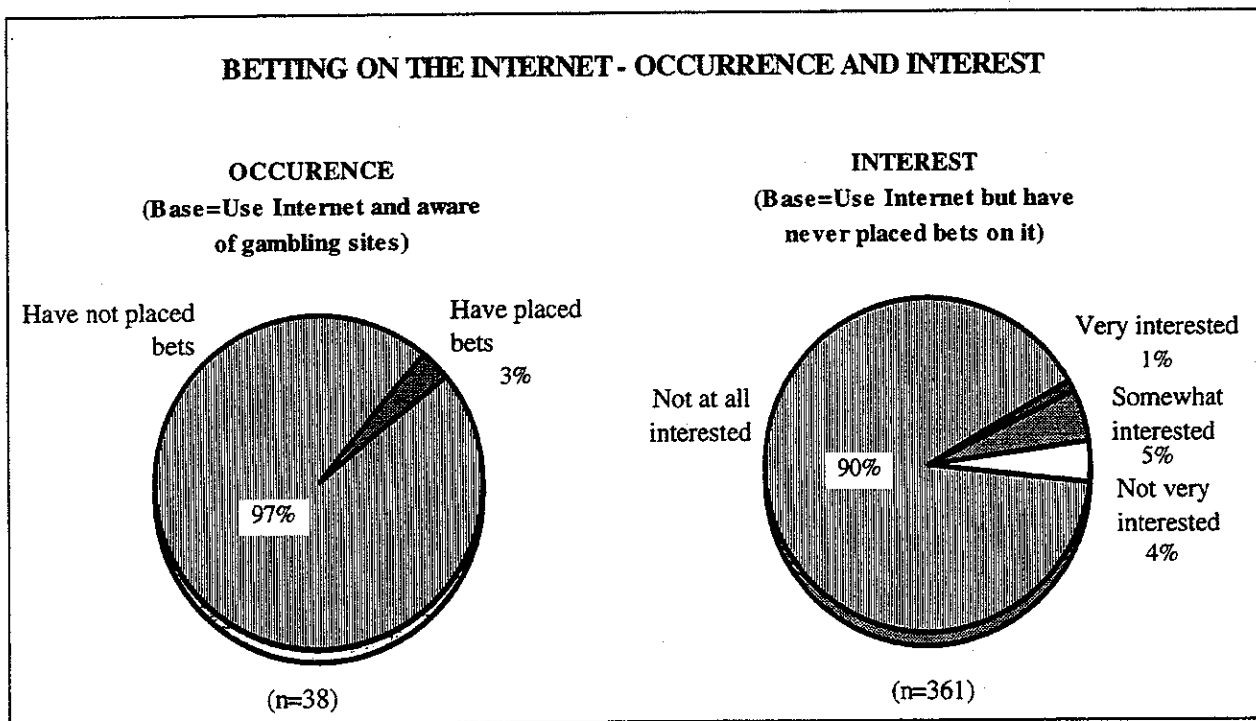
Note: differences among demographic groups that are significant at the 95% confidence level are shown in bold face.

Source: Telephone survey of Connecticut residents, November 1996.

Betting on the Internet - Occurrence and Interest

There is very little betting currently occurring on the Internet (see charts). Additionally, interest levels are fairly modest among Internet non-bettors aware of such betting.

Respondents who were aware of betting sites on the Internet were asked whether they have placed bets on the Internet. Only 3% indicated placing such bets. Furthermore, those who had not placed bets were asked how interested they would be in having the ability to place bets on the Internet. They were asked to indicate interest on a 1-4 scale where '1' denoted 'not at all interested' and '4' denoted 'very interested'. Five percent (5%) of the respondents indicated interest in this form of gambling.



Respondent Profile

As a result of post-survey weighting, the distributions of the sample are identical to the Connecticut population by gender, age, education, and race in 1996 (see **Table 3.24**).

	Total	Sex		Age			Education		
		Male	Female	18-34	35-54	55+	Hi Sch/ Tech	Some College	College Grad
SEX									
Male	48%	100%	-	49%	51%	43%	49%	47%	46%
Female	52%	-	100%	51%	49%	57%	51%	53%	54%
MARITAL STATUS									
Single/never married	21%	26%	17%	46%	11%	3%	20%	24%	21%
Single/livi. w/partner	7%	7%	6%	12%	5%	2%	7%	9%	5%
Married	50%	53%	47%	33%	64%	54%	47%	48%	57%
Separated	3%	3%	3%	2%	6%	2%	4%	5%	1%
Widowed	9%	3%	15%	1%	3%	26%	11%	6%	8%
Divorced	10%	8%	11%	5%	12%	13%	11%	9%	8%
EMPLOYMENT									
Full-time	58%	71%	47%	64%	80%	30%	54%	58%	69%
Part-time	11%	7%	13%	17%	8%	7%	9%	16%	11%
Not employed	31%	22%	39%	20%	12%	64%	38%	27%	21%
SPOUSE EMPL.									
Full-time	61%	54%	69%	82%	76%	28%	57%	68%	65%
Part-time	11%	17%	5%	4%	12%	15%	10%	13%	11%
Not employed	28%	29%	26%	15%	12%	57%	33%	19%	25%
HOUSEHOLD SIZE									
Mean	2.7	2.7	2.7	3.0	3.1	1.9	2.7	2.7	2.7
AGE									
Mean	44.8	43.4	46.1	26.2	43.5	68	46.7	41.6	43.3
EDUCATION									
Less than H.S.	20%	21%	18%	20%	17%	23%	38%	-	-
High school grad	31%	31%	30%	25%	30%	37%	58%	-	-
Tech School/Other	2%	2%	3%	1%	3%	2%	4%	-	-
Some college	20%	19%	20%	26%	17%	17%	-	100%	-
Graduated college	18%	16%	19%	21%	19%	12%	-	-	64%
Grad school or more	10%	10%	10%	6%	14%	9%	-	-	36%
HOUSEHOLD INCOME									
<\$10K	6%	3%	10%	5%	3%	12%	9%	4%	2%
\$10K to <\$15K	5%	6%	4%	6%	2%	7%	6%	3%	3%
\$15K to <\$20K	6%	5%	7%	7%	5%	7%	9%	4%	2%
\$20K to <\$25K	7%	6%	8%	11%	3%	8%	10%	6%	3%
\$25K to <\$30K	8%	8%	7%	10%	6%	7%	9%	7%	4%
\$30K to <\$40K	11%	13%	10%	13%	10%	11%	12%	15%	7%
\$40K to <\$50K	9%	11%	8%	9%	13%	6%	8%	14%	9%
\$50K to <\$75K	14%	16%	13%	15%	18%	10%	10%	18%	20%
\$75K+	16%	18%	14%	14%	27%	8%	7%	16%	33%
RACE									
White	85%	86%	84%	73%	87%	96%	83%	84%	90%
White Hispanic	4%	4%	4%	8%	3%	1%	5%	4%	1%
Black Hispanic	1%	-	1%	1%	-	-	1%	-	-
Black	8%	7%	9%	12%	9%	1%	8%	9%	6%
Asian/Oriental	1%	2%	1%	3%	-	-	-	2%	3%
Native American	1%	1%	2%	1%	1%	2%	2%	1%	-

Note: differences among demographic groups that are significant at the 95% confidence level are shown in bold face.
 Source: Telephone survey of Connecticut residents, November 1996.

Table 3.24b Respondent Demographics - Total and by Income, Race, Employment

	Total	Income				Race		Employment	
		<\$30K	\$30K- \$49.9K	\$50K- \$74.9K	\$75K+	White	Other	Employ	Unemploy
SEX									
Male	48%	42%	54%	53%	53%	49%	42%	54%	34%
Female	52%	58%	46%	47%	47%	51%	58%	46%	66%
MARITAL STATUS									
Single/never married	21%	28%	20%	17%	18%	18%	42%	26%	11%
Single/livi. w/partner	7%	8%	7%	8%	5%	6%	12%	7%	5%
Married	50%	30%	51%	63%	71%	53%	28%	50%	50%
Separated	3%	5%	5%	2%	1%	3%	5%	4%	2%
Widowed	9%	15%	5%	6%	2%	10%	7%	2%	25%
Divorced	10%	14%	12%	5%	4%	10%	7%	11%	7%
EMPLOYMENT									
Full-time	58%	39%	76%	74%	78%	59%	57%	85%	-
Part-time	11%	12%	7%	12%	10%	10%	17%	15%	-
Not employed	31%	49%	17%	15%	12%	31%	25%	-	100%
SPOUSE EMPL.									
Full-time	61%	36%	63%	72%	82%	60%	72%	72%	38%
Part-time	11%	11%	13%	12%	7%	12%	5%	13%	7%
Not employed	28%	54%	24%	16%	11%	29%	23%	15%	55%
HOUSEHOLD SIZE									
Mean	2.7	2.4	2.7	3.0	3.2	2.6	3.1%	2.8%	2.4%
AGE									
Mean	44.8	46.7	42.2	41.6	41.7	46.7	34.9%	39.3%	57.0%
EDUCATION									
Less than H.S.	20%	36%	16%	5%	5%	17%	28%	15%	30%
High school grad	31%	34%	34%	28%	17%	32%	25%	30%	31%
Tech School/Other	2%	2%	2%	3%	2%	2%	2%	2%	3%
Some college	20%	15%	27%	25%	20%	20%	23%	21%	17%
Graduated college	18%	9%	18%	24%	29%	18%	17%	20%	11%
Grad school or more	10%	4%	3%	15%	27%	11%	6%	11%	7%
HOUSEHOLD INCOME									
<\$10K	6%	20%	-	-	-	6%	14%	2%	17%
\$10K to <\$15K	5%	15%	-	-	-	5%	6%	3%	8%
\$15K to <\$20K	6%	19%	-	-	-	6%	10%	5%	10%
\$20K to <\$25K	7%	23%	-	-	-	6%	10%	6%	10%
\$25K to <\$30K	8%	23%	-	-	-	8%	6%	8%	6%
\$30K to <\$40K	11%	-	55%	-	-	11%	15%	14%	6%
\$40K to <\$50K	9%	-	45%	-	-	10	9%	11%	5%
\$50K to <\$75K	14%	-	-	100%	-	15%	11%	18%	7%
\$75K+	16%	-	-	-	100%	17%	11%	20%	6%
RACE									
White	85%	78%	84%	90%	92%	96%	-	84%	87%
White Hispanic	4%	7%	4%	2%	1%	5%	-	4%	4%
Black Hispanic	1%	-	1%	-	-	-	5%	1%	-
Black	8%	13%	8%	4%	6%	-	72%	9%	6%
Asian/Oriental	1%	1%	2%	2%	1%	-	12%	1%	1%
Native American	1%	2%	2%	1%	-	-	11%	1%	2%

Note: differences among demographic groups that are significant at the 95% confidence level are shown in bold face.
 Source: Telephone survey of Connecticut residents, November 1996.

	TOTAL	SINGLE		MARRIED			Double Income No child	Single Parent	Retired
		<35	35+	18-34	35-54	55+			
SEX									
Male	48%	58%	33%	39%	56%	56%	59%	30%	37%
Female	52%	43%	67%	61%	44%	41%	41%	70%	63%
MARITAL STATUS									
Single/never married	21%	86%	19%	-	-	-	-	46%	3%
Single/live w/partner	7%	-	-	27%	7%	4%	-	-	1%
Married	50%	-	-	73%	94%	96%	100%	-	48%
Separated	3%	3%	10%	-	-	-	-	10%	3%
Widowed	9%	1%	38%	-	-	-	-	9%	40%
Divorced	10%	9%	33%	-	-	-	-	35%	4%
EMPLOYMENT									
Full-time	58%	62	49%	65%	78%	35%	96%	72%	-
Part-time	11%	22%	6%	10%	8%	8%	5%	3%	-
Not employed	31%	16%	45%	25%	14%	56%	-	26%	100%
SPOUSE EMPL.									
Full-time	61%	-	-	82%	76%	28%	85%	-	-
Part-time	11%	-	-	4%	12%	15%	15%	-	-
Not employed	28%	-	-	15%	12%	57%	-	-	100%
HOUSEHOLD SIZE									
Mean	2.7	2.8	1.7	3.3	3.6	2.2	2.0	2.8	1.7%
AGE									
Mean	44.8	24.5	59.2	28.1	43.1	65.9	46.9	34.4%	72.6%
EDUCATION									
Less than H.S.	20%	21%	25%	17%	15%	20%	19%	32%	25%
High school grad	31%	27%	33%	24%	31%	38%	21%	34%	37%
Tech School/Other	2%	2%	3%	1%	3%	2%	4%	2%	4%
Some college	20%	27%	14%	24%	17%	20%	19%	18%	13%
Graduated college	18%	18%	13%	25%	20%	13%	20%	10%	12%
Grad school or more	10%	5%	12%	8%	14%	9%	17%	4%	10%
HOUSEHOLD INCOME									
<\$10K	6%	5%	17%	4%	3%	1%	-	20%	18%
\$10K to <\$15K	5%	9%	7%	2%	-	6%	1%	3%	10%
\$15K to <\$20K	6%	7%	7%	6%	3%	8%	3%	5%	9%
\$20K to <\$25K	7%	13%	7%	9%	2%	8%	2%	15%	9%
\$25K to <\$30K	8%	10%	9%	7%	3%	7%	5%	23%	8%
\$30K to <\$40K	11%	14%	11%	12%	8%	14%	13%	15%	6%
\$40K to <\$50K	9%	9%	8%	11%	11%	9%	9%	9%	4%
\$50K to <\$75K	14%	9%	10%	21%	20%	12%	18%	1%	4%
\$75K+	16%	12%	7%	16%	35%	10%	33%	2%	2%
RACE									
White	85%	67%	88%	78%	90%	99%	99%	69%	94%
White Hispanic	4%	8%	3%	9%	2%	1%	-	19%	1%
Black Hispanic	1%	3%	-	-	-	-	-	-	-
Black	8%	15%	7%	10%	8%	-	1%	12%	2%
Asian/Oriental	1%	4%	-	3%	-	-	-	-	-
Native American	1%	2%	2%	-	1%	1%	-	1%	3%

Note: differences among demographic groups that are significant at the 95% confidence level are shown in bold face.
 Source: Telephone survey of Connecticut residents, November 1996.

Comparison With Connecticut Poll Surveys, 1981 to 1994

The Connecticut Poll, carried out by the Institute for Social Inquiry of the University of Connecticut, has periodically carried out surveys related to legalized gambling. For the most part, the questions in their surveys are too different to make comparisons with the November 1996 Telephone Survey, but there are several attitudinal and behavioral questions that are of interest. These are shown in Table 3.25. A comparison with the 1992 study of legalized gambling in Connecticut⁷ is not possible since the survey conducted as part of that study did not include questions about attitudes.

Table 3.25 Comparison of Several Results in The 1996 Survey With The Connecticut Poll, 1981-94

	1981	1989	1991	1994	1996
Always Immoral/Strongly Disapprove	12%	10%	7%		12% ¹ 16% ²
No Problem With Gambling Advertising		62%			77%
Been to a Casino					
Ever	33%	60%	59%		66%
Past 12 Months	9%				
Connecticut Native American Casino				28%	38%
Been to a Greyhound Track					
Ever	18%				18%
Past 12 Months	2%				2%
Been to a Jai Alai Fronton					
Ever	39%				28%
Past 12 Months	5%				3%

¹ The Connecticut Lottery

² Other forms of legalized gambling in Connecticut

Source: The Connecticut Poll, Institute for Social Inquiry, University of Conn.; 1996 values from the November 1996 Telephone Survey conducted as part of the present study.

⁷ Christensen, 1992

The Connecticut Poll question concerning approval was:

“Which of the following is closest to how you feel about gambling in general:

It is always morally wrong.

It's irresponsible if you bet money you can't afford to lose.

It's just harmless entertainment.”

The legalized-gambling-approval questions asked in the telephone survey reported in this chapter were:

“On a scale of 1-10, where 10 means Strongly Approve and 1 means Strongly Disapprove, how much do you approve or disapprove of the different types of Lottery games available in Connecticut?”

“Using the same scale of 1-10, how much do you approve or disapprove of the other forms of legalized gambling in Connecticut”

While these are clearly different questions, it is interesting that a higher percentage expressed strong disapproval of the different forms of gambling in the present survey than thought gambling was immoral in the previous surveys.

The advertising questions are more comparable. The responses suggest that over the past 7 years, the advertising of gambling has become more acceptable.

The participation questions are not comparable for the Connecticut Lottery, but are for pari-mutuels and casinos. The increases in ever having been to a casino, particularly between 1981 and 1989 as New Jersey casino gambling grew rapidly, and in having been to a Connecticut Native American Casino are notable. At the same time, the comparison for Greyhound Tracks shows a remarkable stability. The questions relating to Jai Alai participation underscore the decline in interest in that form of gambling over the last 7 years.

4. THE IMPACT OF LEGALIZED GAMBLING IN CONNECTICUT ON THE ECONOMIES OF DEPRESSED AREAS, ON CRIME AND ON THE REGRESSIVENESS OF STATE TAXATION

Legalized gambling provides both opportunities and costs for Connecticut's citizens.

- Most of the economic opportunity provided by Native American Casinos goes to economically depressed areas. Seventy-one percent of the wages and salaries paid by Foxwoods goes to Connecticut residents in the lowest income two-fifths of the ZIP code areas in Connecticut that together account for only 33% of the total income of the State's residents but 46% of the population.
- The introduction of Native American casino gambling into Connecticut does drive up the number of crimes, especially property crime, in the locality. However, the observed increase is accounted for in large part by the presence of large numbers of visitors.
- Based on the November 1996 Telephone Survey of Connecticut residents, there is little indication of widespread illegal gambling. On the other hand, a subset of heavy gamblers participates in both legalized and illegal gambling to a high degree.
- Progressivity and regressivity as applied to state revenues from legalized gambling depend on, first, whether taxation of entirely voluntary consumption should be considered in this connection and, second, whether spending on the forms of legalized gambling from which the state derives substantial revenues, the Lottery and Native American casino video facsimile machines, falls with rising income. WEFA finds that gambling expenditures do fall as a percentage of income, from incomes below \$10,000 up to incomes of \$25,000 per year. However, the largest percentages of income spent on gambling occur for middle incomes, between \$25,000 and \$40,000 per year.

The Economic Opportunity Provided by Native American Casinos to Residents of Economically Depressed Regions in Connecticut

The greater part of the economic opportunity provided by Native American Casinos, as measured by wages and salaries paid to Connecticut residents by Foxwoods Resort Casino, goes to economically depressed regions of the state (see **Table 4.1**). The analysis on which this conclusion is based uses 1996 wage and salary data released by Foxwoods to WEFA Group, combined with income data on Connecticut residents compiled by WEFA Group. Geographical areas defined by the boundaries of five-digit postal ZIP codes were used in this analysis because they provided the most direct link between the two sets of data.

WEFA ranked each ZIP code area according to average per capita income and divided the ranked list into five groups each containing an equal number of ZIP code areas. These are listed in the first column of **Table 4.1**. The first group contains the 61 ZIP code areas with the highest per capita income, the second group contains the next highest income 61 ZIP code areas, and so forth. The second column lists the average per capita income across the ZIP code areas within each group. For comparison, per

capita income of Connecticut was an estimated \$24,929 in 1996. The third column lists the percentage of the total Connecticut income earned by residents in each group. The last column shows the percentage of total Foxwoods wages paid to residents of that group of Connecticut ZIP codes.

ZIP Code Group	Average Per Capita Income	Share of Connecticut Income	Share of Connecticut Population	Share of Total Foxwoods Wages and Salaries Paid in Connecticut
1	\$44,192	29%	16%	2.2%
2	\$27,726	20%	18%	9.6%
3	\$22,835	17%	19%	16.9%
4	\$20,323	17%	21%	33.2%
5	\$15,871	16%	25%	38.1%
Connecticut Average	\$24,929	100%	100%	100.00%

Sources: Claritas, Inc. and Foxwoods Resort Casino

Residents of ZIP code areas within the fifth, and most economically depressed, group receive 16% of the total income for the state yet receive 38% of the wages and salaries paid by Foxwoods to Connecticut residents. Combining residents of the fourth and fifth groups shows that a full 71% of the wages and salaries paid by Foxwoods to Connecticut residents goes to geographic regions which are among the most economically depressed. Tables listing these groups of the lowest and next lowest per capita income ZIP code areas appear in **Appendix G**.

An assessment that Foxwoods has major positive economic impact for the most economically depressed sections of the State is further supported by the data shown in **Table 4.2**, which lists the ten Connecticut ZIP codes with both the most employees and the most earnings from Foxwoods. These ten ZIP code areas account for over 60% of the wages and salaries paid by Foxwoods to Connecticut residents.

Foxwoods employs 1,402 residents in the 06360 ZIP code area, an area with per capita income of about \$19,000, significantly below the state average of \$24,929. The next three ZIP codes -- Groton, New London and Jewett City -- are the residence of 1,615 Foxwoods employees and average below \$17,500 in per capita income. The only ZIP code in this group of ten with average per capita income above the Connecticut average is Mystic, where Foxwoods employs 228 persons.

Clearly the vast majority of Foxwoods employment in Connecticut goes to the local area and to part of that local area with average per capita income below the Connecticut average.

Zip Code	Geographic Name	Per Capita Income in ZIP code Area	Number of Foxwoods Employees	Share of Total Foxwoods Connecticut Wages
06360	Norwich	\$19,190	1,402	17.7%
06340	Groton	\$17,216	651	8.7%
06320	New London	\$17,133	494	6.2%
06351	Jewett City	\$17,438	470	5.9%
06379	Pawcatuck	\$21,644	367	5.2%
06339	Ledyard	\$22,787	353	4.8%
06374	Plainfield	\$14,962	263	3.8%
06382	Uncasville	\$19,634	256	3.4%
06355	Mystic	\$29,217	228	3.2%
06385	Waterford	\$24,822	182	2.8%
	Connecticut	\$24,929	7,666	100.0%

Sources: Claritas, Inc. and Foxwoods Resort Casino

The Relationship Between Gambling and Crime, Including the Relationship Between Legalized and Illegal Gambling

Gambling and Crime

The common perception that the introduction of legalized gambling leads to more crime is based partly on the early association of the industry with organized crime, especially in Las Vegas. Added to that legacy is the sense that the great amounts of cash, large crowds, and the atmosphere of a gambling site are magnets for criminals. Perhaps the largest factor is the reputation of Atlantic City, where the legalization of casino gambling brought a surge in crime lasting over a decade. After a thorough review and examination of the available data, WEFA concludes that the number of crimes, especially larceny and other property crimes, appears to rise with the introduction of casinos. However, the relationship between legalized gambling and crime is complicated by the issue of the proper measurement of crime rates, as well as definitional problems when "white-collar" crime may be involved.

We conclude from our analysis of crime rates in Ledyard, the location of Foxwoods, and surrounding New London County, that the introduction of legalized gambling does drive up the number of crimes, especially property crime, in the locality. The observed increase, however, loses much of its statistical significance if one adjusts for the entire

population at risk, i.e. visitors to a venue and non-residents working there, in addition to the resident population on which Uniform Crime Index crime rates are based.

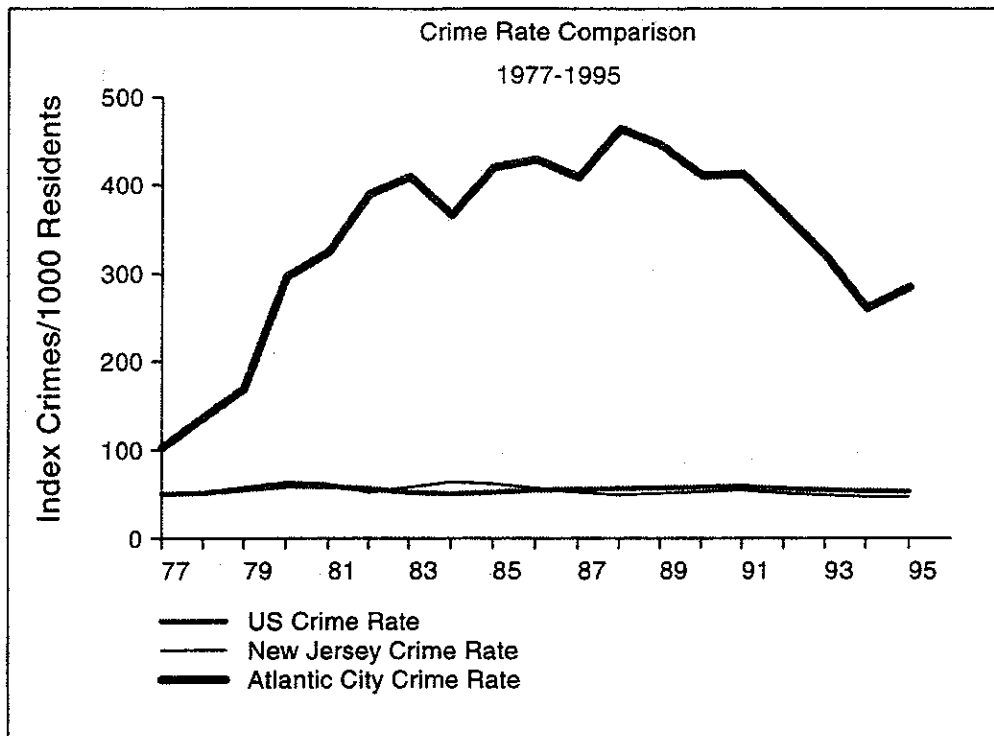
Much of the literature on the impact of gambling on crime is based on the Atlantic City experience. In a series of articles, Simon Hakim, Andrew Buck, and their associates¹ argue that crime increased in the post-casino years, not only in Atlantic City, but also in adjacent localities and along the major routes to Philadelphia and New York City. The major implication of these and similar articles is that the adverse effects of legalized gambling, including crime and related social costs and externalities, should be evaluated along with purely economic benefits of gambling such as increases in employment and state revenues.

According to the State of New Jersey's 1995 Uniform Crime Report, crime in Atlantic City increased substantially after the introduction of casinos.² Between 1977, the year before casinos, and 1990, the number of crimes rose 3.5 times. The number of crimes in Atlantic City turned down after 1990, falling nearly 38% by 1994, although there was a small upturn in 1995 as the result of an increase in nonviolent crime. While there has been no definitive analysis of the reasons for the decline, the trend follows the pattern for the State of New Jersey and the US as a whole. Yet even with the drop, Atlantic County continues to have the highest property crime rate in New Jersey, at 77.9 per 1,000 inhabitants -- driven by Atlantic City's 1995 property crime rate of 259 per 1,000 residents. The chart on the next page illustrates crime rate trends during the 1977-1995 period for Atlantic City, the State of New Jersey, and the entire United States. The Atlantic City rates evidently far exceed those of the larger jurisdictions. However, to put these statistics into perspective, one should take into account both the method of calculating crime rates and the definition of Index Crimes that is the basis for data in the Uniform Crime report.

The FBI's Crime Index, the major gauge of reported crime rates, tabulates only selected offenses classified as the most serious violent and property crimes. The violent crimes counted in the index are murder, manslaughter, rape, robbery and aggravated assault. Property crimes in the index comprise burglary, larceny, motor vehicle theft, and arson. Other offenses are not included in the index, and among these are some "white collar" crimes such as embezzlement and passing bad checks that could be associated with the behavior of pathological gamblers. Gambling offenses are also excluded from the index.

¹ Hakim & Buck, 1989; Friedman et al., 1989; Buck et al., 1991.

² The States of New Jersey and Connecticut participate, along with most other state and local law enforcement agencies, in the FBI's Uniform Crime Reporting Program, which provides national and regional crime counts published in annual reports.



Source: Uniform Crime Reports, US Department of Justice and New Jersey State Police

Reported crime rates are calculated based on resident population. Thus, for a location such as Atlantic City, a crime rate showing a certain number of offenses per 100,000 people has for its denominator only persons living in Atlantic City. Thousands of casino patrons and other tourists who were in the city while crimes were committed are not factored into the rate, nor does the statistic include the many casino workers who live outside the boundaries of Atlantic City. The high crime rate in Atlantic City from the late 1970s into the 1990s is aggravated not only by the large non-resident population, but also because the city's permanent population declined during this period, from 42,655 in 1977 to an estimated 37,250 in the mid-1990s.

Data for non-gambling locations heavily visited by tourists suggest that per resident crime rates resemble the rates at gambling destinations. Thus, there is some ground to view reported crime rates as distorted upward in any large-scale tourist venue because they do not take into account the non-resident population. On the other hand, certain offenses that may be highly relevant to a study of the relation between gambling and crime do not appear in standard crime rate data. There is, further, the difficulty that criminal behavior generated by gambling may occur at locations distant from gambling sites.

The opening of the Foxwoods casino in Ledyard in 1992 sparked an upturn in crime. As **Table 4.3** shows, the number of crimes in Ledyard remained roughly stable from 1989 through 1991, similar to the trend in Connecticut (see **Table 4.4**). In 1993, despite a steady decline in crime in Connecticut and the nation, crime in Ledyard rose substantially and continued to escalate in 1994 and 1995. Much of the increase has been in larceny, which more than tripled between 1993 and 1995. Again, the rise in

Calendar Year	1989	1990	1991	1992	1993	1994	1995
Violent Crime ¹	24	24	22	26	52	54	62
Property Crime ²	164	190	192	257	368	1001	1,032
Larceny	107	143	132	207	313	926	962
Total Crime	188	214	214	283	421	1,055	1,094

Source: Crimes Analysis Department, Town of Ledyard
Information Consistent with FBI Uniform Crime Reports

¹ Violent crimes include murder, manslaughter, rape, robbery and aggravated assault.

² Property crimes include burglary, larceny theft, motor vehicle theft, and arson.

Calendar Year	1989	1990	1991	1992	1993	1994	1995
Violent Crime ¹	16,578	18,219	17,853	16,376	15,047	15,018	13,211
Property Crime ²	154,122	158,866	159,160	150,213	137,442	134,067	133,896
Larceny	91,491	94,484	93,562	89,807	85,878	84,747	87,141
Total Crime	170,700	177,085	177,013	166,589	152,489	149,085	147,107

Connecticut Rate per 100,000 Population

Violent Crime	512	554	540	495	456	456	403
Property Crime	4,758	4,833	4,824	4,558	4,194	4,093	4,088

US Rate per 100,000 Population

Violent Crime	663	732	758	758	746	714	685
Property Crime	5,078	5,089	5,140	4,903	4,737	4,660	4,593

(Index Crimes Consistent with FBI Uniform Crime Reports)

¹ Violent crimes include murder, manslaughter, rape, robbery and aggravated assault.

² Property crimes include burglary, larceny theft, motor vehicle theft, and arson.

Source: Department of Public Safety, *Crime in Connecticut, 1995 Annual Report*.

crime does not take into account the stream of casino patrons, in excess of 17 million annually or almost 45,000 visitors per day in 1995.

As **Table 4.5** indicates, New London County, which includes Ledyard, has the fourth highest rates in the state for both violent and nonviolent (property) crime. However, these rates are below the average for Connecticut, which, in turn, has rates well below the national average. **Table 4.6** shows crime rates in Ledyard, first calculated using the

**Table 4.5 Connecticut Crime Rates by County:
Calendar Years 1991-1995 (Index Offenses per 100,000 population)**

County	Violent Crime ¹					Property Crime ²				
	1991	1992	1993	1994	1995	1991	1992	1993	1994	1995
Hartford	684	592	565	630	547	5481	5366	4739	4660	4668
New Haven	684	6401	520	531	470	6026	5657	5277	5332	5378
Fairfield	549	522	496	431	357	4891	4662	4248	3912	3798
New London ³	360	337	358	346	353	3454	3008	3046	3022	3131
Litchfield	144	130	162	170	117	2642	2293	2127	1961	1936
Middlesex	177	188	176	172	166	3165	2865	2836	2912	2726
Tolland	220	186	231	184	177	2248	2048	1882	2097	1911
Windham	255	289	259	247	334	2454	2249	2002	1852	2498
Connecticut	540	495	456	456	403	4824	4558	4194	4093	4088
United States	758	758	747	714	685	5140	4901	4738	4660	4593

¹ Violent crimes include murder, manslaughter, rape, robbery and aggravated assault.
² Property crimes include burglary, larceny theft, motor vehicle theft, and arson.
³ Includes Ledyard, where Foxwoods Native American Casino is located.

Source: Department of Public Safety, Crime in Connecticut, 1995 Annual Report. (Index Crimes consistent with FBI Uniform Crime Reports: US Department of Justice, Uniform Crime Reports for the United States, 1995); State of Connecticut Uniform Crime Reporting Program.

Calendar Year	1990	1991	1992	1993	1994	1995
Number of Crimes						
Violent	24	22	26	52	54	62
Property	190	192	257	368	1001	1032
Resident Population	14,913	14,828	14,744	14,660	14,759	14,661
Crime Rate per 100,000 resident population						
Violent	161	148	176	355	366	423
Property	1,274	1,295	1,743	2,510	6,782	7,039
Non-residents	0	0	9,350	33,068	46,490	54,558
Casino visitors, daily average	0	0	6,027	27,123	39,178	46,575
Employees	0	0	3,323	5,945	7,312	7,983
Adjusted population	---	---	24,094	47,728	61,249	69,219
Crimes per 100,000 adjusted population						
Violent	---	---	108	109	88	90
Property	---	---	1,067	771	1,634	1,491
Notes:						
<ul style="list-style-type: none"> • Number of Crimes: Source, See Table 4.3. • Resident Population: Sources <ul style="list-style-type: none"> - 1990: US Census Bureau - 1991, 1992: WEFA estimate, interpolated from 1990 Census and 1993 Connecticut Department of Health - 1993,1994,1995: Connecticut Department of Public Health • Non-resident population: Source, Foxwoods Native American Casino <ul style="list-style-type: none"> - Estimate of non-resident visitors is calculated as 96.9% of total visitors who come from 10 miles or more away from the casino. - Employees include those from outside the local area (excluding the following ZIP Codes: 06335 (Gales Ferry), 06339 (Ledyard), 06349 (Groton), 06351 (Preston), 06365 (Preston-North Stonington), and 06359 (North Stonington)). <p>Adjusted population is the sum of the resident plus non-resident population. Casino visitors are an estimate of the daily average.</p> 						

resident population, and then calculated based on the resident population plus casino visitors and employees from outside the region. The resulting rate of violent crime, based on adjusted population, declines slightly from 1992 through 1995, the most recent year for which crime statistics are available. The rate of property crime rises in 1994 and 1995 to levels well above the pre-casino years. However, the rates for both violent and property crime remain far below the rates for Connecticut and the US (see **Table 4.4**).

Studies that accounted for the increased number of tourists into Atlantic City found no net increase in the crime rate after the opening of casinos.³ Other research has associated rising crime in Deadwood, South Dakota and old mining towns in Colorado, where casinos have opened, with the phenomenon of a higher average daily population. In the Iowa and Illinois riverboat communities and on the Mississippi Gulf coast crime rates were unchanged or decreased even without taking the visitor increases into account.⁴ Data also suggest that per resident crime rates in non-gambling locations heavily visited by tourists resemble the rates at gambling destinations.

We conclude from our analysis that the introduction of legalized gambling does drive up the number of crimes, especially property crime, in the locality. Large urban centers, especially those with large numbers of tourists or non-residents, generally provide an environment conducive to the occurrence of this type offense. The observed increase, however, loses much of its statistical significance if one adjusts for the entire population at risk, i.e. visitors to a venue and non-residents working there, in addition to the resident population on which Uniform Crime Index crime rates are based.

The Relation of Legalized and Illegal Gambling

Another specific crime-related impact of the introduction of legal gambling is the effect on illegal gambling. There are several possible links between legalized and illegal gambling. On the one hand, legalization may divert demand from illegal activities, which was the State's purpose for legalizing off-track betting in Connecticut. On the other hand, it may be that legalization introduces gambling to more people, provides it with a social sanction, and enlarges the market. If this is the case, demand for illegal forms of gambling would rise along with the increase in legal activities.

The statistics on arrests for illegal gambling, although not Index Crimes, are tracked by the FBI and the State of Connecticut as part of the Uniform Crime Reports. They provide information on the level of gambling-related law enforcement activity, but no clear-cut evidence of either possible relationship noted above.

Arrest statistics do not distinguish purveyors of illegal gambling from individuals who merely participate in it. The FBI Uniform Crime Report broadly defines gambling offenses as "promoting, permitting, or engaging in illegal gambling."⁵ National crime report statistics for 1995 show that in urban areas, gambling offenses accounted for

³ Albanese, 1985; Curran & Scarpiti, 1991.

⁴ Chiricos, 1994; Illinois Criminal Justice Information Authority, 1994.

⁵ United States Department of Justice, Federal Bureau of Investigation, Crime in the United States 1995 (Uniform Crime Reports), Washington, D.C.

0.2% of all arrests, while in suburban and rural jurisdictions the ratio of gambling arrests to total arrests was half that figure at 0.1%. A higher (though small) gambling arrest rate in cities than in less densely populated sections appears to be a constant phenomenon. Beyond that, it is difficult to discern a clear trend in gambling arrests.

The FBI Uniform Crime Report tabulates crimes reported by large samples of law enforcement agencies, but these agencies do not represent the total number of law enforcement jurisdictions. Moreover, different samples of agencies are tracked for various periods, producing overlapping sets of statistics that are not meaningfully comparable with each other. Thus, one set of 7,587 police departments covering a population estimated at 176.3 million in 1995 reported a decline in total annual gambling arrests from 24,321 in 1986 to 14,653 in 1995, a drop of almost 40%. On the other hand, another sample of 7,051 police agencies with 1995 population coverage of 159.3 million reported nearly a 21% rise in gambling arrests between 1991 (9,911) and 1995 (11,556). With such divergent data, the trend in illegal gambling, and in law enforcement response to this activity, is ambiguous. One possibly significant development is that the FBI cited almost a doubling in gambling arrests of those under 18 -- from 552 in 1986 to 1,093 in 1995 -- in the same set of agency reports that noted a large overall drop in gambling arrests during that ten-year period. This increase raises the issue of whether more widespread legalized gambling has encouraged more youths to gamble illegally, but further study would be required to determine if the increased juvenile gambling arrests occurred where there is commercial legalized gambling for adults.

As **Table 4.7** shows, the states with the highest gambling arrest rates generally do not have casinos.⁶ New Jersey, despite the large and growing Atlantic City complex, has 6.1 gambling arrests per 100,000 population, marginally above the national average of 5.5 such arrests. States with the lowest arrest rates tend to be sparsely populated, although casino gaming is present in the majority of these states.

Gambling laws, and the prohibition of specific forms of gambling, vary by state. In Connecticut, private card games for money, office sports pools, and betting on games of skill such as bowling, pool, and golf are legal -- considered social gambling, as distinguished from commercial gambling or charitable gaming. Social gambling activities become illegal only if the "house" or person who conducts the game takes out a share of the wagers in profit. The principal forms of illegal gambling present in the State of Connecticut are sports bookie operations and illicit gambling devices. The latter offense typically involves bars which offer video poker machines that are played for money rather than amusement purposes only.

⁶ New York State had the second highest gambling arrest rate in 1995, at 44.9 per 100,000. The Oneida people operate a tribal casino in upper New York State with table games and video "instant multi-game" machines (similar to video lottery terminals). However, this facility is located far from the population centers that are likely to account for the great majority of gambling arrests in the State of New York.

Table 4.7 Gambling Arrests, 1995: States with the Highest and Lowest Arrest Rates

Included for comparison:	Arrests per 100,000 Inhabitants
US Average	5.5 ¹
Connecticut	3.9
Eight Highest States	Arrests per 100,000 Inhabitants
District of Columbia	45.3
New York	44.9
Hawaii	32.0
Tennessee	22.7
South Carolina	11.1
Ohio	10.8
Nevada	9.8
Georgia	9.6
New Jersey	6.1
Eight Lowest States	Arrests per 100,000 Inhabitants
Colorado	0.9
Iowa	0.7
Mississippi	0.5
Missouri	0.5
Oregon	0.4
Utah	0.3
Washington	0.2
South Dakota	0.2

¹ Average based on total gambling arrests in US per every 100,000 persons. If state rates are summed and then averaged, the figure is 8.0 arrests.

Source: US Department of Justice, Uniform Crime Reports for the United States, 1995.

Connecticut averages 3.9 gambling arrests per 100,000,⁷ well below the national average. Only three Connecticut cities had significant numbers of gambling arrests in 1995 — Bridgeport, Hartford, and New Haven. The three account for 60 of Connecticut's 94 arrests of persons over 18 in 1995, and 10 of the 13 total arrests of those under 18. **Table 4.8** displays Connecticut's reported gambling arrests from 1986 to 1995.

While there is no strong evidence that legalized gambling either discourages or encourages illegal gambling, the crime statistics do suggest hypotheses. One is that local traditions or practices may be a factor in explaining the prevalence of illegal gambling. Moreover, the number of arrests in a locality may depend more upon the law enforcement priorities of the community than on the relative prevalence of illegal gambling.

Table 4.8 Gambling Arrests in Connecticut 1986-1995									
Number of Arrests									
1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
149	188	165	173	132	131	203	108	91	107
Gambling Arrests as a Percentage of Total Arrests									
1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
0.087%	0.095 %	0.078 %	0.077%	0.061%	0.067%	0.110%	0.058 %	0.049 %	0.057 %

Source: State of Connecticut Uniform Crime Reporting Program

Evidence from the November 1996 Telephone Survey of Connecticut Residents

Statistical analysis of amounts wagered per occasion, from the November 1996 telephone survey of Connecticut residents, shows close relationships between several legalized gambling activities and illegal gambling. These relationships imply that there is a group of people who tend to spend above average amounts on both legalized gambling and illegal gambling activities. This may also suggest that there are "core" gamblers who would engage in the activity even if there were no legalized gambling.

It should be noted that a survey of current attitudes toward and participation in gambling activities cannot address the issue of whether people who formerly engaged in illegal gambling have turned to legalized gambling. Neither can it address the issue of whether the availability of legalized commercial gambling has increased the participation in illegal or private social gambling.

Based on the telephone survey, the incidence of illegal gambling among Connecticut citizens is well below that of legal gambling. Compared to participation rates of 66% (lifetime basis) for casino gambling, 66% for Lotto and 52% for Instant Lottery tickets,

⁷ This rate is based on the FBI 1995 Uniform Crime Report which used a sample of 98 police departments in the State of Connecticut, representing 2.75 million of the State's population. The assumption is that results from the nonreporting agencies which cover the remainder of the population would not significantly alter the gambling arrest rate.

only 15% of the telephone survey respondents have played video poker outside a casino, and 9% have placed bets with a sports bookie.

Our analysis shows that participants in these illegal activities tend to be male; however, each activity has a somewhat different demographic profile:

- Middle-aged men with incomes over \$50,000 most often say they have bet with a sports bookie. Those who bet most frequently earn high incomes, and include singles over 35, and people with some college. The biggest spenders are 18-34, earn less than \$30,000, and are less educated. People who are over 55 and married also spend above-average amounts.
- People who say they have played video poker outside a casino tend to be under 35. Middle-aged married people, including those with children, are also relatively more likely to have played. Those who spend the most include married people over 35, childless couples, and the retired.

We performed a correlation analysis (Pearson r)⁸ to discover whether participation, frequency of play, or level of spending on legal gambling might be associated with corresponding activity in illegal forms of wagering. Note that correlations do not imply causation, only the degree to which one behavior is associated with another. In most cases, the test for amount spent yielded the strongest correlations. Our principal findings are:

- Those who spend the most on betting with bookies are also likely to spend above-average amounts betting on Native American Casino video facsimile machines and table games ($r > 0.9$).
- Those who spend the most betting on video poker machines outside casinos are moderately likely to spend large amounts at greyhound races ($r = 0.64$) and Instant Lottery games ($r = 0.5$).
- There is a low-range moderate correlation between placing a bet with a bookie and participating in a raffle ($r = 0.44$) or Las Vegas Night ($r = 0.38$).
- There is a slight correlation ($r = 0.26$) between placing a bet with a bookie and betting the Daily Numbers in the Lottery.

Based on the telephone survey, there is little indication of widespread illegal gambling activity among Connecticut residents. As noted at the beginning of this discussion, however, a subset of heavy gamblers participates in both legalized and illegal gambling activity to a high degree, with larger than average expenditures in both categories relative to the survey's overall mean figures.

⁸ Pearson r is a measure of the degree of relationship between two normally distributed variables, in this case specific indicators of legal and illegal gambling activity. Values range between +1 for a perfect positive relationship and -1 for a perfect inverse or negative relationship. In this analysis, r values of .9 or higher are very strong, and 0.4 to 0.8 moderate. Note, however, that correlations do not imply causation, only the degree to which one behavior is associated with another.

Regressivity in Connecticut Gambling

Overview

Regressivity, a public finance term, refers to the disproportionate burden of a tax falling on those in lower income brackets relative to the disposition of the tax revenues. Regressivity, and its antonym, progressivity, apply to the fairness of government taxation. Most tax structures are developed with an objective of a fair and equitable burden.

The confusion and concern with respect to gambling is found in the fact that the government derives revenue from this activity and the belief that an unfair and undue burden will fall on lower income groups, due to their perceived tendency to devote a higher percentage of their income to spending on gambling. There is also the public welfare concern that gambling is potentially addictive and that those in lower income brackets can ill-afford to participate beyond moderation. This is used to justify both government regulation and the raising of relative price through some form of taxation similar to the case of cigarettes and tobacco.

Rosen, Musgrave and others describe regressive tax incidence as a condition where *average* tax rates fall with rising income.⁹ They also state that incidence depends upon the disposition of tax receipts. Beyond the fundamental question of whether or not a state lottery meets the definition of a tax, how the proceeds are spent has a great deal to say about the ultimate regressivity. In some states, the part of gambling revenues that is directly taxed is earmarked for public goods or assistance that directly benefits those in lower income brackets, potentially mitigating any regressive impacts.

When comparing gambling behavior across income levels, one has three possible avenues of analysis. First is the participation rate: does the choice to gamble or never to gamble vary by income groups? Second is the absolute amount spent, and third is the amount spent as a percentage of income. Since the question of regressivity is essentially a public finance concept, the third aspect -- the proportion of income spent on gambling -- is most germane for the current discussion. However, to be consistent with the conventions of public finance, the percentages of income spent on gambling should logically be compared as averages for the entire population (gambling participants and non-participants) in each income category. This framework is not well suited for addressing the possibility that participation rates may vary, and the fact that individuals who gamble spend extremely disparate amounts on the activity -- both of which are significant issues.

Regressivity in the context of this study thus refers to the contention that gambling expenditures decline as a proportion of income as income rises. The original discussion of regressivity concentrated on measuring the percentage of income spent on gambling over the distribution of income. In most cases studied, this proportion falls with rising income. Some studies have shown an increase in the proportion of income spent on some forms of gambling at higher incomes, after the initial decline.

The argument that taxation of gambling is regressive is based on an assumption that demand for gambling falls with rising income. Cigarettes and alcohol are the most oft-cited examples of goods or services whose demand has this characteristic. The

⁹ Rosen, 1985; Musgrave, 1980.

purchase of such goods is not by itself regressive, however. It is the burden of the sales, income, or excise taxes assigned to their consumption that can be regressive. While a regressive tax burden may result from the consumption of a good whose demand falls with rising income, it is the existence of the tax and the disposition of its receipts that is the determining factor.

As the analysis has evolved, the issue of gambling as a coercive tax versus a voluntary purchase enters the argument. Here the lottery, for example, can be compared to, say, the use of the state park system. The state park system is similar in that it :

- (1) is sponsored by the state,
- (2) the consumer derives pleasure from the activity,
- (3) it is voluntary rather than coerced,
- (4) its demand also falls to some extent with rising income levels, and
- (5) its "user" fees finance ongoing operations.

Yet, the state park system's user fees are not generally referred to as a regressive tax, given that one "volunteers" to pay them and receives a direct benefit in return.

Finally, the argument comes full circle to whether the conditions are in place that make it appropriate to evaluate the question of regressivity at all. First of all, gambling is an entirely voluntary act whose purchase brings pleasure or satisfies a need. As such, it is similar to other forms of entertainment expenditures. Secondly, the analysis requires an accounting of the disposition of receipts, as well the distribution of spending against income. Thirdly, some observers contend that the percentages of income dedicated to gambling, even in the lowest income brackets, are quite small and hardly worthy of deep concern.¹⁰

Literature Review

Prior to the review of previous work on gambling regressivity, a review of the distinction between the characteristics of gambling spending and regressive taxation is in order. As mentioned previously, the argument rests on the assertion that gambling is a commodity or service whose level of demand falls with rising income. This is contrary to most normal goods and is typified by the examples of cigarettes and alcohol. A regressive tax refers to the condition where average tax rates rise with falling income levels, resulting in a disproportionate distribution of burden. A proportional tax levied on a good whose demand falls with rising income will have a regressive incidence. The actual purchase of the good is not, however, regressive, as the concept of regressivity applies only to taxation.

An article by Daniel Suits¹¹ appears frequently as a reference in subsequent studies of the relation between persons' incomes and their level of gambling expenditures. Suits cites studies two earlier studies, in 1974 and 1975, but his study appears to be the first with sufficiently solid data to arrive at clear conclusions. Suits used data from two surveys (a sample of 1,736 persons nationwide, and another sample of 296 Nevada residents, both from a survey conducted by the Survey Research Center at the

¹⁰ Brown, 1992.

¹¹ Suits, 1977.

University of Michigan) to determine the relationship between income and spending on various types of gambling. He concluded that the majority of types of legalized gambling, and particularly State Daily Numbers and other traditional lottery games, showed significantly greater regressivity than the sales tax.

Many subsequent studies cite Suits' as seminal, while a number of them dispute his methodology. In particular, Suits has been criticized for using different tax bases in different parts of the study, namely state populations for states with horse racing, or lotteries, but the entire US population with respect to casinos. By narrowing their focus, Borg et al.¹² found casino gambling to be a more regressive phenomenon than did Suits.

In a Maryland study, Clotfelter and Cook¹³ again find the overall regressivity of taxes on gambling (lottery) revenues. But they observe, "Measures of incidence based upon mean values alone are likely to miss important distributional aspects of lottery finance," because relatively few households in each income category account for the most concentrated lottery ticket buying. (For the heaviest players in the lowest income group, the regressivity effect was especially striking.)

Clotfelter and Cook acknowledge other possible mitigating factors. In line with Suits, they note that the amount of lottery tax revenue does not represent a major portion of a state's total tax receipts. Also, the fiscal expenditure of gambling tax revenue could have (re)distributive impacts if the funds are earmarked for specific purposes.

An Oregon study,¹⁴ based on a random telephone survey of 3,200 persons in the state, conducted in 1990, revealed that on average, the lowest income groups spent the highest amount proportionate to income on lottery play. The Oregon study did not conclude that the pattern of regressivity represented a serious concern, because no income group spent a large amount on the lottery. Another interesting observation, contrasting with the overall regressive pattern, was that larger household sizes in the lowest income categories (e.g., families with children) tended to spend very low amounts on the lottery. The authors state, "As long as expenditures are maintained within an affordable range, the burden may not be great and may be offset by the perceived entertainment value of the play." They draw a clear distinction between the voluntary nature of purchasing lottery tickets and coercive forms of taxation.

McGurrin and Abt¹⁵ raise the question "Where is the line between involuntary and voluntary taxation?" Finally, McCaffery¹⁶ presents a voluntarist interpretation of lottery ticket buying. He argues against the perceived paternalistic viewpoint in which the purchase of long-shot chances in these games is primarily described as ignorant or irrational consumer behavior.

In conclusion, available data tend to support a correlation between relatively lower income and a higher portion of that income spent gambling. However, gambling

¹² Borg, 1990.

¹³ Clotfelter, 1987.

¹⁴ Brown, 1992.

¹⁵ McGurrin, 1992.

¹⁶ McCaffery, 1994.

spending varies widely within income groups, making any generalization less compelling. With respect to fiscal regressivity, even identifying government receipts from gambling as a tax may be problematic. More generally, any form of spending by low income individuals, for instance on groceries, is "regressive" in that it will take proportionately more of their income than the same purchases by those who are comparatively more affluent.

Results for Connecticut

The telephone survey of Connecticut residents conducted as part of this study revealed that the respondents' gambling spending as a percentage of total income does not vary in any simple way with income.

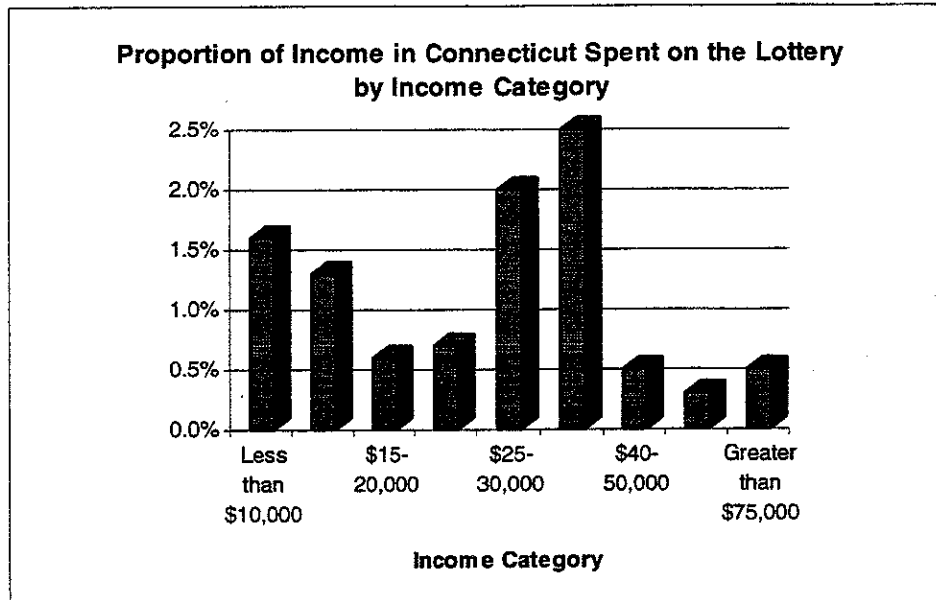
The following analysis was performed on responses from the telephone survey conducted in November 1996 and described in Chapter 3. To test for regressivity, spending, inside and outside the state, is divided by the mean of the income category. For the less than \$10,000 and greater than \$75,000 categories, we used \$7,500 and \$75,000, respectively, in the percentage-of-income denominator. Otherwise, the mean of the category range was applied. The lottery and casino gambling categories are also examined separately.

We must again emphasize that the spending results in this survey, and probably in others, are subject to a high degree of error (see **Chapter 3**). The error arises both from respondents' faulty recollection of how much they have spent and from insufficient sampling of the small number of gamblers who spend the most.

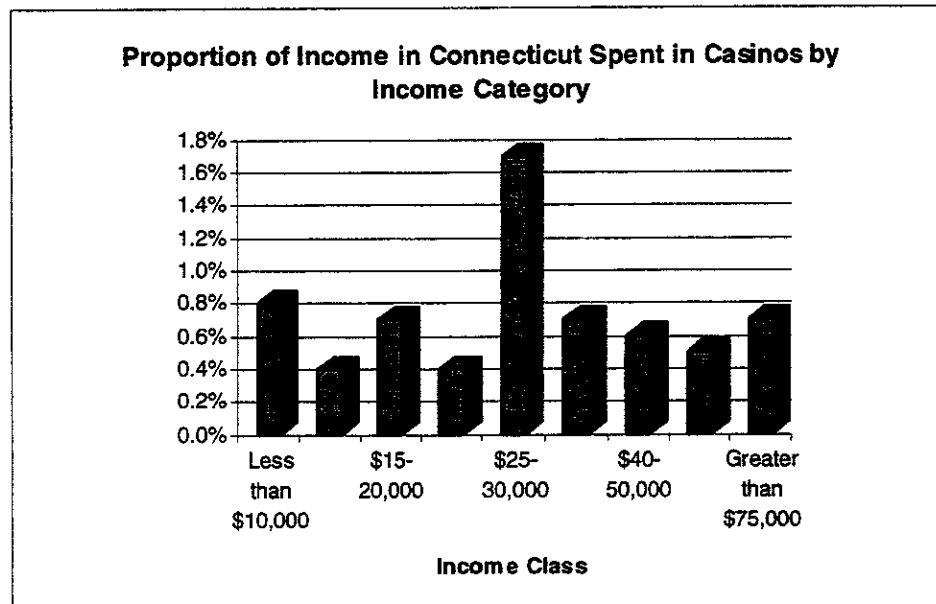
The spending results were developed for the Lottery and for casino gambling. These were the only forms of gambling for which there are sufficient responses to perform a meaningful analysis. The two give very different results, as shown in **Table 4.9**. The table isolates spending on casino and Lottery gambling alternatives. It itemizes the weighted mean proportions of each income class. Casino gambling as a percentage of income appears to be flat over the range of income classes within statistical error, except for the rise in the \$25,000 to \$30,000 income category. This indicates that casino gambling does not exhibit regressivity.

The various Lottery games, on the other hand, do exhibit the properties of a good whose demand falls with rising income for incomes below \$25,000. But the highest spending levels again are found in the middle income categories. The large percentage increase in the middle income categories suggests that in Connecticut the Lottery is not a good whose demand falls with rising income.

These spending patterns are shown graphically in the charts on the next page.



Source: Connecticut Telephone Survey, 1996



Source: Connecticut Telephone Survey, 1996

Table 4.9 Gambling Spending in Connecticut as a Proportion of Annual Income

Income Category	Weighted Mean Proportions	
	Lottery	Casino
1 Less than \$10,000	1.6%	0.8%
2 \$10-15,000	1.3%	0.4%
3 \$15-20,000	0.6%	0.7%
4 \$20-25,000	0.7%	0.4%
5 \$25-30,000	2.0%	1.7%
6 \$30-40,000	2.5%	0.7%
7 \$40-50,000	0.5%	0.6%
8 \$50-75,000	0.3%	0.5%
9 Greater than \$75,000	0.5%	0.7%

Source: Connecticut Telephone Survey, 1996

The previous analysis has concerned spending as a percentage of income only. In terms of average percentage of those in each income category who participate in gambling, the telephone survey results generally fail to support any contention that the lowest income groups are most likely to gamble.

Table 4.10a shows the telephone survey respondents' rate of participation in different forms of gambling within the last 12 months by four broad income levels. The lower income range has a lower degree of participation than the survey average for every game shown with the exception of non-casino video poker. For Lottery participation, the lower income respondents were the only category with a lower rate than that for the survey population overall.

The telephone survey also revealed a relatively low amount of Lottery spending by single parents, compared to relatively high spending by double income households with no children. This result is reported in **Table 4.10b**. Note, however, that the responses on amounts spent must be interpreted with caution.

The results of the telephone survey conducted as part of this study suggest in Connecticut there is a correlation between gambling spending and income level, but it is very weak. Whether defined in terms of spending levels or percentages of income, the Pearson's Correlation Coefficient, measuring the correlation between gambling activity and income level, is no higher than -0.15 (see footnote 8 on page 4-13).

The debate concerning the regressivity of gambling continues. Many studies have described the nature of gambling as a consumer good, confusing this with the regressive incidence of a tax on these goods. Others have discussed the government's role in fiscal, regulatory, and public welfare functions. What is clear is that state sponsored or regulated gambling does not fit the strict definition of a tax. As a result, the argument asserting regressive tax incidence appears fundamentally flawed.

The Lottery can be compared to any number of publicly provided goods or levied taxes. It does not conform to the strict definition of a tax in that it is not coerced, hence the comparison to user fees. On the other hand, the Lottery proceeds are, unlike the state

Type of Game	Household Income				Average for All Respondents*
	Less than \$30,000	\$30,000-under \$50,000	\$50,000-under \$75,000	\$75,000 and Over	
Lottery	67%	78%	79%	84%	74%
Horse Racing	4%	6%	8%	8%	6%
Casino	33%	42%	46%	41%	38%
Raffle	45%	69%	71%	75%	59%
Game of Skill	7%	11%	16%	16%	11%
Non-Casino					
Video Poker	9%	5%	6%	5%	6%
Sports Bookie	1%	2%	4%	6%	3%

* As reported by those among total survey group of 992 respondents (weighted) who answered questions on their participation in specific forms of gambling. Of these respondents, 171 (17%) declined to answer the question on household income.

	By Double Income Households, No Children	By Single Parents
Percent of All Reported Spending on Lottery	23%	6%

Source: November 1996 telephone of Connecticut residents

park system for example, greater than operating costs, similar to an excise or sales tax, and barring an analysis of the distribution of proceeds, it would probably be a regressive tax. Where one falls in the range of interpretation is often determined by one's philosophical position on gambling.

In Connecticut, State revenues from gambling are not earmarked for particular programs but go into the General Fund. The majority of General Fund spending goes to Human Services: Education, Libraries and Museums; and Health and Hospitals (60% in FY1996). A separate study would be required to compare the incidence of spending by income group with the incidence of taxation.

Whether or not State and local revenues from legalized gambling in Connecticut are viewed as regressive taxation, the very low correlation between income and the proportion of income spent by Connecticut residents on the Lottery suggests that if there is disproportionate spending by lower income people, this disproportion is very small. Examination of the data has shown that the highest proportion of Lottery spending comes from middle income categories. Spending on casinos by Connecticut residents is neutral -- neither progressive or regressive within statistical error.

5. THE PREVALENCE OF PATHOLOGICAL GAMBLING IN CONNECTICUT

Introduction

As part of this study, WEFA was asked to analyze the prevalence of pathological gambling in Connecticut. Pathological gambling was first recognized as a mental disorder in 1980 when the American Psychiatric Association (APA) established criteria in the Diagnostic and Statistical Manual, 3rd Edition (DSM-III) for pathological gambling. Since then, the APA has revised and expanded the criteria several times, most recently for the fourth edition in 1995.

The 1995 criteria, specifically designed to reflect the addictive nature of pathological gambling,¹ are given in the following table. It should be emphasized that these criteria are the sole definition of pathological gambling accepted by the medical community and thus the only definition of a case of pathological gambling.

DSM-IV Criteria
A. Persistent and recurrent maladaptive ² behavior as indicated by at least five of the following:
1. preoccupation with gambling (e.g., preoccupied with reliving past gambling experiences, handicapping or planning the next venture, or thinking of ways to get money with which to gamble);
2. a need to gamble with increasing amounts of money in order to achieve the desired excitement;
3. repeated unsuccessful efforts to control, cut back, or stop gambling;
4. restlessness or irritability when attempting to cut down or stop gambling;
5. gambling as a way of escaping from problems or relieving dysphoric mood (e.g., feelings of helplessness, guilt, anxiety, depression);
6. after losing money gambling, often returning another day in order to get even ("chasing" one's money);
7. lying to family members or others to conceal the extent of involvement with gambling;
8. engaging in illegal acts such as forgery, fraud, theft, or embezzlement, in order to finance gambling;
9. jeopardizing or losing a significant relationship, job, educational or career opportunity because of gambling; and
10. relying on others to provide money to relieve a desperate financial situation caused by gambling (a "bailout").
B. The gambling behavior is not better accounted for by a Manic Episode. ³

¹ See Lesieur, 1988; Lesieur & Rosenthal, 1991

² Marked by poor or inadequate adjustment to the environment in which one finds oneself.

³ A Manic Episode is a distinct period of abnormally and persistently elevated, expansive, or irritable mood, lasting at least 1 week (or any duration if hospitalization is necessary), having three or more of seven specific symptoms such as inflated self-esteem and decreased need for sleep, that is sufficiently severe to cause impairment, and whose symptoms are not caused by a substance or a medical condition nor are combined with bouts of depression.

The term "compulsive gambling" is often used instead of "pathological gambling." The APA DSM-IV makes the distinction that "Activities, such as eating (e.g. Eating Disorders), sexual behavior (e.g., Paraphilias), gambling (e.g., Pathological Gambling), or substance use (e.g., Alcohol Dependence or Abuse), are not considered to be compulsions as defined in this manual because the person usually derives pleasure from the activity and may wish to resist it only because of its deleterious consequences." Therefore, this report uses the term "pathological gambling."

Rather than using the DSM-IV criteria in the telephone survey, WEFA chose to use the South Oaks Gambling Screen (SOGS) to analyze the prevalence of pathological gambling in Connecticut because of its widespread use, its validation, and its comparability with the 1991 study. Because only a clinical evaluation using DSM-IV can diagnose pathological gambling, we have used the term "probable" pathological gambling in discussing our results.

The meaning of prevalence data such as that developed in surveys using the SOGS depends crucially on the time frame. Some pathologies occur in episodes with people experiencing them for a few months or years, then being free of symptoms for months or years with the ever present possibility of relapse. Substance abuse disorders follow this pattern, and pathological gambling has been conceptualized as being similar psychologically to the chemical addictions (**see Chapter 7**). Thus, a measure of point prevalence (experiencing the symptoms currently or within the past few weeks or months) will always be lower than a measure of lifetime prevalence (ever had the symptoms).

The original SOGS was a lifetime prevalence measure. However, the SOGS can be used to make both lifetime and one-year prevalence estimates (called "current prevalence"), as we do in this study. The lifetime prevalence, by definition, exceeds current prevalence. Both types of information can be useful, but current prevalence seems more relevant to decisions about the effects of increased gambling opportunities or of increased treatment.

For example, if the lifetime prevalence in Connecticut was 2% in 1996, and a perfect treatment for this pathology was applied to everyone during the subsequent year, the lifetime prevalence would still be 2% in 1997 (assuming everyone remembered their gambling symptoms from past years and reported them accurately when resurveyed) -- even though current pathological gambling would have been reduced to zero by virtue of our new treatment.

An approach measuring prevalence in two time frames was used by Stinchfield and his co-workers in evaluating the success of Minnesota treatment programs⁴. In that study they administered the SOGS on both a lifetime and a past six months basis. They used the past six months measure for three reasons: they wanted to assess recent gambling problem severity; six months was the time interval of two follow-up assessments; and they needed equal time intervals for statistical purposes. The lifetime responses would be unchanged after treatment, but the responses referring to the recent past, since treatment, would be changed as a result of the treatment program.

On a current (past 12-month) basis, the results of our survey of 992 Connecticut adults (weighted total) show that 0.6% of the population, or 15,000 persons, fit the

⁴ Stinchfield, 1996.

category of probable pathological gamblers. The current (past 12-months) measure indicates whether individuals are currently probable pathological gamblers. Therefore, the measure of interest for public policy is the current measure.

The margin of error in this estimate is $\pm 0.5\%$ or $\pm 12,000$ persons. Thus, the number may be as low as 3,000 or as high as 27,000.

Prior to the present study, the most recent survey of the Connecticut population to address this question was conducted in 1991 and asked the SOGS questions only on a lifetime, as opposed to current, basis. The telephone survey undertaken for the present study administered the SOGS on both a current and lifetime basis; in lifetime terms, we find that a smaller percentage of the adult population can be considered probable pathological gamblers than in the 1991 survey (1.2% versus 2.7%).

Given the margins of error, it is not clear that this difference in lifetime prevalence rates is statistically significant. However, it is more significant that probable pathological gambling rates may actually have fallen in Connecticut, and have certainly not risen, during a period during which one of the largest casinos in the world was introduced to the state.

Research into methods of screening populations should be followed in order to develop techniques for obtaining more precise information on Connecticut residents. Because the numbers of current probable pathological gamblers appear to be less than one percent of the population, a larger sample for this part of the survey should be considered.

Measurement of Pathological Gambling

The DSM-IV criteria discussed above are to be used in a clinical setting to diagnose patients as pathological gamblers. In a survey setting, questions must be designed which 1) can elicit responses and 2) can be interpreted to indicate the presence of pathological gambling. Five pathological gambling screens have been used in statewide surveys in various parts of the US during the past ten years:

- The South Oaks Gambling Screen (the SOGS), a 20-question survey in which five or more positive answers classify the respondent as a probable pathological gambler, and modifications of it⁵
- The American Psychiatric Association's diagnostic criteria, presented on the first page of this chapter⁶
- The Diagnostic Interview Schedule,⁷ a four-question screen devised by the National Institute of Mental Health, based on a truncated version of the DSM-III criteria⁸ for pathological gambling (it requires that the first question and two of the following three questions be answered affirmatively)

⁵ Lesieur and Blume, 1987; 1993; Emerson & Laudergeran, 1996; Volberg, 1996b; Wallisch, 1996.

⁶ Bray, Kroutil, Luckey, Wheelless et al., 1992; Reilly and Guida, 1990; Laventhal & Horwath, Guida, David CWI & Associates, & Public Opinion Laboratory, 1990.

⁷ Used in Laventhal & Horwath, Guida, David CWI & Associates, 1986 and C&C, 1991.

⁸ APA, 1980.

- The Cumulative Clinical Signs Method⁹
- The Massachusetts Gambling Screen, a shorter screen designed for use with adolescents¹⁰

Of these measures, the SOGS is the most widely utilized and has had the most rigorous examination for validity and reliability.¹¹ For this reason, it has been used, not only in the United States,¹² but in long-term epidemiological surveys¹³ conducted in Canada,¹⁴ Australia,¹⁵ New Zealand,¹⁶ and Spain.¹⁷

Results from SOGS are highly correlated with the American Psychiatric Association's DSM-III,¹⁸ DSM-III-R,¹⁹ and DSM-IV, meaning that the SOGS and the APA screen should arrive at the same conclusion as to whether the respondent is a pathological gambler.²⁰ Because SOGS has been used most often, it allows for comparable results with other surveys conducted in the region,²¹ as well as a previous survey done in Connecticut.²²

SOGS is a 20-item questionnaire that attempts to measure whether a respondent shows indications of pathological gambling. Individuals answering five or more of the 20 questions in the affirmative are judged probably to be pathological gamblers. Individuals answering fewer than five of the 20 questions in the affirmative are judged probably not to be pathological gamblers. This cutoff point was arrived at through extensive clinical research with 1,616 research subjects including alcoholism, substance abuse, and compulsive gambling patients in a psychiatric hospital, Gamblers Anonymous members, university students, and hospital employees.²³ The validity of

⁹ Culleton, 1989; Sommers, 1988.

¹⁰ Shaffer, 1994. Shaffer and his colleagues formulated seven questions that discriminate on a weighted basis between pathological, transitional, and non-pathological gamblers; these questions are usually combined with another 12 questions that replicate DSM-IV, along with seven questions that are used to obtain information about gambling participation and prevalence but not for clinical classification.

¹¹ See Lesieur, 1994.

¹² See Volberg, 1996b.

¹³ An epidemiological survey is distinguished from a clinical screen in that the former evaluates a population for the incidence of a particular trait or disorder; the latter determines whether criteria are met for the diagnosis of a particular individual.

¹⁴ Ladouceur, 1991; 1996; Baseline Market Research, 1992; 1996; Insight Canada Research, 1993; Wynne Resources, 1994.

¹⁵ Dickerson, Allcock, Blaszczyński, Nicholls, Williams & Maddern, 1995; Dickerson, Baron, Hong & Cottrell, 1996.

¹⁶ Abbott & Volberg, 1996.

¹⁷ Legarde, Babio & Abreu, 1992.

¹⁸ Lesieur & Blume, 1987.

¹⁹ Lesieur, 1988.

²⁰ Volberg, 1996a; Duvarci, Varan, Cokunol & Ersoy, 1996.

²¹ Volberg & Steadman, 1988; 1989; Volberg, 1994; 1996.

²² Volberg, 1991.

²³ Lesieur and Blume, 1987.

this instrument was cross-validated using both therapists and family members. Its reliability was examined using internal consistency checks and test-retest measures (repeat testing of the same individuals).

While we have chosen to use the SOGS to analyze the prevalence of pathological gambling in Connecticut because of its widespread use, its validation and its comparability with the 1991 study, it is not without criticism. Among the criticisms are the following:

- The SOGS was developed as a clinical screen to test individuals, and its use as a screen in the general population has not been validated. The SOGS has been validated against known pathological gamblers, but no survey instrument used for estimating the prevalence of pathological gambling across a population has been validated for its accuracy in identifying the true number of pathological gamblers in any general population.²⁴
- Whenever a survey or questionnaire method is used to examine a sample population for a relatively rare trait, there tend to be some affirmative responses which, in a more intensive clinical setting, would be found to mischaracterize the interviewee's actual situation. Thus, the SOGS does not take into account an increase in the false positive rates which occurs in general epidemiological surveys when the base rate for the examined trait is low.²⁵
- The SOGS focuses on the extremes of "social" gamblers -- those who gamble for entertainment with no indication of gambling pathology -- and those who appear to meet the clinical criteria for diagnosis as pathological gamblers. Thus, it may not identify members of the population who exhibit abnormal gambling tendencies that are less severe or at an earlier stage than the SOGS threshold.²⁶
- The SOGS was originally developed as a lifetime-based measure.²⁷
- The SOGS incorporates certain criteria which some critics claim are evidence of its "middle class bias, its lack of recognition that many pathological gamblers are self-employed, and its exclusion of individuals with antisocial personality disorder."²⁸

In a survey of clinicians concerning the diagnosis of pathological gambling, it was found that of six clinicians who used the SOGS, "four emphasized that they use it just as a screening instrument and for research, and not for specific diagnosis."²⁹ Since the survey is not a clinical diagnosis, we cannot say that respondents can be "diagnosed" as pathological gamblers, rather we use the term "probable" pathological gamblers. We follow the original design of the SOGS in using five affirmative SOGS responses as the threshold indicator of probable pathological gambling.

²⁴ Volberg, 1996.

²⁵ Culleton, 1989.

²⁶ Culleton, in press.

²⁷ Dickerson, in press.

²⁸ Lesieur, 1984.

²⁹ Rosenthal, 1989.

Despite the criticisms of the SOGS noted above, Dr. Marvin Steinberg³⁰ and Dr. Carl Braunlich³¹ concur that it remains "the most frequently used checklist to measure the prevalence of pathological gambling in the general population..." In their report the Responsible Gaming Resource Guide, written for the American Gaming Association, Steinberg and Braunlich discuss the various terms describing gambling problems which are in use. As the number of studies of gambling behavior has increased so has the terminology referring to pathological gambling. Steinberg and Braunlich observe that there is "...a lack of definitions agreed to by industry representatives, scholars, practitioners, social scientists and other experts in the field."

The APA considers *social gambling* an activity someone engages in with friends or colleagues, primarily for entertainment, for a limited time and with predetermined, acceptable losses. This category encompasses gambling participation with no sign of gambling pathology.

Some researchers recognize an intermediate category of "problem gambling," indicated as probable in the case of respondents who answer 3 or 4 of the SOGS questions in the affirmative. Steinberg and Braunlich also associate persons giving 1 or 2 positive answers with a milder form of problem gambling behavior. But, Steinberg and Braunlich also state, "Confusion in the use of the term 'problem gambling' results from the broader use of this term, which encompasses all degrees of the problem -- covering the spectrum from mild to severe problems." They emphasize, "There are no standard definitions for the terms 'compulsive gambling,' 'problem gambling,' 'excessive gambling' and 'gambling addiction.'"

Similar concerns were raised by Richard J. Rosenthal.³² He states "the term 'problem gambler' appears in the literature in varying and contradictory ways. Frequently, it is used to describe someone whose gambling falls short of the diagnostic criteria, but who is assumed to be at an earlier stage. Such individuals are referred to as early or 'potential' pathological gamblers." This group has also been categorized as "gamblers in transition and at risk."³³

WEFA has chosen not to use the term "problem gamblers" because of its vagueness. SOGS respondents with 3 - 4 positive answers may or may not indicate the possibility of or the potential for difficulties with gambling. However, existing research has validated five positive answers on the SOGS as the lower threshold for an indication of probable pathological gambling, and there is no corresponding validation for individuals at the 3 - 4 SOGS range. Any term for the latter group that we have considered has an implication that is not warranted in the literature. Therefore, we include the group scoring in the 3 - 4 range on the SOGS in the following tables and analyses only for purposes of comparison with other studies.

As observed above, many surveys also distinguish between current and lifetime behavior problems. The respondents to the telephone survey conducted in November 1996 were asked to answer the SOGS questions in terms of the *past twelve months*,

³⁰ Executive Director of the Connecticut Council on Problem Gambling.

³¹ Braunlich, 1996.

³² Rosenthal, 1989.

³³ Shaffer, 1994.

current behavior and *ever*, lifetime behavior. For example, the following questions were asked:

Have people *ever* criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?

Have people criticized your gambling during the *past twelve months*?

The lifetime measure indicates whether individuals have probably ever been pathological gamblers. The current (past 12 months) measure indicates whether individuals probably are currently pathological gamblers. Therefore, the measure of interest for public policy is the current measure.

In our tabulations, for comparability with other studies, we have classified the gambling behavior of the respondents who gamble into: 1) 0 to 2 positive SOGS responses, 2) 3 - 4 positive SOGS responses, and 3) probable pathological gamblers, i.e. 5 or more positive SOGS responses. We also classify the respondents according to two time frames: 1) current behavior and 2) lifetime behavior.

Survey Interpretation

In the telephone survey, the SOGS questions were asked to those respondents who indicated having gambled at least once in their life. Respondents who participated in gambling activity at some time represented the great majority of the survey group, as only 30 out of 992 (weighted total) reported never having gambled.

Responses from the telephone survey indicate that 0.6% of the Connecticut population can be classified as *current probable pathological gamblers* and 1.2% as *lifetime probable pathological gamblers*, on the basis of five or more affirmative SOGS responses on a last 12 months or lifetime basis, respectively (see **Table 5.1**). Another group representing 2.2% of the state's adult population has SOGS scores of 3 or 4 on a 12-month basis; on a lifetime basis the 3 - 4 SOGS category comprises 4.2% of the adult population. On the other hand, the vast majority of the state's adult population scores between 0 and 2 on the SOGS. On a current basis this group makes up 92.1% of the state's adult population and 89.2% on a lifetime basis. Four percent of the population are non-gamblers.

Note that the very small number of respondents with the highest range SOGS scores precludes estimating the prevalence of pathological gambling in the State of Connecticut except within a rather wide margin of error. Nearly the same degree of uncertainty adheres to determining the likely number of Connecticut residents in the 3 - 4 SOGS range. Thus, although the November 1996 telephone survey results show that 1.2% of the respondents scored 3 or more on the SOGS on a lifetime basis, a lower percentage than the corresponding figure of 2.7% found in the previous study undertaken in 1991, it is statistically possible that the actual prevalence has not changed.

Table 5.1 Prevalence of Probable Pathological Gambling in Connecticut				
Current Basis				
Outcome	Survey Result ¹	State Adult Population ²	Range ³	
			From	To
Non-Gambler	40	99,000	69,000	129,000
SOGS 0 - 2	924	2,308,000	2,269,000	2,348,000
SOGS 3 - 4	22	55,000	33,000	76,000
Subtotal	986	2,462,000	--	--
SOGS 5 and above: Probable Pathological	6	15,000	3,000	27,000
Total	993	2,477,000	--	--
Lifetime Basis				
Outcome	Survey Result ¹	State Adult Population ²	Range ³	
			From	To
Non-Gambler	40	99,000	69,000	129,000
SOGS 0 - 2	898	2,244,000	2,197,000	2,290,000
SOGS 3 - 4	42	104,000	74,000	134,000
Subtotal	980	2,447,000	--	--
SOGS 5 and above: Probable Pathological	12	30,000	13,000	47,000
Total	992	2,477,000	--	--
<p>Note: The SOGS screen, in which a score of 5 or more positive responses indicates probable pathological gambling, was administered only to respondents who reported having gambled at some time in their life.</p> <p>¹ Survey responses reflect weighting for comparability with Connecticut's actual population distribution.</p> <p>² Figure shown is the estimated number of adult Connecticut residents in each category extrapolated from the survey results.</p> <p>³ At the 95% confidence level, the figures shown are the upper and lower limits of the number of Connecticut residents in each category.</p>				

Source: Telephone survey of Connecticut residents, November 1996

The SOGS was used in the 1991 general population survey conducted by Rachel Volberg for Christiansen/Cummings Associates (1991). This enabled Volberg and her colleagues in the 1991 study to compare Connecticut with surrounding states and allowed them to have measures of the extent of so-called "problem" as well as probable pathological gambling, i.e., SOGS scores in the 3 - 4 and 5+ range, respectively.

When the results from the 1991 screen are compared with the 1996 survey, it appears that in the more recent results the number of people in the 3 - 4 SOGS range has increased, but there are fewer at the five or above level associated with probable pathological gambling. If the percentages in the 3 - 4 and 5+ brackets on the SOGS are combined, the more recent result would still show a somewhat lower proportion.

Random sampling differences between the 1991 and 1996 surveys could explain the result, as could the limited weighting of samples in the 1991 study (discussed in Chapter 3 of this report). The differences are displayed in **Table 5.2**.

Given the margins of error, it is not clear that the differences in reported results between the 1991 and 1996 surveys are statistically significant. However, there are several interesting observations one can make. First, in the 1996 study a smaller proportion of the respondents answered affirmatively to the vast majority of the questions. Given that the 1996 survey simultaneously revealed that the overall percentage of the population with lifetime SOGS scores of 3 or 4 had actually risen from 1991 (from 3.6% to 4.2%), this could indicate that many individuals are consciously exerting greater control over their gambling.

Second, despite the general drop in the percentage of respondents in 1996 who answered SOGS questions affirmatively, compared to five years earlier, in both studies a significantly smaller proportion of the sample felt that they had a problem with gambling than scored in either the 3 - 4 or 5 and above range on the SOGS. However, in the current study a marginally higher proportion of the sample did feel that they had a problem than in the 1991 study (1.2% versus 1.1%). Third, even though the proportions differed, gambling more than intended was the attribute of pathological gambling most frequently cited by the respondents. This was followed by feelings of guilt in both studies. Fourth, a slightly higher proportion of the sample in the current survey had money arguments with family members centered on gambling, while a significantly larger proportion in the 1996 survey borrowed from credit cards for gambling.

Fifth, significantly smaller proportions of the respondents in the current survey claimed to win when they actually lost or had been criticized for their gambling behavior. Sixth, in the current survey none of the respondents said that they borrowed from loan sharks or cashed in financial assets, such as stocks or bonds, to pay gambling debts. In the 1991 study approximately 0.7% of the respondents said that they had.

Table 5.2 Comparison of 1991 and 1996 Studies of Gambling Behavior in Connecticut

SOGS Question	C/C	WEFA			
	1991	1996		1996	
	Lifetime n=1,000	Lifetime n=992		Current n=992	
	SOGS 3+	SOGS 3-4	SOGS 5+	SOGS 3-4	SOGS 5+
Go back another day to win back money lost (most of time or every time I lost)	4.6%	1.6%	0.6%	1.0%	0.3%
Claimed to be winning when actually lost (ever)	5.6%	1.4%	0.3%	1.0%	0.3%
Ever gamble more than intended	13.7%	3.1%	1.1%	1.3%	0.6%
Have people ever criticized your gambling?	6.0%	0.6%	0.7%	0.5%	0.3%
Ever felt guilty about your gambling?	6.4%	2.9%	1.2%	1.7%	0.6%
Like to stop gambling but didn't feel you could	2.2%	0.7%	0.3%	0.8%	0.2%
Hidden signs of gambling from important people in your life	3.0%	0.2%	0.2%	0.1%	.01%
Money arguments with family members centered on gambling	1.0%	0.5%	0.7%	0.2%	0.2%
Missed work or school due to gambling	0.8%	0.0%	0.1%	0.1%	0.0%
Borrowed money and not paid it back because of gambling	2.7%	0.0%	0.1%	0.1%	0.0%
Borrowed household money to gamble	3.5%	0.2%	0.6%	0.1%	0.4%
Borrowed money from spouse or partner for gambling	1.5%	0.3%	0.2%	0.4%	0.1%
Borrowed from other relatives or in-laws for gambling	1.2%	0.4%	0.2%	0.4%	0.1%
Borrowed from banks, loan companies, credit unions for gambling	2.2%	0.2%	0.1%	0.1%	0.0%
Borrowed from credit cards for gambling	0.2%	0.8%	0.6%	0.3%	0.4%
Borrowed from loan sharks for gambling	0.8%	0.0%	0.0%	0.0%	0.0%
Cashed in stocks, bonds or other securities for gambling	0.7%	0.0%	0.0%	0.0%	0.0%
Sold personal or family property for gambling	0.4%	0.0%	0.2%	0.0%	0.0%
Passed bad checks for gambling	0.5%	0.0%	0.1%	0.1%	0.1%
Ever have a problem with gambling	1.1%	1.2%	0.7%	0.4%	0.3%
Total at SOGS 3 - 4	3.6%	4.2%		2.2%	
Total at SOGS 5+	2.7%		1.2%		0.6%
Combined Total SOGS 3 or more	6.3%		5.4%		2.8%

Source:

For 1991 results -- Christiansen/Cummings Associates, Princeton Marketing Associates, Spectrum Associates Market Research, Rachel Volberg, Ph.D. (January 1992), Legal Gambling in Connecticut: Assessment of Current Status and Options for the Future

For 1996: Telephone survey of Connecticut residents, November 1996

Year	Region/State	Lifetime Prevalence	Current Prevalence
	NORTHEAST		
1986	New York	4.2%	--
1988	New Jersey	4.2%	--
1988	Maryland	3.9%	--
1989	Massachusetts	4.4%	--
1991	Connecticut	6.3%	--
1996	New York	7.3%	3.6%
1996	Connecticut (WEFA)	5.4%	2.8%
	MIDWEST/CENTRAL		
1989	Iowa	1.7%	
1990	Minnesota	--	1.6%
1991	South Dakota	2.8%	1.4%
1992	Montana	3.6%	2.2%
1992	North Dakota	3.5%	2.0%
1993	South Dakota	2.3%	1.2%
1994	Minnesota	--	3.2%
1995	Iowa	5.4%	3.3%
	SOUTH/WEST		
1990	California	4.1%	--
1992	Texas	4.8%	2.5%
1992	Washington State	5.1%	2.8%
1994	Georgia	4.4%	2.3%
1995	Louisiana	7.0%	4.8%
1996	Texas	5.4%	3.0%

Source: Based on tables originally constructed by Volberg, 1996; Wallisch, 1996

Comparison of Pathological Gambling in Connecticut with Other States

For purposes of comparisons with other states, the prevalence rates for persons in Connecticut with SOGS scores of 3 or 4 and those with SOGS scores of 5 or above have been summed. As shown in **Table 5.3**, Connecticut's combined lifetime prevalence rate was 5.4% in 1996, actually lower than 6.3% five years earlier. It is still one of the higher lifetime rates shown, exceeded only by New York (7.3%) and Louisiana (7.0%), and equal to the rate in Texas and Iowa. New York and Louisiana are also the two highest ranking states for current prevalence rates, although the order of ranking is reversed on a 12-month basis, with Louisiana at 4.8% and New York at 3.8%. Connecticut's current prevalence rate of 2.8% ranks just above the average and median rates (2.62% and 2.65%, respectively) for the fourteen state studies that measured current prevalence.

The Midwest states have the lowest lifetime prevalence rates, with only Iowa (5.4%) over 4.0%. In terms of current prevalence rates only Iowa (3.3%) and Minnesota (3.2%) have rates in excess of 3.0%. The reason for the lower prevalence rates in the Midwestern states relative to other regions of the country is not known for certain. Religion and ethnicity have been associated with gambling problems in different

studies.³⁴ These studies have suggested that Catholics, African-Americans and Hispanics tend to have higher rates of gambling problems than Protestants and non-Hispanic Caucasians. Since the Midwestern states, especially those listed in Table 5.3, tend to have an above average representation of white Protestants, this may partially explain lower overall rates in the Midwest.

There have been at least two separate studies of gambling behavior for the following states: Connecticut (1991 and 1996), New York (1986 and 1996), Iowa (1989 and 1995), Minnesota (1990 and 1994), South Dakota (1991 and 1993) and Texas (1992 and 1996). In all states, with the exception of South Dakota and Connecticut, the reported prevalence rates increased over time on both a lifetime and current basis. New York and Iowa, which had the longest period between studies, had the biggest increases in prevalence rates, by 3.1 and 3.7 percentage points, respectively.

In conclusion, according to the results of the 1991 and 1996 surveys, probable pathological gambling rates may actually have fallen in Connecticut, and have certainly not risen, during a period in which one of the largest casinos in the world was introduced to the State.

Demographic Profile, Gambling Preferences and Participation of Telephone Survey Respondents, Classed by SOGS Scoring Range

The tables presented in this section provide information obtained from the November 1996 random telephone survey of Connecticut residents. Weighted to be consistent with the statewide demographic distribution, this survey found 964 people in the 0 - 2 range on the SOGS, and 938 in that range on a current basis. By contrast, it uncovered only 22 and 42 people in the 3 - 4 SOGS range on a current and lifetime basis, respectively. The weighted totals of probable pathological gamblers -- those who scored 5 or higher on the SOGS -- were only 6 current, 12 lifetime. It is important to note that because of such a wide disparity in sample sizes, the results are statistically robust only for the general population and for the large group of respondents who scored 0 - 2 on the SOGS. On the other hand, since data for those in the higher SOGS score groups refer to much smaller numbers of persons, information on these segments of the survey group illustrates the characteristics of certain persons found who happened to have higher scores on the SOGS -- but is not sufficient to draw definite inferences about the characteristics of all persons who would have similarly high scores should they be tested.

It is important to note that the telephone survey data on demographic characteristics of probable pathological gamblers are not statistically significant and not projectable to the general population.

The research undertaken for this report was not intended to determine the demographic profile of probable pathological gamblers. In order to make such a determination, it would be necessary to obtain a much larger sample size of individuals in this category. If the State wishes to ascertain the demographic characteristics which significantly differentiate probable pathological gamblers from the overall population, a survey of at least 6,000 persons would be required.

³⁴ Commission on the Review of the National Policy Towards Gambling, 1974; Lesieur, Cross, Frank, Welch et al., 1991; Wallisch, 1993.

Table 5.4 Selected Demographic Characteristics of Telephone Survey Respondents, Classed by SOGS Scoring Range

Important: Reported differences between the respondent classifications are not statistically significant. Demographic characteristics of respondents in the higher SOGS score categories cannot be projected to the general population.

Demographic Characteristic	All Respondents n=992	Current			Lifetime		
		SOGS 0 - 2 n=964	SOGS 3 - 4 n=22	SOGS 5 + n=6	SOGS 0 - 2 n=938	SOGS 3 - 4 n=42	SOGS 5 + n=12
Gender							
Female (n=516)	52%	52%	69%	20%	53%	46%	38%
Male (n=476)	48%	48%	31%	80%	48%	54%	62%
Age							
18-34 (n=355)	36%	36%	36%	33%	36%	41%	46%
35-54 (n=320)	33%	32%	36%	67%	32%	40%	41%
55+ (n=307)	31.2%	32%	27%	0%	32%	15%	13%
Income							
Under \$30,000 (n=317)	39%	39%	50%	36%	39%	49%	29%
\$30,000-49,999 (n=206)	25%	25%	7%	25%	26	6%	29%
\$50,000-74,999 (n=140)	17%	17%	7%	13%	17%	18%	29%
\$75,000 or more (n=158)	19%	19%	36%	25%	19%	27%	14%
Race							
White (n=810)	89%	90%	76%	73%	89%	82%	71%
Other (n=101)	11%	10%	24%	27%	11	18%	29%
Employed							
Full-time (n=579)	59%	59%	52%	67%	59%	55%	67%
Part-time (n=104)	11%	11%	0%	17%	11%	0%	17%
Retired (n=171)	17%	17%	26%	0%	18%	17%	0%
Unemployed (n=42)	4%	4%	13%	0%	4%	21%	0%
Others not in Paid Labor Force (n=94)	10%	10%	9%	17%	10%	7%	17%
Education							
Less than High School (n=195)	20%	19%	46%	0%	19%	36%	0%
High School/ Technical School (n=324)	33%	33%	18%	33%	33%	26%	58%
Some college (n=197)	20%	20%	23%	33%	20%	26%	25%
College graduate (n=272)	28%	28%	14%	33%	28%	12%	17%
Marital Status							
Single (n=273)	28%	28%	14%	50%	28%	30%	33%
Currently Married (n=494)	50%	50%	41%	50%	50%	42%	58%
Separated/Divorced (n=125)	13%	13%	23%	0%	13%	19%	8%
Widowed (n=92)	9%	9%	23%	0%	10%	12%	0%

Note: The South Oaks Gambling Screen (SOGS) was administered to all respondents who indicated they had participated in some form of gambling activity at least once in their life. Respondents giving five or more positive responses to the SOGS are considered probable pathological gamblers. Survey results are reported on a weighted basis.

Source: Telephone survey of Connecticut residents, November 1996.

Table 5.5 Gambling Preferences of Telephone Survey Respondents, Classed by SOGS Scoring Range

Important: Reported differences between the respondent classifications are not statistically significant. The results for respondents in the higher SOGS score categories cannot be projected to the general population.

Type of Gambling	All Respondents n=992	Current			Lifetime		
		SOGS 0 - 2 n=964	SOGS 3 - 4 n=22	SOGS 5 + n=6	SOGS 0 - 2 n=938	SOGS 3 - 4 n=42	SOGS 5 + n=12
Lottery Games							
Lotto	12%	13%	4%	--	13%	9%	--
Powerball	3%	3%	4%	--	3%	2%	--
Cash Lotto	2%	2%	--	--	2%	2%	11%
Daily Numbers	0%	1%	--	--	0%	2%	--
Play Four	0%	0%	--	--	0%	--	--
Instant Lottery	5%	5%	--	--	5%	7%	--
Keno	0%	0%	--	--	0%	--	--
Total Lottery Games	23%	23%	7%	--	23%	36%	11%
Harness-Horse (at track)	2%	2%	4%	--	2%	4%	--
Greyhound (at track)	1%	1%	--	--	1%	--	--
Jai alai	2%	2%	3%	10%	2%	--	11%
OTB	0%	0%	--	--	0%	--	--
Total Pari-mutuel and OTB	5%	5%	7%	10%	5%	4%	11%
Casino Games							
Slot or Video Games	20%	19%	41%	36%	19%	24%	24%
Table Games	12%	12%	4%	14%	10%	16%	7%
Bingo	6%	6%	--	--	5%	8%	--
Total Casino Games	37%	37%	45%	50%	33%	47%	31%
Non Casino Cards	1%	1%	4%	--	1%	--	7%
Raffle (charity)	2%	2%	--	--	2%	--	--
Sports	7%	7%	8%	--	7%	4%	7%
Bowling or Pool	4%	4%	5%	14%	4%	4%	12%
Office Pools	--	--	--	--	--	--	--
Other	3%	3%	--	26%	3%	2%	13%
No preference	11%	11%	20%	--	11%	15%	7%

Note: The South Oaks Gambling Screen (SOGS) was administered to all respondents who indicated they had participated in some form of gambling activity at least once in their life. Respondents giving five or more positive responses to the SOGS are considered probable pathological gamblers. Survey results are reported on a weighted basis.

Source: Telephone survey of Connecticut residents, November 1996.

Table 5.6 Lifetime Gambling Participation of Telephone Survey Respondents, Classed by SOGS Scoring Range

Important: Reported differences between the respondent classifications are not statistically significant. The results for respondents in the higher SOGS score categories cannot be projected to the general population.

Type of Gambling	All Respondents n=992	Current			Lifetime		
		SOGS 0 - 2 n=964	SOGS 3 - 4 n=22	SOGS 5 + n=6	SOGS 0 - 2 n=938	SOGS 3 - 4 n=42	SOGS 5 + n=12
Lottery Games							
Lotto	66%	66%	69%	100%	65%	77%	82%
Powerball	39%	396%	24%	100%	38%	43%	73%
Cash Lotto	32%	31%	46%	100%	30%	54%	73%
Daily Numbers	33%	32%	57%	100%	31%	61%	82%
Play Four	25%	24%	50%	100%	24%	50%	73%
Instant Lottery	51%	51%	63%	100%	50%	63%	95%
Total Lottery Games	81%	80%	97%	100%	80%	98%	95%
Pari-mutuel							
Harness-Horse (at track)	34%	34%	36%	49%	34%	34%	61%
Greyhound (at track)	18%	18%	14%	60%	17%	30%	42%
Jai alai	28%	28%	41%	63%	27%	37%	55%
OTB	5%	5%	11%	14%	4%	15%	14%
Casino Games†							
Slot or Video Games	33	31%	63%	63%	31%	61%	38%
Table Games	12%	11%	33%	50%	11	43%	25%
Bingo	3%	3%	3%	--	3%	6	--
Total Casino Games‡	66%	66%	71%	90%	65%	79%	83%
Video Poker (non-casino)	15%	15%	13%	38%	15%	18%	19%
Non Casino Cards	49%	49%	57%	75%	48%	69%	50%
Casino Nights	14%	14%	10%	38%	14%	10%	25%
Raffle (charity)	79%	80%	57%	100%	79%	74%	81%
Bingo (charity)	33%	32%	53%	25%	32%	49%	19%
Sports with Bookie	8%	8%	7%	38%	8%	16%	25%
Bowling or Pool	24%	23%	50%	63%	22%	53%	50%
Office Pools	45%	45%	47%	75%	44%	63%	56%

Note: The South Oaks Gambling Screen (SOGS) was administered to all respondents who indicated they had participated in some form of gambling activity at least once in their life. Respondents giving five or more positive responses to the SOGS are considered probable pathological gamblers. Survey responses are reported on a weighted basis. Tabulations omit cases in which respondents did not answer the question.

‡ For casino gambling data only, participation rates for individual games (slots, tables, bingo) are for the last 12 months. The row labeled "Total Casino Games" gives percentage of respondents who ever participated in casino gambling (lifetime basis), similar to the participation rates for all the non-casino gambling options reported in the other sections of this table.

Source: Telephone survey of Connecticut residents, November 1996.

Summary, Conclusions and Recommendations

Pathological gambling is currently defined by diagnostic criteria set forth by the APA in DSM-IV. These criteria are designed for a clinical setting. There are several questionnaires that are used to screen populations for pathological gamblers, none of which are completely satisfactory and none of which can conclude that an interviewee is a pathological gambler.

In this study, WEFA has used the South Oaks Gambling Screen or SOGS to estimate the prevalence of "probable pathological gamblers." The SOGS is the most widely used screening questionnaire, and it was used in the most recent (1991) previous survey of adult Connecticut residents for pathological gambling. Five or more positive answers to the twenty questions of the SOGS define the respondent as a probable pathological gambler.

Persons who fall short of the clinical threshold for pathological gambling, but who exhibit much of the behavior of those with the pathology, are considered "at risk or in transition." Some researchers identify this group with those who answer three or four questions positively on the SOGS. However, WEFA knows of no clinical evidence to support this grouping and has included it only for comparability.

The telephone survey of 992 Connecticut residents (weighted basis) found 12 (1.2%) who responded positively to five or more SOGS questions on a lifetime basis and 6 (0.6%) who responded positively to five or more questions concerning behavior in the last 12 months. The 1991 survey of 1,000 Connecticut residents had found 27 (2.7%) on a lifetime basis and did not ask the questions on a 12-month basis. While these are very small statistics and have a wide margin of error, one certainly cannot conclude that pathological gambling is more severe in 1996 than in 1991.

Projecting this result to the Connecticut adult population would suggest approximately 15,000 might be identified as probable pathological gamblers. The margin of error here is very high -- the actual number could be anywhere between 3,000 and 27,000. However, only tests using DSM-IV administered in a clinical setting can determine this number.

WEFA recommends continued periodic prevalence screening of sample populations, as is now being done. The State should also consider undertaking a future study to follow up a somewhat larger group of subjects who answer 3 or more SOGS questions positively. This project would be distinct and separate from the series of general studies on gambling commissioned at five-year intervals. The purpose of this recommended study would not be to reduce the large margin of error in determining the prevalence of pathological gambling. Rather, it would be to validate the sensitivity and specificity of the SOGS in measuring this disorder, and to trace the changes that take place over time in individuals with the pathology, or at risk for it.

Research into methods of screening populations should be pursued in order to develop improved techniques for obtaining reliable information on Connecticut residents. Because the number of probable pathological gamblers appears to be less than one percent of the population, a larger sample for this part of the survey should be considered.

6. THE SOCIAL COSTS OF PATHOLOGICAL GAMBLING

Introduction

A study of the social costs of pathological gambling entails (1) an estimation of the incidence of pathological gambling behavior in the population, (2) an identification of those consequences of gambling pathology that create costs for the rest of society and are referred to as "social costs," and (3) measurement of these costs. The first step, the estimation of the incidence of gambling pathology, is the subject of Chapter 5.

Only a preliminary assessment of the implications of the pathological gambler "profile" sketched through the survey responses can be attempted without more detailed investigation and larger sample sizes. Perhaps most saliently, the youthful stage at which most of the respondents initiated heavy betting (the "incubation period" for a gambling pathology) indicates that prevention and education programs to prevent the inception of such problems would probably be most effective if they were targeted at a young (school-age) audience.

The first section of this chapter is a review of the literature on the social costs of pathological gambling covering both the identification of areas that have been investigated and the results of these investigations. Following this are reports on two primary research studies undertaken as part of the present report. These studies, which were performed in addition to the random telephone survey of Connecticut residents, consist of (1) an in-person "intercept" survey of patrons at gambling sites in Connecticut and (2) a questionnaire given to 112 pathological gamblers in therapy, some being clients of the Connecticut Compulsive Gambling Treatment Program and the remainder members of Gamblers Anonymous groups.

The literature review and the analysis of the intercept survey are the work of Dr. Henry Lesieur. The supervision and analysis of the pathological gamblers survey was carried out by Dr. William Thompson.

Information relating to the social costs of pathological gambling has been collected in other studies, five of which are reviewed here. However, none have developed a satisfactory method of calculating a total dollar social cost. One major difficulty is the inability to distinguish with adequate precision between personal costs incurred by pathological gamblers and their families as individuals, on one hand, and the actual additional costs that society in general must pay because of the occurrence of pathological gambling. Another difficulty encountered in our analysis of data we gathered on pathological gambling in Connecticut stems from the limited usefulness of projecting results for persons with serious pathology to prevalence data from the population for a very few persons with much less serious pathology.

Although WEFA was also unable to develop a dollar estimate of social cost, quantitative data from the two surveys are highly useful, we believe, in indicating the severe costs created by gambling pathology along the dimensions of time missed from work, personal property sold and money borrowed to finance gambling, arrests for gambling related offenses, and treatment costs.

Literature Review

Indebtedness and Bankruptcy

The first study which gathered cost data from pathological gamblers was by Politzer, Morrow and Leavey (1985), who attempted to assess the cost of pathological gambling and the effectiveness of treatment. They used information from 92 pathological gamblers in an outpatient treatment facility in Maryland. These individuals' average gambling-related debt (respondents' outstanding debt at the time they were questioned, excluding auto loans, mortgages, and other "legitimate" debt) was \$92,000. Gambling-caused indebtedness continues to be a widely used statistic in social cost estimates. Pathological gamblers' reported mean gambling-related debt varies considerably in different studies.¹ Female Gamblers Anonymous (GA) members indicated a lower level of gambling related debt, averaging almost \$15,000.²

The Politzer study, now over ten years old, has been largely superseded by more recent work. The most extensive cost study done to date was conducted in Australia by Dickerson, Allcock, Blaszczyński, Nicholls, Williams & Maddem (1995) in an investigation for the Casino Community Benefit Fund in New South Wales. Using a "door knock" (door-to-door) method, they interviewed individuals in two stages. In the first stage they ascertained the extent of gambling done by a random sample of 1,390 adults. In the second stage, they interviewed 299 weekly gamblers from that sample. In this interview they administered the South Oaks Gambling Screen (SOGS), as well as a series of questions designed to estimate social costs. These data were supplemented with interviews with 82 clients receiving treatment for pathological gambling.

Another study combining a general population survey with research on known pathological gamblers was done in Wisconsin by Thompson, Gazel and Rickman (1996). They combined a telephone survey of 1,000 adults with a questionnaire administered to 98 Gamblers Anonymous members. The telephone survey used the DSM-IV while the GA survey used a questionnaire devised by Lesieur and Anderson (1995).

Three other recent studies used treatment or Gamblers Anonymous (GA) samples. In Germany, Meyer (April 1995) combined interviews with 68 pathological gambling outpatients, 57 pathological gambling inpatients, and 66 members of GA; Ladouceur, Boisvert, Pepin, Loranger and Sylvain (1994) surveyed 60 members of GA in Quebec; and Lesieur and Anderson (1995) surveyed 184 members of GA in Illinois. In **Table 6.1** below, the Dickerson et al. (1995) study is identified as the "Australia" study; Meyer (April 1995) is identified as the "Germany" study; Ladouceur et al. (1994) is called "Quebec," Lesieur and Anderson (1995) is called "Illinois," and the Thompson et al. (1996) study is identified as the "Wisconsin" study.

¹ For instance: \$53,350 (Division of Alcoholism, 1987); \$113,640 (Lesieur and Anderson, 1995); \$38,664 (Thompson et al., 1996).

² Lesieur, 1988b.

	Australia, 1995	Germany, 1995	Quebec, 1994	Illinois, 1995	Wisconsin, 1996
Borrowed money past 12 months	5% of weekly gamblers	87%	83%		
Unable to Pay Debts	2% of weekly gamblers	55.5%			
Bankruptcy	1% of cases from Attorney General's office	13%	28%	21%	22%
Bankruptcy Cost	6,500 Australian dollars per case				
Borrow from Friends/Relatives		50% (past yr.)	62%		
Borrow from Friends		52% 4,283 DM avg.	35% received between C\$3,000 and C\$5,000		
Borrow - Banks	38% of clients*			63%	75%
Borrowed Past 12 months - Banks		62% 24,317 DM avg.			
Credit Cards	28% of clients*			63%	82%
Borrowed Past 12 months - Relatives-		59% 7,979.6 DM avg.			
Loan Sharks			20%	22%	4%
Borrowed Past 12 months - Moneylenders		18% 19,439 DM avg.			
Casino credit				27%	13%
Bookmaker credit				45%	13%
Total Debts			30% reported debts of C\$75,000- C\$150,000	\$113,640 average \$18,000 median on entry into GA	\$38,664 average \$20,000 median on entry into GA
Lifetime gambling debts				\$215,406 average \$45,000 median	\$61,000 average \$25,000 median
Past 12 months					\$15,367 average \$5,250 median

* Refers to supplemental survey of 82 persons in treatment for pathological gambling.

Source: Australia (Dickerson et al, 1996); Germany (Meyer et al., 1995); Quebec (Ladouceur et al., 1994); Illinois (Lesieur & Anderson, 1995); Wisconsin (Thompson et al., 1996)

For an estimated 18 to 28 percent of males and 8 percent of females in studies of treatment samples and members of Gamblers Anonymous, the burden of gambling related debt eventually led to bankruptcy.³ Dickerson and colleagues' Australian study (1995) found that 1% of bankruptcy cases from the Attorney General's office were

³ Custer & Custer, 1981; Lesieur, 1988b; Meyer et al., 1995; Ladouceur et al., 1994; Lesieur & Anderson, 1995; Thompson et al., 1996.

gambling-related; the average cost per case was A\$6,500 (Australian dollars). Other defaults on indebtedness and civil suits also need to be added to the costs.

Workplace Costs

Lesieur (1984) reported that the lower the level of supervision on the job, the likelier it is that a compulsive gambler will exploit the time and finances which the position grants. He confirmed this pattern for female compulsive gamblers as well.⁴ Both the gambler's employer and fellow employees can be exploited: for instance, by gambling on company time, lateness and absence from work, borrowing from co-workers, and ultimately perhaps by illegal actions such as embezzlement. Determining the cost of these activities would require extensive further research.

Table 6.2 summarizes data on pathological gamblers' work-related problems from the same five studies cited in Table 6.1.

	Australia	Germany	Quebec	Illinois	Wisconsin
Late/Absent from Work	5% of weekly gamblers	58.7% 3.2 times/month	61% 30%--5 times or more per month	76%	
Late/Absence Cost			\$45M per year		
Sick Days to Gamble		33% 3.3 times/year			
Lost Job	1% of weekly gamblers	29%; 3,000 DM median lost wages	36%	34%	21%; 18 unemployed avg. 12.6 mos.
Changed Job	2% of weekly gamblers				
Difficulty concentrating at Work	4% of weekly gamblers	59% once or more per week; 25% less than once per week	59%		
Irritable at Work		71% once or more per week; 22% less than once per week	59% (same question as above)		
Advance on Pay			43%		
Stolen from Work			37%	44%	49%
Amount Stolen			50% of thieves stole more than C\$2,000		

Source: Australia (Dickerson et al, 1996); Germany (Meyer et al., 1995); Quebec (Ladouceur et al., 1994); Illinois (Lesieur & Anderson, 1995); Wisconsin (Thompson et al., 1996)

Insurance Costs

Pathological gamblers also borrow from life insurance policies, surrender their policies, and allow them to lapse or be revoked. This is costly for the insurance companies and the insurance buying public as well as the gamblers' families. Gamblers get into

⁴ Lesieur, 1988b.

uninsured auto accidents and become disabled or die without insurance. While these costs have not yet been calculated, one study of (primarily male) GA members in New York found that 47% had engaged in insurance related fraud or thefts where insurance companies had to pay the victims.⁵ The average amount of fraud was \$65,000 (this average was pushed up by several bonded gamblers who embezzled over \$1 million). Aside from this study in New York, no one has systematically examined this issue.

Also relevant are the costs of treatment programs for pathological gambling covered by health insurance.

Crime

The occurrence of crime as a function of the proximity of gambling venues is discussed in Chapter 4, which concludes that such locations (and tourist destinations generally) exhibit relatively high property crime rates. The involvement of pathological gamblers in criminal activity is largely a separate issue, characterized by their attempts to finance their gambling by illegal means. Pathological gamblers are believed to commit frequent "white collar" crimes in an attempt to finance their gambling activity, a characterization supported by survey data on gamblers in treatment. After legal resources diminish, a desperate gambler may take out fraudulent loans, cosign a spouse's name to loans, write bad checks, perhaps embezzle from employers. However, the type of crimes engaged in will vary by occupation, social class, contacts and personal experiences.

Research has found that approximately two-thirds of non-incarcerated and 97 percent of incarcerated pathological gamblers admit engaging in illegal behavior to finance gambling or pay gambling related debts.⁶ White collar crimes predominated among the non-incarcerated subjects, while street crimes and drug sales were more frequent among imprisoned pathological gamblers. The total cost of pathological gamblers' crimes is unknown at present. While various studies have determined that ten to thirty percent of prisoners are probable pathological gamblers,⁷ most of these individuals are also addicted to alcohol and drugs.

Thus, it does not seem feasible to specify which criminal justice system costs directly originate from pathological gambling. Nevertheless, pathological gambling evidently does add to the costs of arrest, prosecution, probation, parole and imprisonment that are borne by society.

Table 6.3 details pathological gamblers' crime and criminal justice experience reported in the studies from Australia, Germany, Quebec, Illinois and Wisconsin.

Welfare Costs

If pathological gamblers experience periodic or chronic unemployment related to their gambling behavior, they and their families may have recourse to public assistance such as welfare, food stamps or disability. This constitutes another area of social cost.

⁵ Lesieur & Puig, 1987.

⁶ Lesieur, 1987; Lesieur & Klein, April 1985.

⁷ Lesieur & Klein, April 1985; Maden, Swinton & Gunn, 1992; Templer, Kaiser & Siscoe, 1993.

Table 6.3 Crime and Criminal Justice Experience Among Pathological Gamblers in Five Recent Studies					
	Australia	Germany	Quebec	Illinois	Wisconsin
Crime—Individual	60% of clinical treatment group	69%	68%	56%	
Contemplated illegal acts	4% of weekly gamblers				
Specific Crimes Reported by Pathological/Heavy Gamblers:					
Forgery		25%	10%		
"Borrowed without permission"	2% of weekly gamblers				
Embezzlement		44%	23%		
Employee theft			37%	44%	49%
Bad Checks		23%	33%	58%	53%
Income Tax		9%	18%		
Insurance Fraud		7%	3%		
Non-violent Theft		15%	17%		
Shoplifting			17%		
Burglary		10.5%			
Robbery		4%	3%		
Fencing Stolen Goods		4%	7%		
Selling Drugs		3%			
Manipulation of slot machines		5%			
Other crimes		12%			
Theft: amount stolen		62,789 DM avg.		\$60,700 avg. \$5,000 median	\$5,738 avg. (excludes \$1M case)
Arrests	1% of weekly gamblers; 60% of clinical group			18%	38%
Court-Criminal	2% of weekly gamblers; 25% of clinical group	18% (1.85 times avg.)	17%	12%	
Court-Civil				17%	11%
Probation				8%	8%
Prison	0.3% of weekly gamblers; 12% of clinical group	5%	8%	4%	11%
Prison-months or days	12% received 1-2 yrs.	32.3 months avg.			82.1 months avg.

Source: Australia (Dickerson et al, 1996); Germany (Meyer et al., 1995); Quebec (Ladouceur et al., 1994); Illinois (Lesieur & Anderson, 1995); Wisconsin (Thompson et al., 1996)

Physical Disorders Among Pathological Gamblers: Medical Costs

Pathological gambling has adverse health and emotional consequences for the gambler. There is ample evidence that gambling is related to arousal levels⁸ and stress.⁹ During the later stages of their gambling, pathological gamblers experience depression, insomnia, intestinal disorders, anxiety attacks, cardiac problems, high blood pressure, migraines and other stress-related problems.¹⁰ A study of 217 successive admissions to the inpatient gambling treatment program at the Brecksville, Ohio VA hospital found: 39% with major cardiovascular disorders; 26% with allergies; 17% with respiratory problems; 16.1% with nerve and sensory system disorders; 15% with musculo-skeletal disorders; 43% with serious oral-dental disease; and 30% with cases of obesity.¹¹ This research found no significant differences when the pathological gamblers with coexisting substance abuse (42% of the sample) were compared with "pure gamblers" (the 58% with no coexisting substance abuse problem). Eighty percent of compulsive gamblers in treatment were heavy smokers. This complicates the interpretation of the data.

Another systematic investigation uncovered fatigue, colds and flu, migraine headaches, gastric pain, nausea and other physical problems in a study of 41 Swedish pathological gamblers.¹² Finally, a study that compared chemically dependent patients with chemically dependent patients who were also pathological gamblers found that the chemically dependent gamblers reported more chronic medical problems, conflicts with family members, and more psychiatric symptoms than the non-gambling chemically dependent patients.¹³

At the present time it is not possible to specify a cost figure for the physiological illnesses suffered by pathological gamblers. The picture is too muddled by coexisting substance abuse, cigarette smoking, and other factors.

Suicide Attempts and Thoughts of Suicide Among Pathological Gamblers

Suicidal ideation among pathological gamblers has been investigated in treatment and Gamblers Anonymous samples. These studies have found that approximately 80% have said they wanted to die at some point, between 48% and 70% contemplated suicide, 45-48% have had a suicidal plan, and 12-24% have made suicide attempts.¹⁴ While Nevada has the highest suicide rate in the United States,¹⁵ it is not known how much gambling plays into the Nevada statistics.

⁸ Anderson & Brown, 1984.

⁹ Blaszczyński & McConaghy, 1989.

¹⁰ Lorenz & Yaffee, 1986.

¹¹ Russo, undated.

¹² Bergh and Kuhlhorn, 1994.

¹³ Ciarrocchi, 1987.

¹⁴ Sources: Custer & Custer, 1978; McCormack, Russo, Ramirez & Taber, 1984; Frank, Lester & Wexler, 1991; Lesieur & Anderson, 1995; Meyer, Fabian & Peter, 1995; Thompson, Gazel & Rickman, 1996; Moore, September 1996.

¹⁵ Mikawa & Stotler, 1973.

The costs of suicide include funeral and insurance costs, which would have to be borne at some time but are incurred prematurely. There may be unpaid bills (equivalent to bankruptcy), and the loss of a societal investment in education and socialization. To the extent that the individual who committed suicide was a productive worker, selecting and training his or her replacement constitutes a cost. There is also the significant but not readily quantifiable cost of emotional trauma to the suicide's family and friends. The costs of suicidal plans and attempts include hospitalization, lost work productivity on the part of employees and business operators, and the pain and suffering of close relatives and friends. If a spouse is absent from work in order to be with the suicidal individual, this should probably be counted as well. German researchers, using an estimate of 1,000 inpatient and 6,400 outpatient suicide attempts, estimated that the community costs (hospitalization alone) for suicide attempts were 34 million Deutschemarks (approximately \$22.67 million) per year.¹⁶

On the other hand, the irony of a pathological gambler's early death is that many costs cease to be incurred, such as medical costs, the cost of unpaid debt and possible fraud, and Medicare and Social Security costs.

Psychiatric Disorders and Other Addictions Among Pathological Gamblers

Pathological gambling overlaps with other psychiatric disorders. Numerous studies point to anxiety and depression as features of pathological gambling. Research in Australia, for example, found that both state and trait anxiety was at levels comparable to those of other neuropsychiatric patients.¹⁷ The evidence for depression is particularly striking, showing up in personality testing,¹⁸ clinical reports,¹⁹ and systematic investigations of dual diagnoses among pathological gamblers.²⁰

Systematic studies of pathological gamblers have revealed rates of alcohol and other substance abuse problems ranging from 47% to 52%.²¹

When substance abusing populations have been studied to find out the extent to which those people have problems with pathological gambling, the results uncovered rates from 9% to 14% for pathological gambling.²² As in the general population, males in the substance abuse treatment groups were more likely than females to have gambling problems.

Researchers note that when problem gambling and problem drug use occur in combination, there is a more than additive increase in the risk of incarceration and other legal problems, compared to the risk associated with gambling problems or with drug use problems alone.²³

¹⁶ Meyer et al., 1995.

¹⁷ Blaszczynski and McConaghy, 1989.

¹⁸ E.g., Blaszczynski & McConaghy, 1988; Graham & Lowenfeld, 1986.

¹⁹ E.g., Custer & Milt, 1985; Rosenthal, 1992.

²⁰ McCormick, Russo, Ramirez & Taber, 1984; Linden, Pope & Jonas, 1986; Specker, Carlson, Edmonson, Johnson & Marcotte, 1996.

²¹ Linden, Pope & Jonas, 1986; Lesieur, 1988b; Ramirez, McCormick, Russo & Taber, 1983.

²² Lesieur, Blume & Zoppa, 1985; Lesieur & Heineman, 1988; Davis, Breslau & Andreski, May 1991; Griffin-Shelley, Sandler & Lees, 1992; Jacobs, July 1993.

²³ Lesieur, 1987; Steinberg, Kosten & Rounsaville, 1992.

The Quebec, Illinois, and Wisconsin studies referenced above examined other impulse control problems among pathological gamblers. They found between 20 and 30 percent acknowledged alcohol problems, and 13 to 19 percent had other drug problems. These studies also uncovered eating disorders and compulsive spending in 22 to 30 percent of the samples.

Family Issues

Every study that has examined family functioning in pathological gamblers has found problems. Ciarrocchi and Hohnmann (1989) examined family functioning in three groups of married patients being treated for either chemical dependency, pathological gambling, or both. The gambling-only and chemical dependent-plus-gambling patients were all males. The three treatment groups displayed no appreciable psychological differences from each other, while all had a greater degree of family dysfunction than a control group of normal subjects. Specifically, their marriages experienced significantly less cohesion, independence, and intellectual-cultural orientation than the controls. Ahrons (1989), using a smaller sample (15 gambler; 15 alcoholic; and 15 psychiatric patients and each group's spouses), reached similar conclusions. Using the McMaster Family Assessment Device (FAD) with a sample of 34 families of pathological gamblers in Gamblers Anonymous and GamAnon, Epstein (1992) found that the families of pathological gamblers functioned more poorly than the general population on five out of seven FAD subscales. The families were dysfunctional in the areas of problem solving, communication, family roles, affective involvement, and general functioning. Family members who have been in treatment and in GA/GamAnon for longer periods of time reported better functioning.

The pathological gambler's financial problems are chiefly borne by the family. In extreme cases, utilities are shut off, automobiles or furniture may be repossessed, household items may be sold, and eviction or foreclosure may take place. Family stress, including but not limited to financial stress, has resulted in divorce and a need for marital counseling for many who do not divorce. Twenty-one percent of the pathological gamblers in the Illinois study, and 16% of those in the Wisconsin study, reported that their gambling led to divorce or separation. Half of those in the pathological gambling treatment group segment of the Australian study needed marital counseling.

Much of the systematic research on the effects of a compulsive gambler's behavior on other family members has been by Lorenz and colleagues.²⁴ Subjects in these studies have been wives of compulsive gamblers attending regional or national Gamblers Anonymous/GamAnon conferences. The data show problems including harassment by bill collectors (experienced by 62% of the spouses in Lorenz' 1981 study), insomnia related to gambling produced difficulties (78%), physical violence by the spouse against the gambler (62%), and suicide attempts by the spouse. In another study, the reported suicide attempt rates of 11-14% by spouses of pathological gamblers are three times higher than in the general population.²⁵

The only research of its kind to date that has examined the psychosomatic, emotional and marital difficulties of pathological gamblers and their spouses²⁶ found a very high

²⁴ Lorenz, 1981; Lorenz & Shuttlesworth, 1983.

²⁵ Mintz, 1970.

²⁶ Lorenz & Yaffee, 1986 and 1988.

incidence of the following illnesses when compared with studies of female hospital patients: chronic or severe headache, bowel problems, asthma, depression and suicide attempts.

Lorenz' 1981 study also asked compulsive gamblers' spouses about their relationship with their children. She found that 8% of the gamblers and 37% of the spouses were physically abusive to the children (1981). Another study showed that children of Gamblers Anonymous members in the US are more likely to be abused than children in studies of the national population.²⁷

Studies of children of pathological gamblers depict a seesaw process in which the parents manifest extremes of behavior. At times the gambler dotes on them, then ignores them. This relationship has been portrayed in accounts of the dynamics of the family of the pathological gambler.²⁸ The children respond by feeling angry, hurt, lonely, guilty, abandoned, and rejected. According to one account, they experience troubled teen years and run away from home, use drugs, become depressed and experience psychosomatic illnesses.²⁹ However, another inquiry about psychosomatic illnesses among pathological gamblers' children did not find statistically significant differences between these children and the general juvenile population.³⁰

Another concern is the possible intergenerational transmission of pathological gambling behavior. Studies in New Jersey and Quebec³¹ have found that high school students who reported that their parents had a gambling problem were more likely to have a gambling problem themselves, compared to children who did not report having a parent with a gambling problem.

Calculation of Social Costs of Pathological Gambling in the Wisconsin Study

The Wisconsin study³² is sufficiently recent that unadjusted dollar amounts cited from this research are substantially comparable to current figures. Moreover, it used nearly the same questionnaire of pathological gamblers, administered to GA groups, that was distributed to Connecticut pathological gamblers in the State treatment program or in GA as part of the present study.

Based on the results of this gamblers survey, the Wisconsin study organized the estimated social costs of pathological gambling into the following categories:

1. Employment-related costs -- average number of hours lost from work in a year due to gambling; average amount of unemployment compensation received; and average income forgone in the last year of gambling due to unemployment. The questionnaire asks about these issues on a lifetime basis, but the social cost calculation attempts to reach an annual estimate. The study used the national average for wages and unemployment compensation payments in calculating this category of costs.

²⁷ Lesieur & Rothschild, 1989.

²⁸ Custer & Milt, 1985; Wanda & Foxman, 1971.

²⁹ Custer & Milt, 1985.

³⁰ Lorenz & Yaffee, 1988.

³¹ New Jersey: Lesieur & Klein, 1987; Quebec: Ladouceur & Mireault, 1988.

³² Thompson, Gazel & Rickman, 1996.

2. Bad debts and theft -- the Wisconsin study only considered the reported debts of gamblers who filed for bankruptcy, assuming 50% of this amount would not be paid and reckoning that amount as a social cost. The study tabulated the average amount that respondents reported they had stolen, converted to an annual figure, as a further social cost.

3. Court and justice system costs -- the Wisconsin study derived a \$3,750 per case court cost based on 50% of the calculated figure for US District courts. The researchers assigned this figure to each bankruptcy case, civil lawsuit, and gambling-related criminal case reported by the respondents. Based on cost data for Wisconsin, the researchers assigned costs of \$500 per arrest, \$2,800 per year for supervision of an individual on probation, and \$1,000 and \$2,000 per month for those incarcerated in jail and prison respectively.

4. Therapy -- Most gamblers in the GA group who indicated receiving professional therapy noted that they had insurance coverage for it. The study estimated that half the cost of treatment would be borne by individuals and half by insurance. The researchers thus assumed that the amount respondents reported paying for treatment represented 50% of the full cost and assigned an identical sum as a social cost.

5. Public assistance -- Any use of AFDC or food stamps reported by the respondents was regarded as a social cost of gambling, set at \$5,520 and \$2,000 per year respectively for each respondent indicating such assistance.

Using the above calculations, the Wisconsin study estimated the annual cost that a pathological gambler in Wisconsin incurred to society at \$9,469, as shown in **Table 6.4**.

Applying the Wisconsin Study's Calculation of the Social Costs of Pathological Gambling to Connecticut

There are various judgmental or technical questions about the derivation of dollarized social costs in the Wisconsin study. Many of the annual estimates involve dividing a reported lifetime figure by the number of years in an individual's gambling career. Another technique used was to take the small percentage of respondents who indicated ever receiving welfare or food stamps and assuming this represented the average percentage of pathological gamblers receiving full-time public assistance in any given year. Nevertheless, the Wisconsin estimates shed some light on the magnitude of social and economic disruption generated by individuals with severe gambling pathologies.

It would be possible to take the responses from the survey of Connecticut pathological gamblers in GA groups and the State treatment program, and estimate a corresponding figure for social cost. However, we decided against performing this procedure for the following reasons.

First, estimates of the type used for social costs entail approximations that are subject to a wide range of error. Certain factors such as family trauma and dissolution probably have social costs, whether or not researchers attempt to quantify them (the Wisconsin study did not). Published figures for the annual social cost generated by a pathological

gambler have ranged from a low of \$6,000 to over \$50,000 per year in various studies.³³

Category	# of Respondents Reporting (Individual Average)	Average Cost ¹
Employment Related: ²		
Work Hours Lost	64 (avg. 7.4 hrs./month)	\$1,328.76
Unemployment Compensation	37 (for approx. 3 mos. each)	\$213.99
Forgone Income	21 (18 for 12.6 mos. each)	\$1,398.14
Bankruptcy Debt	22 (\$8,909 each)	\$1,487.00
Theft	32 (avg. \$5,738)	\$1,733.00
Court Cases		
Bankruptcy	22 (\$3,750 each)	\$333.75
Other Civil	20 (\$3,750 each)	\$513.63
Criminal	14 (\$3,750 each)	\$369.02
Arrest ³	14 (\$500 per arrest)	\$47.51
Probation	8 (\$2,800 per year)	\$185.89
Incarceration	11 (avg. cost \$1,800/yr.)	\$1,162.44
Therapy ⁴	57 (avg. total cost \$2,625)	\$361.21
Public Assistance:		
Welfare	7 (\$5,520 per year)	\$233.46
Food Stamps	13 (\$2,000 per year)	\$100.82
TOTAL (average social cost for each pathological gambler in 1996)		\$9,468.62

¹ Annual cost is derived by estimating the total yearly cost incurred by the respondents reporting being affected by each cost category, and then dividing this figure by the total number of respondents (98).
² Wage and unemployment compensation figures used represent the US average.
³ Study considered only those arrests deemed to be the direct result of gambling pathology. The 14 respondents with this type of arrest include some with more than one such arrest.
⁴ Therapy may extend more than one year. Social cost estimate is based on 50% of average annual cost, the amount assumed to be covered by insurance.

Source: William Thompson, Ricardo Gazel, & Dan Rickman, The Social Costs of Gambling in Wisconsin, Wisconsin Policy Research Institute, July 1996

³³ Thompson et al., 1995; Kindt, 1994; Politzer et al., 1985.

Furthermore, a replication for Connecticut of the social cost calculation used in the Wisconsin study would develop average figures from data reported by the GA/treatment program group, and extrapolate these to the general population based on the telephone survey's incidence of those at the pathological gambling threshold. We believe this would overestimate the social cost of pathological gambling because the data obtained from the GA/treatment program questionnaire probably cannot be generalized to the State population. The difficulty involves projecting the results from individuals in an advanced state of pathology to those whose gambling pathology covers a broad range, with much of the range at a less severe level.

The Wisconsin study was in two phases. The first part consisted of a statewide random sample of approximately 1,000 persons, who were given a modified DSM-IV screen to estimate the prevalence of probable pathological gambling. In this test, three yes answers, used as the threshold for "serious problem gambler," equate to five in the SOGS. The other component of the Wisconsin study was a survey administered to 98 GA participants, almost identical to the GA/State treatment program questionnaire used in Connecticut. Responses to this survey formed the basis for calculating estimated social costs of pathological gambling, projected to the incidence revealed in the DSM screen of the larger general population sample.

The Wisconsin GA group was not subjected to a clinical screen such as DSM-IV or SOGS. This marks a significant disparity with the present study. In Connecticut, a SOGS screen was administered to both the general population sample (i.e., to the 96% of the telephone survey respondents who reported ever having gambled), and to the treatment program or GA-based sample of pathological gamblers. The SOGS results revealed that the small number of probable pathological gamblers uncovered in the general population telephone survey did not have a commensurate pathology with the gamblers sampled from a clinical or self-help setting.

Only a few Connecticut residents in the general population survey of nearly 1,000 persons were at or above the SOGS pathological gambling threshold, and even fewer on a currently active basis. Virtually all these persons scored near the minimum number of positive responses that put them in a likely clinical range. On the other hand, of 112 GA or treatment program participants who responded to the Connecticut pathological gamblers questionnaire, 83 filled out a complete SOGS test; of these, only the three lowest-scoring respondents were at the threshold of five yes answers, while 67 (81%) scored ten or more.

In surveys of the general adult population performed in other states, approximately 80-90% of individuals scoring 5 or more on the SOGS have scores between 5 and 9. Approximately 10-20% have scores over ten.

To replicate the Wisconsin study's procedure for Connecticut, one would derive a per gambler dollar amount for social cost based on the GA/treatment group survey, and then multiply this figure by the likely number of people in Connecticut who score at least five on the SOGS. In effect, this process would treat a measurably small group with five positive SOGS responses as the equivalent of an immeasurably smaller group with ten such responses. To make the GA survey results meaningful on a statewide basis, one would need to estimate the number of Connecticut residents who evince gambling pathology comparable to those in the clinical sample (e.g., SOGS scores of eight or ten).

Another crucial impediment to making a social cost estimate for Connecticut is that the actual number of pathological gamblers in the State is not known except within a wide range from 3,000 to 27,000. This is because of the small samples of such individuals found in the random telephone survey: only 12 persons on a lifetime basis, 6 of them on a current basis. To generalize social costs from such a low number of individuals would not have been responsible.

Making a reasonably precise social cost estimate would require a large-scale survey of at least 6,000 persons, in order to obtain a narrower range for the likely prevalence of pathological gambling and to find a sufficient number of individuals who evince pathology more comparable with that indicated by the respondents to the GA/treatment program questionnaire. A large-scale survey of this type would generate the following important data:

- It would produce an estimate for the State's pathological gambling prevalence rate subject to a much smaller margin of error than the current estimate.
- It would yield more a more generalizable demographic profile of probable pathological gamblers.
- The results of such a study could be used to determine whether there is a difference in social costs for treatment samples when comparing, for example, those with 5-9 on the SOGS with those scoring 10 or more. A formula could then be devised for estimating the costs of pathological gambling in the general population.

We believe that such an effort would fill a gap in the existing research. However, WEFA does not contend that a project of this scope would be a cost-effective undertaking from the State's perspective. We mention this type of larger study essentially so that we may clarify the achievements as well as the limitations of the present report.

A random survey similar to that conducted in November 1996 (approximately 1,000 telephone respondents) has a prototypical market research format. This design is well suited for determining widespread tendencies among the general population: for instance, the rate of gambling participation, preferences for certain games, etc. It is less effective when applied to examine the traits of extremely small subsets of respondents -- in this case, those who indicated probable pathological gambling. The results of the telephone survey provide a reliable, albeit very broad prevalence estimate. However, the data are not sufficient to draw meaningful conclusions about either the significant demographic characteristics of persons with the pathology, or the costs that originate from their pathology.

Assessing Social Costs in Connecticut from the Intercept Survey

The difficulties presented above -- i.e., a wide range of error and lack of comparability between different sample groups -- lead us to conclude that projecting a specific dollar amount for the social cost of pathological gambling in the State of Connecticut, based on the data now available, would be an exercise in spurious precision. Survey evidence, nevertheless, demonstrates that these social costs are considerable. To obtain current data specifically in regard to gambling in the State of Connecticut, three surveys of Connecticut residents have been carried out for the present report:

- A telephone survey of a random sample of approximately 1,000 persons

- On-site "intercept" surveys of 919 patrons at Connecticut gambling venues³⁴
- A survey of 112 pathological gamblers in Connecticut treatment programs³⁵

The telephone survey was primarily designed to determine the level of participation in gambling among Connecticut residents, to discover the attitudes toward gambling which prevail in the State, and to screen the general population for the prevalence of pathological gambling. The survey and its findings in the first two categories are reported in Chapter 3. Its findings regarding gambling pathology are reported in Chapter 5. We include in this section's data the responses from those contacted in the random telephone survey of Connecticut residents who meet the SOGS criteria for being or having been a probable pathological gambler at some time in their life. On a weighted basis, these total 12 respondents out of a total 992 survey subjects. However, the major focus of the telephone survey was not gambling pathology.

In contrast, the major purpose of the intercept and pathological gamblers surveys was to collect more information about pathological gamblers. Specifically, many of the questions in the second survey and most in the third were designed to elicit information on costs, costs to the pathological gambler as an individual and costs imposed upon society by the pathological gambler. The intercept survey and its findings regarding gambling participation and spending are reported in Chapter 8.

A Note on Method

Given the paucity of the data and the relatively high refusal rate among the probable pathological gamblers interviewed, combined with the following criterion from the American Psychiatric Association's Diagnostic and Statistical Manual, Fourth Edition (APA, 1994), it is doubtful whether intercept interviews with individuals who are not currently in treatment will provide accurate information on social costs. The APA criterion for probable pathological gambling which is of relevance is as follows: "[criterion] 7. Lies to family members, therapists, or others to conceal the extent of involvement with gambling" (p. 618).

In the intercept survey, in addition to the South Oaks Gambling Screen (SOGS), gamblers at the venues were asked nine questions related to the social cost of their gambling. After the SOGS question: "Have you lost time from work or school as a result of your gambling?" those who answered "yes" were asked how many hours they missed in the past year. While none of the individuals in the general population telephone survey would give a figure, the average for those at the intercept sites who

³⁴ 919 gamblers in total were interviewed on site, according to the following distribution: 153 at Foxwoods Native American Casino and 49 at Mohegan Sun Native American Casino; 40 patrons each at the OTB locations in Bridgeport, Meriden, Norwalk, Waterbury, and West Haven; 203 at the Windsor Locks Teletheater (racing simulcast); 203 at the jai alai fronton in Milford; and 111 at the Plainfield Greyhound track. Interviews took place between November 20 and December 7, 1996. The questionnaire appears in Appendix B of this report.

³⁵ This survey instrument was a confidential questionnaire distributed to gamblers in therapy in the State of Connecticut's pathological gambling treatment program and to other residents of the State meeting in Gamblers Anonymous (GA) groups. Distribution and collection of the survey was coordinated by the Connecticut Department of Mental Health Compulsive Gambler's Treatment and Rehabilitation Program and the Connecticut Council on Problem Gambling. The questionnaire appears in Appendix C of this report.

did was quite high, with an overall figure of 89 hours among the 36 probable pathological gamblers (lifetime) giving estimates. Specific site information is listed in **Table 6.5**. There was no weighting applied to the intercept survey data.

	Casino [‡] (n=30)	Greyhound [‡] (n=38)	OTB [‡] (n=101)	OTB Teletheater [‡] (n=66)	Jai Alai [‡] (n=58)	General Population [‡] (n=12)
Miss time from work or school due to gambling?	7 (22%)	13 (34%)	40 (40%)	26 (36%)	15 (26%)	1
Missed time in past 12 months?	6 (20%)	7 (18%)	23 (23%)	21 (32%)	6 (10%)	--
How many hours in the past 12 months?	68 (n=2) [§]	84 (n=5) [§]	95 (n=12) [§]	80 (n=15) [§]	160 (n=2) [§]	--

[‡]Number indicates individuals contacted at each venue who meet SOGS criteria for probable pathological gambling over their lifetime.
[‡]From the random telephone survey of Connecticut residents. Twelve of 992 total respondents met the SOGS criteria as probable pathological gamblers over their lifetime.
[§]Indicates persons who gave a specific answer to this question.

Source: Intercept survey of gambling patrons at Connecticut gambling venues, Nov.-Dec. 1996.

	Casino [‡] (n=30)	Greyhound [‡] (n=38)	OTB [‡] (n=110)	OTB Teletheater [‡] (n=66)	Jai Alai [‡] (n=58)	General Population [‡] (n=12)
Ever sell personal or family property to finance gambling?	3 (10%)	9 (24%)	23 (23%)	18 (27%)	7 (12%)	2
Sell property in past 12 months?	1 (3%)	2 (5%)	13 (13%)	10 (14%)	3 (5%)	--
How much was the property sold during the past 12 months worth?	\$400 (n=3) [§]	\$2,330 (n=3) [§]	\$10,360 (n=9) [§]	\$490 (n=5) [§]	\$1,000 (n=1) [§]	--
Don't know or refused to answer how much property sold during the past 12 months was worth	--	6	14	13	6	--

[‡]Number indicates individuals contacted at each venue who meet SOGS criteria for probable pathological gambling over their lifetime.
[‡]From the random telephone survey of Connecticut residents. Sixteen of 992 total respondents met the SOGS criteria as probable pathological gamblers over their lifetime.
[§]Indicates persons who gave a specific answer to this question.

Source: Intercept survey of gambling patrons at Connecticut gambling venues, Nov.-Dec. 1996.

While borrowing and sale of property are not, strictly speaking, social costs, as the money and property goes to someone else who may value it and use it, it does involve pain and suffering for the gambler and family members. To the extent that it deprives them of something they value, the cost (to them) may be quite high. A total of over \$100,000 worth of property was sold by 28 out of the 302 probable pathological gamblers reporting an estimate in the intercept surveys (see **Table 6.6**). The average value of property sold that was sold during the past year was \$7,051. This does not

include the property sold by those who refused to answer or did not know the value of the property sold (this included the majority of those who sold property).

In addition to property sales, the probable pathological gamblers were asked how much money they borrowed to finance their gambling (see **Table 6.7**). The gamblers had borrowed \$146,850 in the past 12 months, an average of \$2,160 apiece for those who gave an amount. When asked how much they had borrowed for gambling during their lifetime, 39% of probable pathological gamblers surveyed responded that they didn't know, while an additional 9% refused to respond. Consequently, the borrowing figures, like the property sales figures, must be treated with caution.

Table 6.7 Borrowing to Finance Gambling by Probable Pathological Gamblers (Lifetime Basis) in the Intercept and General Population Surveys

	Casino [†] (n=30)	Greyhound [†] (n=38)	OTB [†] (n=101)	OTB Teletheater [‡] (n=66)	Jai Alai [‡] (n=58)	General Population [‡] (n=12)
Ever borrowed to finance gambling?	8 (27%)	9 (24%)	23 (23%)	5 (8%)	23 (40%)	5
Borrowed in past 12 months?	4 (13%)	6 (16%)	15 (15%)	5 (8%)	13 (22%)	n/a
How much was borrowed in past 12 months?	\$9,170 (n=4) [§]	\$990 (n=6) [§]	\$1,780 (n=15) [§]	\$840 (n=5) [§]	\$1,180 (n=13) [§]	\$1,077 (n=14) [§]
Don't know or refused to answer if they ever borrowed to finance gambling	13 (43%)	23 (61%)	49 (49%)	40 (61%)	21 (36%)	--

[†]Number indicates individuals contacted at each venue who meet SOGS criteria for probable pathological gambling over their lifetime.

[‡]From the random telephone survey of Connecticut residents. Sixteen of 992 total respondents met the SOGS criteria as probable pathological gamblers over their lifetime.

[§]Indicates persons who gave a specific answer to this question.

Source: Intercept survey of gambling patrons at Connecticut gambling venues, Nov.-Dec. 1996.

The probable pathological gamblers were also asked whether they had ever been arrested for a gambling-related offense (see **Table 6.8**). Twenty-one out of the 302 probable pathological gamblers (7%) admitted to having a gambling related arrest while 5 of them (2%) had been arrested in the past year. Only four described the incident leading to the arrest ("lose money," "stealing," "argument with someone I borrowed money from," and "felony").

In addition, probable pathological gamblers were asked whether they had ever attempted suicide. The rates among probable pathological gamblers ranged from 3% to 12% at the different intercept sites. The cost of suicide attempts would include hospitalization costs as well as the pain and suffering of friends and relatives who are witnesses to the aftermath and other consequences.

Table 6.8 Arrest for Gambling Related Offenses Among Probable Pathological Gamblers (Lifetime Basis) in the Intercept Surveys

n = number of respondents at each site who meet lifetime criteria for probable pathological gambling	Casino (n=30)	Greyhound (n=38)	OTB (n=101)	OTB Teletheater (n=66)	Jai Alai (n=58)
Ever been arrested for a gambling related offense?	1 (3%)	5 (13%)	10 (10%)	2 (3%)	3 (5%)
During the past 12 months?	1 (3%)	0	4 (4%)	0	3 (5%)
Passed bad checks for gambling	7 (23%)	12 (32%)	36 (36%)	14 (21%)	14 (24%)

Source: Intercept survey of gambling patrons at Connecticut gambling venues, Nov.-Dec. 1996.

In addition to arrests, gamblers were asked whether they had been to a therapist, doctor, group counseling, or Gamblers Anonymous for help with a gambling problem. Thirty-seven out of the 302 probable pathological gamblers (12%) had participated in some form of treatment, counseling or Gamblers Anonymous in their lifetime, while 20 (7%) had done so in the past year. The twelve individuals who were willing to state the cost had spent an average of \$481. Some reported no cost because they went to Gamblers Anonymous, a self-help group. Whether affordability of professional treatment is an issue for those who did not go could not be determined. Information on treatment is detailed in Table 6.9.

Table 6.9 Treatment, Counseling or Gamblers Anonymous Attendance, and Suicide Attempts by Probable Pathological Gamblers (Lifetime Basis) in the Intercept Survey

n = number of respondents at each site who meet lifetime criteria for probable pathological gambling	Casino (n=30)	Greyhound (n=38)	OTB (n=101)	OTB Teletheater (n=66)	Jai Alai (n=58)
Ever been to a therapist, doctor, group counseling, or Gamblers Anonymous for help with a gambling problem?	2 (7%)	8 (21%)	12 (12%)	4 (6%)	11 (19%)
During the past 12 months?	1 (3%)	2 (5%)	10 (10%)	2 (3%)	5 (9%)
How much did treatment cost?	\$1,000 (n=1)	\$8 (n=2)	\$8 (n=5)	\$9 (n=1)	\$1,569 (n=3)
Treatment occur in Connecticut?	Yes	Yes	Yes for 8 out of 10	Yes for 1 out of 2	Yes
Have you ever attempted suicide?	2 (7%)	2 (5%)	8 (8%)	8 (12%)	2 (3%)

Source: Intercept survey of gambling patrons at Connecticut gambling venues, Nov.-Dec. 1996.

To conclude this part of the report, one should again take note of the relative unreliability of intercept survey responses, particularly insofar as these have been elicited from probable pathological gamblers who are not in treatment for a gambling problem. This difficulty is discussed in the "Note on Method" at the beginning of this section.

Assessing Social Costs From the Survey of Pathological Gamblers

Introduction

Recognizing that intercept surveys at gambling venues are a suboptimal tool in terms of ascertaining the precise nature and costs of pathological gambling behavior, WEFA

conducted a third survey to develop a further understanding of the likely costs of pathological gambling in Connecticut. For this portion of the study, we utilized a sample of pathological gamblers in the State who are currently undergoing some form of treatment. A questionnaire (Appendix C) was presented to gamblers in therapy in the State of Connecticut pathological gambling program and to members of Gamblers Anonymous (GA) groups in Connecticut. The survey instrument was based on that in the Wisconsin study.³⁶ In turn, that model was based upon an earlier survey of pathological gamblers in Illinois done by Henry Lesieur.

The distribution and collection of the questionnaires was coordinated through the offices of the Connecticut Department of Mental Health Compulsive Gambler's Treatment and Rehabilitation Program and the Connecticut Council on Problem Gambling.

Approximately two hundred questionnaires were distributed in a manner that guaranteed that responses would be completely anonymous. 112 responses were received. While the total number of responses was somewhat smaller than desired, it was comparable to the numbers used in other jurisdictions (98 in Wisconsin; 165 in Illinois). Unlike earlier studies in Wisconsin and Illinois, in which there was no perception of even indirect government involvement, the survey in Connecticut evoked some resistance from GA coordinators who did not want to participate in a government research effort that they believed might have "political" goals.

The questionnaires were distributed and collected during December 1996 and January 1997. Some were completed immediately at the site of GA meetings, while others were filled out later and delivered personally or by mail to GA leaders and then to the Connecticut Compulsive Gambler's Treatment and Rehabilitation office. All were subsequently forwarded to Dr. Thompson at UNLV for analysis. One should note that for purposes of assuring a completely anonymous and confidential survey, the 112 responses analyzed are not broken down into separate GA and State treatment program subgroups. An unknown number of respondents are members of GA chapters but not enrolled in the State treatment program. However, all respondents in the State program are also GA participants.

A Profile of 112 Pathological Gamblers in Connecticut

The profile of the 112 respondents to the survey is presented in **Table 6.10**.

a. Gender

Men dominated the respondent group. Eighty-seven (78%) of 111 indicating gender were male; 24 (22%) were female.

b. Age

The current ages of the respondents ranged from 25 to 80. The average age was 48 years, close to the median age of 47 years. A standard deviation of 12 suggests a rather even distribution of respondents among all age groups.

³⁶ Thompson et al., 1996.

Table 6.10a Profile of the Sample of 112 Pathological Gamblers: Gender, Age, Ethnicity (n = number of respondents)

Gender n=111		Age n=112		Ethnicity n=109			
Male	Female	Range	Mean	Native American	Asian	African American	White
78%	22%	25-80	47	2%	2%	0%	96%
Connecticut's ethnic distribution (included for comparison)				0.2%	1.8%	9%	89%

Source: Questionnaire distributed to persons in State of Connecticut pathological gamblers treatment program and to Gamblers Anonymous groups meeting in Connecticut. Statewide ethnic distribution figures are 1995 US Census Bureau estimates, reported in 1995 Statistical Abstract of the United States.

c. Ethnicity

The pathological gamblers in treatment (State program and/or GA) did not represent the full diversity found among the population of Connecticut. All but four of 109 indicating ethnicity said they were white. Two indicated Native American ethnicity; two were Asian. There were no African Americans. The whites were reluctant to identify a country of family national origin. Of the 27 that did, the largest representations were found among Italian-Americans (11), Irish-Americans (5), French-Americans (4), and Polish-Americans (3). Other national family origins included Slovak, German and Indian (i.e., India).

d. Religion

Nearly all of the respondents (110 of 112) indicated their religious identification. Most (81, or 74%) were Roman Catholics, followed by 14 (13%) Protestants, 11 (10%) Jewish, and four others. Three of the Protestants were Methodists. No other Protestant or "other" category included more than two respondents in a single denomination.

e. Education

Most of the respondents had at least completed high school. The average (and median) respondent had "some college" education. Of 111 respondents, 11 (10%) had post-college graduate educations. Thirteen (12%) additional respondents had a four-year college degree; another 50 (45%) had "some college." Of the remainder, 33 (30%) were high school graduates, and only four (4%) had not finished high school.

Table 6.10b Profile of the Sample of 112 Pathological Gamblers: Religion, Education (n = number of respondents)								
Religion n=110				Education n=111				
Roman Catholic	Protestant	Jewish	Other	Less than High School	High School Graduates	Some College	4 year College	Post Graduate
74%	13%	10%	4%	4%	30%	45%	12%	10%
Connecticut Data Included for Comparison:								
Religion*				Education				
Roman Catholic	Protestant	Jewish	Other	Less than High School	High School Graduates	Some College	4 year College	Post Graduate
42%	45%	3%	10%	21%	30%	22%	16%	11%

* Catholic population obtained from Archdiocese of Hartford. Distribution of remaining affiliations estimated by Dr. Arnold Dashefsky, Department of Sociology, University of Connecticut.

Source: Questionnaire distributed to persons in State of Connecticut pathological gamblers treatment program and to Gamblers Anonymous groups meeting in Connecticut. Data on statewide educational attainment are from the 1990 US Census, reported in 1995 Statistical Abstract of the United States.

f. Occupation

Type of employment was indicated by 106 respondents (the researcher categorized jobs). Of those indicating type of employment, 13 were professionals (12%); 26 (25%) were white collar/non-sales (these included self-employed business owners); 23 (22%) were in sales; 32 (30%) were blue collar or in non-professional technical positions; 2 (2%) were in manual labor jobs; while 7 (7%) said they were retired. Only 2 (2%) indicated they were unemployed.

Table 6.10c Profile of the Sample of 112 Pathological Gamblers: Occupation						
Number of respondents = 106						
Not Employed	Retired	Manual Labor	Technical/Blue Collar	Sales	White Collar Non-Sales	Professional
2%	7%	2%	30%	22%	25%	12%

Source: Questionnaire distributed to persons in State of Connecticut pathological gamblers treatment program and to Gamblers Anonymous groups meeting in Connecticut.

g. Household income

We asked current household income by category. There were 107 who responded. Of these, median income was in the \$50,000 to \$74,999 range, while the mean income was in the high part of the \$25,000 to \$49,999 category.

Table 6.10d Profile of the Sample of 112 Pathological Gamblers: Household Income

(73 respondents)		
\$100,000 plus	10	(9%)
\$75,000--\$99,999	22	(21%)
\$50,000--\$74,999	32	(30%)
\$25,000--\$49,999	30	(28%)
\$15,000--\$24,999	9	(8%)
Under \$15,000	4	(4%)

Source: Questionnaire distributed to persons in State of Connecticut pathological gamblers treatment program and to Gamblers Anonymous groups meeting in Connecticut.

h. Marital Status

Most (58 of 111, or 52%) of the respondents were married. Only 15 (14%) indicated that they were single. Thirty (27%) said they were divorced, 5 (5%) separated, and 3 (3%) widowed. Of 58 who were ever married and separated or divorced, 32 (55%) indicated that gambling was the primary cause of their divorce or separation.

Table 6.10e Profile of the Sample of 112 Pathological Gamblers: Marital Status
Number of respondents = 111

Married	Never Married	Divorced*	Separated*	Widowed
52%	14%	27%	5%	3%

*55% of these separated or divorced indicated that gambling was the primary cause.

Source: Questionnaire distributed to persons in State of Connecticut pathological gamblers treatment program and to Gamblers Anonymous groups meeting in Connecticut.

The Gambling Histories of the Respondents

To provide more information on the respondents' degree of pathological gambling behavior, we attached a South Oaks Gambling Screen questionnaire to our survey. Only 83 of the respondents filled out the SOGS completely. Of these, 67 scored over 10; three scored 9; four scored 8; six scored 7; and three scored 5. None scored lower than 5. While 95% scored over five, a score of five is used as an indication that a person is probably a pathological gambler. These results support the conventional threshold of 5 positive answers to the SOGS questionnaire for probable pathological gambling. However, the results suggest that the pathological gamblers in the study have, on average, a much more serious pathology than those in the population of Connecticut as a whole (see Chapter 5).

The results reported in this section are tabulated in **Table 6.11**.

	Mean	Median	Range
Age Began Gambling	21	16	5-66
Age Began Heavy Betting	26	21	12-70
First Borrowed Money to Gamble	30	27	8-75
Onset of Gambling Problems	32	29	8-75
Length of Problem Gambling Careers	12	9	1-40
Length of Time in GA	5	2	0-25
Time Since Last Bet	4	1	0-24

Source: Questionnaire distributed to persons in State of Connecticut pathological gamblers treatment program and to Gamblers Anonymous groups meeting in Connecticut.

a. When Gambling Began

The literature of problem gambling suggests that pathological gamblers typically begin their gambling careers at a young age. Our evidence certainly supports what others have found. Although the pathological gamblers in our survey have average/median ages of 47 years old, they started gambling at much younger ages. The average respondent started gambling at 21 years old. The median respondent started gambling at 16 years old. The range of starting ages was from five years old to 66 years old.

b. Regular and Heavy Betting

Heavy gambling also started at a young age for most of these respondents. In answer to the question of when they began to gamble on a weekly basis, the average response was 26 years old. The median age was 21 years old. The range of ages was 12 years old to 70 years old.

The age at which each first borrowed money for gambling ranged from eight years old to 75 years old. The average age was 30 years old; the median age was 27 years old.

c. Problem Gambling

The onset of gambling problems appears to have occurred about eight or nine years after regular betting and heavy betting commenced. The average respondent said his/her problem gambling began at age 32 years old, while the median respondent said 30 years old. The range was from eight years old to 75 years old.

d. Years in GA

The respondents had been in GA and other treatment programs for several years. The average length of time for which respondents reported attendance at GA was 5 years; the median length was 2 years. The range was from one day (they were at their first meeting) to over 25 years.

e. Time Since Last Bet

While GA asks its members to totally abstain from gambling activities, that is often a difficult goal to reach. We asked the survey participants when they had made their "last" bet. The average respondent made his/her last bet about three and a half years ago. The median subject in the survey group placed the last bet one year earlier.

f. Length of Problem Gambling Careers

From our data, it is difficult to assess how long these respondents sustained gambling while in a pathological condition. While they were serious gamblers (weekly; borrowing to gamble) for nine to ten years before turning to treatment (and GA), this does not mean they had pathologies that long. From the time respondents indicated they had a problem to the time they made their last bet averaged 12 years, with the median elapsed time being 9 years.

Implications

Only a preliminary assessment of the implications of the pathological gambler "profile" sketched through the above survey responses can be attempted without more detailed investigation and larger sample sizes. Perhaps most saliently, the youthful stage at which most of the respondents initiated heavy betting (the "incubation period" for a gambling pathology) indicates that prevention and education programs to prevent the inception of such problems would probably be most effective if they were targeted at a young (school-age) audience.

In the confidential questionnaire of pathological gamblers, the problem population — or that segment of it actively pursuing treatment — is predominantly male. This, however, does not rule out a possible need to develop special programs geared to women. Supporting the inference that gambling pathologies are at least latently present in the female population, the random telephone survey of Connecticut residents revealed that women accounted for almost 40% of the probable pathological gamblers on a lifetime basis, or nearly twice the rate seen in the treatment group questionnaire. On a 12-month basis the telephone survey's finding that 20% of the probable pathological gamblers were female shows a gender distribution nearly equivalent to that in the treatment group sample.

The questionnaire of gamblers in treatment does suggest that pathological gambling careers (at least for this group of respondents) may run for longer durations in the State of Connecticut than such careers typically run elsewhere, particularly in comparison with the Wisconsin results.

Games They Played

The respondents were asked which games caused them "some" problems and "definite" problems. They were also asked to identify their primary and secondary games. All indicated at least one game. **Table 6.12** provides the percentages of responses for each game listed in the questionnaire. **Table 6.13** shows their first and second choice games.

The questionnaire used, as with that used in the Wisconsin study, includes "Played the stock, options and/or commodities markets" under "types of gambling." Such business transactions may entail a high degree of risk, but they are not gambling in the sense of this study nor under law.

Only two out of the 112 respondents mentioned security investment and those results did not affect the results quoted in this report.

When we split out gamblers by groups according to the time that had elapsed since they had quit gambling, we found that players who stopped the longest tended to bet at racing, sports, and private games more often. On the other hand, more recent gamblers played slot machines and casino table games. The more recent gamblers seemed to be playing

Table 6.12 Gamblers in Treatment: Games Cited as Problem

Number of Respondents = 112	Definite Problem	Some Problem
Native American Table Games	41%	14%
Native American Video Facsimile Machines	26%	9%
Native American Video Poker	12%	6%
Other Casino Tables	38%	12%
Other Casino Slots	19%	13%
Other Casino Video Poker	11%	11%
Race Tracks	28%	13%
OTB	22%	11%
Bookies	36%	10%
Daily Numbers	21%	31%
Lotto	23%	39%
Instant Lottery	27%	34%
Bingo	4%	13%
Non Casino Slots	6%	10%
Non Casino Videos	5%	8%
Jai Alai	23%	23%
Personal Skill Games	11%	28%
Other (Private Cards)	11%	7%

Source: Questionnaire distributed to persons in State of Connecticut pathological gamblers treatment program and to Gamblers Anonymous groups meeting in Connecticut.

Table 6.13 Pathological Gamblers in Treatment: Their First and Second Choice Games
Open Ended,* 112 Respondents

First Choice Games		Second Choice Games [‡]	
Tables	32%	Tables	33%
Sports	21%	Race	17%
Slots	20%	Sports	13%
Jai Alai	8%	Instant Lottery	7%
Race	8%	Lotto	7%
		Slots	6%
		Daily Number	6%
		Private	4%
(No other category had above 3%)		(No other category had above 3%)	

* Respondents were asked to name their first and second choice games without being offered a multiple choice list of predetermined possible selections.

‡ Only 84 respondents indicated a second-choice game.

Source: Questionnaire distributed to persons in State of Connecticut pathological gamblers treatment program and to Gamblers Anonymous groups meeting in Connecticut.

games that led to addiction more quickly. They had shorter gambling careers before they turned to treatment.

The percentages of gambling losses for each type of game varied considerably. **Table 6.14** provides the percentages reported by the 104 subjects who responded to this section of the questionnaire.

Casinos	44%
Bingo	1%
Jai Alai	6%
Race Track	8%
Sports	19%
Skill Games	<1%
Lotto	3%
Instant Lottery	4%
Numbers	2%
OTB	2%
Video Keno	0%
Video Poker	<1%
Slots	7%
Other	2%

Source: Questionnaire distributed to persons in State of Connecticut pathological gamblers treatment program and to Gamblers Anonymous groups meeting in Connecticut.

Under \$1,000	2	2%
\$1,000-\$9,999	8	8%
\$10,000-\$24,999	10	10%
\$25,000-\$49,999	13	13%
\$50,000-\$99,999	15	15%
\$100,000-\$249,999	25	25%
\$250,000-\$499,000	13	13%
\$500,000-\$999,999	7	7%
\$1,000,000 plus	8	8%

Source: Questionnaire distributed to persons in State of Connecticut pathological gamblers treatment program and to Gamblers Anonymous groups meeting in Connecticut.

Losses Incurred at the Games and Moneys Owed

a. Gambling Losses

There were 85 specific responses to a question on the amount of lifetime losses (see **Table 6.15**). These pathological gamblers indicated an average lifetime gambling loss of \$226,539, while their median loss was \$82,500. The average dollar figures reported in relation to gamblers' financial situations are skewed upward by very high responses at the

top end, so WEFA reports both the average and the median. In this case the range of losses indicated by respondents was from \$1,000 to \$2,500,000. Along with the 85 gamblers who stated an exact amount lost, another 16 indicated estimated losses using the categories shown in Table 6.15.

Of the forms of gambling cited by the respondents to the questionnaire, casino table games were cited the most often (Native American casinos, 41%; other casinos, 38%), followed by bookies (36%). Among those who provided information on their gambling losses at particular games, the highest percentage of losses, 44%, was in casinos, followed by sports betting at 19%.

The losses experienced over the last year (12 months) of gambling approximated between one-third and one-fourth of the lifetime losses (see Table 6.15). For 89 respondents who gave specific amounts, the losses over the last 12 months of their gambling averaged \$110,388, with the median loss being \$20,000. The range of losses was \$500 to \$2,000,000. The distribution of losses for these respondents and for the 10 who provided information by category is shown in Table 6.16.

Under \$1,000	5	5%
\$1,000-\$9,999	26	26%
\$10,000-\$24,999	18	18%
\$25,000-\$49,999	18	18%
\$50,000-\$99,999	15	15%
\$100,000-\$249,999	10	10%
\$250,000 plus	7	7%

Source: Questionnaire distributed to persons in State of Connecticut pathological gamblers treatment program and to Gamblers Anonymous groups meeting in Connecticut.

b. Money Owed

The losses incurred by pathological gamblers take almost all of these individuals beyond funds they personally possess. When asked to indicate how much money they owed at the time they joined GA, 89 provided information. The range of money owed was from nothing (three people), and \$500 (one person) to \$1,750,000 (one person). Sixteen had debts over \$100,000. The average amount was \$113,698, while the median amount was \$30,000.

A considerable amount of the debt owed at the time of joining GA resulted from borrowing during the previous twelve months of gambling. Ninety indicated that in the last twelve months of gambling they had incurred new debts averaging \$49,926; the median debt incurred was \$14,500.

c. Money Borrowed

The lifetime borrowing of 82 gamblers responding to this question averaged \$169,526, with the median amount being \$52,500. The range of lifetime borrowing was from no borrowing to \$1,300,000.

Borrowing over the past twelve months of gambling ranged from no borrowing to \$1,700,000 (90 respondents). The average amount borrowed in the last twelve months was \$52,082 while the median amount was \$10,000.

d. Sources of Money Borrowed--Legitimate

The pathological gambler will seek funds from whatever sources are available. First, they utilize personal resources, cash reserves, bank accounts, sale of stocks, and sale of personal property. Then (or simultaneously) they will borrow. Usually they will turn to illegitimate funding sources only after they have exhausted legitimate funding sources.

All but one of the 112 respondents reported that they turned at some time to one of the legitimate sources for gambling money, that is their gambling required that they fund the activity from sources beyond their normal wages and living expenditures.

Eighty-nine (80%) indicated that they had cashed in stocks and bonds in order to support their gambling. The average amount received through the sale of stocks and bonds was \$35,504, with the median amount being \$5,000. Only eleven (12%) cashed in stocks worth more than \$50,000.

Fifty-three (47%) indicated that they had resorted to selling personal property in order to gamble.

The most utilized source of money for gambling was "household" funds. One hundred respondents (89%) said that they used these funds for gambling. Credit cards were the next most often used source of funds. Ninety-four (84%) used credit card loans for gambling. Banks were the third most frequently used source of funds, reported by 89 respondents (80%). Over two-thirds (74 of 108 answering the question, or 69%) cashed bad checks in order to gamble.

The gamblers borrowed moneys from many non-institutional sources as well. These are reported in **Table 6.17**.

Table 6.17 Non-Institutional Borrowing Sources (Number of Responses = 112)

<u>Source of Funds</u>	<u>Persons Borrowing from this Source</u>	<u>Percent of Respondents</u>
Relatives (other than spouse)	75	67%
Friends	68	61%
Spouse	55	49%
Bookies	41	37%
Loan sharks	26	23%
Casino credit	20	18%

Source: Questionnaire distributed to persons in State of Connecticut pathological gamblers treatment program and to Gamblers Anonymous groups meeting in Connecticut.

e. Other Sources of Money for Gambling

When legitimate sources of moneys are exhausted, most pathological gamblers will seek other sources to keep their habits going. As mentioned, 74 (66.2%) resorted to writing what they knew to be bad checks in order to gamble. Certainly, many who used credit cards probably used multiple cards that exceeded their abilities to make repayments. Also, by turning to loan sharks, some gamblers entered into illegal arenas.

Fifty-four of 98 respondents (55%) indicated that at some time they had stolen money or property in order to have gambling money. Forty-four of 108 (41%) responded that they had stolen from their workplace.

The average amount of money (or value of goods) stolen by the 72 gamblers responding to this inquiry was \$92,274; the median amount was \$2,750. The range of amounts stolen was from \$10 to \$1,750,000. Nine individuals stole more than \$100,000. Discounting these individuals, the average amount stolen by the remainder was \$22,533.

Over the last twelve months of gambling, 38 of 69 pathological gamblers responding (55%) reported that they stole property. Amounts reported ranged from \$100 to \$1,730,000. Discounting six with thefts over \$100,000, the average amount stolen was \$5,432.

f. Bad Debts and Bankruptcy

Quite obviously, the gamblers, given the extent to which their debt exceeded their earning power, would never be able to repay. Twenty-six of 111 (23%) turned to bankruptcy court for protection from their creditors. Twenty-two of 109 (20.2%) indicated they had been sued over gambling debts. Six were sued one time; one twice; 15 were sued three or more times.

Other Costs

a. Workplace and Employment Problems

Over one-third (37 of 110) of the pathological gamblers answering this question had either quit a job or lost a job due to their gambling activities. The average length of unemployment resulting from such a job loss was 6.7 months. If spread over the entire group, the average would be 2.1 months.

Over one-sixth (18 of 102, or 18%) indicated that they had received unemployment compensation due to a job loss attributed to gambling.

The loss of jobs did not constitute the only employment problem. Seventy-three of 109 (67%) said they had missed time at work in order to gamble. Of those reporting lost time at work, the average lost 20.9 hours a month. If the lost hours were spread over the entire group of 109, the average work loss per pathological gambler would be 9.8 hours per month.

b. Welfare

Ten of 103 (10%) received food stamps because of their gambling problems. Two of these gambled with moneys from the food stamps. Seven of 105 (7%) received other welfare because of gambling problems; four gambled with the welfare moneys.

Six of 18 social security recipients said they gambled with their social security moneys. Forty-one of 109 respondents had received unemployment compensation, 18 due to job

losses related to gambling. Twenty-three of those receiving unemployment compensation gambled with the moneys received.

c. Criminal Acts

While it is likely that most of the pathological gamblers committed some illegal acts (for instance, 72 of the respondents indicated a particular dollar amount they had stolen), not all were brought into the criminal justice system as a result of crimes. Only 28 of 107 (26%) indicated that they had been arrested as a result of offenses related to gambling. Fifteen were arrested once, six twice, and seven three times or more.

Twenty-one of the 28 were put on trial (nine one time, four twice, and eight three times or more). Nineteen were convicted (nine one time, three twice, and seven three times or more). Twenty indicated that they had been put on probation as a result of gambling related offenses (no doubt some plea bargained probation penalties). Sixteen had been incarcerated due to gambling related crimes, and indicated that they served a grand total of 105 months in jail/prison as a result. (This represents average jail time of 1.3 months for the total group of 112.) Certainly shorter sentences were given to these individuals because their offenses were property offenses. Only two indicated their crime was an assault, and two said the crime was drug related. The clear majority of offenses were larcenies and frauds. Shorter sentences may also have resulted from pleading mitigating circumstances.

d. Other Problems/Suicide

The respondents to the questionnaire reported other pathologies in addition to gambling ones (see **Table 6.18**).

The available data does not disclose whether any of the above respondents have a clinically defined primary addiction other than gambling. The questionnaire was administered in the context of therapy or self-help programs aimed at the respondents' recognized pathological gambling.

Other studies suggest that pathological gamblers have rates of attempted suicides that exceed national population averages by more than a factor of five. Of the 112 pathological gamblers who responded to our questionnaire, 80 (71%) indicated they had felt so low that "they wanted to die." Seventy-two (64%) had had suicidal thoughts, while 49 (44%) had planned how they were going to kill themselves. Eighteen of 112 (17%) indicated that they had actually attempted suicide.

Table 6.18 Other Problems Noted by Pathological Gamblers (Confidential Treatment Group Survey)

Type of Problem	Number Reporting Problem	Number of Respondents	Percent Reporting This Problem
Alcoholism	32	111	29%
Drug Addiction	22	111	20%
Overeating	33	111	29.7%
Anorexia	3	108	3%
Compulsive Shopping	36	110	33%

Source: Questionnaire distributed to persons in State of Connecticut pathological gamblers treatment program and to Gamblers Anonymous groups meeting in Connecticut.

e. Treatment Costs

Seventy-three of 110 (66%) had visited doctors and therapists because of their gambling problems. Ten of 109 (9%) had been hospitalized because of gambling. For those indicating the cost of treatment, the average cost was \$761. Of 103 respondents, 71 (69%) indicated that they had insurance coverage for such costs.

Assessing the Costs of Pathological Gambling from the Treatment Group/GA Survey

It is difficult to interpolate information from the survey into actual social costs of gambling, and particularly to do so on a time period (annualized) basis. As noted in the introduction to this chapter, there is uncertainty in distinguishing between individual, personal costs to the pathological gambler and the costs actually borne by society as a whole. Moreover, one cannot precisely specify the length of a gambler's "pathological gambling career." In addition, the information reported in the questionnaire of pathological gamblers in therapy was not given for specific time periods (although questions were included about the final 12 months of individuals' gambling activity, and the responses revealed considerable amounts of money borrowed or stolen). Another complication is that spending during years past would have to be interpreted with inflation corrected numbers for today. Finally, there is the caveat made previously in this chapter: a characteristic of pathological gamblers is that they do not tell the truth about these issues.

Both because of the income distribution of the GA respondents and because of their level of gambling pathology, it is not possible to generalize these results to the population at large. The median household income of the 12 telephone survey respondents classed as probable lifetime pathological gamblers was in the \$30,000 - \$40,000 range, as compared with the GA survey respondents who are in the \$50,000 - \$75,000 range. Of the 83 GA respondents who completed the full SOGS screen, 81% scored 10 or more (positive answers to 10 or more of the 24 screening questions). In the population at large, the telephone survey of 992 people only found 2 with scores this high, out of 12 who responded positively to 5 or more SOGS questions. (In both the telephone survey and GA group SOGS screen, these figures refer to lifetime results.)

7. EDUCATION, PREVENTION AND TREATMENT

The social costs of pathological gambling can be reduced if the number of pathological gamblers is reduced and if the severity of their gambling problems are reduced. Various strategies have been advanced for making such reductions. These include awareness programs, education about pathological gambling, warnings about potential gambling problems, interventions to stop pathological gambling, aids to direct those with a gambling problem to treatment programs, and outpatient and inpatient treatment programs.

This section reviews these strategies and their availability. Different diagnoses as to the causes of pathological gambling result in different recommendations for treatment. The first section of this chapter discusses treatments in the context of a review of literature, covering first biological theories and treatment, and second psychological theories and treatment. The degree of success achieved by existing methods of treatment is an issue that requires further research. The next section examines programs and funding in Connecticut and other states. A brief section on conclusions and recommendations concludes the chapter.

Causes of Pathological Gambling

Biological/Physiological Theories and Treatment

Some researchers have investigated the idea that biological factors are involved in pathological gambling. Blaszczynski, Winter and McConaghy (1986) proposed that pathological gambling is a defense against depression and anxiety or is a reaction to imbalanced physiological arousal levels. They studied thirty male pathological gamblers in Australia and compared them with thirty non-gambling males. No baseline differences were found between the samples taken as a whole but differences were found when horse-race gamblers were compared with poker machine players and controls. The horse-race gamblers had lower baseline B-endorphin levels (B-endorphins are the natural opiates in the body). These results give credence to the idea that possibly, as Blaszczynski and colleagues propose, poker machine players may be trying to ward off stress while horse-race gamblers may be warding off depression related to their low B-endorphin levels. However, field experiments using small wagers have failed to show alteration in B-endorphin levels after gambling. It is possible that some form of physical tolerance to the effects has developed and higher wagers would have been needed to raise B-endorphin levels in the horse-race gamblers studied.

Goldstein and colleagues studied EEG brain wave patterns among a small sample of Gamblers Anonymous members and controls.¹ The pathological gamblers showed patterns similar to those found in children with attention deficit disorder (ADD). This was supported by a questionnaire designed to show signs of ADD. Pathological gamblers had significantly higher scores than the sixteen controls.² The hypothesis was given further impetus by a finding that pathological gamblers performed

¹ Goldstein et al., 1985; 1988; Carlton & Goldstein, 1987.

² Carlton & Goldstein, 1987; Carlton, Manowitz et al., 1987.

significantly worse than control subjects on standardized tasks which assess attention deficits.³

A second avenue of biological research involves the testing of various neurotransmitters (the chemical messengers in the brain). In one such study, it was determined that 18 male pathological gamblers had higher centrally-produced cerebrospinal fluid levels of a particular brain chemical (3-methoxy-4-hydroxyphenylglycol) as well as significantly greater outputs of norepinephrine than the levels found in controls. The same study also found "significant positive correlation between indexes of [the appropriate hormones] in cerebrospinal fluid (CSF), plasma, and urine and extroversion scores" on the Eysenck Personality Questionnaire⁴ for the pathological gamblers.⁵ Extroversion is related to novelty seeking and sensation seeking. A link between the hormonal complex controlling stress and arousal and sensation seeking behaviors had previously been hypothesized;⁶ the physiological investigation of the pathological gamblers suggests that they may have deficits in this hormonal complex.

Spanish researchers have also been conducting biological research into other neurotransmitters.⁷ Again using male subjects, these researchers found that the 27 pathological gamblers they studied had lower levels of another chemical associated with serotonin dysfunction than control subjects. Serotonin is a neurotransmitter related to impulsivity and depression.

In essence, then, elements of brain chemistry involving both impulsive, sensation-seeking activity and depression have been related to pathological gambling. While further evidence is needed, this fits in with the available psychological and sociological research evidence.

It is significant that these studies have all been done with men. It remains to be seen whether female pathological gamblers display similar biological traits.

There have recently been genetic studies demonstrating that deficient production or use of the neurotransmitter dopamine is related to high scores on "novelty seeking" in research subjects.⁸ In the only genetic study done to date with pathological gamblers,⁹ dopamine receptor site abnormalities were found in half of the male pathological gamblers studied, but not in females. Seventy-six percent (76%) of pathological gambling males who also had substance abuse problems exhibited this genetic peculiarity. This leads to the possibility that this pattern may place some individuals at risk for pathological gambling and other impulse control problems. Whether pathological gambling itself is "inherited" in some people requires further research, however.

Research into the intergenerational transmission of pathological gambling is in its infancy. Researchers have asked whether family members have gambling problems.

³ Rugle & Melamed, 1993.

⁴ Eysenck, H.J., 1967; Eysenck, S. & Zuckerman, 1978.

⁵ Roy et al., 1988.

⁶ Zuckerman, 1979.

⁷ Blanco, Orensanz-Munoz, Blanco-Jerez & Saiz-Ruiz, 1996.

⁸ Ebstein, Novick, Umansky, Priel et al., 1996; Benjamin, Li, Patterson, Greenberg et al., 1996.

⁹ Comings, Rosenthal et al., 1996.

A general population survey conducted in Ontario found that 11 percent of respondents stated that their father, mother or both had a gambling problem.¹⁰ Pathological gamblers were more likely to report this than non-pathological gamblers. This has also been found with high school and adolescent samples¹¹ and college students.¹² The connection is clearer with treatment samples. A study of 186 pathological gamblers in an inpatient treatment facility found that 28% stated their parents were compulsive gamblers.¹³ However, the one twin study found only moderate effects for gambling frequency.¹⁴

While the telephone survey of 992 Connecticut residents (weighted total), conducted for this study, was not designed to explore the effects of intergenerational factors on gambling, it did uncover some familial links. All respondents in the general population telephone survey were asked whether they knew anyone with a gambling problem. Probable pathological gamblers were more likely to say that they had a biological relative with a gambling problem than other respondents. The results are reported in more detail in Chapter 5 of this report. These figures suggest a possible mechanism for the intergenerational transmission of gambling; whether related to learning, biology, or some other factor cannot be determined.

Biological/physiological treatment is virtually nonexistent for pathological gambling. Only a very few studies have been conducted with very small patient populations. For example, one experimental program used lithium carbonate¹⁵ with three gamblers;¹⁶ another used clomipramine with one gambler;¹⁷ and there has been a report of an ongoing clinical trial in Spain treating pathological gambling with fluoxetine (an antidepressant with powerful effects on serotonimic transmission used for treating obsessive-compulsion problems).¹⁸

Psychological Theories and Treatment

Recent psychological research has focused on personality factors as well as on cognitive and behavioral orientations to gambling problems. One approach, for example, outlines five major personality constructs which have promise for future research.¹⁹ These are: an obsessive-compulsive factor (ranging from few preoccupations other than gambling to multiple compulsions), a mood factor (ranging from depression to hypomania), presence of traumatic and major life stress factors (from recent acute to remote chronic), a socialization factor (from completely socialized to an antisocial personality) and substance abuse or multiple addiction factor (from no

¹⁰ Ferris & Stirpe, 1995.

¹¹ Lesieur & Klein, 1987; Winters, Stinchfield & Fulkerson, 1993.

¹² Lesieur, Cross et al., 1991; Winters, Bengston Stinchfield & Dorr, April 1996.

¹³ Ciarrocchi & Richardson, 1989.

¹⁴ Winters & Rich, 1996.

¹⁵ "A medication commonly used with bipolar disorder (formerly known as manic-depression)"

¹⁶ Moskowitz, 1980

¹⁷ Hollander, Frenkel et al., 1992.

¹⁸ Saiz, 1992.

¹⁹ Taber & McCormick, 1987.

other addictions to having multiple addictions). Each of these factors has implications for research and treatment.

Along parallel lines, work in Australia has classified gamblers with gambling problems into three types: impulsive, neurotic, and situational.²⁰ Independently, similar findings from Spain propose three types of gambling related disorder, varying in their degree of severity, with the impulsive gamblers having the most severe problems.²¹

Current research supports the view that gambling problems are precipitated by early learning combined with arousal, desire to alter mood, and cognitive beliefs regarding gambling.²² Consequently, there has been a recommendation to develop programs in which the gambler is trained to remain calm when confronted with gambling related stimuli such as casino or lottery advertising.²² Eventually, over the course of this learning process, such stimuli should cease to trigger the subject's craving to engage in gambling.²² This learning process should be followed by the identification of cognitive distortions and cognitive therapy. The subject comes to see a quest to beat gambling odds as a form of magical thinking, to be replaced by a more realistic and mature assessment of the nature of gambling activity. After therapy, relapse prevention strategies are recommended.²³ This is essentially the approach used in ongoing research and treatment studies taking place in Quebec.²⁴

However, there is the added recognition that even a cognitive-behaviorally oriented treatment program is insufficient to deal with the problem. There is a movement towards a more eclectic approach, combining techniques developed by specialists in various treatment fields. For example, Blaszczynski and Silove (1995) add other components to their suggested treatment model: antidepressant medication for clients with dysphoric (opposite of euphoric) mood, marital therapy where trust has been impaired in the family, chemical addiction counseling for the problem gamblers who also use chemicals to excess, and attendance at Gamblers Anonymous.

There is ample evidence to support a more eclectic position related to pathological gambling. One team of psychiatrists used the Schedule for Affective Disorders and Schizophrenia (SADS) in a study of 50 male veteran pathological gamblers. They found 76% could be diagnosed with major depressive disorder and 38% with hypomanic disorder.²⁵ Other researchers produced similar findings.²⁶ Further evidence comes from reports that thirteen to twenty percent of pathological gamblers have histories of suicide attempts.²⁷ Additionally, there is evidence that approximately 50% of pathological gamblers have a history of psychoactive substance abuse.²⁸

²⁰ Blaszczynski, 1996.

²¹ Gonzalez-Ibanez et al., 1995.

²² Blaszczynski & Silove, 1995.

²³ Marlatt & Gordon, 1985.

²⁴ Bujoid, Ladouceur, Sylvain & Boisvert, 1994; Ladouceur, Boisvert & Dumont, 1994.

²⁵ McCormick, Russo, Ramirez & Taber, 1984.

²⁶ Linden, Pope & Jonas, 1986; Taber, McCormick & Ramirez, 1987; Roy, Custer, Lorenz & Linnoila, 1988; Glassman, 1990.

²⁷ McCormick, Russo, Ramirez & Taber, 1984; Frank, Lester & Wexler, 1991.

²⁸ Linden, Pope and Jonas, 1986; Ramirez, McCormick, Russo & Taber, 1983.

While there are reports that discuss treatment of family issues,²⁹ there are no behavioral studies reporting treatment of the spouse as anything other than an adjunct to the pathological gambler. Yet research has identified spouses of pathological gamblers as significantly more likely to experience physiological and psychosomatic stress than the general population.³⁰ There appears to be a need to assess what is happening to spouses as well as what is happening to the gambler following treatment.

More recently, a proposed "stages of change" model³¹ is being used in Australia and Canada.³² This model proposes five basic stages: pre-contemplation, contemplation, preparation, action and maintenance. The form that treatment should take depends on which stage of change an individual is in. In other words, "one size fits all" is rejected as the optimal mode of treatment.

Treatment Success

WEFA found only one carefully executed study of treatment success -- a 1996 report of a four-year longitudinal study evaluating six state-supported pathological gambling treatment programs in Minnesota.³³ Over the period of the study, 1,342 clients were recruited and 944 were admitted for treatment.

Approach to treatment varied across the six programs, but most combined a 12-step orientation with cognitive-behavioral and reality therapy. Length of treatment varied as well, from 4 to 26 weeks for primary treatment and 6 weeks to 2 years for follow-up treatment.

The six treatment programs were not significantly different from each other in the amount of reduction in gambling frequency and problem severity. Four out of five treatment completers moved from gambling on a weekly or daily frequency before treatment to monthly or less frequent gambling after treatment. In terms of gambling problem severity as measured by the SOGS, 65% of treatment completers moved from the clinical range before treatment to the normal range after treatment. Later in this chapter, we report the success rate for the GA members who completed the Pathological Gamblers Survey.

Research on Youth Gambling

Surveys of youth gambling have been conducted in Minnesota,³⁴ Washington State,³⁵ Texas,³⁶ Georgia,³⁷ Massachusetts,³⁸ as well as among high school and college students in other states.³⁹

²⁹ E.g., Gaudia, 1987.

³⁰ Lorenz & Yaffee, 1988.

³¹ Prochaska, Norcross & DiClemente, 1995.

³² E.g., Horbay, 1996.

³³ Stinchfield & Winters, 1996.

³⁴ Winters & Stinchfield, 1993; Winters, Stinchfield & Kim, 1995.

³⁵ Volberg, 1993.

³⁶ Wallisch, 1996; 1993.

³⁷ Volberg, 1996c.

³⁸ See Shaffer, 1996.

According to one report on research into teenage involvement with illicit activities, playing the lottery ranks second only to alcohol and ahead of cigarettes among Massachusetts youth. This investigation also found that 58% of Massachusetts 5th through 8th grade students had gambled during the previous year.⁴⁰

Studies of teen gambling reveal that it is associated with illegal drug use, a history of delinquency, poor grades in school, truancy, eating disorders, suicide attempts and crime.⁴¹ Gambling can be seen as part of a behavioral complex that includes other deviant forms of behavior. For example, a study in Texas found that compared with non-pathological gamblers, adolescent pathological gamblers were more likely to have skipped school; they were sent to the principal more often; the school was more likely to have called home. Furthermore, they were more likely to have committed illegal acts and been arrested and were more likely to have friends who carry weapons and belong to gangs. Nevertheless, most of the teen problem gamblers were not judged to exhibit a pattern of serious delinquency.⁴²

The incidence of teenagers who are attracted to gambling is apparently quite high. For instance, the New Jersey Casino Control Commission reported that in 1993, 178,000 underage gamblers were stopped at casino entrances, and another 15,000 were escorted from the buildings. In 1995, 136,000 were stopped at casino entrances and 25,000 were escorted from the casino. Whether more teenagers are getting into casinos or enforcement has tightened is not known. Evidence of underage persons attempting to enter gambling sites also comes from the Missouri Riverboat Gaming Association, who report that during 1996 there were 26,500 cases of youths being denied admittance to their facilities following ID checks.⁴³ The two Native American casinos in Connecticut train their staff on steps to deter underage gambling, and post notices stating the legal minimum age. WEFA was unable to obtain data on how many underage persons were refused entry to Foxwoods or removed from the premises.

While some age controls are evident in some casino locations, they appear to be lacking at many lottery ticket sales outlets. In four studies using similar methods, underage youths attempted to purchase lottery or keno tickets. In the first such study, a girl who attempted to purchase lottery tickets at 50 outlets in central Illinois was successful in 49 out of 50 tries.⁴⁴ Also with parental consent, the Massachusetts attorney general's office used young people to purchase lottery tickets (with staff from the attorney general's office present).⁴⁵ In 80% of the cases the youth were successful. The youngest purchaser was 9 years old. Only 40% of stores posted helpline signs regarding compulsive gambling. This past year, the Massachusetts Attorney General's office conducted another study, this time of keno outlets.⁴⁶ Fourteen children attempted to buy keno tickets. They were successful in 66% (109/166) of their attempts. The

³⁹ Lesieur, Cross et al., 1991.

⁴⁰ Shaffer, 1996.

⁴¹ Lesieur, 1996, in press.

⁴² Wallisch, 1993.

⁴³ Missouri Riverboat Gaming Association, 1997.

⁴⁴ Radecki, 1994.

⁴⁵ Harshbarger, 1994.

⁴⁶ Harshbarger, 1996.

youngest ticket purchaser was 14 years old. More recently, the Illinois State Crime Commission tested ticket purchases from machines and observed two girls aged 12 and 14. They were able to purchase in 20 out of 20 attempts.⁴⁷ In Connecticut, all lottery outlets are required to post notices to patrons stating that the minimum age to purchase tickets is 18, and the electronic display seen by vendors when they conduct lottery transactions also displays this information.

At the present time there is a lack of reliable statewide information on youth gambling participation in Connecticut. WEFA recommends that the State conduct research to ascertain the current level of such participation. Spot checks on the effectiveness of current laws against underage gambling, perhaps using supervised teens in a "buy" program at State Lottery outlets, would also provide relevant information. In general, the behavior patterns that underlie the inception of youth gambling, as well as the degree to which underage gambling is a risk factor for the onset of pathological gambling, are not yet sufficiently understood. WEFA believes these are significant topics which would be worthwhile to investigate in future studies.

Attitudes Toward Youth Gambling in Connecticut

In the telephone survey conducted as part of this study, Connecticut residents were asked their opinions on underage gambling and whether they had placed bets for youth. Only 4.5% of the adults answered affirmatively to the question: "Have you ever placed bets for people who are under 18, such as brothers, sisters, sons, daughters, cousins, nephews, or friends on things such as lottery numbers, a pull on a slot machine, or on the Super Bowl or other kinds of sports bets?" Males were almost twice as likely to have admitted to this than females; people age 18-34 and 35-54 admitted it more than those 55 and older; and nonwhites admitted it more than whites. Married people with children were three times as likely to admit this as those without children.

When asked whether the age to play the lottery, jai alai, the greyhound tracks, and OTB should be raised from 18 to 21, barely over half answered affirmatively. This was in contrast to fewer than 9% who believed that the age to play at Connecticut Native American casinos should be lowered to 18, the same as the lottery, jai alai, and OTB. The rest (38%) felt that the legal age should remain the same. Females, those aged 55 and older, whites, those not in the paid labor market, and college grads were more likely (than males, under 55 years old, etc.) to favor raising the age to 21 for all forms of gambling.

The attitudes and behavior regarding underage gambling are indicated by the answer to another question asked in the survey. When asked "How serious of a problem, if at all, do you feel that underage teen gambling is in Connecticut?" 40% said it was either "very serious" or "somewhat serious" while 35% said it was either "not very serious" or "not at all serious." Almost a quarter (24%) didn't know how serious a problem it is or had no opinion. Females, people earning under \$30,000 per year, those not in the paid labor force, and people with a high school or technical school education were more likely to see teen gambling as a very or somewhat serious problem (relative to males, those earning \$30,000 or more, the employed, and those with some college or more). Females, people aged 55 or more, whites and college graduates were more likely (than males, those under age 55, nonwhites and those with less than a college degree) to answer "I don't know" to this question.

⁴⁷ Zimmerman, 1996.

Treatment of Pathological Gamblers

In recent years, the introduction of treatment programs specifically for pathological gamblers has started to gather momentum. However, such programs are still relatively rare. Inpatient and outpatient treatment, as well as education and prevention programs, targeted to alcoholism and other forms of substance abuse remain considerably more numerous.

Treating the pathological gambler presents a somewhat similar challenge to that encountered in therapies for other impulse control disorders. Addictions or addictive-type behaviors are generally regarded as difficult to treat, with high relapse rates; the available evidence about pathological gambling seems to put it in this category. While cross-disciplinary knowledge developed in other treatment modes offers the potential to advance gambling treatment, many counselors and clinical practitioners lack explicit training in treating pathological gamblers, a shortcoming that should be rectified.

Inpatient Treatment Programs

Dr. Robert Custer started the first inpatient treatment program for pathological gamblers, while serving as the head of the alcohol unit of the Veterans Hospital in Brecksville, Ohio, in 1972. The Brecksville program became a model for other inpatient treatment programs at VA facilities: Brooklyn, New York; Lyons, New Jersey; and Loma Linda, California. The patient usually remains at the facility for 35 days of inpatient testing and treatment. Other military-oriented facilities have started outpatient programs.

Several private facilities offer inpatient treatment programs, each with its own unique qualities. Some of these facilities are Valley Forge Medical Center in Norristown, Pennsylvania; Proctor Hospital in Peoria; Charter Hospital in Las Vegas; and the Harbour Center in Baltimore. The Harbour Center is operated by the National Center for Pathological Gambling and is the only stand-alone residential treatment program for compulsive gamblers and their families. It has been estimated that the cost of an inpatient program with residential care for up to 30 days is between \$20,000 and \$28,000 per patient.⁴⁸

As of 1997, no inpatient treatment program specifically devoted to the treatment of pathological gamblers had ever operated in the State of Connecticut.

Outpatient Treatment Programs

Most resources for treatment of gambling problems are devoted to outpatient counseling services provided by therapists. This also holds true for Connecticut: a state-sponsored outpatient clinic treats pathological gamblers, and various psychologists, psychiatrists and counselors provide private treatment.

One impediment to such treatment by individual counselors, both in Connecticut and elsewhere, is that clinicians generally lack specific training, at least on an advanced level, with the problems of pathological gambling. Another complication -- similar to the situation with other impulse control, addictive type disorders -- is that pathological gambling problems involve many persons besides the gambler. One estimate suggests that someone with a severe pathological gambling problem touches at least 17 other

⁴⁸ Riconda, 1995.

lives in a major way.⁴⁹ The importance of the family in the gambler's behavior means that therapy should not be conducted by inexperienced counselors, and that extending counseling programs to include family members is desirable. Even GA groups need professional resources available for dealing with psychological emergencies that are likely to arise.⁵⁰

According to the National Council on Problem Gambling, as of 1996 there were twenty-one state government programs, 13 of which -- including Connecticut's -- are state funded with outpatient care, while the federal government had no funding at all for this treatment. There are fewer than 100 pathological gambling treatment centers in the United States. In contrast there are 13,000 outpatient centers for treating alcohol and drug addiction. Waiting lists for pathological gambling treatment in the centers are up to six months long. However, Connecticut does not have a waiting list.

Related Programs

Gamblers Anonymous

Started in Santa Anita, California in the mid-fifties, Gamblers Anonymous (GA) is a self-help endeavor based on the twelve steps of Alcoholics Anonymous.⁵¹ GA had 130 chapters nationwide in 1970 and grew rapidly in parallel with the expansion of legalized commercial gambling. There are now over 2,000 chapters worldwide.

GA is a purely voluntary non-political organization with no dues or officers. The GA groups are loosely held together by a National Service Organization which provides literature, holds meetings, and gives advice on setting up chapters. A related organization, GamAnon, assists the spouses of problem gamblers. In Connecticut, there are 20 GA chapters, several with GamAnon affiliates; the chapters have from 6 to 36 members per group.

GA offers a group therapy technique that uses only ex-gamblers as helpers. The GA program requires complete abstinence from gambling activities, and GA members are encouraged to break off relationships with old friends who are still active gamblers and to develop a new lifestyle. Success rates are not overwhelming if success is measured in terms of total abstinence and life transition.⁵²

The National Council on Problem Gambling

In 1972, the Board of Trustees of Gamblers Anonymous (the national service arm of the organization) moved to establish the National Council on Compulsive Gambling (later changed to the National Council on Problem Gambling) to win support for awareness, education, and counseling programs. Throughout the 1970s the Council lobbied to have problem gambling recognized as a disease. In 1980 the American Psychological Association gave that recognition. Early efforts of the National Council also resulted in public funding of treatment and educational programs in several states.

⁴⁹ Maryland Department of Health and Mental Hygiene, 1990.

⁵⁰ Lester, 1980.

⁵¹ The Twelve Steps as promulgated by Alcoholics Anonymous, also used by members of Gamblers Anonymous and Narcotics Anonymous, appear in Appendix D. The program has a strong religious orientation.

⁵² Dowell, 1991.

There are 29 state affiliated Councils, including Connecticut, and two associate members (Puerto Rico and Ontario, Canada). States that have developed pathological gambling education, prevention and treatment programs typically administer them in coordination with their state's Council.

Education

At present, there are still relatively few gambling education initiatives. Yet there is now growing recognition that education efforts offer a promising way to make gambling problems more recognizable and reduce their occurrence. Surveys of adolescents demonstrate frequent gambling participation;⁵³ and as reported in the preceding chapter of this report, pathological gamblers usually indicate they initiated their gambling behavior when young. Thus, it is believed that education and prevention efforts should begin at the primary school level and that more treatment resources should be made available to adolescent gamblers and particularly to children of adult gamblers.

The North American Think Tank on Youth Gambling Issues, a conference that took place in 1995, proposed seven broad strategies to address the issue of underage gambling, including a recommendation to develop gambling education curricula.⁵⁴ One such curriculum is being developed by Dr. Howard Shaffer and colleagues at the Harvard Medical School.⁵⁵ This integrated middle school mathematics curriculum is part of BASE, the Harvard Billerica Addiction Science Education Project.⁵⁶ As noted in the first part of this chapter, the most widely accepted psychological theories on causation focus on early learning, cognitive beliefs, and desire to alter mood. At least the first two of these three factors that are believed to precipitate pathological gambling originate from childhood experience. Shaffer et al. believe that poor understanding of mathematics, particularly statistics and probability, combined with magical thinking and

⁵³ E.g., Wallisch, 1993 and 1996; Winters et al., 1995.

⁵⁴ The North American Think Tank on Youth Gambling Issues was a conference held at Harvard Medical School, April 6-8, 1995, attended by representatives from government, educational and research institutions, the gaming industry, medicine and finance. The purpose of the conference was to define a public policy strategy to address issues associated with youth gambling. The seven recommendations developed at the conference are: (1) a joint US-Canadian task force to coordinate an appropriate response to youth gambling, including obtaining the funds for needed programs; (2) structuring the task force as a not-for-profit organization to attract both public and private sector funding; (3) establishment of law enforcement standards to uphold underage gambling prohibitions; (4) international research on the prevalence of youth gambling and the effectiveness of prevention and treatment programs, with findings available on-line; (5) an inventory of treatment methods used in North America, evaluation of their efficacy, and enhanced professional training of youth gambling treatment providers; (6) development of gambling education curricula and programs to educate parents and teachers, as well as children, about the issues of youth gambling; and (7) a campaign to increase public awareness of youth gambling issues, along with voluntary standards set by the gaming industry to discourage gambling advertising geared to young consumers.

⁵⁵ Shaffer, 1996.

⁵⁶ The BASE Project is a partnership between Harvard Medical School and the town of Billerica, MA. The project began as a science curriculum covering alcohol and drug abuse. The curriculum now contains eight different modules, one of which is the mathematics module that focuses on gambling.

the availability of gambling opportunities, is responsible for the high rate of gambling and gambling related problems among US youth. The Harvard curriculum, being classroom tested for the first time during the 1997 spring semester, combines gambling awareness content with a step-by-step introduction to probability and statistics.

However, at the present time, most in-school gambling education does not follow such a structured format. More often, concerned individuals with knowledge of the topic, for instance speakers from a state's Council on Problem Gambling, give presentations to high school students.

Connecticut has no gambling education program in its public schools, though efforts to initiate such a program are in the planning stage.

Casino-Sponsored Programs

Harrah's Casinos has taken an active stance regarding problems with gambling, and other casino companies have followed their lead. While funding from casinos represents only a very small portion of their net revenues, the efforts taken represent a positive outcome in an arena where there was little available until recently. Harrah's corporate mission statement pledges, in addition to a general affirmation of social responsibility, "to commit human and financial resources to educate and build awareness that deters underage and compulsive gambling at our casinos." The corporation's Director for Responsible Gambling and related committees administer several programs including Project 21, aimed at preventing youth gambling, and Operation Bet Smart, designed to heighten adults' awareness of gambling problems. As part of Project 21, frontline casino staff are trained to recognize teenage gambling. Attention is also given to employees with gambling problems. Additionally, Harrah's has assisted the American Gaming Association with its publication of the Responsible Gaming Resource Guide (1996), which is the source for much of the information on state programs in the latter part of this chapter.

The casino industry organization, the American Gaming Association, supported the establishment of the National Center for Responsible Gaming, located in Kansas City, Missouri. The Center conducts research on gambling problems and the development of strategies to mitigate them.

The two Native American casinos located in the State of Connecticut, Foxwoods and Mohegan Sun, provide significant financial support to the Connecticut Council on Problem Gambling. In 1996, Foxwoods contributed \$200,000 and Mohegan Sun Casino contributed \$100,000. The two Native American casinos display notices and distribute brochures about programs in the State to assist individuals who have developed problems with gambling.

Connecticut Programs and Funding

Funding

Connecticut was the first State to directly authorize public funds for treatment of severe gambling problems. In 1981 the State devised a funding mechanism to support the Connecticut Compulsive Gambler's Treatment and Rehabilitation Program and established this mechanism on a permanent basis in 1987. Commercial gambling facilities (pari-mutuels and OTB teletheaters) are required to devote a portion of their revenues to the program. (For instance, each live performance of a game or racing event results in a contribution of \$135 to the program, while an OTB teletheater event

results in a \$25 fee.) **Table 7.1** presents data for FY1992 through FY1996 for this program. In FY1996 this amounted to nearly \$209,000, while the State added another \$100,000 from its budget. Another \$250,000 is provided on an annual basis by the Connecticut Lottery Corporation starting with its establishment in July 1996, bringing the total funding for fiscal 1996-97 to approximately \$559,000. The \$100,000 from general fund revenues requires annual reauthorization.

Fiscal Year	Performances	Plainfield Greyhound	Hartford Jai-Alai	Bridgeport Jai-Alai	Milford Jai-Alai	Tele-theaters	Total
1992	Number of performances	339	346	240	230	456	1,611
	Amount	\$45,135	\$46,755	\$32,400	\$310,050	\$11,400	\$167,685
1993	Number of performances	334	331	236	230	419	1550
	Amount	\$45,136	\$44,730	\$31,860	\$31,050	\$10,475	\$163,251
1994	Number of performances	328	332	195	277	0	1,132
	Amount	\$44,325	\$44,730	\$26,325	\$437,395	\$0	\$152,910
1995	Number of performances	320	312	156	313	1757	2858
	Amount	\$43,245	\$42,030	\$21,060	\$42,255	\$43,925	\$192,515
1996	Number of performances	345	85	234	463	2,270	3,397
	Amount	\$46,620	\$11,475	\$31,590	\$62,505	\$56,750	\$208,940

The Connecticut Division of Special Revenue

The Connecticut Division of Special Revenue (DSR) has commissioned studies on the effect of legalized gambling on the citizens of Connecticut in 1986, 1991 and the present study. One of the objectives of each study has been to measure the prevalence and effects of pathological gambling and to make recommendations. In addition, DSR personnel participate in seminars concerning pathological gambling.

Beginning in 1993, the DSR took the following steps:

- Posting of materials informing Lottery players of (1) the 18-year-old minimum legal age to play the Lottery and (2) the toll-free hotline for the Connecticut Council on Problem Gambling (CCPG). The screen that Lottery vendors see when they sell tickets is also programmed with a message displaying the legal age.
- Requested Lottery agents to post signs making people aware that help for problem gambling is available.
- Added a section on pathological gambling to training for new Lottery agents.
- Added a message to Lottery game play brochures and Winning Ticket Claim Forms indicating the availability of help for gambling problems from the Compulsive Gambler's Treatment Program, GA, and CCPG.

In general, the DSR has sought to take a proactive position with regard to informing the public that for some individuals gambling is a problem and that help is available. The Division's Mission Statement maintains:

"The Division recognizes that there are social costs associated with legalized gambling the Division has a responsibility to support programs for the prevention and treatment of gambling related disorders."⁵⁷

In line with this responsibility, DSR developed a policy to educate its employees about the issue of pathological gambling, sensitize them to the indications of the pathology and inform them about available treatment programs. The policy further stipulates that the Division will collaborate closely with the State's Compulsive Gambling Treatment Program and the non-governmental Connecticut Council on Compulsive Gambling; finally, DSR is designated to supervise five-year socioeconomic studies on the impact of legalized gambling. The present work is the third in the series of these reports.

In 1994, DSR, along with the Department of Public Health and Addiction Services, supported legislation to impose a fee per performance at the four teletheaters to support the Compulsive Gambling Treatment Fund.

In 1995, a DSR representative began attending Foxwoods Casino's Problem Gambling Committee. In 1996, Public Act 96-212 which created the Connecticut Lottery Corporation increased funding for pathological gambling prevention and treatment and also required the executive director of the DSR, within available resources, to prepare and distribute information on Connecticut prevention, treatment and rehabilitation programs for pathological gamblers and to require the information be displayed at each licensee's premises. Information is now available at all pari-mutuel, OTB facilities and at all 3050 Connecticut lottery agent locations.

It must be noted that DSR formerly had a direct role in legalized gambling operations in the State, prior to the sale of OTB facilities to Autotote and the creation of the Connecticut Lottery Corporation. At that time, DSR personnel had more extensive regular contact with the gambling public. However, they retain contact through their oversight and regulatory functions.

The Connecticut Council on Problem Gambling

The Connecticut Council on Problem Gambling (CCPG) operates an 800 number hotline 24 hours every day, which fields calls from Massachusetts and Rhode Island as well as Connecticut. The Council also works with Native American casinos on issues involving underage gambling. The casinos financially support the Council. Foxwoods provides \$200,000 annually and Mohegan Sun \$100,000 annually. The Native American casinos distribute CCPG brochures on problem gambling. The 800 number is prominently displayed.

This CCPG telephone "Helpline" received 588 calls from gamblers seeking help in 1995. The individuals who called it have, in many ways, a similar demographic profile to the pathological gamblers in the survey described in Chapter 6. The 1995 Helpline callers were 69% male and 31% female; 85% of them were white and 65% of them were Catholic. Casino slot machines, casino table games, and sports betting (in that order) were the principal games mentioned as representing a problem; those who cited sports betting were far more likely to be male. A large majority of the callers reported emotional, financial and family problems. Eighteen percent said they abused alcohol or drugs as a direct result of their pathological gambling, but the total number with a substance abuse problem was higher: about one-third of the callers in the case of

⁵⁷ Division of Special Revenue, 1996.

alcohol, one-eighth for drugs (tabulation of the data does not reveal how many callers reported both addictions). Twenty percent admitted committing illegal acts to obtain gambling money.

The chief dissimilarities between the Helpline caller profile and that provided by the Connecticut pathological gamblers questionnaire appear with respect to age and income. Eighty-three percent of the males who called the Helpline, and 56% of the females, were under forty years old, compared to a median age of 47 in the survey. Almost one-third of the callers (32%) reported income under \$26,000 per year and only 14% had an income over \$46,000. These figures are significantly lower than the incomes reported in the pathological gamblers questionnaire (only 12% of those respondents said their annual incomes were less than \$25,000, while 30% had incomes of \$75,000 or more). Finally, it is interesting to note that 72% of the Helpline caller subgroup who identified themselves as having a problem with casino gambling indicated that their problem originated at Foxwoods.

The Compulsive Gambling Treatment Program

The chief state-supported treatment resource for pathological gamblers in Connecticut is the Compulsive Gambling Treatment Program. This unit was established in Bridgeport in 1982, and has operated since 1992 at its present location in Middletown. Since 1995 the state-funded program conducted at this outpatient clinic has been administered under the Connecticut Department of Mental Health and Addiction Services. At the current time, efforts are underway to extend services to treat pathological gamblers in other locations around the state by means of contracting with private nonprofit providers.

The Middletown clinic has two full-time social workers and two additional part-time social workers (all MSWs); one full-time plus three part-time peer counselors; a psychiatrist ten hours per week on contract; and one full-time administrative assistant. During fiscal year 1996, the staff had 2,089 contact hours with 156 clients, some of whom were gamblers' family members. The low average of approximately 13 staff hours per client seen reflects, first, clients who drop out of treatment, and also, clients who initiated treatment late in the year. The treatment sequence starts with a two to three hour intake with both a clinician and a peer counselor present. The client then attends two weekly therapy sessions of 90 minutes each; one is an individual session and the other with a group of clients. A Gamblers Anonymous chapter also meets near the facility. Clients attend GA as part of the treatment program, either with this chapter or one in their home community.

All clients in treatment are clinically diagnosed under DSM-IV criteria. Optimally, someone stays in treatment for two years, with a gradually decreasing frequency of contacts with clinic staff and an emphasis on group therapy. The treatment sequence is roughly one year of "stabilization" followed by another of follow-up maintenance.

Maintenance continues on a lifetime basis. Professionals in the treatment of pathological gambling (as well as in treatment of alcoholism and drug abuse) reject the notion of a "cure." There is disagreement as to whether abstinence on the GA model or controlled gambling is the preferable outcome.⁵⁸

⁵⁸ Prochaska et al., 1995; Horbay, 1996.

Information on relapse rate/outcome measurement is not available. Assuming a continued increase in state funding, the clinic plans to initiate some type of outcome measurement program in the near future. The program's principal concern at the present time is to deliver a high quality of treatment for their clients, and to expand the number of sites at which treatment is available to four other locations around the state. The current plan to expand Connecticut's pathological gambling treatment program includes a provision for 21 hours of professional training at each of the four new locations prior to the start-up of the new clinics.

The Middletown program organizes six to seven day-long workshops each year. At these sessions nationally recognized experts in the treatment of pathological gambling provide information and instruction for counselors, psychologists, etc. who attend. The Middletown program is also active in organizing an annual regional (New England) conference for counselors.

There are no in-school gambling education programs operating in Connecticut at the present time. The preliminary phase of developing a formal education program is underway. Focus groups are meeting during the first half of 1997 to complete and submit a consensus proposal for an education program based on the focus groups' findings. At present, the Middletown program helps to coordinate a public awareness campaign on the problems of pathological gamblers. This consists of a series of radio and TV spots that began in December 1996.

Coordination between the Middletown operation and the Connecticut Council on Problem Gambling is very close. There is less coordination with GA because GA membership assumes anonymity and leadership is on an informal basis. The GA group that meets near the Middletown clinic was begun, in part, with assistance from the director of the clinic and a few of the peer counselors in the Middletown program are very active GA members, thus providing some contact with GA.

Nominally, the State Compulsive Gambling Treatment Program sets fees of \$124 per individual session and \$32 per group session. The practice is to apply insurance coverage if the client has any and adjust the remainder downward on a sliding scale based on income. For clients with insurance, their plans generally pay in a 50% to 80% range. At present no client is personally paying the full fee, and several clients are not paying anything out of pocket. The Middletown clinic treats a limited, but steadily growing number of persons. **Table 7.2** provides data for fiscal years 1993-1996 about the individuals who took part in the program.

Table 7.2 Compulsive Gambling Treatment Program -- Middletown						
	FY1993	FY1994	FY1995	FY1996		
	(7/1/92-6/30/93)	(7/1/92-6/30/93)	(7/1/92-6/30/93)	(7/1/92-6/30/93)		
Clients Seen						
Pathological Gamblers	51	74	100	117		
Family Members	4	26	26	39		
Total	55	100	126	156		
Pathological Gamblers-Male	45	62	78	89		
Pathological Gamblers-Female	6	12	22	28		
Family Members-Male	2	4	4	6		
Family Members-Female	2	22	22	33		
Other Client Characteristics - Pathological Gamblers Only - Average for FY1993-FY1996¹						
Race	92% White	3% Black	2% Asian	1% Latino	2% Unknown	
Religion	58% Catholic	12% Protestant	9% Jewish	11% Other	10% Unknown	
Marital Status	48% Married	23% Single	4% Separated	20% Divorced	6% Unknown	1% Widower
Region ²	34% N. Central	36% S. Central	3% Northwest	6% Northeast	15% Southwest	7% Southeast
State Funding for Compulsive Gambling Treatment Program in FY1996: \$559,000 ³						
¹ Percentages may not add up to 100% because of rounding. ² Tabulation omits 21 pathological gamblers whose area of residence is unknown. The North Central region includes Hartford; the South Central region includes New Haven; and the Southwest region includes Bridgeport. ³ Source of funds: \$209,000 from levies on OTB and pari-mutuels; \$250,000 from Connecticut Lottery Corporation; \$100,000 from General Fund. Funding supports counselor training workshops and public awareness programs in addition to clinical treatment of pathological gamblers.						
Note: FY1993 is the earliest period for which full fiscal year data are available.						

Gamblers Anonymous

There are 20 Gamblers Anonymous locations across Connecticut, some with adjunct GamAnon programs. The great advantage of these groups and their approach is the very low cost, borne by contributions of those in treatment. Membership in Connecticut's GA chapters, however, is very small: 6 to 36 members per group.

Success Rate

The results of the survey of pathological gamblers, conducted as part of this study and described in Chapter 6, can be used to obtain a crude measure of success, at least for members of GA. Ninety seven respondents provided information on length of time since the last time they had "slipped" and gambled again. A general but subjective measure of success of GA and treatment programs is that the gambler did not gamble for a full year. **Table 7.3** provides the results. Considering the small numbers, the

percentages are not significantly different and suggest that, on this criterion, the success rate of GA members in Connecticut is approximately 75%.

	Total	Members for		
		Less Than One Year	One to 4.99 Years	Five or More Years
Number	97	34	32	31
Failure	25	10	11	4
Success	72	24	21	27
Percent Successful	74%	71%	66%	87%

Source: Dec. 1996-Jan. 1997 Survey of Pathological Gamblers

The Southeastern Connecticut Problem Gambling Task Force

Another major actor in the State which has been part of the response to pathological gambling problems is the Southeastern Connecticut Problem Gambling Task Force. This group has been highly influential in raising the level of State funding for programs to help pathological gamblers. A separate Problem Gambling Task Force has recently been started in the Middletown area, but is not yet very active.

Private Counseling Services

Various private counseling services in the State also serve pathological gamblers, and law enforcement personnel such as probation officers have contact with pathological gamblers as well. In 1994 the Southeastern Connecticut Problem Gambling Task Force (a volunteer umbrella group comprising representatives from about 20 human services agencies and community organizations) conducted a mail-in survey of social service providers.⁵⁹ The purpose of the survey was to discover how much contact the providers had with pathological gamblers; what types of gambling were the greatest source of problems, and whether an increase in pathological gambling could be observed over time; and how much training, if any, the providers had in treating pathological gamblers.

The survey indicated that about two-thirds (67%) of the providers had seen pathological gamblers at some time in their professional life. Nearly half (47%) had seen gamblers' family members. In total, the 108 respondents said they had served 960 people with some form of gambling-related problem over a two-year period. Most of the providers who reported serving pathological gamblers also noted an increase over time in the frequency of seeing this type of client. Asked to give a ranking of the forms of gambling that seemed to cause the greatest problem, 87% of the providers cited casino gambling in the top three; 47% cited sports betting and 38% the lottery. Dog racing (29%) and bingo (12%) were mentioned in the top three next most often; no other type of game was given a top-three ranking by more than 4% of the providers.

⁵⁹ There were 108 respondents to this survey, comprising 38 counselors or social workers (35%), 24 probation officers (22%), 12 clergy (11%), 10 psychiatrists or psychologists (9%), 4 nurses (4%), and 20 (19%) in other occupations.

The survey revealed gaps in the training of providers with respect to pathological gambling. Forty percent of the respondents had no training at all in this field; 34% had minimal training such as attending a lecture. Only 26% had more substantive training, such as a workshop with an expert. The relative lack of training may underlie another finding of the survey which showed that only 23% of those providers who reported serving pathological gamblers routinely screen each client they see for signs of this problem.

Programs In Other States

For comparison, **Table 7.4** lists some information about the existing prevention and treatment programs in other states.

As **Table 7.4** shows, most states devote a relatively modest level of resources to pathological gambling issues. Of the states that use public money to support pathological gambling prevention and/or treatment programs, not all have statutory formulas that assure continuity of funding. For instance, New York's state funding of gambling related programs varied widely, between \$300,000 and \$776,000 per year, between 1984 and 1996; last year the legislature provided an increased appropriation (\$1.5 million). In virtually every state that utilizes private funding for the programs, that state's gambling industry donates the bulk of the money. A number of states, including Connecticut, use a hybrid public and private funding system. In most cases, the states have cooperative relationships with their respective Councils on Problem or Compulsive Gambling, though in only a few states — for instance, Massachusetts — is this relationship sealed with a formal commitment of public funds. Another area of need, addressed in no more than a handful of states, is for training and certification programs for counselors who treat pathological gamblers.

The most widespread state programs, as listed in **Table 7.4**, are education and information efforts, some in schools and some through awareness postings at gambling outlets. Gamblers' hotlines are also fairly common. The availability of treatment programs, with or without public funding, is much more spotty.

Table 7.4 Existing Programs in Other States			1997 figures¹
State			
(Population)²	Annual Funding		Program Description
	Public	Private	
Included for comparison:			
Connecticut (3,270,740)	\$559,000: \$209,000 from pari-mutuels/OTB, \$100,000 from General Fund, \$250,000 from CLC	\$300,000 from Native American casinos for Council on Problem Gambling	State funded Compulsive Gambling Treatment Program; Council on Problem Gambling operates hotline and works with Native American casinos on issues of underage gambling
Arizona (4,305,016)	none	\$100,000 (approx.)	Donations from gaming industry support Council, which operates telephone helpline, conducts counselor training and certification program, and distributes brochures
California (31,565,480)	none	n.a. ³	Hotline, school presentations, brochures at card rooms; Council budget draws on member donations, contribution from Calif. Card Club Assoc., and in-kind support (rent) from Agua Caliente Indians
Colorado (3,747,560)	\$100,000 proposed	\$8,800 ⁴	Council on Compulsive Gambling has been organized; no regular state budget allocation; prevalence study has been contracted
Delaware (717,041)	\$120,000 from general fund plus 1% of race-track slot proceeds*	n.a.	Coordination with Council on treatment referrals; Council runs helpline; state mental health agency sponsors public awareness messages
Florida (14,184,155)	\$113,000 from lottery	\$50,000 (approx.)	No formal state budget item for pathological gambling programs, but state lottery makes voluntary contribution to Council; Council also supported by gaming industry (race tracks and Native American gaming); Council undertakes prevention/education programs, treatment referrals, counselor training workshops
Georgia (7,208,676)	\$250,000 (max.)	none	Unclaimed lottery prizes support problem gambling hotline
Illinois (11,790,379)	none	\$300,000 (approx.)	Riverboat casino association supports Council's hotline, treatment referral and informational advertising; no funding for treatment programs; gaming industry grants are on ad hoc basis, renegotiated yearly

¹ Unless otherwise indicated.
² US Census Bureau estimate for 1996.
³ Indicates information is not available.
⁴ Figure shown for known contribution(s), but does not represent inclusive tabulation of all private funds.
* Racetrack slot parlors opened in late 1996; the share of proceeds transferred to Delaware's mental health agency was approximately \$600,000 for the first six months of operation (1996Q4 and 1997Q1).

State (Population)²	Annual Funding		Program Description
	Public	Private	
Indiana (5,796,948)	\$1.6 million (estimate)	n.a. ³	10¢ from the \$3 casino boat admission tax is mandated to state Mental Health division; state contracts with HMO for treatment programs and funds telephone helpline; Council currently inactive, in process of being reorganized
Iowa (2,843,074)	\$2.2 million	n.a.	Mandatory portion of lottery sales and gambling facilities' gross win budgeted to awareness programs, hotline, 8 outpatient treatment units
Kentucky (3,856,877)	\$5,000	n.a.	Only public funding is state lottery corporate membership in Council on Compulsive Gambling; private corporate members (race tracks), along with individual memberships and donations, support Council, which operates hotline and referral service
Louisiana (4,338,072)	\$600,000	\$25,000 ⁴	Education programs (including counselor training); hotline; research program under state mental health department
Maryland (5,038,912)	terminated in FY1985*	n.a.	Council on Compulsive Gambling conducts information programs (including school presentations), operates hotline, makes treatment referrals and maintains current list of counselors available through insurance plans or sliding fee scale
Massachusetts (6,071,078)	none from General Fund; \$230,000 from lottery	\$100,000 from racetracks	Legislation mandates that unclaimed lottery prizes (\$600,000 max.) and pari-mutuel breakage support Council on Compulsive Gambling; outpatient clinic, hotline, awareness programs
Michigan (9,537,948)	\$700,000 in 1996; \$1 mil. ceiling	n.a.	10% of lottery budget dedicated to research (state university prevalence study), hotline and other programs
Minnesota (4,614,613)	\$1.3 million	\$350,000	Two hotlines, information programs, six outpatient treatment centers
Mississippi (2,696,183)	\$100,000 from casino fines and penalties	\$100,000 from gaming industry association	Council on Problem Gambling established in 1997 with casino industry donations and legislation for direct support from fines levied on gaming violations; Council plans hotline and treatment referral service
Missouri (5,319,335)	\$300,000	n.a.	Communities donate a portion of riverboat admission tax proceeds to state mental health agency, which coordinates education/prevention and treatment programs; Missouri Riverboat Gaming Association contributes to helpline and sponsors counselor training; newly organized state Council on Problem Gambling

¹ Unless otherwise indicated.
² US Census Bureau estimate for 1996.
³ Indicates information is not available.
⁴ Figure shown for known contribution(s), but does not represent inclusive tabulation of all private funds.
* On a limited case-by-case basis, the State of Maryland subsidizes outpatient treatment of indigent pathological gamblers at one clinic.

State (Population)²	Annual Funding		Program Description
	Public	Private	
Nebraska (1,639,213)	\$200,000	n.a. ³	1% of lottery sales mandated for programs to reduce pathological gambling; Neb. Council received \$18,000 to run gamblers' phone helpline and \$25,000 for counselor training workshops in 1996; remaining funds partially support 7 outpatient treatment centers
Nevada (1,533,478)	none	\$300,000	Casinos donate to Nevada Council on Compulsive Gambling
New Jersey (7,949,506)	\$600,000	\$10,000 ⁴	Education programs; hotline; partial state support for 6 treatment centers (one inpatient)
New York (18,196,829)	\$1.5 million	n.a.	Funding from lottery helps support 6 outpatient treatment centers, education programs, hotline and referrals; Council does not accept direct gaming industry donations
Ohio (11,134,032)	\$314,000.	n.a.	Lottery funds principally used to support hotline; smaller amount slated for public awareness brochures
Oregon (3,148,870)	\$1,000,000 (approx.)	n.a.	Lottery money helps support 3 intensive outpatient treatment programs and incidental treatment at other counseling services; Council on Problem Gambling runs hotline and information programs; tribal casinos donate to treatment providers
Pennsylvania (12,058,380)	none	\$12,000	Council on Problem Gambling receives small contributions from gambling industry, mostly relies on individual donations; main activities: hotline, in-school presentations
Rhode Island (991,701)	\$3,000	n.a.	Council on Problem Gambling runs hotline and school programs; legislature has provided small supporting grants on a year-by-year basis
South Dakota (729,500)	\$200,000	n.a.	Video lottery funds help support 6 treatment sites; Council on Problem Gambling coordinates hotline, information efforts
Texas (18,801,380)	\$375,000 in FY1997	n.a.	State formerly subsidized outpatient treatment -- this was terminated; legislative rider for current fiscal year supports Council on Problem Gambling hotline only
Washington (5,447,720)	\$100,000 from state gaming com- mission; \$5,000 from lottery	\$1,000 ⁴	State sponsors public information program; state and gaming industry sources help support Council on Problem Gambling hotline; no public or subsidized treatment; Council runs prison pilot project
Wisconsin (5,122,100)	none	\$35,000 from Oneida casino ⁴	Oneida tribal casino supplies 24% of Council on Problem Gambling budget, small individual donations make up the remainder; Council runs hotline, awareness programs

¹ Unless otherwise indicated.
² US Census Bureau estimate for 1996.
³ Indicates information is not available.
⁴ Figure shown for known contribution(s), but does not represent inclusive tabulation of all private funds.

Conclusions and Recommendations

As a general conclusion, research into the causes and treatment of pathological gambling is generally in its infancy, and data on the success of treatment, especially in Connecticut, is generally lacking.

Research into physiological treatments for pathological gambling, such as antidepressants, is virtually nonexistent at present. Only a minuscule number of pathological gamblers have been treated with medication as a specific part of their gambling-related therapy. However, in light of the demonstrated link between depression and pathological gambling, some individuals with gambling problems are probably receiving antidepressants from their physicians.

Psychological approaches to treatment and prevention are the type of treatment usually encountered, and have largely drawn on developments in the treatment of alcoholism and other addictions. These programs utilize both inpatient and outpatient formats, and a variety of features including individual and group therapy, participation of family members, and peer support (the GA model). One carefully executed 4-year longitudinal study of treatment success, in Minnesota, found the same success rate over a variety of treatment formats and durations. All formats combined the same 12-step orientation with cognitive-behavioral and reality therapy and brought 65% of those who completed treatment from the pathological range of the SOGS to the normal range. No follow-up as to relapse rates is noted, however.

The results of the telephone survey conducted in November 1996 suggest that there are between 3,000 and 27,000 Connecticut adults who currently are probable pathological gamblers. The number of pathological gamblers now known to be in treatment in Connecticut is much smaller. There are close to 200 individuals being served by the state's Compulsive Gambling Treatment Program in Middletown, a few hundred more attending Gamblers Anonymous meetings throughout the State, and another unknown number who receive private counseling or psychotherapy. Moreover, we have not seen data on the relapse rate among pathological gamblers who have been in treatment, and thus are not in a position to evaluate the efficacy of treatment programs now being conducted. While the GA survey indicated a "success rate" of 74%, this did not include dropouts. While some studies of this issue may have been made and not come to our attention, we believe there is a need for clinical studies in Connecticut that trace treatment programs over time and compare various treatment methods. It is also worth noting that success need not be absolute to be significant. Substantial curtailment of pathological gambling behavior, even with occasional relapses, constitutes a worthwhile improvement over uncontrolled pathological gambling.

Studies in many states consistently show that most pathological gamblers initiate gambling behavior when young and that adolescents have a high frequency of gambling participation. In view of these results, WEFA recommends that the State of Connecticut attach a high priority to education and prevention efforts. New Jersey, a nearby state with a high gambling profile, allocates the funds it has designated to reduce the damage from pathological gambling predominantly for education and awareness efforts. Specifically, it uses \$100,000 to help support treatment centers, and devotes the other \$500,000 of a total \$600,000 budget to information and prevention. Notably, members of the New Jersey Council on Compulsive Gambling regularly give outreach presentations in high schools. Various states conduct some form of

pathological gambling prevention program through the schools. The programs are typically informally structured, although specific gambling education curricula are being developed.

8. THE INTERCEPT SURVEY: DEMOGRAPHICS AND GAMBLING BEHAVIOR

Purpose

The purpose of the on-site survey was two-fold:

- To collect information about Connecticut residents gambling at the various sites.

In the telephone survey of the general population, out of 994 interviewed, there were only 26 recent (past 12 months) greyhound racing patrons, 29 recent jai alai patrons, 9 recent OTB simulcast patrons, and 3 recent OTB branch patrons. Thus, the number of respondents that had attended an OTB or pari-mutuel facility recently was too small for detailed analysis. The on-site surveys rectify this lack of information. On-site surveys were carried out at Foxwoods Resort Casino and Mohegan Sun Casino for purposes of completeness and because Mohegan Sun had opened only a few days prior to the telephone survey.

- To collect information about a larger number of pathological gamblers than were found in the telephone survey.

The proportion of probable pathological gamblers was expected to be larger at gambling facilities than among the general population. Detailed results are reported in Chapter 6.

Methodology

A total of 919 interviews were conducted between November 20 - December 7, 1996 at the following gambling locations:

Native American Casinos

Foxwoods = 153

Mohegan Sun Resort = 49

OTB Parlors

Bridgeport = 40

Meriden = 40

Norwalk = 40

Waterbury = 40

West Haven = 40

Windsor Locks Teletheater = 203

Jai alai (Milford) = 203

Greyhound (Plainfield) = 111

In order to qualify for the survey, respondents had to be Connecticut residents and at the facility to gamble or place a wager. Additionally, at the jai alai and greyhound facilities, respondents were screened to ensure that they were there to wager on jai alai matches or greyhound races, and not the OTB section of the facility.

Nature of the Intercept Survey Results

The Intercept Survey results represent characteristics of those persons attending the sites where the interviews were carried out on the particular day of the interview. **The results do not represent characteristics of that portion of the general population that attends the sites over the course of a year, but only on that particular day.**

The reason these surveys do not describe the entire population who participate in a given activity is the fact that people who attend frequently are over-represented in the on-site samples and people who attend infrequently are under-represented, in direct proportion to their frequency of attendance. For example, suppose there were 400 pari-mutuel performances in a year, and two equal sized groups of people, one group attending only one performance a year and the other group attending every performance. The chance of persons from the group attending every performance making it into the on-site sample would be 400 times that of persons from the group attending only one performance a year. The on-site sample thus would "weight" people from the second group by a factor of 400 relative to the first group, compared to their representation in the adult population attending the facility.

Conversion of the data from the intercept survey to estimates for the general population is possible in a mechanical sense by using the frequency of attendance reported by the respondents to weight the sample. However, the results would be questionable at best. Persons interviewed in an on-site survey have not been selected randomly from the population attending the facility and are not a fully representative sample of the Connecticut population. Therefore, WEFA has not carried out this process and strongly recommends against doing it.

In this study, the telephone survey represents the only primary source of information on the gambling behavior of the general population. Therefore, the observations about patrons of gambling facilities in this section apply only attendees who responded to the questionnaire at the performance on the day when they were interviewed, and do not represent characteristics of the general population.

Comparisons of Responses to the South Oaks Gambling Screen (SOGS) in the Different Surveys

WEFA anticipated that the 919 on-site responses would show many more than the 6 probable pathological gamblers (weighted result¹) who gave 5 or more positive SOGS answers in the telephone survey relating to their most recent 12-month behavior. This is because pathological gamblers can be expected to be a higher proportion of people attending gambling sites than would be found among the population as a whole.

This can be seen in **Table 8.1**, which presents the distribution of respondents to the surveys conducted as part of this study according to the number of SOGS questions they answered in the affirmative. While the SOGS is designed only to differentiate probable pathological gamblers from the rest of the population, some researchers use

¹ The results of the telephone survey conducted in November 1996 were weighted to provide statewide representative and projectable estimates of the adult population of Connecticut 18 years of age and older based on US Census figures. The data were weighted by Gender, Age, Education and Race to reflect the demographics of the State of Connecticut.

the scores to indicate degree of pathology.² In Chapter 6, for example, we have noted the difficulty in projecting characteristics of pathological gamblers from the on-site and gamblers-in-treatment surveys to the total population of pathological gamblers, as identified by the telephone survey, because of the very different apparent pathology of the different groups as indicated by the number of questions they answered positively.

Table 8.1 Distribution of Respondents to the Surveys by Number of Positive SOGS Responses (Lifetime Prevalence)

Number of SOGS Responses	Native American						
	Telephone Survey ³ (n=992)	Casinos (n=202)	Greyhound (n=111)	OTB Branches (n=200)	OTB Teletheater (n=203)	Jai Alai (n=203)	Gamblers in Treatment (n=83)
0	716	56	18	23	75	48	0
1	169	54	18	21	17	46	0
2	51	33	12	21	14	23	0
3	33	15	10	17	21	16	0
4	10	14	15	17	10	12	0
5	6	7	8	18	8	16	0
6	2	6	7	12	10	8	3
7	0	5	2	11	5	6	6
8	2	2	5	8	8	7	4
9	1	4	3	15	10	2	3
10 or more	2	6	13	37	25	19	67
5 or more	12	30	38	101	66	58	83
% 5 or more	1.2%	15%	34%	51%	33%	29%	100%
Percentage Distribution of Responses of Five or More							
5	50%	24%	15%	19%	12%	47%	0%
6	17%	28%	15%	11%	21%	11%	4%
7	0%	16%	0%	13%	14%	3%	7%
8	17%	12%	15%	14%	14%	8%	5%
9	17%	8%	15%	10%	5%	8%	4%
10 or more	0%	12%	40%	33%	34%	24%	81%

Sources: Telephone survey of Connecticut residents, November 1996; Intercept survey of gambling patrons at Connecticut venues, Nov.-Dec. 1996; Questionnaire distributed during December 1996 to persons in the State of Connecticut Compulsive Gambling Treatment Program and to Gamblers Anonymous groups meeting in Connecticut.

² Gambino, in press.

³ The results of the telephone survey are weighted (see footnote 1, previous page).

Results

There are 67 questions on the On-Site Questionnaire (see **Appendix B**). Here we only summarize a few of them (see **Table 8.2** and **Table 8.3**). The Intercept Survey responses to the SOGS questions are in **Table 8.1**, and the responses to the social cost questions are presented and discussed in Chapter 6.

Table 8.2 compares demographics of respondents to the on-site survey at the different sites.

Table 8.3 compares three categories of gambling behavior of the respondents at the different sites:

- Other forms of participation in legalized gambling by the respondents
- Their frequency of attendance
- Their average (mean) spending.

Because reported frequency of attendance and amounts spent are expected to have large margins of error, only major differences in frequency of attendance or spending are statistically significant and discussed in this chapter.

Demographics

The attendees were predominantly male. The highest male percentage occurred for the OTB branches (90%), and the lowest for the Native American Casinos (59%).

Marital status showed no such simple pattern: those attending the Native American Casinos and Windsor Locks were likely to be married (63% and 59%, respectively); those attending the Plainfield greyhound facility and the OTB branches were less likely to be married (34% and 42%, respectively). Average household size was approximately the same for respondents at all the sites.

The on-site respondents tended to be employed full-time, except for Native American Casino patrons because of the heavy percentage of retired people participating there. Plainfield greyhound respondents had the highest percentage employed (75%), which is consistent with the heavily male percentage (88%). Interestingly, the venue with the highest male attendance, the OTB branches, had essentially the same full-time employment percentage (59%) as the general population. As previously noted, these findings may be substantially influenced by the lack of a randomly selected sample.

The age breakdown of those interviewed showed small differences between the different sites. The mean age at the Native American casinos was slightly higher than that at Plainfield greyhound and slightly lower than the others.

A heavy percentage of retirement age (65 and older) was found at the Native American Casinos (34% of respondents) and the OTB branches (31%). In this age group, Windsor Locks Simulcast (24%) and Milford jai alai (19%) had the next lowest percentages, and Plainfield greyhound had only 12%.

The Simulcast facilities and Native American casinos on-site surveys showed the greatest percentage of those with a college education or greater (both 36%), with the other venues at approximately 25%. Milford jai alai showed the highest income, with 42% of attendees earning \$50,000 or more. The Native American casinos survey had 36% in this income group.

Hispanic respondents attend OTB sites and pari-mutuels in greater percentages than their percentage in the general population. Black respondents attend OTB sites and jai alai in greater percentages. Hispanics appear to attend Native American Casinos significantly less than other venues.

For all except the Native American Casinos, most of the attendees came from within 30 miles. Not surprisingly, two-thirds of the OTB branch attendees were from within 10 miles. At the other end of the scale, 18% of the Native American Casino attendees reported coming from over 70 miles away. At the Windsor Locks Teletheater, 29% reported coming from 20-29 miles away and 7% from 30-39 miles. Those interviewed at the pari-mutuels reported similar distances.

Gambling Behavior

The On-Site Survey asked many of the same questions of patrons at the various venues at which the survey was conducted as were asked in the telephone survey. It needs to be emphasized that, as was the case in the telephone survey, a relatively few people in the On-Site Survey are responsible for most of the spending. The accuracy of the mean spending estimates is dependent on how many of these "heavy spenders" were contained in the sample. In general, the number of these heavy spenders is not sufficient to estimate the mean spending with any precision. Therefore, the mean spending numbers must be taken as indicative only, rather than giving an accurate estimate of actual spending at the venues.

Lottery

Comparing attendees at the five venues studied, greyhound track attendees participate in the Lottery to the greatest degree (88%). In general, between 46% and 50% of attendees at the other sites play the Lottery. Interestingly, of those attending the different venues where the on-site survey was conducted who report playing the lottery, the average annual amount wagered on the lottery was lowest at the greyhound track and highest at Windsor Locks.

Horse Racing

Of those interviewed at the various sites, around 30% also bet on horse racing in other states, with the highest percentage of horse race bettors found at the Windsor Locks simulcast facility (39%). A similar pattern occurred for attendance frequency, suggesting that, while all of the venues attracted horse race bettors, perhaps not surprisingly, simulcast facilities attracted the greater share. Betting followed a similar pattern.

Charitable Gambling

Among the three types of charitable games covered in the surveys – raffles, bingo, and casino nights – the results were mixed. In the results for spending behavior on charitable games by respondents to the On-Site Survey, raffles showed the most consistency, with OTB simulcast patrons reporting the highest average spending on this charitable game and jai alai patrons the lowest.

Native American Casinos

A large percentage of the patrons at each of the other venues had gone to a Native American Casino over the last year. Seventy-nine percent of greyhound track gamblers had gone to a Native American Casino, seventy-three percent of jai alai patrons, and

sixty-one and fifty-four percent of OTB branch and Windsor Locks Simulcast patrons, respectively.

Casino spending was highest for those interviewed at the Native American Casinos, but spending by jai alai players was comparable. Respondents at the other venues reported lower average casino spending.

Pari-Mutuels

On-site respondents generally reported having attended a greyhound track in relatively high percentages (30%) with the exception of respondents at the Native American Casinos (10%). The reported attendance at jai alai followed a similar pattern -- 30% for OTB branch and greyhound, 20% for simulcast and 6% for Native American Casino patrons.

Mean annual spending by greyhound track patrons was essentially the same as jai alai patrons, at their respective venues.

OTB

Patrons of other venues attend OTB branches less than they do simulcast. Of those who attended an OTB branch, 50% had also attended a simulcast facility in the last year; 10% had attended jai alai, 8% greyhound racing and 4% a Native American Casino. By comparison, simulcast facility patrons reported attendance at other types of venues within the past year at rates of 70% for an OTB branch, 20% for jai alai, 20% for greyhound track and 9% for Native American Casinos.

Reported average annual spending at OTB branches by patrons was less than that at simulcast facilities. Interestingly, the OTB branch attendees reported spending more at a simulcast facility than at OTB branches.

Table 8.2 Summary Demographics of the Intercept Surveys

Question	OTB Branches	Simulcast (Windsor Locks)	Milford Jai alai	Plainfield Greyhound	Native Am. Casinos
Sex (% Male)	90%	85%	70%	88%	59%
Marital Status (% Married)	42%	59%	50%	34%	63%
Size of Household (Mean)	2.5	2.5	2.5	2.3	2.5
Employed (% Full Time)	59%	62%	69%	75%	37%
Age (Percentage)					
18-24	1%	1%	3%	13%	2%
25-34	13%	9%	19%	10%	12%
35-44	25%	3%	19%	29%	11%
45-54	21%	20%	19%	24%	20%
55-64	10%	12%	18%	12%	20%
65-74	25%	20%	13%	11%	28%
75 or Older	6%	4%	5%	2%	6%
Mean (years)	51	50	49	45	54
Education (Percentage)					
Less Than High School	6%	2%	6%	9%	5%
High School, Tech School, Other	34%	41%	38%	36%	37%
Some College	30%	20%	24%	24%	20%
College Graduate	18%	27%	17%	21%	24%
Graduate School or More	7%	9%	9%	3%	12%
Income (Percentage)					
Less than \$10,000	4%	----	2%	3%	2%
\$10,000-\$15,000	4%	1%	2%	8%	1%
\$15,000-\$20,000	6%	6%	2%	5%	6%
\$20,000-\$25,000	12%	11%	6%	10%	7%
\$25,000-\$30,000	15%	18%	7%	15%	14%
\$30,000-\$40,000	19%	24%	17%	17%	11%
\$40,000-\$50,000	15%	16%	15%	25%	15%
\$50,000-\$75,000	15%	15%	24%	9%	22%
\$75,000 and Over	6%	5%	19%	5%	14%
Ethnic Group (Percentage)					
White Hispanic	10%	6%	6%	8%	2%
Black Hispanic	3%	2%	1%	1%	0%
White	64%	66%	78%	81%	90%
Black	19%	22%	12%	8%	6%
Asian	2%	1%	1%	1%	1%
Native American	1%	----	1%	----	----
Other	3%	4%	1%	1%	1%
Distance to Site (Percentage)					
Less than 10	68%	19%	22%	27%	7%
10-19	26%	40%	31%	25%	6%
20-29	4%	32%	20%	31%	9%
30-39	1%	8%	13%	10%	7%
40-49	1%	1%	7%	1%	10%
50-59	----	1%	3%	2%	22%
60-69	----	----	2%	1%	19%
70 Miles or More	1%	----	1%	3%	18%
Mean (Miles)	7.9	16.4	20.3	19.3	48.5

Source: On-Site Survey, Connecticut gambling establishments, November - December, 1996.

Question	OTB Branches	Simulcast (Windsor Locks)	Milford Jai alai	Plainfield Greyhound	Casinos
Lottery	50%	48%	47%	88%	46%
Mean Frequency	273	139.8	193.1	102.2	59.3
Mean Spending	\$821	\$1,131	\$540	\$505	\$616
Horse-or Harness-Racing Track (%)	30%	36%	29%	32%	23%
Mean Frequency	16.3	37.2	9.8	17.4	17.9
Mean Spending	\$283	\$359	\$257	\$159	\$185
Raffle	48%	36%	57%	38%	64%
Mean Frequency	7.5	2.1	4.4	2.1	3
Mean Spending	\$50	\$141	\$23	\$76	\$80
Bingo	11%	8%	18%	31%	25%
Mean Frequency	0.7	1.2	3.8	2.7	3
Mean Spending	\$108	\$322	\$235	\$231	\$301
Casino Night	9%	7%	7%	19%	18%
Mean Frequency	0.2	0.2	0.8	1.6	0.3
Mean Spending	\$86	\$593	\$318	\$171	\$95
Native American Casinos	61%	54%	73%	79%	100%
Mean Spending					
Video Facsimile Terminals	\$996	\$838	\$2,364	\$925	\$2,955
Table Games	\$3,981	\$1,626	\$5,029	\$3,651	\$5,156
Bingo	\$308	\$644	\$1,313	\$2,338	\$1,733
Greyhound Racing	30%	30%	30%	100%	10%
Mean Frequency	39.4	27	15.3	238.4	11
Mean Spending	\$1,018	\$1,787	\$1,277	\$3,689	\$1,104
Jai alai	30%	20%	100%	30%	6%
Mean Frequency	40.8	24.3	299.9	35.7	0.4
Mean Spending	\$2,186	\$3,069	\$3,857	\$876	\$425
OTB Branches	100%	50%	10%	8%	4%
Mean Frequency	247.3	77.2	34.8	6.1	9.6
Mean Spending	\$5,973	\$7,076	\$1,577	\$1,993	\$367
Simulcast Facility	70%	100%	20%	20%	9%
Mean Frequency	70.5	156.9	46.6	59.5	7.8
Mean Spending	\$2,635	\$8,521	\$1,584	\$1,465	\$459
OTB Telephone Betting	10%	8%	3%	2%	1%
Mean Frequency	3.2	1	3.3	1.5	2.2
Mean Spending	\$839	\$1,058	\$676	\$153	\$124

* As discussed in the text, those interviewed on-site at the gambling establishments do not represent persons in the general population who participate in that form of gambling, but rather represent attendees on the day of the interview.

Source: On-Site Survey, Connecticut gambling establishments, November - December, 1996.

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- Appendix A** **Questionnaire Used in the Telephone Survey**
- Appendix B** **Questionnaire Used in the Intercept Survey at Gambling Venues**
- Appendix C** **Questionnaire Used in the Pathological Gamblers Survey**
- Appendix D** **The Gamblers Anonymous 12 Steps of Recovery**
- Appendix E** **Diagnostic Criteria for Pathological Gambling from the American Psychological Association Diagnostic and Statistical Manual, Fourth Edition (DSM-IV)**
- Appendix F** **Home Page of the Connecticut Division of Special Revenue**
State Lottery Web Site Addresses
Home Pages of Connecticut Legalized Gambling Sites
The Connecticut Lottery
Plainfield Greyhound Park
Shoreline Star Greyhound
Foxwoods Resort Casino
Mohegan Sun Casino
- Appendix G** **Connecticut Zip Code Rankings by Per Capita Income in 1996: Lowest 40% of Zip Code Areas**
- Appendix H** **Substitution and Saturation: A Statistical Approach**

Appendix A
Questionnaire Used in the Telephone Survey

Interpretation of the South Oaks Gambling Screen (SOGS)

In the survey instruments used in this study, the SOGS questions are numbered 20 through 42 and 44 in the telephone survey questionnaire and numbered 20 through 42 and 46 in the intercept survey questionnaire (see **Appendix B**). Questions 20 through 27 only have one part and alternate between lifetime and 12-month questions. Questions 28 through 42 and either 44 or 46 are multiple-part with part *a* usually being the lifetime question and part *b* being the 12-month question. Questions 31 and 41 are exceptions, being three-part questions, where 31b, 31c, and 41c are the SOGS questions.

All but the first two sets and the final lifetime questions are yes/no questions with yes being the positive screening response. Questions 20 through 23 have "never," "some of the time," "most of the time," and "every time" as possible responses. In questions 22 and 23, "some of the time" is counted as a positive response as well. In question 44b or 46b, the 12-month version of the final SOGS question, "currently have" and "had one in the last 12 months" are both positive answers.

Normally, if a response to the lifetime question was negative, the 12-month question was skipped. One exception was the "some of the time" response to the first question. In this case the 12-month question was asked and several respondents answered positively. These respondents clearly made an error. As we do not know which way the error was made, the respondents were counted as a negative on the lifetime and a positive on the 12-month.

Only respondents who reported having gambled sometime in their life were asked the SOGS questions (30 out of 994 reported never having gambled). 852 did not respond (don't know or refusal to answer) to one SOGS question, 23 did not respond to two and two did not respond to four. We interpreted these as negatives, but 33 of these were in the 3 or 4 affirmative answer category and could possibly be false negatives.



Media, Pennsylvania 19063

Job #4458
October 31, 1996
1014GAMQ.DOC

CONNECTICUT GAMING STUDY SCREENING QUESTIONNAIRE

Hello, my name is _____ and I'm from ICR, a national research firm located near Philadelphia. We are conducting a study among Connecticut residents such as yourself regarding leisure activities and hobbies, and would like to include your opinions.

(ROTATE MALE/FEMALE SELECT)

A. May I please speak to the:

Male, 18 years of age or older, living in this household who had the most recent birthday?

- 1 Qualified male is on the phone GO TO Q.1
- 2 Qualified male is available (not on phone)
ASK FOR RESPONDENT, REPEAT MAIN INTRO AND GO TO Q.B
- 3 Qualified male is not available at this time GO TO Q.C
- 4 No males 18+ living in household GO TO Q.F
- R Refused TERMINATE

B. I would like to interview the male, 18 years of age or older, living in this household, who had the most recent birthday. Are you that person?

- 1 Yes, is qualified male GO TO Q.1
- 2 No, is not qualified RE-ASK Q.A
- R Refused TERMINATE

C. Then may I speak to any male, 18 years of age or older, living in this household?

- 1 Qualified male is on the phone GO TO Q.1
- 2 Qualified male is available (not on phone)
ASK FOR RESPONDENT, REPEAT MAIN INTRO AND GO TO Q.D
- 3 Qualified male is not available at this time GO TO Q.E
- 4 No males 18+ living in household GO TO Q.F
- R Refused TERMINATE

D. I would like to interview the male, 18 years of age or older, living in this household. Are you that person?

- 1 Yes, is qualified male GO TO Q.1
- 2 No, is not qualified RE-ASK Q.C
- R Refused TERMINATE

E. When would be a convenient time to call back to speak to him?
(Male who had the most recent birthday)

Date _____

Time _____

F. Since there are no males 18 years of age or older living in this household, may I please speak to the female, 18 years of age or older, living in this household who had the most recent birthday?

- 1 Qualified female is on the phone GO TO Q.1
- 2 Qualified female is available (not on phone)
ASK FOR RESPONDENT, REPEAT MAIN INTRO AND GO TO Q.G
- 3 Qualified female is not available at this time GO TO Q.H
- R Refused TERMINATE

G. I would like to interview the female, 18 years of age or older, living in this household, who had the most recent birthday. Are you that person?

- 1 Yes, is qualified female GO TO Q.1
- 2 No, is not qualified RE-ASK Q.F
- R Refused TERMINATE

H. Then may I speak to any female, 18 years of age or older, living in this household?

- 1 Qualified female is on the phone GO TO Q.1
- 2 Qualified female is available (not on phone)
ASK FOR RESPONDENT, REPEAT MAIN INTRO AND GO TO Q.I
- 3 Qualified female is not available at this time GO TO Q.J
- R Refused TERMINATE

I. I would like to interview the female, 18 years of age or older, living in this household. Are you that person?

- 1 Yes, is qualified female GO TO Q.1
- 2 No, is not qualified RE-ASK Q.H
- R Refused TERMINATE

J. When would be a convenient time to call back to speak to her?
(Female who had the most recent birthday)

Date _____

Time _____

1. I am going to ask you some questions about different gaming activities, and whether or not you have participated in them.
NOTE: IF RESPONDENT SAYS HE/SHE NEVER GAMBLES/ DOESN'T BELIEVE IN IT, SAY: We understand that not everyone gambles, but the opinions of those who do not gamble are also very critical for the successful completion of this study.

2a. Which, if any, of the following lottery games have you played at least once in your life? (READ LIST. MULTIPLE RESPONSES ACCEPTED)

- 1 Powerball
- 2 The instant lottery
- 3 The daily numbers
- 4 Play Four
- 5 Cash lotto
- 6 Lotto
- N (DO NOT READ) None of these (SKIP TO Q.3a)
- D (DO NOT READ) Don't Know (SKIP TO Q.3a)
- R (DO NOT READ) Refused (SKIP TO Q.3a)

(FOR EACH ITEM MENTIONED IN Q.2a, ASK Q.2b-Q.2h)

2b. How many times have you played (INSERT ITEM) during the past 12 months in Connecticut?

- _____ (CONTINUE)
- 0 None (SKIP TO Q.2g)
 - D Don't Know (SKIP TO Q.2g)
 - R Refused (SKIP TO Q.2g)

2c. Approximately how much do you spend on this lottery game in Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

- 1 Respondent answers in years _____
- 2 Respondent answers in months _____
- 3 Respondent answers in weeks _____
- 4 (VOLUNTEERED) Respondent answers "per drawing" _____
- D Don't Know
- R Refused

(ASK Q.2d IF "THE INSTANT LOTTERY" MENTIONED IN Q.2a - CODE 6. ALL OTHERS, SKIP TO INSTRUCTIONS BEFORE Q.2f)

2d. What is the denomination of Instant lottery tickets that you buy? (DO NOT READ LIST. MULTIPLE RESPONSES ACCEPTED)

- 1 One dollar
- 2 Two dollars
- 3 Three dollars
- 4 Five dollars
- 5 Whatever the new game is (non-specific)
- 0 Other
- D Don't Know
- R Refused

(ASK Q.2e IF "LOTTO" MENTIONED IN Q.2a - CODE 6. ALL OTHERS, SKIP TO INSTRUCTIONS BEFORE Q.2f)

2e. What is the minimum Lotto jackpot necessary before you would be willing to play? (INTERVIEWER: ALLOW FOR AN EXACT DOLLAR FIGURE. IF "DON'T KNOW" OR "REFUSED," READ RANGES TO RESPONDENTS)

- 1 Respondent gives exact dollar figure _____
- 2 Would you be willing to play for a jackpot up to 4 million dollars
- 3 5-9 million
- 4 10-19 million, or would it have to be
- 5 20 million dollars or more
- D (DO NOT READ) Don't Know
- R (DO NOT READ) Refused

(ASK Q.2f IF "POWERBALL" MENTIONED IN Q.2a - CODE 1. ALL OTHERS, SKIP TO Q.2g)

2f. What is the minimum Powerball jackpot necessary before you would be willing to play? (INTERVIEWER: ALLOW FOR AN EXACT DOLLAR FIGURE. IF "DON'T KNOW" OR "REFUSED," READ RANGES TO RESPONDENTS)

- 1 Respondent gives exact dollar figure _____
- 2 Would you be willing to play for a jackpot of up to 30 million dollars
- 3 31-49 million
- 4 50-99 million, or would it have to be
- 5 100 million dollars or more
- D (DO NOT READ) Don't Know
- R (DO NOT READ) Refused

2g. How many times have you played (INSERT ITEM) during the past 12 months outside of Connecticut?

- _____ (CONTINUE)
0 None (SKIP TO NEXT ITEM)
D Don't Know (SKIP TO NEXT ITEM)
R Refused (SKIP TO NEXT ITEM)

2h. Approximately how much do you spend outside of Connecticut on this lottery game on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

- 1 Respondent answers in years _____
2 Respondent answers in months _____
3 Respondent answers in weeks _____
D Don't Know _____
R Refused

3a. Have you ever placed a bet at a horse-racing or harness-racing track at least once in your life?

- 1 Yes (CONTINUE)
2 No (SKIP TO Q.4a)
D Don't Know (SKIP TO Q.4a)
R Refused (SKIP TO Q.4a)

3b. How many times have you placed a bet at a horse-racing or harness-racing track during the past 12 months?

- _____ (CONTINUE)
0 None (SKIP TO Q.4a)
D Don't Know (SKIP TO Q.4a)
R Refused (SKIP TO Q.4a)

3c. Approximately how much do you spend on this activity on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

- 1 Respondent answers in years _____
2 Respondent answers in months _____
3 Respondent answers in weeks _____
D Don't Know _____
R Refused

(ASK Q.4a-4c FOR EACH ITEM LISTED BELOW)

4a. Have you ever (INSERT ITEM) at least once in your life?

- 1 Yes (CONTINUE)
- 2 No (SKIP TO NEXT ITEM)
- D Don't Know (SKIP TO NEXT ITEM)
- R Refused (SKIP TO NEXT ITEM)

- a. Participated in a raffle in support of a religious or local organization
- b. Played bingo for money or prizes at a religious or local organization
- c. Participated in a "casino night" at a religious or local organization
- d. Played in an office pool at work for games such as the Super Bowl, the College Basketball tournament, or weekly football picks
- e. Played card games with friends or family for money
- f. Bowled, shot pool, played golf, or some other game of skill for money
- g. Placed a bet with a sports bookie
- h. Played video poker machines not found in casinos

4b. How many times have you (INSERT ITEM) during the past 12 months in Connecticut?

- _____ (CONTINUE)
- 0 None (SKIP TO NEXT ITEM)
 - D Don't Know (SKIP TO NEXT ITEM)
 - R Refused (SKIP TO NEXT ITEM)

4c. Approximately how much do you spend on this activity in Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

- 1 Respondent answers in years _____
- 2 Respondent answers in months _____
- 3 Respondent answers in weeks _____
- D Don't Know
- R Refused

5a. Have you ever visited a casino to gamble at least once in your life?

- 1 Yes (CONTINUE)
- 2 No (SKIP TO Q.6a)
- D Don't Know (SKIP TO Q.6a)
- R Refused (SKIP TO Q.6a)

5b. How many times have you visited a casino to gamble during the past 12 months in Connecticut, such as Foxwoods or Mohegan Sun Resort?

- _____ (CONTINUE)
0 None (SKIP TO Q.5h)
D Don't Know (SKIP TO Q.5h)
R Refused (SKIP TO Q.5h)

5c. Which, if any, of the following games did you play at the casino in Connecticut over the past 12 months? (READ LIST. MULTIPLE RESPONSES ACCEPTED).

- 1 Slot or Video Machines (ASK Q.5d)
2 Table games (ASK Q.5e)
3 Bingo (ASK Q.5f)
D (DO NOT READ) Don't know (SKIP TO Q.5g)
R (DO NOT READ) Refused (SKIP TO Q.5g)

(ASK Q.5d IF "SLOT OR VIDEO MACHINES" - CODE 1 - MENTIONED IN Q.5c)

5d. Approximately how much do you spend betting on slot or video machines in Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

- 1 Respondent answers in years _____
2 Respondent answers in months _____
3 Respondent answers in weeks _____
D Don't Know _____
R Refused

(ASK Q.5e IF "TABLE GAMES" - CODE 2 - MENTIONED IN Q.5c)

5e. Approximately how much do you spend betting on table games in Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

- 1 Respondent answers in years _____
2 Respondent answers in months _____
3 Respondent answers in weeks _____
D Don't Know _____
R Refused

(ASK Q.5f IF "BINGO" - CODE 3 - MENTIONED IN Q.5c)

5f. Approximately how much do you spend betting on Bingo in Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

- 1 Respondent answers in years _____
- 2 Respondent answers in months _____
- 3 Respondent answers in weeks _____
- D Don't Know
- R Refused

5g. If there were casinos located closer to where you live in Connecticut, would you make more visits to casinos, or would you continue to make the same number of trips as you do now?

- 1 Make more trips
- 2 Same amount of trips
- D Don't Know
- R Refused

5h. How many times have you visited a casino to gamble during the past 12 months outside of Connecticut, such as Atlantic City or Las Vegas?

- _____ (CONTINUE)
- 0 None (SKIP TO Q.6a)
 - D Don't Know (SKIP TO Q.6a)
 - R Refused (SKIP TO Q.6a)

5i. Which, if any, of the following games did you play at casinos outside of Connecticut over the past 12 months? (READ LIST. MULTIPLE RESPONSES ACCEPTED).

- 1 Slot or Video Machines (ASK Q.5j)
- 2 Table games (ASK Q.5k)
- 3 Bingo (ASK Q.5l)
- D (DO NOT READ) Don't know (SKIP TO Q.6a)
- R (DO NOT READ) Refused (SKIP TO Q.6a)

(ASK Q.5j IF "SLOT OR VIDEO MACHINES" - CODE 1 - MENTIONED IN Q.5i)

5j. Approximately how much do you spend betting on slot or video machines outside of Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

- 1 Respondent answers in years _____
- 2 Respondent answers in months _____
- 3 Respondent answers in weeks _____
- D Don't Know
- R Refused

(ASK Q.5k IF "TABLE GAMES" - CODE 2 - MENTIONED IN Q.5i)

5k. Approximately how much do you spend betting on table games outside of Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

- 1 Respondent answers in years _____
- 2 Respondent answers in months _____
- 3 Respondent answers in weeks _____
- D Don't Know
- R Refused

(ASK Q.5l IF "BINGO" - CODE 3 - MENTIONED IN Q.5i)

5l. Approximately how much do you spend betting on Bingo outside of Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

- 1 Respondent answers in years _____
- 2 Respondent answers in months _____
- 3 Respondent answers in weeks _____
- D Don't Know
- R Refused

6a. Have you ever placed a bet at a greyhound racing track at least once in your life?

- 1 Yes (CONTINUE)
- 2 No (SKIP TO Q.7a)
- D Don't Know (SKIP TO Q.7a)
- R Refused (SKIP TO Q.7a)

6b. How many times have you placed a bet at a greyhound racing track during the past 12 months in Connecticut?

- _____ (CONTINUE)
0 None (SKIP TO Q.6d)
D Don't Know (SKIP TO Q.6d)
R Refused (SKIP TO Q.6d)

6c. Approximately how much do you spend on this activity in Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

- 1 Respondent answers in years _____
2 Respondent answers in months _____
3 Respondent answers in weeks _____
D Don't Know
R Refused

6d. How many times have you placed a bet at a greyhound racing track outside of Connecticut during the past 12 months?

- _____ (CONTINUE)
0 None (SKIP TO Q.7a)
D Don't Know (SKIP TO Q.7a)
R Refused (SKIP TO Q.7a)

6e. Approximately how much do you spend outside of Connecticut on this activity on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

- 1 Respondent answers in years _____
2 Respondent answers in months _____
3 Respondent answers in weeks _____
D Don't Know
R Refused

7a. Have you ever placed a bet at a jai-alai facility at least once in your life?

- 1 Yes (CONTINUE)
2 No (SKIP TO Q.8a)
D Don't Know (SKIP TO Q.8a)
R Refused (SKIP TO Q.8a)

7b. How many times have you placed a bet at a jai-alai facility during the past 12 months in Connecticut?

- _____ (CONTINUE)
0 None (SKIP TO Q.7d)
D Don't Know (SKIP TO Q.7d)
R Refused (SKIP TO Q.7d)

7c. Approximately how much do you spend on this activity in Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

- 1 Respondent answers in years _____
2 Respondent answers in months _____
3 Respondent answers in weeks _____
D Don't Know
R Refused

7d. How many times have you placed a bet at a jai-alai facility outside of Connecticut during the past 12 months?

- _____ (CONTINUE)
0 None (SKIP TO Q.8a)
D Don't Know (SKIP TO Q.8a)
R Refused (SKIP TO Q.8a)

7e. Approximately how much do you spend outside of Connecticut on this activity on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

- 1 Respondent answers in years _____
2 Respondent answers in months _____
3 Respondent answers in weeks _____
D Don't Know
R Refused

8a. Have you ever placed a bet, either over the phone or in-person, with OTB (Off Track Betting) at least once in your life?

- 1 Yes (CONTINUE)
2 No (SKIP TO Q.9)
D Don't Know (SKIP TO Q.9)
R Refused (SKIP TO Q.9)

8b. How many times have you placed a bet at an OTB facility simulcasting during the past 12 months in Connecticut? (ADD IF NECESSARY: That is, facilities that show horse races on a giant screen?)

- _____ (CONTINUE)
0 None (SKIP TO Q.8e)
D Don't Know (SKIP TO Q.8e)
R Refused (SKIP TO Q.8e)

8c. Approximately how much do you spend on this activity in Connecticut at an OTB facility simulcasting on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

- 1 Respondent answers in years _____
2 Respondent answers in months _____
3 Respondent answers in weeks _____
D Don't Know
R Refused

8d. When you've visited OTB facilities in Connecticut simulcasting over the past 12 months, have you gone to the Windsor Locks Teletheater or Sports Haven?

- 1 Yes
2 No
3 Don't Know
R Refused

8e. How many times have you placed a bet at an OTB branch that does not have simulcasting during the past 12 months in Connecticut?

- _____ (CONTINUE)
0 None (SKIP TO Q.8h)
D Don't Know (SKIP TO Q.8h)
R Refused (SKIP TO Q.8h)

8f. Approximately how much do you spend on this activity in Connecticut at an OTB branch that does not have simulcast on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

- 1 Respondent answers in years _____
2 Respondent answers in months _____
3 Respondent answers in weeks _____
D Don't Know
R Refused

Q.8g - OMITTED

8h. How many times have you placed a bet over the phone through OTB's telephone wagering system during the past 12 months in Connecticut?

- _____ (CONTINUE)
0 None (SKIP TO Q.9)
D Don't Know (SKIP TO Q.9)
R Refused (SKIP TO Q.9)

8i. Approximately how much do you spend on this activity in Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

- 1 Respondent answers in years _____
2 Respondent answers in months _____
3 Respondent answers in weeks _____
D Don't Know
R Refused

IF NO, DON'T KNOW, OR REFUSED FOR ALL ITEMS IN Q.2a, Q.3a, Q.4a, Q.5a, Q.6a, Q.7a, and Q.8a, RESPONDENT IS CLASSIFIED AS A NON-GAMBLER, AND SKIP TO Q.10. ALL OTHERS CONTINUE.

9. Of the gaming activities we've discussed, which is your favorite game? (DO NOT READ LIST. RECORD ONE RESPONSE ONLY.) (INTERVIEWER: IF RESPONDENT SAYS "LOTTERY", PROBE FOR SPECIFIC LOTTERY GAME)

01 Powerball
02 Instant lottery
03 Daily numbers
04 Play Four
05 Lotto
06 Cash lotto
07 Raffles
08 Bingo
09 Sports betting (football, baseball, the Super Bowl, etc.)
10 Poker
11 Blackjack
12 Craps
13 Roulette
14 Keno
15 Slot machines
16 Video Poker/Video Blackjack
17 Off-Track Betting
18 Horse racing/harness racing
19 Greyhound/dog racing
20 Jai-alai
00 Other (SPECIFY) _____
DD Don't Know
RR Refused

10. On a scale of 1-10, where 10 means, "Strongly Approve" and 1 means, "Strongly Disapprove", how much do you approve or disapprove of the different types of lottery games available in Connecticut, which includes powerball, lotto, or instant or scratch tickets? Of course, you can choose any number between 1-10.

10 Strongly Approve
09
08
07
06
05
04
03
02
01 Strongly Disapprove
DD Don't Know
RR Refused

11. Using the same scale of 1-10, how much do you approve or disapprove of other legalized gaming in Connecticut, which includes activities such as the Foxwoods Casino, jai-alai, Greyhound races, and Off-Track Betting? Of course, you can choose any number between 1-10.

10 Strongly Approve

09

08

07

06

05

04

03

02

01 Strongly Disapprove

DD Don't Know

RR Refused

12. Now I would like to ask you about the number of locations in Connecticut where you can legally gamble, which includes casinos, jai-alai, Greyhound races, and Off-Track Betting. Overall, do you think there are too many of these facilities in Connecticut, too few, or just about the right amount?

1 Too many

2 Too few

3 Just the right amount

D Don't Know

R Refused

13. Thinking about the number of locations in Connecticut where you can purchase lottery tickets, including powerball, and lotto, do you think there are too many places to buy lottery tickets, too few, or just about the right amount?

1 Too many

2 Too few

3 Just the right amount

D Don't Know

R Refused

ADVERTISEMENTS

Now I would like to ask you about any advertisements about gaming activities, such as the lottery, including jackpot announcements, greyhound, OTB, jai-alai, and casinos in Connecticut that you may have seen recently.

14a. How influential would you say advertisements are to you in selecting which game you may play or attend? Would you say they were...(READ LIST. RECORD ONE RESPONSE ONLY)

- 4 Very influential
- 3 Somewhat influential
- 2 Not very influential (SKIP TO Q.15a)
- 1 Not at all influential (SKIP TO Q.15a)
- 0 (VOLUNTEERED) Did not attend/play (SKIP TO Q.15a)
- D (DO NOT READ) Don't Know (SKIP TO Q.15a)
- R (DO NOT READ) Refused (SKIP TO Q.15a)

14b. Which games did you play or attend based on the advertising you saw in the past month or so?
(IF LOTTERY MENTIONED, PROBE FOR SPECIFIC LOTTERY)

- 01 Powerball
- 02 The instant lottery
- 03 The daily numbers
- 04 Play Four
- 05 Lotto
- 06 Cash Lotto
- 07 Foxwoods Casino
- 08 Mohegan Sun Resort
- 09 Jai-alai
- 10 Greyhound races
- 11 OTB, or Off-Track Betting
- 97 Other (SPECIFY) _____
- DD Don't know
- RR Refused

15a. Do you believe there is a problem in the way in which any form of legalized gambling is advertised in Connecticut?

- 1 Yes
- 2 No (SKIP TO Q.16)
- D Don't Know (SKIP TO Q.16)
- R Refused (SKIP TO Q.16)

15b. Which forms of legalized gambling do you think are advertised inappropriately?
(IF LOTTERY MENTIONED, PROBE FOR SPECIFIC LOTTERY)

- 01 Powerball
- 02 The instant lottery
- 03 The daily numbers
- 04 Play Four
- 05 Lotto
- 06 Cash Lotto
- 07 Foxwoods Casino
- 08 Mohegan Sun Resort
- 09 Jai-alai
- 10 Greyhound races
- 11 OTB, or Off-Track Betting
- 12 All of them
- 97 Other (SPECIFY) _____
- DD Don't know
- RR Refused

16. Which of the following statements do you agree with the most? (READ LIST.
RECORD ONE RESPONSE ONLY.)

- 1 The age to play the lottery, jai-alai, the greyhound tracks, and OTB should be raised to 21 years old, the same as the casinos
- 2 The age to play at Connecticut casinos should be lowered to 18, the same as the lottery, jai-alai, and OTB
- 3 Things are fine the way they are. Lottery, jai-alai, the greyhound tracks, and OTB should remain at 18, and the Connecticut casinos should remain at 21.
- D (DO NOT READ) Don't Know
- R (DO NOT READ) Refused

17. Have you ever placed bets for people who are under 18, such as brothers, sisters, sons, daughters, cousins, nieces, nephews, or friends on things such as lottery numbers, a pull on a slot machine, or on the Super Bowl or other kinds of sports bets?

- 1 Yes
- 2 No
- D Don't Know
- R Refused

18. How serious of a problem, if at all, do you feel that underage or teen gambling is in Connecticut? Would you say it is...(READ LIST. RECORD ONE RESPONSE ONLY.)

- 4 Very serious
- 3 Somewhat serious
- 2 Not very serious
- 1 Not at all serious
- D (DO NOT READ) Don't Know
- R (DO NOT READ) Refused

(NON-GAMBLERS - SKIP TO Q.46a)

SOG SERIES

19. The next series of questions is part of a standard measurement scale which has been used in North America in surveys similar to this one. There are no right or wrong answers to the questions that follow. We just would like to know what your experiences have been. Please try to be as accurate as possible, and be assured that your answers will only be shown in aggregate with all others participating, and that individual level information remains confidential.

20. When you participate in the gambling activities we have discussed, how often do you go back another day to win back money you lost? Would you say...(READ LIST. RECORD ONE RESPONSE ONLY.)

- 4 Never (SKIP TO Q.22)
- 3 Some of the time
- 2 Most of the time, or
- 1 Every time
- D (DO NOT READ) Don't Know (SKIP TO Q.22)
- R (DO NOT READ) Refused (SKIP TO Q.22)

21. How often have you done this in the past 12 months? Would you say...(READ LIST. RECORD ONE RESPONSE ONLY.)

- 4 Never
- 3 Some of the time
- 2 Most of the time, or
- 1 Every time
- D (DO NOT READ) Don't Know
- R (DO NOT READ) Refused

22. How often, if at all, have you said to family and friends that you are winning money from these activities when in fact you had lost? Would you say...(READ LIST. RECORD ONE RESPONSE ONLY.)

- 4 Never (SKIP TO Q.24)
- 3 Some of the time
- 2 Most of the time, or
- 1 Every time
- D (DO NOT READ) Don't Know (SKIP TO Q.24)
- R (DO NOT READ) Refused (SKIP TO Q.24)

23. How often have you done this in the past 12 months? Would you say...(READ LIST. RECORD ONE RESPONSE ONLY.)

- 4 Never
- 3 Some of the time
- 2 Most of the time, or
- 1 Every time
- D (DO NOT READ) Don't Know
- R (DO NOT READ) Refused

24. Have you ever spent more time or money gambling than you had originally intended?

- 1 Yes
- 2 No (SKIP TO Q.26)
- D Don't Know (SKIP TO Q.26)
- R Refused (SKIP TO Q.26)

25. Has this occurred at least once during the past 12 months?

- 1 Yes
- 2 No
- D Don't Know
- R Refused

26. Have people ever criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?

- 1 Yes
- 2 No (SKIP TO Q.28a)
- D Don't Know (SKIP TO Q.28a)
- R Refused (SKIP TO Q.28a)

27. Have people criticized your gambling during the past 12 months?

- 1 Yes
- 2 No
- D Don't Know
- R Refused

28a. Have you ever felt guilty about the way you gamble, or about what happens when you gamble?

- 1 Yes
- 2 No (SKIP TO Q.29a)
- D Don't Know (SKIP TO Q.29a)
- R Refused (SKIP TO Q.29a)

28b. Have you ever felt this way during the past 12 months?

- 1 Yes
- 2 No
- D Don't Know
- R Refused

29a. Have you ever felt that you would like to stop gambling, but didn't think that you could?

- 1 Yes
- 2 No (SKIP TO Q.30a)
- D Don't Know (SKIP TO Q.30a)
- R Refused (SKIP TO Q.30a)

29b. Have you ever felt this way during the past 12 months?

- 1 Yes
- 2 No
- D Don't Know
- R Refused

30a. Have you ever hidden betting slips, lottery tickets, gambling money, IOU's, or other signs of betting or gambling from your spouse, partner, children, or other important people in your life?

- 1 Yes
- 2 No (SKIP TO Q.31a)
- D Don't Know (SKIP TO Q.31a)
- R Refused (SKIP TO Q.31a)

30b. Have you ever done this at least once during the past 12 months?

- 1 Yes
- 2 No
- D Don't Know
- R Refused

31a. Have you ever argued with the people you live with over how you handle money?

- 1 Yes
- 2 No (SKIP TO Q.32a)
- 0 (VOLUNTEERED) Live by myself (SKIP TO Q.32a)
- D Don't Know (SKIP TO Q.32a)
- R Refused (SKIP TO Q.32a)

31b. Have any of these arguments ever centered on your gambling?

- 1 Yes
- 2 No (SKIP TO Q.32a)
- D Don't Know (SKIP TO Q.32a)
- R Refused (SKIP TO Q.32a)

31c. Have you had any of these arguments over the past 12 months?

- 1 Yes
- 2 No
- D Don't Know
- R Refused

32a. Have you ever lost time from work or school due to betting money or gambling?

- 1 Yes
- 2 No (SKIP TO Q.33a)
- D Don't Know (SKIP TO Q.33a)
- R Refused (SKIP TO Q.33a)

32b. Have you missed time from work or school during the past 12 months due to gambling?

- 1 Yes
- 2 No (SKIP TO Q.33a)
- D Don't Know (SKIP TO Q.33a)
- R Refused (SKIP TO Q.33a)

32c. In the past 12 months, approximately how many hours have you missed from work or school due to gambling on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

- 1 Respondent answers in years _____
- 2 Respondent answers in months _____
- 3 Respondent answers in weeks _____
- D Don't Know
- R Refused

33a. Have you ever borrowed from someone and not paid them back as a result of your gambling?

- 1 Yes
- 2 No (SKIP TO Q.34a)
- D Don't Know (SKIP TO Q.34a)
- R Refused (SKIP TO Q.34a)

33b. Has this occurred at least once during the past 12 months?

- 1 Yes
- 2 No
- D Don't Know
- R Refused

34a. In the next part of the survey, I am going to read you a list of the ways in which some people borrow or get money for gambling. First, have you ever borrowed from household money for gambling or to pay gambling debts?

- 1 Yes
- 2 No (SKIP TO Q.35a)
- D Don't Know (SKIP TO Q.35a)
- R Refused (SKIP TO Q.35a)

34b. Has this occurred at least once during the past 12 months?

- 1 Yes
- 2 No
- D Don't Know
- R Refused

35a. (Have you ever) borrowed money from your spouse or partner (for gambling or to pay gambling debts?)

- 1 Yes
- 2 No (SKIP TO Q.36a)
- 0 (VOLUNTEERED) Single/No spouse or partner (SKIP TO Q.36a)
- D Don't Know (SKIP TO Q.36a)
- R Refused (SKIP TO Q.36a)

35b. Has this occurred at least once during the past 12 months?

- 1 Yes
- 2 No
- D Don't Know
- R Refused

36a. (Have you ever) borrowed money from other relatives or in-laws (for gambling or to pay gambling debts?)

- 1 Yes
- 2 No (SKIP TO Q.37a)
- D Don't Know (SKIP TO Q.37a)
- R Refused (SKIP TO Q.37a)

36b. Has this occurred at least once during the past 12 months?

- 1 Yes
- 2 No
- D Don't Know
- R Refused

37a. (Have you ever) received loans from banks, loan companies, or credit unions (in order to gamble or pay gambling debts?)

- 1 Yes
- 2 No (SKIP TO Q.38a)
- D Don't Know (SKIP TO Q.38a)
- R Refused (SKIP TO Q.38a)

37b. Has this occurred at least once during the past 12 months?

- 1 Yes
- 2 No
- D Don't Know
- R Refused

38a. (Have you ever) made cash withdrawals on credit cards, such as VISA or Mastercard (in order to gamble or to pay gambling debts?) This does not include any cash withdrawals you may have made using an ATM card.

- 1 Yes
- 2 No (SKIP TO Q.39a)
- 0 (VOLUNTEERED) No credit cards (SKIP TO Q.39a)
- D Don't Know (SKIP TO Q.39a)
- R Refused (SKIP TO Q.39a)

38b. Have you made cash withdrawals on credit cards for gambling during the past 12 months?

- 1 Yes
- 2 No
- D Don't Know
- R Refused

39a. (Have you ever) gotten loans from loan sharks (to gamble or to pay gambling debts?)

- 1 Yes
- 2 No (SKIP TO Q.40a)
- D Don't Know (SKIP TO Q.40a)
- R Refused (SKIP TO Q.40a)

39b. Have you received any loans from loan sharks during the past 12 months?

- 1 Yes
- 2 No
- D Don't Know
- R Refused

40a. (Have you ever) cashed in stocks, bonds, or other securities (to gamble or to pay gambling debts?)

- 1 Yes
- 2 No (SKIP TO Q.41a)
- D Don't Know (SKIP TO Q.41a)
- R Refused (SKIP TO Q.41a)

40b. Has this occurred at least once during the past 12 months?

- 1 Yes
- 2 No
- D Don't Know
- R Refused

41a. (Have you ever) sold personal or family property (to gamble or to pay gambling debts?)

- 1 Yes
- 2 No (SKIP TO Q.42a)
- D Don't Know (SKIP TO Q.42a)
- R Refused (SKIP TO Q.42a)

41b. Have you ever done this during the past 12 months?

- 1 Yes
- 2 No
- D Don't Know
- R Refused

42a. (Have you ever) borrowed money from your checking account by writing checks that bounced (in order to get money to gamble or to pay gambling debts?)

- 1 Yes
- 2 No (SKIP TO Q.43)
- D Don't Know (SKIP TO Q.43)
- R Refused (SKIP TO Q.43)

42b. Have you ever done this during the past 12 months?

- 1 Yes
- 2 No
- D Don't Know
- R Refused

43. How much in total have you borrowed for gambling from all sources combined in the past 12 months?

- \$ _____
- 0 None
 - D Don't Know
 - R Refused

44a. Do you feel that you have ever had a problem with betting money or gambling?

- 1 Yes
- 2 No (SKIP TO Q.45)
- D Don't Know (SKIP TO Q.45)
- R Refused (SKIP TO Q.45)

44b. Do you feel you currently have a problem with gambling, or have you had one during the past 12 months?

- 3 Currently have
- 2 Had one in past 12 months
- 1 No gambling problem in past 12 months
- D Don't Know
- R Refused

45. Which, if any, of the following people in your life has, or had a gambling problem?
(READ ENTIRE LIST TOGETHER. MULTIPLE RESPONSES ACCEPTABLE.)

- 1 Father
- 2 Mother
- 3 Brother or sister
- 4 Grandparent
- 5 Another relative
- 6 Child
- 7 Spouse or partner
- 8 A friend or someone else important in your life
- 0 (DO NOT READ) None of these
- D (DO NOT READ) Don't Know
- R (DO NOT READ) Refused

THE INTERNET

46a. Do you have access to a personal computer with access to the internet?

- 1 Yes
- 2 No (SKIP TO Q.48)
- D Don't Know (SKIP TO Q.48)
- R Refused (SKIP TO Q.48)

46b. Have you ever used the internet to chat with other people who gamble, or to find information on gambling activities?

- 1 Used to chat with other people
- 2 Used to obtain information on gambling
- 3 No, have not used the internet for this
- 4 (VOLUNTEERED) Never used the Internet
- 0 (VOLUNTEERED) Never heard of the Internet (SKIP TO Q.48)
- D (DO NOT READ) Don't Know
- R (DO NOT READ) Refused

46c. Do you know if there are sites on the Internet where you can gamble?

- 1 Yes
- 2 No (SKIP TO Q.46e)
- D Don't Know (SKIP TO Q.46e)
- R Refused (SKIP TO Q.46e)

(ASK Q.46d IF CODE 1, 2, OR 3 IN Q.46b. ALL OTHERS, SKIP TO Q.47)

46d. Have you ever placed any bets on the Internet?

- 1 Yes (SKIP TO Q.47)
- 2 No
- D Don't Know
- R Refused

46e. How interested would you be in having the ability to place bets on the Internet?
Would you say you are... (READ LIST. RECORD ONE RESPONSE ONLY).

- 4 Very interested
- 3 Somewhat interested
- 2 Not very interested (SKIP TO Q.48)
- 1 Not at all interested (SKIP TO Q.48)
- D (DO NOT READ) Don't Know (SKIP TO Q.48)
- R (DO NOT READ) Refused (SKIP TO Q.48)

47. What types of games would you like to place bets on using the Internet? (DO NOT
READ LIST. RECORD ALL RESPONSES).

- 1 Sports betting (horse racing, football, etc.)
- 2 Lottery
- 3 Poker games with other people on the Internet
- 4 Video poker
- 5 Video Blackjack
- 0 Other (SPECIFY) _____
- D (DO NOT READ) Don't Know
- R (DO NOT READ) Refused

DEMOGRAPHICS

And finally, just a few questions for classification purposes only. . .

48. Are you: (READ LIST)

- 1 Single, that is never married
- 2 Single, living with a partner
- 3 Married
- 4 Separated
- 5 Widowed, or
- 6 Divorced
- R (DO NOT READ) Refused

49a. Currently, are you yourself employed full-time, part-time, or not at all?

- 1 Full-time (SKIP TO INSTRUCTIONS BEFORE Q.50a)
- 2 Part-time (SKIP TO INSTRUCTIONS BEFORE Q.50a)
- 3 Not employed
- R Refused (SKIP TO INSTRUCTIONS BEFORE Q.50a)

49b. Are you: (READ LIST)

- 1 Retired
- 2 A homemaker
- 3 A student, or
- 4 Temporarily unemployed
- 5 (DO NOT READ) Disabled/handicapped
- 0 (DO NOT READ) Other (SPECIFY) _____
- D (DO NOT READ) Don't Know
- R (DO NOT READ) Refused

(ASK Q.50a-50b IF MARRIED IN Q.48 (CODE 3). ALL OTHERS, SKIP TO Q.51a)

50a. Currently, is your spouse employed full-time, part-time, or not at all?

- 1 Full-time (SKIP TO Q.51a)
- 2 Part-time (SKIP TO Q.51a)
- 3 Not employed
- R Refused (SKIP TO Q.51a)

50b. Is your spouse: (READ LIST)

- 1 Retired
- 2 A homemaker
- 3 A student, or
- 4 Temporarily unemployed
- 5 (DO NOT READ) Disabled/handicapped
- 0 (DO NOT READ) Other (SPECIFY) _____
- D (DO NOT READ) Don't Know
- R (DO NOT READ) Refused

51a. Including yourself, how many people are there living in your household?
(RECORD SINGLE-DIGIT NUMBER)

- 8 Eight or more people
- R Refused

(IF 1 OR IF REFUSED, SKIP TO Q.52)

51b. How many of these are adults, 18 or older?
(RECORD SINGLE-DIGIT NUMBER)

- 8 Eight or more people
- R Refused

(IF 1 OR IF REFUSED, SKIP TO Q.52)

51c. How many of these adults are male?
(RECORD SINGLE-DIGIT NUMBER)

- 8 Eight or more people
- R Refused

51d. How many of these adults are female?
(RECORD SINGLE-DIGIT NUMBER)

- 8 Eight or more people
- R Refused

52a. What is your age?

_____	(SKIP TO Q.53)
DD Don't know	(ASK Q. 52b)
RR Refused	(ASK Q. 52b)

52b. Is it.... (READ LIST)

- 1 18-24
- 2 25-34
- 3 35-44
- 4 45-54
- 5 55-64
- 6 65-74
- 7 75 or older
- R (DO NOT READ) Refused

53. What is the last grade of school you completed?
(DO NOT READ LIST)

- 1 Less than high school graduate
- 2 High school graduate
- 3 Some college
- 4 Graduated college
- 5 Graduate school or more
- 6 Technical school/Other
- R Refused

54. Is your total annual household income from all sources, and before taxes:
(READ LIST)

- 1 Less than \$10,000
- 2 \$10,000 but less than \$15,000
- 3 \$15,000 but less than \$20,000
- 4 \$20,000 but less than \$25,000
- 5 \$25,000 but less than \$30,000
- 6 \$30,000 but less than \$40,000
- 7 \$40,000 but less than \$50,000
- 8 \$50,000 but less than \$75,000, or
- 9 \$75,000 and over
- D (DO NOT READ) Don't Know
- R (DO NOT READ) Refused

55a. Are you of Hispanic origin or background?

- 1 Yes
- 2 No (SKIP TO Q.56)
- D Don't Know (SKIP TO Q.56)
- R Refused (SKIP TO Q.56)

55b. Are you White Hispanic or Black Hispanic?

- 1 White
- 2 Black
- D Don't Know
- R Refused

(SKIP TO Q.57)

56. Would you consider yourself to be White, Black or of some other race?

If "other" say: "I'm not referring to your nationality. I just want to know if you consider yourself white or black."

- 1 White
- 2 Black
- 3 Asian/Oriental/Chinese/Japanese
- 4 Native American/American Indian
- 0 Other (SPECIFY) _____
- R Refused

57. Besides the telephone number I reached you on, how many other telephone numbers, if any, does your household have? Not extensions but different telephone numbers.

(RECORD SINGLE-DIGIT NUMBER)

- _____
- 0 None
 - R Refused

58. Finally, what is the five digit ZIP CODE of where you live?

(RECORD BELOW)

- _____
- D Don't Know
 - R Refused

59. RECORD SEX OF RESPONDENT:

- 1 Male
- 2 Female

I WANT TO THANK YOU VERY MUCH FOR YOUR TIME AND OPINIONS! THEY ARE VERY MUCH APPRECIATED!

Appendix B
Questionnaire Used in the Intercept Survey at Gambling Venues



Media, Pennsylvania 19063

START CARD 1 DUP 1-5 CARD 3/18
SP. 6-80
START CD 2 DUP 1 5
SP. 6-80

Job #4458
December 1, 1996
HARDCUT.DOC

Card 3 Case ID # (1-5)

CONNECTICUT GAMING STUDY

Hello, my name is _____ and I'm from ICR, a national research firm. We are conducting a study regarding leisure activities and hobbies, and would like to include your opinions. For your participation, we would be pleased to offer you (INSERT INCENTIVE)

START CD 18 DUP 1-5

A. First, are you currently a resident of Connecticut?
18/6

- 1 Yes
- 2 No (TERMINATE)
- 9 Refused (TERMINATE)

START CARD 1 DUP 1-5 CARD 3/18 Q.A - NOT A CONNECTICUT RESIDENT

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	18/(7/8)			
48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69				

B. Are you hear today to gamble or place a wager?
18/(9)

- 1 Yes
- 2 No (TERMINATE)
- 9 Refused (TERMINATE)

Q.B - NOT HERE TO GAMBLE/PLACE A WAGER

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	18/(10/11)			
48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69				

IF INTERVIEWING BEING DONE AT JAI-ALAI OR GREYHOUND RACES, ASK Q.C.

IF INTERVIEWING BEING DONE AT CASINO OR OTB, SKIP TO Q.1

C. Which event are you here for today?
18/12

- 1 Jai Alai/Greyhound Race
- 2 OTB (TERMINATE)
- 9 Refused (TERMINATE)

Q.C - PLACING A WAGER FOR OTB, NOT JAI -ALAI OR GREYHOUND RACES

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	18/(13/14)			
48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69				

1. I am going to ask you some questions about different gaming activities, and whether or not you have participated in them.

(NOTE: IF RESPONDENT SAYS HE/SHE NEVER GAMBLES/ DOESN'T BELIEVE IN IT, SAY: We understand that not everyone gambles, but the opinions of those who do not gamble are also very critical for the successful completion of this study.)

2a. Which, if any, of the following lottery games have you played at least once in your life? (READ LIST. MULTIPLE RESPONSES ACCEPTED)

3/25

- 1 Powerball
- 2 The instant lottery
- 3 The daily numbers
- 4 Play Four
- 5 Cash lotto
- 6 Lotto
- 0 (DO NOT READ) None of these (SKIP TO Q.3a)
- 8 (DO NOT READ) Don't Know (SKIP TO Q.3a)
- 9 (DO NOT READ) Refused (SKIP TO Q.3a)

2b. How many times have you played lottery games during the past 12 months in Connecticut?

18/15.3

- _____ (CONTINUE)
 000 None (SKIP TO Q.2d)
 998 Don't Know (SKIP TO Q.2d)
 999 Refused (SKIP TO Q.2d)

2c. Approximately how much do you spend on lottery games in Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

18/18

- 1 Respondent answers in years _____ 18/19.5
 2 Respondent answers in months _____ 18/24.5
 3 Respondent answers in weeks _____ 18/29.5
 4 (VOLUNTEERED) Respondent answers "per drawing" _____ 18/34.5
 8 Don't Know
 9 Refused

2d. How many times have you played lottery games during the past 12 months outside of Connecticut?

18/39.3

- _____ (CONTINUE)
 000 None (SKIP TO Q.3a)
 998 Don't Know (SKIP TO Q.3a)
 999 Refused (SKIP TO Q.3a)

2e. Approximately how much do you spend outside of Connecticut on lottery games on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

18/42

- 1 Respondent answers in years _____ 18/43.5
 2 Respondent answers in months _____ 18/48.5
 3 Respondent answers in weeks _____ 18/53.5
 8 Don't Know
 9 Refused

3a. Have you ever placed a bet at a horse-racing or harness-racing track at least once in your life?

5/61

- 1 Yes (CONTINUE)
 2 No (SKIP TO Q.4b)
 8 Don't Know (SKIP TO Q.4b)
 9 Refused (SKIP TO Q.4b)

3b. How many times have you placed a bet at a horse-racing or harness-racing track during the past 12 months?

5.62.3

- _____ (CONTINUE)
 000 None (SKIP TO Q.4b)
 998 Don't Know (SKIP TO Q.4b)
 999 Refused (SKIP TO Q.4b)

3c. Approximately how much do you spend on this activity on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

5/65

- 1 Respondent answers in years _____ (14/5.5)
 2 Respondent answers in months _____ (14/10.5)
 3 Respondent answers in weeks _____ (14/15.5)
 8 Don't Know
 9 Refused

(Q. 4a deleted)

(ASK Q. 4b-4c FOR EACH ITEM LISTED BELOW)

CARD 5/6/7/14/15/18
IF RESPONDENT HAS NOT PLAYED ITEM IN Q. 4a, SKIP TO NEXT ITEM ON LIST UNTIL ALL ARE READ AND EVALUATED.)

4b. How many times have you (INSERT ITEM) during the past 12 months in Connecticut?
(RECORD ON GRID. MULTIPLE RESPONSES ACCEPTED) (IF ZERO TIMES, SKIP TO NEXT ITEM OR Q. 5a. DO NOT ASK Q. 4c)

4c. Approximately, how much do you spend on this activity in Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY; Your best estimate will do.) (DO NOT ACCEPT RANGES.)

	4b # of Times	4c. \$ Amount Spent				Amount Spent			
		Yearly 1	Monthly 2	Weekly 3	DK 8	Ref 9	Yrs.	Mos.	Wks.
Participated in a raffle in support of a religious or local organization	5/76.3	5/79 1	2	3	8	9	14/20.5	14/25.5	14/30.5
Played bingo for money or prizes at a religious or local organization	6/10.3	6/13 1	2	3	8	9	14/35.5	14/40.5	14/45.5
Participated in a "casino night" at a religious or local organization.	6/24.3	6/27 1	2	3	8	9	14/50.5	14/55.5	14/60.5
Played in an office pool at work for games such as the Super Bowl, the College Basketball tournament, or weekly football	6/38.3	6/41 1	2	3	8	9	14/65.5	14/70.5	14/75.5
Played card games with friends or family for money	6/52.3	6/55 1	2	3	8	9	14/80.5	15/5.5	15/10.5
Bowled, shot pool, played golf, or some other game of skill for money	6/66.3	6/69 1	2	3	8	9	15/15.5	15/20.5	15/25.5
Placed a bet with a sports bookie	6/80.3	7/3 1	2	3	8	9	15/30.5	15/35.5	15/40.5
Played video poker machines not found in casinos	7/14.3	7/17 1	2	3	8	9	15/45.5	15/50.5	15/55.5

(NOTE: IF INTERVIEWING BEING DONE IN CASINO, SKIP TO Q.5b. ALL OTHERS, ASK Q.5a)

5a. Have you ever visited a casino to gamble at least once in your life?

7/27

- 1 Yes (CONTINUE)
- 2 No (SKIP TO Q.6a)
- 8 Don't Know (SKIP TO Q.6a)
- 9 Refused (SKIP TO Q.6a)

5b. How many times have you visited a casino to gamble during the past 12 months in Connecticut, such as Foxwoods or Mohegan Sun Resort?

7/28.3

- _____ (CONTINUE)
- 000 None (SKIP TO Q.5h)
- 998 Don't Know (SKIP TO Q.5h)
- 999 Refused (SKIP TO Q.5h)

5c. Which, if any, of the following games did you play at the casino in Connecticut over the past 12 months? (READ LIST. MULTIPLE RESPONSES ACCEPTED)

7/31

- 1 Slot or Video Machines (ASK Q.5d)
- 2 Table games (ASK Q.5e)
- 3 Bingo (ASK Q.5f)
- 8 (DO NOT READ) Don't know (SKIP TO Q.5g)
- 9 (DO NOT READ) Refused (SKIP TO Q.5g)

(ASK Q.5d IF "SLOT OR VIDEO MACHINES" - CODE 1 - MENTIONED IN Q.5c)

5d. Approximately how much do you spend betting on slot or video machines in Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

7/32

- 1 Respondent answers in years _____ (7/33.9)
- 2 Respondent answers in months _____ (7/42.9)
- 3 Respondent answers in weeks _____ (7/51.9)
- 8 Don't Know
- 9 Refused

(ASK Q.5e IF "TABLE GAMES" - CODE 2 - MENTIONED IN Q.5c)

5e. Approximately how much do you spend betting on table games in Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

7/60

- 1 Respondent answers in years _____ (15/60.5)
- 2 Respondent answers in months _____ (15/65.5)
- 3 Respondent answers in weeks _____ (15/70.5)
- 8 Don't Know
- 9 Refused

(ASK Q.5f IF "BINGO" - CODE 3 - MENTIONED IN Q.5c)

5f. Approximately how much do you spend betting on Bingo in Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

7/70

- 1 Respondent answers in years _____ (15/75.5)
- 2 Respondent answers in months _____ (15/80.5)
- 3 Respondent answers in weeks _____ (16/5.5)
- 8 Don't Know
- 9 Refused

5g. If there were casinos located closer to where you live in Connecticut, would you make more visits to casinos, or would you continue to make the same number of trips as you do now?

7/80

- 1 Make more trips
- 2 Same amount of trips
- 8 Don't Know
- 9 Refused

5h. How many times have you visited a casino to gamble during the past 12 months outside of Connecticut, such as Atlantic City or Las Vegas?

8/1.3

_____	(CONTINUE)
000 None	(SKIP TO Q.6a)
998 Don't Know	(SKIP TO Q.6a)
999 Refused	(SKIP TO Q.6a)

5i. Which, if any, of the following games did you play at casinos outside of Connecticut over the past 12 months? (READ LIST. MULTIPLE RESPONSES ACCEPTED).

8/4

1	Slot or Video Machines	(ASK Q.5j)
2	Table games	(ASK Q.5k)
3	Bingo	(ASK Q.5l)
8	(DO NOT READ) Don't know	(SKIP TO Q.6a)
9	(DO NOT READ) Refused	(SKIP TO Q.6a)

(ASK Q.5j IF "SLOT OR VIDEO MACHINES" - CODE 1 - MENTIONED IN Q.5i)

5j. Approximately how much do you spend betting on slot or video machines outside of Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

1	Respondent answers in years	_____	(16/10.5)
2	Respondent answers in months	_____	(16/15.5)
3	Respondent answers in weeks	_____	(16/20.5)
8	Don't Know		
9	Refused		

(ASK Q.5k IF "TABLE GAMES" - CODE 2 - MENTIONED IN Q.5i)

5k. Approximately how much do you spend betting on table games outside of Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

8/15

1	Respondent answers in years	_____	(16/25.5)
2	Respondent answers in months	_____	(16/30.5)
3	Respondent answers in weeks	_____	(16/35.5)
8	Don't Know		
9	Refused		

(ASK Q.5l IF "BINGO" - CODE 3 - MENTIONED IN Q.5i)

5l. Approximately how much do you spend betting on Bingo outside of Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

8/25

1	Respondent answers in years	_____	(16/40.5)
2	Respondent answers in months	_____	(16/45.5)
3	Respondent answers in weeks	_____	(16/50.5)
8	Don't Know		
9	Refused		

(NOTE: IF INTERVIEWING BEING DONE AT GREYHOUND TRACK, SKIP TO Q.6b. ALL OTHERS, ASK Q.6a)

6a. Have you ever placed a bet at a greyhound racing track at least once in your life?

8/35

- | | | |
|---|------------|----------------|
| 1 | Yes | (CONTINUE) |
| 2 | No | (SKIP TO Q.7a) |
| 8 | Don't Know | (SKIP TO Q.7a) |
| 9 | Refused | (SKIP TO Q.7a) |

6b. How many times have you placed a bet at a greyhound racing track during the past 12 months in Connecticut?

8/36.3

- _____ (CONTINUE)
- | | | |
|-----|------------|----------------|
| 000 | None | (SKIP TO Q.6d) |
| 998 | Don't Know | (SKIP TO Q.6d) |
| 999 | Refused | (SKIP TO Q.6d) |

6c. Approximately how much do you spend on this activity in Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

8/39

- | | | | |
|---|------------------------------|-------|-----------|
| 1 | Respondent answers in years | _____ | (16/55.5) |
| 2 | Respondent answers in months | _____ | (16/60.5) |
| 3 | Respondent answers in weeks | _____ | (16/65.5) |
| 8 | Don't Know | | |
| 9 | Refused | | |

(NOTE: IF INTERVIEWING BEING DONE AT JAI-ALAI FACILITY, SKIP TO Q.7b. ALL OTHERS, ASK Q.7a)

7a. Have you ever placed a bet at a jai-alai facility at least once in your life?

8/62

- | | | |
|---|------------|----------------|
| 1 | Yes | (CONTINUE) |
| 2 | No | (SKIP TO Q.8a) |
| 8 | Don't Know | (SKIP TO Q.8a) |
| 9 | Refused | (SKIP TO Q.8a) |

7b. How many times have you placed a bet at a jai-alai facility during the past 12 months in Connecticut?

8/63.3

- _____ (CONTINUE)
- | | | |
|-----|------------|----------------|
| 000 | None | (SKIP TO Q.7d) |
| 998 | Don't Know | (SKIP TO Q.7d) |
| 999 | Refused | (SKIP TO Q.7d) |

7c. Approximately how much do you spend on this activity in Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

8/66

- | | | | |
|---|------------------------------|-------|-----------|
| 1 | Respondent answers in years | _____ | (17/5.5) |
| 2 | Respondent answers in months | _____ | (17/10.5) |
| 3 | Respondent answers in weeks | _____ | (17/15.5) |
| 8 | Don't Know | | |
| 9 | Refused | | |

(NOTE: IF INTERVIEWING BEING DONE AT AN OTB FACILITY, SKIP TO Q.8b. ALL OTHERS, ASK Q.8a)

8a. Have you ever placed a bet, either over the phone or in person, with OTB (Off Track Betting) at least once in your life?

9/9

- 1 Yes (CONTINUE)
- 2 No (SKIP TO Q.10a)
- 8 Don't Know (SKIP TO Q.10a)
- 9 Refused (SKIP TO Q.10a)

8b. How many times have you placed a bet at an OTB facility simulcasting during the past 12 months in Connecticut? (ADD IF NECESSARY: That is, facilities that show horse races on a giant screen?)

9/10.3

- _____ (CONTINUE)
- 000 None (SKIP TO Q.8e)
 - 998 Don't Know (SKIP TO Q.8e)
 - 999 Refused (SKIP TO Q.8e)

8c. Approximately how much do you spend on this activity in Connecticut at an OTB facility simulcasting on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

9/13

- 1 Respondent answers in years _____ (17/35.5)
- 2 Respondent answers in months _____ (17/40.5)
- 3 Respondent answers in weeks _____ (17/45.5)
- 8 Don't Know
- 9 Refused

8d. When you've visited OTB facilities in Connecticut simulcasting over the past 12 months, have you gone to the Windsor Locks Teletheater or Sports Haven?

9/23

- 1 Yes
- 2 No
- 3 Don't Know
- 9 Refused

8e. How many times have you placed a bet at an OTB branch that does not have simulcasting during the past 12 months in Connecticut?

9/24.3

- _____ (CONTINUE)
- 000 None (SKIP TO Q.8g)
 - 998 Don't Know (SKIP TO Q.8g)
 - 999 Refused (SKIP TO Q.8g)

8f. Approximately how much do you spend on this activity in Connecticut at an OTB branch that does not have simulcast on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

9/27

- 1 Respondent answers in years _____ (17/50.5)
- 2 Respondent answers in months _____ (17/55.5)
- 3 Respondent answers in weeks _____ (17/60.5)
- 8 Don't Know
- 9 Refused

8g. How many times have you placed a bet over the phone through OTB's telephone wagering system during the past 12 months in Connecticut?

9/38.3

_____	(CONTINUE)
000 None	(SKIP TO Q.10a)
998 Don't Know	(SKIP TO Q.10a)
999 Refused	(SKIP TO Q.10a)

8f. Approximately how much do you spend on this activity in Connecticut on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate. (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

9/41

1	Respondent answers in years _____	(9/42.9)
2	Respondent answers in months _____	(9/51.9)
3	Respondent answers in weeks _____	(9/60.9)
8	Don't Know	
9	Refused	

(Q. 9 Deleted)

10a. Have you ever engaged in speculative investments, such as the stock market, futures options, or real estate?

18/58

1	Yes	(CONTINUE)
2	No	(SKIP TO Q.19)
8	Don't Know	(SKIP TO Q.19)
9	Refused	(SKIP TO Q.19)

10b. Have you engaged in this activity during the past 12 months?

18/59

1	Yes
2	No
8	Don't Know
9	Refused

(Q. 11 - 18 Deleted)

19. The next series of questions is part of a standard measurement scale which has been used in North America in surveys similar to this one. There are no right or wrong answers to the questions that follow. We just would like to know what your experiences have been. Please try to be as accurate as possible, and be assured that your answers will only be shown in aggregate with all others participating, and that individual level information remains confidential.

20. When you participate in the gambling activities we have discussed, how often do you go back another day to win back money you lost? Would you say...(RECORD ONE RESPONSE ONLY.)

10/16

- 1 Never (SKIP TO Q.22)
- 2 Some of the time
- 3 Most of the time, or
- 4 Every time
- 8 Don't Know (SKIP TO Q.22)
- 9 Refused (SKIP TO Q.22)

21. How often have you done this in the past 12 months? Would you say...(RECORD ONE RESPONSE ONLY.)

10/17

- 1 Never
- 2 Some of the time
- 3 Most of the time, or
- 4 Every time
- 8 Don't Know
- 9 Refused

22. How often, if at all, have you said to family and friends that you are winning money from these activities when in fact you had lost? Would you say...(RECORD ONE RESPONSE ONLY.)

10/18

- 1 Never (SKIP TO Q.24)
- 2 Some of the time
- 3 Most of the time, or
- 4 Every time
- 8 (DO NOT READ) Don't Know (SKIP TO Q.24)
- 9 (DO NOT READ) Refused (SKIP TO Q.24)

23. How often have you done this in the past 12 months? Would you say...(RECORD ONE RESPONSE ONLY.)

10/19

- 1 Never
- 2 Some of the time
- 3 Most of the time, or
- 4 Every time
- 8 (DO NOT READ) Don't Know
- 9 (DO NOT READ) Refused

24. Have you ever spent more time or money gambling than you had originally intended?

10/20

- 1 Yes
- 2 No (SKIP TO Q.26)
- 8 Don't Know (SKIP TO Q.26)
- 9 Refused (SKIP TO Q.26)

25. Has this occurred at least once during the past 12 months?

10/21

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

26. Have people ever criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true?

10/22

- 1 Yes
- 2 No (SKIP TO Q.28a)
- 8 Don't Know (SKIP TO Q.28a)
- 9 Refused (SKIP TO Q.28a)

27. Have people criticized your gambling during the past 12 months?

10/23

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

28a. Have you ever felt guilty about the way you gamble, or about what happens when you gamble?

10/24

- 1 Yes
- 2 No (SKIP TO Q.29a)
- 8 Don't Know (SKIP TO Q.29a)
- 9 Refused (SKIP TO Q.29a)

28b. Have you ever felt this way during the past 12 months?

10/25

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

29a. Have you ever felt that you would like to stop gambling, but didn't think that you could?

10/26

- 1 Yes
- 2 No (SKIP TO Q.30a)
- 8 Don't Know (SKIP TO Q.30a)
- 9 Refused (SKIP TO Q.30a)

29b. Have you ever felt this way during the past 12 months?

10/27

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

30a. Have you ever hidden betting slips, lottery tickets, gambling money, IOU's, or other signs of betting or gambling from your spouse, partner, children, or other important people in your life?

10/28

- 1 Yes
- 2 No (SKIP TO Q.31a)
- 8 Don't Know (SKIP TO Q.31a)
- 9 Refused (SKIP TO Q.31a)

30b. Have you ever done this at least once during the past 12 months?

10/29

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

31a. Have you ever argued with the people you live with over how you handle money?

10/30

- 1 Yes
- 2 No (SKIP TO Q.32a)
- 0 Live by myself (SKIP TO Q.32a)
- 8 Don't Know (SKIP TO Q.32a)
- 9 Refused (SKIP TO Q.32a)

31b. Have any of these arguments ever centered on your gambling?

10/31

- 1 Yes
- 2 No (SKIP TO Q.32a)
- 8 Don't Know (SKIP TO Q.32a)
- 9 Refused (SKIP TO Q.32a)

31c. Have you had any of these arguments over the past 12 months?

10/32

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

32a. Have you ever lost time from work or school due to betting money or gambling?

10/33

- 1 Yes
- 2 No (SKIP TO Q.33a)
- 8 Don't Know (SKIP TO Q.33a)
- 9 Refused (SKIP TO Q.33a)

32b. Have you missed time from work or school during the past 12 months due to gambling?

10/34

- 1 Yes
- 2 No (SKIP TO Q.33a)
- 8 Don't Know (SKIP TO Q.33a)
- 9 Refused (SKIP TO Q.33a)

32c. In the past 12 months, approximately how many hours have you missed from work or school due to gambling on either a yearly, monthly, or weekly basis? Please use whatever time frame is easiest for you to make your estimate per year. Your best estimate will do.

10/35

- 1 Per Year _____ (10/36.3)
- 2 Per Month _____ (10/39.3)
- 3 Per Week _____ (10/42.3)
- 8 Don't Know
- 9 Refused

33a. Have you ever borrowed from someone and not paid them back as a result of your gambling?

10/45

- 1 Yes
- 2 No (SKIP TO Q.34a)
- 8 Don't Know (SKIP TO Q.34a)
- 9 Refused (SKIP TO Q.34a)

33b. Has this occurred at least once during the past 12 months?

10/46

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

34a. In the next part of the survey, I am going to read you a list of the ways in which some people borrow or get money for gambling. First, have you ever borrowed from household money for gambling or to pay gambling debts?

10/47

- 1 Yes
- 2 No (SKIP TO Q.35a)
- 8 Don't Know (SKIP TO Q.35a)
- 9 Refused (SKIP TO Q.35a)

34b. Has this occurred at least once during the past 12 months?

10/48

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

35a. Have you ever borrowed money from your spouse or partner for gambling or to pay gambling debts?

10/49

- 1 Yes
- 2 No (SKIP TO Q.36a)
- 0 Single/No spouse or partner (SKIP TO Q.36a)
- 8 Don't Know (SKIP TO Q.36a)
- 9 Refused (SKIP TO Q.36a)

35b. Has this occurred at least once during the past 12 months?

10/50

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

36a. Have you ever borrowed money from other relatives or in-laws for gambling or to pay gambling debts?

10/51

- 1 Yes
- 2 No (SKIP TO Q.37a)
- 8 Don't Know (SKIP TO Q.37a)
- 9 Refused (SKIP TO Q.37a)

36b. Has this occurred at least once during the past 12 months?

10/52

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

37a. Have you ever received loans from banks, loan companies, or credit unions in order to gamble or pay gambling debts?

10/53

- 1 Yes
- 2 No (SKIP TO Q.38a)
- 8 Don't Know (SKIP TO Q.38a)
- 9 Refused (SKIP TO Q.38a)

37b. Has this occurred at least once during the past 12 months?

10/54

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

38a. Have you ever made cash withdrawals on credit cards, such as VISA or MasterCard in order to gamble or to pay gambling debts? This does not include any cash withdrawals you may have made using an ATM card.

10/55

- 1 Yes
- 2 No (SKIP TO Q.39a)
- 3 No credit cards (SKIP TO Q.39a)
- 8 Don't Know (SKIP TO Q.39a)
- 9 Refused (SKIP TO Q.39a)

38b. Have you made cash withdrawals on credit cards for gambling during the past 12 months?

10/56

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

39a. Have you ever gotten loans from loan sharks to gamble or to pay gambling debts?

10/57

- 1 Yes
- 2 No (SKIP TO Q.40a)
- 8 Don't Know (SKIP TO Q.40a)
- 9 Refused (SKIP TO Q.40a)

39b. Have you received any loans from loan sharks during the past 12 months?

10/58

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

40a. Have you ever cashed in stocks, bonds, or other securities to gamble or to pay gambling debts?

10/59

- 1 Yes
- 2 No (SKIP TO Q.41a)
- 8 Don't Know (SKIP TO Q.41a)
- 9 Refused (SKIP TO Q.41a)

40b. Has this occurred at least once during the past 12 months?

10/60

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

41a. Have you ever sold personal or family property to gamble or to pay gambling debts?

10/61

- 1 Yes
- 2 No (SKIP TO Q.42a)
- 8 Don't Know (SKIP TO Q.42a)
- 9 Refused (SKIP TO Q.42a)

41b. How much in total have you sold from personal or family property to gamble or pay gambling debts during your life?

20/10.5

\$ _____
 99998 Don't Know
 99999 Refused

41c. Have you ever sold personal or family property to gamble or to pay gambling debts during the past 12 months?

10/62

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

42a. Have you ever borrowed money from your checking account by writing checks that bounced in order to get money to gamble or to pay gambling debts? (10/63)

- 1 Yes
- 2 No (SKIP TO Q.43)
- 8 Don't Know (SKIP TO Q.43)
- 9 Refused (SKIP TO Q.43)

42b. Have you ever done this during the past 12 months?

10/64

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

43a. How much in total have you borrowed for gambling from all sources combined during your life?

20/15.5

- \$ _____
- 00000 None (SKIP TO Q.44a)
 - 99998 Don't Know (SKIP TO Q.44a)
 - 99999 Refused (SKIP TO Q.44a)

43b. How much in total have you borrowed for gambling from all sources combined in the past 12 months?

10/65.6

- \$ _____
- 000000 None
 - 999998 Don't Know
 - 999999 Refused

44a. Have you ever been to a therapist, doctor, group counseling, or Gamblers Anonymous for help with a gambling problem?

18/60

- 1 Yes
- 2 No (SKIP TO Q.45a)
- 8 Don't Know (SKIP TO Q.45a)
- 9 Refused (SKIP TO Q.45a)

44b. Have you been to a therapist, doctor, group counseling, or Gamblers Anonymous for help with a gambling problem during the past 12 months?

18/61

- 1 Yes
- 2 No (SKIP TO Q.45a)
- 8 Don't Know (SKIP TO Q.45a)
- 9 Refused (SKIP TO Q.45a)

44c. How did you pay for your treatment? Was it...(RECORD ONE RESPONSE ONLY.)

18/62

- 1 Covered entirely by insurance
- 2 A combination of insurance and out-of-pocket expenses
- 3 Paid entirely by out-of-pocket expenses, or
- 4 You have still not paid for it

18/66 7 Other (SPECIFY) _____

- 8 Don't Know
- 9 Refused

44d. In total, approximately how much did your treatment, both outpatient, and in-patient, cost? (Your best estimate will do.)

20/20.4

- \$ _____
- 9998 Don't Know
 - 9999 Refused

44e. Was this treatment received in the state of Connecticut?

18/67

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

45a. Have you ever been arrested for a gambling related offense, that is, an offense that was related to your gambling?

18/68

- 1 Yes
- 2 No (SKIP TO Q.46a)
- 8 Don't Know (SKIP TO Q.46a)
- 9 Refused (SKIP TO Q.46a)

45b. Have you been arrested for a gambling related offense during the past 12 months?

18/69

- 1 Yes
- 2 No (SKIP TO Q.46a)
- 8 Don't Know (SKIP TO Q.46a)
- 9 Refused (SKIP TO Q.46a)

45c. For what offense were you arrested?

18/70.5

46a. Do you feel that you have ever had a problem with betting money or gambling?

10/71

- 1 Yes
- 2 No (SKIP TO Q.47)
- 8 Don't Know (SKIP TO Q.47)
- 9 Refused (SKIP TO Q.47)

46b. Do you feel you currently have a problem with gambling, or have you had one during the past 12 months?

10/72

- 3 Currently have
- 2 Had one in past 12 months
- 1 No gambling problem in past 12 months
- 8 Don't Know
- 9 Refused

47. Which, if any, of the following people in your life has, or had a gambling problem? (CIRCLE EACH RESPONSE.)

10/73

- 1 Father
- 2 Mother
- 3 Brother or sister
- 4 Grandparent
- 5 Another relative
- 6 Child
- 7 Spouse or partner
- 8 A friend or someone else important in your life

10/74 0 None of these

- 8 Don't know
- 9 Refused

48. Have you ever attempted suicide?

18/75

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

DEMOGRAPHICS

CARD 11/18

And finally, just a few questions for classification purposes only...

49. Approximately how many miles away do you live from this gaming site? (ADD IF NECESSARY: Your best estimate will do.) (DO NOT ACCEPT RANGES.)

20/24.4

_____ Miles

- 9998 Don't Know
- 9999 Refused

50. Which, if any, of the following benefits have you ever received? (READ LIST. MULTIPLE RESPONSES ACCEPTED.)

18/76

- 1 Social Security
- 2 Unemployment benefits
- 3 Food stamps
- 4 Aid to Families with Dependent Children, or Welfare
- 8 (DO NOT READ) Don't Know
- 9 (DO NOT READ) Refused

51. Are you: (READ LIST)

11/5

- 1 Single, that is never married
- 2 Single, living with a partner
- 3 Married
- 4 Separated
- 5 Widowed, or
- 6 Divorced
- 7 (DO NOT READ) Refused

52. Currently, are you yourself employed full-time, part-time, or not at all?

11/6

- 1 Full-time (SKIP TO INSTRUCTIONS BEFORE Q.54)
- 2 Part-time (SKIP TO INSTRUCTIONS BEFORE Q.54)
- 3 Not employed
- 9 Refused (SKIP TO INSTRUCTIONS BEFORE Q.54)

53. Are you: (READ LIST)

11/7

- 1 Retired
- 2 A homemaker
- 3 A student, or
- 4 Temporarily unemployed
- 5 (DO NOT READ) Disabled/handicapped
- 6 (DO NOT READ) Other (SPECIFY) _____
- 7 (DO NOT READ) Don't Know
- 8 (DO NOT READ) Refused

(ASK Q.54-55 IF MARRIED IN Q.51 (CODE 3). ALL OTHERS, SKIP TO Q.56)

54. Currently, is your spouse employed full-time, part-time, or not at all?

11/8

- 1 Full-time (SKIP TO Q.56)
- 2 Part-time (SKIP TO Q.56)
- 3 Not employed
- 9 Refused (SKIP TO Q.56)

55. Is your spouse: (READ LIST)

11/9

- 1 Retired
- 2 A homemaker
- 3 A student, or
- 4 Temporarily unemployed
- 5 (DO NOT READ) Disabled/handicapped
- 6 (DO NOT READ) Other (SPECIFY) _____
- 7 (DO NOT READ) Don't Know
- 8 (DO NOT READ) Refused

56. Including yourself, how many people are there living in your household?
(RECORD SINGLE-DIGIT NUMBER)

11/10.2

- | | | |
|----|----------------------|------------------|
| 01 | One | (SKIP TO Q. 58a) |
| 08 | Eight or more people | |
| 09 | Refused | (SKIP TO Q. 58a) |

57a. How many of these are adults, 18 or older?
(RECORD SINGLE-DIGIT NUMBER)

11/12.2

- | | | |
|----|----------------------|------------------|
| 01 | One | (SKIP TO Q. 58a) |
| 08 | Eight or more people | |
| 09 | Refused | (SKIP TO Q. 58a) |

57b. How many of these adults are male?
(RECORD SINGLE-DIGIT NUMBER)

11/14.2

- | | |
|----|----------------------|
| 08 | Eight or more people |
| 09 | Refused |

57c. How many of these adults are female?
(RECORD SINGLE-DIGIT NUMBER)

11/16.2

- | | |
|----|----------------------|
| 08 | Eight or more people |
| 09 | Refused |

58a. What is your age?

11/18.3

- | | | |
|-----|------------|----------------|
| | | (SKIP TO Q.59) |
| 998 | Don't know | (ASK Q. 58b) |
| 999 | Refused | (ASK Q. 58b) |

58b. Is it... (READ LIST)

11/21

- | | |
|---|-----------------------|
| 1 | 18-24 |
| 2 | 25-34 |
| 3 | 35-44 |
| 4 | 45-54 |
| 5 | 55-64 |
| 6 | 65-74 |
| 7 | 75 or older |
| 8 | (DO NOT READ) Refused |

59. What is the last grade of school you completed?
(DO NOT READ LIST)

11/22

- | | |
|---|--------------------------------|
| 1 | Less than high school graduate |
| 2 | High school graduate |
| 3 | Some college |
| 4 | Graduated college |
| 5 | Graduate school or more |
| 6 | Technical school/Other |
| 9 | Refused |

60. Is your total annual household income from all sources, and before taxes: (READ LIST)

11/23

- 1 Less than \$10,000
- 2 \$10,000 but less than \$15,000
- 3 \$15,000 but less than \$20,000
- 4 \$20,000 but less than \$25,000
- 5 \$25,000 but less than \$30,000
- 6 \$30,000 but less than \$40,000
- 7 \$40,000 but less than \$50,000
- 8 \$50,000 but less than \$75,000, or
- 9 \$75,000 and over
- 0 (DO NOT READ) Don't Know
- X (DO NOT READ) Refused

61a. Are you of Hispanic origin or background?

11/24

- 1 Yes
- 2 No (SKIP TO Q. 62)
- 8 Don't Know (SKIP TO Q. 62)
- 9 Refused (SKIP TO Q. 62)

61b. Are you White Hispanic or Black Hispanic?

11/25

- 1 White (SKIP TO Q. 63)
- 2 Black (SKIP TO Q. 63)
- 8 Don't Know (SKIP TO Q. 63)
- 9 Refused (SKIP TO Q. 63)

62. Would you consider yourself to be White, Black or of some other race?

If "other" say: "I'm not referring to your nationality. I just want to know if you consider yourself white or black."

11/26

- 1 White
- 2 Black
- 3 Asian/Oriental/Chinese/Japanese
- 4 Native American/American Indian
- 0 Other (SPECIFY) _____
- 9 Refused

63. Finally, what is the five digit ZIP CODE of where you live? (RECORD BELOW)

11/29.5

99998 Don't Know
99999 Refused

64. RECORD SEX OF RESPONDENT:

11/34

- 1 Male
- 2 Female

I WANT TO THANK YOU VERY MUCH FOR YOUR TIME AND OPINIONS! THEY ARE VERY MUCH APPRECIATED!
START CD 20 DUP 1-5

65. RECORD INTERVIEWING SITE:
20/6 (20/7)

- Casino
1 Foxwoods
2 Mohegan

3 Greyhound Track

4 Jai-Alai

- OTB
5 Bridgeport
6 Meriden
7 Norwalk
8 Waterbury
9 West Haven

66. RECORD DAY: (20/8)
1 Weekday
2 Weekend

20/9

67. RECORD TIME: 1 Before 6PM
2 After 6PM

INTERVIEWER: MAKE SURE SELF-ADMINISTERED PORTION HAS BEEN COMPLETED, RETURNED, AND STAPLED TO THIS SURVEY AFTER Q.18.

Appendix C
Questionnaire Used in the Pathological Gamblers Survey

Survey of Social Costs

You, as one of about 100 compulsive gamblers, are being asked to help the State of Connecticut learn more about compulsive gambling. Every five years the state commissions a study to assess the impact of legalized gambling on the citizens of Connecticut. This year, part of the study will determine the social costs of compulsive gambling. This will be accomplished by looking at employment, debt, legal, and treatment experiences of compulsive gamblers. The questionnaire which follows asks questions about each of these things. Information from your survey will be compiled along with the other 100 or so surveys. No individual survey will be separated out and reported.

The results which will be included in a larger report may have significant impact on the state's gambling policies. Also, they may be used to support requests for funding public awareness, prevention, and treatment services.

As you know, compulsive gambling remains a largely ignored problem. Your help is needed to bring it the attention it desperately deserves.

If you decide to complete the questionnaire, please answer all questions as truthfully as possible. All responses are confidential. Your name or other identifying information will not appear on the questionnaire or elsewhere. You will remain anonymous.

Thank you in advance for helping.

Christopher Armentano, Director
Compulsive Gambling Treatment Program

1. Please indicate which of the following types of gambling gave you a problem in your lifetime. For each type, mark one answer: 0 = "not at all", 1 = "some problem but not serious", or 2 = "definite problem".

a. Indian Casinos:

<u>Not at all</u>	<u>Some Problem but not serious</u>	<u>Definite Problem</u>	
0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	Table Games
0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	Video Slots
0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	Video Poker

b. Other Casinos:

0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	Table Games
0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	Video Slots
0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	Video Poker

	<u>Not at all</u>	<u>Some Problem but not serious</u>	<u>Definite Problem</u>	
c. Race Tracks:	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
d. OTB:	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
e. Betting with a bookie:				
	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
f. State Lottery:				
	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	Daily Numbers
	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	Lotto
	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	Instant Tickets
g. Bingo:	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
h. Played the stock, options and/or commodities market:				
	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
i. Slot Machines Outside Casino:				
	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
j. Poker Machines Outside Casino:				
	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
k. Video Keno Outside Casino:				
	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
l. Jai-Alai:	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
m. Bowled, shot pool, played golf or some other game of skill for money:				
	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	
n. Some form of gambling not listed above (please specify): _____				
	0 <input type="checkbox"/>	1 <input type="checkbox"/>	2 <input type="checkbox"/>	

2 & 3. Please indicate which form of gambling you preferred. Indicate a second choice only if you engaged in this frequently.

2. First choice (please write in _____)

3. Second choice (please write in _____)

4. What percent of your gambling losses were caused by gambling at:

Casinos	-----	Racetracks	-----	Lotto	-----
Bingo	-----	Sports betting	-----	Instant tickets	-----
Jai Alai	-----	Stock Options	-----	Daily numbers	-----
	/	Futures	-----	OTB	-----
		Games of Skill	-----	Video Keno	-----
				Video Poker	-----
				Slot Machines	-----
				Other	-----

5. At about what age did you start gambling?

___ years old ___ do not remember

6. At what age did you first gamble or bet on a weekly basis or more often?

___ years old ___ do not remember

7. At what age did you first experience problems with gambling? ___ years old

8. If you borrowed money to gamble or to pay gambling debts, who or where did you borrow from? (check "yes" or "no" for each)

- a. from household money _____ No Yes
- b. from your spouse _____ No Yes
- c. from other relatives or in-laws _____ No Yes
- d. from friends and acquaintances _____ No Yes
- e. from banks, loan companies or credit unions _____ No Yes
- f. from credit cards _____ No Yes
- g. from loan sharks _____ No Yes
- h. you cashed in stocks, bonds or other securities _____ No Yes
- i. you sold personal or family property _____ No Yes
- j. you borrowed on your checking account _____ No Yes
(passed bad checks)
- k. you have (had) a credit line with a bookie _____ No Yes
- l. you have (had) a credit line with a casino _____ No Yes

9. How old were you when you first borrowed money to gamble? ____years old.

10. How much money would you estimate you owed as a result of your gambling (include borrowing for cars and other legitimate purposes if money ordinarily used for these things was spent on gambling) when you came into G.A. (what showed up on your pressure relief form or your best estimate)?

- | | |
|---|---|
| 0. <input type="checkbox"/> Nothing | 5. <input type="checkbox"/> \$25,000 - 49,999 |
| 1. <input type="checkbox"/> Under \$1,000 | 6. <input type="checkbox"/> \$50,000 - 99,999 |
| 2. <input type="checkbox"/> \$1,000 - 4,999 | 7. <input type="checkbox"/> \$100,000 - 249,000 |
| 3. <input type="checkbox"/> \$5,000 - 9,999 | 8. <input type="checkbox"/> \$250,000 or more |
| 4. <input type="checkbox"/> \$10,000 - 24,999 | |

10.a. Please put a more accurate amount here: _____

10.b. How much was owed in the last twelve months of your gambling because of gambling? _____

11. Counting all the money you borrowed to gamble or pay gambling debts, how much would you estimate you have borrowed in your lifetime? This would include money you borrowed and paid back (do not include borrowing for cars, etc.)

- | | |
|---|---|
| 0 <input type="checkbox"/> nothing | 06 <input type="checkbox"/> \$50,000-99,999 |
| 01 <input type="checkbox"/> under \$1,000 | 07 <input type="checkbox"/> \$100,000-249,999 |
| 02 <input type="checkbox"/> \$1,000-4,999 | 08 <input type="checkbox"/> \$250,000-499,999 |
| 03 <input type="checkbox"/> \$5,000-9,999 | 09 <input type="checkbox"/> \$500,000-999,999 |
| 04 <input type="checkbox"/> \$10,000-24,999 | 10 <input type="checkbox"/> \$1,000,000 or more |
| 05 <input type="checkbox"/> \$25,000-49,999 | |

11.a. Please put a more accurate amount here: _____

11.b. How much was borrowed in the last twelve months of your gambling because of gambling? _____

12. If you cashed in stocks, bonds or other securities, or sold personal or family property to support gambling activity, what was the estimated value of these items?

- | | |
|---|---|
| 00 <input type="checkbox"/> nothing | 06 <input type="checkbox"/> \$50,000-99,999 |
| 01 <input type="checkbox"/> under \$1,000 | 07 <input type="checkbox"/> \$100,000-249,999 |
| 02 <input type="checkbox"/> \$1,000-4,999 | 08 <input type="checkbox"/> \$250,000-499,999 |
| 03 <input type="checkbox"/> \$5,000-9,999 | 09 <input type="checkbox"/> \$500,000-999,999 |
| 04 <input type="checkbox"/> \$10,000-24,999 | 10 <input type="checkbox"/> \$1,000,000 or more |
| 05 <input type="checkbox"/> \$25,000-49,999 | |

12.a. Please put a more accurate amount here: _____

12.b. How much in the last twelve months of gambling? _____

13. If you stole money or things and used it to gamble or pay gambling-related debts, what was the approximate value of what you stole?

- | | |
|--|--|
| 0 <input type="checkbox"/> nothing | 5 <input type="checkbox"/> \$25,000-49,999 |
| 1 <input type="checkbox"/> under \$1,000 | 6 <input type="checkbox"/> \$50,000-99,999 |
| 2 <input type="checkbox"/> \$1,000-4,999 | 7 <input type="checkbox"/> \$100,000-249,999 |
| 3 <input type="checkbox"/> \$5,000-9,999 | 8 <input type="checkbox"/> \$250,000 or more |
| 4 <input type="checkbox"/> \$10,000-24,999 | |

13.a. Please put a more accurate amount here: _____

13.b. In the last twelve months of your gambling? _____

14. If you could put a dollar amount, how much would you estimate you lost (losses minus winnings) in the last year you gambled (including money from all sources)?

- | | |
|--|--|
| 0 <input type="checkbox"/> nothing | 5 <input type="checkbox"/> \$25,000-49,999 |
| 1 <input type="checkbox"/> under \$1,000 | 6 <input type="checkbox"/> \$50,000-99,999 |
| 2 <input type="checkbox"/> \$1,000-4,999 | 7 <input type="checkbox"/> \$100,000-249,999 |
| 3 <input type="checkbox"/> \$5,000-9,999 | 8 <input type="checkbox"/> \$250,000 or more |
| 4 <input type="checkbox"/> \$10,000-24,999 | |

14.a. Please put a more accurate amount here: _____

15. How much money do you estimate you lost in your lifetime as a result of gambling (losses minus winnings)? This would include money you earned, borrowed, stole, etc.

- | | |
|---|--|
| 00 <input type="checkbox"/> nothing | 06 <input type="checkbox"/> \$50,000-99,999 |
| 01 <input type="checkbox"/> under \$1,000 | 07 <input type="checkbox"/> \$100,000-249,999 |
| 02 <input type="checkbox"/> \$1,000-4,999 | 08 <input type="checkbox"/> \$250,000-499,999 |
| 03 <input type="checkbox"/> \$5,000-9,999 | 09 <input type="checkbox"/> \$500,000-999,999 |
| 04 <input type="checkbox"/> \$10,000-24,999 | 10. <input type="checkbox"/> \$1,000,000-9,999,999 |
| 05 <input type="checkbox"/> \$25,000-49,999 | 11. <input type="checkbox"/> \$10,000,000 or more |

15.a. Please put a more accurate number here: _____

16. Your age is (please write it on the line): _____

17. Your sex is: 0 Male 1 Female

18. What is your religion?

- 1 Catholic
2 Protestant (specify denomination: _____)
3 Eastern Orthodox
4 Jewish
5 Other (please specify: _____)

19. What is your race and/or ethnicity?

1. Black (Afro-American)
2. White
(specify ethnicity, for example Irish-American, on this line _____)
3. Asian-American
(specify on this line _____)
4. Hispanic-American
5. Native American/American Indian
6. Other (specify on this line _____)

20. What is your marital status?

- | | |
|---------------------------------------|---|
| 1. <input type="checkbox"/> Single | 4. <input type="checkbox"/> Divorced |
| 2. <input type="checkbox"/> Married | 5. <input type="checkbox"/> Widowed |
| 3. <input type="checkbox"/> Separated | 6. <input type="checkbox"/> Cohabiting (living with someone, but not legally married) |

21. If you were ever separated or divorced, was gambling a factor?

0. Never separated or divorced
1. Separated or divorced, but gambling not a factor
2. Yes, separated due to gambling
3. Yes, divorced due to gambling

22. How many children do you have? _____

23. What is your occupation? As nearly as possible, write the type of job you do and describe what you do, not the name of the company you work for.

- | | <u>1 (Yes)</u> | <u>0 (No)</u> |
|--|-----------------------------|-----------------------------|
| 24. Have you ever lost or quit a job due to gambling?
If yes, how long did you stay unemployed _____ | 1. <input type="checkbox"/> | 0. <input type="checkbox"/> |
| 25. Have you ever missed time from work due to gambling?
If yes, on average, how many hours a month? _____ | 1. <input type="checkbox"/> | 0. <input type="checkbox"/> |
| 26. Have you ever stolen anything from work in order to gamble or to pay gambling debts? | 1. <input type="checkbox"/> | 0. <input type="checkbox"/> |
| 26.a. Have you ever received food stamps?
Did you receive food stamps because of low income caused by gambling? | 1. <input type="checkbox"/> | 0. <input type="checkbox"/> |

- | | <u>1 (Yes)</u> | <u>0 (No)</u> |
|---|---|-----------------------------|
| 27. Did you ever gamble with food-stamp money? | 1. <input type="checkbox"/> | 0. <input type="checkbox"/> |
| 28. Have you ever received Aid to Families with
Dependent Children (State Welfare)? | 1. <input type="checkbox"/> | 0. <input type="checkbox"/> |
| Have you ever received local Welfare? | 1. <input type="checkbox"/> | 0. <input type="checkbox"/> |
| Was this because of low income due to gambling? | 1. <input type="checkbox"/> | 0. <input type="checkbox"/> |
| 29. Did you ever gamble with Welfare money? | 1. <input type="checkbox"/> | 0. <input type="checkbox"/> |
| 30. Have you ever received Social Security? | 1. <input type="checkbox"/> | 0. <input type="checkbox"/> |
| 31. Did you ever gamble with Social Security money? | 1. <input type="checkbox"/> | 0. <input type="checkbox"/> |
| 32. Have you ever received unemployment benefits?
Was this the result of lost employment
due to gambling? | 1. <input type="checkbox"/> | 0. <input type="checkbox"/> |
| 33. Did you ever gamble with unemployment money? | 1. <input type="checkbox"/> | 0. <input type="checkbox"/> |
| 34. How many years of education do you have? | | |
| 1. <input type="checkbox"/> 8th grade or under | 4. <input type="checkbox"/> some college | |
| 2. <input type="checkbox"/> 9 to 11 grades | 5. <input type="checkbox"/> college graduate, 4 years | |
| 3. <input type="checkbox"/> high school grad or GED | 6. <input type="checkbox"/> post-graduate degree | |
| 35. What is the approximate (current) income of your family (all income earners you
live with combined)? | | |
| 1. <input type="checkbox"/> less than \$15,000 | 4. <input type="checkbox"/> \$50,000-74,999 | |
| 2. <input type="checkbox"/> \$15,000-24,999 | 5. <input type="checkbox"/> \$75,000-99,999 | |
| 3. <input type="checkbox"/> \$25,000-49,999 | 6. <input type="checkbox"/> \$100,000 or more | |

The following questions relate to your experiences with the legal system. Gambling-related offenses involve any law breaking in order to support gambling activity.

- | | never
0 <input type="checkbox"/> | once
1 <input type="checkbox"/> | twice
2 <input type="checkbox"/> | 3 or more
3 <input type="checkbox"/> |
|--|-------------------------------------|------------------------------------|-------------------------------------|---|
| 36. From age 15 to the present, how
many times have you been arrested
by the police? | 0 <input type="checkbox"/> | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> | 3 <input type="checkbox"/> |
| 37. How many of these arrests were
related to your gambling? | 0 <input type="checkbox"/> | 1 <input type="checkbox"/> | 2 <input type="checkbox"/> | 3 <input type="checkbox"/> |

38. Has anyone in your family, including yourself, used the following services as a result of your gambling.

- | | |
|--|--|
| 1. <input type="checkbox"/> Homeless shelter | 5. <input type="checkbox"/> Emergency medical services |
| 2. <input type="checkbox"/> Battered person's shelter | 6. <input type="checkbox"/> Police services |
| 3. <input type="checkbox"/> State Mental Health
or Addiction Services | 7. <input type="checkbox"/> Credit counseling services |
| 4. <input type="checkbox"/> Vocational Rehabilitation
Services | 8. <input type="checkbox"/> Emergency psychiatric services |

never once twice 3 or more
0 1 2 3

39. How many times have you been sued to collect gambling-related debts? 0 1 2 3

40. How many times have you been tried in court on gambling-related offenses? 0 1 2 3

41. How many times have you been convicted of gambling-related offenses? 0 1 2 3

1. (yes) 0. (no)

42. Have you ever filed bankruptcy? 1. 0.

43. Have you ever been placed on probation? 1. 0.

43.a. If placed on probation, was this for a gambling-related offense? 1. 0.

What was the offense? _____

44. Have you ever been incarcerated? 1. 0.

44.a. If incarcerated, was this for a gambling-related offense? 1. 0.

What was the offense? _____

44.b. How many months did you serve in jail or prison for a gambling-related offense? _____ months

45. Do you believe that you are (or were)...?

- a. alcoholic (or have a drinking problem) 1. yes 0. No
- b. drug addict (or have a drug problem) 1. yes 0. No
- c. compulsive gambler (or have a gambling problem) 1. yes 0. No
- d. a compulsive overeater 1. yes 0. No
- e. anorexic or bulimic 1. yes 0. No
- f. a compulsive shopper or spender 1. yes 0. No
- g. have another problem 1. yes 0. No

If yes, what is the problem? _____

46. Have you ever felt so low you wanted to die? 1. yes 0. No

47. Have you ever felt so low you thought of committing suicide? 1. yes 0. No

48. Have you ever felt so low you planned how you would commit suicide? 1. yes 0. No

49. Have you ever attempted suicide? 1. yes 0. No

50. How long have you been in 12-step group for gambling? _____ years _____ months _____ days

51. How long has it been since you made your last bet? _____ years _____ months _____ days

52. How many slips have you had since joining the 12-step group? _____ slips

53. Have you ever been to a therapist or doctor for help with a gambling problem? 1. yes 0. No

53.a. If yes, how old were you when you first went to a therapist or doctor for a gambling problem? _____ years old

53.b. How much did the therapist or doctor know about compulsive gambling?

- 0 nothing
- 1 something
- 2 the therapist or doctor was quite knowledgeable

53.c. Were you ever hospitalized for a gambling problem? 1. yes 0. No

53.d. How much did your (outpatient and inpatient) therapy cost? _____

53.e. How did you pay for this?

- 1 out of pocket for all
- 2 insurance
- 3 combination of out of pocket and insurance
- 4 it is still not paid for

54. Have you ever been to a therapist or doctor for help with alcohol or drugs? 1. yes 0. No
55. Have you ever been to a therapist or doctor for help with other problems? 1. yes 0. No
- 55.a. If yes, what was the problem you went to the therapist or doctor for?

- 55.b. If yes, did the therapist or doctor talk to you about gambling? 1. yes 0. No
- 55.c. How much did the therapist or doctor know about compulsive gambling?
0 nothing
1 something
2 the therapist or doctor was quite knowledgeable
- 55.d. How old were you when you first went to a therapist or doctor for other problems?
_____ years old
56. Do you feel you have other (alcohol, drug or mental health-related) problems you are currently having trouble with? 1. yes 0. No
57. Do you have insurance that would cover professional (counseling or psychological) help? 1. yes 0. No
58. If there were therapists or doctors who understood compulsive gambling and it was made affordable, would you go to hem for help? 1. yes 0. No
59. If you feel you need a therapist or doctor, about how much money a week would you be able to afford to pay?

60. I don't need treatment.

IF YOU HAVE ANY COMMENTS ON THIS SURVEY, PLEASE INDICATE THEM HERE

SOUTH OAKS GAMBLING SCREEN

1 When you gamble, how often do you go back another day to win back the money you lost?

- never
- some of the time (less than half the time) I lost
- most of the time I lost
- every time I lost

2 If you borrowed money to gamble or to pay gambling debts, who or where did you borrow from? (check "yes" or "no" for each).

- a. from household money yes No
- b. from your spouse yes No
- c. from other relatives or in-laws yes No
- d. from banks, loan companies, or credit unions yes No
- e. from credit cards yes No
- f. from loan sharks (shylocks) yes No
- g. you cashed in stocks, bonds, or other securities yes No
- h. you sold personal or family property yes No
- i. you borrowed on your checking account (passed bad checks) yes No
- j. you have (had) a credit line with a bookie yes No
- k. you have (had) a credit line with a casino yes No
- l. friends and acquaintances yes No

3 When you participate in the gambling activities we have discussed, how often do you go back another day to win back money you lost? Is it:

- 1. Never
- 2. Some of the time
- 3. Most of the time
- 4. Every time

4 How often have you done this in the past year?

- 1. Never
- 2. Some of the time
- 3. Most of the time
- 4. Every time

5 Have you ever claimed to be winning money from these activities when in fact you have lost?

- 1. Never
- 2. Some of the time
- 3. Most of the time
- 4. Every time

6. How often have you done this in the past year?

1. Never
2. Some of the time
3. Most of the time
4. Every time

7. Do you spend more time or money gambling than you intended? Yes___ No___

8. Have you done this in the past year? Yes___ No___

9. Have people ever criticized your gambling? Yes___ No___

10. Have people criticized your gambling in the past year? Yes___ No___

11. Have you ever felt guilty about the way you gamble, or about what happens when you gamble? Yes___ No___

12. Have you felt this way in the past year? Yes___ No___

13. Have you ever felt that you would like to stop gambling, but didn't think that you could? Yes___ No___

14. Have you felt this way in the past year? Yes___ No___

15. Have you ever hidden betting slips, lottery tickets, gambling money, or other signs of gambling from your spouse or partner, children, or other important people in your life? Yes___ No___

16. Have you done so in the past year? Yes___ No___

17. Have you ever argued with people you live with over how you handle money? Yes___ No___

18. Have these arguments ever centered on your gambling? Yes___ No___

19. Have you had any of these arguments in the past year? Yes___ No___

20. Have you ever missed time from work or school due to gambling? Yes___ No___

21. Have you missed time from work or school in the past year due to gambling? Yes___ No___

22. Have you ever borrowed money from someone and not paid them back as a result of your gambling? Yes___ No___

23. Have you done so in the past year? Yes___ No___

Appendix D
The Gamblers Anonymous 12 Steps of Recovery

The Gamblers Anonymous 12 Steps of Recovery

Step One

We admit we are powerless over our dependencies and that our lives have become unmanageable.

Step Two

We come to believe that God (or a higher power) can restore us to sanity.

Step Three

We make a decision to turn our will and our lives over to the care of God.

Step Four

We make a searching and fearless moral inventory of ourselves.

Step Five

We admit to God, to ourselves, and to another human being the exact nature of our wrongs.

Step Six

We are entirely ready to have God remove all these defects of character.

Step Seven

We humbly ask God to remove our shortcomings.

Step Eight

We make a list of all persons we have harmed and become willing to make amends to them all.

Step Nine

We make direct amends to such people whenever possible, except when to do so would injure them or others.

Step Ten

We continue to take personal inventory and when we are wrong promptly admit it.

Step Eleven

We seek through prayer and meditation to improve our conscious contact with God, praying only for knowledge of his will for us and the power to carry that out.

Step Twelve

Having a spiritual awakening as a result of these steps, we try to carry this message to others and to practice these principles in all our affairs.

Appendix E
Diagnostic Criteria for Pathological Gambling from the
American Psychological Association Diagnostic and
Statistical Manual, Fourth Edition (DSM-IV)

Diagnostic Criteria for Pathological Gambling from the American Psychological Association Diagnostic and Statistical Manual, Fourth Edition (DSM-IV)

Persistent and recurrent maladaptive behavior as indicated by at least five of the following criteria:

1. preoccupation with gambling (e.g., preoccupied with reliving past gambling experiences, handicapping or planning the next venture, or thinking of ways to get money with which to gamble);
2. a need to gamble with increasing amounts of money in order to achieve the desired excitement;
3. repeated unsuccessful efforts to control, cut back, or stop gambling;
4. restlessness or irritability when attempting to cut down or stop gambling;
5. gambling as a way of escaping from problems or relieving dysphoric mood (e.g., feelings of helplessness, guilt, anxiety, depression);
6. after losing money gambling, often returning another day in order to get even ("chasing" one's money);
7. lying to family members or others to conceal the extent of involvement with gambling;
8. engaging in illegal acts such as forgery, fraud, theft, or embezzlement, in order to finance gambling;
9. jeopardizing or losing a significant relationship, job, educational or career opportunity because of gambling; and
10. relying on others to provide money to relieve a desperate financial situation caused by gambling (a "bailout").

The gambling behavior is not better accounted for by a Manic Episode.¹

¹ A Manic Episode is a distinct period of abnormally and persistently elevated, expansive, or irritable mood, lasting at least 1 week (or any duration if hospitalization is necessary), having three or more of seven specific symptoms such as inflated self-esteem and decreased need for sleep, that is sufficiently severe to cause impairment, and whose symptoms are not caused by a substance or a medical condition nor are combined with bouts of depression.

Appendix F

Home Page of the Connecticut Division of Special Revenue

State Lottery Web Site Addresses

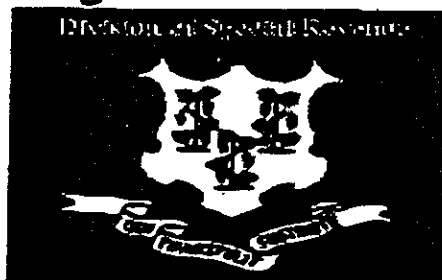
Home Pages of Connecticut Legalized Gambling Sites

**The Connecticut Lottery
Plainfield Greyhound Park
Shoreline Star Greyhound
Foxwoods Resort Casino
Mohegan Sun Casino**

DIVISION OF SPECIAL REVENUE HOMEPAGE

Division of Special Revenue Home Page

State of Connecticut



*Welcome to the
Connecticut Division of Special Revenue*

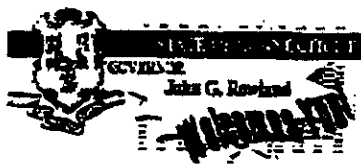
The Mission of the Division of Special Revenue

To administer the gaming laws of the State of Connecticut and ensure compliance with the Tribal-State Compacts governing the conduct of the Native American gaming through the performance of our licensing and oversight duties in an efficient and courteous manner which instills public confidence of the highest level in the integrity of all aspects of various legal gaming activities.

- »» Search »» General Information »» Agency Units
- »» Employee Directory »» Wagering Statistics
- »» Available Publications »» Rules & Regulations

For Further Information Please Contact:

Division of Special Revenue
555 Russell Road
Newington, CT 06111
(860)594-0500 - Main No.
(860)594-0509 - Fax



Thank You For Visiting
Division of Special Revenue
Home Page
Acting Executive Director
George F. Wandrak

US and Canadian Lottery Web Site Addresses

Arizona
www.arizonalottery.com

Atlantic Provinces of Canada
www.alc.ca

California
www.calottery.com

Connecticut
www.qgm.com:80/ctlott.html

Florida
www.flalottery.com

Illinois
www.state.il.us/lottery

Inter Lotto: Information on 38 State
Lotteries and Host for the Official Sites for
Kentucky, Pennsylvania and Virginia
www.interlotto.com

Iowa
www.ialottery.com

Kansas
www.kslottery.com

Kentucky
www.kylottery.com

Maine
www.mainerlottery.com

Manitoba
www.mlc.mb.ca

Maryland
www.msla.state.md.us/msla

Minnesota
www.lottery.state.mn.us

Multi-State Lottery Association (MUSL)
www.powerball.com

Nebraska
www.nelottery.com

New Hampshire
www.state.nh.us/lottery/nhlotto.htm

New Jersey
www.state.nj.us/lottery

New York
www.nylottery.org

Ohio
www.lottery.state.oh.us

Ontario
www.sportselect.com

Oregon
www.das.state.or.us/lottery

Pennsylvania
www.palottery.com
www.state.pa.us/lottery

South Dakota
www.state.sd.us/state/executive/lottery

Texas
www.window.state.tx.us/txgovinf/lottery/lotto.html

Virginia
www.valottery.com

Washington
www.wa.gov/lot/home.htm

West Virginia
www.state.wv.us/lottery/default.htm



The Connecticut Lottery

Non-Java enabled browsers must click [HERE](#) to get the current jackpot. Sorry.

This Space FOR RENT
 Targeted Exposure for Connecticut Businesses
[CLICK HERE for details](#)

Did You Play Your Game Today?		Daily Numbers 3	Play 4	Cash 5 Lotto
Thu	05/08	3-8-2	6-3-4-2	06-22-24-27-35
Wed	05/07	5-3-1	0-4-5-5	No Drawing
Tue	05/06	0-8-3	8-0-3-5	03-08-16-17-23-33
Mon	05/05	4-0-7	0-6-7-8	05-11-18-25-31
Sun	05/04	9-3-6	9-9-6-4	No Drawing
Sat	05/03	4-7-6	5-1-1-4	08-17-22-26-31
Fri	05/02	2-2-9	4-0-3-2	03-11-15-22-28-37

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SuperRide
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108195



Plainfield Greyhound Park

Located just off Exit 87 on Interstate 395, in Plainfield, CT. - Call our 24 - hour infoline: 1-800-RACES ON

[Racing Schedule](#)

[Entries & Results](#)

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[Activities](#)

[Wagering Guide](#)

[Grading System](#)

[History](#)

[Officials](#)

[Track Info](#)

[Facilities & Fees](#)

[Local Lodging](#)

Shoreline Star Greyhound

trackinfo.com - [US Tracks](#) - [Connecticut](#) - Shoreline Star Greyhound

Bridgeport, Connecticut

Bridgeport, Connecticut - Call 203-576-1976 for Information

Please select one of the following for additional information:

| [History](#) | [Facilities & Fees](#) | [Racing Schedule](#) | [Activities & Events](#) | [Entries & Results](#) |

| [Track Specifications](#) | [Operating Officials](#) | [Transportation](#) | [Simulcast Outlets](#) |

Track History

Shoreline Star opened its doors in 1976, but it was known as Bridgeport Jai-Alai until 1995.

Facilities & Fees

- Track Capacity: 3700
 - Grandstand Admission: Free
- Clubhouse Capacity: 800
 - Clubhouse Admission: Table minimum
- Parking Capacity: 3700
 - General Parking: Free
 - Valet Parking: \$3.00

Racing Schedule

1996 Racing Dates: 01/01/96-12/31/96

1997 Racing Dates: 05/01/96-11/30/96

- **Sunday** Post Time: 1:00 pm
- **Monday** Post Time: 7:30 pm
- **Tuesday** Post Time: Dark
- **Wednesday** Post Time: Matinee 1:00pm and Evening 7:30 pm
- **Thursday** Post Time: 7:30 pm
- **Friday** Post Time: 7:30 pm
- **Saturday** Post Time: Matinee 1:00 pm and Evening 7:30 pm

Activities and Events

Special Events in 1996 A List of Special Events is currently not available. Please contact the track.

Entries & Results

For Race Results call 203-576-1059

Entries and results are currently not posted on this homepage. If you would like to see them posted in this space, please contact track management and let them know.

Track Specifications

The track is 7/16 mile

Operating Officials

- President: **A.Robert Zeff**
- Vice President: **Susan Zeff**
- Treasurer/Secretary: **Paul Weintraub**
- General Manager: **Steve Alford**
- Director of Racing: **Steve Alford**
- Racing Secretary: **Scott Symonds**

Transportation

Shoreline Star is centrally located, just 20 minutes from Stamford or New Haven, 35 minutes from Waterbury, 45 minutes from Danbury and Westchester County, or 55 minutes from any major New York Bridge. Immediately off I-95 at Exit 28 in Connecticut.

Other Transportation

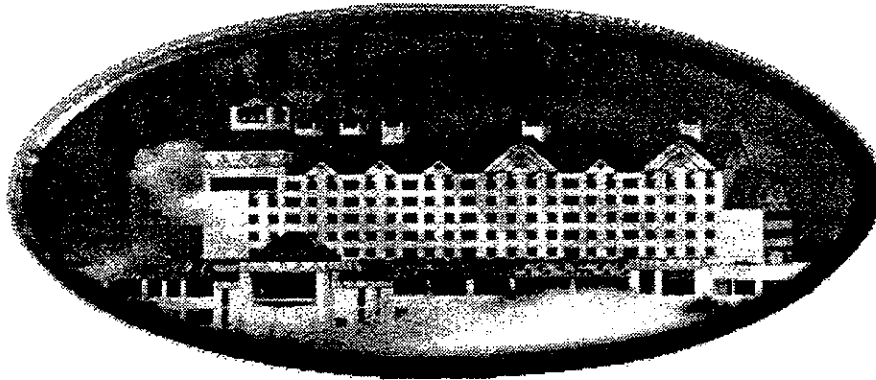
Less than 1 mile from Metro-North rail station and Port Jefferson Ferry stors in Bridgeport, Connecticut. Taxi or shuttle service available.

Simulcast Outlets

A list is currently unavailable. Please contact the track.

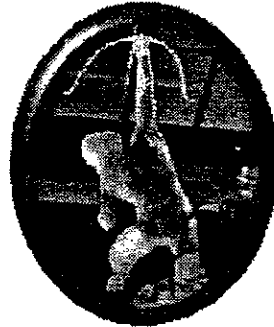
[Trackinfo Homepage](#) | [Top of Page](#)

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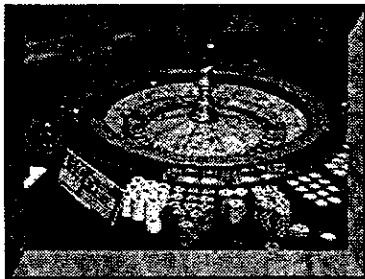
Foxwoods Resort Casino

1- 800 PLAY BIG



Welcome to the largest Casino in the entire world.
Experience the wonder of the Connecticut (map) woods.

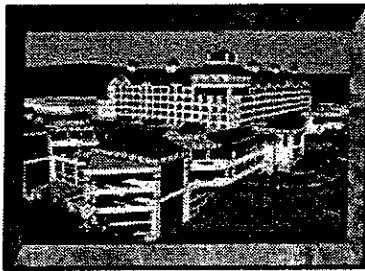
At Foxwoods experience GAMING as it is meant to be...



in its natural state.
100's of table games...
1000's of slots...
\$1,000,000 BINGO games
And an entire...
Non-smoking casino



Choose from elegant DINING to buffets to cafes
or lounges.
Something to please every taste.

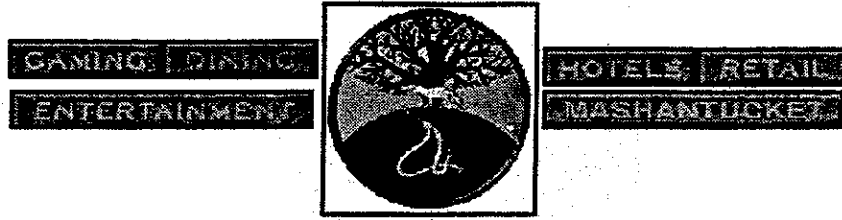


Whether
your Connecticut
woods experience includes
a stay at the elegant Resort HOTEL
or our quaint Two Trees Inn,
you'll enjoy New England
hospitality at its finest.

Foxwoods is world class
ENTERTAINMENT with stars like
*Carly Simon, Bill Cosby and Anita
Baker*. It's Championship Boxing. It's
Cinetropolis. Fox Giant Screen
Theatre. Turbo Ride. Cinedrome
Dance Club. And all the excitement of
Broadway only 2 hours away. It's also
a RETAIL concourse filled with
fascinating specialty shops.



Come Play in the Connecticut Woods
At Foxwoods Resort Casino



Home Page

**Where your Host is the
Mashantucket Pequot Tribal Nation**



Call 1-800 Play Big



Rising Sun

Mohegan Sun,
 a spectacular new casino and resort located in rural Southeastern Connecticut, provides world-class gaming and entertainment facilities. Featuring an extraordinary Mohegan-themed design and set behind rolling hills on the banks of the Thames River, Mohegan Sun offers its visitors a truly unique entertainment experience.

Past, Present and Future Stakes
 Mohegan Sun Casino blends innovative technologies with the hand-crafted traditions of the Mohegan Indians, known as the Wolf People. A natural paradise of intricately designed Mohegan images of nature – crafted from stone, rough timbers and metals – integrates with the latest sound, lighting and special effects to bring Mohegan Sun visitors into a world where yesterday mingles with today.



Celebrating the history and traditions of the Mohegan Indians, Mohegan Sun's circular design and Indian themes reflect the tribe's beliefs and culture. Featuring four quadrants, each of which includes its own entrance and a seasonal theme - Winter, Spring, Summer and Fall – the design highlights the importance of seasonal changes to Mohegan life. From the creative minds of the Rockwell Group, architectural designers for Planet Hollywood, the Official All-Star Café, Caesar's Maximus and other outstanding developments, the casino integrates technology, entertainment and ancestral design for a magical effect.

A Player's Paradise
 The state-of-the-art design provides over 150,000 square feet of gaming space which can accommodate up to 3,000 slot machines and 180 gaming tables, while also offering excellent dining, entertainment, retail shopping and the Kids Quest family entertainment center. Mohegan Sun visitors can also experience the Wolf Den – a captivating retreat in the heart of Mohegan Sun. The spectacular 10,000 square foot Wolf Den can seat 350 people, offering state-of-the-art entertainment and event facilities. The Wolf Den offers live entertainment seven days a week.

The casino's large bingo hall hosts world-class entertainment and sporting events. In the next several months, Mohegan Sun's bingo hall presents a world boxing championship, televised live on HBO, and a special concert performance by Al Jarreau.

In addition to exciting live events and a legendary gaming experience, Mohegan Sun also offers more than 20 specialty food outlets, including three fine-dining restaurants, the 600-seat Seasons buffet, Chief's Deli, a sensational food court providing international cuisine and the 24-hour full-service Mohegan Territory.

Located conveniently in Uncasville, Connecticut, Mohegan Sun gives its patrons direct access to I-395 and I-95, the main highway connecting to New York, New Haven, Providence and Boston. For complete directions, or to learn more about upcoming events at Mohegan Sun, call Entertainment Express ticketing **TOLL FREE at 1-888-332-5600.**



E x p e r i e n c e t h e l e g e n d .

Appendix G
Connecticut Zip Code Rankings by Per Capita Income in
1996: Lowest 40% of Zip Code Areas

Connecticut Zip Code Rankings by Per Capita Income in 1996: Lowest 20% of Zip Code Areas

Zip Code	Geographic Name	Per Capita Income (\$)	Zip Code	Geographic Name	Per Capita Income (\$)
06350	Hanover	\$18,594	06511	New Haven	\$17,005
06279	Willington	\$18,585	06256	North Windham	\$16,883
06786	Terryville	\$18,400	06255	North Grosvenordale	\$16,881
06330	Baltic	\$18,397	06610	Bridgeport	\$16,811
06389	Yantic	\$18,310	06779	Oakville	\$16,557
06515	New Haven	\$18,265	06332	Central Village	\$16,483
06076	Stafford Springs	\$18,252	06605	Bridgeport	\$16,437
06790	Torrington	\$18,241	06354	Moosup	\$16,383
06105	Hartford	\$18,232	06053	New Britain	\$16,149
06234	Brooklyn	\$18,078	06782	Plymouth	\$16,079
06451	Meriden	\$18,072	06051	New Britain	\$16,052
06277	Thompson	\$18,033	06226	Willimantic	\$15,545
06260	Putnam	\$18,003	06377	Sterling	\$15,459
06373	Oneco	\$17,912	06387	Wauregan	\$15,388
06061	Pine Meadow	\$17,885	06374	Plainfield	\$14,962
06262	Quinebaug	\$17,870	06604	Bridgeport	\$14,699
06450	Meriden	\$17,807	06710	Waterbury	\$14,561
06513	New Haven	\$17,795	06704	Waterbury	\$14,455
06380	Taftville	\$17,716	06520	New Haven	\$14,308
06705	Waterbury	\$17,705	06706	Waterbury	\$14,111
06114	Hartford	\$17,666	06607	Bridgeport	\$13,533
06108	East Hartford	\$17,511	06268	Storrs Mansfield	\$13,207
06351	Jewett City	\$17,438	06246	Grosvenor Dale	\$13,188
06239	Danielson	\$17,245	06263	Rogers	\$12,889
06331	Canterbury	\$17,232	06112	Hartford	\$12,195
06340	Groton	\$17,216	06106	Hartford	\$11,524
06320	New London	\$17,133	06519	New Haven	\$10,632
06401	Ansonia	\$17,120	06608	Bridgeport	\$10,196
06233	Ballouville	\$17,051	06702	Waterbury	\$9,721
06241	Dayville	\$17,043	06510	New Haven	\$9,185
06243	East Killingly	\$17,025	06120	Hartford	\$7,282

Per capita income in 1996, estimated by Claritas, Inc.

**Connecticut Zip Code Rankings by Per Capita Income in 1996: Next to Lowest
20% of Zip Code Areas**

Zip Code	Geographic Name	Per Capita Income (\$)	Zip Code	Geographic Name	Per Capita Income (\$)
06249	Lebanon	\$21,726	06334	Bozrah	\$20,439
06481	Rockfall	\$21,675	06708	Waterbury	\$20,437
06021	Colebrook	\$21,669	06758	Lakeside	\$20,355
06244	East Woodstock	\$21,669	06018	Canaan	\$20,264
06379	Pawcatuck	\$21,644	06750	Bantam	\$20,081
06716	Wolcott	\$21,643	06062	Plainville	\$20,013
06403	Beacon Falls	\$21,635	06455	Middlefield	\$19,934
06795	Watertown	\$21,603	06238	Coventry	\$19,885
06088	East Windsor	\$21,555	06280	Windham	\$19,840
06810	Danbury	\$21,528	06247	Hampton	\$19,743
06492	Wallingford	\$21,517	06242	Eastford	\$19,739
06457	Middletown	\$21,499	06010	Bristol	\$19,715
06232	Andover	\$21,479	06230	Abington	\$19,714
06336	Gilman	\$21,393	06382	Uncasville	\$19,634
06370	Oakdale	\$21,277	06282	Woodstock Valley	\$19,619
06071	Somers	\$21,245	06418	Derby	\$19,617
06483	Seymour	\$21,236	06082	Enfield	\$19,614
06096	Windsor Locks	\$21,168	06770	Naugatuck	\$19,548
06118	East Hartford	\$20,981	06512	East Haven	\$19,469
06763	Morris	\$20,919	06016	Broad Brook	\$19,304
06353	Montville	\$20,891	06360	Norwich	\$19,190
06065	Riverton	\$20,808	06469	Moodus	\$19,184
06110	W Hartford	\$20,783	06077	Staffordville	\$19,089
06712	Prospect	\$20,775	06091	West Hartland	\$19,013
06027	East Hartland	\$20,774	06075	Stafford	\$18,983
06456	Middle Haddam	\$20,761	06516	West Haven	\$18,933
06235	Chaplin	\$20,745	06787	Thomaston	\$18,893
06901	Stamford	\$20,580	06467	Milldale	\$18,790
06264	Scotland	\$20,575	06098	Winsted	\$18,774
06278	Ashford	\$20,512	06781	Pequabuck	\$18,747
06606	Bridgeport	\$20,493	06384	Voluntown	\$18,703

Per capita income in 1996, estimated by Claritas, Inc.

Appendix H
Substitution and Saturation: A Statistical Approach

Substitution and Saturation: A Statistical Approach

Introduction

Over time gambling revenues, i.e., lottery sales, pari-mutuel handle, casino revenues, etc., will increase or decrease at varying rates. As shown in Chapter 1, lottery sales have steadily increased while pari-mutuel wagering has steadily declined. The rates of increase (decline) are potentially related to a number of factors, including demand indicators, such as income and population, business cycle variables, such as the unemployment rate, and price variables, such as the price of a lottery ticket or the implicit price of gambling, i.e., the average bet.

In addition to these factors, there is the influence of the various forms of gambling on each other. First, is the substitution effect. Monies wagered on one form of gambling are not available for another form of gambling. The reasons for substituting one form of gambling for another are many. Different individuals will have different preferences. One individual may be attracted by the instant response of instant lottery tickets and slot machines, while another may be attracted by the "handicapping" associated with pari-mutuel wagering, while yet another may be attracted by the skill associated with various card games, and so forth. Substitution between games will also be influenced by the average price, measured as ticket prices, average play or the probability of win. Accessibility of the different forms of gambling, in terms of both proximity or distance and specific knowledge required to effectively participate also affect substitution. For example, lottery tickets have a high degree of accessibility. They can be purchased at a large number of retail outlets and there is little knowledge required to play. Slot machines are not quite as accessible. They do require little knowledge to be played but can only be played at two locations in the state. Pari-mutuel wagering on jai alai has limited accessibility. An understanding of the game and players is required to wager effectively and there is only one location in the State where wagering can occur. While our current data base does not allow us to measure the influence of each of these factors, we can analyze the substitution effect across games by statistically analyzing the influence of the growth (decline) in wagering in one form of wagering on another.

Second, and related to the substitution effect, is the saturation effect. Saturation refers to the situation when sales of a product or the wagering on a particular form of gambling peak or flatten. This can be measured in absolute terms, i.e., dollar sales of a specific lottery game may show no growth or actually decline, or in relative terms, casino revenues as a percentage of personal income may peak at some percentage level. Again, saturation can be reached for a variety of reasons. For example, the appeal of the game may diminish, i.e., tastes change, or a game may have fully penetrated the market, i.e., all people who have the desire to play a game play the game, so demand cannot increase any further. In aggregate, total wagering could conceptually exhaust the monies available for wagering and so no further increase is possible.

In the following analysis, we examine the influence of a number of factors (variables) on gambling revenues or sales. With these equations we analyze and quantify those factors which influence gambling revenues in broad terms. These equations can also

be used: (1) to examine whether substitution across games occurs; (2) to generate projections of future revenues (sales) based on the projections of the influencing factors; and (3) to determine the degree of saturation of the various forms of wagering.

The Quantitative Results

Using the factors in the following list, WEFA specified equations for sales/handle of each form of legalized gambling in Connecticut. These equations were then subjected to regression analysis. The data for sales and wagering were provided by the Division of Special Revenue. In regard to the latter, the Division of Special Revenue provided data for video facsimile machine win and handle, and WEFA estimated total Native American Casino wagering using data from New Jersey and Nevada, as described in the footnote on the first page of this chapter. All monthly data were converted to a quarterly basis as the economic and demographic data are reported on that basis.

The following discussion of the results of the quantitative work describes the variables that were shown to have a significant effect on sales/handle, along with the percentage of the variation that is explained by the variables. All of the factors that applied to a specific form of legalized gambling were tested. If these factors do not appear in the discussion, that means they were not found to have a statistically significant effect. In the discussion, variables are listed in order of importance.

Factors to Be Examined

Economic and Demographic Variables

- Connecticut Total Personal Income
- the Connecticut unemployment rate
- Connecticut Transfer Payments (the major part of which is social security payments)
- Connecticut Dividends, Interest and Rent, part of which is retirement income from savings
- Connecticut population
- Connecticut population age 18 and older
- Connecticut population age 35 years and older
- Connecticut population aged 35-44
- Connecticut population age 65 and older

Lottery Variables

- Instant Lottery sales
- Daily Numbers and Play 4 sales
- Lotto sales
- Cash 5 sales
- Powerball sales
- total Lottery advertising expenditures

- advertising expenditures on Instant games
- advertising expenditures on daily games
- advertising expenditures on Lotto
- introduction of each of the over-one-dollar price point Instant games
- The average price of Instant Lottery tickets
- Introduction of the second weekly drawing for Cash 5
- Introduction of the third weekly drawing for Cash 5
- Augmentation of Lotto in 1992
- Lotto jackpots

OTB Variables

- OTB branch sales
- OTB simulcast sales
- OTB telephone sales
- Number of OTB branches
- Number of OTB simulcast facilities
- the expansion to 43 states in early 1994 and subsequent reduction to 15 states at the end of 1995 of OTB telephone betting
- The shift of New Haven operations from Teletrack to the Coliseum between 1992 and 1995
- OTB handle from carrying Connecticut pari-mutuel events

Pari-Mutuel Variables

- Greyhound track handle
- Greyhound track performances
- Jai-alai handle

Charitable Gaming Variables

- Charitable gaming sales/receipts

Foxwoods Variables

- Foxwoods handle
- The average number of video facsimile machines
- Influence of Foxwoods in each calendar year, 1992 through 1996

Other Variables

- A time trend
- Seasonal factors

The Lottery

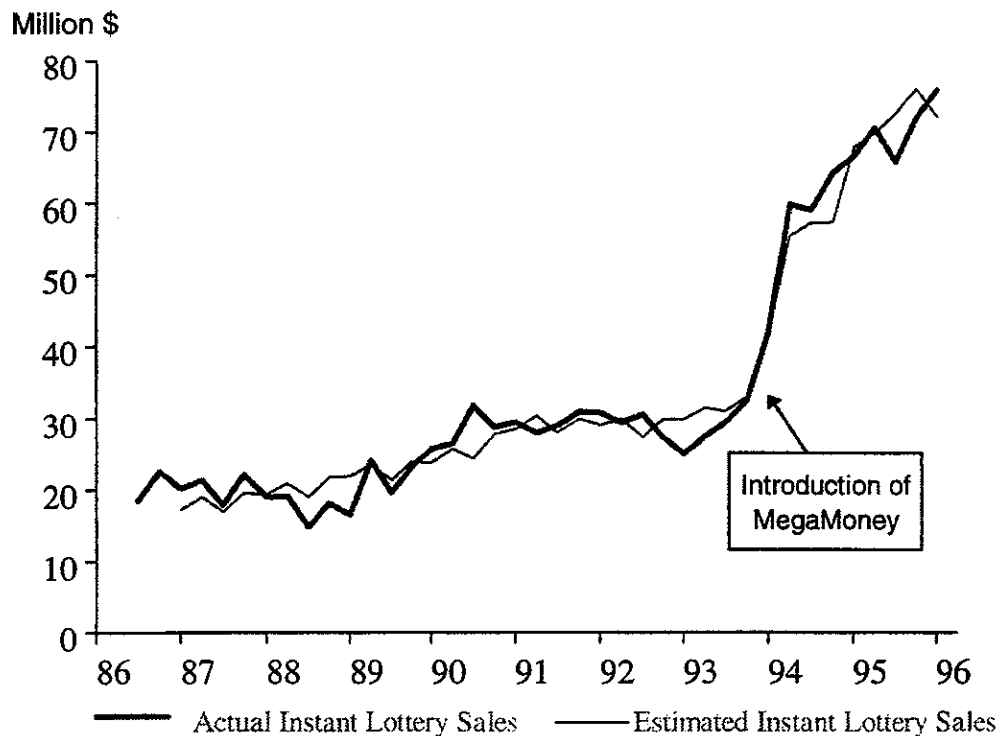
The Instant Lottery

Our analysis showed that two independent variables explain 97% of the variation in Instant Lottery sales:

- The average price of Instant Lottery tickets
- The size of the Connecticut population aged 35-44

There is no evidence of an effect on Instant Lottery sales from Native American Casino gaming.

Instant Lottery Sales, Calendar Years 1986 Through 1996



Note that the horizontal axis ticks indicate the first quarter of the calendar year rather than the beginning of the year.

The chart can be divided into two periods. Before and after the introduction of MegaMoney, the first successful two-dollar Instant game. The extraordinary success of the first two-dollar Instant game, MegaMoney, is clear from the chart. Before that, all Instant tickets were priced at one dollar, and the population variable in the equation is capturing the underlying trend. After that, the underlying trend remains, but the major variation is captured by the average price variable. The degree to which this variable explains actual Instant Lottery sales after the beginning of calendar 1994 accounts for the excellent fit of the equation.

The equation is as follows.

$$\text{lotinst} = 71.5134 * \text{instprice} + 0.26308 * \text{pop3544ct} - 180.810$$

$(20.1659)^1$ (7.20918) (10.9182)

Adjusted R-Squared² 0.9696

D.W.³ 2.0640

where:

lotinst = quarterly Instant Lottery sales in million dollars,
instprice = quarterly average Instant Lottery ticket price in dollars,
pop3544ct = quarterly average population, 35-44 years, thousands.

Other variables tested that not enter the equation with statistically significant coefficients were:

- Connecticut Total Personal Income,
- sales of each of the other lottery games,
- advertising,
- introduction of each of the over-one-dollar price point games,
- Foxwoods handle, and
- the Connecticut unemployment rate.

This means that sales of the other lottery games, for example, did not impact Instant sales significantly although sales of the other games may be impacted significantly by Instant sales.

¹ Numbers in parenthesis are t-statistics and are used to determine whether an estimated coefficient is different from zero at the 95% confidence level. The t-statistic is equal to the coefficient divided by the standard error of the estimate of the coefficient. For the equations we have estimated, values greater than 1.7 indicate significance at the 95% confidence level.

² The adjusted R-squared or coefficient of multiple determination is interpreted as the fraction of the variation in the dependent variable that is explained by the estimated equation.

³ D.W. refers to the Durbin-Watson statistic. The Durbin-Watson statistic measures the degree of correlation among the error terms, i.e., the degree of a systematic relationship between the error term in one period and the error term in the previous period. If there is correlation among the error terms, this indicates that there is some non-random unexplained variation in the dependent variable. This, in turn, implies that there are one or more variables that if included in the equation would reduce this variation i.e., raise the R². Even with this unexplained variation, the significant coefficients that are estimated are unbiased. The D.W. statistic is interpreted as follows. A D.W. of less than one indicates that there is unexplained variation in the dependent variable that could be explained by choosing additional independent variables. A D.W. of greater than approximately 1.5 indicates that there is no additional variation to be explained by adding other independent variables. Values of D.W. between 1.0 and 1.5 are inconclusive, i.e., we cannot say with confidence that there is or is not variation among the error terms.

The simplicity of the equation and the excellent equation statistics indicate the overwhelming importance of the higher price point games as well as the underlying importance of the 35 to 44 age group. While there are only two variables in the equation, these variables are capturing a great deal of information.

The Connecticut population aged 35-44, which the telephone survey shows play instant games most frequently, is growing at slightly under two percent per year. However, the coefficient of the population variable boosts its impact of by a factor of 3.8. Thus, the average growth rate in this population group of 1.7% per year "explains" the underlying trend in Instant game sales in increasing popularity of Instant games of 6.5% or \$1.5 million dollars per year, even before the sharp increase in growth when successful higher price point games were added.

The average price variable captures the extraordinary success of the Instant Lottery after the beginning of 1994. A one-dollar increase in the average price of the tickets produces \$71.5 million dollars in additional Instant Lottery sales. As shown in Chapter 3, 64% of players still buy one-dollar tickets and only seven percent buy five-dollar tickets, the highest current price. Clearly, a small increase in the percentage of patrons buying higher priced tickets will generate a very large increase in sales. We have not tried to explain relative demand for the different priced games.

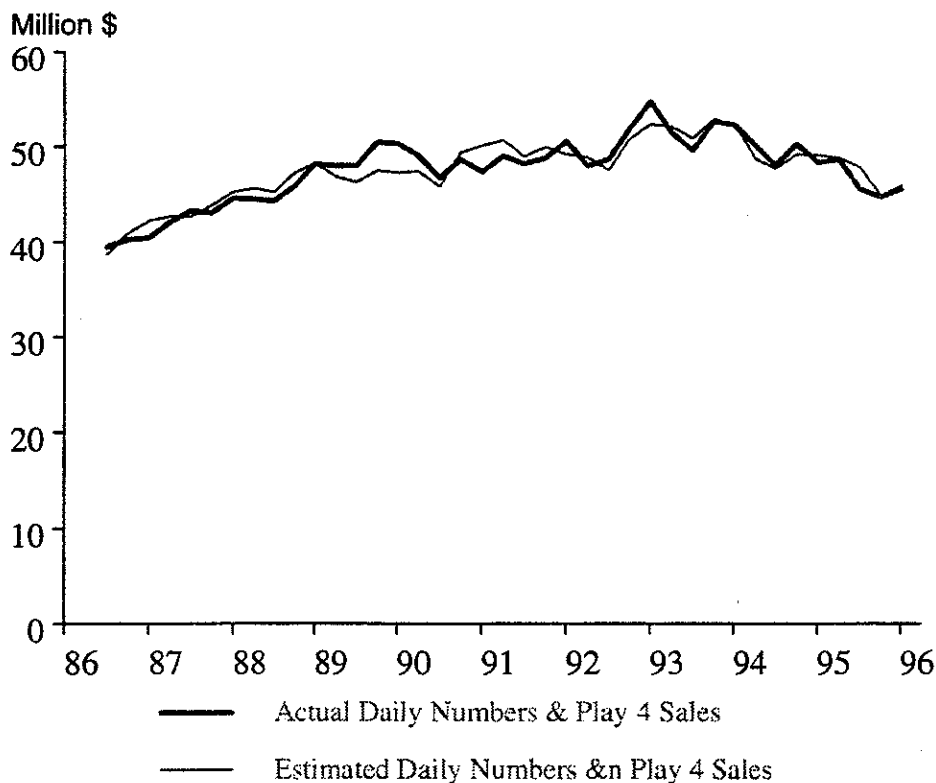
The Daily Numbers and Play 4

Our analysis of sales of the Daily Numbers and Play 4 shows that four factors are primarily responsible for determining sales. These are:

- Connecticut Total Personal Income,
- Instant Lottery sales,
- Introduction of the third weekly Cash Lottery drawing in 1995, and
- Seasonal factors.

These four variables explain 83 % of the variation in Daily Numbers and Play 4 sales. There is no evidence of an effect on sales of Daily Numbers and Play 4 from Native American Casino gaming.

Daily Numbers and Play 4 Sales, Calendar Years 1986 Through 1996



Note that the horizontal axis ticks indicate the first quarter of the calendar year rather than the beginning of the year.

For a series that shows relatively little variation over the time period studied, the fit of the equation is quite good. The underlying trend in Daily Numbers and Play 4 sales, apparent over the period between 1986 and 1993, is explained by Connecticut residents' Total Personal Income. The decline in the sales of the daily games come at the beginning of 1994 when Instant sales started increasing rapidly with the introduction

of MegaMoney. We had expected the daily games to be influenced more by sales of other on-line games, but the major substitution appears to have historically been with Instant games. The addition of a third weekly drawing to Cash 5 in 1995 does appear to have had an effect, however. Interestingly, there also appears to be a regular seasonal downturn in sales of these daily games in each third quarter.

The equation is as follows.

$$\begin{aligned}
 \text{lotdnum} = & -0.16861 * \text{lotinst} - 6.05720 * \text{cash95} + 0.00047 * \text{yrpicct} \\
 & \quad (7.49713) \quad \quad (3.78302) \quad \quad (12.7594) \\
 & + 13.8658 - 0.48504 * \text{SEASON}_2 - 1.93233 * \text{SEASON}_3 \\
 & \quad (5.24516) \quad (0.74991) \quad \quad (2.99193) \\
 & - 0.15260 * \text{SEASON}_4 \\
 & \quad (0.23421)
 \end{aligned}$$

Adjusted R-Squared 0.8312
D.W. 1.8882

where:

lotdnum	=	quarterly Daily Numbers and Play 4 sales in million dollars,
lotinst	=	quarterly Instant Lottery sales in million dollars,
cash95	=	variable for 1995 shift from 2 to 3 drawings per week,
yrpicct	=	Connecticut Personal Income, quarterly, million dollars,
SEASON_i	=	seasonal variable for quarter i. If one seasonal factor is significant, two others must be included in the equation.

Other variables tested that not enter the equation with statistically significant coefficients were:

- Sales of lottery games other than Instant,
- Advertising,
- Introduction of the second weekly drawing for Cash 5,
- Augmentation of Lotto,
- The Connecticut unemployment rate,
- Connecticut population aged 35-44, and
- Foxwoods handle.

The coefficient of Total Personal Income in the equation, which explains the underlying trend, implies that for each additional \$1,000 of personal income in the State, forty-seven cents of it is going to the daily Lottery games. This means that \$8 million of each year's increase in Daily Numbers and Play 4 sales is explained by personal income, alone. The estimated coefficient on Instant Lottery sales implies indicates that, in the

past, for each dollar of increased Instant Lottery sales, there has been a seventeen-cent decrease in the total of Daily Number and Play 4 sales. The \$186 million increase in Instant sales between FY1993 and FY1996 thus generated a \$31 million decrease in sales of the daily games below the level that they would have been otherwise.

Lotto

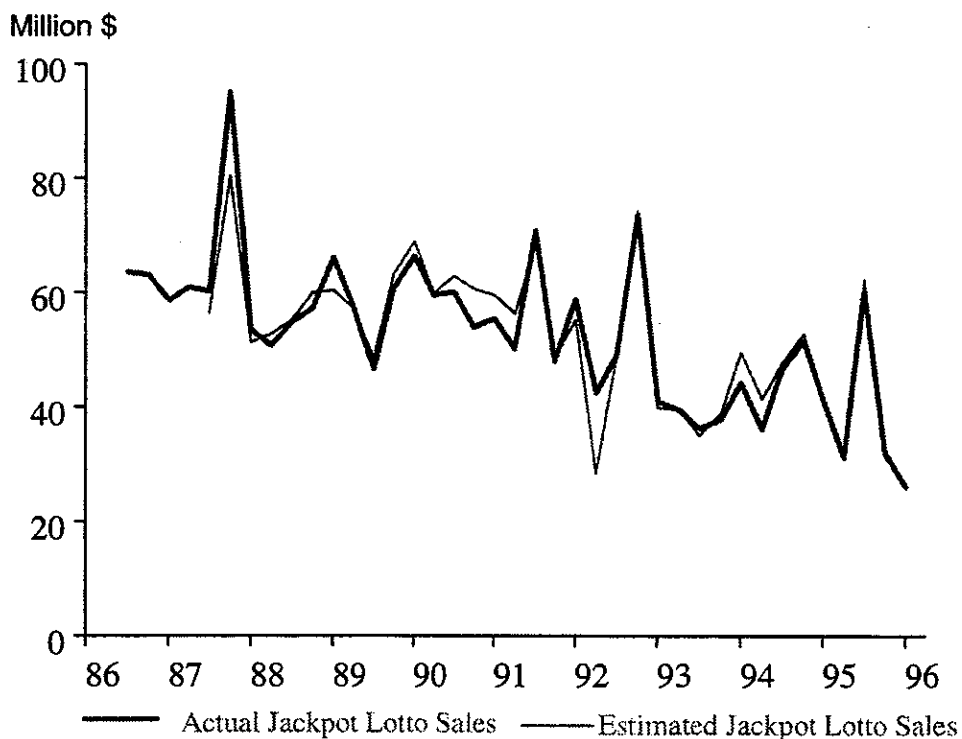
Lotto sales are highly volatile because of jackpots. There is evidence of substitution between Lotto and two other lottery games.

The equation explains 87% of the variation in Lotto sales. It contains the following six variables:

- Jackpots,
- Cash 5 and Powerball sales,
- Advertising,
- Unemployment, and
- Enhancement of Lotto in 1992.

There is no evidence of an effect on Lotto sales from Native American Casino gaming.

Lotto Sales, Calendar Years 1986 Through 1996



Note that the horizontal axis ticks indicate the first quarter of the calendar year rather than the beginning of the year.

Lotto sales have been on a downward trend over most of the period, occasionally interrupted by large jackpots or by an upturn in the Connecticut economy. While it is not readily apparent from this chart, the expected effect of Cash 5 and Powerball each have a large and negative effect. Advertising enters because of the connection with

Lotto jackpots. The fit of the equation is quite good considering the volatility of the series.

The equation is as follows.

$$\begin{aligned} \text{lotto} = & -1.04333 * \text{lotpowr} + \text{lotcash} + 12.8370 * \text{jack92} \\ & (6.86710) \qquad\qquad\qquad (3.05580) \\ & + 6.36193 * \text{lotjp_jkpt} + 4.83871 * \text{adv_lotto} - 2.23649 * \text{xrunrct} + 37.9574 \\ & (6.90472) \qquad\qquad (3.90734) \qquad\qquad (3.19929) \qquad\qquad (8.20866) \end{aligned}$$

Adjusted R-Squared 0.8730

D.W. 1.9351

where:

lotto	=	quarterly Lotto sales in million dollars,
lotpowr	=	quarterly Powerball sales in million dollars,
lotcash	=	quarterly Cash 5 sales in million dollars,
lotto92	=	variable for enhancement of Lotto in 1992,
lotjp_jkpt	=	quarterly total jackpots in million dollars,
adv_lotto	=	quarterly spending on Lotto advertising in million dollars,
xrunrct	=	quarterly average Connecticut unemployment rate.

Other variables tested that not enter the equation with statistically significant coefficients were:

- Sales of each of the other lottery games,
- introduction of the second and third weekly drawings for Cash 5,
- Foxwoods handle,
- Connecticut population 35 to 44 years of age, and
- Connecticut Total Personal Income.

Sales of Lotto appear to be unaffected by demographic variables and by economic variables other than the unemployment rate. However, the effect of Powerball and Cash 5 is significant. The coefficient of the sum of the two sales variables indicate that for every dollar of increased Cash 5 and Powerball sales, there has been a one dollar decrease in Lotto sales. This means that the \$42 million Powerball sales in its first year of operation, FY1996, accounted for a \$42 million decline in Lotto sales, and the \$49 million in Cash 5 sales in that year accounted for an equal loss in Lotto sales.

The effects of the changes in Lotto that were instituted in 1992 in order to augment sales appear to decline sharply after two quarters and disappear by the end of 1994. However, because these changes were intended to increase jackpots and because jackpots are included as a variable, the changes can continue to improve sales without being identified separately as a significant variable.

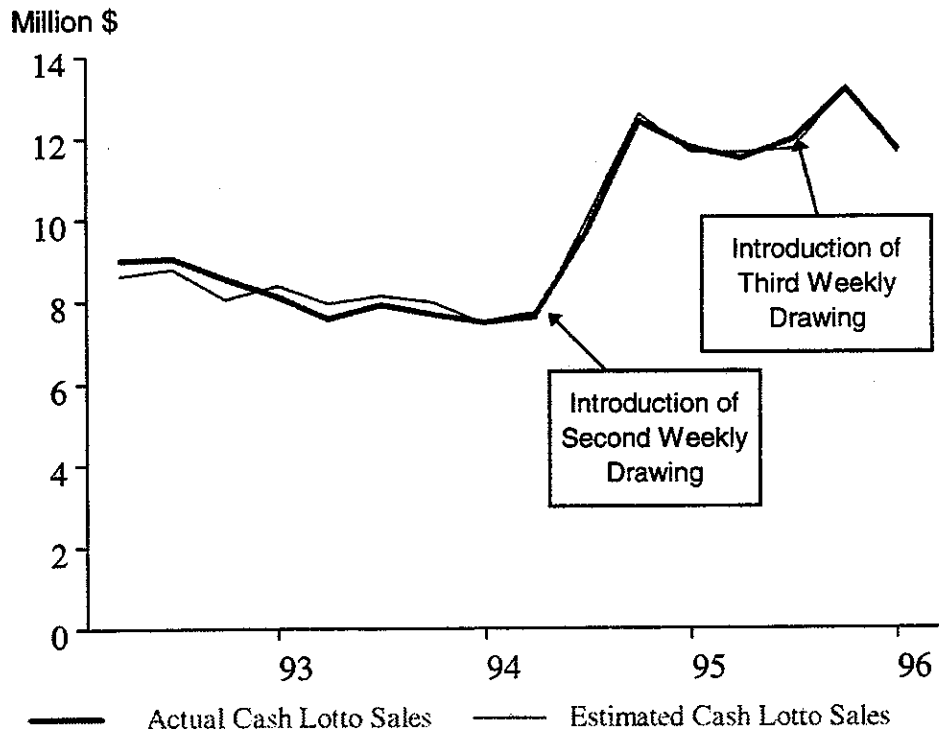
Cash 5

The equation for Cash 5 explains 97% of the variation in Cash 5 sales. It contains the following four variables:

- Connecticut population 35 to 44 years of age,
- The introduction of the second weekly drawing in 1994,
- The introduction of the third weekly drawing in 1995, and
- The Connecticut unemployment rate.

There is no evidence that spending on Cash 5 has been reduced by diversions to other forms of gambling. There is no evidence of an effect on Cash 5 sales from Native American Casino gaming.

Cash 5 Sales, Calendar Years 1986 Through 1996



Note that the horizontal axis ticks indicate the first quarter of the calendar year rather than the beginning of the year.

The underlying trend in Cash 5 sales is explained by the growth in the Connecticut population age 35-44, which is growing at a rate of less than one percent per year. The major factor in the growth of Cash 5 sales appears to be the addition of a second weekly drawing in August 1994. The addition of the third weekly drawing in October 1995 appears to have had a much smaller effect. The unemployment variable captures

the effect of the State economy on sales. The excellent fit of the equation results primarily from the importance of the additional drawings.

The equation is as follows.

$$\begin{aligned} \text{lotcash/pop3544ct} &= 0.00756 * \text{cash94} + 0.00235 * \text{cash95} + 0.00127 * \text{xrunrot} \\ &\quad (17.3270) \qquad\qquad 3.42686) \qquad\qquad (5.55009) \\ &+ 0.00726 \\ &\quad (4.97135) \end{aligned}$$

Adjusted R-Squared 0.9678
D.W. 1.7202

where:

lotcash	=	quarterly Cash 5 sales in million dollars,
pop3544ct	=	quarterly average population, 35-44 years, thousands,
cash94	=	variable for addition of a second weekly drawing in 1994,
cash95	=	variable for addition of a third weekly drawing in 1995,
xrunrct	=	quarterly average Connecticut unemployment rate.

Other variables tested that not enter the equation with statistically significant coefficients were:

- Connecticut Total Personal Income,
- sales of each of the other lottery games,
- advertising,
- introduction of Lotto augmentation in 1992, and
- Foxwoods handle.

The fact that sales of no other lottery games entered the equation was a surprise and implies there is no diversion from Cash 5 to other games. The effect of the addition of the second weekly drawing on Cash 5 sales does not appear to have decreased over time and accounted for approximately \$4 million in increased sales over the next two quarters. However, the effect of the addition of the third weekly drawing appears to have been roughly a third that of the addition of the second and to have declined sharply two quarters after its introduction.

Powerball

Because Powerball is such a new game, there is not sufficient data to estimate an equation. However, Powerball sales have been shown in the foregoing analysis to benefit from diversion from other games.

Off Track Betting

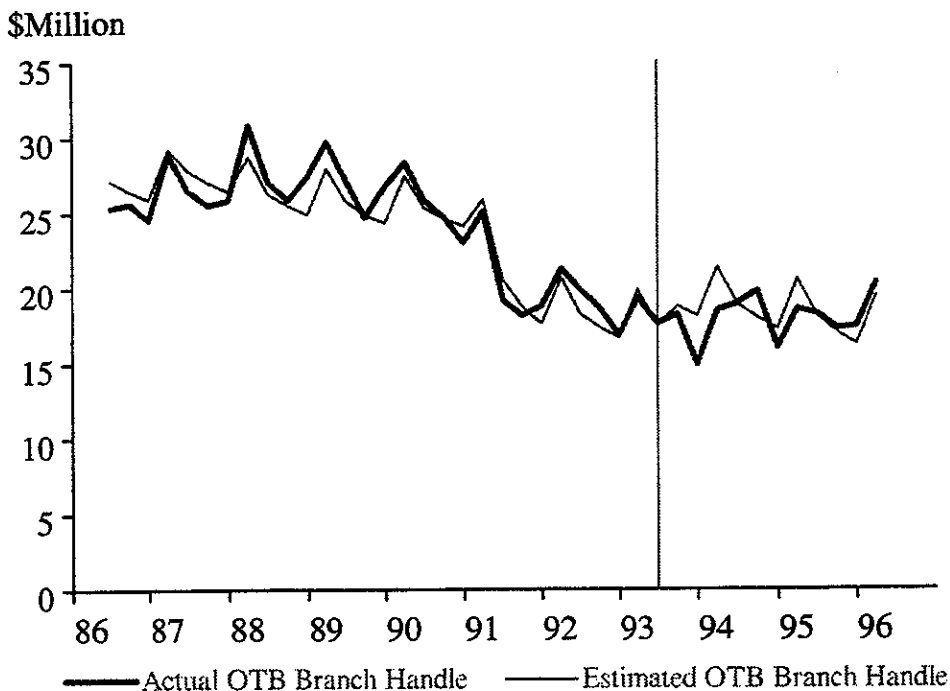
Branches

The equation for the OTB branches explains 92% of the variation in OTB branch handle. It contains the following five variables.

- Number of branches,
- Number of simulcast facilities,
- Connecticut population 35 to 44 years of age,
- A time trend, and
- Seasonal factors.

There is no observed effect from Native American Casino gaming.

OTB Branches Handle, Calendar Years 1986 Through 1996



Note that the horizontal axis ticks indicate the first quarter of the calendar year rather than the beginning of the year. The vertical line in the chart represents the date that Autotote began operating the OTB system.

The underlying trend in OTB handle is explained by the growth in the Connecticut population age 35-44, which is growing at a rate of less than one percent per year. The major factors in OTB branch sales are the number of branches, the number of simulcast facilities and the economy.

The opening in October 1990 of the Bradley Teletheater in Windsor Locks, a simulcast facility caused the beginning of a sharp decline in OTB branch handle by diverting OTB branch sales to the Teletheater. This decline was accelerated by the closing of 4 branches in May 1991, and an additional branch October 1991, the opening of the Plainfield simulcast facility in November 1991, as well as by the downturn in the economy. The opening of the Bridgeport simulcast facility in December 1992, by attracting additional patrons away from the branches, countered what little increase the recovering economy provided. The opening of the Hartford and Milford branches in October 1993 finally stabilized OTB handle.

The excellent fit of the equation to the data is the result of the importance of these branch closings and openings and of the simulcast facility openings.

The equation is as follows.

otb_br/pop3544ct

$$\begin{aligned}
 = & 0.00043 * \text{num_br} - 0.00574 * \text{num_sim} - 0.00114 * \text{xrunrct} \\
 & (0.87304) \qquad (10.3998) \qquad (2.30201) \\
 & + 0.05598 + 0.00562 * \text{SEASON_2} + 0.00136 * \text{SEASON_3} \\
 & (6.17853) \quad (5.17281) \qquad (1.23246) \\
 & + 0.00088 * \text{SEASON_4} \\
 & (0.81071)
 \end{aligned}$$

Adjusted R-Squared 0.94351
D.W. 1.70115

where:

otb_br	=	quarterly OTB branch handle in million dollars,
pop3544ct	=	quarterly average population, 35-44 years, thousands
num_br	=	number of branches,
num_sim	=	number of simulcast facilities,
xrunrct	=	quarterly average Connecticut unemployment rate.
SEASON_i	=	seasonal variable for quarter i. If one seasonal factor is significant, two others must be included in the equation.

Other variables tested that not enter the equation with statistically significant coefficients were:

- Connecticut Total Personal Income,
- Foxwoods handle,
- OTB simulcast handle, and
- the Connecticut unemployment rate.

OTB branch handle depends primarily on the number of branches. Because we have specified the dependent variable as total OTB branch handle per capita (population 35-44) and per branch, the negative coefficient for branches on the right hand side of the equation implies that an increase in the number of branches will not provide a proportional increase in total OTB branch handle. The coefficient for the number-of-branches variable suggests that increasing the number of branches produces proportionally only about half as much increase in handle. That is, if another branch opens in addition to the current 11 branches, the equation would project a net handle increase of one-half of one-eleventh of the current total.

For example, WEFA estimates that OTB simulcast handle will be \$81 million in FY1997. The equation implies that if an additional branch had been added at the beginning of the fiscal year, increasing the number of branches from 11 to 12, then handle would have increased not by one-eleventh or \$7 million, but by half of that, namely, \$4 million. However, as with the branches, location and other factors might change this conclusion.

However, adding a new Simulcast facility has a negative effect on branch handle. The coefficient on the simulcast variable suggests that doubling the number of simulcast branches, while keeping the number of OTB branches constant, would decrease total OTB branch handle by 20%. The negative time trend captures the decrease over time in interest in OTB parlors, independent of the other factors in the equation.

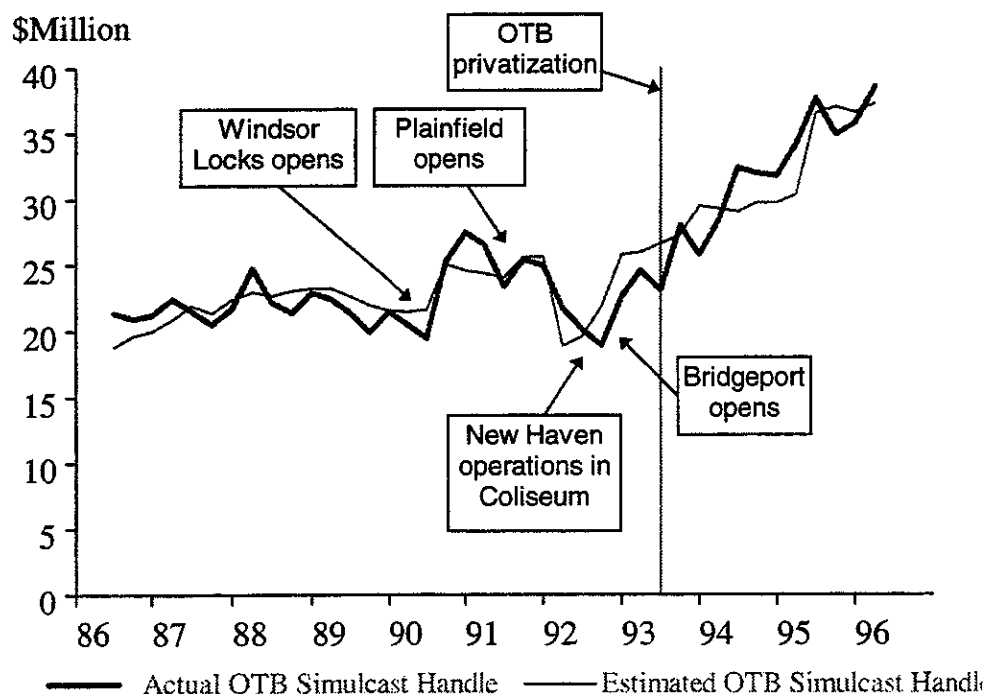
Simulcast

Five variables explain 86% of OTB Simulcast Facility sales:

- Connecticut population age 35-44,
- Connecticut population,
- Number of simulcast facilities,
- The shift of New Haven operations from Teletrack to the Coliseum between 1992 and 1995, and
- Unemployment.

There is no evidence of an effect from Native American Casino gaming.

OTB Simulcast Handle, Calendar Years 1986 Through 1996



Note that the horizontal axis ticks indicate the first quarter of the calendar year rather than the beginning of the year. The vertical line in the chart represents the date that Autotote began operating the OTB system.

The major events affecting OTB simulcast handle have been the opening of simulcast facilities, the shifting of New Haven operations to the Coliseum from 1992 to 1995, and the privatization of the OTB system. The new owner was able both to move the New Haven operations back into the Teletrack facility and to make substantial improvements in the facility. The underlying trend in OTB simulcast handle has been captured in the equation by the proportion of the 35-44 age group in the population, the age group that

most patronizes the facilities. The fit of the equation is quite good considering the volatility of the series.

The equation is as follows.

$$\begin{aligned} \text{otb_si/ptttct} = & 0.00088 * \text{num_sim} - 0.00191 * \text{teletrack} \\ & (3.43401) \qquad\qquad\qquad (5.83769) \\ & + 0.18578 * \text{pop3544ct/ptttct} - 0.00058 * \text{xrunrct} - 0.02021 \\ & (3.78879) \qquad\qquad\qquad (6.34277) \qquad\qquad\qquad (2.86267) \end{aligned}$$

Adjusted R-Squared 0.86443

D.W. 1.82737

where:

otb_si	=	quarterly OTB simulcast facility handle in million dollars,
num_sim	=	number of simulcast facilities,
teletrack	=	variable for the shift of New Haven simulcast operations from Teletrack to the Coliseum between 1992 and 1995,
pop3544ct	=	quarterly average Connecticut population, 35-44 years, thousands,
ptttct	=	quarterly average Connecticut population, thousands,
xrunrct	=	quarterly average Connecticut unemployment rate.

Other variables tested that not enter the equation with statistically significant coefficients were:

- Connecticut Total Personal Income,
- Number of OTB branches,
- OTB branch handle,
- handle from carrying Connecticut pari-mutuel events, and
- Foxwoods handle.

The equation indicates that the underlying growth rate of OTB simulcast handle is approximately three times faster than the population aged 35 to 44 indicating increasing penetration of the market represented by this age group. The estimated coefficient for the number of facilities indicates that increasing simulcast facilities would increase handle proportionally by only a third as much. That is, if another facility opens in addition to the current four, the equation would predict a net handle increase of one-third of one-fourth of the current total.

For example, WEFA estimates that OTB branch handle will be \$159 million in FY1997. The equation implies that if an additional simulcast facility had been added at the beginning of the fiscal year, increasing the number from 4 to 5, then handle would have increased not by one-fourth or \$40 million, but by one-third of that, namely, \$13 million.

However, the location of the new branch and other factors might change this conclusion.

We tested whether the opening of new branches would affect simulcast facility handle and did not find a statistically significant effect.

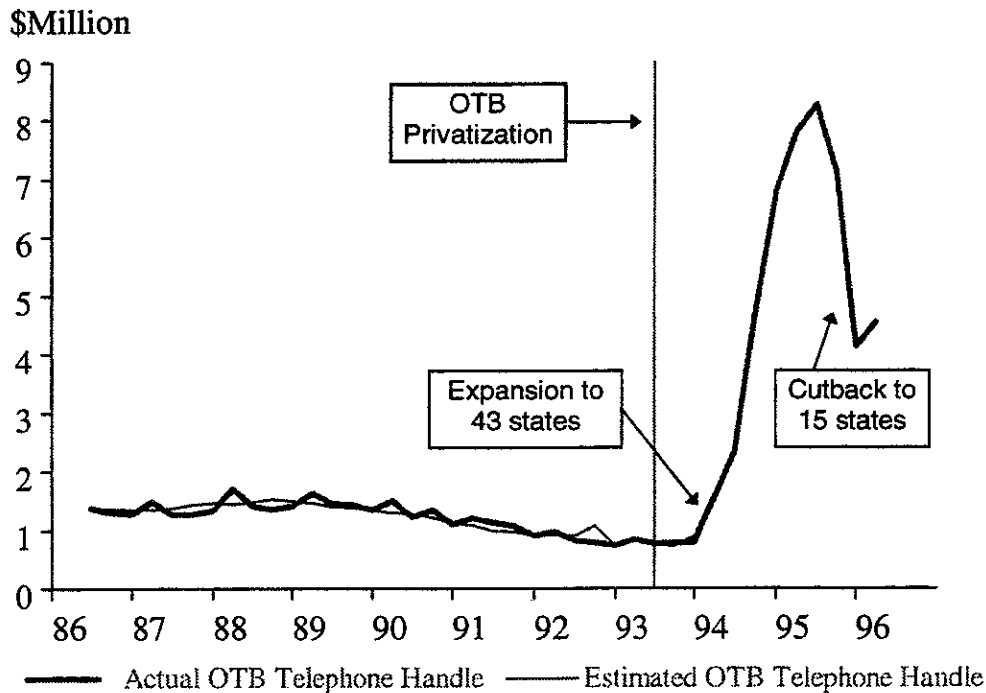
Telephone

Four variables explain 99.7% of the variation in OTB telephone sales:

- Connecticut Total Personal Income,
- the expansion to 43 states in early 1994 and subsequent reduction to 15 states at the end of 1995, and
- a negative time trend.

There is no observed effect from Native American Casino gaming.

OTB Telephone Handle, Calendar Years 1986 Through 1996



Note that the horizontal axis ticks indicate the first quarter of the calendar year rather than the beginning of the year. The vertical line in the chart represents the date that Autotote began operating the OTB system.

Telephone OTB handle, after rising slightly in the late 1980's, was on a downward trend prior to the expansion to other states. We find that this underlying trend in telephone OTB handle is explained by a combination of Connecticut Total Personal Income, which is growing at about 4% a year, and a negative time trend.

This suddenly changed when telephone OTB betting was offered in other states in early 1994. The initial expansion to 43 states was cutback to 15 at the end of 1995 because of concern about being in compliance with state and federal laws. The excellent fit of

the equation is primarily because of the impact of the expansion to other states and the low volatility in the data.

The equation is as follows.

$$\begin{aligned} \text{otb_tl} = & 0.00007 * \text{yrpicct} + 0.09140 * \text{otb9495} + 4.02769 * \text{otb96} \\ & (6.20273) \qquad (91.9958) \qquad (39.7100) \\ & - 0.36170 * \text{trend} + 715.586 \\ & (8.75756) \qquad (8.79768) \end{aligned}$$

Adjusted R-Squared 0.9969
D.W. 1.2694

where:

otb_tl	=	quarterly OTB telephone facility handle in million dollars,
yrpicct	=	Connecticut Personal Income, quarterly, million dollars,
otb9495	=	variable to capture the offering of telephone betting to 43 states in early 1994,
otb96	=	variable to capture the reduction of telephone betting from 43 to 15 states at the end of 1995,
trend	=	time trend.

Other variables tested that not enter the equation with statistically significant coefficients were:

- Connecticut demographics,
- the Connecticut unemployment rate, and
- Foxwoods handle.

OTB telephone handle rose very rapidly when offered in other states and declined when the number of states was reduced. This is the dominant factor in telephone sales. The income factor and the time trend currently almost exactly offset one another.

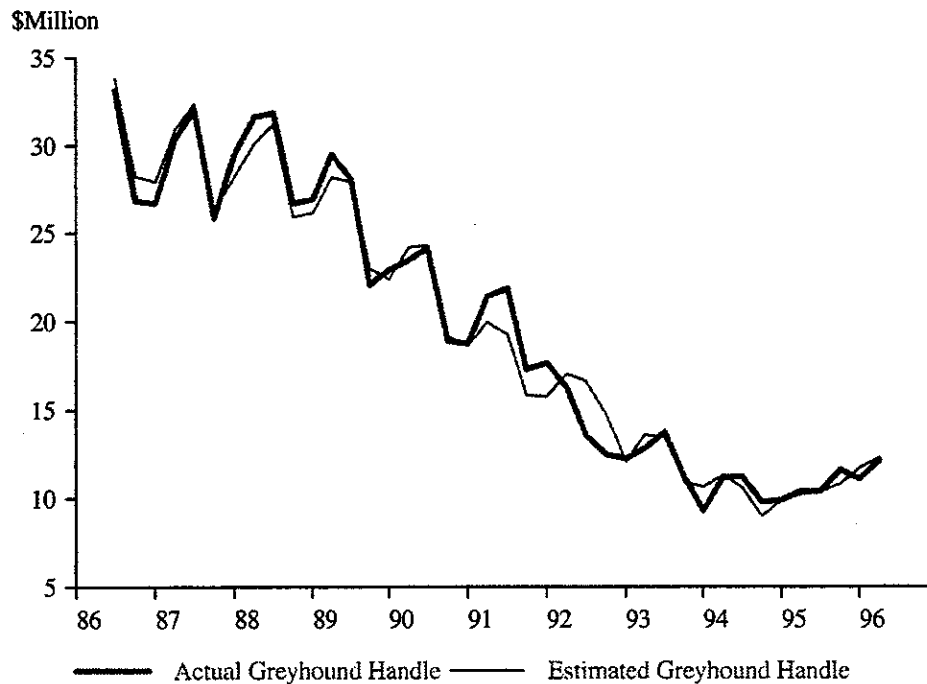
Pari-Mutuels

Greyhound Racing

Six variables explain 97% of the variation in Greyhound wagering:

- Connecticut population age 35 and over,
- A negative time trend,
- Greyhound track performances,
- Influence of Foxwoods in CY1993 and CY1994,
- Connecticut Total Personal Income, and
- Seasonal factors.

Greyhound Racing Handle, Calendar Years 1986 Through 1996



Note that the horizontal axis ticks indicate the first quarter of the calendar year rather than the beginning of the year.

The major factor in greyhound racing handle has been a long-term decline in attendance, captured in our equation by a negative time trend. This trend was accentuated in 1993 and 1994 by the opening of Foxwoods. The growth in Connecticut Total Personal Income and the population age 35-44 offsets the decline to some extent, as bettors have more in their pockets to spend and as there are greater numbers able

to bet. Both the seasonality of attendance and the number of performances capture the short term volatility in the handle data, resulting in an excellent fit of the equation.

The equation is as follows.

$$\begin{aligned} \log(\text{pmgrey}/\text{pop35ct}) = & 0.43004 * \log(\text{greyperf}) - 0.22965 * \text{trend} - 0.09792 * \text{fox93} \\ & (4.91817) \qquad\qquad\qquad (12.6550) \qquad\qquad\qquad (2.29125) \\ & - 0.09103 * \text{fox94} + 2.34723 * \log(\text{yrcpicct}/\text{pop35ct}) + 441.491 \\ & (1.90249) \qquad\qquad\qquad (4.80728) \qquad\qquad\qquad (12.9258) \\ & + 0.06212 * \text{SEASON}_2 + 0.09131 * \text{SEASON}_3 - 0.03869 * \text{SEASON}_4 \\ & (1.79881) \qquad\qquad\qquad (2.69617) \qquad\qquad\qquad (1.14920) \end{aligned}$$

Adjusted R-Squared 0.9725
D.W. 2.4194

where:

- | | | |
|--------------|---|--|
| pmgrey | = | quarterly greyhound track handle in million dollars, |
| pop35ct | = | quarterly average Connecticut population, 35 years and older, thousands, |
| greyperf | = | greyhound track performances, |
| trend | = | time trend, |
| fox93, fox94 | = | variables to capture Foxwoods influence in CY1993 and CY1994, respectively, |
| yrcpicct | = | quarterly Connecticut total personal income, million dollars, |
| SEASON_i | = | seasonal variable for quarter i. If one seasonal factor is significant, two others must be included in the equation. |

Other variables tested that not enter the equation with statistically significant coefficients were:

- OTB handle from carrying Connecticut greyhound events, and
- variables to capture Foxwoods influence in years other than 1993 and 1994, and
- Connecticut average unemployment rate.

Because the history of Connecticut greyhound track handle is characterized by a strong downward time trend, the appropriate form of the equation is logarithmic. The coefficients of the Foxwoods variables imply that the opening of video facsimile terminals at Foxwoods reduced the handle at Plainfield Greyhound Park from what it would otherwise have been by 9.8% and 9.1% in CY1993 and CY1994, respectively. In CY1995 and CY1996, the effect of Foxwoods on the greyhound track handle was not statistically significant at the 95% level of confidence.

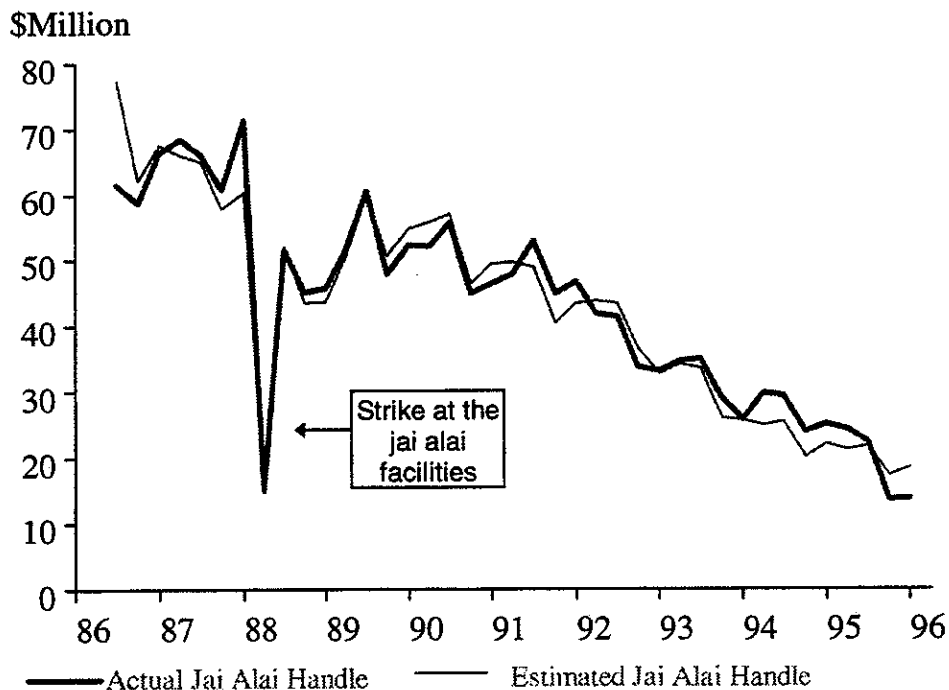
Greyhound track races are carried on the OTB system. Our original concern was that the OTB offering may be taking business from the tracks. The opposite appears to be true, if there is any effect at all. While the coefficient of OTB handle from offering Connecticut greyhound races was not statistically significant, it did enter the equation positively. A positive estimated coefficient would suggest that the OTB offering stimulates interest in track attendance and betting.

Jai Alai

Six variables account for 94% of the variation in jai alai wagering:

- A negative time trend,
- The strike in April 1988,
- Connecticut population 35 years and older,
- Connecticut Total Personal Income,
- Foxwoods handle, and
- Seasonal factors.

Jai Alai Handle, Calendar Years 1986 Through 1996



Note that the horizontal axis ticks indicate the first quarter of the calendar year rather than the beginning of the year.

In addition to the strike in April 1988, the major factor in jai alai handle has been a long-term downturn in attendance. This downward time trend is counterbalanced to some extent by the growth in income and population over age 35, but this growth is too slow to offset the declining interest in jai alai. These factors, together with the seasonality of attendance and handle, provide a very good fit of the equation to the data.

The value of the coefficient on the Foxwoods term indicates that the decrease in jai alai handle from diversion of betting to Foxwoods rose from 1% of jai alai handle in 1993, to 2% in 1994, to 4% in 1995 and to 5% in 1996. This is consistent with the size of the effect we found for greyhound racing, but in that case, the effect disappears after 1994.

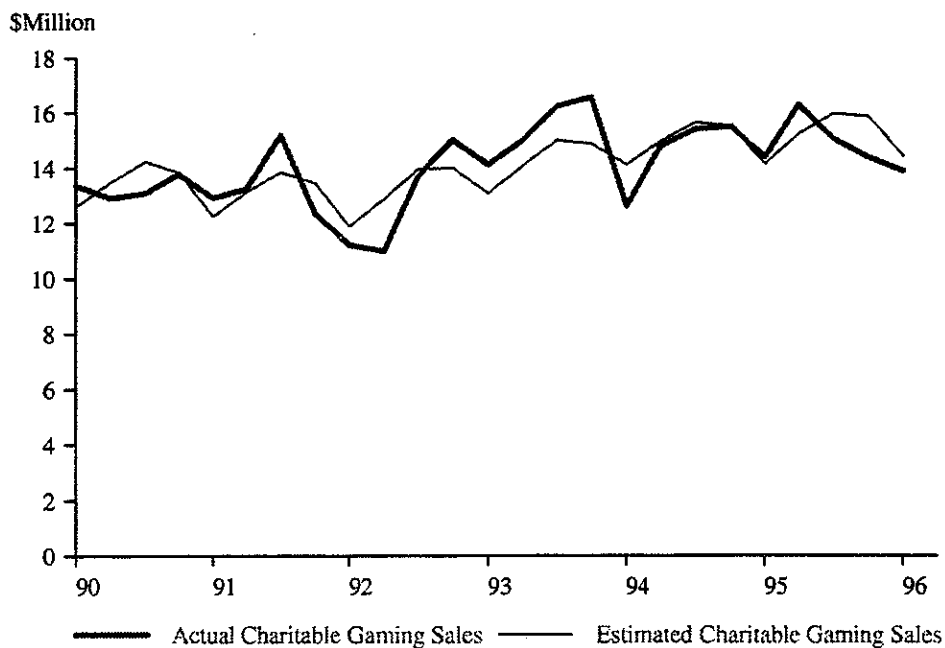
Charitable Gaming

Three variables explain 46% of the variation in charitable gaming including bingo, raffles, sealed tickets, Las Vegas nights and bazaars:

- Connecticut population age 65 and older,
- Unemployment, and
- Seasonal factors.

There is no observed effect from Native American Casino gambling.

Charitable Gaming Sales and Receipts, Calendar Years 1986 Through 1996



Note that the horizontal axis ticks indicate the first quarter of the calendar year rather than the beginning of the year.

The underlying trend in charitable gaming sales and receipts is explained by the size of the retirement age population. The economy and the seasonality of charitable gaming sales and receipts explain the deviations from trend. Compared to the volatility of the data, the underlying trends and effects of the economy and seasonality are small. As a result, even though the equation fits the data rather well, the measure of the explanatory power of the equation, the R-squared, is rather low.

The equation is as follows.

$$\begin{aligned} \text{tot_char} = & -0.53277 * \text{xrunrct} + 0.07912 * \text{ptt65ct} - 19.9161 \\ & (2.24802) \qquad (2.92890) \qquad (1.55856) \\ & + 0.92021 * \text{SEASON_2} + 1.67885 * \text{SEASON_3} + 1.38765 * \text{SEASON_4} \\ & (1.56215) \qquad (2.72422) \qquad (2.25041) \end{aligned}$$

Adjusted R-Squared 0.4572
D.W. 2.2667

where:

tot_char = quarterly charitable gaming sales in million dollars,
xrunrct = quarterly average Connecticut unemployment rate,
ptt65ct = quarterly average Connecticut population, 65 years and
over, thousands,
SEASON_i = seasonal variable for quarter i. If one seasonal factor is
significant, two others must be included in the equation.

Other variables tested that not enter the equation with statistically significant coefficients were:

- sales of each of the different lottery games,
- Foxwoods handle,
- Connecticut Transfer Payments (the major part of which is social security payments),
- Connecticut Dividends, Interest and Rent, part of which is retirement income from savings, and
- Connecticut Personal Income.

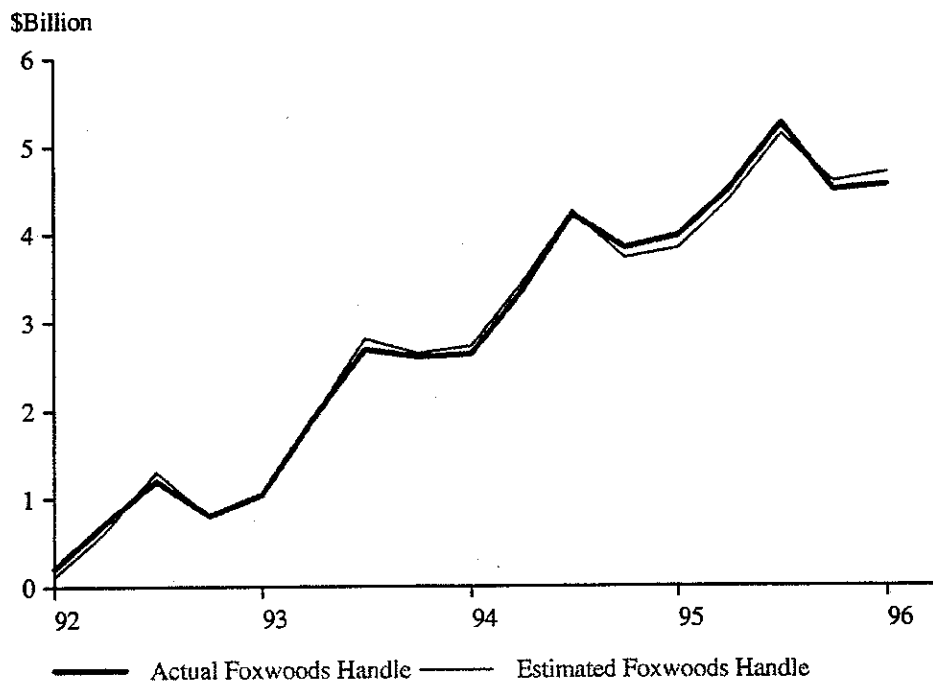
Charitable gaming appears to be unaffected by spending on other forms of legalized gambling in Connecticut and only to be affected by demographics and the unemployment rate. This latter variable may be registering players' confidence in the economy.

Native American Casinos

Four variables explain 99.5% of the variation in wagering at Native American Casinos in Connecticut:

- Connecticut population age 35 years and older,
- The average number of video facsimile machines,
- A time trend to capture increasing penetration of the market, and
- Seasonal factors.

Native American Casinos Handle, Calendar Years 1986 Through 1996



Note that the horizontal axis ticks indicate the first quarter of the calendar year rather than the beginning of the year.

Since opening in February 1992, Foxwoods handle has grown rapidly, primarily by its increasing market penetration in New England. Most of the patrons currently come from Connecticut and neighboring New England states. This is captured in our equation by the upward time trend. In addition, the number of video facsimile machines also provide part of the upward trend. We also found a strong seasonal pattern to the data, particularly in third quarter and to a lesser extent in second quarter, as a result of summer vacations. The resulting equation is an outstanding fit and explains essentially all of the variation in the data.

The equation is as follows.

$$\begin{aligned} \text{tot_char} = & -0.53277 * \text{xrunrct} + 0.07912 * \text{ptt65ct} - 19.9161 \\ & (2.24802) \qquad (2.92890) \qquad (1.55856) \\ & + 0.92021 * \text{SEASON_2} + 1.67885 * \text{SEASON_3} + 1.38765 * \text{SEASON_4} \\ & (1.56215) \qquad (2.72422) \qquad (2.25041) \end{aligned}$$

Adjusted R-Squared 0.4572
D.W. 2.2667

where:

tot_char = quarterly charitable gaming sales in million dollars,
xrunrct = quarterly average Connecticut unemployment rate,
ptt65ct = quarterly average Connecticut population, 65 years and
over, thousands,
SEASON_i = seasonal variable for quarter i. If one seasonal factor is
significant, two others must be included in the equation.

Other variables tested that not enter the equation with statistically significant coefficients were:

- sales of each of the different lottery games,
- Foxwoods handle,
- Connecticut Transfer Payments (the major part of which is social security payments),
- Connecticut Dividends, Interest and Rent, part of which is retirement income from savings, and
- Connecticut Personal Income.

Charitable gaming appears to be unaffected by spending on other forms of legalized gambling in Connecticut and only to be affected by demographics and the unemployment rate. This latter variable may be registering players' confidence in the economy.

The equation is as follows.

$$\begin{aligned} \text{foxwoods/pop35ct} = & 0.21181 * \text{foxslotdavg}/1000 + 0.45911 * \text{trend} - 914.481 \\ & (8.22279) \qquad \qquad \qquad (14.6677) \qquad \qquad \qquad (14.6644) \\ & + 0.19411 * \text{SEASON}_2 + 0.49458 * \text{SEASON}_3 + 0.06014 * \text{SEASON}_4 \\ & (4.37242) \qquad \qquad \qquad (11.0862) \qquad \qquad \qquad (1.27408) \end{aligned}$$

Adjusted R-Squared 0.99543
D.W. 2.17952

where:

foxwoods	=	quarterly Foxwoods handle in million dollars,
foxslotdavg	=	quarterly average number of video facsimile machines, thousands,
pop35ct	=	quarterly average Connecticut population, 35 years and older, thousands,
trend	=	time trend,
SEASON_i	=	seasonal variable for quarter i. If one seasonal factor is significant, two others must be included in the equation.

Other variables tested that not enter the equation with statistically significant coefficients were:

- Connecticut total personal income, and
- the Connecticut unemployment rate.

The equation is specified on a per capita basis, where the population variable is the Connecticut population 35 years and older. Over half of Foxwoods patrons are from out-of-State. Here we are assuming that those 35 years and older in those populations grow proportionally to those in Connecticut.

The growth in handle is explained in the equation both by the time trend (representing increasing market penetration) and by the growth in video facsimile machines. The time trend explains about \$4 million, over half, of the growth in Foxwoods handle.



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