Gambling as a Rational Addiction

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This paper applies the Becker-Murphy model of rational addiction to gambling and tests the hypotheses of the model empirically using data on pari-mutuel betting at horse tracks from 1950 through 1987. Gambling demand equations which explicitly account for the fact that gambling is an addictive behavior are derived from the Becker-Murphy theoretical model of rational addictive behavior. The effectiveness of changing the takeout rate, the price variable, on gambling behavior, is examined within the addictive framework. Using instrumental variables techniques, gambling demand equations are estimated, with the results supporting the hypothesis of model of rational addictive behavior. In particular, significant inter-temporal linkages are found in gambling consumption, confirming the assumption that gambling is addictive. Future events are found to have a significant impact on current consumption, implying that individuals are not behaving myopaically. The long run price elasticities of demand implied by the estimates obtained for the addictive demand equation for handle per attendee is approximately -0.68, significantly larger (by approximately a third) than those obtained from demand equations estimated under the hypothesis of non-addictive behavior (with an elasticity of -0.454). This reaffirms that the takeout rate is an effective policy instrument for state governments as they set the price of gambling.

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INTRODUCTION AND SUMMARY

America's gambling fever has been receiving a great deal of attention as gambling has become more acceptable and readily available in recent years. In fact, some form of gambling is legal and available in every state except Hawaii and Utah. Organized religion's opposition (once strong) has been stifled as charitable Monte Carlo Nights and Bingo have become pervasive. Even 'Bible Belt' states have entered the lottery industry.

Moreover, the amounts spent on gambling are dazzling. In 1989, more than $290 billion was wagered on gambling activities in the United States. This is a 6% increase over the 1988 handle. Almost $14 billion of this handle was wagered on horseracing; an increase of 1.3% over the 1988 handle. Gambling operators retained over $30 billion in 1989. This is a 7.7% increase over the amount retained in 1988. Horseracing operators retained 20.3% on average, almost $3 billion. This is an 2.3% increase over the amount retained in 1988 (Christiansen and McQueen 1990a, 1990b).

Not everyone wants to celebrate or congratulate the gambling operators. Gambling has been attacked because of its potential harmful effects on society; the dangers of compulsive wagering and the erosion of the traditional work ethic as Americans try to strike it rich with a lucky ticket. Headlines publicizing the gambling related suspensions of Cincinnati Reds' Pete Rose and New York Yankees' owner George Steinbrenner bring the moral overtones of the activity to public awareness (New York Times, 1989; Vescey, 1990).

Gambling has been said to be America's latest social addiction. As the number of people gambling increases, gambling problems become more prevalent. Psychiatrists are reported to be seeing more patients with gambling related problems. Problem gambling is to blame for many bankruptcies and divorces. Many down-trodden gamblers turn to crime in order to keep loan sharks or bookmakers at bay. The problems caused by excess gambling are not limited to social and financial. Pathological gamblers also face many medical problems such as chronic headaches, migraines, breathing difficulties, angina pains, heart arrhythmias and numbness in the arms and legs (Barron, 1990; Lesieur, 1977; Lesieur and Custer, 1984). So, as the real and social costs of gambling are recognized, the degree of addiction becomes an important factor to be determined.

A theoretic economic model of rational addiction was developed