

Gambling on Lotteries and Casinos in Tennessee

Chapter in *Freedom and Prosperity in Tennessee*

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I. Introduction

Some industries face much more government regulation than others. The gambling industry can be considered to be an entertainment-type industry, like movies or professional sports, in which people pay to engage in an activity but there is nothing tangible produced. The gambling industry, generally defined, is one of the most regulated industries there is. Historically the industry has been banned or strictly regulated by government, at both the federal and state levels.

Forty three states and the District of Columbia now operate lotteries, and this is the most common form of gambling that is now allowed in states. Since the late 1980s, however, casino gambling has seen enormous growth, and is currently a controversial public policy in many states. While casinos may promote employment and tax revenues, they may also cause economic and social ills. The next phase of the expansion of the gambling industry in the U.S. is going to be online gambling.

Tennessee is a relatively new entrant to the legal gambling world, having introduced the lottery only in 2004. Prior to that, Tennessee had been one of fewer than five states that did not allow its citizens to engage in some form of legal gambling. Now that Tennessee has opened the door to legal gambling, is the expansion of the gambling industry consistent with freedom and

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prosperity in the state? This chapter examines the likely economic and social impacts of expanded legal gambling options in Tennessee. We begin with a brief review of the Tennessee lottery and the typical concerns people have with state lotteries. Next we examine how different gambling industries affect each other; this will help inform us as to how the introduction of casinos or online gambling might affect Tennessee's lottery or businesses. Then we examine the various benefits and costs to be expected with the introduction of casinos. The chapter concludes with a discussion of moral and philosophical issues related to legalized gambling.

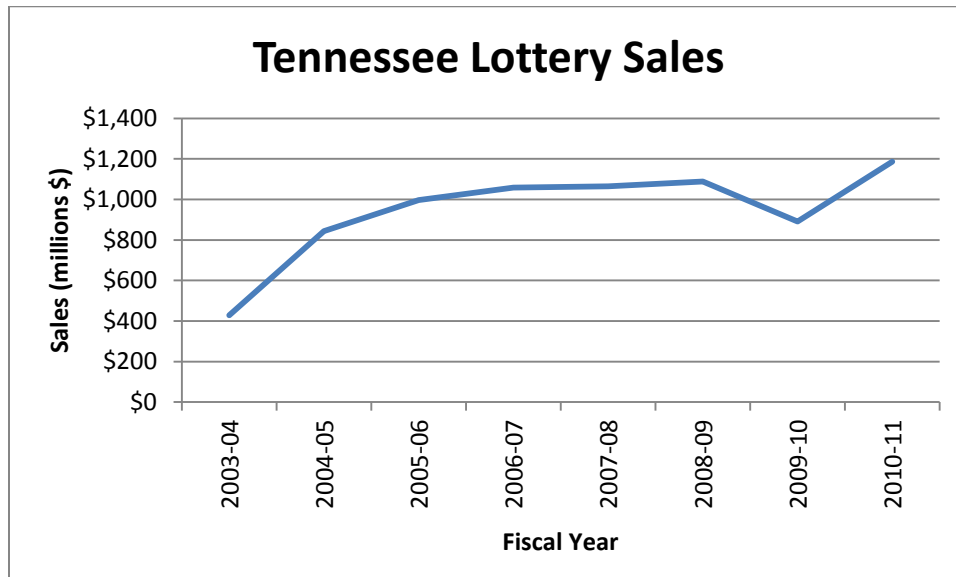
II. The “Tennessee Education Lottery”

Forty three states, plus Washington, DC, now operate a lottery. Tennessee voters approved a lottery in 2002, which began operations in early 2004. Tennessee was relatively late to join the lottery game, as most states introduced the lottery in the 1980s and 90s. Numerous economic analyses of the lottery have been published in the literature. Some of the most important issues raised in the literature are examined in this section.

Like many state lotteries, Tennessee's lottery was promoted and passed by affiliating it with a good cause – education. According to the lottery's public information sheet, the lottery has raised more than \$2.3 billion for education programs. The lottery subsidizes college students, after-school programs, and pre-K programs.¹ Figure 1, below, shows the lottery's gross nominal sales since its inception in January 2004. The 2004 fiscal year figure is low because the lottery was operating only about half of the 2003-04 fiscal year, which ends on June 30.

¹ See tnlottery.com for a list of facts regarding the Tennessee lottery.

Figure 1. Tennessee lottery sales by fiscal year, 2004-2011



Source: Tennessee Lottery Corporation annual reports, various years.

Lottery adoption

The primary reason state lotteries have become so popular is that they provide another source of government revenue (Jackson, Saurman, and Shughart 1994). However, during the 1990s and 2000s, it became more common for newly-adopting states to tie the lottery to some good cause, such as education. Tennessee’s lottery is called the “Tennessee Education Lottery,” and lotteries in Georgia, South Carolina, and other relatively recent adopters are also tied to education. If states that adopted lotteries later had more opposition to them from their citizens, then it makes sense as a matter of politics that the lottery needs to be tied to a good cause. Perhaps this helps to offset any moral arguments people raise against the lottery or against the state promoting gambling.

The lottery “tax”

Most state lotteries are designed so that roughly 50% of sales are returned to players in the form of prizes, about 10% goes toward operating expenses, and 40% represents “tax” revenue (Clotfelter and Cook 1990). The typical lottery in the U.S. is designed to maximize revenues for the state (Garrett 2001). Until recently the issue of cross-border shopping was a fairly important issue, as isolated states could attract out-of-state lottery ticket buyers, earn tax revenues from non-residents, and possibly increase state-level economic growth (Walker and Jackson 1999). However, since there are no “isolated” lottery states anymore, cross-border shopping is generally not an important issue, as most lottery ticket purchases come from state residents.

Since the lottery is effectively a tax, several papers have examined who buys lottery tickets. That is, who ends up paying the lottery tax to government? The lottery is often characterized by its critics as being “a tax on the poor and stupid.” Generally, empirical studies confirm that lottery purchases come disproportionately from lower-income individuals and the less educated. According to one study, about 49% of lottery players do not have a high school degree, while only 30% of lotto players have a college degree (Clotfelter and Cook 1990). A variety of studies also confirm that individuals with lower incomes tend to spend a higher percentage of their income on lottery tickets than higher income people. The lottery is, therefore, considered to be a *regressive tax*.²

Aside from the fact that the lottery tax falls heavier on relatively poor people, it is also worth noting that how the state spends the lottery revenue also contributes to the regressivity of the lottery as a public policy. For example, Rubenstein and Scafidi (2002) examine the incidence

² For more information on the lottery, see Clotfelter and Cook (1991) and Borg, Mason, and Shapiro (1991).

of the lottery tax for Georgia's HOPE Scholarship program, a program in which the lottery covers college students who had a "B" average (or better) in high school. They find that lower income, non-white households spend more on the lottery and receive lower benefits, in terms of the financial support for college. This evidence is representative of much of the literature that fairly strongly indicates that the lottery is a regressive tax.

On the other hand, one could argue the regressivity issue may not be as serious of a problem with the lottery as some observers think. Consider that the lottery represents a *voluntary tax*. That is, the tax is quite easy to avoid. You do not have to pay the tax if you do not buy lottery tickets. Since economists generally believe that individuals can best decide the best way to spend their own money, the voluntary tax argument may offset the regressivity issue to some extent.

Politics and fungible budgets

As noted above, state fiscal stress is certainly one of the key factors that has led so many states to adopt state lotteries. But there is an important political explanation for this, too. Politicians want to be popular, of course, and introducing a lottery, which many people like, may increase their popularity. Perhaps more importantly, if the lottery were not introduced, politicians may need to either cut spending or raise other taxes in the state. So the lottery ends up being a politically easy way to raise revenues or to avoid having to cut spending.

Another way in which the lottery acts as a political tool can be seen when considering the fungibility of budgets. In Figure 1, above, one can see that the Tennessee lottery has had sales of around \$1 billion each year since the 2005-06 fiscal year. Supposing that around 50% of these revenues have been given back to lottery players in the form of prizes, one might expect

expenditures on Tennessee education has increased by roughly \$500 million each year. This is clearly what the Lottery officials would like people to believe, as they advertise the amount of money given to various education programs. However, when considering the ultimate effects of the lottery, it is important to recognize that *budgets are fungible*.

It may be the case that the Tennessee legislature and governor have maintained or even increased their expenditures on education in the state. But it may be more likely that, with the availability of lottery funding for education, the state has *decreased* its support of public education. Many states have been facing budget cuts, even before the 2007-09 recession. Many public universities have seen their budgets shrinking. So even though the lottery may advertise how much is doing for education, at the same time state politicians may be cutting their support for education. The net impact of the lottery on education probably varies by state. There has not been any empirical study of this particular issue since the most recent recession, and because Tennessee introduced the lottery only a few years earlier, there is no empirical evidence available to determine the net impact of the lottery on Tennessee education.

Finally, since one function of the lottery is to subsidize college students, a likely effect of lotteries being tied to college scholarships is that the tuition and fees charged by colleges increases. Since the students do not bear much of the cost of tuition increases, colleges can increase tuition and their revenues, as lottery scholarships boost demand for college. This may be one explanation for why the cost of college increases at a rate much higher than the overall inflation rate.

Consumer sovereignty

There are a variety of arguments given in opposition of state lotteries. Lotteries represent a regressive tax; they may encourage people to gamble rather than work hard for a living; they may not end up increasing net funding for socially desirable ends; etc. One can argue whether or not the state should be sponsoring legalized gambling.³ But in terms of economics and consumer sovereignty, it seems clear that individuals should be allowed to spend their money as they wish. After all, each individual knows his own utility function best and can make consumption decisions in a way to maximize their own welfare.

People obviously enjoy playing the lottery. The recent \$640 million Mega Millions jackpot proves this, as lottery ticket sales reached a record high rate leading up to the winning drawing. Although most people do not get any tangible benefit from playing the lottery, clearly people get some benefit from imagining what they could do with half a billion dollars. In the end, the lottery may just provide a daydream for people; but it's something for which people are willing to pay.

Summary

The lottery in Tennessee is undoubtedly a successful program, with an annual average of over \$1 billion in sales for most of the life of the lottery. We have examined some of the concerns that many people have over state-operated lotteries. However, since Tennessee already only recently introduced the lottery, data are limited, and we have not examined the economic impacts of the lottery in Tennessee. Clearly, the lottery provides some revenue to government. Aside from that, there are unlikely to be other major economic impacts from the lottery.

³ A discussion of private lottery ownership is beyond the scope of this chapter.

What is perhaps more important is the likely impacts on the Tennessee lottery if the state were to introduce other forms of legalized gambling, such as casinos or online gambling. We examine these issues in the next section.

III. Inter-industry Relationships⁴

Like most other states, Tennessee will be forced to consider whether or not it should expand its offering of legalized gambling beyond the lottery. One key consideration, given the Tennessee lottery is so new, is how any new gambling in the state would affect the lottery or other industries. In particular, the introduction of casinos and online gambling should be considered, as these are the most popular types of legalized gambling right now.

A variety of studies has examined the impacts of one gambling industry on another, but these studies tend to be limited, in terms of their scope and time period covered. The findings are mixed, suggesting that gambling industries affect each other in varied ways. Table 1 summarizes some recent studies on gambling inter-industry relationships.

Table 1. Studies on the relationships among gambling industries

Paper	Years	States/Counties	Findings
Anders, Siegel, and Yacoub (1998)	1990-96	1 county (AZ)	Indian casinos cause a reduction in tax rev.
Borg, Mason, and Shapiro (1993)	1953-87	10 states	Lotteries cause a decline in some other tax rev., but total tax rev. increases
Elliot and Navin (2002)	1989-95	All states	Casinos and pari-mutuels harm lotteries
Fink, Marco, and Rork (2004)	1967-99	All states	Net increase in lottery rev. causes a decrease in state aggregate tax rev.
Kearney (2005)	1982-98	All states	Lotteries do not harm other forms of gambling
Popp and Stehwiien (2002)	1990-97	33 counties (NM)	Indian casinos reduce county tax rev.
Siegel and Anders (1999)	1994-96	1 state (MO)	A 10% increase in gambling tax rev. leads to a 4% decline in other tax rev.
Siegel and Anders (2001)	1993-98	1 state (AZ)	Slots harm lottery; horse and dog racing do not affect lottery

⁴ This section draws material from Walker and Jackson (2008).

Two studies of particular interest are those by Borg, Mason, and Shapiro (1993) and Kearney (2005). The Borg, et al. study shows that, while lotteries may reduce revenues in other industries, the overall tax revenues to states tend to increase with the introduction of lotteries. This makes sense because states typically keep around 50% of all lottery ticket sales. The study by Kearney shows that lotteries do not reduce revenues in other gambling industries.

A more recent and comprehensive study examines the inter-industry relationships between casinos, lotteries, horse racing, and greyhound racing (Walker and Jackson 2008). The study uses panel data for all states from 1985-2000. The inter-industry relationships found are presented in Table 2.

Table 2. Summary of intrastate industry relationships⁵

Model & Variables	Casino	Dog racing	Horse racing	Lottery
Casino		-	+	-
Dog racing	(-)		-	+
Horse racing	+	-		+
Lottery	-	+	+	
Indian casino square footage	+	(+)	+	-

Table 2 indicates that the industry listed in the rows affects industries in the columns in a positive way (+) or negative way (-). Parentheses indicate that the results were not statistically significant. In Tennessee, which has only a lottery currently, we would expect the following impacts on the lottery: Commercial and tribal casinos would harm the lottery; horse or dog racing would have a positive impact on the lottery. In other words, based on the results from the Walker and Jackson (2008) study, casinos and lotteries are substitutes, while the lottery and

⁵ The variable tested for each industry is revenue (or volume), except for Indian casinos. Since tribes are sovereign nations, they are not required to report or publicize revenue data. Indian casino square footage is a proxy for the volume/revenue at tribal casinos.

racing are complementary. In any case, it is likely that the introduction of a new type of gambling, particular casinos, would lead to an *increase* in overall tax revenues, even if casinos would cannibalize some of the lottery revenues.

Summary

The Tennessee lottery may see a modest reduction in sales (or lower growth in sales) with the introduction of any new type of gambling in the state. Previous empirical studies suggest that some gambling industries act as substitutes, and others act as complements. Depending on the goal of public policy, this consideration may be very important, or irrelevant. If we are interested in allowing consumers to spend their money how they wish, then perhaps additional forms of gambling should be legalized, regardless of the net tax impacts on the state. After all, the introduction of a new good or service is likely to be beneficial to those consumers who choose to consume the good or service, as well as the industry providing it.

IV. Bordering State Competition

Casino gambling is likely to become a serious public policy issue of debate sooner or later in Tennessee. There are several critical issues to consider, with respect to the availability of casino gambling in neighboring states. As shown in Figure 1, the state borders seven other states. Casino gambling (tribal or commercial) is already available in Missouri, North Carolina, and Mississippi.

Figure 1. Map of Tennessee and bordering states



The ninth largest casino market in the U.S. during 2011 was Tunica, Mississippi (AGA 2011, 8). This market is roughly 30 miles from Memphis, and just 15 miles across the Tennessee-Mississippi state line. Data from the Mississippi Gaming Commission indicates that over 30% of patrons to Tunica casinos come from Tennessee.⁶ The Cherokee Casino in Cherokee, NC, is about 75 miles from Knoxville. Again, this provides a casino opportunity for people living in a large Tennessee city. Finally, there is a small riverboat casino in Caruthersville, MO, right on the Missouri-Tennessee state line, which is convenient for the rural northwest part of the state (near Dyersburg). Kentucky and Arkansas are actively considering the legalization of casinos. Overall, many Tennessee citizens already have fairly easy access to casino gambling.

One argument typically given to introduce casinos in a state is that, because citizens of the state are already patronizing casinos in other nearby states, the state in question might as well

⁶ See mgc.state.ms.us for more information.

introduce its own casinos to keep the tax revenue at home. This is a major consideration which finally resulted in legal casinos in Massachusetts. This argument makes sense from a fiscal perspective. If your citizens are already gambling at casinos, perhaps the state could benefit by keeping the people in their home state.

A second argument is that the introduction of casinos will create a new tourist attraction and may increase the amount of tourism for the state. It is difficult to estimate the overall size and impact of this effect. Given the now widespread availability of commercial and tribal casinos (nearly 1,000 of them in the U.S. now), it is unlikely that the introduction of casinos in Tennessee would generate a significant amount of new tourism for the state.

V. Economic Benefits of Casinos in Tennessee

In previous sections we have discussed the Tennessee lottery, its likely relationship to other forms of legalized gambling, and how gambling in Tennessee would compete with gambling in neighboring states. Now in anticipation that commercial casinos will be considered as a public policy issue, we discuss the likely impacts of casinos being introduced in Tennessee. Without exception, state governments consider legalizing casinos because they believe casinos will create jobs and supplement state coffers. In this section we discuss the economic benefits typically associated with casinos; then we discuss some of the costs and negative impacts of introducing casinos.

Economic growth

Despite the popularity among politicians of legalized casinos, there has been relatively little research on the economic impacts of casinos. Critics of casinos argue that there is little, if

any, positive economic growth effect of casinos. Grinols (2004, 56-65), for example, argues that growth in the casino sector comes at the expense of other firms and industries, so that there is little if any net positive growth effect from casinos. However, Grinols does not base his discussion on empirical evidence.

In one of the first studies to examine whether casinos are a catalyst for economic growth, Walker and Jackson (1998) used a Granger causality analysis modified for panel data to test the relationship between casino revenues and state-level per capita income. They found that casinos Granger cause economic growth. However, the sample period was relatively short, going from 1991-96. The study was repeated in 2007, and no significant Granger causal relationship was found (Walker and Jackson 2007). Our interpretation of the conflicting results from the two studies is that casinos appear to at least have a short-term positive impact on state-level economic growth. This conclusion was further supported when we examined the impact of the rebuilding of the casino industry in the wake of Hurricane Katrina, in 2005 (Walker and Jackson 2009). We found that states in which there was a casino industry saw a statistically significantly higher rate of economic growth in the aftermath of Katrina, compared to those states that were affected but did not have commercial casinos.

The intuition behind casinos having at least a short-term stimulus effect is straightforward. Building a casino, which may cost anywhere from several hundred million to billions of dollars, requires a large inflow of capital to a state or region. In addition, both the building and operation of a casino are relatively labor intensive. So the building and operation of a casino represents economic activity, as does the customers betting on casino games. So in these respects, casinos act as economic engines just as other firms in the economy producing goods or services.

One caveat regarding the research that shows a positive impact of casinos on state-level economic growth is that the empirical work has not been sophisticated enough to tell exactly *how much* economic growth can be attributed to casinos; the literature only shows that there is a positive correlation between the casino industry growth and state economic growth. The empirical work does suggest that the direction of “causation” is from casino growth to economic growth. This suggests that the introduction of casinos in Tennessee would be helpful to the state economy.

Employment

If casinos were introduced in Tennessee, we can trace out what we would expect to happen with employment in the state. As of March 2012, Tennessee has an unemployment rate of 7.9%. To the extent that casino construction and operation jobs come from unemployed workers in the state, the casinos would clearly represent an economic stimulus for the state. The unemployed would be going back to work, transfer payments would decrease, and economic activity would increase.

To the extent that casino construction and operations jobs are filled by individuals already employed, this too is likely has a positive economic impact. Consider that workers are rational, and will choose the best job they can get, given their preferences, expected wage rate, etc.⁷ So if a worker chooses to leave a current job in favor of taking a job at the casino, it must be the case that the worker sees that as his or her best option, given the various characteristics of the job, on which the worker make their decision about which job to take.

⁷ Some casino critics have argued that jobs at casinos are inferior to other jobs. This logic is suspect when one considers that workers will try to choose the best job available to them.

Another consideration is that, when a casino opens it represents a new firm on the demand side of the local labor market. This means there will be increased competition among employers for qualified and productive employees. The increased competition for workers should push wage rates, benefits, or other amenities of jobs, higher, resulting in an improved situation for workers.

It is possible, of course, that through increased competition in the entertainment market, some firms will be unable to compete successfully with a casino. In this situation, then, jobs created by the casino come at the expense of firms that have failed. The net employment impact in this case is zero, and it may be the case that the casino job is less preferred than the job that was eliminated. However, this possibility does not represent a good economic justification for preventing a casino from opening in a market. If it did, then we could argue against any new firm opening in a market. Such a stance is clearly contrary to economic development and a free market economy.

There has not been much empirical economic analysis of the impacts of casinos on labor markets. Perhaps the most comprehensive study to be published on the subject is the paper by Cotti (2008).⁸ Cotti studies all U.S. counties from 1990-96. This period includes much of the first wave of casino adoptions in the U.S. The analysis uses county level employment and average weekly earnings data to determine whether there is a statistical difference between counties with a casino and those without. Cotti finds that total casino employment in casino counties rises 8.2% relative to non-casino counties, and that county earnings in casino counties rise 0.79% faster in casino than in non-casino counties. In order to test the robustness of his results, Cotti

⁸ My discussion on Cotti's paper is taken from a report I wrote on the "substitution effect" of casinos for Spectrum Gaming's 2008 report for the State of Massachusetts. I use that discussion here because it is the most comprehensive review of Cotti's paper that has been written.

adjusts the model to include county-level trends in employment. He still finds the same qualitative effects, but they are smaller in magnitude. An additional finding is that the results seem stronger in rural counties, compared to large urban counties. This makes sense, as a casino represents a relatively large firm in a rural county but not in a large urban county.

Cotti also tests the employment effects on other sectors in the economy, particularly other entertainment industries. His results suggest that there is an insignificant effect on the sub-sectors tested, including museums, zoos, parks, golf courses, ski resorts, marinas, fitness centers, and bowling alleys. The results do show a negative coefficient on employment for bars and restaurants, but it is not statistically significant from zero. Finally, the paper examines whether there are employment and/or earnings effects on counties neighboring casino counties. He finds no negative impacts, and even finds that employment in the entertainment sector in counties neighboring casino counties increases. Overall, the results of Cotti's study suggest that casinos will have a net positive impact on the local economy through employment and wages.

Tax revenues

Aside from the expected employment effects from casinos, the tax revenues are typically the most important political motivation for the legalization of casino gambling. Tennessee may eventually introduce commercial casinos, or it may sign an agreement (i.e., compact) to allow a tribal casino in the state.⁹ If the state signs a compact with the Cherokee (or another tribe whose reservation lands are within Tennessee), the state can seek to receive payments in return for its consent for the tribe to open a casino. In some cases, such payments are given on the condition

⁹ The introduction of a tribal casino typically requires that the tribe build a casino on its reservation land. The introduction of tribal casinos requires federal government approval as well as the state's consent. Because tribal casinos are generally not regulated by the state, a detailed discussion of tribal casinos is beyond the scope of this chapter.

that the state guarantees a monopoly for the tribal casino. In general, however, commercial casinos represent a greater potential benefit for state budgets.

A variety of studies have examined the impacts on state revenue from the introduction of casinos. In 2011, John Jackson and I published what I believe to be the most comprehensive study on the topic (Walker and Jackson 2011). We examined state government revenues, net of federal transfers, for 1985-2000. When we tested the net impact of casino revenues, and implicitly, casino taxes, we found a modestly *negative* impact from the introduction of casinos. It should be emphasized that the model we tested included all state, and included a limited sample size. Therefore, it may very well be the case that Tennessee would see a positive net impact on state revenues if it were to introduce casinos. However, the available evidence suggests that a positive tax revenue impact from casinos is not guaranteed.

Whatever the empirical evidence suggests are likely effects of gambling on net state tax revenues, both lottery and casino revenues face very high relative tax rates. This suggests that the introduction of casinos should lead to an increase in net tax revenues, even if 100% of the casinos' revenues come at the expense of other industries in the state, as long as the state sets the casino tax at a higher rate than the sales tax. Although the empirical evidence is mixed, it is clear that tax revenues are a primary catalyst for states to introduce casinos. If nothing else, the casinos represent an alternative for politicians to cutting spending or raising other types of taxes in the state.

VI. Social Costs of Casinos

The social costs of gambling, and particularly those affiliated with casinos, have received an enormous amount of attention in the literature. Here we discuss two specific areas of this

research which will be enlightening for predicting the likely impact of introducing casinos in Tennessee. First, we discuss the sources of social costs and the empirical estimates of the social costs of gambling. Second, we discuss the relationship between casinos and crime.

Social cost estimates

When states first began legalizing commercial casinos (outside of Nevada and New Jersey) in the early 1990s, there was a lot of debate about the alleged social costs of gambling that are attributed to “disordered gamblers.” Among the different topics of research related to gambling, estimating the prevalence and treatment of disordered gambling has become the major area of research. Psychology research finds that roughly 1% of the adult population can be considered to have a gambling problem.¹⁰

Problem gamblers often exhibit a variety of unhealthy and anti-social behaviors. Researchers have attempted to put dollar values on some of these bad behaviors, the sum of which came to be known as the “social costs of gambling” in the literature. Walker and Barnett (1999, Table 1) list some of the commonly alleged social costs to be associated with disordered casino gambling:

- Income lost from missed work
- Decreased productivity on the job
- Depression and physical illness related to stress
- Increased suicide attempts
- Bailout costs

¹⁰ The American Psychiatric Association publishes the *Diagnostic and Statistical Manual*, which provides disorder categories as well as diagnostic criteria. Discussing the prevalence and diagnosis of gambling problems is beyond the scope of this paper. We will take for granted that such problems exist among a small proportion of the population. The term used to describe gambling problems has evolved. In the 1990s there was “problem” and “pathological” gambling. The newest term, I believe, is “disordered gambling.” These different labels are used interchangeably in this chapter.

- Unrecovered loans to pathological gamblers
- Unpaid debts and bankruptcies
- Higher insurance premiums resulting from pathological gambler-caused fraud
- Corruption of public officials
- Crime
- Strain on public resources
- Industry cannibalization
- Divorces caused by gambling

Researchers have tried to estimate the monetary value of these and other social costs. Grinols (2004, 171) estimates the social costs of per year per pathological gambler is \$10,330. This estimate is derived by averaging the estimates from several other studies that provided original estimates. However, none of the papers used by Grinols went through a peer review, and many arguably have serious methodological flaws. There are several major problems with the social costs of gambling literature and empirical estimates. Many of these issues were identified by Walker and Barnett (1999) and Walker (2007).

The first problem with many of the social cost studies is that their authors fail to define what “social cost” means. Many of the cost estimates were performed by individuals from disciplines other than economics, such as public administration, law, and even landscape architecture! These disciplines do not have a rigorous definition of social costs. Walker and Barnett (1999, 185-186) argued that from a welfare economics perspective, a social cost represents a decrease in societal wealth. This definition precludes wealth transfers from being considered to be social costs. Then among the effects on the list above list, the following could not be classified as social costs: bailouts, income lost from missed work, decreased productivity, and bad debts. Social costs – those that decrease the wealth of society – may include police

enforcement costs, incarceration costs, and treatment costs. As a whole, however, the social cost estimates in the literature dramatically overestimate the true social costs of gambling.

Another problem with the social cost estimates in the literature is that many of them are based on surveys of *Gamblers Anonymous* members. Since these individuals are likely those with the worst gambling problems in society, they likely overestimate the social costs of gambling for society at large. Further, it is questionable whether problem gamblers are able to accurately estimate the costs they have incurred or caused as a result of their disordered gambling.

A key problem with estimating the social costs of gambling – the problem that makes it effectively impossible – is “comorbidity.” Recent published studies in psychology have shown that around 70% of problem gamblers have other behavioral problems. For example, Petry, Stinson, and Grant (2005) find that 73.2% of U.S. pathological gamblers have an alcohol use disorder. The prevalence rate for drug use disorders is around 38% for pathological gamblers. Another study (Westphal and Johnson 2007) found that 77% of their subjects with a gambling problem had a co-occurring behavioral problem, and 56% had multiple problems. The problem that comorbidity creates is that it makes it impossible to partition the socially costly behaviors among a person’s various disorders. Yet, *all* social cost of gambling estimates have ignored this issue, simply attributing all of the costs to problem gambling. This clearly means that social cost estimates overstate the true cost of problem gambling.

Casinos and crime

Perhaps one of the greatest concerns voters and policymakers have about the introduction of casinos is that casinos may create or attract crime. The fact that casino customers often carry

large amounts of cash may be a catalyst for criminals to flock to casinos. Alternatively, disordered gamblers may commit crimes to get money to continue gambling. There have been a number of studies that have examined the relationship between casinos and crime. However, the results of these studies are far from conclusive.

One of the most comprehensive studies published to date on the relationship between casinos and crime is by Grinols and Mustard (2006). This study uses a county-level analysis of crimes rates in casino and non-casino counties, from 1977 to 1996. The authors find that casinos are responsible for a significant amount of crime in casino counties four or five years after casinos are introduced in the county. Several other studies have found similar results. However, studies linking casinos to crime have been criticized.¹¹ It turns out that a key empirical issue that affects whether a study can link casinos to crime is how the crime rate is measured. The crime rate helps us to judge the relative safety (or danger) of different communities, or the risk of an individual becoming a victim of crime; it is usually expressed as a rate per 100,000 population:

$$\text{Crime rate} = \frac{\text{\# of crimes committed}}{\text{population at risk}}$$

My literature review of the casino-crime literature (Walker 2010) found several important caveats to consider when evaluating the alleged link between casinos and crime. A key finding is that most of the papers that conclude that casinos cause crime exclude casino visitors (i.e., tourists) from the crime rate calculation, whereas studies that find no link between casinos and crime include visitors in calculating the crime rate.

When the Grinols and Mustard (2006) analysis concludes that casino cause an increase in the crime rate, it is because they include the crimes committed by casino county visitors in the

¹¹ For a detailed critique of the Grinols and Mustard (2006) paper, see Walker (2008).

numerator, but exclude the number of visitors from the population at risk measure (in the denominator). This overstates the crime rate in casino counties.

A more recent study by Reece (2010) helps alleviate some of the problems in the casino-crime literature. Although Reece studied only one state (Indiana), he is more careful than most other researchers in modeling the casino-crime relationship. First, he controls for casino volume by including casino turnstile count as an explanatory variable in his model. He also included a variable for hotel rooms to help control for tourism in general. Reece's results indicate that increased casino activity *reduces* crime rates, except for burglary.

There exists conflicting evidence on the link between casinos and crime. But the best empirical work indicates that, if Tennessee legalized casinos and tourism increased, the number of crimes committed would increase, but the crime *rate* accounting for tourism would likely fall. In short, crime tends to be a larger concern about casinos than is warranted based on the empirical evidence.

Summary

If casinos are eventually introduced in Tennessee, a variety of social impacts can be expected. A proportion of the population can be expected to exhibit disordered gambling behaviors. However, it is not clear that the number of people with this type of infliction in Tennessee depends on whether casinos exist in the state. This is because many Tennessee citizens are already within a short drive to a casino.

Nevertheless, psychologists and economists tend to agree that there are some socially harmful impacts from casinos. Some of these are listed toward the top of this section. Monetary

estimates of these social ills are unreliable, so concerned citizens and politicians should simply be aware of the potential problem some individuals will have with gambling. But the issue is not much different from tobacco or alcohol, or fast food. Some people consume too much of these products, but this typically is not a good argument for government to ban the product – at least in a free society.

VII. Online Gambling

Up to this point in the chapter we have ignored online gambling. As computer technology and internet speed have increased, so too has the availability and volume of online gambling. There has been little empirical analysis of the online gambling market, but everyone with a computer has had access to internet gambling for at least the past decade.

The online gambling market changed somewhat in 2006, with the passage of the Unlawful Internet Gambling Enforcement Act (UIGEA), which sought to ban banking transactions that involved gambling via the internet. The law did little to curb internet poker and other gambling, but it did cause much of the industry to move offshore. In April 2011, the FBI and Department of Justice seized the domain names of three of the biggest online gambling websites, in one of the largest and publicized acts to enforce laws against online gambling in the U.S. Still, people in the U.S. can gamble online, as the laws are easy to skirt and are not consistently enforced against individual gamblers.

In December 2011, the U.S. Justice Department surprised everyone by issuing an opinion that clarified its position on internet gambling with respect to the Wire Act. The opinion

effectively gives the right to states to individually regulate online gambling.¹² Several states have already begun drafting legislation to begin offering online gambling, and Illinois became the first state to introduce online lottery sales, in March, 2012.

Because legal, state-regulated online gambling is virtually new, there is almost no empirical evidence to indicate what the likely effects of online gambling would be on other types of gambling. For example, if Tennessee were to introduce casinos and online gambling, how would these industries affect each other and the lottery?

One study that examines online gambling and its impacts on casinos is by Philander (2011). This study finds that each dollar increase in online gambling leads to a 30 cent reduction in commercial casino revenues. Yet, even in this case, the introduction of online gambling is likely to lead to a net *increase* in overall state revenue. Another study (Philander and Fiedler 2012) finds that online poker and offline (casino) gambling are complementary, rather than substitutes.

Since Tennessee currently has neither casinos nor online gambling, if it were to introduce the two simultaneously it would likely maximize its revenues from legalized gambling offerings. The new forms of gambling would likely have a negative impact on lottery sales, as explained earlier in the chapter. However, the introduction of new forms of gambling would almost certainly increase the overall amount of tax revenues from legalized gambling.

In terms of employment and other effects on the Tennessee economy, the introduction of online gambling in the state may stimulate employment, but likely only modestly. An internet

¹² This exempts sports gambling, as the opinion specifies that the Wire Act applies specifically to sports betting. See Virginia A. Seitz (2011), "Whether proposals by Illinois and New York to use the internet and out-of-state transaction processors to sell lottery tickets to in-state adults violate the Wire Act," Memorandum Opinion for the Assistant Attorney General, Criminal Division, U.S. Department of Justice (issued 12-23-11; dated 9-20-11).

gambling industry that serves the state would not likely be a very labor intensive operation. However, as with other types of legalized gambling, it does represent an industry that would offer something that consumers want. In this sense, one would expect online gambling to contribute to the state economy.

VIII. Moral and Philosophical Considerations

States that have introduced lotteries, casinos, and other forms of legalized gambling typically do so after attempting at least a simple cost-benefit analysis. State government may hire consultants to provide empirical estimates of the costs and benefits of introducing a certain number of casinos in the state. But such empirical estimates are always flawed and, to some extent, arbitrary.

Legislation to introduce casinos typically specifies that the casinos must include a minimum capital investment, pay relatively high taxes, etc. The legislation attempts to guarantee the state a minimal amount of benefits. At the same time, legislation may include provisions that require the casino industry to fund treatment or hotlines for problem gamblers, fund infrastructure improvements, and otherwise attempt to offset any social costs that may be attributed to casinos.

Rarely is the casino question considered in the context simply of whether the supply and demand sides of the market can interact to create value for the individuals in society. The gambling industry is thought of as a public policy, not as a typical market. But what about the issues of property rights, freedom of choice, and the role of government in a free society? These

are issues I have written about previously (Walker 2007, chapter 9), that are also applicable in discussing legalized gambling in Tennessee.

If we believe in individual freedom and property rights, values that were the basis for founding the United States, then why should these values not apply in the case of legalized gambling? Why shouldn't property owners be allowed to build a casino if they view that as the highest-valued use of their property? Similarly, why shouldn't consumers be allowed to spend their money as they choose, so long as their choices do not harm other people?¹³ A classical liberal perspective on government is that government is created by individuals to protect their freedom and property rights. Yet, in the case of gambling, the role of government appears to be to protect people from themselves.

As other chapters in this volume have argued, the best path toward increased prosperity in Tennessee is more freedom, the reliance on market forces, and limited government. The application of these principles with respect to legalized gambling suggests that government should allow the industries. Other states have provided a number of examples for how the industry can be effectively regulated. A completely free market for gambling is not politically feasible, nor is it something that would win popular support from voters. But a ban on gambling (except the lottery) is a highly inefficient policy because it prevents willing buyers and sellers of a popular entertainment industry from operating in the state. As with other sectors of the economy, a more free market with respect to the gambling industry would increase economic development in Tennessee.

¹³ Critics of legalized gambling argue that the potential social costs associated with gambling represent externalities and therefore justify government regulation of the industry.

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