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Measuring Costs from Permitted Gaming: Concepts and Categories in Evaluating Gambling's Consequences

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This paper addresses the methodology of cost–benefit analysis as applied to policy alternatives regarding legally sanctioned gambling in its various forms. Existing economic studies regarding the social costs of gambling are reviewed and critiqued. Distinctions are made between definitions of social costs that are defined as actions which result in negative changes in aggregate social wealth (the "narrow" definition), and those which also include internal nonmarket costs that are borne by individual gamblers and their immediate families and acquaintances (the "broader" definition). This distinction is important because of its bearing on economic policies that are primarily concerned with economic efficiency versus policies that are more paternalistic, which attempt to protect individuals from self-damage or self-destruction by restricting their ranges of choice. Whether societies choose to prohibit or severely restrict permitted gambling, or allocate substantial resources to mitigate its negative side effects, rests largely on which of these perspectives regarding social costs they find more appropriate. Finally, the issue of social protection through restrictions on the availability of gambling to the entire population, versus a strategy tailored toward identifiable "problem" gamblers, is discussed.

KEY WORDS: social costs of gambling; cost–benefit analysis; social wealth; nonmarket costs; social and economic policies related to gambling; social protection.

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INTRODUCTION

With the spread of casinos and casino-style gambling in many countries throughout the world over the past two decades, there has been a growing concern in many jurisdictions about the negative personal and social consequences that have emerged—or might yet emerge—as a by-product of legally sanctioned commercial or not-for-profit gaming. As a result, commercial gaming is an activity where—after a couple decades of expanded legalization—many states, provinces, and national governments are still wrestling with fundamental questions of what to do with it.

Ultimately, their choices range from strict prohibition to widespread permission, with many variations in between.[1] When a society has chosen to permit some forms of legal commercial gaming, for whatever purposes and in spite of whatever concerns, they often put into place a wide variety of restrictions, constraints, and limitations which—at least in the minds of policy makers, or perhaps as a result of political compromises—strikes some balance between the benefits that the authorizing authorities are trying to capture with permitted gaming and the social damage that might result from the presence of such activities.

If a particular society acts in a rational manner, its citizens would expect it to attempt to establish policies that are consistent with their general preferences and values, and in such a way that would maximize the net welfare that accrues to society at large. As guidelines, welfare can be enhanced through greater aggregate wealth, through broader choices and freedoms for individual societal members, or through the achievement of, or movement toward, commonly held values. Welfare would diminish if wealth is decreased, choices and freedoms are taken away, or society moves away from commonly held values. Sometimes changes in social welfare can be observed and adequately measured, but sometimes not.

The objective of this paper is to shed light on the debates of social welfare as it relates to the spread of commercial gaming in societies at the beginning of the 21st century. It does so by applying sound economic principles in reviewing approaches taken in other major studies, and by reminding the reader what those principles are and how and why they might apply in the particular situations that are analyzed.

Economics is not the only discipline that can be used to examine the positive and negative implications related to changing the legal status of commercial gaming in a society. However, because economic methodology uses specific well-defined concepts, and is well versed in the jargon of costs and benefits, it can provide a much clearer picture of at least some of the issues that surround this controversial subject. This undertaking is not an empirical study. Rather it strives to provide a clear and well-defined framework so that careful and competent social scientists, utilizing objective and replicable measures, can do a reasonable job in estimating those factors and variables that can be measured, and in appreciating the difficulties—and perhaps futility—of attempts to quantify benefits and costs that defy measurement.

INITIAL CONCERNS AND SIMPLE ILLUSTRATIONS

For the most part, this paper limits itself to the cost side of the benefit/cost gambling equation.[2] Among the areas of concern that are usually raised in policy discussions concerning the costs associated with the status quo of permitted gambling, and possible changes in that status, are the following issues:

1. The damage that problem or pathological gamblers do to themselves, to their families, and to society at large as a result of being, or becoming, or altering the severity of their status as, problem or pathological gamblers;
2. The adverse effects of commercial or not-for-profit gaming on other sectors of the local or regional economy, because such gaming venues or activities can draw spending away from previously established businesses or commercial activities;
3. The costs to society at large of providing public goods, resource outlays, and infrastructure to deal with the consequences of commercial or not-for-profit gaming;
4. Concerns that there might be a causal link between permitted or expanded legal gaming and increases in crime or suicide, deterioration in physical health, and other personally or socially undesirable consequences;
5. Concerns that the increased presence of commercial or not-for-profit gaming could lead to a reduction in the level of respect for shared individual, community, or social values that,

in turn, might deteriorate the quality of life for many members of society, including those who choose not to participate in commercial or not-for-profit gaming.

6. A general concern that the spread of gambling is related to a more general deterioration of more fundamental personal and social values, and society at large might suffer as a consequence.

As illustrations of each of the above categories, we might consider the following:

1. *The miscreant father*: A family breadwinner loses the rent money due to excessive gambling at a local casino. As a result, his family is evicted from their apartment, the man's wife abandons him, the children are traumatized, and he subsequently loses his job because of chronic absenteeism;
2. *The failed restaurant*: A family restaurant that has existed for years in a community finds itself in direct competition with restaurants and other food outlets at a new casino, where the casino company's policy is to offer prepared meals below cost in order to attract customers. As a result, the family restaurant is driven out of business;
3. *Public sector costs*: Because of the opening of a new casino in a city, there is considerably greater vehicular and foot traffic in the immediate vicinity of the casino. As a result, the city finds it necessary to expend public dollars to add traffic signals around the casino, to widen nearby streets, and to hire additional police to patrol the now more heavily patronized parking lots, sidewalks and footpaths;
4. *Social impacts*: Since the opening of a local casino, a number of pawnshops have opened in town. The police department reports that there has been a significant increase in the number of DWI (driving while intoxicated) citations in the city sector where the casino is located. Observers have noted that people who frequent the casinos smoke and drink disproportionately to the city's general population. There have also been a few dramatic suicides of elderly people who left notes saying that gambling losses had shattered the stability of their lives;

5. *Community values*: Since a casino has come into operation, observers note that fewer community members are going to church services, are voting in local elections, or are participating in voluntary activities for the city's more needy citizens. There is also concern that welfare or social security checks are being cashed at the casino on a fairly regular basis.
6. *Judgmentalists*: A portion of the community believe that other citizens should not have access to casino gaming because of one or more of the following views:

   - People who frequent casinos are foolish or irresponsible;
   - Casino customers are bound to lose;
   - It is difficult to comprehend what is so fun about pushing buttons on a slot machine;
   - Gambling is a sin, and;
   - The "wrong" people are gambling.

Clearly the above illustrations are indicative of the kinds of attitudes and circumstances that emerge in communities where casinos are introduced and become part of the commercial mix. They point out some of the reasons why many people do not like casinos in their communities, and are also typical of the economic, social, and political ramifications that result when casinos are newly introduced into communities.

However, these scenarios can also be used to illustrate some of the fundamental difficulties that policy makers, researchers, and concerned citizens confront when they try to quantify the personal and social costs that might be attributed to casinos. Economists for the past hundred years—in pursuit of the development and refinement of their discipline—have striven to segment deductive economic reasoning into so-called *positive* analysis which is supposedly value free and based on findings of fact and deduction that can be made regardless of individual tastes, preferences, or societal values; and *normative* analysis, which involves the direct comparisons of different value systems and judgments as to which are more or less deserving or socially desirable.[3] Empirical research in economic analysis is intended to be complementary to *positive* deductive modeling in the sense that such work attempts to objectively measure the variables that are grounded in *positive* concepts, and to confirm or refute hypotheses about the validity of claims regarding the values of such variables. As such, careful economic analysis builds on deductive models, deals with *positive* analysis, and uses quantitative methods and measures that—when correctly applied—meet the underlying requirements of the scientific method.

From each of the above-simplified illustrations, we can point out various difficulties that arise when conceptualizing and/or measuring costs associated with them. In an actual study, each type of example would have to be aggregated to the extent that it occurs within the relevant region.

1. With *the miscreant father* illustration, an important conceptual question is: What would have occurred had the casino not been there for temptation? Perhaps all of the father's—and his family's—difficulties are attributable to the availability of casino gaming, but perhaps not. Without the casino, he might instead have experienced problems with illegal gambling, drink, drugs, loose women, or day trading. Causality is difficult to establish. Was it the casino—or a much deeper psychological trait or problem—that led to the behavior? Perhaps the casino was only the proverbial "straw that broke the camel's back;" alternatively, it might have been the only temptation to which the individual would have succumbed. Also, an analyst would need to compare the outcome of the casino's presence and operating practices against reasonable alternatives in the "state of nature" to validly measure incremental benefits and costs associated with permitted gaming. For example, if this casino did not exist, are there other casinos a few minutes or a few hours away from the father's work or residence that may have also tempted him? Are there illegal gaming outlets? These musings are analogous to the concept of *opportunity cost*, i.e. to determine the costs of a particular course of action, one must compare to the situation that would have prevailed in its absence.
2. With *the failed restaurant* example, there is clearly a cost that falls upon the restaurant's owners and their families, but economists would classify this as a *pecuniary externality*, i.e. a typical working of the market. (Customers prefer the joint restaurant/gaming product that the casino is offering to the restaurant product of the failed restaurant, at prevailing price struc-

tures, and are voting with their pocketbooks.) The case is somewhat unusual insofar as the casino typically is given an exclusive or limited franchise to offer gambling services, whereas there is no such symmetry for the offering of restaurant food product. (The restaurant is typically precluded from offering gambling services.) Thus, to some extent, the restaurant's owners could attribute and blame their plight to government action, and legislators might suggest financial redress to compensate the restaurant owners for their loss. (This is a *normative* issue in the economist's parlance.)

3. With the *public sector costs* scenario, the situation created by a popular casino is closely analogous with that which would occur with a new shopping mall, a new sports stadium, or any other facility in the city that acts as a magnet to attract visitors. The results are *negative externalities* that accrue in the neighborhood of the magnet, and their resolution is often undertaken by local government through zoning, fee assessments, traffic flow planning, or other typical duties related to development;
4. The *social impacts* examples create a number of considerations for analysts trying to properly categorize and segment the various costs in these illustrations. The increased incidence of DWI citations could be indicative of the increased police action that results from the greater density of people in the vicinity of the casino, but it might be as much a supply phenomenon (i.e. more police allocated to the area) as it is a demand phenomenon (i.e. more people actually committing DWI offenses than before.) Furthermore, as with other scenarios, there is a causality question: Is the increase in DWIs solely attributable to casino gaming, or are there other factors at work as well? The number of pawnshops may indeed increase, but these could as well be interpreted as market responses to consumers who want to have greater access to liquidity, perhaps because of the casino. The presence of the pawnshops may be distasteful to many, but there is a fundamental question of when one's person's private decisions should be interfered with "for his own good." The same can be said for smoking or drinking, except to the extent they create pecuniary externalities by requiring society at large to allocate medical

and health care resources to those who become ill as a result of such consumption patterns;

5. The *community values* illustration is particularly difficult for economists to try to categorize and treat in a *positive* rather than a *normative* sense. Whether or not society is better off when people go to church, refrain from voting, or volunteer their services to good causes, are all normative issues in the sense that an observer might believe one action or another to be better or worse for the community, but such a view is a value judgment rather than a statement of objective fact. Like-minded people might deplore such changes in community values, but others might find them enlightening or beneficial. To determine who is right would require interpersonal comparison of values, which by definition is not *positive* but rather *normative.* As a result, economists usually admit they have little to contribute in such arguments. Furthermore, the ability to measure any social costs or benefits associated with such incremental shifts in behavior is even more problematic.[4]
6. Much of the above discussion is also relevant for the *Judgmentalists* example. One of the great challenges in a democratic society is to set a code of law that provides maximum freedom for individuals, but protects society at large from adverse consequences linked to the actions of others. The broad philosophy of British common law (and to an extent Libertarianism) is to establish a rule of law that provides well defined property rights, but which constrains behavior only when one person's actions interfere with the property rights of others (i.e. negative externalities). That said, many laws that deal with the vices (alcohol, tobacco, drugs, gambling, the sex industries) are motivated by some mix of trying to impose the values of some members of society on everyone else, and attempting to control for negative externalities.[5]

DEFINITIONS OF SOCIAL COSTS AND OTHER NONMARKET COSTS LINKED TO GAMBLING

Conceptualizing and estimating "social costs" associated with each of the above concerns—or related issues that can be linked to permitted gaming—is a challenge requiring careful analysis. In spite of the need for careful definitions and measures to avoid misleading or meaningless results, this has not deterred some researchers and study groups from forging forward with studies and estimates on the social costs of gambling. Many of these turn out to be seriously flawed, because of the conceptual, empirical, and data availability challenges that are glossed over or that are not resolved.[6]

To summarize the methodological difficulties in estimating social costs associated with permitted gaming, one can note the following:

1. It is difficult to attribute outcomes to gambling as a primary or sole cause;
2. Costs associated with certain outcomes are difficult to conceptualize and to categorize, as the later discussion will demonstrate;
3. It is important to distinguish between *private costs* (those borne by the consumer) and *social costs* (those borne by society at large);
4. Even if the conceptual difficulties are adequately addressed, such costs are still difficult to measure with any degree of reliability or accuracy;
5. With some variables, there may be weak or non-existent guidelines for measurement (i.e. what are the measurable incremental costs to society of additional suicides?)
6. Studies that attempt to measure the social costs attributable to gambling have—or should have—some ultimate policy objective, i.e. guiding policy makers as to whether or not gambling should be expanded, more heavily regulated or constrained, etc. The appropriate basis for measurement should relate to the use of the results of such analyses, and should be made in comparison to some alternative "state of nature." For example, if the underlying analysis is going to be used to address the question of legalization versus prohibition, then the costs associated with legal gaming—under an explicit set of rules and constraints—need to be measured against the costs that would prevail in a world of prohibition.

Nonetheless, many or the studies conducted to date have resulted in reporting a single number or a range of numbers—i.e. ". . . the cost to society is $15,000 per problem gambler per annum," or ". . . the range of costs to society is from $9,000 to $50,000 per pathological gambler per annum,"—on the basis that such numbers should—indeed *must*—be measured and reported, regardless of their lack of context, difficulties in conceptualization and measurement, or the ease with which such reporting can be misinterpreted or misunderstood. One problem that sometimes occurs is when researchers approach their analysis with preconceived biases, hoping for a higher (or lower) number because of their beliefs with regard to the seriousness (or lack of seriousness) of the issue.

A good place for a responsible and objective analysis to begin is to establish an acceptable definition of social cost. Drawing from Walker and Barnett (1999),

> Simply (and somewhat imprecisely) put, the welfare economics measure of the social cost of an action is the amount by which that action reduces aggregate societal real wealth. (pp. 181–182)[7]

Thus, by this definition, if an action results in making some members of society worse off, and no one better off, then there is a social cost that has occurred. A measurement of the social cost would be the amount of income transfer it would take to compensate those who were damaged so that they could be made "whole," i.e. as well off as they were before the action took place. Continuing in this vein, if some members of society are made better off by an action and others are made worse off, and if those made better off in the aggregate *could* financially compensate those who lost (in terms of compensation demanded to be made "whole"), then it is an improvement in social welfare even if no compensation is actually made from the winners to the losers.

With this definition as a starting point, it is important to note what is and what is not a social cost. First, transfers of wealth from one individual to another (i.e. through bail-out loans to a problem gambler, or from the theft of one's property) are not social costs, but rather transfer payments from one individual to another. In a similar context, unemployment compensation and bad debts need to be viewed as transfers of wealth between or among individuals and do not therefore involve social costs. However, the commitment of resources by individuals or governments to try to avoid theft or other crimes (police, prisons, locks, security guards, choosing not to go somewhere for fear of becoming a victim of crime, etc.) or to try to "cure" the problem gambler (counselling, medication, etc.) are examples of social costs.[8] Psychic costs that accrue to affected individuals (i.e. the fear that one's property will be stolen, the concerns over the gambling losses of a spouse, etc.) are also social costs by this definition, but are much more difficult to measure and quantify.[9]

Implicit in the discussion of social costs and externalities is that the individual is responsible for his own actions, and knows his own mind, i.e. the consumer is rational. In such circumstances, individual decisions cannot be second-guessed by others; if a person chooses to pursue an activity, it is because that person perceives net gain (as measured in utility) in so doing. As with experience goods[10] a consumer may regret the outcome of a gambling session after the fact, but that does not undermine the rationality of the decision to undertake such an activity, based on the consumer's knowledge of the range of possible outcomes.

Psychologists and other social scientists might argue with the above approach by noting that not all consumers are rational. However correct they might be, such an observation alone does not provide useful guidelines for policy-makers. If one of society's values is to maximize freedom of choice, then rationality is clearly a better starting point than some alternative assumption, such as that most people are so foolish that they need to be protected from their ability to make bad decisions.[11] Furthermore, as Walker and Barnett point out, even the person who becomes addicted to an activity, such as gambling or smoking or drinking, cannot be considered irrational out of hand, because that person typically can anticipate the risks of addiction in the initial decisions of whether or not to consume the potentially addictive commodity.

It is instructive to review Walker and Barnett's discussion of Thompson's (1997) empirical investigation of the social costs linked to gambling, especially with regard to their consistency to the above conceptual foundations. Table 1 represents Thompson's cost estimate per compulsive gambler, based on a variety of assumptions and empirical estimation techniques.

Table 1
Summary of Annual Societal Costs of One Compulsive Gambler (U.S.$)

Employment		2,941
Lost work hours	1,328	
Unemployment compensation	214	
Lost productivity/unemployment	1,398	
Bad debts		1,487
Civil court		848
Bankruptcy court	334	
Other civil court	514	
Criminal justice		3,498
Thefts	1,733	
Arrests	48	
Trials	369	
Probation	186	
Incarceration	1,162	
Therapy		361
Welfare		334
Aid to Families with Dependent Children	233	
Food stamps	101	
Total		9,469

Source: Thompson (1997, p. 87).

Walker and Barnett discuss the categorization of these items first by defining the following classifications of costs, and then discussing the appropriateness of each of Thompson's categories in relation to them:

1. *Transfer payments*: Movements of claims against existing wealth from one individual to another, or from an institution to an individual, which do not alter society's aggregate wealth. As such, transfer payments are not social costs.
2. *Private consequences of individual decisions*: If a person chooses a course of action that affects his income or well-being alone, then it is a private consequence, not a social cost.
3. *Social costs*: If a person's actions cause society to allocate resources to deal with the consequences of those actions, then

such resources are not available for production (of products or utility) elsewhere, and is therefore a social cost.

4. *Psychic costs*: If the actions of an individual create distress for other individuals, to which they would be willing to allocate resources to avoid, then one could argue that the actions in question create a *technological externality* and, as such, create a social cost. Measurement of the social cost would be the amount *the affected individuals* would be willing to spend to avoid the action.[12]

Under the general heading of *employment*, lost work hours would either be a choice by the individual on how to allocate his own time (if not compensated) or a transfer payment from employer to employee if he is. To the extent that the worker is producing less value added than he was before, it is a result of his own personal decision. The cost falls upon himself, or his employer. Lost productivity would reflect upon the private contract between the employer and employee, and would be an example of private consequences of individual actions. In a perfectly competitive market, the worker's wage rate would be adjusted to reflect his lower productivity. Unemployment compensation represents a contractual transfer payment between an affected worker and government. Unemployment, generally speaking, creates a cost borne by the individual.

Bad debts are clearly an example of a transfer payment. Just as loans for any purpose are a transfer payment from the creditor to debtor with a promise to repay, bad debts are a failure of that promise that results in a redistribution of wealth from the creditor to the debtor. (If the creditor expends resources to recover his assets, those resources would reflect social costs.)

Under the *civil court* and *criminal justice* headings, most of the categories reflect resources that are allocated as a result of the actions of gamblers. The one exception is the category of *theft*. As noted earlier, theft is a transfer payment insofar as it does not directly result in a loss of societal wealth, but rather a transfer in existing assets from one individual to another.

Under the category *welfare*, Aid to Dependent Children and food stamps are also transfer payments that take place between government and eligible beneficiaries.

Using these criteria, Walker and Barnett reduce the dollar estimates of Thompson et al from $9,469 to $2,974 per compulsive gambler per annum. They go on to note that even this number is suspect because of questions in causality. The result would apply only if gambling were the dominant cause of the consequences, rather than a only a contributing or incidental cause relative to other factors, such as alcoholism, drug use, depression, mental illness, etc. They go on to note that some other legitimate social cost considerations should have been included, but were not, such as rent seeking efforts by proponents and opponents of gambling legislation. Furthermore, restrictions on the supply of gambling, such as exclusive or limited franchise licensing arrangements for casinos, create monopoly conditions. As a result, they reduce consumer and producer surplus by limiting supply and increasing prices (creating so-called *dead weight loss*), which is also a social cost. At the point of initial licensing or license renewal, the competitive bidding process that companies go through and resources they allocate to win or retain exclusive or limited franchise licenses are also examples of rent seeking.[13]

In summary, Walker and Barnett note that, even with clear conceptual foundations, measuring the social costs and social benefits attributable to permitted gaming is a difficult task. The studies that they reviewed all suffer from inadequate or confused conceptual foundations. As a result, such efforts are either very misleading or virtually useless either as guidelines for policy makers or in shedding light on the actual issues for interested researchers and observers.

THE AUSTRALIAN PRODUCTIVITY COMMISSION ANALYSIS

Subsequent to the writing of Walker and Barnett's paper, two major government studies were released that looked in considerable detail at the ramifications of legal commercial gambling: the *National Gambling Impact Study Commission* in the United States (1999), and the *Australian Productivity Commission* (1999).[14] Though both of these studies were more careful and scientific than the cost/benefit studies cited by Walker and Barnett, many of the same criticisms can also be applied to the Australian Productivity Commission's (APC) *Final Report* and the *Final Report* of the National Gambling Impact Study Commission, along with the related National Opinion Research Center (NORC) study that was funded by the National Gambling Impact Study Commission.[15]

The remainder of this analysis closely examines those portions of the Australian Productivity Commission report that deal with the social cost issue. This study is an illustration of a more careful attempt to establish a workable conceptual and empirical methodology than other work, but also to illustrate some of the same shortcomings that were alluded to in the earlier studies reviewed by Walker and Barnett.

The Australian Productivity Commission (APC) is an independent government body (similar to the U.S. Government Accounting Office) whose mission is to serve as the Australian government's principal review and advisory body on microeconomic policy and regulation. As such, the APC purports to be objective and disinterested in its attempted applications of sound economic methodology.

In addressing the issue of social costs linked to gambling, the APC found, not surprisingly, that the ". . . principal costs for society (costs that are not offset by benefits elsewhere) result from problem gambling."[16] Furthermore, The APC notes that ". . . 'social costs and benefits' as defined in this report are the benefits and costs that are relevant as a basis for possible government intervention in private decisions."[17] Note that this is a far less precise definition than that put forward by Walker and Barnett, and opens the door to problems that are discussed below. Since any information could serve as a basis for possible government intervention, this is a circular definition of social costs.

The stereotypical problem gambler that the APC's analysis concentrates on is described as follows:

> . . . some gamblers encounter severe difficulties controlling at least some forms of gambling. Such people say that they often feel guilty or depressed about their gambling, and sometimes engage in 'problematic' behaviour, such as chasing losses, stealing and lying. At the extreme, their gambling problems can lead to poverty, relationship breakdown, depression and suicide. Many of these people say that they wish they could stop gambling, but cannot do so.[18]

This is not too far from the *miscreant father* scenario cited earlier in this paper.

The APC study attempts to quantify the social costs attributable to problem gamblers by initially grouping them in the following categories:

- financial costs (family debts and bankruptcy);
- effects on productivity and employment;
- crime (theft, court cases and imprisonment);
- personal and family impacts (divorce and separation, depression and suicide); and
- treatment costs.

They also differentiate costs into three categories: internal costs, external costs, and transfers. External costs are those pushed on to some members of society by the actions of others; these would be most consistent with social costs as defined by Walker and Barnett. Transfers are the same as Walker and Barnett's transfer payments, and the APC draws similar conclusions about them, that they are indeed transfers from one member of society to another and do not constitute a social cost. However, the report does note that:

> While *transfers* do not represent a net cost to society, they are nonetheless important for those who pay for them. If the transfers are large, it may be worthwhile investigating cost-effective ways to minimise them or, if they are part of the welfare system, ways to make them more effective. Estimating the size of the transfers and identifying the direction of flows can be a worthwhile exercise.[19]

The APC report then goes on to argue that it is justifiable to talk about internal costs—those borne by the consumer—as social costs *because of the "foolishness" of the gambler.*

> . . . the Commission has included a significant element of internal costs (other than the money spent directly on gambling) in its estimates of the policy-relevant costs that gambling imposes on the Australian community.
>
> This is because of serious reservations about the extent to which problem gamblers are aware of the true costs and benefits of gambling—misperceptions about how the games operate and the true likelihood of winning are widespread and persistent. More importantly, for many problem gamblers, it is questionable whether they are spending money on gambling in a 'voluntary' way, exercising the 'consumer sovereignty' that would normally be assumed to apply.[20]

In effect, what the APC is trying to do is to make the case that, in reality, a portion of gamblers—so-called problem gamblers—indeed are incompetent in making their own spending decisions, at least as it relates to gambling, and this incompetence generates substantial costs for themselves and their immediate family and associates. By implication, such gamblers would need to be better informed, so that they could better appreciate the "true costs and benefits of gambling," and they need to be constrained from "hurting" themselves and their families through the medium of gambling.

The empirical results of the APC study are presented in Table 2.

On a per capita basis, these results range from a cost of about A$100 to A$300 for each Australian. Among those with gambling problems, the cost per problem and pathological gambler would range from about A$10,000 to A$30,000 per pathological gambler (if we assume an incidence rate of 1.0% for pathological or "level 3" gamblers.)[21]

An interesting debate can—and perhaps should—take place around the issue of the legitimacy of including such internal costs as social costs (calling for government action) both for the costs that accrue to the individual as well as those that accrue to other family members, friends, acquaintances, and employers. One submission to the APC argued that if such negative costs are going to be considered for families of problem gamblers, then the positive benefits that would accrue to families of normal (happy and satisfied) gamblers should be measured and netted out. The APC responded: ". . . The *additional* level of happiness from gambling is likely to be small, but the *additional* level of unhappiness from problem gambling is large. In its estimates of costs and benefits, the Commission has not attempted to measure each and every benefit and cost, but concentrated on those which appear to be the most significant."[22]

As a result of inclusion of these internal costs (which the report also refers to as intangible costs), the estimated aggregate cost of problem gambling in Australia is between A$1.8 billion and $5.6 billion per annum. Of greatest importance for this analysis is the observation that over 90 percent of these costs comes from internal costs.

> The most striking feature of these estimates is that the more easily measured direct financial or money costs of problem gambling, which amount to $127 million to $309 million, are a small share of the total. The most significant categories of costs are those covering adverse emotional impacts on immediate family members and parents, followed by the estimate for depression for those with gambling problems.

Table 2
Costs of Problem Gambling (A$ million, 1997–98)

	Low	High
Financial		
Bankruptcy	1.3	1.3
Productivity and employment		
Productivity loss at work	21	150
Productivity loss outside work	7.2	50
Job change		
Earnings loss	24	24
Employee job search	13	13
Employer staff replacement cost	22	22
Crime and legal		
Cost of police incidents	3.2	3.2
Court cases	5.6	5.6
Jail costs	5.1	5.1
Personal and family		
Emotional distress of immediate family		
Moderate problem gamblers	ne	ne
Severe problem gamblers	756	2,267
Emotional distress of parents		
Moderate problem gamblers	ne	ne
Severe problem gamblers	0	666
Breakup of a relationship[a]	288	864
Financial cost of divorce	2.8	2.8
Emotional cost of divorce	126	253
Cost of violence	2.8	8.3
Depression[b]	231	692
Thought of suicide[c]	120	239
Attempted suicide	70	117
Impact on immediate family	81	161
Impact on parents	0	21
Treatment costs		
Gambling counseling services	20	20
Total	1,800	5,586

ne. Not estimated.
[a]Excluding those that lead to divorce or separation.
[b]Excluding those reporting thoughts of suicide.
[c]Excluding estimated attempted suicides.
Source: Productivity Commission (1999), *Australia's Gambling Industries*, Report No. 10, AusInfo, Canberra, appendix J.

The distributional implications of the APC study are that a disproportionate amount of the costs fall onto a small group of society who pay a disproportionate amount of the costs of gambling themselves. For many in this group, the costs are self-inflicted; for some, they are burdens linked to family bonds or concerns for the well-being of loved ones. If one accepts the legitimacy of this line of argument, then the obvious policy response is to work toward a situation where such players can be identified and isolated, and—through a variety of private and public sector efforts and strategies—prohibited from participating in casino-style gambling.

The balance of the categories in the APC report is subject to the same criticisms that Walker and Barnett made regarding the Thompson study.

If the suggested Walker and Barnett methodology is applied to the APC data, then the following conclusions can be drawn:

1. The social costs from permitted legal gambling—once transfer payments are adjusted for—are relatively low (less than A$100 million per annum);
2. The costs that accrue to the individual gambler and his/her family and acquaintances can be quite high (in the range of A$1.5 billion to A$5 billion per annum);
3. If government is going to adopt policies that attempt to efficiently mitigate the costs of permitted gambling (whatever they are called), it should aim its policies to target the small group in society who both create and bear the greatest proportion of these costs.

PUBLIC POLICY IMPLICATIONS OF THE AUSTRALIAN PRODUCTIVITY COMMISSION STRATEGY

Assuming for the time being that the empirical findings of the APC are relatively accurate, and that it is reasonable and humanitarian for government policy—in conjunction with other responsible parties—to try to mitigate the negative consequences associated with legal gambling, then what kinds of policy recommendations should be considered? First, it is worth noting the evolution of the problem gambling issue in jurisdictions with legal casino-style gambling, and the kinds of strategies that have emerged in the past decade in various jurisdictions where problem gambling has taken on a higher profile.

Prior to 1990, there was very little attention paid to problem or pathological gambling by commercial gaming industries or by regulators anywhere. In Nevada, which had had the longest North American experience with casino gaming as a major economic presence, there was no recognition from the gaming industry, the regulatory structure, or state agencies that problem or pathological gambling even existed.[23] As a result, there had been virtually no efforts to deal with it. In some respects, this was understandable in light of the nature and history of casino gaming in Nevada. The great majority of customers to Nevada's casinos came from out-of-state. It was thus easier to dismiss whatever social costs might be linked to their gambling abuses, because the preponderance of costs that might be associated with such behavior would be manifested in the jurisdictions where the gamblers lived, not in Nevada. Thus, policy or gaming business practices in Nevada did not have to be as sensitive to the problems of "foreign" residents than to their own citizens.[24]

Another contributing factor that prevailed through the 1960s and into the 1970s was the fact that casino gaming was outlawed everywhere in the country besides Nevada, and gambling carried with it the stigma of a nefarious reputation and checkered past. The perspective that prevailed was that there must be something seriously wrong with the activity of gambling because of this social condemnation. By observation, excessive gambling destroyed some people, and that was reason enough for its low status. (Other factors, such as the presence of organized crime and scandals involving corruption, skimming and hidden ownerships, added to the poor image and low self-esteem that the precorporate gaming industry conveyed.) In this social environment, it was not difficult to see how gambling was viewed as a vice, and that the problems associated with it were outside the scope of what society should try to address and mitigate. The industry itself implicitly accepted this status, and, as a result, little formal mitigation was ever considered. Finally, because the casino industry dominated Nevada's economy from the 1960s onward, there were few other industries that could put pressure on casinos—directly or indirectly—to induce them to act more responsibly.

Because the casino industry was viewed as a pariah industry in most other jurisdictions where it had legal status, there were similar attitudes abroad as well. Various European countries had legal casino industries, many of which had been in existence for a fairly long period, but which were viewed with similar a lack of respect as those in the United States. European casinos—then as now—tended to be much smaller, more elitist, and rather invisible in comparison to their American counterparts. Problem gambling was typically viewed as a reality, a by-product of human nature, but there was little formal policy directing what government or gaming companies should do about it. In some countries, such as Germany and France, there were policies that permitted self-banning of players, or banning based on the requests of other family members. Furthermore, in some jurisdictions such as Baden Wurtemburg in Germany, locals, members of the military, and civil servants were prohibited from participating in casino gaming, and furthermore, it was management's responsibility to determine that gamblers could afford to lose the money they were gambling.

When casino gaming spread into new jurisdictions in many countries from the 1970s through the 1990s, a number of these perspectives changed. Casinos, where legal, became more corporate from the 1970s onward. Corporations, especially those with broad public ownership and substantial market capitalization, were far more motivated by their public images and reputations than the previous generation of entrepreneurial casino owners. Therefore, they were less able to ignore the growing anecdotal and scientific evidence that linked an increase in permitted gambling with apparent increases in the incidence of problem gambling. Corporations in the gaming industry increasingly recognized it was in their enlightened self-interest to become pro-active in addressing issues related to problem gambling.[25]

When government had a high stake in the ownership or operation of casinos, and when the clientele of casinos were made up of a large proportion of local residents, the political pressures to become more socially responsible around the issue of problem gambling also increased. Governments that had authorized casino-style gambling in order to exploit its economic benefits sometimes felt obliged to address the adverse social impacts that came along with it.

Another important factor is that gambling as an activity has become more socially accepted as a legitimate entertainment form. Surveys conducted in the 1990s in the United States indicated that roughly 60 percent of the adult population considered gambling an acceptable activity for anyone, 30 percent indicated gambling was not acceptable for themselves, but it was all right for others to participate in gambling if they so chose, and 10 percent believed that gambling was inappropriate for anyone.[26]

As a result of these trends, a number of approaches have been experimented with over the past few years to address problem gambling and its consequences. Among these strategies are:

- Limitations placed on various financial conveniences, such as prohibitions against credit play, prohibitions against automatic teller machines within the casino, or stiff penalties for fraudulent checks;
- Limitations placed on how the casino is permitted to market itself and its activities, such as constraints on advertising, types of games to be offered, promotions, prize structures, complementaries, and other marketing tools;
- Limitations on the types or locations of venues where casino gaming can take place;
- Signage, public service announcements, distribution of brochures, and other attempts to educate the general public on the risks of excessive gambling;
- Self-exclusion and self-banning of customers from casino premises;
- Training programs for gaming management and employees on recognizing the signs of problem gambling, and on devising intervention strategies to provide assistance when warranted.

Such programs can be divided into two broad categories. The first category is where all consumers of gambling activities are constrained in what they are permitted to do to protect the few who might be susceptible to damage if such constraints did not exist. The second category is where the policy action tries to target the specific group of consumers who are likely to be problematic.

The first category is illustrative of the rationale that lies behind the various limitations noted above. For example, the British long held to the position that gambling is a social activity of questionable merit that cannot be eradicated by prohibition. Therefore, their policy has been to permit commercial gaming as a revokable privilege, and to adhere to the broad policy of "unstimulated demand."[27] Much of the rationale for this position can be imputed as "protection for the vulnerable." For example, British casinos, which are run on a "club" or membership basis, are not permitted to grant credit, to offer alcohol within the casino, are prohibited from offering live entertainment, are severely limited in the amount of advertising that can be undertaken, and cannot provide customers with most complementary "gifts," such as airfares and hotel rooms, that are typical in other jurisdictions. Furthermore, new members must wait 24 hours (prior to 1998, it was 48 hours) before they are permitted to gamble.

In the United States, some new jurisdictions have placed limitations on wager size (Iowa from 1990 to 1994,[28] Colorado, South Dakota), on the amount of money a customer could spend per excursion (Iowa from 1990 to 1994, Missouri), and on where casino gaming could be offered (only on riverboats: Iowa, Illinois, Mississippi, Missouri, Indiana; only in specified towns or cities: New Jersey, South Dakota, Colorado, Michigan). Some of these constraints were political compromises, but some were introduced under the belief that the constraints would mitigate the social and personal costs associated with problem gambling. However, such beliefs at the time of adoption did not—and still do not—have much evidence besides opinion to support them.

The problem with this approach is that, even though it might assist those prone to problem gambling, it might more significantly constrain the enjoyment to be derived by those consumers and potential consumers who are "normal" gamblers, those for whom there is or would be little personal cost of the type referred to in the APC report.[29] (Prohibition would be an extreme example of this approach.) Furthermore, since many people in the general public remain judgmental about the wisdom of gambling even for those individuals for whom it is relatively harmless, and because gaming customers have historically been reticent in the political arena, it is often quite difficult to remove constraints that might have only "symbolic" value, i.e. they have only negligible impacts in mitigating the costs of problem gambling, but create substantial inconveniences for non-problem customers. Mandated cruising with riverboat casinos is an illustration of this phenomenon.

The more interesting mitigation measures are in the second category of policy direction, where problem gamblers and probable problem gamblers are specifically targeted. At a minimum level, the casino industry can provide information in the form of brochures, signage, or public service announcements that alert customers to the potential risks associated with problem gambling. The intent is to let customers know that it is possible that—at least for some people—gambling might become far more of a burden than an entertainment, and if that happens to them, there are avenues of recourse.[30] In a similar direction, self-help groups, such as the National or State Councils on Problem Gambling in the United States—with financial support from gaming industries or regulatory bodies—can fulfil the same functions.

Another approach that seems to be gaining favor in many jurisdictions is the banning or self-banning of players from the casino premises. In such systems, a customer usually has to initiate the action and volunteer to sign a statement indicating that he/she wishes to be excluded from the casino permanently, or for some period of time. The document is put on file and the customer's photograph is given to casino surveillance. In some jurisdictions, if the customer later violates the self-ban, he/she can be arrested and charged with a misdemeanour crime. In other jurisdictions, the player is just removed from the casino floor and told not to return.

Some variants of this approach that have been tried in some jurisdictions occurs when casino management takes it upon themselves to determine if they believe a player has a gambling problem. When such a determination is made, they can ban the player themselves, recommend the player seek counselling, or provide the player with brochures and other information that might help the problem gambler (if indeed he/she was properly identified) recognize that they indeed might have a problem.

The question of whether all-inclusive constraining strategies are more effective than targeting strategies to probable problem gamblers is ultimately an empirical question. At this stage of understanding of the phenomenon of problem gambling and casino practices, there is very little hard evidence that would resolve such a question in any meaningful way.

A MODEST PROPOSAL

In light of the development of player tracking and other computer based technologies, in conjunction with the fact that many political jurisdictions that have adopted casino and casino-style gaming have also expressed concern regarding the potential negative ramifications of more accessible and more exciting gaming opportunities, the following strategic approach might be considered. It is important to note that this proposal is more controversial—and perhaps less feasible—in some jurisdictions than in others, because it does require the player to become less anonymous than many players, and many casinos, would prefer.

The proposal is:

Casino customers who wish to wager more than some minimal amount would need to register and receive a *gambling license*. The *gambling license* would be granted to anyone who is of age and who can provide adequate and verifiable identification (i.e. passport, driver's license).

The *gambling license* could be suspended or revoked for a number of reasons, including:

- Self-banning,
- Banning at the request of family members or concerned acquaintances, following some due process, or
- An order of a court of law.

The rationale behind the *gambling license* proposal is the following. There are indeed costs associated with permitted gambling that are socially undesirable, whether the burden of costs fall on the individual gambler and his/her family, or whether the costs are shifted to other members of society. There is good reason from studies such as the APC report to believe that the preponderance of such costs are borne by those individuals who meet the criteria of problem gamblers (and their families), rather than society at large. Therefore, it makes sense to try to identify, isolate, and work with that particular group, rather than passing constraining regulations and restrictions that paint with a broad brush and inconvenience a much larger group of consumers and potential consumers.

With various other social activities where the individual is expected to behave in a socially responsible manner and where there are some potentially significant risks to one's person—such as driving a car, flying a private aircraft, or scuba diving—laws require some validation that the person has not acted in a manner that violates the presumption of responsible behavior. Thus, to legally drive, fly one's own plane, or scuba dive, one must have a driver's license, a pilot's license, or a scuba diving certificate. According to this proposal, in order to gamble in a licensed casino or venue with casino-style gambling, one must have been issued a gambling license, and that license has not been suspended or revoked for cause.

One approach that could be taken is that each consumer would be issued a gambling license card, which would need to be inserted into gaming devices or at a table game before the consumer is able to activate the game. A second alternative would be to require the person to have the card available whenever he/she enters a casino. As with other such membership devices, there may be alternative ways of verifying the status of the person who has forgotten their card. The information that is to be gathered with the card should be limited to what is necessary to provide adequate protection for those players who need it, but not so much that it might become a source of abuse either by the gaming industry or by government.

There are two obvious problems with information that might be gathered as part of this process. If the gambling license is linked to information regarding the player's gambling volume or patterns, as is the case with the data bases of casino player tracking systems, then there is potential for violation of the privacy of the licensed gamblers themselves. If the information were made available to the casino industry, then it might be rich in marketing information in the same context as player tracking systems; without the player's consent, this could be inherently problematic. If the information were made available to government, it could be abused in the sense that government would be sorely tempted to use such information to determine whether players were spending outside the limits of their reported incomes. Thus, it could become an investigative tool for tax collectors.

To minimize these risks, a primary suggestion would be that the *gambling license* process be administered by an independent third party that would be clearly separate from government and the casino industry. The model for such an entity might be the Councils on Problem Gambling to be found in the United States.

CONCLUSION

In sum, as casino and casino-style gambling continue to increase in social acceptance and in their presence as part of the leisure and entertainment offerings of modern society, the issues of social and personal costs associated with permitted gambling, and strategies for mitigating those costs, will continue to gain attention. It is clear that gambling will continue to spread, both in terms of geographic presence and in terms of the attractiveness and excitement associated with the development of gambling products and gaming venues. Thus, it is imperative that societies gain greater understanding of the nature of social and personal costs associated with such expansions, and develop meaningful strategies that can best deal with those costs in a responsible and efficient manner.

NOTES

1. For general discussions of these variations, see William R. Eadington, "The economics of casino gambling," in *Journal of Economic Perspectives*, vol 13, no. 3, August, 1999, pp. 173–192, and William R. Eadington, "Contributions of casino style gambling to local communities", *Annals of the American Academy of Political and Social Sciences*, Vol. 556, pp. 53–65, March, 1998.
2. From the economist's perspective, the major benefit from legalized gambling is *consumer surplus*: the net gain that accrues to consumers of gambling services as the difference between what they would be willing and able to pay for the activity and what they actually pay. (What sets gambling apart from other commodities is the fact that *ex ante* the price is a random variable in the short run, but stabilizes in the long run.) See Productivity Commission (1999), *Australia's Gambling Industries*, Report No. 10, AusInfo, Canberra, and at *http://www.indcom.gov.au/inquiry/gambling/index.html*, especially chapter 4.
3. It is worth noting that *positive analysis* deals more with concepts of efficiency as economists understand the term (i.e. getting the greatest value in output from a given level of inputs), whereas *normative analysis* addresses questions of income or wealth distribution (i.e. economists are able to say more GDP is a better overall situation than less GDP, but they are unable to say, except as a value judgment, if one income distribution among its citizens is better or worse than another at the same level of GDP.)
4. This obviously does not preclude groups, such as the Christian Coalition or NORML (the National Organization for Reform of Marijuana Laws) to politically lobby to impose their values upon society through statutory changes.
5. Such philosophic differences have split the American Republican party in recent years between those who support "family values" and those who support maximum choice in utilization of one's property.
6. See, for example, William Thompson, Ricardo Gazel, and Dan Rickman (1997), "Social and legal costs of compulsive gambling," *Gaming law review,* vol. 1, no. 1, pp. 81–89; Robert Goodman (1995), *The Luck Business: The Devastating Consequences and Broken Promises of America's Gambling Explosion*, Martin Kessler Books, The Free Press; and Earl Grinols and J. Omorov (1996), "Development or Dreamfield delusions? Assessing casinos' gambling costs and benefits," *Journal of Law and Commerce*, vol. 16, no. 1, pp. 49–87.
7. For a detailed description of the underlying definition of social cost, along with the Pareto criterion, externalities, and other related concepts, see Douglas M. Walker and A. H. Barnett (1999), "The Social Costs of Gambling: An Economic Perspective," in *Journal of Gambling Studies*, vol. 15, no. 3, pp. 181–212. The following discussion draws heavily from this reference.
8. Walker and Barnett distinguish between *technological externalities*, where one's ability to produce (products or utility) is hampered by an action, insofar as it takes more inputs to generate the same level of output (products or utility); versus *pecuniary externalities*, where changes in prices

or wages lead to a change in individual wealth, but not societal wealth. Net social costs can only occur as a result of technological externalities, not pecuniary externalities.

9. Psychic costs are technological externalities insofar as they reduce someone's ability to produce utility with existing resources. One conceptual method of measurement is to ask the affected party how much compensation they would need to be made "whole," in light of the action under investigation.
10. An *experience good* is one where the consumer does not realize how much utility he will derive until the good has been consumed, i.e. movies, books, theatrical productions. A night out at the casino goes one step further insofar as the consumer will not know how much the consumption of gambling services is going to cost until play has been completed. Standard economic analysis would argue the consumer makes such decisions based on the expected utility to be derived, knowing full well that expectations are likely to differ from the actual outcome.
11. This is not a trivial point of discussion, however. In the case of other vices, notably illicit drugs, policy makers have for the most part decided that the issue of individual choice in consumption should be constrained for the "greater good," even though there is not clear evidence that the social costs of legalizing illicit drugs, or at least some types of illicit drugs, would be greater than the social costs incurred with their prohibition.
12. The individuals in question should not confuse this with a group's efforts at lobbying government to spend taxpayers' money to mitigate the damage or limit the action. If such efforts are successful, the resultant spending reflects a transfer payment, whereas the efforts to change the law (and efforts in opposition to such change) are examples of *rent seeking*, and as such are social costs.
13. The conviction in March 2000 of former Louisiana Governor Edwin Edwards for soliciting and receiving kickbacks for riverboat casino licenses in his state is another illustration of (in this case illegal) rent seeking behavior.
14. Web site for the Australian commission final reports: *http://www.indcom.gov.au*.
15. See National Opinion Research Center (1999), "Gambling Impact and Behavior Study," prepared for the National Gambling Impact Study Commission, especially chapter 3.
16. Productivity Commission (1999), *Australia's Gambling Industries*, Report No. 10, AusInfo, Canberra, "Quantifying the costs of problem gambling," (ch. 9, section 9.1)
17. Ibid. "Impacts of gambling, a framework for assessment," ch. 4, box 4.1.
18. Ibid. ch. 4, section 4.2.
19. Ibid. ch. 9, section 9.3
20. Ibid.
21. The terms "level 1" (no problem gambling), "level 2" (moderate problem gambling), and "level 3" (severe problem gambling) were introduced by Shaffer et al in Shaffer, H. J., M. N. Hall, & J. Vander Bilt, (1997), "Estimating the prevalence of disordered gambling behavior in the United States and Canada: A meta-analysis." Paper prepared for the National Center for Responsible Gambling.
22. APC, *op. cit.*, chapter 9.
23. To gain a sense of how this issue was viewed as recently as the 1980s, see William R. Eadington, (1989), "Problem gambling and public policy: Alternatives in dealing with problem gamblers and commercial gambling," In Howard J. Shaffer, Sharon Stein, Blaise Gambino, & Tom Cummings (Eds.) (1989). *Compulsive gambling: Theory, research, and practice.* Lexington, MA: Lexington Books, pp. 175–186.
24. This is an issue that appears in many casinos throughout the world that cater to visitors from across a state, provincial, or national border. In effect, for political reasons, public policy—and casino operators—needs to be sensitive to the damages that might occur among one's citizens or local residents, but nonresidents or foreigners do not merit the same protections.
25. For interesting discussion on this issue, see William R. Sherman (1991), "A casino company's response to compulsive gambling," in William R. Eadington and Judy A. Cornelius (eds.), *Gambling and Public Policy: International Perspectives.* Institute for the Study of Gambling and Commercial Gaming, University of Nevada, pp. 671–678.
26. See, for example, Harrah's Entertainment, Inc. (1996). *Harrah's survey of casino entertainment.*
27. In 2000, the Home Secretary established the Gambling Review Body to examine the underpinnings of permitted gaming in that country that had remained relatively stable since the passage

of the Gaming Act 1968. If their recommendations are followed, substantial changes in British gaming laws would result.

28. Iowa eliminated its wager and loss limits in 1994.
29. Conceptually, such incremental constraining policies could be evaluated in terms of their relative benefits and costs, by implementing the constraint and then computing the lost benefits (in the form of foregone consumer surplus) in comparison to the avoided costs (in the form of social and personal costs of problem gambling avoided.)
30. One slogan used in some of the public service announcements in the United States is: ". . . when gambling isn't fun anymore."

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