5 Assessing the benefits

Box 5.1 **Key messages**

- The benefits from liberalisation of the gambling industries come primarily from the satisfaction that consumers obtain from the ability to access what for many is a desired form of entertainment.
- The gambling industries employ a large number of people in Australia, but the net production-side benefits of liberalisation have been small when account is taken of substitution effects and the alternatives available for gambling spending. Benefits in terms of employment and activity in the gambling industries are largely offset by declines in industries that have lost the consumers' dollar to gambling.
- Even when discounted for excessive spending by problem gamblers, the value of the consumer benefit remains substantially positive — estimated to be at least $4.4 billion (and possibly as high as $6.1 billion) each year.
- This overall positive benefit has three components: a benefit of $2.7 billion to $4.5 billion for recreational gamblers; a transfer of $4.3 billion principally to government in the form of tax revenue, licence fees and community contributions; and a loss for problem gamblers of around $2.7 billion.
- In assuming that problem gamblers do not get 'value for money' for their very high level of spending, the Commission has nonetheless assumed that they do gain some benefit.

5.1 Introduction

In many respects the gambling industries are like any other industry. People are employed, investment is undertaken, export revenue earned and taxes paid. As would be expected in a growing industry, there is also considerable R&D dedicated to improving the attractiveness of the product to consumers. The Australian gambling industries are acknowledged to be among the most innovative in the world (particularly in the area of gaming machines and the development of internet gambling).

The benefits that an industry provides are usually taken for granted. If producers provide and consumers purchase a product or service, we presume that they do so because the benefit from that activity is greater than the alternatives available.

The key feature that makes the gambling industries different is the existence of problem gambling and its attendant costs. Without this, the gambling industries would be like most other recreation and entertainment industries, and the extent of their contribution to the economy would not be an issue. Critics of the industries who call for reductions in the availability of gambling, or bans on some forms, consider the costs to be high, implicitly higher than any benefits the industries generate.

Thus, as the CIE commented in a submission prepared on behalf of Aristocrat (sub. 111, p. 22):

> This estimate [of the contribution of gambling to the economy] is used to establish a threshold or reference value against which the social costs, such as those arising from problem gambling, may be assessed.

Another reason for focussing on the benefits relates to basic misunderstandings about their nature.

- Many regard the main benefits as being the jobs and economic activity associated with the gambling industries. But when the impacts on other industries of the shift in consumer spending to gambling is taken into account, these benefits are, on balance, much reduced.
- Others argue that the gambling industries provide no benefits to consumers because gamblers as a group lose money (box 5.2). However, this misunderstands the nature of gambling, which is more appropriately viewed as entertainment for which a cost or price is appropriate, rather than as an investment with a positive expected rate of return.

Box 5.2 **An 'industry' that produces nothing?**

Misperception about the benefits that the gambling industry provides is typified by the editorial in the *Canberra Times* on 21 July 1999, following release of the Commission's draft report. The editorial titled 'An 'industry' that produces nothing', observed:

> The Productivity Commission is wrong when it says the gambling industry in Australia produces a benefit… Gambling creates no wealth for anyone: it merely shifts wealth from some people to other people. There is no value-adding in the gambling "industry".

A letter to the editor of that paper on the 26th of July expressed a similar view, saying:

> I buy lottery tickets. I get no enjoyment from this. I buy them to win. If I do not, I only get disappointment. There is no consumer benefit. But the commission assumes: I buy, therefore I benefit. This is nonsense. What if the product is heroin, or alcohol or cigarettes? Then, according to the commission, the cheaper the price, the greater the consumer surplus. Does anyone out there in the real world believe this?

That said, most would accept that, in this industry, not all spending is rationally made or provides commensurate benefits, particularly for those with significant problems arising from their gambling.

The chapter examines:

- the nature and size of the benefits for consumers that result from being able to purchase gambling products;
- the impact that problem gamblers may have on this benefit; and
- the broader benefits for consumers and the economy as a whole, including the benefits cited by those in the industry (employment and activity) and drawing on a number of studies which have used models of the Australian economy to assist our understanding of the wider economic effects of the industries.

The impacts on particular industries, communities and regions, including the impact on retailing and the growth of local clubs, are discussed in chapter 10.

5.2 What benefits do consumers gain from gambling?

Many people purchase gambling products. The Commission's national survey indicates that just over 80 per cent of the adult population gamble at some time each year, and almost 40 per cent of adults are regular gamblers (playing, on average, at least weekly). Problem gamblers — ranging from those with mild to severe problems — are estimated to comprise only 2.1 per cent of the adult population (although they account for a much larger share of gambling expenditure). Liberalising access has resulted in a significant switch of consumer spending to gambling products, with expenditure by Australians averaging just over $760 per adult in 1997-98. In addition, the demand for gambling appears to respond little to changes in price, indicating that consumers place a high value on the opportunity to play.

What is the nature of this benefit? Certainly gamblers as a whole, and the vast majority of them individually, lose money by gambling over any extended period of time. Because of this, gambling cannot realistically be viewed as a form of investment, other than for a tiny minority of professional gamblers and in only a very limited range of gambling products (box 5.3). Rather, gambling is best characterised as a form of entertainment, albeit one where a major element of that entertainment is the *chance* of winning some money[1].

[1] Indeed, a key source of gambling problems arises when people see gambling as a means of realistically increasing their wealth, rather than as a form of entertainment that is, on average, going to cost them money.

Box 5.3 Gambling vs investment

The boundary between gambling and investment is often blurred. Many approach traditional forms of gambling as an investment activity — indeed, it is often described as such in the industry. In a very few forms of gambling some gamblers may make money over time[2]. Conversely, some activities traditionally classified as investment may be approached as a gamble, and some particularly risky business investments (often referred to as 'speculation') are described as such. So is there an essential characteristic that leads society to classify one form of activity as gambling and one as investment?

A key characteristic of an investment, even a risky one, is that it can realistically be expected to offer a positive rate of return over time. This return may vary from time to time, but with enough transactions, and over a reasonable period of time, the expected rate of return is positive, even after tax and commissions for the providers. This is true for investors as a group and also typically for each individual investor. This is not to say that investors are 'guaranteed' a positive return. There is always a risk of loss, but with traditional investments, there is a realistic expectation of a positive return over time. Similarly, someone could certainly approach an investment such as the stock market as a pure gamble — some people do — but this is not fundamental to that activity.

For products traditionally classified as gambling, while the return may vary from time to time, with enough transactions, the expected rate of return to the *venue* is positive but that for the *gambler* is negative. Other than for a small minority of 'professional' gamblers in a very limited range of products (for example, wagering on racing and sports), this negative expected rate of return holds true for individual gamblers and gamblers as a group.

It is this fundamental difference in the expected rate of return that differentiates gambling from investment, even when both activities involve 'staking' money where there is an element of risk, or uncertain outcomes.

Even where some gamblers win over time — such as in wagering on races — the wider group of players as a whole must lose, with the few 'professional' gamblers relying on the losses of the others to pay for their wins.

As Barrett (sub. D251, p. 3) observed:

> Secondly, investment does not entail that anyone loses; betting does… Although investors may "lose", their "winning" does not typically depend on others losing. Investing is not a zero-sum game.

The value of the service provided by gambling is essentially the enjoyment or entertainment from playing and having access to a *chance* of winning some money, not a positive expected return on the funds employed.

[2] Blackjack is one area where skillful play can create a small advantage over the casino. However, casinos generally will ban such skilled players or severely restrict their play (see BJ Masters Professional BlackJack School, sub. D285, p. 3).

The fact that gamblers lose money does not mean that they derive no benefit, nor does it mean that the industries do not make a contribution to the economy. Many other activities (such as sport, theatres etc) represent consumption rather than investment, with the net cost to the consumer representing a payment for the entertainment provided.

Thus, ACIL (sub. D233, p.11) commented:

> The expected financial return is only one of the variables that enters into an individual's estimation of the utility of the transaction. It is not even the most important variable to the gambler.

The dream of winning appears to loom large in the minds of gamblers, as indicated by a 1999 survey in Victoria (table 5.1). But it is clear that a range of other reasons also influence the decision to gamble, highlighting its role as a form of entertainment.

Table 5.1 **Why do people gamble?**
(Victoria, survey of 1326 gamblers conducted in 1998)

Motivation	*All gamblers*	*Regular gaming machine/Casino gamblers*
	% of respondents	% of respondents
Dream of winning	59	66
Social reasons	38	65
For charity	27	26
Beating the odds	9	14
Favourite activity	10	19
Atmosphere/excitement	13	19
Belief in luck	12	16
Boredom/pass the time	9	13

Source: Roy Morgan Research (1999).

Similarly, survey evidence in New South Wales indicates that winning ranks highly with players, but the entertainment aspects of gambling again appear important (table 5.2).

While most gamblers report positive factors associated with their gambling activities, their level of satisfaction has been questioned. Critics of the gambling industries express concerns about the degree of satisfaction that gamblers receive from their gambling activities. For example, at the public hearings Anglicare commented:

> I would ask anybody to go into a pokie venue and look around at people sitting playing the machines and see the joy and pleasure on their face, and I'll tell you something, it doesn't exist. To me, something which is a happy experience or an entertaining experience or a good time causes you pleasure and there are signs that human beings

can sort of put out to show that. I find an awful lot of people in there are sitting frozen (transcript, p. 772).

Table 5.2 **Motivational aspects of gambling**
(per cent of respondents answering in the affirmative)

	Lotto only[a]	*Other gambling*
	%	%
I daydreamed of getting a big win	75.7	79.9
Gambling has given me pleasure and fun	72.1	87.4
Gambling has been a hobby and interest for me	53.6	78.0
When I was gambling I felt excited	52.1	79.2
When I gambled I felt relaxed	37.1	72.3
I am more likely to gamble for celebration	29.3	56.6

[a] The 'Lotto only' group comprise respondents who played lotto/lottery/instant lottery weekly or more often, but no other form of gambling weekly or more often.

Source: Drawn from Table 20 in Dickerson et al (1996a, p. 43).

However, appearances can be misleading. Star City observed (sub. D217, p.2) that:

> Football fans do not expect their team to win every match. At the match they will be engrossed and generally not laughing. And they can look very unhappy when and after they lose. Yet, they go again the following week and no one suggests that even losing a game is a net disbenefit. Joggers and bush walkers are notoriously solemn. Concertgoers rarely laugh.

The Commission's *National Gambling Survey* asked regular gamblers to rate their gambling experience according to the extent to which it made their life more enjoyable. The survey results indicated that most (67 per cent) considered that it made no difference, and only 24 per cent considered that it made their life a little more enjoyable (chapter 6).

A survey of gamblers in inner city municipalities in Melbourne (Melbourne Institute et al 1997), asked gamblers to rate the satisfaction derived from their gambling experiences. The report commented (p. 58):

> The vast majority of males and females, gamblers and non-gamblers, EGM users and non-EGM users report that they do not find EGM gambling appealing, i.e. they responded in the 1-5 range on a 1-10 scale from "not at all appealing" to "extremely appealing". EGM users find EGM gambling slightly more appealing than do other individuals, but surprisingly, not by much.

Similarly, a survey of gamblers in regional Victoria (Deakin Human Services Australia and The Melbourne Institute, 1997), found that 90 per cent of gamblers considered playing gaming machines to be an unappealing leisure activity. However, the study also found that 83 per cent were satisfied with their gambling life generally.

In contrast to the other studies, Tabcorp, (sub. D232), concluded on the basis of AMR Quantum survey of 262 patrons of gaming machine venues that:

> … 85 per cent of customers — even those who lost money — enjoyed their visit to a gaming venue … (p. 1);

and that this level of satisfaction was higher than that of alternative forms of entertainment. Tabcorp also said:

> In addition, the survey confirmed that gaming machine players consider that gaming venues provided comparable value for money to other entertainment options (p. 4).

Tabcorp subsequently provided the Commission with a copy of the survey, which provided more detail on the patrons' responses (tables 5.3 and 5.4). This indicated that, while the overall enjoyment of the visit to the venue, and the overall perception of value for money, were similar to that stated for alternatives, both the level of satisfaction and perception of value for money were noticeably lower for gaming machine play than for other forms of entertainment.

While the sample is small, and is likely to involve an element of self-selection, the two tables indicate that players' perceptions of value for money from gaming machines are significantly lower than their perception of enjoyment.

Table 5.3 **Enjoyment by venue patrons[a], 1999**

Survey of 262 patrons of gaming machine venues

	Very enjoyable	*Quite enjoyable*	*Not very enjoyable*	*Not enjoyable at all*
	%	%	%	%
Visit to the venue	27	58	10	4
Playing the gaming machines	21	58	14	7
Having a meal or snack in the bistro or restaurant	67	29	2	2
Using the bar	35	62	1	1
Using the TAB/sportsbet	32	68	-	-
Going to the cinema/movies	41	38	9	8
Watching live sport at a venue	38	24	15	21
Going to opera theatre or a rock concert	27	26	16	27
Playing bingo	13	15	21	45
Going to a restaurant or café	64	29	4	2
Going to a once a year sporting event	44	23	10	20
Going to an exhibition or show	35	37	14	13

a Rows may not add due to rounding. In a few areas a small percentage of respondents did not provide an answer.

Source: sub. D286.

Table 5.4 **Perceptions of value for money[a], 1999**

Survey of 262 patrons of gaming machine venues

	Very good value	*Quite good value*	*Not very good value*	*Not good value at all*
	%	%	%	%
Visit to the venue	23	41	21	13
Playing the gaming machines	14	38	24	23
Having a meal or snack in the bistro or restaurant	71	20	6	2
Using the bar	31	51	1	10
Using the TAB/sportsbet	36	44	12	4
Going to the cinema/movies	32	44	13	7
Watching live sport at a venue	26	39	18	13
Going to opera theatre or a rock concert	22	33	18	19
Playing bingo	16	18	16	40
Going to a restaurant or café	45	48	4	3
Going to a once a year sporting event	33	32	13	15
Going to an exhibition or show	30	40	19	7

a Rows may not add due to rounding. In a few areas a small percentage of respondents did not provide an answer.

Source: sub. D286.

The importance of winning on reported perceptions about satisfaction is demonstrated in table 5.5 using data from the same survey. Those who reported their experience as being 'not very enjoyable' or 'not enjoyable' were predominantly people who perceived that they were 'down' (had lost money) in their gambling activities.

Table 5.5 **Relationship between perceived gambling outcome and reported of satisfaction[a], 1999**

Survey of 262 patrons of gaming machine venues

	Perceived outcome				
Satisfaction	*Winning*	*Losing*	*About even*	*Not sure*	*All respondents*
	%	%	%	%	%
Very enjoyable	58	26	16	0	100
Quite enjoyable	22	57	19	1	100
Not very enjoyable	6	94	0	0	100
Not enjoyable at all	0	100	0	0	100

a Rows may not add due to rounding. In a few areas a small percentage of respondents did not provide an answer.

Source: sub. D286.

Information on ex-post perceptions of enjoyment and value for money from a product such as gambling should be treated with some caution. Gambling involves two aspects, the chance of winning money and the entertainment in playing. The potential for winning money is an attribute that exists only so long as play continues. As most players lose money by the end of a gambling session, perceptions of value and satisfaction after gambling has occurred need not give an accurate picture of the value of that activity to consumers. In much the same way, asking someone at the end of the year whether they have got value for money from their insurance would be misleading when, in most cases, claims had not been made. The insurance is nonetheless valued and can be expected to be renewed into the next year. The fact that most people continue to spend significant amounts on gambling products means that, notwithstanding some reservations about consumption by problem gamblers, the industry does provide services that consumers value.

5.3 How can we measure the benefits to consumers?

The benefits that consumers gain from the consumption of any good or service is commonly measured within an economic framework as 'consumer surplus' — a measure of their preparedness to pay over and above the cost of purchasing the product (box 5.4).

Box 5.4 **What is consumer surplus?**

Consumer surplus is a term used in economics to refer to the difference between what a consumer pays for any particular quantity of a product and the maximum amount which he or she would be prepared to pay rather than do without it.

Take, for example, water. Water for drinking is highly valued, and consumers would be prepared to pay a very high price for that essential use. Other uses are less important and consumers would pay less for water for such uses. However, water is abundant and quite cheap to provide. Its high value uses are readily supplied, with considerable excess left over for lower value uses. Consumers pay for water at the low price reflecting its additional (or marginal) lower value uses. This same price typically applies to all the water consumed, even that (for drinking) with a very high value to the consumer. Consumers are thus paying less for the water than its value to them. That difference is the consumer surplus.

This preparedness to pay reflects the value that consumers place on a product in comparison with alternative products and thus indicates the gain to consumers from

that product or service being available[3]. Consumer surplus is measured by looking at the level of current consumption, and the extent to which this consumption would change if the price were to change. For example, if the price of a product were to rise significantly, but consumers continued to buy almost as much, we would say that they value the product highly. The way in which consumption changes when prices change is referred to as the 'price elasticity of demand' (box 5.5 and appendix C).

- Typically the less change there is in the quantity purchased when prices change (a lower price elasticity), the higher will be the estimate of consumer surplus; and
- conversely, the greater the change in the quantity purchased when prices change, (a higher price elasticity), the lower will be the estimate of consumer surplus.

Box 5.5 **What is the 'price elasticity of demand'?**

The price elasticity of demand (referred to sometimes as the 'own' price elasticity of demand or just the elasticity of demand), measures the extent to which the quantity consumed of a particular good changes when its price changes. A product is said to have more elastic demand (that is, be more price sensitive) when the quantity purchased changes proportionately more than the price. For example:

- if the price halves, but consumers purchase three times as much, demand is said to be elastic; and
- if the price halves and consumers purchase only 10 per cent more, demand is said to be relatively inelastic.

A product will typically have more elastic demand (a higher price elasticity) if there are close substitutes, or if it is viewed as a discretionary item. That is, if the price were to rise, people could readily purchase something else as a substitute, or just more easily do with less of it. If there are few substitutes, or the product is a necessity of life, consumers may not be able to reduce the quantity purchased, even if the price were to rise considerably. Such products are said to have inelastic demand, or a low price elasticity.

[3] In measuring the consumer surplus from gambling liberalisation, pre-existing illegal gambling is ignored. To the extent that some consumers gambled prior to liberalisation (albeit at higher cost) some of the measured surplus already existed. Conversely, there are some gains for consumers and society from the displacement of illegal gambling which are also not measured (appendix O).

5.4 Measuring consumer benefits from the gambling industries

Estimates of consumer surplus for the Australian gambling industries are scarce. The Commission has come across one conducted for New South Wales (box 5.6), and ACIL (sub. 155) made an indicative estimate in its original submission to this inquiry (box 5.7).

Box 5.6 A consumer surplus estimate for New South Wales

In estimating the consumer surplus resulting from the introduction of the Casino in New South Wales, Swan (1992) said:

> When the Sydney Casino is introduced, a kind of gambling service that is presently not available (or at least only illegally) becomes available. Not only does it compete to some extent with existing types of gambling such as poker machines but, more importantly, those who enjoy gambling in casinos receive a considerable benefit. This benefit is over and above what they pay for the service. What they will pay has been estimated ... at between $450 and $550 million p.a. in 1997.
>
> The benefit which gamblers will receive is estimated … to be of the order of $162 million per annum for 1996-97 …. This represents 29% of the anticipated casino revenue (gambler's casino expenditure) [$550 million].
>
> In assessing the estimated benefit of $162 million p.a. it must be acknowledged that the magnitude of the benefit could be influenced by the assumptions of the model, in particular the CES specification and the fairly arbitrary way in which a prohibitively high 'price' was assigned to the casino prior to its introduction.

Source: Swan (1992, pp. 55-57 and p. 86).

Box 5.7 ACIL's consumer surplus estimate for Australia

Using a linear demand curve, three numerical examples have been calculated:

1. If price elasticity of demand equals -1½, the rule is: "*multiply total expenditure by 0.3*"
2. If price elasticity of demand equals -1.0, the rule is: "*multiply total expenditure by ½*"
3. If price elasticity of demand equals -½, the rule is: "*multiply total expenditure by 1"*

Broadly speaking these statements explain the relationship between consumer surplus and total expenditure. Since we believe price elasticity of demand for gambling as a whole is between -½ and -1, but closer to -1, it seems we can support a general statement along the lines of: **"**consumer surplus is likely to be more than half the cash outlay."

On this basis, in 1996-97, when according to the Tasmanian Gaming Commission the net outlay on gambling in Australia was $10,037 million, a gambling consumer surplus estimate of greater than $5,000 million but less than $10,000 million seems reasonable.'

Source: Extracts from sub. 155, p.91.

The Commission's estimates

There are essentially three components of the Commission's estimates of the benefits derived from the availability of gambling:

- the benefits accruing to the majority group of recreational gamblers (measured as their consumer surplus retained after consumption taxes);
- the revenue accruing to government through taxes on gambling (essentially a transfer of part of the consumer's potential surplus to government); and
- the estimated shortfall in value-for-money for problem gamblers as a result of their excessive level of spending on gambling.

Of these, the third represents a significant departure from the normal presumptions in economic modelling of consumer sovereignty and rational consumption behaviour.

Should problem gamblers be treated differently?

This question is central to the approach used by the Commission to 'discount' the benefit that problem gamblers gain from their consumption of gambling products.

Chapter 4 looks briefly at the literature on 'rational addiction', and chapter 6 looks in some detail at people with gambling problems and their behaviour. These indicate that problem gamblers (particularly those with more severe problems) behave quite differently from the vast majority of recreational gamblers. In particular, they demonstrate an impaired capacity to control their gambling expenditure.

On the basis of this, the Commission has concluded that problem gamblers should be treated differently from other consumers when estimating the benefit they derive from their gambling activities. The Commission's estimate of the 'discount' to the benefit that this group receives, however, is considerably less than that implied in many other studies — which typically count all the expenditure by problem gamblers as a cost for which they receive no benefit. This is one of the reasons why some estimates of the social costs of gambling, particularly in US studies, are so high.

The Commission considers that it is unrealistic to presume that problem gamblers gain no benefit at all from the money that they spend. Among other things, survey evidence suggests the contrary. Consequently, the Commission has included some benefit for problem gamblers in its estimates. This is explained in more detail in appendix C and summarised later in this chapter.

ACIL (sub. 155), in presenting their indicative estimate of (at least) $5 billion per annum for the consumer surplus generated by the gambling industries in Australia (box 5.7), took a different approach in the treatment of consumption by problem gamblers. They said (p. 61):

> Quite apart from the very approximate nature of the estimate, it will be noted that we see no need to make any downward adjustment to account for the claim that part of the consumption of gambling is addictive... In our view, there are no credible grounds for doubting that expenditure on gambling reflects the true preferences of consumers. In other words, we contend that the willingness to pay in excess of costs is, in this case as in others, a *genuine* addition to the welfare of the consumers involved.

The Commission maintains that it would be misleading to treat demand by problem gamblers in the same way as the majority of recreational gamblers. In particular, it is unrealistic to believe that problem gamblers (who spend a very high share of their income on gambling, and suffer a range of other financial, family and personal costs) are not only receiving benefits equivalent to their spending, but are also receiving a significant consumer surplus. The behaviour of many problem gamblers — reporting an inability to control their gambling despite a desire to do so, and their use of self exclusion policies and other devices to constrain their behaviour — strongly suggests that they are not making consumption decisions in this area in the same way as recreational gamblers (see chapter 6).

There may also be reservations about the nature of preferences for gambling products for consumers in general, which, if accepted, would have significant implications for the long-run cost to society of any significant reduction in the availability of gambling opportunities (box 5.8). While this is an interesting area for speculation, the Commission has not included it in its analysis.

Box 5.8 **What if tastes change over time?**

There are many apparent inconsistencies in community attitudes towards, and values placed on, access to gambling.

- Revealed demand indicates that consumers value the product highly, yet the majority of the same consumers say that the industry does more harm than good, and typically they report low levels of satisfaction after consuming.
- At the same time, those opposed to the expansion of gambling point to the fact that in the remaining jurisdiction without extensive access to gaming machines (Western Australia) the pressure for expansion comes not from consumers 'deprived' of an apparently highly valued product, but from the suppliers.

(continued)

Box 5.8 **continued**

If the consumers' taste for gambling is not as high or as stable as assumed by the standard economic analysis underpinning the estimates of benefit, this could have significant implications for the balance of costs and benefits for society over time.

The estimate of consumer surplus measures the value to consumers from the availability of gambling. It also indicates what could be lost if gambling were unavailable. Were the industry to be banned, consumers would suffer a net loss equivalent to their consumer surplus each year in perpetuity. But this assumes that consumers' tastes for products and services are unchanging over time — an assumption that underpins neo-classical economic analysis, though one that is not universally accepted.

If preferences were not stable, and the preference for gambling declined over time with the lack of availability, the costs in terms of lost consumer satisfaction would reduce as the years went by, but the gain from restricted access in terms of gamblers who do not become problem gamblers in the future would be a permanent and ongoing benefit. In time, the balance of costs and benefits would well change to one where the benefits of restricting access to gambling exceeded the costs.

The implications for policy, however, are problematic. Accepting that exogenous preferences are an important component of consumer demand could lead to calls for the banning or restricting of a whole range of products and services, from X rated videos to fatty foods, on the grounds that consumers will, in time, no longer miss the product. The danger is that a range of, at best paternalistic, and at worst intolerant and authoritarian, restrictions could evolve. Nevertheless, it does suggest that some caution should be exercised when using estimates of consumer surplus derived for the gambling industries.

Key data required to make these estimates are:

- the share of expenditure accounted for by problem gamblers;
- the sensitivity of the demand for gambling to changes in its price, for each category of consumer; and
- the level of tax collected.

What is the share of expenditure by problem gamblers?

The Commission's *National Gambling Survey* indicated that an estimated 2.1 per cent of the adult population are experiencing significant problems associated with their gambling. This is equivalent to 293 000 people. The extent of problems faced by those in this group are, however, quite varied, and in estimating the benefits derived by problem gamblers, the Commission has distinguished between two broad groups of problem gamblers — 'moderate', and 'severe' problem gamblers. The basis for identifying the two groups of problem gamblers is outlined in appendix P.

Of the estimated 293 000 problem gamblers, the Commission estimates that 163 000 have moderate, and 129 000 severe problems. While problem gamblers are a small percentage of the number of adults in Australia, their expenditure on gambling is high. As a group, they accounted for an estimated 33 per cent of the money spent on gambling in 1997-98 (table 5.6).

Table 5.6 **The number and spending of problem gamblers**[a]

		Moderate	*Severe*	*All problem gamblers*
Number	No.	163 388	129 348	292 736
Per cent of adults	%	1.2	0.9	2.1
Per cent of gambling expenditure	%	8.3	24.8	33.0
Per person spending	$	5 443	20 662	12 168

a The number of people involved, and the shares of expenditure are from the Commissions' 1999 *National Gambling Survey*. The dollar values of expenditure are based on annual gambling expenditure for 1997-98.

Source: PC *National Gambling Survey* and PC estimates.

The significance of problem gambling varies considerably among the different modes of gambling (table 5.7)

Table 5.7 **Share of spending (loss) accounted for by problem gamblers by different gambling products, 1997-98**

	Annual spending ($ million)			*Share of spending (per cent)*		
	Australians (1997-98)[b]	*Moderate problem gamblers*	*Severe problem gamblers*	*Moderate problem gamblers*	*Severe problem gamblers*	*All problem gamblers*
	$m	$m	$m	%	%	%
Wagering	1 600	152	377	9.5	23.5	33.1
Lotteries	1 179	43	24	3.7	2.1	5.7
Scratchies	246	28	19	11.3	7.8	19.1
Gaming machines[a]	6 401	554	2 156	8.7	33.7	42.3
Casino games[b]	895	73	22	8.2	2.5	10.7
Other	449	38	74	8.5	16.5	25.0
All gambling[b]	**10 771**	**889**	**2 673**	**8.3**	**24.8**	**33.0**

a Includes gaming machine expenditure in casinos. **b** Excludes tourist expenditure.

Source: PC *National Gambling Survey* and appendix P.

Shares for the individual forms of gambling should be treated as indicative only. For some forms of gambling — particularly 'casino gaming' and 'other gaming' — the number of survey respondents who were regular players or who were problem gamblers in that mode were relatively low, leading to significant standard errors

associated with the averages used. The estimates are more robust for gaming machines and lotteries, where the number of players is much greater.

Overall, the Commission is confident that its estimates of expenditure shares for the gambling industry in aggregate are robust, given the size of the Commission's *National Gambling Survey* and the similarity of the result with those generated by earlier studies in Australia (chapter 7).

How sensitive is the demand for gambling products to changes in price?

Most studies have generated relatively high estimates for the price elasticity of demand for gambling. They imply that, as the price rises, the quantity of gambling (that is, the amount staked) falls by significantly more than the increase in price, and thus the amount of money spent (lost) falls. As discussed in appendix D, the Commission has reservations about the robustness of these estimates and considers that they overstate the sensitivity of gambling demand to changes in price.

This view was implicitly shared by those undertaking modelling work on behalf of the industry (notably the CIE and ACIL). These participants commented on, but did not use, the literature results, preferring to use numbers implying considerably more inelastic demand for gambling products. That is, they considered that, with any rise in the price of gambling, the quantity consumed would fall, but by significantly *less* than the price rise, resulting in consumers spending more on gambling than they did previously.

A number of participants questioned the value of estimating consumer surplus when there is some uncertainty about the responsiveness of gamblers to changes in price. The AHA (NSW) (sub. D208, p. 14) said:

> Given the range, our view is that the elasticity concept employed is explaining nothing about the behaviour of gamblers when prices change. It follows that if elasticity cannot be measured within a meaningful range then consumer surplus cannot be measured.

Uncertainty about the elasticities of demand for gambling does not mean that consumer surplus does not exist, or that consumers do not benefit from access to gambling products. It does mean that some caution should be exercised in using estimates of consumer benefit. Such estimates can only be indicative. However, as the subsequent analysis by the Commission shows, the benefit to consumers is found to be substantial, and remains so when using a wide range of elasticities.

In estimating consumer surplus, the Commission has treated problem gamblers differently from the majority of recreational gamblers. In addition, to reflect the fact

that problem gamblers are not a homogeneous group, a distinction has been drawn between moderate and severe problem gamblers.

- Recreational gamblers are likely to be more sensitive to changes in the price of gambling products. For these consumers, gambling is just one of a range of recreational activities and thus it is reasonable to consider that they could more readily shift to alternatives if the price of gambling increased. This category would thus have a higher price elasticity of demand than other gamblers.
- Moderate problem gamblers are considered to be less sensitive to price changes. Such gamblers report some problems with control of their gambling activity, and thus a lower price elasticity is assumed for this group.
- Severe problem gamblers are a more difficult category. They could be expected to be the least sensitive to price changes, as the need to continue gambling is so great. But some may already be gambling with all the money that they have at their disposal, thereby constraining their ability to respond to price changes. It is likely, however, that this situation only arises at the extreme end of the problem gambling spectrum. The Commission has therefore assumed that severe problem gamblers are the least sensitive to changes in the price of gambling products.

Because of the lack of certainty about the way individual groups of gambling consumers react to price changes, the Commission has used a high and a low elasticity for each of the identified groups. These elasticities have been chosen to reflect a reasonable range of the likely responses of gambling consumers. The range of elasticities for the demand for gambling used in estimating consumer surplus for each category of gamblers are shown in table 5.8.

Table 5.8 **Price elasticities of demand for gambling used in the Commission's estimates of benefits**[a]

	Low demand elasticity	*High demand elasticity*
Recreational gamblers	-0.8	-1.3
Moderate problem gamblers	-0.6	-1.0
Severe problem gamblers	-0.3	-1.0

a Percentage change in expenditure on gambling given a 1 per cent change in the price of gambling.

An estimate of recreational gamblers' surplus

For most consumption (that undertaken by recreational gamblers), the presumption that the surplus represents a *genuine* addition to the welfare of consumers is a reasonable one. While the Commission has identified widespread and persistent misperceptions about the nature of gambling products in the general community (chapter 16) which may imply some 'overconsumption' of gambling products, even

by recreational gamblers, no adjustment has been made to the estimate of consumer surplus for this group.

The Commission has estimated that, for the two thirds of expenditure on gambling accounted for by recreational gamblers, the consumer surplus is some $2.7 billion to $4.5 billion each year. The higher estimate results from the low elasticity assumption, the lower estimate represents the higher elasticity situation. This represents the consumer surplus retained by recreational gamblers after tax has been paid to government (table 5.9). The total benefit should include the tax paid, and this is presented in the following section.

Table 5.9 **Estimated consumer surplus retained by recreational gamblers, 1997-98**

	Consumer surplus for recreational gamblers
	$ million
Wagering	410 — 666
Lotteries	427 — 693
Scratchies	77 — 124
Gaming machines	1 404 — 2281
Casino games	305 — 495
Other	129 — 210
All gambling	**2 745 — 4 460**

Source: PC estimates: appendix C.

Tax revenue, licence fees and community contributions

State and Territory governments collected $3.8 billion in tax revenue from the gambling industries in 1997-98. In addition, gambling providers have paid a range of gambling licences to the various state and territory governments, some as up-front fees at the time of the granting of the licence, and some as an annual payment. The Commission has estimated an annual value for these licence payments of $233 million. Clubs, particularly those in New South Wales, make a range of community contributions (for which, in part, they receive concessional tax treatment). In these estimates of benefits, an annual figure of $246 million has been used as the community contribution of clubs from their gaming machine revenues (chapter 21).

These payments represents a transfer of some of the consumer surplus potentially available to consumers to the government, or to others in the community via community contributions. That is, in the absence of the tax, the estimated consumer surplus retained by consumers would be higher to the extent of the tax revenue collected (together with a small amount representing the impact that the high prices have on the level of consumption), and thus the tax collected should be included in

estimates of the consumer benefits generated by the availability of gambling products.

For simplicity, the Commission has assumed that all the tax revenue collected from the gambling industries is ultimately borne by consumers, and thus the full value of taxes is included with other consumer benefits estimated here. In practice, not all of the tax may be borne by consumers, some may be carried by the gambling industries. The extent to which tax falls on consumers and producers depends on the nature of the demand and supply conditions associated with the industry. Box 5.9 presents an estimate made by ACIL of the distribution of tax between consumers and producers).

Box 5.9 **Industry estimate of the distribution of taxes between consumers and producers**

"Revenue from product taxation is sometimes not regarded as part of producer surplus (or consumer surplus). Yet here taxation is very high, and unquestionably producers bear a proportion of it. Their burden depends on the tax rate and the ratio of the supply and demand elasticities."

"Assume for illustrative purposes a supply elasticity of 2.5, a demand elasticity of -0.7 (which is the lower bound of the PC's preferred range of demand elasticities), and a tax rate of 40 per cent. Of the total of almost $4 billion in gambling taxes collected last year, the producers' share of the taxation burden would be one-seventh, or $0.6 billion."

"This figure would represent a lower bound of the producer surplus measured according to our preferred methodology. First, the total tax estimate excludes the annualised equivalent of the substantial lump sum licence fees that have been paid by most operators. Second, to reflect traditional producer surplus, any earnings above cost earned by producers (such as those with special skills, or sites) should be added."

Source: Excerpt from sub. D233, pp 34-35.

This allocation of the tax burden between consumers and producers does not, however, have any impact on the estimate of the total benefit derived from the availability of gambling in Australia. The total of the tax revenue collected, including that from licence fees, would be included in such an estimate of benefits whether borne by consumers or producers. Nonetheless, the Commission considers that it is more appropriate to allocate the tax revenue to consumers as there are few signs that costs in the gambling industries would go up as the industry expands. Indeed, in many areas, economies of scale are an important factor. This implies that a supply elasticity of 2.5 (box 5.9) is too low. A higher elasticity would result in a greater share of the tax being borne by consumers.

Table 5.10 below presents information on the total of tax revenue collected, licence fees paid and community contributions for gambling as a whole and for the different forms of gambling.

Table 5.10 **Gambling tax revenue, licence fees and community contributions, 1997-98 ($ million)**

	Estimated tax revenue paid by recreational gamblers	*Estimated tax revenue paid by moderate problem gamblers*	*Estimated tax revenue paid by severe problem gamblers*	*Estimated revenue from tourist spending*	*Tax revenue collected 1997-98*
Wagering	409	58	144	-	611
Lotteries	784	31	17	-	832
Scratchies	140	20	14	-	174
Gaming machines	1 364	205	797	-	2 365
Casino games	170	16	5	89	280
Other	38	4	8	-	51
All gambling	**2 826**	**349**	**1 048**	**89**	**4 312**

Source: PC estimates: appendix C.

Estimates for problem gamblers

As noted, in making its estimates, the Commission has assumed that problem gamblers benefit only from part of their gambling expenditure. The part from which they derive a benefit is the level of spending that they are assumed to have undertaken had they not become subject to compulsive gambling behaviour. The Commission has estimated this non-compulsive or 'recreational' level of spending based on the expenditure by regular recreational gamblers in each mode of gambling (table 5.11).

Problem gamblers are estimated to be spending an average of $12 200 each on their total gambling activities in 1997-98. Based on the level of spending by regular non-problem gamblers, the Commission has assumed that, in the absence of their compulsive behaviour, problem gamblers would have spent $1496 per head, some 13 per cent of their current level of spending, but more than twice that of the average for recreational gamblers as a whole.

In relation to this smaller level of expenditure, problem gamblers are treated in the same way as recreational gamblers, with their consumer surplus being confined to the smaller level of consumption that would occur in the absence of their compulsive behaviour.

Table 5.11 **Spending by recreational gamblers and a 'recreational' level for problem gamblers, 1997-98 (all gambling)**

Type of gambler	*Current spending*	*Current spending per head*	*Alternative 'recreational' spending*	*Alternative 'recreational' spending per head*
	$ million	$	$ million	$
Recreational	7 209	644	-	-
Moderate problem	889	5 443	244	1 496
Severe problem	2 673	20 662	194	1 496
All problem	3 562	12 168	438	1 496

Source: appendix P.

Spending in excess of the estimated 'recreational' amount for problem gamblers is assumed not to provide them with 'value for money'. That is, the benefit they receive is less than the amount of money spent. Overall, the lack of value for money on their excess spending exceeds the consumer surplus from the 'normal' level of spending, resulting in a 'negative' consumer surplus or 'deficit' for this group of consumers.

This is not to say that problem gamblers get *no* benefit out of the spending in excess of the recreational level. In its response to the draft report, the Australian Casino Association (sub. D234, p. 13) wrongly concluded that '… the PC arbitrarily applies an expenditure cap, above which it is assumed that problem gamblers receive no benefit'. Problem gamblers do get a benefit, but this benefit declines progressively as expenditures increase and is less than the amount that they pay for the higher consumption.

In making its estimate of the level of spending by problem gamblers that would occur in the absence of their compulsion, the Commission has taken the hypothetical situation where those concerned had not progressed to problem gambling — a situation that could exist if effective harm minimisation and prevention measures were in place in the gambling industry. Under this scenario, it is reasonable to presume that such gamblers would be more enthusiastic players than most, and thus the level of play of *regular* non-problem players is considered a more appropriate benchmark than the level of play of all non-problem players.

As with other assumptions in this analysis, this is a contestable point. Were, for example, the alternative level of spending chosen on the basis of the level of spending that problem gamblers would undertake were they to be 'cured' of their compulsive gambling habit, the level of spending is likely to be considerably lower than that used by the Commission. Some 80 per cent of gamblers in counselling say that they wish to quit gambling completely rather than continue at 'managed' levels. Assuming a lower level of spending for problem gamblers in the absence of their

compulsion would increase the 'loss' attributed to the problem gambling group and decrease the level of benefit estimated for the gambling industries.

The Commission has also assumed that, at the 'recreational' level of consumption, the demand characteristics would be the same as for recreational gamblers; that is, a range of demand elasticities of -0.8 to -1.3, rather than the more inelastic demand assumed to apply to their level of consumption as problem gamblers. This is consistent with the Commission's treatment of the alternative level of spending for problem gamblers as the level of spending that they would have undertaken had they not developed problems.

On this basis, problem gamblers would be spending $438 million a year on gambling activities, rather than their current expenditure of some $3.6 billion. The 'loss' (lack of value for money) on their spending in excess of this $438 million, is considerably greater than any consumer surplus on the lower consumption amount. The net 'consumer surplus' for this group thus becomes negative — estimated to be a shortfall of $2.7 billion each year (table 5.12)[4].

Table 5.12 **Estimated loss for problem gamblers, 1997-98 ($ million)**

	Annual spend by moderate problem gamblers	*Annual spend by severe problem gamblers*	*Loss for moderate problem gamblers*	*Loss for severe problem gamblers*
Wagering	152	377	76 — 77	315
Lotteries	43	24	20	7
Scratchies	28	19	19	13
Gaming machines	554	2 156	244 — 245	1 908 — 1 910
Casino games	73	22	18 — 19	(15)[a]
Other	38	74	18	59
All gambling	**889**	**2 673**	**404 — 406**	**2 288 — 2 290**

a Note that for casino games, severe problem gamblers are estimated to receive a positive benefit rather than a loss.

Source: PC estimates: appendix C.

In contrast, Blandy and Hawke (subs. D193 and D211) considered that the inelastic demand observed from current consumption by problem gamblers should be retained when estimating the benefit and loss in relation to their assumed 'recreational' level of spending. The Commission does not consider this appropriate

4 Note that, despite the significant difference in the elasticities used in relation to problem gamblers' 'recreational' level of consumption (-0.8 and -1.3), there is very little difference in the estimates of the losses they face. This is because there are two competing factors at work. When a lower elasticity is used, the surplus on their 'recreational' level of spending is greater, but conversely, the estimated loss on their excess spend also increases. Because the two elasticities chosen are symmetrical around an elasticity of -1, this results in a very close offsetting result.

as both the high level of spending by problem gamblers and their insensitivity to price changes compared to other players are the result of their compulsive behaviour. In looking at spending in the absence of this compulsive behaviour developing, it seems reasonable that both the level of spending and the sensitivity to price changes would need to be modified.

Blandy and Hawke's assumption is more relevant to an alternative scenario of regarding the alternative consumption situation as relating to problem gamblers' likely behaviour *after being 'cured'*. To be consistent, however, it would also be necessary to impute a zero value for this alternative level of consumption (see above), which means that problem gamblers would be assumed to derive no benefit at all. As noted, the Commission does not regard this as reasonable.

Box 5.10 **Alternative view on the treatment of problem gamblers**

In a submission on behalf of the Hon. Nick Xenophon and others, Professor Richard Blandy and Dr Anne Hawke questioned the assumption that problem gamblers, in the absence of their compulsion, would have the same demand characteristics as recreational gamblers. Blandy and Hawke (sub. D193) described the Commission's analysis of the consumer surplus for gamblers as "clear and innovative", but considered that, for problem gamblers, the elasticity of demand used in the analysis should be lower than that used by the Commission, (0.3 rather than the Commission's lower estimate of 0.5) and the elasticity of demand for recreational gamblers should be higher (1.7 rather than the Commission's high estimate of 1.3). Blandy and Hawke further considered that, even as relates to the assumed level of recreational spending by problem gamblers, the very low price elasticity for compulsive consumption should be used.

Using these elasticities, and the Commission's methodology as outlined in Appendix C of the Draft Report, Blandy and Hawke (sub. 211) estimated that the consumer surplus would be $3.2 billion. This compares to the Commission's current lower estimate of $4.3 billion.

The choice by Blandy and Hawke of a price elasticity at the high end of the range for recreational gamblers and at the low end of the range for problem gamblers even for the assumed 'non-problem' level of consumption, serves to minimise the estimate of consumer surplus. For example, if the Commission were to use an elasticity of -1.7 rather than the -1.3 chosen for its 'high elasticity' estimates, the estimated consumer benefit would be $599 million lower. At the hearing in Brisbane, Chris Murphy of ECONTECH was critical of Blandy and Hawke's choices of elasticities, noting that there was no hard evidence based on people's actual behaviour.

The Commission acknowledges that there is no hard evidence either way, but considers its own elasticity range to be more tenable for the ball park estimates provided here.

The overall benefits from consumption

Despite the net 'loss' for problem gamblers, the consumer benefits from the gambling industries are positive overall, estimated at between $4.4 billion and $6.1 billion each year. This benefit is made up of:

- between $2.7 billion to $4.5 billion of satisfaction or entertainment value (consumer surplus) for recreational gamblers;
- $4.3 billion of tax revenue for government, licence fees and community contributions; and
- a loss of $2.7 billion for the 2.1 per cent of the adult population classified as problem gamblers (table 5.13).

Table 5.13 **The value of benefits for gambling consumers, 1997-98 ($ million)**

	Consumer surplus for recreational gamblers	*Tax, licences and community contributions 1997-98*	*Consumer loss for problem gamblers*	*Net total benefit/surplus*
Wagering	410 — 666	611	391 — 392	629 — 885
Lotteries	427 — 693	832	27	1 232 — 1 498
Scratchies	77 — 124	174	32	219 — 266
Gaming machines	1 404 — 2 281	2 365	2 152 — 2 155	1 617 — 2 491
Casino games	305 — 495	280	3 — 4	580 — 769
Other	129 — 210	51	77	103 — 184
All gambling	**2 745 — 4 460**	**4 312**	**2 692 — 2 696**	**4 365 — 6 076**

Source: PC estimates: appendix C

The adjustments to the consumer surplus estimates to account for the lack of value-for-money received by problem gamblers relate only to the direct dollar amount spent on gambling by the problem gambler. They do not include the other costs that problem gamblers face, nor the costs imposed on families or the community by problem gambling. These additional costs are estimated in chapter 9.

The treatment by the Commission of consumption by problem gamblers differs from that of many other studies (which have assumed that all of the money spent by problem gamblers represents a loss to both the gambler and society) and from the view of many in the industry (which is that all of the spending by problem gamblers should be treated in the same way as spending by any other consumer). While the Commission does not accept these views, a comparison of the results based on them is presented in table 5.14.

Table 5.14 **Comparison of alternative benefit estimates ($ million)**

	All spending by problem gamblers is a loss	*All spending by problem gamblers is a gain*	*Productivity Commission estimate*
High elasticity	3 495	8 497	4 365
Low elasticity	5 210	12 613	6 076

Source: PC estimates.

The Commission also examined how the estimates of the benefits from gambling would differ if moderate problem gamblers were treated in the same way as recreational gamblers, and were thus allocated the full apparent benefit from their consumption.

Table 5.15 **Results if moderate problem gamblers are treated as recreational gamblers: all gambling, 1997-98 ($ million)**

	Benefit if adjusting only the consumption of severe problem gamblers	*Productivity Commission estimate*
High elasticity	5 176	4 365
Low elasticity	6 444	6 076

Source: PC estimates.

As can be seen from table 5.15, treating moderate problem gamblers as recreational gamblers goes only a little way towards the estimated benefits using the industry's assumption that all problem gamblers gain the full benefit from their consumption. This is because severe problem gamblers account for the bulk of gambling expenditure by all problem gamblers. While the extent to which moderate problem gamblers benefit from their expenditure may be debatable, it is difficult to accept that severe problem gamblers are gaining full consumer benefits from their excessive levels of spending.

5.5 What other benefits are there for the Australian economy?

Contribution to economic activity

The gambling industries are now a significant part of the Australian economy. Some 20 000 people were employed in casinos, 13 000 at TABs, sports betting and bookmakers, and nearly 3000 in lottery businesses. In addition, about 120 000 people were employed in clubs and hotels with gambling facilities in 1997-98, although this includes employees associated with non-gambling aspects of these

organisations. Based on data supplied by the ABS, the Commission has estimated that the value added in the gambling industries amount to some $3.5 billion, or about 1.5 per cent of GDP in 1997-98 (chapter 2).

Gambling has links to other sectors of the economy, including the suppliers of gambling equipment, which rely on the demand generated by gambling. In some regional locations, establishments providing gambling services have become major players in the local recreational and entertainment sector. In the gaming machine manufacturing sector a successful and growing export business has been developed, with Australian machines recognised as among the most sophisticated in the world (see appendix N).

Industry representatives typically identify the employment and activity of the gambling industries as the principal benefit they provide to the Australian economy. ACIL (sub. D233 p. iv) said:

> if government were to treat the industry more like other industries, its GDP and job contribution would be bigger than these figures suggest.

Similarly, the Council of Community Clubs of Australia and New Zealand (sub. D226, p.3) said:

> The Club Movement is a significant generator of economic activity and wealth creation. There are some 3,868 licensed clubs in Australia (ABS 1999b). The majority of clubs are located in regional Australia. Country clubs are a major local hub of economic activity. Clubs are important in terms of capital expenditure and expenditure on training. Total employment for all clubs in 1997-98 was 67,272. In addition there are a substantial number of voluntary workers that do not appear in the ABS figures. Club directors alone are estimated to provide over 3 million hours annually in voluntary labour.

In looking at the contribution of an industry to the economy, it is important to distinguish between measures of an industry's size and measures of its net contribution, especially when considering liberalisation. It is also important to distinguish between the net economic impacts associated with the policy-induced expansion of an industry and that of policy-induced contraction.

Industry size and net contribution

Some $11 billion was spent by Australians on gambling in 1997-98. Spending on gambling has also grown rapidly as more jurisdictions have legalised an increasing range of gambling opportunities. However, in the absence of gambling, this spending would largely have occurred elsewhere (the impact of changes to the rate of savings is discussed later in this chapter). In the absence of gambling those other industries that would have received the consumers' dollar would have grown,

invested, employed people, and produced value added in much the same way as the gambling industries have done.

The important message is that measures of an industry's size (denoted by such things as investment, turnover, employment etc) are not measures of the net contribution of an industry to the wellbeing of the community or the economy. They are essentially a measure of the amount of the community's resources that are used in the industries, in response to the spending of consumers. In the absence of any particular industry, including gambling, neither the consumer spending, nor the resources of labour, capital, land etc, would disappear. There are alternatives available for both the consumer spending and for the resources used in the industry. While consumers prefer these alternatives less, they would nevertheless also have contributed to the economy in terms of their use of capital and labour, had gambling not been liberalised.

The AHA (NSW) expressed reservations about the ability of resources used in hotel gambling to move to other uses. They said (sub. D208, p. 15):

> There is not prima facie evidence that capital would flow to other industries in Australia…
>
> Specifically, the Commission's arguments on full employment of resources would, if taken to their conclusion, mean that no individual industry creates an economic benefit for the Australian economy. The sum of all industry's economic value would be nil which is absurd.

The AHA (NSW) comment raises a number of points. First, full employment is not essential to the argument that, over time, labour and other resources will shift to alternative uses in response to the redirection of consumer spending, only that the level of unemployment is largely unchanged by such developments. While there is considerable debate over the causes of systematic levels of unemployment, there is little evidence that unemployment rates are significantly affected by policies assisting particular industries. In its report on *Telecommunications Equipment, Systems and Services*, the Industry Commission (1998b, p. 93) noted:

> Empirical studies of unemployment among different countries suggest that industry policy does not have a large roll to play in ameliorating the problem [unemployment] (Layard, Nickell and Jackman 1991; Nickell 1997). Factors such as employment programs, industrial relations laws and institutions, and the social security and tax system are much more important long run determinants.

Similarly, Chris Murphy, in work presented by the Australian Hotels Association (sub. D231, p.22), said:

> In the long-term, the unemployment rate depends on labour market policy rather than industry policy. That is, in the long-term, industry policy affects the industry pattern of employment not the total level. Thus the PC [Productivity Commission] is correct in

arguing that the gambling industry, like any other industry, does not affect the unemployment rate in the long term.

This is not to say that there cannot be some regional effects from development projects. The existence of high rates of unemployment, which can persist for long periods of time at the regional level, together with other rigidities in markets that limit the ability for price signals to reflect the availability of such underutilised resources, means that there may be gains from some regional development policies. For the economy as a whole, the effect is more questionable. However, subsidised growth in one region can still be at the expense of a more efficient location elsewhere.

There can also be significant regional impacts where the location of gambling changes the pattern of consumption. For example, the Queensland Government (sub. D275, p. 5) pointed to the increase in Queensland club and hotel revenues and associated declines in revenues for clubs in Northern New South Wales which previously relied heavily on the patronage of Queenslanders.

Second, the fact that there are alternative uses for resources does not imply that the sum of all industries' contribution to the economy is nil. Obviously if the government stopped production in all industries the resources would be idle and there would be little left of the Australian economy. But this is not the comparison in question. The comparison is between the use of the resources in one particular industry compared to the many alternatives available, not between the use of the resources in an industry and not using them at all.

Third, to say that there is no evidence that capital would flow to other industries is clearly at odds with the history of the growth of the Australian economy. Over the last 50 years or more there have been huge changes in Australia's industrial structure. And the aggregate level of unemployment, while it has varied over time has been remarkably robust in the face of these structural changes.

The comment by the AHA (NSW) does, however, raise an important distinction between what would have been had the gambling industries not been liberalised, and the situation that would occur if those industries were now to be significantly curtailed. While in time resources would shift to other uses, there would be adjustment costs in the short-term. Skills and knowledge may be specific to the industry and staff may need to be retrained. The AHA (NSW) (sub. D208, p.ii) said that '… resources … would not flow seamlessly to other uses in the absence or contraction of the gambling industries.' and:

> The vast majority of hoteliers are in the business because it is their work as well as their investment. Their skills and experience would not be transferable to other industries. … Obviously, in long business cycles there will be periods of greater and lesser

> profitability and participants will stay in an industry waiting for better times rather than lose their intangible investment (i.e. their knowledge of the industry) and have to pay for capital movement, adjustment costs and imperfect resource mobility. (p. 15)

In addition to industry-specific skills, much capital equipment is unique to the gambling industries and could not be converted to other uses (though some could be exported). Too rapid a contraction would mean that gambling enterprises could sustain significant capital losses.

The CIE (sub. 111) explored these adjustment costs by modelling (on behalf of Aristocrat) the impact of a tax increase that reduced activity in the gambling industry by 1 per cent. They undertook this analysis by using a general equilibrium model using 'short-run' conditions which include limits on the ability of labour and capital to adjust to changes in the industry. The model showed a reduction in GDP of $105 million and an increase in unemployment of 2539 people in the short-run as the result of a 1 per cent contraction in the gambling industries. However, the long-run modelling yielded only minor changes (see below).

In this chapter the Commission has measured the benefits that have resulted from the growth of the gambling industries in Australia, not the costs of dismantling them. In so doing, it has not 'discounted' its estimate of the benefits to take account of the adjustment costs to other industries that were associated with the growth of gambling. In the same way that the benefits are not 'discounted' by the adjustment costs for other industries, they are not 'inflated' by estimates of the adjustment costs that would result from the contraction of gambling.

Measuring changes in the economy

The Australian economy contains a complex network of linkages between industries, consumers, governments and the international economy. Some industries are suppliers to others, some are in competition for the consumers' dollar. Some are labour intensive, some are not. The general equilibrium model is the tool that has been developed to assist in understanding the impacts that a change in one industry can have elsewhere in the economy.

A number of such modelling studies have been undertaken to look at the impact of the gambling industries on the Australian economy (NIEIR 1997a; CIE, sub. 111; ACIL, sub. 155). ECONTECH also undertook economy-wide modelling for the Commission to help it to understand the effects of the expansion of gambling on the

economy, and to assist in understanding other modelling results presented by participants in the inquiry[5].

A summary of the studies and their findings are presented below.

Table 5.16 **Economy-wide impacts from modelling changes to the gambling industries.**

Model and simulation	*Change to the gambling industries*	*GDP*	*Employ-ment*	*Real wages*	*Private consumpt-ion*	*Exports*	*Retail trade*
NIEIR (rise in gambling from 1992-93 to 1995-96)	$1 500m 150% rise	$1 143	20 200	na	$829m 1%	na	na
CIE (1 per cent reduction in gambling industry)	(-$100m)	-$106m	-2,539	fixed	-$133m	na	0.2%
ACIL (50 per cent cut in gambling taxes)	2.09 ($209m)	0.00%	fixed	0.36%	0.03%	-0.11%	0.00%
ECONTECH (reduction in gambling to 1993-94 level)	gaming machines (-19%) casino (-55%)	0.0%	fixed	-1.9%	0.0%	0.1%	0.2%
(1 per cent reduction in gambling industry)	-1%	0.0%	fixed	0.0%	0.0%	0.0%	0.0%

Sources: NIEIR (1997a); CIE, sub. 111; ACIL, sub. 155; ECONTECH (1999).

What do these results tell us?

While each of the models presented in table 5.16 above have been structured in different ways, and have modelled the results of different changes to the gambling environment, they all indicate that there is a benefit to Australia from the liberalisation of the gambling industries. The overall gains are small, reflecting the fact that general equilibrium models take into account the range of alternative goods and services on which consumers can spend their money, and the range of activities in which resources can be used in response to the change in consumption patterns. It is important to note, however, that none of the models include any of the external or

[5] A copy of the ECONTECH report *Taxation and Regulation of the Australian Gambling Industries*, July 1999, is on request from the Productivity Commission, and is available from the Commission's internet site www.pc.gov.au/inquiry/gambling.

social costs of problem gambling, which can be expected to offset some proportion of the estimated benefit (chapters 9 and 10).

That aside, other aspects of the models also raise questions about the scale and nature of the impacts estimated.

- The NIEIR modelling generated significant net gains for Victoria because it assumed that the increased spending on gambling was all new spending. That is, other than some minor substitution between different forms of gambling, consumers did not reduce their spending on other goods to finance the increased spending on gambling. Increased spending was drawn from savings, and thus there was little offsetting contraction in other consumption industries. (The likely role of savings is discussed in the following section.)
- The CIE estimated the impact of an increase in the tax rate on gambling and the subsequent contraction in gambling activity. Importantly, as already noted, the CIE ran the general equilibrium model in short-run mode, which severely limits the extent to which resources leaving the gambling industries can find alternative uses in the economy. These unemployed resources thus show up as a significant loss to the economy. While the results tell us something about the short-term effect of a shock to the gambling industry and the economy, they tell us little about the contribution of an industry to the economy, which is more appropriately evaluated over the longer term when investment and other decisions can change in response.
- The ACIL and ECONTECH results presented above are run in a more traditional fashion and over the longer term. ACIL modelled the impact of a reduction in gambling taxes, while ECONTECH modelled the effect of industry re-regulation and an increase in gambling taxes. Both indicate that the gambling industries make a positive net contribution to the Australian economy. Both models assume that, over the longer term, real wages adjust to maintain the same level of employment in the economy.

That said, ACIL's results involved tax reductions for gambling that were not offset by increased tax revenue elsewhere in the economy, but were offset by increased productivity in the public sector. These results have not been presented in table 5.16, as they tell us more about the potential gains from increased efficiency in government than about the gains to the economy from the gambling industries.

While general equilibrium models can help us understand the likely effects of a change throughout the economy, they are necessarily simplifications of the real world, and the results are presented in quite an aggregated form. Significant changes can be occurring at lower levels, notwithstanding even a quite small net effect. Nonetheless, general equilibrium models do allow us to take into account alternative

uses for the consumers' dollar and alternative uses for the employment and capital in an industry. Importantly, they allow us to avoid the misleading impression of large gains that are indicated by the often used (but inappropriate) input-output based multiplier analysis.

What is the role of savings?

An issue that has arisen in the debate over the impact of the growth of gambling is whether the expansion of gambling expenditure has come from a decline in the rate of savings in Australia, or has come from consumers switching their expenditure from other forms of consumption. The issue is important because if expenditure in the new industry were to come from consumers running down their levels of savings — that is, they do not reduce their consumption of other goods — it is possible to have increases in the overall level of activity in the short-run.

The proposition that increases in consumer spending on gambling have been derived largely from savings, originated in a report by NIEIR and Spiller Gibbins Swan Pty Ltd (1997). This study concluded:

> The decline in household savings between 1990 and 1996 funded increased outlays on gambling, retail and services in Australia and Victoria. (p. iii)

and:

> The funding of increased gambling expenditure at the state level from savings is supported by empirical analysis at the state-wide level and some industry perceptions (p. v).

The conclusion of this study was used by the NIEIR in its modelling of the effect of gambling on employment in Victoria. It said:

> ... the fundamental position adopted is that up to 1995-96, at least new gaming expenditure largely represents new expenditures in the Victorian economy that would not otherwise have been made. This is in contrast to earlier methodologies applied by NIEIR in gambling studies which argued that expenditures of Victorian residents on new gambling activities would largely represent displacement of other forms of expenditures (NIEIR 1997a, p. 79).

The consequence of this assumption is that little displacement occurred and the model indicated that the expansion of gambling in Victoria increased employment by 34 700, and that this was sufficient to have reduced the Victorian unemployment rate by 1 percentage point in 1995-96 (p. i).

The extent to which the increased expenditure on gambling is drawn from reductions in savings is debatable. ACCESS Economics, in a submission for

Tattersall's (sub. 156), reviewed trends in gambling expenditure and savings and concluded:

> The overall conclusion from this material is that changes in gambling expenditure have been only one of a number of substantial changes in household expenditure over the last decade or so. There is no reason to single out changes in gambling as having in any way a "special" impact on savings (p. 15).

In addition, as much gambling expenditure is undertaken by people with low incomes and little discretionary savings, it is hard to see how the increase in gambling expenditure could be funded by a fall in savings.

The Commission's *National Gambling Survey* asked regular gamblers the following question: 'if you hadn't spent the money on gambling, could you please tell me in what other ways might you have used it?' The results, presented in chapter 6, indicated that only 15 per cent would have saved the money, while one third indicated that they would have spent it on other forms of entertainment.

Other studies have generated similar results (box 5.11).

Even without these reservations, any benefits to employment and output are short term. Savings are essentially deferred consumption. If savings are reduced to increase consumption in the present, consumption in the future must be lower. Drawing additional expenditure from savings does not, in the longer-term increase the level of activity in the economy, and to the extent that savings are essential for investment and growth, it is likely to generate a larger reduction in future consumption.

Box 5.11 **Alternative uses of gambling expenditures**

A number of surveys have asked gamblers about the alternative uses for gambling expenditure, either in terms of where the current spending has come from or what the money would be used for if gambling were not available. One survey of community gambling patterns and perceptions (Roy Morgan Research 1999, p. 65) said:

> Respondents were also asked where the money they used to gamble with came from. Most (38%) said they used money from their wage/job or pension. While 32% of respondent used 'pocket money' to gamble with, 9% said they took money from their entertainment budget. Money for transport, food or other bills, from general savings or from a special gambling budget were each the source of gambling outlay for 2% of gamblers ...

Another survey, (Melbourne Institute et al. 1997), conducted as part of a report on the impact of gaming venues on inner city municipalities in Melbourne, asked gaming machine users what they would do with the money and time that they spend on gaming machine gambling if they could not use it on gaming machines.

(continued)

Box 5.11 **continued**

The study commented (p. 65):

> … 65.1 per cent of respondents indicated that they would not devote any of the money they devote to EGMs to savings. On the other hand 13 per cent indicated that they would devote all the money to savings. The remainder said that they would devote some of the money to savings. On average it emerges that respondents indicated that they would devote about 21 per cent of the money to savings.
>
> The response for "other entertainment" were very similar, indicating that on average about 21 per cent of the funds would be devoted to "other entertainment". A smaller proportion, about 15 per cent would be devoted to household necessities and much the same again to other personal items.
>
> Other gambling would not increase much at all with nearly 90 per cent saying that they would not spend any of the money on other gambling and under one half of one per cent saying that they would spend it all on other gambling.

Spillovers

A number of participants also referred to 'spillover' or multiplier effects from their activities. The Council of Community Clubs of Australia and New Zealand (sub. D266 p.3) said:

> 'The Club Movement provides spin off benefits to other industries, particularly the tourism sector. The Club Movement supports campaigns that promote tourism activity nationally, statewide and in regions to the benefit of a wide range of non-contributing businesses.'

Others pointed to the purchase of a range of goods and services by their businesses and the employment and activity associated with their supply. These links are generally referred to as multipliers, and these multiplier 'benefits' — the activity and employment in supplier industries — are often added to the employment and activity in the particular industry in question.

But these multipliers just compound the fallacy that an industry's net contribution to the economy is the amount of resources it uses. As consumer spending shifts to other areas, they too employ people and invest, and equally 'generate' employment and activity in supplier and associated industries. There is no reason to believe that these links or multipliers are any greater or smaller than those of the gambling industries. Multipliers are simply measures of the links that an industry has in the economy, not a measure of the net benefits that it generates (chapter 4).

How important are tourists to gambling revenues?

Gambling facilities, particularly casinos, are often established with the objective of gaining significant revenues from tourists, typically out-of-state visitors, but also overseas visitors. The South Australian Government (sub. D284, pp. 7-8) said:

> However, although it [regional development] may be a zero sum game nationally, there may be some benefits from a regional perspective if South Australia can preserve a stake in the national tourism market.

The Australian Casino Association (sub. 124, p. 13) said that, in 1996-97, 13.6 per cent of casino visitors were from outside the local region, 0.4 per cent were international commission players, and a further 2.8 per cent were other international players. While international visitors are a very small percentage of the number of visitors, they represent a much more significant percentage of casino revenues. The ABS estimated that, in 1997-98, overseas visitors accounted for $536.5 million (or 25 per cent) of casino revenue.

The deregulation of gambling has enabled Australia to offer new or better tourist packages for overseas visitors and, to the extent that this generates additional tourist spending, there are likely to be benefits for the economy as a whole. At the same time, the provision of gambling locally is likely to reduce the number of local residents travelling overseas to gamble, though the extent of this is unknown. Deregulation has an effect similar to the discovery of new mineral resources for the export market. While there will be some offsetting adjustments to other export activities to maintain Australia's overall balance of payments, there is nonetheless a net gain to the economy. However, the modelling conducted for the Commission, and by others in submissions to the inquiry, indicate that the net benefits are small.

Box 5.12 **Does the level of foreign equity matter?**

Tabcorp (sub. D232, pp. 6-7) referred to the low level of foreign equity in the Australian gambling industries, reporting that cinema distribution results in a much greater share of funds flowing offshore (23.8 per cent, presumably as a return on foreign equity) than the gambling industries (1.5 per cent). Given the high level of foreign investment in the Australian economy (and increasing investment by Australians overseas), it is inevitable that some industries will have a higher share of foreign equity than others. In much the same way Australians' overseas investments may be concentrated in particular industries. The fact that Australians have chosen to invest in the gambling industries rather than cinema distribution does not in any way mean that one industry in some way provides greater benefits for the Australian economy than the other. Were Australians to sell their shares in the gambling industries and purchase shares in cinema distribution, this would have no impact on the relative worth of the two industries to the Australian economy.

Summing up

The gambling industries generate a significant net benefit to consumers, even when discounted for the likely shortfall in value received by problem gamblers. This overall benefit is estimated at between $4.4 and $6.1 billion a year.

The gambling industries also account for substantial employment and value added in the economy. However, the net gain in employment and activity from the (policy-induced) expansion of the gambling industries are small at the aggregate level when account is taken of the impact on other industries that lose the consumers' dollar to gambling.