Evidence and social policy: the case of gambling*

> *Sir Humphrey:...* Now in Stage Two you go on to discredit the evidence … You say it leaves some important questions unanswered, that much of the evidence is inconclusive, that the figures are open to other interpretations, that certain findings are contradictory, and that some of the main conclusions have been questioned. ...
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> *Minister Hacker*: But to make accusations of this sort — you'd have to go through it with a fine toothcomb?
>
> *Sir Humphrey*: No, no, no. You can say all these things without reading it.

Evidence is crucial to good public policy outcomes in two respects:

- it helps policymakers work out which policy options are likely to achieve the best results;

- it helps in getting a policy implemented in circumstances where there is opposition to it.

Opposition to genuinely 'good' policy — policy that makes the community as a whole better off — is actually quite common. It can be the result of ignorance or interests. The former is an easier obstacle to overcome than the latter, since it will generally suffice to be able to explain or demonstrate the benefits of the proposed policy action. Disarming the opposition of special interests is a lot harder. This is because evidence of public benefit will rarely ameliorate the reason for their opposition — namely, expectation of private loss or disadvantage. Thus, opposition from special interests to such policy proposals tends to persist, unless it can somehow be bought off. But this can be a perilous path for governments to take.

In such circumstances, credible evidence of the potential gains from policy change can play a vital role. It can provide government with ammunition to counter the claims of special interests, as well as alerting the beneficiaries of the proposed policy to what is at stake for them — thereby creating a more active political constituency for change or reform.

In short, evidence about the public interest is the friend of the reformer and the enemy of vested interests, who will accordingly often seek to undermine it in an attempt to preserve the perceived legitimacy of the status quo.

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Thus, as many here will appreciate, the story of structural economic reform in Australia has been a story of the effective building and selling of evidence about the need for reform and how it should be advanced. It represented the triumph of public over private interest — reversing previous experience — and has yielded substantial rewards to the Australian community.

Social policy is harder

Evidence has played a less central or dramatic role in the evolution of social policy in Australia, at least until relatively recently. Many policies have been devised without much evidence or even close analysis. As I have previously remarked, perhaps the most calamitous instances were the policies introduced some four decades ago that simultaneously made it harder to employ Indigenous people, while making it easier for them to get by without work, the consequences of which are all too evident today. However, there are many other illustrations from areas such as welfare and community services, public health and education.

Social policy is often directed at equity goals, and reflects the (changing) norms or values of society. It is thus inherently more value laden and 'political' than much economic policy, and it can evolve in new directions. The focus tends to be on doing good or avoiding obvious harms to people — on the *ends*, rather than detailed assessment of alternative means.

It is also the case that the potential payoffs from alternative social policy measures can be very hard to evaluate in advance. Theory is often not settled and evidence can be difficult to collect, and rarely definitive. There are several dimensions to this evidentiary challenge.

People are complicated

As shown in the behavioural economics literature, people's actions can reflect complex preferences and motivations, which make it hard to predict the impacts of policies. Blood donations are a classic illustration. People are strongly motivated by altruism in donating blood, but periodically there are shortages in blood supplies. In the United States and some other countries, this led to money being offered. However, payment undermined altruistic motivations, with the seemingly perverse effect of partly crowding out donation. Moreover, donors induced by payment had a higher risk of transfusion-transmitted infections, affecting blood quality. (In fact, the evidence suggests that paid donation need not have undesirable consequences if artfully presented and structured. But the point is that policy formulation in such areas needs to be much more subtle than might be expected).

Collecting good data is difficult

It is often hard to get salient data about impacts of policies or about people's behaviours. There can be significant ethical and privacy issues in acquiring evidence. For example, inquiries into suicidal ideation may strengthen those ideas. Or there may be a conflict between the obligation to maintain respondent confidentiality and disclose revelations to others (such as child abuse). Such issues do not usually pervade other areas of policy research. An additional barrier to understanding problems that might invite social policy responses in areas such as domestic violence and drug use is that people often hide stigmatised behaviours.

Policy outcomes can take a while

In addition, there can be particularly long lags before the efficacy of some social policy initiatives can be determined. For instance, the HighScope Perry pre-school experiment in the USA assessed the impacts of a intensive education for at-risk children from poor areas. The follow-ups undertaken when the children were adults were key to detecting much of the benefits from the program. But the cost of such longitudinal studies is high and often they are too slow to meet policy design needs.

Hard to compare 'like with like'

It can be hard to apply the results from one policy to others, unless great care is taken to ensure that the policy applies in truly congruent contexts. For example, the Perry pre-school policy proved effective for underprivileged children, but was found to be less relevant for others. The detail matters. More generally, it is often hard to confirm causality simply based on correlation between an 'outcome' and some factor amenable to policy change.

Assessment often must depend on what people say

In many areas of policy, outcomes can be readily observed. But in some areas of social policy measurement — for instance, people's emotional states, or their satisfaction with community services — the information available is mostly based on self-assessment. While this is subjective, it can still constitute legitimate evidence. But it has to be carefully collected and interpreted — particularly where dependent on recollection. It is not like measuring salinity in the Murray River!

Intangible and value-driven tradeoffs

Social policies, like other policies, often have multiple impacts, but their relative importance can be much harder to weight. For example, a social policy might promote equity, but reduce some peoples' job prospects. It is hard to assess the total impact without valuing each different component.

Moreover, views may differ about what constitutes a 'benefit' in areas where community norms are evolving. For instance, at one time a policy that incidentally increased female workforce participation would have been seen as a bad outcome, whereas currently it would be seen as a good one. (Prior to the mid-1960s, a woman in the public sector was required to resign when she got married.)

A reasonable standard of 'proof' is called for

So if not quite 'dancing in the dark', social policymakers have access to imperfect and hard-to-interpret evidence, and they must often make their moves in the shade. Some might say that imperfect evidence should mean *no* policy action until there is greater certainty. In many cases, this is a reasonable rule of thumb. Its underlying premise, however, is that the consequences of wrongly adopting a poor policy (a false positive) are likely to be more costly to society than the consequences of wrongly rejecting a good one (a false negative).

But in some social policy areas, the potential cost of false negatives — not acting when it would have helped — could be much higher than false positives. In such cases, a precautionary approach may be called for, requiring a lower standard of evidence, or even reversal of the onus of proof. The telling issue for making a policy decision may not be the evidence for action, but the evidence for inaction.

The issue, therefore, is not the desirability of evidence *per se* — but the extent and nature of the evidence required to preserve the status quo or to make a policy change. The test in social policy needs to be more akin to the test in civil law 'on the balance of probabilities', than the criminal law's 'beyond all reasonable doubt'; though with the proviso that outcomes should be monitored to verify the verdict.

The case of gambling policy

This is all highly relevant to the history and evolution of policies concerned with gambling. For many years, the various forms of gambling were either illegal or heavily constrained in Australia, notwithstanding some variation across states and territories. This essentially reflected community norms, with gambling generally

seen as a 'bad thing' or, at best, a 'questionable pleasure' (as a senior executive at Tattersall's once put it).

The extensive liberalisation of poker machine gambling which occurred through the 1990s was not the result of new evidence about the social effects of gambling. Rather, liberalisation was mainly driven by pressure from the gambling industry itself, in a policy environment that was more receptive to market forces, together with the desire for tax revenue by governments — buttressed by the mistaken view that more gambling would create more jobs.

This illustrates the special difficulty of achieving good public policy when it comes to gambling. It not only faces all the difficulties of an evidence-based approach that are inherent to social policy, it also faces the political difficulties that stem from strong vested interests. It is hard to think of another area of social policy where this combination of obstacles is so marked. Indeed, gambling has often been seen as industry or regional policy as much as social policy, with this confusion often also being present in administrative arrangements.

Evidence is thus both very important to achieving gambling policies/reforms in the public interest and very hard to assemble. In its 1999 Inquiry, the Commission had the benefit of little evidence other than what it was able to generate itself, including through surveys. It accordingly recommended that evidence be collected through trials and other means for a number of policy measures that it considered prospective on prima facie grounds.

Returning to the field a decade later, we were disappointed to find that although many research studies and policy initiatives had been undertaken, few had been directed where they were likely to do most good. Different jurisdictions had commissioned a number of prevalence studies, and there was considerable research into the behaviour and traits of 'problem gamblers'. But methodologies lacked consistency and key data and indicators were not always presented.

Evidence on the effectiveness of alternative harm minimisation options has been a particular weakness. In the case of gaming machines, where the social costs loom largest, there have been few targeted trials to assess the impacts of machine design features — where harm minimisation has the most potential. Where trials have taken place, their scale and design have often detracted from their policy usefulness.

All this has provided fertile ground for the selective use and mis-use of data. Perhaps the most egregious example has been Clubs Australia's selective use of data from surveys with different methodologies to falsely claim that the prevalence of problem gambling had been greatly reduced. (Careful analysis by the Commission, allowing for different survey characteristics, suggests at most a small

decline.) The industry has also cited research results for weak policy measures in arguing against stronger variants. And it has argued that large revenue losses would result from recreational gamblers being 'put off' by the more effective harm minimisation measures, when in reality their revenue comes predominately from a small group of big spending 'regulars' — a large proportion of whom are likely to be experiencing significant problems.

Further, most of the harm minimisation measures that were introduced by governments in the decade between our inquiries had little evidence to support their efficacy, let alone cost-effectiveness. Indeed, we found that virtually no machine design change with an *a priori* likelihood of effectiveness had been introduced in any state or territory. For example, there is little evidence that requiring clocks on machine displays would ameliorate the disorientation of people playing gaming machines (most of whom have watches). Governments have introduced short periods of machine shutdowns, but these are mainly in the early hours of the morning, and do more to facilitate the work of cleaners than to reduce harm to consumers. The measure that had the biggest impact — smoking bans in hospitality premises — was only incidental to gambling policy.

This illustrates the double standards displayed by the gambling industry when it comes to evidence. The industry essentially owes its existence and current size to the lack of an evidence-based approach to liberalization, which has resulted in extensive 'community-based gambling'. It subsequently protested only a little at the lack of evidence for most of the (ineffectual) harm minimisation measures introduced over the past decade, despite their compliance costs. But it has been insistent on high standards of proof for measures that promise to be effective. One major industry group even suggested that no measure should be introduced if the possibility of error was more than 1 in a 1000!

The Commission's pursuit of evidence

Some degree of uncertainty must be present when devising policies in an area as complex as gambling. As noted, policy has to weigh up the risks of introducing an ineffective measure with the risks of failing to introduce a measure that would have been effective. Minimising one risk necessarily maximises the other. For this purpose, rarely will any one source of evidence be sufficient in itself, especially given the data deficiencies just described. In informing its judgments about these risks and the most appropriate policies, therefore, the Commission used a 'triangulation' approach, drawing systematically from a range of sources. These included:

- analysis of the unit records of seven major surveys that investigated gambling behaviours and impacts. The data enabled the Commission to analyse the types of harms affecting different categories of gamblers, their gambling behaviour and (from some surveys), the strategies used by gamblers to address risks to themselves

- our own survey of people receiving counselling assistance, conducted with the cooperation of counselling agencies throughout Australia

- consultations with government bodies in the United Kingdom, New Zealand and Norway about significant changes in their gaming machine (and related) policies, and their impacts

- unit record data from one large club in Sydney detailing the playing styles and losses of thousands of players

- national data — disaggregated by state and territory — on expenditure, turnover and other aspects of gambling over time

- extensive consultations with leading experts in gambling research and policy in Australia and overseas

- discussions about the functioning of gaming machines with monitoring agencies, gaming machine manufacturers and other technology providers. Several regulators also provided technical and cost advice, as did ATM operators in gambling venues

- unit record data from the Worldsmart pre-commitment trial in South Australia

- Australian and overseas academic literature on gamblers' behaviours, harm minimisation measures, and treatment efficacy, and theory about the behaviour of different types of gamblers and insights into their likely responses to different policies

- last, but not least, extensive consultation with all stakeholders, involving visits, public hearings and evidence from 422 submissions, including detailed responses to our preliminary findings and recommendations, well ahead of our final reporting deadline.

The Commission used evidence from such multiple sources to assess the likely effectiveness of particular measures in reducing harm, the extent to which different measures would affect people not experiencing harm, the practical aspects of administering any arrangement, the costs of measures, and the appropriate pace of implementation given those costs and benefits. As a result, we felt sufficiently confident about the likely payoffs to recommend a number of significant measures. However, where significant uncertainties remained, we recommended trials or proposed measures in a form that could be readily monitored and adjusted.

Why is gambling a policy 'problem'?

Many people see gambling as part of a social night out, or as a cheap dream of transforming their lives with a big prize. Most spend little, but people spent (lost) around $19 billion in total on gambling in 2008-09, which is around the same as purchases of motor vehicles, and 40 per cent more than retail alcohol purchases. All things being equal, this reveals strong consumer preferences for gambling. Meeting this demand comprises the major source of economic benefits from the gambling industry.

But of course, all things are not equal. Some people experience significant harm from some types of gambling, particularly electronic gaming machines — the 'pokies' — and this distinguishes gambling from most other recreational activities. It also explains the community's ambivalence towards it. A national survey found that three-quarters of Australian adults thought gambling did "more harm than good" — a view unlikely to apply to most other (legal) recreational pursuits.

Adverse impacts are experienced by many people in different ways and to differing degrees. For some people — 'problem gamblers' — they can be intense, involving major personal and family impacts (depression, suicide, financial hardship, relationship breakdown) and community problems and costs (fraud and other crime, social welfare and other government services).

Based on the accepted screening methodologies, the estimated number of problem gamblers ranges around 115,000 people (0.7 per cent of the adult population) with another 280,000 (1.7 per cent) at 'moderate risk'. On the face of it, these numbers — or at least the percentages — appear 'small'. This interpretation is fostered by the gambling industry, which often characterises any social problems as being confined to just the irresponsible few.

However, small population prevalence rates do not mean small problems for society. (We do not regard mountaineering or drug-taking as safe pursuits on these grounds, for example.) Moreover, population prevalence rates mask the real risks. The risks for lottery players are low, as they are for sweeps and bingo. However, the Commission estimates that among those who regularly play on gaming machines, around 15 per cent are problem gamblers with an additional 15 per cent at risk. And pokie players are estimated to account for 75-80 per cent of all problem gamblers.

Moreover, problem gamblers play for longer intervals and at much higher intensity (spending rates) than other regular players, so it should come as no surprise that they also account for a disproportionately large share of the people 'on the floor' at any one time, as well as of total losses or industry revenue — our 'triangulated' estimates ranged around 40 per cent. This is also consistent with the 'reality check'

provided by the records of spending by loyalty card members at a large Sydney club – with 0.5 per cent of members accounting for one-half the club's total gaming revenue, and 2 per cent accounting for nearly 80 per cent. (This is well beyond the '80:20 rule' that is said to apply in some other areas of business). The club's records show that one player actually lost $210,000 in just six months, averaging $600 per hour played. While neither that person nor other 'big spenders' are necessarily problem (or at-risk) gamblers, the evidence correlating problems with amounts lost suggests that many would be.

The large spending of problem gamblers has major implications for the social costs of gambling and the likely efficacy of 'light-handed' regulation, or self-regulation. And it has been strongly disputed by segments of the industry. The Commission was therefore careful to document its methodology, to use a variety of sources less susceptible to the difficulties posed by gamblers' inaccurate recall and to give ranges of estimates. Even the lowest point — a share of 20 per cent of total gambling losses arising from problem gamblers — is sizable, amounting to some $2.5 billion.

Clubs Australia has argued that problem gamblers' spending share is much lower than the midpoint of 40 per cent found in the Commission's analysis of multiple surveys. They did so by selectively using our statistics, finding a problem gambling share of 'only' 16 per cent. But this implicitly presumes that problem gamblers' self-assessed spending is accurate whereas that of all other gamblers is under-stated. The reverse (and equally arbitrary) assumption would elevate problem gamblers' share to considerably more than 40 per cent. (As an illustration, in the NSW 2006 survey, the Clubs Australia approach yields a problem gambling share of 18 per cent, whereas the alternative yields a share of 66 per cent).

Estimating costs versus benefits

The Commission estimated both the costs and benefits of gambling. The benefits were derived from the estimated 'consumer surplus' — a measure of people's enjoyment of gambling — and from tax revenue. The Commission did not separately measure 'production' benefits since the evidence is that these are small. The major reason is that gambling displaces other production and employment, which would benefit from any contraction in it (and this is confirmed by empirical models of the economy).

On the cost side, the calculations included a share of the 'excessive' losses experienced by problem gamblers (where the usual concept of consumer surplus does not apply), and the impacts on their relationships, work performance and emotional wellbeing. The calculations also took account of broader social impacts,

such as crime, noting that the major documented source of fraud is gambling-related.

Such costs are obviously hard to estimate with any precision. The Commission's estimates ranged from just under $5 billion to around $8.5 billion. The lower number is based on the most conservative assumptions and the lowest estimates of problem gambler spending. But the whole range is likely to be an underestimate of the total social costs to the extent that it excludes harms that cannot readily be costed (like suicide) and impacts on other gamblers, including the significant proportion 'at risk'.

The benefits are also large, lying somewhere between $12 billion and $16 billion annually. These suggest that gambling produces a net social benefit for Australia overall. Some have taken that to mean that no policy change is therefore required. However, the aggregate net benefit numbers include the more benign gambling forms, such as lotteries. The range for gaming machines alone includes a net social cost at the low end. More importantly, from a policy perspective, the issue is whether a *bigger* net benefit could be achieved by devising policies that reduce the social cost, while preserving most of the benefit. The magnitude of the costs suggests that even measures of modest efficacy could yield substantial dividends for society.

Not (just) a 'medical' problem

In framing a policy approach, it is important to recognise that 'problem gambling' is only at the pointy end of the adverse social impacts. As just implied, the problems are far more extensive than those affecting this group of people. While the prevalence *rate* of harm is much lower among non-problem gamblers, the absolute *number* of people experiencing some form of harm is high, because the population of recreational gamblers is large. Indeed, 'non-problem' gamblers sometimes account for more than half the people affected by specific harms (such as health problems resulting from gambling). Moreover, many people have trouble understanding the nature of the gambling 'product' and its likely 'price'.

Gambling is therefore best seen through a public health or consumer policy lens — like alcohol, drugs and other socially 'risky' activities. Such an approach does not just take account of the traits of a person that may predispose them to problematic play, but also considers how gambling technologies, venue behaviours and other aspects of the gambling environment can contribute to bad outcomes.

Gaming machines should be the main focus of harm minimisation

Modern electronic gaming machines have come a long way from the old 'one-armed bandits' that were once the preserve of NSW clubs. Modern machines offer much higher levels of playing intensity and much greater ease in loading up the machines with cash. Sometimes referred to overseas as 'Australian-style' machines, they allow repeat bets at rates far in excess of other gambling forms, such as wagering, roulette or blackjack. It is easily possible for someone to play up to 1000 separate games every hour. This partly explains why gaming machine expenditure as a share of household income roughly doubled from the 1980s to the 2000s in NSW, despite the 'maturity' of its gaming market — that state having introduced pokies in the 1950s.

A modern two-cent machine allows people by definition to bet as little as two cents every button push. But by betting on multiple 'lines' and with multiple credits per line, gamblers can end up wagering $10 every few seconds. Based on data provided by the makers, Commission researchers simulated a machine currently in the market to understand the outcomes from playing. It found that people could 'expect' to lose $590 per hour of play if they staked $10 per button push at an average speed of 5.5 seconds per button push. Someone with a quick 'trigger finger' could expect to lose $1050 an hour, with the most common outcome being a loss of $1750. These losses bear no comparison with any other form of (legal) entertainment in community settings. As noted, the Commission has evidence of gaming machine players losing tens of thousands of dollars in a few months.

In addition, people playing the pokies often do not understand the 'price' of the games, which admittedly is not easy to work out. There are also widespread faulty cognitions (such as a belief that machines can 'run hot or cold' or the view that successive losses must be followed by successive wins). Some of the design elements of machines — such as frequent but irregular prizes — facilitate loss of control through their operant-conditioning effects ('human skinner boxes' as they have been called). Moreover, as noted, gaming machines are very accessible throughout the community, being available at most times of the day, within a few kilometres of everyone, and at venues that are routinely used for socialising.

Policy options

As in other areas of public health and consumer policy, reducing harm for people who gamble requires a focus on two strategies:

- strengthening people's capacity for informed choice ('self-responsibility')
- moderating the hazardous features of the 'environment' in which people gamble.

These strategies go beyond reducing the prevalence of problem gambling, to include reducing the number of new cases (incidence), and reducing the impacts on ordinary consumers. They are underpinned by a more fundamental requirement for good regulatory governance, and institutional arrangements that can respond to risks as they emerge.

The Commission's policy trilogy

STRATEGY 1 Enhance Personal Responsibility	STRATEGY 2 Reduce Risks and Intensity of Play	STRATEGY 3 Institutional Structures and Research
Pre-commit to time/money limits Earlier self exclusion Warnings, education, information on cost of playing Dynamic warnings Providing counselling and treatment for gamblers experiencing problems	$1 bet limit $20 max cash input $250 max ATM withdrawal $300 prizes and above paid by cheque Win banks Shutdown times Venues – Training and staff guidelines	Regulatory independence and effective complaints and penalties Ministerial responsibility for gaming AND harm minimisation Research Centre – Independent and consultative with policy-relevant research Consistency in surveys and public domain data

The Commission's guiding principle in selecting measures within the three areas was to reduce the social costs of gambling without unduly detracting from its recreational value, thereby enhancing net benefits to the community as a whole.

The Commission recommended a raft of measures based on a significant body of evidence from different sources. Drawing on triangulated evidence, we assessed the potential effectiveness of each measure for the target population relative to its impacts on others, as well as considering potential implementation costs.

The Commission's evidence-based approach not only led us to recommend the measures indicated above; it also led us to reject others. For example, while we judged that imposing withdrawal limits on ATMs would be cost-effective, removing these machines entirely from venues was considered unlikely to be, given evidence of the likelihood of gamblers still accessing cash 'outside' and the costs of relocating the machines. And we found a case for further liberalisation in some cases – such as allowing the Canberra Casino access to gaming machines, with an

equivalent reduction in machines in community venues, and allowing scope for Australians to legally participate in regulated online poker *card* games.

Perhaps the most important, as well as most contentious, of our harm minimisation proposals were:

- reducing maximum bets on gaming machines to one dollar

- introducing a 'pre-commitment' regime to all gaming venues in each jurisdiction.

The second of these recommendations has become the centrepiece of an agreement between Senator Wilkie and Prime Minister Gillard in the aftermath of the 2010 election. This agreement also requires the introduction of other recommendations, including incorporating 'dynamic warnings' and cost-of-play displays on gaming machines; and the $250 limit on ATM withdrawals.

The dollar bet limit

As noted above, most Australian gaming machines allow very high intensity play, leading to expected losses (or 'prices') that are out of kilter with their apparent recreational function. A direct way of affecting the losses and thus the 'problems' associated with gambling is to lower the maximum bet limit. The Commission recommended a dollar bet limit to replace the existing 'limits' of five to ten dollars.

This would still allow people considerable scope to choose their desired playing style (for example, how many lines they play versus how many credits per line). And the research suggests that such a spending constraint would not have significant impacts on recreational gamblers. For example, one survey suggested that only 12 per cent of recreational gamblers typically staked one dollar or more, whereas 50 per cent of problem gamblers did so. Data relating to loyalty card players showed that 98 per cent of gamblers bet on average one dollar or less. And one regulator indicated that the average stake across all gamblers on a popular game was 50 cents.

Some have argued that problem gamblers would adapt to this constraint by playing longer. However, the only real-life test of the impact of reduced bet limits found that problem gamblers did not extend their playing duration. In any case, there is no feasible increase in player duration that could produce the same losses!

By itself, a dollar bet limit would obviously not resolve problem gambling, since losses could still exceed one hundred dollars an hour. But it would be likely to reduce harm for many, without inhibiting the enjoyment of others.

Pre-commitment

Many gamblers find it difficult to control how much they spend when gambling. Not surprisingly this is most accentuated for problem gamblers, with around 90 per cent saying that they have difficulty resisting gambling. But significant numbers of other gamblers also face difficulties in limiting their play, their bet size, and keeping to a voluntary limit. In fact, of the total *number* of people who 'at least sometimes' experience difficulty in resisting gambling, 90 per cent would not be categorised as problem gamblers.

The goal of pre-commitment is to allow gamblers to set limits on their expenditure that are binding for a certain period and cannot be revoked during that period. The classical form of pre-commitment is drawn from the story of Ulysses, who tied himself to the mast so that he could enjoy the sirens' song without dashing his ship on the rocks. For that reason, these arrangements are sometimes referred to as 'Ulysses contracts'. In essence, pre-commitment is an aid to informed consent. It is also an ideal measure conceptually, in its targeting of the source of social cost.

Among other evidence in favour of such an approach, there is the testimony of problem gamblers in treatment, the strategies that gamblers are known to adopt in the absence of such a mechanism (such as wearing thongs when out, knowing that this would preclude entry to gaming venues) and the willingness of some to submit to the extreme sanction of self-exclusion (and the difficulties of arranging this).

An effective pre-commitment regime could accordingly be expected to have a significant take-up rate at *binding levels* over time, and thus also to have a significant impact on player losses and industry revenue. The industry has strongly opposed pre-commitment in its classical binding form, being more favourably disposed to voluntary arrangements.

Voluntary schemes have limited effectiveness

The empirical results point to some benefits from voluntary pre-commitment. In one trial in South Australia, people reported greater adherence to desired spending limits, with problem gamblers reducing their spending (and time played) by more than other groups. However, overall, a relatively small group of players took it up — which was also the experience of trials in Queensland.

The relatively low take-up and the capacity to renege on any limits is the Achilles heel of voluntary pre-commitment. Like New Year's resolutions, partial or voluntary pre-commitment can prompt good intentions and some changes, but are

easily circumvented. They are akin to tying Ulysses to the mast, but leaving him with a knife to cut his bonds.

The requirements

Given these significant limitations, the Commission recommended a 'mandatory' pre-commitment system:

- People would be required first to choose whether to set spending limits or not, and then either to nominate an amount and duration, or adopt the machine's relatively low 'default' settings. For example, someone might limit their spending to no more than $300 every fortnight for the next six months. The amount would be up to them, but while they could decrease it at any time (or increase the duration of the contract), they could not do the opposite.

- The machine must be able to identify the person playing. In turn, that would require people to meet some identification requirements to obtain the necessary smart card or other device.

- The machine or smart card must be able to collect information about play to determine whether the gambler's contract has been violated.

- All (high intensity) machines must be included within the system.

Design issues

Some have identified major concerns about privacy and paternalism in such measures. However, a requirement for identification to obtain the rights to some products (DVD loans, mobile phones) is now commonplace. All clubs already require people to identify themselves before they are issued a membership card or visit a club of which they are not a member. Such identification requirements have generally served the interests of businesses. The pre-commitment proposal is similar, but involves a requirement that benefits consumers. Moreover many recreational gamblers could gamble modestly without being part of the system (for example, by using a low value cash card without significant ID requirements or a machine in 'low-intensity' mode).

There are legitimate concerns about privacy whenever data are collected. However, such requirements are ubiquitous in modern society — such as for most financial transactions, tax, health care, the use of the internet and mobile phones. Under current gambling arrangements, many people are part of card-based loyalty schemes that identify them and record their transactions. Under pre-commitment, information would be collected and stored under the control of the body that

monitors machine revenues and functioning (currently, private technology companies contracted to government). No government need have access to the information.

Far from being paternalistic, pre-commitment is a mechanism to ensure consumer sovereignty. Gamblers get enhanced choice because they have an ability to set their own limits at a time when they are most rational, to control their behaviour during their more irrational times. Gamblers could choose high limits and never alter them, or they could choose low ones. But no one would be telling them how they had to play — the spectre of 'big brother' is a contrived one.

Some have argued that while pre-commitment might help 'normal' gamblers acquire greater control, it would not work for 'addicted' problem gamblers — whose resistance to gambling is generally weak. However, clinical and research evidence shows that people with impulse control difficulties do have periods of lucidity and experience regret and guilt over past gambling behaviour. (Guilt is a key characteristic of problem gambling behaviour and one of the items used to test its presence in screening questionnaires.)

That said, such gamblers can become desperate to gamble, so that an effective pre-commitment scheme must minimise the risks of them evading their self-imposed limits. For example, card swapping was significant in the Nova Scotia trials. However, this could be simply countered by requiring gamblers to identify themselves before receiving cheques for major prizes.

It has also been asserted by the gaming industry that gamblers would simply shift from pokies to other gambling forms. However, this is again not supported by evidence. Major changes to gaming machines (including the adoption of pre-commitment technology) were introduced in Norway from 2006 to 2009. These significantly curtailed 'slot machine' participation rates. But there was no increase in participation in any other gambling form, including no evident shift to online gambling and 'help line' calls declined significantly.

What about the costs?

Like other policies that aim to improve public health or increase consumer safety, there are both benefits and costs. Pre-commitment would require changes to gaming machines, devices such as smart cards that people would use when playing, and the upgrading of central monitoring systems in some jurisdictions to allow the two-way passage of information between the system and gaming machines. The industry has claimed that these costs would be prohibitive, amounting to billions of dollars.

However, the costs would depend greatly on the period over which the system is implemented.

There would be significant costs with the *rapid* implementation of pre-commitment — an overnight change has been implicitly assumed in the industry's estimates — because it would require the premature scrapping of many relatively new gaming machines or costly retrofitting. Rapid change would also entail practical difficulties, given constraints on the gaming industry undertaking large numbers of retrofits. Effective pre-commitment would also require the development of appropriate national standards, which would inevitably take some time. (A new national set of gaming machine standards would over time significantly reduce the regulatory burdens experienced by the manufacturers, which have had to modify machines for each jurisdiction for sometimes trivial variations in their standards.)

The Commission accordingly proposed a staged implementation of pre-commitment, such that capacities for it would be introduced at the time of machine manufacture (at low incremental cost), with that functionality switched on later, in line with the normal turnover of machines. We also envisaged that small clubs and hotels with few machines and low usage would face a slower transition.

Sometimes it is asserted that unemployment would also represent a major cost. The Commission judges this to be unlikely. Staff in clubs and other gambling venues have skills valued in the hospitality sector. The sector has drawn attention to impending staff shortages. Modelling commissioned by the gaming machine industry also found that reductions in gambling would not have adverse employment effects.

That said, there is no doubt that pre-commitment and other measures targeted at excessive spending — such as $1 bet limits and limits on how much cash can be loaded into a machine at one time — would have a significant impact on industry revenue, given the high share coming from problem and 'at risk' gamblers, at whom they are targeted. But this is not a reason to forgo reforms that would be generally beneficial, and has not stopped other reforms with distributional implications. The club industry has tried to position itself as a special case, given its community-based activities. But the evidence suggests that only a small proportion of most clubs' gambling revenue tends to be devoted to genuinely 'public benefit' causes (and, in any case, the concessional tax treatment of this revenue potentially displaces government spending of the same kind).

The way forward

Evidence is a decisive factor in good policymaking, though its use involves more nuances in the social arena. The Commission's approach to gambling reform was to gather evidence from disparate sources about what may work and how people behave, while taking into account the risks of both action and inaction.

In this spirit, we recognised the value of creating a regulatory system that is adaptable, flexible and efficient. A key aspect of implementing pre-commitment is the development of a versatile technology platform that would reduce the costs of any major subsequent regulation of machine design features. This enabling technological shift should be the prime focus of policy change. Pre-commitment is a useful initiative for lowering harm, but it is not a silver bullet and should be seen as part of a package of measures. A new technology platform would allow the low-cost tweaking of policies to achieve their maximum impact.

Technology in the gaming industry is already heading towards systems in which the central features of gaming machines can be configured remotely. That could include their settings for lines, credits, cash input levels, denomination, bets size, button push speeds and many other aspects of their design. It would allow regulators to introduce regulated changes to machines without costs to venues. This is already possible to some extent in Queensland, which changed the cash input amount remotely. Such a technology platform also has potential commercial benefits (such as the capacity for quicker changeover of games, multiplayer games, and cashless gambling).

Evidence-based policy-making also recognises that it is hard to design all aspects of a policy optimally in one go, particularly in complex areas of social policy. Pre-commitment is a significant policy initiative that must confront many choices about specific design features. Getting the detail right can be crucial to achieving a system that is cost-effective. Matters such as sign-up and ID requirements, protection of privacy, the choice of 'safe play' options, the appropriate defaults for limits, and measures to stop people borrowing others' identities, are all relevant to its success as a consumer protection and harm minimisation measure. For that reason, the Commission proposed that the Australian Government sponsor trials in a distinct region (it could be the whole of Tasmania), to identify the best parameters.

Finally, ongoing evidence-based approaches to gambling policy — or indeed policy in general — require appropriate governance arrangements. In the gambling area, these have not sufficiently kept at arms' length political, tax and commercial influences. The Commission accordingly stressed the need to establish better institutions and processes to enable the right research to be pursued and for the results of such research to be reflected in policy.