INVITED EMINENT PAPER SERIES

SOME POLICY IMPLICATIONS OF BEHAVIORAL ECONOMICS AND HAPPINESS STUDIES FOR SINGAPORE: WITH SPECIAL REFERENCE TO CASINOS

Professor Yew-Kwang Ng, Director of the Center for Increasing Returns and Economic Organization at Monash University, was born in 1942 in Malaysia. He graduated with a B.Com. from Nanyang University, Singapore in 1966 and a Ph.D. from Sydney University in 1971. He currently holds a personal chair at Monash University and is a fellow of the Academy of Social Sciences in Australia since 1980. He has worked in welfare economics, proposed mesoeconomics (a simplified general equilibrium analysis with both micro- and macro-elements) and welfare biology. He also collaborated with Prof. Xiaokai Yang on an inframarginal analysis of division of labor. He has published papers in leading journals in economics as well as in biology, mathematics, philosophy, psychology, and sociology and articles in the popular press. Books published include Mesoeconomics: A Micro-Macro Analysis (London: Wheatsheaf, 1986), Specialization and Economic Organization
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SOME POLICY IMPLICATIONS OF BEHAVIORAL ECONOMICS AND HAPPINESS STUDIES FOR SINGAPORE: WITH SPECIAL REFERENCE TO CASINOS*

YEW-KWANG NG
Department of Economics, Monash University, Clayton 3800, Australia
Kwang.Ng@buseco.monash.edu.au

Behavioral economics is the study of economic behavior beyond the traditional simple economic models of constrained maximization with purely economic objectives (consumption/profits). Some policy implications of the findings of behavioral economics, happiness studies and beyond are outlined, with special reference to excessive volatility in business cycles and the optimal level of public spending. Though behavioral economics potentially provides more support for the restriction of gambling, an outright ban need not be optimal. Though legal casinos may increase some crimes, it will decrease crimes associated with illegal gambling. Some restrictions of problem gambling will be needed. Apart from (if not rather than) the attraction of tourists/visitors, the consumer surplus associated with responsible pleasure gambling is likely to be the major benefits of legalizing casinos. The proposed entry fee may be better replaced by a membership system, as the former is unfair to locals and will lead to unhealthy gambling.

Keywords: Singapore; casinos; behavioral economics; happiness studies; public spending; business cycles.

1. What is Behavioral Economics

As correctly predicted by Jack Knetsch, the Nobel prize in economics in 2002 was awarded in behavioral and experimental economics (to Kahneman and Smith). What is behavioral economics? I define behavioral economics as the study (including observation, experimentation, modeling, policy implications) of economic behavior beyond the traditional simple economic models of constrained maximization with purely economic objectives (consumption/profits). [The more elaborate definition by Day (2004, p. 716) literally includes all economics as behavioral economics; see Ng (2005) for more details.] Some such “extra” or complex behavioral patterns include: (1) rational but “non-economic” objectives, e.g., fairness, altruism, relative standing, esteem (see, e.g., Brennan and Pettit, 2004; Frank, 2004; Rabin, 1993) and (2) irrational or non-maximizing behavior, e.g., satisficing, near rational behavior, endowment effects, procrastination, “defective telescopic faculty”, hyperbolic discounting, mob psychology

*This paper is a write-up version of my Goh Keng Swee (吴庆瑞) Public Lecture on 25 October 2005 organized by Singapore Center for Applied and Policy Economics, Department of Economics, National University of Singapore, while I was a visiting Goh Keng Swee professor. Parts of the paper are based on my previous publications, including Ng (2003, 2005).
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(see, e.g., Kahneman et al., 1991; Loewenstein and Elster, 1992; O’Donoghue and Rabin, 2001; Simon 1997).

2. Some Policy Implications of Behavioral Economics and Wider Studies

Many different implications of behavioral economics have been discussed (e.g., Akerlof, 2002; Laibson et al., 1998; Rabin, 1993; Thaler and Benartzi, 2004). Here, I will just discuss two much neglected issues.

2.1. Excessive volatility in business cycles

The problem of excessive volatility has been analyzed from Keynes to Schiller and Summers, among others. Here, I want to focus on the excessive volatility due to mob psychology and the existence of multiple equilibria or something close to this.

First, on mob psychology, let me tell a true personal story. About three decades ago, when I had absolutely no experience in share trading or financial economics, I was chatting with some friends. The conversation turned to share trading. Mr. A said, “They use the rule of 10%.” Mr. B asked, “What is this rule of 10%.” Being young and highly confident of myself, I thought I knew what it meant just from its name. So I said, “The rule of 10% means that, if you evaluate the share of a company at $100, when the share price drops to $90 or below, you buy; when it increases to $110 or above, you sell!” I said it with so much conviction that not only Mr. B nodded his head, Mr. A also nodded his head! Some weeks or months after that conversation, I was very surprised to find out in some publication that the so-called rule of 10% means something almost exactly opposite. It means something like this. When the share prices move down by more than 10%, it means that the bear market has come; quickly sell before it is too late! When the share prices move up by more than 10%, it means that the bull market has come; quickly buy before it is too late! This is what I mean by mob psychology of following the trend. Obviously, such psychology, behavior, and investment rules are going to increase the volatility of fluctuations in the financial markets. Moreover, it may also increase the volatility in some real variables, including production, especially when the economy is in a situation having or a continuum of equilibria or close to that.

2.1.1. Non-neutrality of money

In fact, even without mob psychology, time lags, money illusion, and other frictions, just the presence of non-perfect competition may make the economy having a continuum of equilibria. In such a situation, a change in nominal aggregate demand (either due to a change in money supply or some other factors) may affect either the price level (the monetarist case) or the real output (the Keynesian case) without affecting the other variable. The remarkable

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1I define irrationality as preferring/choosing something against one’s own welfare neither due to ignorance nor for the welfare of others; see Ng (1999) for details.
cases of an expectation wonderland (outcome depends on expectation which will be self-fulfilling) and cumulative expansion/contraction are also possible, partly explaining some real-world phenomena like business cycles, the importance of confidence, and difficulties of prediction (Ng 1977, 1980, 1986, 1992, 1998; Ng and Wu, 2004; on a range of equilibria and the effectiveness of incomes policies, see also McDonald, 1990; Lye and McDonald, 2004).

In the non-traditional cases, there exists an interfirm macroeconomic externality where the expansion by each firm benefits other firms apart from the familiar income multiplier effects. This is an area where behavioral economics, macroeconomics and welfare economics intersect, an area still not adequately studied.

2.1.2. The crux of the difference

In the traditional case of perfect competition, the same set of conditions (no time lags, no money illusion or other frictions) makes the economy have a unique equilibrium with the result of the neutrality of money. Why does the presence of non-perfect competition (either monopoly, oligopoly, monopolistic competition or any other non-perfectly competitive market structure or a mixture thereof) make such a big difference? Both the demand and supply sides are involved.

On the demand side, a perfectly competitive firm faces a horizontal demand curve for its product. Such a demand curve cannot shift left or right; it can only shift up or down. But an upward shift (as a consequence of an increase in aggregate demand, including that resulting from an increase in money supply) means an increase in prices. With no time lags, no money illusion (workers demand higher nominal wages with higher prices), etc., this leads to a similar shift in the marginal cost curve of the firm. Thus, the new profit-maximization point of $MC = MR = price$ remains at the same vertical line. Only prices increase with no change in the output level.

On the supply side, a horizontal demand curve under perfect competition implies that the MC curve has to be upward sloping for a determinate equilibrium. With such an upward-sloping MC curve, an increase in output tends to lead to an increase in the price level. On the other hand, with non-perfect competition, the demand curve for the product of a firm is typically downward sloping, making the corresponding MR curve typically even more downward sloping. It is thus consistent (for the existence of a determinate equilibrium) with either an upward, horizontal, or even downward-sloping MC curve. An increase in output may not increase or may even decrease the marginal cost, making the result of no increase in the price level more likely to prevail.

2.2. The implication on the optimal level of public spending

In this section, we discuss the implications of some findings of behavioral economics as well as some wider factors not usually considered in the simple economic models on the optimal level of public spending, especially on public goods.
First, with increasing affluence, the welfare of an individual depends increasingly less on her absolute consumption and more on her relative standing in the society. The importance of relative standing such as relative-income or relative-consumption effects has long been recognized by economists. While most economists refer to Veblen (1899) and Duesenberry (1949), Rae (1834) discussed the problem of relative income extensively much earlier. However, recent studies reveal the magnitude, scope, and relative (to absolute income) importance of relative standing that are beyond the imagination of most people, myself included. For example, one may expect that the importance of relative standing is least in the area of health care where the absolute effects may be expected to dominate. However, Wilkinson (1997) shows that even in health care, relative standing is more important than absolute standards. The relatively poor, even with higher absolute incomes and health care, ended up with much lower levels of healthiness than the absolutely poor but relatively well-off. Mortality is more a function of relative than absolute income and health care. After reviewing biological and non-biological evidence, Frank (1999, p. 145) concluded that “concern about relative position is a deep-rooted and ineradicable element of human nature”.

For a single person, an increase in income increases both her absolute and relative incomes. It is thus perceived to be very important. If the friends/schoolmates of your child all receive expensive birthday and Christmas gifts, you also have to give your child expensive ones. If your friends all have luxurious cars, you may feel less satisfied with your standard one. However, since public goods are simultaneously consumed by all individuals, no such relative pressures are present. This causes a bias in favor of private spending or against public spending. The benefits of public spending are underestimated relative to that of private consumption. In most estimates, the marginal benefit of private expenditure is likely to be taken to include the absolute-income or intrinsic consumption effects plus the internal or direct relative income effect (as these two taken together constitute the worth of private consumption as it appears to each individual), but not to include the negative external or indirect relative income effects. This creates an over-emphasis in favor of private expenditure, leading to a sub-optimal level of public spending (Ng, 1987).

Secondly, behavioral economics and wider studies show that individuals are not perfectly rational and perfectly informed maximizers as in the simple economic models. Rather, their behavior is affected by biological instincts, the influence of commercial advertising, peer pressure, imperfect information, and imperfect rationality. Moreover, at least in some aspects, these influences interacted to form a one sided bias making virtually all individuals (myself included) become excessively materialistically inclined (excessive in the sense of being bad to their own welfare). The (biological) fitness-maximizing instinct of accumulation (food storage in animals and money or wealth accumulation in human) also biases us towards excessive materialism. Natural selection works on the principle of survival and reproductive fitness, not on welfare maximization. It is true that once consciousness evolved (or created by God), evolution (or God) ensured that the choices made on the spot with conscious decisions are largely consistent with fitness by endowing the conscious species with affective feelings. Thus, activities/things bad for fitness (like injuries to the body, sickness, etc.) are penalized with pain and those good for fitness (like eating nutritious food when hungry and having
sex with reproductive members of the opposite sex) are rewarded with pleasure. Thus, our conscious decisions largely aiming at welfare maximization are also largely consistent with fitness maximization. However, the correspondence is not 100%. Hard-wired bias in favor of fitness may be selectable even if not consistent with welfare maximization. For example, the excessive fear of death and the willingness to undergo enormous hardships in order to survive will increase our fitness even at the costs of decreasing our expected net welfare. Similarly, excessive accumulation of wealth may increase fitness even if welfare reducing.

Happiness studies by psychologists and sociologists (and now increasingly also by economists) show that, after a rather low figure needed for biological survival, higher income contributes little to happiness even at the individual level (less so at the social level due to the need to deduct the relative competition effect). The evidence suggests that income accounts for less than 2% of the overall variance in individual happiness (Diener et al., 1993). Moreover, the direction of causation need not just be from money to happiness. Other things being equal, a person who laughs a lot may be easier than a person who cries a lot to be appointed to be a Goh Keng Swee professor. In fact, “if there is any causal relationship in rich countries, it appears to run from happiness to growth, not vice-versa” (Kenny, 1999, p. 19; see also Graham et al., 2004).

On the other hand, studies show that there are far more important factors (including faith, family, health, employment, personality) affecting happiness. If money is not very important for happiness but many people still sacrifice things far more important for happiness like health and leisure, jeopardize their relationships with friends and family, and even violate moral principles and the law (thus threatening their own freedom and even lives) to make more money, are they not less than perfectly rational? Such excessive accumulation decreases welfare but may increase fitness, especially in the ancient past when our accumulation instinct was shaped. This is so since an unloved and unhappy rich man with no true friends might still possess many wives and rear many children to reproductive ages. The case for the existence of irrational materialistic bias influenced by both nature and nurture is overwhelming, as discussed in Ng (2004, Chap. 11).

2.2.1. The case of Japan

One indication of the insignificance of income for happiness over a certain income level is the case of Japan. Japan has about the highest per capita income in the whole world around the 1970s and 1980s. However, its happiness level is the very lowest among all countries (Cummins, 1998). However, just after a few years after its economic “stagnation” from about 1989, the survey in 1994 shows that happiness index for Japan reaches just-below-average level (Diener, 2000). Moreover, the latest available survey in 2002–2004 (Leigh and Wolfers, forthcoming), happiness index for Japan reaches above average level.

In contrast, from 1987 to 2004, the average working hours in Japan decreased 0.7% per annum, with a larger than 10% decrease in total. Could it be the case that, after working too hard to make too many useless dollars, the people in Japan eventually realize that leisure is more important than money and hence increase their happiness level?
2.2.2. The reliability of happiness study

Economists tend to trust actual choices backed up by spending but doubt the reliability of happiness studies, which rely heavily on self assessments of happiness levels that are also difficult to compare interpersonally.\textsuperscript{2} Dominitz and Manski (1999) examine the scientific basis underlying economists’ hostility against subjective data and found it to be “meager” and “unfounded”. Rather, “survey respondents do provide coherent, useful information when queried systematically”; see Manski (2000, p. 132). Even before the use of more reliable methods of happiness measurement, there are persuasive arguments that existing measures are rather reliable. For example, different measures of happiness correlate well with one another (Fordyce, 1988), with recalls of positive versus negative life events (Seidlitz et al., 1997), with reports of friends and family members (Costa and McCrae, 1988; Diener, 1984; Sandvik et al., 1993), with physical measures like heart rate and blood pressure measures (Shedler et al., 1993), and with EEG measures of prefrontal brain activity (Sutton and Davidson, 1997). Moreover, correlations of happiness show remarkably consistency across countries, including developing and transitional (Graham and Pettinato, 2001, 2002; Namazie and Sanfey, 2001). Despite some remaining problems (see, e.g., Schwarz and Strack, 1999; Bertrand and Mullainathan, 2001), reported subjective well-being may still be used as good approximation (Frey and Stutzer, 2002).

For those economists who are still skeptical or even look down upon and deride at the happiness measures, they should look at their own backyard. Even the measurement of the most important economic variable of GNP is subject to all sorts of inaccuracies. We used the imperfect measure for decades. Then came the PPP (purchasing power parity) adjustment which overnight increased the Chinese GNP by four times and the Indian one by six times from this single adjustment alone! Most happiness measures may not be very accurate but I doubt that a 4-times adjustment will ever be necessary for the average figure of any nation. Furthermore, the picture is not much different even if we use more objective indicators of the quality of life. Analyzing a panel data set of 95 quality-of-life indicators (covering education, health, transport, inequality, pollution, democracy, political stability) covering 1960–1990, Easterly (1999) reaches some remarkable results.

While virtually all of these indicators show quality of life across nations to be positively associated with per capita income, when country effects are removed using either fixed effects or an estimator in first differences, the effects of economic growth on the quality of life are uneven and often nonexistent. It is found that “quality of life is about equally likely to improve or worsen with rising income. . . . In the sample of 69 indicators available for the First Differences indicator, 62% of the indicators had time shifts improve the indicator more than growth did” (Easterly, 1999, p. 17–18). Even for the only 20 out of the 81 indicators with a significantly positive relationship with income under fixed effects, time improved 10

\footnote{For one thing, people now may require a larger amount of subjective happiness before describing themselves as “very happy”. Thus, despite a possibly substantial increase in happiness, the percentage of people describing themselves as “very happy” may not have increased. To overcome such difficulties, I have developed a method that yields happiness measures that are comparable interpersonally, inter-temporally, and internationally (Ng, 1996).}
out of these 20 indicators more than income did. The importance of time is explained by the advance of knowledge at the world level that does contribute to the quality of life and happiness.

The above has an important implication. The growth in the government sector, the inefficiency in government spending, and the excess burden of taxation have been much emphasized by economists. However, they tend to ignore the likely much grosser inefficiencies in private spending due to the mutually offsetting effects of relative competition, the environmental disruption effects of much production and consumption activities, and the materialistic bias due to both nature and nurture discussed above. Taking account of these inefficiencies, the diversion of spending from the private to the public sectors may well be more welfare enhancing. It is true that the cost of an additional million dollars of public spending may be rather high (but see an additional point below questioning this). But this is so only in dollar terms. If additional private spending no longer really contributes significantly either to the quality of life or the happiness of people, the social welfare costs (not in the sense of efficiency costs but in the sense of the costs in terms of happiness forgone at the social level) of public spending may be rather low, or even negative. [The latter will be the case when private consumption is welfare reducing through the environmental disruption effects. In fact, economic growth may be welfare reducing if disruption is not or could not be directly taxed/controlled at low costs, even if the government is benevolent enough in trying to tax private incomes and spend on disruption abatement optimally, as shown in Ng and Ng (2001).] Since things like money and consumption are not our ultimate objective while happiness is, the high monetary costs of public spending should not deter us from increasing public spending on areas that are welfare enhancing (such as education, health and research) if the happiness costs are low. Economists need to complement their traditional learning with this opposite and more important piece of knowledge.

In fact, even just purely within the confines of monetary costs, there is a consideration suggesting that economists overestimate the costs of spending on public goods. Kaplow argues that public goods can be financed without excess burdens or additional distortions by using an adjustment to the income tax that offsets the benefits of the public good. The "preexisting income tax schedule is adjusted so that, at each income level, the tax change just offsets the benefits from the public good. By construction, an individual’s net reward from any level of work effort will be unaltered; any reduction in disposable income due to the tax adjustment is balanced by the benefits from the public goods. Because an individual’s after-tax utility as a function of his work effort will thus be unchanged, his choice of work effort — and utility level — will also be unaffected (Kaplow, 1996, p. 514).

Many economists may still fail to see the point, thinking that, even if a taxpayer gets to enjoy the public good, a higher tax rate will still induce higher disincentive effects as the taxpayer can free ride on the higher level of public goods. To the extent that the benefits from public spending is related to the publicly unobservable earning abilities rather than actual incomes, this is in fact true and serves as a qualification to Kaplow’s point discussed in Ng (2000). However, Kaplow refers to the higher benefits from the public goods due to higher
income or wealth level (e.g., police protection of more properties). As such benefits cannot be enjoyed if the higher incomes are not actually earned, free-riding is not possible.

We may also view the point roughly as the excess burden on the taxation side being offset by the negative excess burden on the spending side. If you can keep all the additional $100 earned, the incentive will presumably be higher than the case when you can only keep $70, with $30 taxed. But this is an accurate picture only if the tax revenue is thrown/wasted away. If it is used to supply public goods such as police protection, people may actually have higher incentives to earn the protected $70 than the unprotected $100!

Perhaps most economists lag behind some members of the public in seeing the relative importance of public spending. In a letter to the magazine *Time* (October 17, 2005), Steve Kraus of California wrote on the destruction of New Orleans by Hurricane Katrina and the insufficient rescue and rehabilitation efforts, “The American people persist in voting... for lower taxes. Government is not... the problem. Nor is it... a beast that must be starved. Government is society’s means to collectively address problems that are too large... for individuals... By shortsightedly choosing lower taxes... we now have only the precarious protection of a hobbled government.”

Of course, the case for higher public spending depends also on some degree of efficiency in the public sector. If most or all of the tax revenues are corrupted away or spent on projects of white elephants, they could perhaps be better kept as private consumption, inefficient as the later may be. Fortunately, for the case of Singapore and most democratic countries with sufficient check and balance against government power, the degrees of inefficiency in public spending may be less than in private consumption due to the factors mentioned above.

3. The Case of Singapore

Singapore has the reputation of being highly efficient. This is particularly true in the area of transport. Public transport in the forms of buses and MRT (mass rapid transport or urban trains/subways) are frequent and reliable. Private cars are heavily controlled as they should be and electronic road pricing and surcharges are adopted for heavily used sections of roads. The numbers of cars of different types are controlled by the issue of COEs (certificates of entitlement) which are open for public bidding with the Vickrey second-price auction effectively used. What more can an economist ask?

Some economists may think that, with sufficient pricing to account for congestion and pollution, there should be no additional controls on car ownership like the COE system. However, there is an important external cost not yet accounted for. Especially in East Asia, cars are commonly used as a status symbol. (If not, why do people in cities like Beijing and Shanghai buy private cars? Empty taxis are waiting and passing practically everywhere and anytime. Taking a taxi for all the journey costs less than owning your own car and is much more convenient without the trouble of driving, parking, servicing, etc.) Thus, the purchase of an additional car imposes costs on others by making pre-existing car owners feeling less distinctive and non-owners even more deprived. Thus, car ownership itself should be taxed or controlled through of the COE system.
Instead, I am rather worried about the recent increase in the numbers of COEs issued by the government, making the prices dropping by very big margins (but with a slight reversal in the latest figure in October 2005). Instead of issuing more COEs, I think the government should consider issuing more taxi licenses. Compared to three years ago, I find that it is now more difficult to get a taxi, especially in places like Suntec City and especially after 9 pm. The aspiration of many Singaporeans to have their own cars and continue to enjoy largely pollution and congestion free travel is illusory. When most people have cars, you will not have Singapore; you will have another Bangkok! I prefer to be without a car in Singapore than to have a car and caught in frequent traffic jams in Bangkok.

While the MRT system in Singapore is very efficient, I find it anomalous that neither of the two big universities (National University of Singapore and Nanyang Technological University) has a MRT station. Could it be the case that, the people in charge of designing the MRT system looked mainly at the numbers of residents in different locations, ignoring the fact that, although a big university has very few people officially residing in it, may thousands of persons travel to and from it everyday?

4. The Issue of Legalized Casinos

On April 18, 2005, the Government of Singapore announced its decision to proceed with the development of integrated resorts with casinos in Singapore. (The development of an Integrated Resort in Singapore was first raised in Parliament in March 2004. Within the government, it was raised “not for the first time” in 1985, when Singapore experienced a severe recession, but Mr. Goh Chok Tong, who was then the First Deputy Prime Minister, turned down the proposal.) The stated strategic objective is to “broaden our leisure and entertainment options to enhance Singapore’s reputation as a premium “must-visit” destination for leisure and business visitors... It is one of the many strategies that we are pursuing to widen the range of entertainment options in Singapore and ensure that the tourism sector remains a key contributor to the economy” (from the document on Casino Control Bill in the feedback website of the Singapore government). Obviously, the main objective is to attract tourists/visitors rather than to provide a legal gambling outlets for local Singaporeans. This is consistent with the current proposal to impose an entrance fee of $100 daily or $2,000 annually for Singaporeans (citizens and permanent residents) to discourage them from entering casinos. In fact, the possibility of an outright ban on Singaporean was considered but potential operators told the government that they would need some local business.

Using traditional economic analysis, there appear to be no grounds for prohibiting gambling. If some people choose to gamble, why stop them? It is true that even traditional economics recognizes the concept of external costs. If an activity impose significant external costs on others, it may be desirable to restrict or at least to tax it according to the amount of the external costs involved. However, the existence of substantial costs that are really external to the gamblers is debatable. The troubles of bankruptcy or huge losses fall mainly on the direct family members of gamblers. Traditional economics tends to treat the intra-household issues as the business of the individuals/households themselves. Moreover, “evidence... not support... gambling has impacted... bankruptcy rates (de la Vina and Bernstein, 2002)”.
If crimes are involved, external costs may be involved. However, traditional economics also tends to favor tackling crimes directly. We do not ban business simply because doing business also leads to crimes, bankruptcy, and even suicides.

Behavioral economics and wider studies do provide stronger grounds for restricting gambling. Since such studies suggest that imperfect rationality is prevalent, the ground of imprudence may be added to that of external costs as potential grounds for restricting gambling. However, are these grounds strong enough for the outright prohibition of gambling?

The effects of the legalization of casinos on crimes are unclear; empirical evidence is not conclusive. On the one hand, legalization increases crimes related to casinos but decreases crimes related to illegal gambling and other activities.

Gambling may have undesirable social effects including crimes, but does banning gambling solve the problem? When gambling is banned, people turned to illegal gambling (Reuter, 1983). Moreover, for the case of Singapore, people can gamble in Genting (a casino resort close to Kuala Lumpur, some five hours drive from Singapore), or casino cruise ships near Singapore, or engage in Internet gambling, not to mention the legal forms of gambling already in existence.

As reported in the press (e.g., Zaobao, October 20, 2005), the death (suicides) of a whole family in Tampines this year was due to debts from illegal gambling, not legal gambling. Also, if the “main reason in [higher] crime rates... [is due to] agglomerations of people carrying cash” (Gazel, 1998), such costs are largely imposed on gamblers themselves. They are not really social costs.

Regarding the effect on crime rates, some lesson may be learned from the prohibition of alcohol in the US. Excessive drinking was seen as bad and thus alcohol was ban in 1919. But the prohibition led to bigger problems: smuggling, illegal production, crimes. These proved to be worse than the problem of excessive drinking and hence the prohibition was ended in 1933. This incident suggests that legalization may in fact reduce crimes.

Perhaps there are more grounds banning smoking than gambling. However, while banning smoking in certain public places may be sensible, an outright ban may not be desirable. Perhaps, only higher taxes on cigarettes are justified. In fact, tobacco tax revenue in Australia is considerably higher than the public expenditures attributable to smoking (Collins and Lapsley, 1996). Similarly, it appears that only higher than normal business taxes on casinos may be justified.

Perhaps the main argument against legal casinos is the problem of pathological gambling. It has been estimated that 1–3% of adults are addicted to gambling (American Psychiatric Association, 1994, p. 617). The annual costs per pathological gambler has been estimated to be around US$3,000 (Walker and Barnett, 1999, pp. 202, 195–196). If pathological gambling is part of a more basic problem as Walker and Barnett themselves believe, the true costs that may be attributable to legal casinos should be lower. On the other hand, one may argue that the high psychic costs of pathological gambling may exceed the monetary figures involved.

According to traditional economic analysis, even the existence of addicted gamblers need not entail irrationality or imprudence, as there can be rational addiction (Becker et al., 1991). A person may rationally choose to gamble, knowing that there is a small chance...
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(say 2%) of becoming addicted to gambling. If that happen, he will be worse off. However, in the other 98%, he may be better off. If the disutility of being addicted is not more than 49 times the extra utility of gambling, his choice to gamble is rational (in the sense of expected utility maximizing). Yet, in 2% of the cases, people become addicted.

If all individuals make such rational choices, restriction is hard to justify. However, while rational addiction may certainly exists, it is difficult to deny the existence of inadequate allowance for gambling or other types of addiction due to imperfect information and irrational preference. This, as well as possible external costs on others (mainly family members) justify some restrictions on pathological gambling.

However, many alleged social costs of gambling are not real (Walker, 2003). For example, the costs of reduced productivity are largely borne by the gamblers themselves and hence not social costs. If informed and rational, a gambler will weigh the benefits of gambling against the costs including that of reduced productivity. While gamblers may impose costs externally on employers or co-workers, in the long run, these costs will be internalized through non-promotion, reduced bonuses, or even firing.

What about the costs of additional policing, regulation, etc. These should be accounted for by the extra tax revenues on casinos. This leaves the main social costs of gambling as mainly crimes (which are of doubtful sign as suggested above) and pathological gambling.

On the other hand, the benefits of legalizing casinos include

- Consumer surplus: “legal gambling provides enjoyment to a great number of people... a harmless pleasure for a relatively small outlay” (Collins and Lapsley, 2003, p. 143).
- Attracting tourists: This benefit, while appearing to be the main ground for the recent legalization in Singapore, should not be exaggerated. There are costs in catering to the tourists and only the producer-surplus parts should be counted.
- Government-revenue raising: This may be substantial but should be offset by the additional policing and counselling (of pathological gamblers in particular) costs involved.
- Better regulations of legal gambling and potentially reducing problems associated with illegal gambling.

In my view, the most important point in favor of legalization is the gain of consumer surplus. Players could then avoid the hefty costs of either illegal gambling or going elsewhere. It is unfair to the majority of responsible players to outlaw casinos to prevent problems created by irresponsible players, especially as these could be better dealt with by other means. Excessive drinking creates as bad if not worse problems, but the banning of alcohol proved to be clearly undesirable.

My conclusion in my very informal cost-benefit guestimate of the legalization of casinos is that the social costs, if positive, are unlikely to be strong enough to justify an outright ban. However, some appropriate restrictions of pathological gambling are needed.

Let me turn now to the proposed $100/$2,000 entry fee for locals. First, this is better than an outright ban. However, it is a significant deterrence for players. Thus, it will significantly reduce the consumer surplus associated with legalization. It may even reduce the business of casinos to uneconomical levels. At least, it would likely increase the average
costs substantially by forcing operations at lower levels. The idea is to lower the number of Singaporeans becoming problem gamblers. It cannot be denied that some Singaporeans may be deterred and hence never has a chance of becoming problem gamblers. However, the effect is likely to be minimal. Problem gamblers or those who have higher probabilities of becoming problem gamblers are less likely to be deterred by the entrance fee than are responsible pleasure gamblers. In fact, the hefty entrance fee would likely help to increase unhealthy gambling. Many of those who pay the daily entrance fee may choose to gamble for as long as possible to make it worth the $100 paid. This will certainly be very unhealthy for them. Those who pay the annual entrance fee of $2,000 may also be encouraged to visit the casinos more frequently, defeating the intention of discouraging gambling.

In addition, the proposed entrance fee (not applicable for tourists/visitors) is very unfair to Singaporeans. I have an Australian passport and will probably not be affected by the entrance fee. However, I feel sorry for Singaporeans. With the government investing heavily in providing the basic infrastructures for the integrated resorts, outsiders can enter the casinos free and yet locals have to pay entrance fees! I am confident that such a system would be very unpopular.

Instead of the proposed entrance fee, it is better to collect the expected revenue from entrance fee indirectly through higher taxes on the profits of the casinos. This is particularly so as the proposed tax rate is only 15%, much lower than the 40% in Macau and the 25% in Genting. Traditional economic analysis favors direct to indirect taxes. However, behavioral economics suggests that the reverse may be true. Direct taxes imposes more felt burdens as they as visible.

As mentioned above, pathological gambling has to be restricted, for the benefits of these gamblers themselves and their family members. A much better way to reduce the problem of pathological gambling is the use of compulsory membership system for Singaporeans. Instead of paying an entrance fee, locals have to become members to enter the casinos. Voluntary membership systems already operate in most overseas casinos. A member is issued a card which is used to insert into the gambling machine or handed in to a dealer for registration into the computer. This allows the casino to trace the hours of play and, at least for machine gambling, the amount of win or loss. Usually, the hours of play is awarded with complementary entitlements such as free parking, free meals, free chips, etc. I understand that such inducements will not be allowed in Singapore. I see no reasons to ban such mutually agreeable arrangements. In fact, such inducements make easier the use of the membership system for restricting pathological gambling.

In advance, each member may choose the self-imposed upper gambling limits on total hours and total accumulated loss per week and/or per annum. Some compulsory limits may also be required which may depend on the income/wealth levels and working status (obviously the retired may be allowed longer hours and the rich allowed larger loss) of the respective members. When the membership card indicates that the limits have been exceeded, entrance may be denied. To ensure that members do not use the membership card to enter and avoid using it to register the hours and losses, random checks and fines on violation may be needed. While some costs will be involved, this system is likely to be superior to entrance fees in restricting pathological gambling.
Of course, the Singapore government is well aware of the need to restrict pathological gambling. “The social safeguards include a minimum age requirement, membership system for Singapore residents, self-exclusion programs, guidelines on credit extension, facility to allow setting of voluntary loss limits, advertising guidelines and patron education. In addition to the social safeguards, a robust and stringent regulatory regime for casino gaming will be developed in Singapore. Similar to those imposed in leading global gaming jurisdictions, a set of strict international regulatory standards such as measures against money laundering, illegal money-lending, licensing and screening of operators and employees will be imposed.” In addition, a system of family restrain orders has also been proposed to supplement the above. This allows family members of problem gamblers to apply for orders to restrain them from further gambling.

With sufficient safeguards, I believe that the legalization of casinos will make Singapore a more interesting city to visit and to live in. A glimpse may be obtained from the experience of Melbourne. More than a decade after the operation of a large legal casino (the Crown), Melbourne still leads the world (after the top city Vancouver and just ahead of Vienna, Geneva, Perth, Sydney, and Adelaide) as the second most livable city in the whole world, according to a survey of the Economist Intelligence Unit (as reported in the press on October 5, 2005, including Zaobao, p. 18). While there have been occasional reports of problems associated with excessive gambling, the general handling of pathological gambling has been acceptable, though much less restrictive than the proposed system above. I personally certainly find Melbourne much more livable than without the Crown casino.

Incidentally, a reporter interviewed me and my wife in 2003 while we were visiting Nanyang Technological University. I emphasized that there are many more important things to happiness than money. When her write-up was published in the Stray Times, we had a good laugh to find that she wrote something like: “Do not ask him to go to a casino!” She meant that I was not much interested in money. In fact, I do go to the Crown casino, but I ensure that I gamble in moderation and do not lose more than entertainment money.

While the announcement of the integrated resorts with legalized casinos took almost everyone (myself included) by surprise, on hindsight, it may be said that the decision is really somewhat too late, at least in the sense that it would be better to do it earlier. We cannot change history but may change the future.

The resorts are scheduled to commence business in 2009. For such major projects, four years are not too long to complete even at the efficiency level of Singapore. However, there is no need to wait for the full completion of the resorts to commence operation of the casinos. The experience of Melbourne may again be cited. It took several years for the permanent building of the Crown casino to be completed. However, the casino commenced operation at a temporary site soon after the decision to allow a casino was taken. Even if not easy to find temporary sites, there is no need to wait for the whole resorts to be completed. The casino parts could be opened for business first. Then, the attraction of tourists and the provision of exciting entertainment may commence much earlier.

What about moral objections to gambling? I think these are largely out of date. “Gambling has become an acceptable form of entertainment as some states [i.e., the state governments in the US], churches, and other charitable institutions promoted gambling such as lotteries...
bingo, ... ‘Las Vegas nights’” (Gazel, 1998, p. 67). So, why has gambling become more acceptable and why have legal casinos spread quickly all over the world? Part of the answer is that higher incomes enable us to pay for the costs of enjoying ourselves, including something regarded as “sinful” previously.

I am sure that some of you may have too strong a view against gambling to agree with me. However, I am also sure that more people will agree with me in one to two decades.

References


