

研究ノート

A Policy Innovation for Social and Economic Development: The Case of Integrated Resorts in Singapore¹

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Abstract

Faced with financial stress, many policy-makers in the Asia Pacific region are in a dilemma over casino gambling issue. Should casino gambling be legalized? The promise of economic development in terms of more job and tax revenue and tourism boost is counteracted by the undesirable social problems such as addictive gambling, crime and money laundering. Using the innovative policy of the Integrated Resorts in Singapore as a case study, this paper explores the possibility of how a nation can benefit from building a gambling casino with the minimum of the negative social and regional impacts.

Keywords

Policy Innovation, Legalized Casino Gambling, Integrated Resort, Non-gaming amenities, Global competition.

1. Introduction

Gambling has been practiced everywhere for various reasons since ancient time. However, legalized casino gambling is a recent phenomenon and has spread globally in the turn of the last century. At the same time, to differentiate themselves from their competitors, many commercial casinos have metamorphosed into destination casino resorts offering a wide variety of non-gambling amenities ranging from theatre-style shows to retail shopping, fine dining, conferencing and exhibition.

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Asian gaming markets in particular have experienced exponential growth and many major gaming industry operators are seeking to open new casinos there. “Asia is without doubt the most promising market for the expansion of the global casino gaming industry” (Wiseman 2007). Inspired by Macau’s emergence as the Las Vegas of the East, many Asian countries have legalized or considered to legalize casino gambling. South Korea opened three more casinos, bringing its total to 17, in order to compete with Macau and lure upper-tier Japanese customers. Philippines will open a \$750 million casino complex in Manila Bay in 2012 (Dumlao 2011). Taiwan considered building a \$600 million casino on Penghu Island but was rejected by local residents. Similarly Japan is considering legislation to legalize casino gambling, which may imperil its \$250 billion-a-year pachinko business (Wiseman 2007). Indeed the attraction of casino for the economy has led to a discussion in the mass media of where to build the casino if the anti-gambling law is repealed in Japan.

Should casino gambling be legalized? Gambling has long been associated with the moral breakdown and regarded by some as sinful activity which corrupts society. It can turn people into an addiction and has been known to destroy families. Moreover, because of the large amount of cash involved, gambling often breeds organized crime and money laundering at the local level (Gazel, Rickman and Thompson 2001; Stitt, Nichols and Giacopassi 2003). Nevertheless, the promise of economic development in terms of more jobs, higher tax revenue and tourism boost brought about by the amenities of casinos have attracted more states and countries to legalize casino gambling (Felsentein and Freeman 1998; Nichols, Giacopassi and Stitt 2002; Walker and Jackson 2007; Calcagno, Walker and Jackson 2010). Other factors such as location, resort nature of the casino facility, monopolistic situations, competitors in the region, timing and necessary supplementary measures can also influence the benefit from casino gambling (Siegel and Anders 2001; Chhabra 2007; Lambert, Srinivasan, Dufrene and Min 2010).

Singapore has just dropped its 40-year old gambling ban in 2005 and opened two Integrated Resorts (IRs) with casinos in 2010. This paper seeks to understand the process and causes involved in this innovative policy. What prompted Singapore to re-examine its anti-gambling position? How did Singapore proceed with the casino gambling legalization process? Why Singapore eventually legalized casino gambling? To what extent will the integrated resorts with legalized casino gambling help the economic development in Singapore? What measures have Singapore government taken to manage and control the negative effects of casino gambling such as addiction and the erosion of moral values?

Hopefully such study will enrich the literature of policy innovation and offer valuable experience for policy makers in the Asia Pacific and beyond.

Section 2 provides an overall view of Singapore's socio-economic development experience since 1965. It also attempts to explain the causes and the transformation of Singapore's economic development by applying Lim's S-Curve Development Theory. Section 3 reviews literature in policy innovation in public service and various methods in productivity measurement. Section 4 describes the decision process involved by the Singapore government to adopt and implement the legalization of casino gambling. Section 5 presents the development and economic impacts of Singapore's IRs. Some concluding remarks are made in Section 6.

2. Singapore's Policy Innovations and Socio-Economic Development Experience

Singapore is a small city-state with no significant natural resources. The island's only valuable asset is the geographical location with a deep natural harbour which has made her an entrepot trade centre around the region. Historically Singapore imported primary products such as spices, rubber and timber from the region and re-exported to the industrial nations in exchange for their manufactured goods. Since 1959, the ruling People's Action Party (PAP) has placed overwhelming emphasis on economic development to overcome unemployment and stagnation. With relatively weak domestic private sector, the public sector has become the leading actor for economic growth, general employment and industrialization. Initially the government adopted import substitution strategy to industrialize and diversify away from dependence on entrepot trade. Jurong Industrial Estate and Economic Development Board (EDB) were established in 1961 to provide infrastructure and promote foreign investment.

However, since her independence in 1965, Singapore has to survive without large hinterland and domestic market. The government has adopted the innovative export-oriented policy for industrialization. With abundant labor and foreign investment in labor-intensive manufacturing sector, Singapore had comparative advantage in labor-intensive goods. By the 1970s, unemployment was no longer a serious problem for Singapore. However, Singapore's trade pattern is not determined once and for all. The government has constantly assessed the changing comparative advantage and upgraded her domestic industries accordingly. Several innovative government training centers were set up jointly with foreign investors to upgrade Singaporean workers. EDB marketed Singapore as a

quick startup location with factories and skilled workforce readily available. Industrial development was surging ahead. By the mid-1970s, the relatively capital-rich Singapore started exporting capital-intensive goods. During 1979-1981, the government adopted a high-wage policy to accelerate the move away from labor-intensive industries to high-technology industries. The Science Park was set up next to the National University of Singapore to stimulate R&D activities and promote high-technology industries.

However Singapore quickly slid into her first recession in 1985-1986. An Economic Committee, led by the then Minister for Trade and Industry Lee Hsien Loong, was set up to review and restore Singapore's competitiveness. The Committee recommended an innovative flexible wage system where pay increases would be pegged to a company's profitability. Another recommendation was to promote Singapore as a major exporter of services and an international total business center. After the 1985 recession, while manufacturing further upgraded and remained important, service industries have been identified as a second engine of growth for the Singapore economy. Singapore started exporting technology intensive goods and services. In the 1990s, EDB focused on chemicals, electronics and engineering industries and began to develop pharmaceutical, biotechnology and medical technology sectors. This helped diversify and balance the Singapore economy.

Within three decades, Singapore has transformed herself from a historical entrepot trading center into a modern manufacturing, banking and financial center for the region. Her real GDP grew at an average rate of 9 percent per annum during 1965-1997 (Department of Statistics, Singapore) and her GDP per capita grew from US\$512 to US\$25,255 in 1997 (Chart 1). However, the 1997 Asian Financial Crisis, the rise of China, the US recession in the early 2000's and the war on terrorism after September 11, 2001 have modified Singapore's economical environment. As a consequence, Singapore experienced her second and third recessions in 1998 and 2001 respectively (Chart 1). In response, an Economic Review Committee (ERC) was set up in December 2001 to comprehensively review current policies and propose strategies for further growth and development of the Singapore economy. The ERC, chaired by the then Deputy Prime Minister and Minister for Finance Lee Hsien Loong, set up seven Sub-Committees and many working groups to study various issues related to Singapore's cost competitiveness and strategies for further development. In the process more than 1000 people, Singaporean and expatriates living in Singapore, contributed to the ERC's report. Among others, the ERC proposed to remake Singapore into a globalized knowledge economy. The government

accepted the recommendation and agreed to mobilize Singaporeans to work together to restructure the Singapore economy and make Singapore one of the best cities in the world to work and live in (Ministry of Trade and Industry 2003).

According to the recommendations, Singapore will have more engines of growth especially in services exports like education, healthcare services and the creative industries. Singapore will be “a key node in the global economic network”, “provide an environment for local and foreign talent to flourish and grow” and “become a hub for knowledge-based activities and talent like London, New York or Boston”. Singapore’s “openness to global talent will be a key competitive advantage for a Singapore that aspires to become a leading global city”. In particular, the Tourism Working Group (TWG) proposed the following long-term vision for Singapore (Ministry of Trade and Industry 2003):

“A vibrant and welcoming destination that offers visitors a diverse range of attraction and distinctive experiences drawing on its Asian heritage, and with tourism making an even more significant contribution to the economy.”

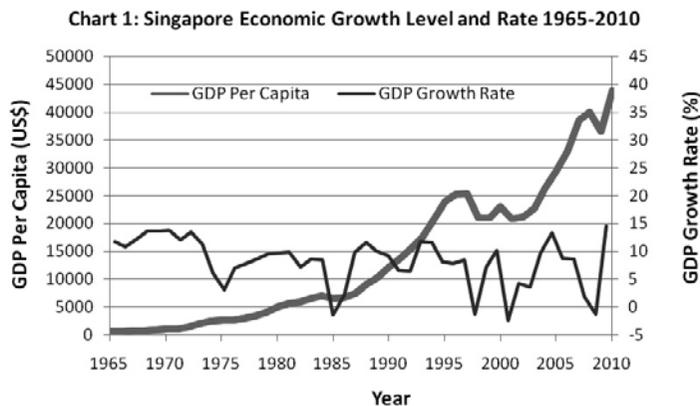
Among others, TWG has identified following strategic recommendations to achieve the vision:

“Develop Singapore as a regional tourism hub”

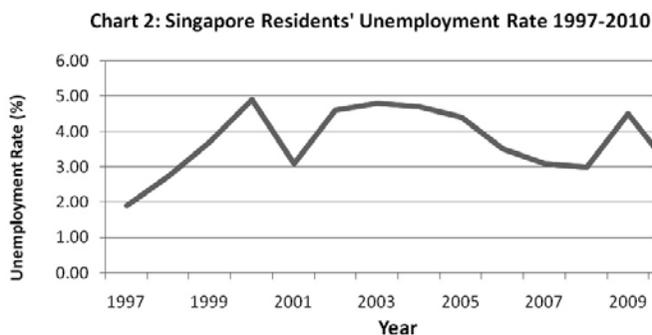
“Offering distinctive tourism products and memorable visit experiences” by “creating outstanding experiential attractions, establishing Singapore as the food paradise of Asia and developing a vibrant events scene in Singapore”

“Transformation of Sentosa into a unique resort destination”

“The Marina area could be developed into an Arts and Events District”



Source: World Bank 2011. World Development Indicator



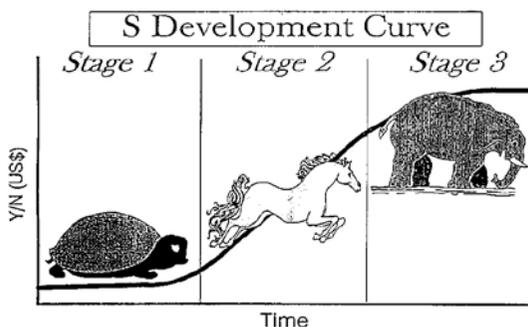
Source: Department of Statistics, Singapore. 2011. *Yearbook of Statistics 2010 and Monthly Statistics of Singapore*.

“Extending the focus of tourism beyond business and leisure travel to include education and healthcare services”

The ERC recommendations have almost heralded the introduction of integrated resorts in Singapore. The 2003 bird flu crisis increased the urgency for an IR proposal. During 1998-2004, the average growth rate drastically declined to 4 percent and residents’ unemployment rate rose to an unbearable 4.5 percent and above (Chart 2). Obviously this has become a cause for concerns to the Singapore government.

According to the S Curve Theory developed by Lim (1996), due to population growth control, high savings and investment rate, outward-looking economic policy, conducive investment climate, high investment in infrastructure, high investment in human resource, priority on economic achievements and emphasis on market forces as an engine of growth, Singapore economy has transformed from a low/no growth turtle economy before 1965 into a superlatively growing horse economy during 1965-1997 and started phasing into an affluent but low growth “elephant” economy after 1998 (Diagram 1).

Diagram 1



Source: Lim Chong Yah, “Which Nations Will Dominate the World?” *Accounting and Business Review*, vol 1, No. 2 (July 1994) p. 56

However, the reasons for slow growth in matured economies are not the same as those for low-level equilibrium trap economies. In the affluent societies, although wealth may not corrupt all men, it certainly increases the propensity to consume and results in slower growth. Through better medical and health services, wealth can lengthen the longevity of life and brings about a high old-age dependency ratio. “Private Citizens who inherit wealth from generation to generation find wealth creation activities increasing costly in time and effort. Thus, slow growth for such an economy is to be expected” (Lim, 1996:180). To overcome the inevitable slowdown in economic growth when reaching the plateau, a country must initiate innovative strategies and timely policies to grow through trade, investment and knowledge transfer with countries in the region and in the world, especially when facing global competition.

For this reason, the Singapore Public Service seeks to nurture a culture of change where the public service is ready for change and able to execute change. It also reinforces the spirit of continuous improvement and innovation. Through e-Government Action Plans the government has successfully made public policy information easily accessible to the public. There is a government feedback mechanism where policy papers and proposal are made available for public feedback and suggestions while the public officers can explain the rationale for their policies. Singapore public sector leaders work closely with the political leadership to set directions, draw up strategies and plans and implement programs to ensure the survival, security and success of Singapore. The public service develops processes and platforms for government policy discourse and formulation, as well as spearheads transformational initiatives. Through scenario planning, key challenges and opportunities facing Singapore in the future are surfaced. This helps public service to anticipate the future and study on long-term cross-agency issues. It shares with and learn from public service from all over the world and harnesses information and technology to better deliver public service (Public Service Division, Singapore).

The vision of the Ministry of Trade and Industry (MTI) is “to turn Singapore into a leading global city of talent, enterprise and innovation”, “willing to take risks to create fresh businesses and blaze new paths to success” and become “a diversified economy powered by the twin engines of manufacturing and services.” Singapore needs to embrace globalization and link to the developed economies as well as to take decisive steps to enhance Singapore’s competitiveness. For this reason, various government departments and agencies are mobilized to tackle various tasks.

Historically, the EDB was assigned the tasks to plan and execute strategies to sustain

Singapore as a leading global hub for business and investment. It is responsible to design and deliver solutions that create value for investors and companies in Singapore and jobs for the people of Singapore.

Singapore has also designed and implemented innovative policies to solve housing problem by the Housing Development Board (HDB), road congestion problem by the Certificate of Entitlement (COE), social security problem by the Central Provident Fund (CPF), industrial relationship by the National Wage Council (NWC). The idea of the IRs, euphemistically called in Singapore, is just another innovative policy to further develop Singapore as a global city.

The government chose to issue only two casino licenses as the carrot to require each winning bidder to conceptualize and build a world-class, iconic integrated resort. The objective was to recover Singapore's slippage as one of Asia's top visitor destinations and, specifically, to increase visitor count from 10 million to 15 million by 2015.

However the contemporary globalization poses a challenge to the legitimacy and credibility of being a developmental state in Singapore. In particular, the process of intensive globalization of market forces and expansive power of multinational corporations have rendered the economic functions of the government less relevant. Although it was called upon to deal with the financial and economic crisis, its role has declined from "first-class regulators" to efficient "facilitators" of business activity (Low 2000). The government has moved toward deregulating administrative laws and liberalizing various sectors such as finance, telecommunications and utilities in response to global trend and external influences (Low 2000). Internally, the government has recently adopted business-oriented public service reform by converting various departments and statutory boards into autonomous agencies. There are considerable public-sector programs and institutions to provide basic services in housing, education and social security.

According to the S Curve theory, affluence spells inevitable slowdown in economic growth. The Singapore government, apprehending the danger of affluence, has tried hard to combat the "disease of affluent society". For example, it is totally against Western style welfare system and encourages high savings rate through Central Provident Fund scheme. Since 1993, the Singapore government has called for Singapore companies to venture abroad. It is felt that with her fast maturing economy, Singapore's economic growth is constrained by her limited labour supply, lack of natural resources and limited market size. Outward investment in high growth area is one way to overcome these limitations and upgrade Singapore's industries.

Tourism is a clean tertiary industry which both Singapore and Japan hope to develop further. The benefits of tourism often spill over to friendship, trade and investment and produce a multiplier effect on other sectors of the economy as well. Although Singapore is not abundantly endowed with natural and scenic attractions as are her near neighbors of Malaysia and Indonesia, the Tourist Promotion Board succeeded to bring to Singapore 7.1 million visitors whose spending accounted for more than 11 billion dollars in 1995.

With these theoretical understanding and prescription for solution, it is easier to explain why Singapore could take another timely and innovative approach to revamp her gaming policy and embrace another upgrading in her tourism industry. The Singapore government is not thinking of setting up a casino, but an integrated resort – a leisure, entertainment zones in which the casino is only a small part of it. As a matter of fact, the gaming area is less than 3 percent and 5 percent of the total floor area allowed in Bayfront and Sentosa respectively. IRs are basically “one-stop” entertainment centers and major mutations from “gaming-centric” casinos. The potential economic benefits and social cost generated by IRs are radically different from gambling-centric casinos (Eadington and Doyle 2010).

Yet as mentioned above, a casino is bound to invite negative social consequences, particularly for gambling addicts and their families, thus generating a strong public reaction to the proposal. The issue thus becomes “whether an economic investment comprising an overall tourist integrated investment project running into billions of dollars should be disallowed because of a gaming component.” In attempt to calm the public resistance to the idea of IRs with a casino, the Singapore government has assured that they make a concerted effort to control and minimize adverse impacts that could arise.

We summarize the Policy innovations as consisting the following:

1. After agreeing to have IRs, the government decided on two IRs because “the two projects complement each other and having two provides competition and critical mass”. Most of the gaming investors also preferred two projects to bring in new visitors instead of worrying about competition for a finite local market. They would help making Singapore a centre for tourism, business and conventions. MTI estimated that two IRs would create about 35,000 jobs within the IRs and spinoffs throughout the economy.
2. Selection of location: the Bayfront is a prime site right in the heart of the city. The government made sure that the development is iconic with excellent architectural

design and complement Singapore as a business and financial hub and subject to the stringent urban design standards. With the IR, the Bayfront would be developed to bring new life and excitement to the new Downtown within 4 years instead of 15 years or more. Sentosa is a family-friendly resort. Anchor “our vision for the Sentosa IR as a large-scale, family resort with world-class family leisure attractions and other strong offerings. We believe that the attractions will position Sentosa as a premier island resort for families and draw significant numbers of both new and repeat visitors to Singapore.”

3. Singapore has been criticized as “water too clean so there is no fish”. The integrated resorts are an example of Singapore’s effort trying to shake off its image as a nice-but-ultimately-unexciting destination. They will offer visitors attractions and activities that are not often associated with the image of a clean but boring city.
4. To ensure the decision be based on adequate information and discussion, a Request for Concepts (RFC) was initiated. However, the concept proposals are not binding offers and the government can make an informed decision one way or other. The ministers and all Members of Parliament (MPs) viewed the designs and architectural models and were briefed on the proposals.
5. The government did not take any stand from the beginning. In fact, the Cabinet started off mostly against the IRs, but gradually shifted their views only after understanding better what the IRs actually involved and realizing the serious consequences of being left behind by other cities if it said no. After knowing the trends and the need to move and the risk to take there are not many options if the aim is to build a new Singapore as a vibrant and dynamic city in Asia.

The government has to make an overall judgment after balancing the economic benefits against tangible social cost and intangible impact on national brand name and values. The key consideration is to serve the national interest in the long run.

3. Innovation in Public Service and Productivity Measurements

The study and practice of innovation have traditionally been associated with the private sector, where the effective innovation equals to commercial firms’ competitiveness and survival. Public service organizations, by comparison, tend to have lower incentives and higher risk to innovate. Innovation in public service may be considered as an optional

extra or an added burden (Mulgan and Albury 2003). However, technology and globalization have brought great changes in the world today. The increasingly high standards of service experienced by consumers in the private sector or foreign countries are driving a shift in citizen attitudes towards public services. There are rising expectations for more convenient and personalised public service provision.

(a) Public service in Singapore

The public service led by the Singapore government has been widely known for its economic efficiency and competence, especially its role in achieving “economic miracle”. With relatively weak domestic private sector, the public sector became the leading actor to enhance economic growth, ensure general employment and attract foreign investments. As globalization is intensified, the government has also adopted a business-oriented public service reform by converting various departments and statutory boards into autonomous agencies. There are considerable public-sector programs and institutions to provide basic services in housing, education and social security. The reform of the public service was a response to both internal and external factors (Haque 2004).

Internally, the population has become more educated, informed and demanding. They expect a more consultative and less interventionist mode of government (Lam 2000; Lee 2001). Externally, Singapore is highly dependent on foreign investors and markets and has to comply with global economic trend favoring market forces rather than state agencies. In his annual budget statement, the former Finance Minister, Richard Hu, pointed out “We have no choice but to be open and to compete in the world market to survive and prosper” (Yeung 2000). Under globalization, the Singapore government has also encouraged its state enterprises, government-linked companies and local private entrepreneurs to go regional. This also required a shift from state-centric approach to business-oriented culture and managerial flexibility in the public sector.

In the past Singapore has been using high rates of economic growth and employment to reject western model of democracy and welfare state. As a result, little resources were allocated for social welfare. The public assistance program has been small and ungenerous and unemployment insurance is absent. Singapore’s social development has lagged behind when compared with its rapid economic development. But as Singapore has decided to move toward greater market-based competition in the context of a highly globalized world, she may have to adjust the “social safety nets” to address the needs of those who are left behind.

Social development in Singapore has followed an innovative approach for social security and income redistribution using home ownership and managed life savings through the mandatory saving scheme known as CPF as the major instruments of social development policy. Through the management of the HDB set up in 1960, Singapore has worked to enhance social stability and social integration as different income and ethnic groups are housed together, and live and interact with one another. Housing and social security have helped foster Singapore's spectacular economic success and social stability (Vasoo and Lee 2001).

Assessing or measuring the productivity of the public service is never an easy job because the nature of the problem tackled in most public policies is often complex. Before discussing productivity measurement, it is necessary to discuss the nature of the problem that public policies aim to solve.

(b) Public policy problems as “wicked problems”

Most of the issues dealt with in a public policy can be described as “wicked” problem. As explained in a report published by the Australian Public Service Commission, the term “wicked” is used “not in the sense of evil, but rather as an issue highly resistant to resolution” (Australian Public Service Commission 2007: iii). To put it in another way, a “wicked” problem is one that is not easy to tame.

The policy of casino gambling we are going to deal with is a good example of a “wicked” problem. There is tension between the goal of economic growth in terms of tax revenue and employment and the goal of minimising harm from social problem arising from casino gambling. Given their multi-causal nature, it also often involves trade-offs between conflicting goals. Attempts to address “wicked” problems often lead to unforeseen consequences. The problem is not understood until after the formulation of a solution. Worse still, “wicked” problems are often evolving and not stable. Policy makers have to focus on a moving target. Problem-solving often ends when deadlines are met or as dictated by other resource constraints rather than when the ‘correct’ solution is identified. To pursue approaches based on solving may cause policy makers to act on unwarranted assumptions and create unrealistic expectations. It may be more useful to consider how to manage rather than fix the problem.

A “wicked” problem occurs in any domain involving stakeholders with different perspectives and has no right or optimal solution. It cannot be solved by standard methods and demand creative solutions. It cannot be tackled by the traditional approach in which

problems are defined, analysed and solved in sequential steps. Roberts (2000) identifies three strategies to cope with wicked problems: authoritative, competitive and collaborative. Among these three strategies, the most effective approach in dealing with wicked problems is collaborative strategies.

Tackling wicked problems often require broader, more collaborative and innovative approaches (Australian Public Service Commission 2007). Part of the solution involves changing the behaviour of groups of citizens and working across both internal and external organizational boundaries and engaging citizens and stakeholders in policy making and implementation. It requires innovative, comprehensive solutions that can be modified in light of experience and on-the-ground feedback. These can pose challenges to traditional approaches to policy making and implementation.

Collaborative strategy aims to engage all stakeholders in order to find the best solution for all stakeholders. The policy of casino gambling involves meeting in which issues and ideas are discussed and a common agreed approach is formulated. They are not merely asked but actively involved in the planning process. More innovative, personalised approaches are likely to be necessary to motivate individuals to actively cooperate in achieving sustained behavioural change. It lies somewhere on a continuum between tame and wicked problems. It displays lots of the characteristics of wicked problems. The expansion of democracy, market economies, globalization, travel and social exchanges may have highlighted value differences, weakened traditional authority and control mechanisms and promoted dissensus rather than consensus in problem-solving process. The technological and information revolutions enable more people to become active participants and increase the complexity of the process.

Traditional policy thinking is to follow an orderly and linear process, working from problem to solution. It usually starts by understanding and defining the problem, then gathering and analysing data, consulting with stakeholders. Once the problem is defined, evidence and stakeholder views are analysed, options and a preferred option can be determined. However, it is inadequate to encompass the interactivity, uncertainty and social complexity of the wicked policy problems.

The handling of wicked problems requires holistic rather than linear thinking. Innovation in public services does raise additional issues on risk management. The primary responsibility of public service is to deliver an excellent service and achieve continuous improvement. A second responsibility is to ensure that part of the organization is focused on services of the future, cultivating the innovator and help them to evolve their

ideas. There is a need for public service organization to become more adaptive and flexible in dealing with wicked problems. In these complex circumstances, public services should be a complex adaptive system. The difference is like between throwing a stone and throwing a live bird (Plsek 2001).

(c) Productivity Measurements

Productivity measures are performance measures that use numbers to show the physical level of performance. The purpose of productivity measurements is to bring about long last improvements in performance, especially in the wake of innovation or organizational transformation. While studying innovation and productivity improvement in certain service industry, various productivity measures at various economic levels from the individual right up to the economy can be used for various purposes. For example, a partial productivity measure, such as value-added per employee in tourism can be used to measure direct effects on tourism industry. However, to include indirect effects on all relevant industries, a productivity measure on economy level is suitable in measuring overall performance, especially when industry data are poor and measurements intractable.

As shown in Diagram 2, various productivity measures can be constructed for an organization or economy, for gross output or net output (value added), and for single input or multiple inputs. Partial productivity measurement, relating output to one input used in the production process, is the most commonly used technique. They are easily defined and provide quick results. The changes in labour productivity by industry will be reported to show the improvements in some industries. Multifactor productivity relates output to combined inputs of labor and capital. A change in multifactor productivity reflects the

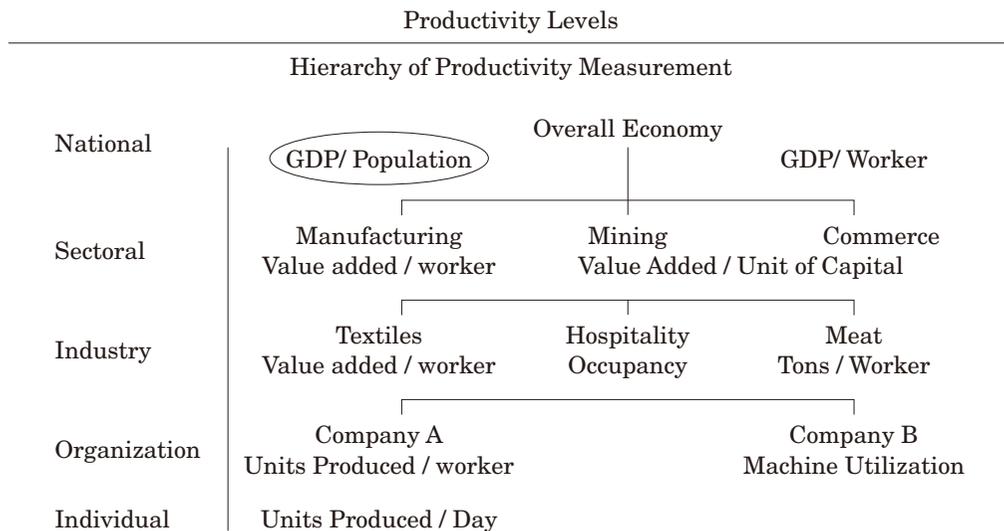
Diagram 2 : Types of Productivity Measures

1. Partial productivity measure: Ratio of output to one input
 - a. Labor productivity = $\text{Gross output} / \text{Labor}$
 - b. Capital productivity = $\text{Gross output} / \text{Capita}$
2. Multiple input productivity indices = $(\text{Gross output} - \text{Materials} - \text{Energy} - \text{Others}) / (\text{Labor} + \text{Capital})$
= $\text{Value added} / (\text{Labor} + \text{Capital})$
3. Total productivity = $\text{Gross output} / (\text{Labor} + \text{Capital} + \text{Materials} + \text{Energy} + \text{Others})$

change in output that cannot be accounted for by the change in combined inputs. Multifactor productivity therefore measures the effects of changes such as policy innovation, technological progress, changes in the organization of production, and worker management relations. Multifactor productivity will also be reported to see whether there are signs of improvements due to policy innovation. Another type of productivity measures is total productivity which relates total output to all the inputs used to generate that output.

The Productivity and Standards Board of Singapore (PSBS) has adopted a more comprehensive approach in the measurement of productivity for various purposes. As shown in diagram 3, the hierarchy of productivity measurement by PSBS depicts typical measures likely to be used at various economic levels from the individual right up to the economy. As a small city state, the Singapore government is effectively the decision maker for government-linked companies, industries and the economy. It is more appropriate to measure productivity for the economy as whole rather than an individual industry. Also due to externalities among closely related industries, productivity measure at industry level may not capture all the benefits and costs. In addition, the measurement of productivity and economic performance in service industries is well known to pose difficult and in some cases intractable problems. It is imperative to rely on related data available

Diagram 3 : Hierarchy of Productivity Measurement
(after PSB, Singapore)



Sources: Parsons, John. 2001

to infer productivity measure and improvement in the industry/economy. For purposes of this study, GDP per capita will be used as a productivity measure for the economy as well as tourism industry.

4. Innovation in Public Service for Integrated Resorts in Singapore

Political leaders in Singapore in last four decades have been consistently opposing the establishment of casino in Singapore. In March 2004, Singapore's Ministry of Trade and Industry announced that Singapore government may consider allowing casino gaming in Singapore. This announcement came after reports that major gaming companies, such as MGM-Mirage, Kerzner International and Harrah's Entertainment, were planning to invest in Las Vegas-style casinos in Macau, Thailand and Britain, which were planning to relax their gambling regulations. On 29 December 2004, the Singapore government proposed social safeguards while launching Request for Concepts (RFC). After the exercise of RFC closed on 28 February 2005, the Singapore government started evaluating all the 19 proposals received. On 18 April 2005, the Singapore government announced its decision to proceed with two IRs at Marina and Sentosa (Table 1).

Table 1 : Major Milestones Leading to Singapore Government's New Gaming Policy

1 March 2004	Then Minister (MTI) BG. George Yeo announces that the government may consider allowing casino gaming in Singapore
29 Dec 2004	Announcement of proposed social safeguards and launch of request for concepts (RFC) exercise
18 Feb 2005	PM Lee Hsien Loong's comments in Budget Speech 2005
28 Feb 2005	Close of RFC exercise. Evaluation of RFC proposals commences.
18 April 2005	Announcement of government's decision to proceed with two IRs at Sentosa and Marina

Source: Ministry of Trade and Industry, Singapore. <http://app.mti.gov.sg/default.asp?id=585>

Why did the Singapore government revamp her gambling policy in 2005 to attract integrated resorts? The reasons are many folds, including economic, social and religious, virtue, and way of life. In his statement at Parliament House on 18 April 2005, Prime Minister Lee Hsien Loong pointed out that IRs are a significant proposal to boost Singapore's tourism industry. But because the IRs would include a gambling casino, many

Singaporeans have spoken up for and against the IRs and the issue of IRs has been debated intensely among the public and within the government.

Three major developments caused the Singapore Cabinet to reexamine its position. The first is the changing tourism trends. Tourism in Asia is growing phenomenally, but Singapore's market share was declining from 8 percent in the Asia Pacific region in 1998 to 6 percent in 2002 and many tourists were spending less time in Singapore. Singapore was losing attractiveness as a tourist destination since tourists had too few things to do when visiting Singapore. Tourists from Hong Kong and Taiwan in particular had felt that Singapore was a boring place because the water is too clear so that there are no fish (水清则无鱼) If doing nothing about it, soon visitors from China and India would feel the same and many Singaporean jobs related to tourism would be jeopardized.

The second major development was that cities all round the world were reinvesting themselves. Cities like New York, Paris and London were adding more life and color to their already vibrant and cosmopolitan city by reinvesting in art exhibition, nightlong street parties and new architecture respectively to draw in more tourists. Cities in Asia like Shanghai, Hong Kong, Kuala Lumpur were developing rapidly with World Expo, Disneyland, new cultural center and Formula One racing to attract tourists from far and near. Hong Kong and Thailand were talking about building a casino on Lantau and IRs at Khao Lak respectively. Singapore had to consider whether be part of this new world or be bypassed and left out. While seeking to be a lively and vibrant global city, Singapore needed to act and act quickly.

The third point was that IRs have developed as leisure, entertainment and business zones and quite different from casinos as perceived in the past. Singapore was not considering casinos but IRs. The IRs that Singapore aspired to have would have all kinds of amenities to attract tourists, executives and businessmen mainly to enjoy the resorts, attend conventions or conferences rather than gamble. But the small casino gaming area (less than 3 percent of the IRs) would be essential to make the entire IR project financially viable and attract investors to put in their money and take the commercial risk without government grants or subsidies.

For all these reasons, the Singapore Cabinet started studying IRs seriously and discussing how to proceed. At that stage, some public feedback showed strong views against the IRs and the Ministers themselves were evenly split. The process to eventual creation and acceptance of legalized gambling casinos in Singapore was historical and innovative. It can be understood by institutional theory in sociology as a political and

social process affected by the environment outside the casino industry. How has casino gambling become a legitimate consumption practice? As gambling moves from a practice framed in moralistic terms, to one framed in techno-rational terms, there is a historical shift from filth/purity binary to the poverty/wealth binary over time. Legitimation also occurs through territorial instantiation and financial solvency. Regulatory and normative relaxation likely touched off territorial expansion. The diffusion process of gambling from US, Canada, Australia, Macao and UK to Singapore can also be explained by cultural and normative structures (Humphreys 2008).

It showed that although Singapore faced a global tourism competition pressure, it was not inevitable that the government must turn to the legalization of casino gambling as a source of revenue. They were alternatives to gaining tourism and tax revenues, but casino gambling was the solution proposed by casino industry advocates who strategically positioned the industry for eventual acceptance not only by regulators but by their constituent as well. To some extent, the government and casino entrepreneurs together influenced the development of casino market in Singapore. First, they took strategic action to form social ties both internal and external to the field. Second, they strategically used language to frame casino gambling by amplifying its core attributes, extending the original concept, and bridging to other potentially challenging frames. Legitimacy is a process in which multiple stakeholders contend to shape the social world. The Singapore government was trying to maximize the net effects of IRs operation for Singapore while the casino investors were trying to maximize their investment profits by expanding casino operation. The compromise was that the casino gaming area must be less than 3 percent of Marina IR and 5 percent of Santosa IR.

Before providing explanations, we have to differentiate an integrated resort from a gambling casino. The Singapore government does not want a gambling hall in Singapore to compete in the gambling market. If possible, Singapore would like to attract mega theme park without the casino component. However, projects like Disney theme parks or the Guggenheim museum in Bilbao typically require significant amount of the government co-investment, which is not what the Singapore government has in mind. The IR envisioned in Singapore is privately funded and an iconic destination resort offering world-class entertainment and leisure facilities with/without the casino component. However, overseas experiences have shown that IRs without the casino component may not be economically viable. Revamping gambling policy thus becomes a necessity if Singapore would attract private investor to construct IRs in Singapore. But why can't Singapore

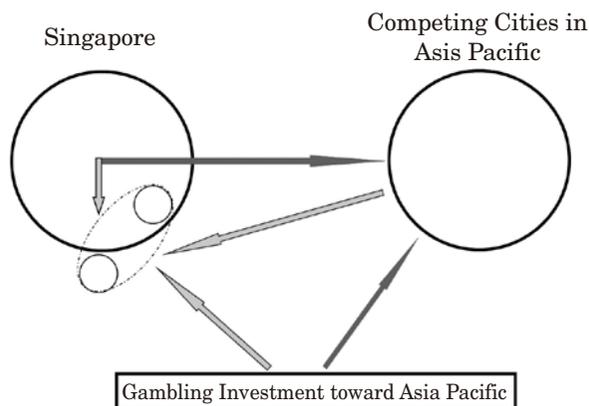
focus on other engines of growth rather than IRs?

Economic development typically involves transformation of agriculture sector into manufacturing sector and then into service sector. It involves decreasing share of agriculture sector and increasing share of service sector while the share of manufacturing increases up to certain stage and declines eventually. As Singapore developed into the “elephant” economy with service industries contributing 66 percent of GDP in 2005, it is not likely to revert back to manufacturing industry for growth. Focusing on services is the natural way to grow Singapore’s economy. Singapore has endeavored to grow as a healthcare, aviation and life sciences hub recently, however their success hinges on how attractive Singapore is to overseas leisure and business visitors and foreign talent. It is vital to ensure Singapore’s overall positioning as a premium must-visit destination when economic opportunities arising. Due to these positive externalities, it requires Singapore to take a multi-pronged and coordinated strategy to consider productivity in service industry and overall economy and act swiftly. Under these backgrounds, why should IRs be considered in Singapore?

Firstly, the economic and tourism landscape in the Asia Pacific was changing very rapidly. The fast growing Asia Pacific outbound market and the emergence of low cost airlines present significant opportunities for tourism industry. Overseas gaming industry investors were looking for places in Asia for Las Vegas Style IR Casinos investments. Many countries are moving quickly to develop major tourist attractions and exciting tourism products (Lee Hsien Loong 2005). If Singapore did not respond and adapt to the increasingly competitive environment, she would gradually lose out on her tourism share. As illustrated in diagram 4, not only Singapore would lose the mega investment in IRs, up to S\$6 billion currently being wagered every year by Singaporeans in local betting outlets might spend on IR casinos nearby once IRs were built in other countries. On the contrary, if Singapore revamped her gambling policy, not only local betting outlets could be retained domestically, due to her strategic location and regional hub status in trade, investment, transportation, telecommunication and secure environment, Singapore would surely attract overseas mega IR investment and overseas gamblers, parts of estimated S\$1.5 billion gambled away by Singaporeans in casinos around the world might spend in local casino instead (Rising D Empire 2008).

IRs would generate significant economic benefits for Singapore. Not only it would bring in substantial foreign investment and job opportunities, it would also boost construction initially and tourism receipts and related industries later on.

Diagram 4 : Economic Impacts of Integrated Resorts



For example, after Kerzner International transformed an ailing casino resort into Atlantis resort on Paradise Island in the Bahamas, hotel occupancy rose from below 65% in 1993 to 80% in 2003. The casino not only generated revenue from gambling, but also generated a buzz that brought more people to shops, restaurants, convention venues, entertainment venues and other attractions. In Las Vegas, 65% of Bellagio's revenues were from non-gaming components (Rising D Empire 2008).

Secondly, the possible negative social impact of casinos on the community could be moderated. The social impact of casinos had been studied widely but no conclusive proof of the link between casino gaming and social costs such as bankruptcies, fraud and embezzlement. However, Electronic Gaming Machines (EGMs) in the community instead of casinos was highlighted as the main causal factor of problem gambling by Australian Productivity Commission. With existing gambling activities (4D, lottery, horse racing EGMs and cruse to nowhere) locally, the social cost if any might have existed. If the impacts of the IRs were largely drawn from the existing pool of gamblers while attracting few new local gamblers, less than 15 % of the current level estimated, the incremental cost of IRs would be limited.

Furthermore, the social cost could be moderated from resources generated from casinos and innovative and precocious measures which would be implemented. For examples:

A \$100 levy per entry (or \$2000 per year) for Singaporeans and Permanent Residents is designed to reduce impulsive gambling.

The minimum age for casino gambling is raised from 18 years old (for other legal

gambling activities) to 21 years old to protect young person from problem gambling.

Self-exclusion or exclusion by a close family member allows a person or family members to request exclusion of a problem gambler from the casino.

Casinos cannot extend credit to Singapore residents.

A voluntary loss-limit system is set to avoid over-gambling and chasing of losses.

Casino advertising, similar to smoking and tobacco, on local mass media is prohibited.

Patron education on gambling will raise awareness among gamblers on the signs and consequences of problem gambling and encourage responsible gambling behavior.

Thirdly, Singapore would put in place stringent regulatory controls such as imposing a tight licensing and screening regime for operators and measures against money laundering, vice and illegal money leading. Similar regulatory controls have successfully kept casino-related law and order problems under control.

Foreign consulting firms were optimistic about IRs in Singapore. Merrill Lynch estimated that the IR would promote local construction and tourism industries and prompt urban redevelopment nearby. It will also generate revenue of \$3.4 billion in 2009 for operator and create 30000 jobs opportunity. More importantly, Singapore will become more dynamic, tolerant, interesting and attractive society with variety after IRs. Investors would truly believe in the Singapore government's determination for service-centered economy, given her efforts for life science, higher education and financial service development (Chua and Lee 2005).

Morgan Stanley on the contrary played down the economic effects on account of its estimated small scale and was more concerned about IR's social impacts on Singapore society. However Merrill Lynch held the view that gambling problem already exists, but unsolved in Singapore. Most likely Singaporean gamblers have been gambling regularly in Genting Highlands, Star Cruises, and illegal casinos. Additional tax revenue of \$1.4 billion will enable the Singapore government to solve gambling-related social problems more effectively.

Opinions from the general public were also invited through the feedback unit, newspaper and TV programs. Singaporeans were actively participating in the debate for an IR in Singapore. After one year consultation and evaluation, Singapore government announced its decision on 18 April 2005 to build not just one but two IRs, one at Marina and the other at Sentosa. The IR in Marina is sited within the city as part of a high-intensity mixed-use development. The facilities include hotels, shopping, theme attractions

as well as cultural amenities such as concert halls, theatres and museums. Another IR in Sentosa is a premium, large scale development which takes advantage of beach and marina settings to create a truly get-away holiday feel for visitors.

5. Development and Economic Impacts of Singapore Integrated Resorts

After the 40 year ban against casinos was lifted, 19 bids were submitted for the large project although only four made it to the final stage. On 26 May 2006, a casino license was awarded to Las Vegas Sands Inc to build and run Singapore's first casino in Marina Bay which costs US\$3 billion. In addition to a 24-hour running casino, the Marina Bay Sands Integrated Resort (Marina IR) includes three towering hotels bridged by a rooftop Sands SkyPark, a waterfall, a Moshe Safdie designed museum, a convention center and business retail space in a 51 waterfront acres and would be the world's most expensive IR. Gamblers worldwide were anxious to see the result of the Las Vegas Sands project in Singapore. Individuals worldwide were also excited about the plan for 11,000 jobs opportunity and new IR experience. The second license for the casino project, Resorts World Sentosa Integrated Resort (Sentosa IR), was awarded to Genting International on 8 December 2006. It features a Universal Studios, a Marine Life Park, a Maritime Xperiential Museum, an Equarius Water Theme Park along with hotel rooms, retail space, attraction and a casino over a 47 ha site as a fun-filled family destination.

According to remarks given by the Deputy Prime Minister then, S. Jayakumar, at their respective press conference "Sands has submitted the best overall proposal that meets our economic tourism objective. In particular, the proposal will significantly strengthen Singapore's position as a leading MICE destination and the proposal also possesses unique design elements that will provide a memorable image for Marina Bay" and "Genting International & Star Cruises submitted the most compelling proposal overall that best meets our economic and tourism objectives. In particular, the proposal reflects our vision for the Sentosa IR as a large-scale, family resort with its host of world-class family leisure attractions and other strong offerings. We believe that the attractions will position Sentosa as a premier island resort for families and draw significant numbers of both new and repeat visitors to Singapore" (Wikipedia). The Marina IR is a centerpiece of the Marina Bay landscape. With the land price and associated capital cost, its total investment would exceed S\$5 billion and be one of the most expensive casinos in the world.

Since their announcement, two IRs have helped boosting Singapore's economy. During

their construction, the total construction contract awarded in Singapore increased 46 percent consecutively for three years. It helped the construction sector stop from its decline since 1997 economic crisis and turned into positive growth since 2005 except the crisis year of 2009 (Chart 3). Tourism performance continued its healthy growth. In 2007 Singapore welcomed 10.3 million visitors, a 5.4% growth over 2006. This is the highest visitor arrivals ever recorded in a single year for Singapore tourism sector. Visitor days

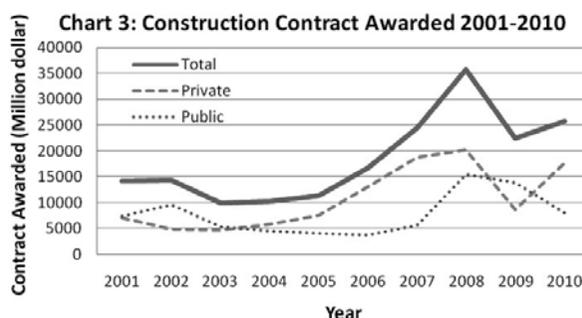


Table 2 : Changes in Labor Productivity by Industry

Industry	Per Cent									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total	-5.70	5.70	4.40	7.40	2.90	2.00	0.10	-7.50	-3.40	10.70
Total (excluding Construction)	-6.70	5.30	3.60	7.10	2.70	2.10	0.20	-6.90	-2.90	11.00
Goods Producing Industries	-8.90	10.00	6.80	10.00	3.50	3.10	-3.10	-12.10	-2.40	24.50
Manufacturing	-13.50	11.00	5.40	9.70	2.90	3.90	-3.10	-10.90	1.60	31.90
Construction	1.90	-4.00	1.40	-0.40	0.00	-3.40	4.00	-0.80	4.00	2.90
Services Producing Industries	-3.60	3.50	2.70	6.40	3.10	1.80	1.40	-4.00	-4.20	5.40
Wholesale & Retail Trade	-5.70	9.20	11.30	15.00	5.80	4.90	1.90	-1.90	-7.70	12.10
Transport & Storage	-4.50	3.60	-2.60	11.00	3.20	1.30	6.90	-3.60	-9.30	4.70
Hotels & Restaurants	-3.60	-3.10	-11.10	7.20	4.90	-0.20	-4.90	-9.00	-5.00	3.90
Information & Communications	6.80	9.90	7.10	7.10	2.10	-3.40	-4.10	-1.10	-3.20	-3.40
Financial Services	-3.20	0.10	8.20	1.50	1.60	4.70	0.10	-7.10	2.30	3.20
Business Services	-9.80	4.60	-2.60	-1.50	0.40	-0.20	0.60	-5.80	-0.40	-0.90
Other Services Industries	1.10	1.90	-	3.00	1.00	-2.00	-2.10	-3.40	-0.40	8.90

Table 3 : Multifactor Productivity: Contributions to Growth in Real GDP

	Per Cent									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Percentage Change in Real GDP				8.80	7.10	8.30	8.40	1.50	-0.80	13.50
Percentage Contribution to Growth in Real GDP of:										
Capital Input	2.60	1.70	1.50	1.90	1.80	2.30	3.00	3.30	2.70	2.70
Labour Input	1.70	-0.70	-0.60	0.80	1.90	2.70	3.60	4.10	1.30	1.50
Multifactor Productivity	-6.80	3.00	2.20	6.20	3.50	3.40	1.90	-5.90	-4.70	9.30

Source: Department of Statistics, Singapore. 2011. *Yearbook of Statistics 2010 and Monthly Statistics of Singapore*.

also grew by 13.4 percent over 2006. The averaged GDP growth rate has increased to 8.5 percent during 2005-2007 and resident unemployment rate has fallen to 3 percent in 2008 and 2010 (Chart 2).

According to Singapore Input-Output Tables 2005, the income and employment multipliers for the hotels and restaurants are 0.375 and 16.4 respectively, among the highest in 2005, reflecting the highly labour intensive nature of the hotel and restaurants industry. The value-added multiplier of the hotel and restaurants sector in 2005 was 0.708.

After the two IRs opened for one year, Singapore has become the “world’s second hottest gambling destination” after Macau (Stradbroke 2011). It is estimated that the two casinos produced gambling revenue of US\$4 billion for 2010 and will generate US\$5 billion in 2011 (Cass 2010; Kelly 2011). Furthermore, Singapore is likely to surpass the Las Vegas Strip as the second biggest gaming market in two or three years. The Royal Bank of Scotland estimated that, in 2011, Singapore’s two casino resorts will generate gambling revenue of US\$ 6.4 billion, higher than the anticipated US\$ 6.2 billion by the Las Vegas Strip (Yogonet.com 2011). It is estimated that the two IRs contributed 0.3 to 0.4 percent of GDP in 2010 (Lim, 2011)

However, the Singapore government legalized casino resorts not to overtake Las Vegas as a gambling destination. In addition to theaters, shopping and convention facilities, Singapore’s resorts feature large and all-ages attractions like theme parks, marine attractions and museums to boost tourism and make Singapore a fun global city to work and live in. So far the two IRs have been successful in attracting tourists to Singapore. Total visitor arrivals increased from 9.7 million people in 2009 to 11.6 million people in 2010, an increase of 20 percent after 4 percent decline in 2009 due to Sub-Prime financial crisis. The average length of stay has also increased from 3.2 days before 2005 to 4 days since 2007. The standard room occupancy rate also increased from 76 percent in 2009 to 86 percent in 2010.

However, the two IRs have raised concerns among the locals over problem gamblers and more crowded island due to the influx of foreign workers. Prime Minister Lee Hsien Loong has acknowledged the problems and promised to tackle them “If we didn’t quite get it right, I’m sorry, but we will try and do better the next time.” (Stradbroke 2011). Out of the concern, the following recommendations were proposed:

1. Periodical surveys and researches on the costs and the benefits of gambling are necessary. Since gambling is not merely a business like any other, in addition to

constantly monitoring the operation and development of gambling in Singapore closely, more fact finding and reliable information on social and economic impacts are needed for informed discussion and decision. “We can seek to shape the world we live in or simply allow it to shape us” (National Gambling Impact Study Commission).

2. Periodical surveys and forums on the gambling problem and feedback are recommended for shared display and shared understanding.

6. Concluding Remarks

The measurement of productivity is difficult especially in service industries. Out of many possible productivity measures, GDP per capita was chosen to reflect productivity improvement in Singapore’s national economy since Singapore government is responsible for policy making in national economy, industry level and Government-Linked Companies (GLC). After transformed into the “elephant” economy, Singapore has to look out possible opportunities and respond innovatively and swiftly.

In responding to keen competition for investment in gaming industry, Singapore government, aware of the possible social impacts and law and order challenges, has revamped her four decades long gambling policy and allowed construction of two IR casinos in Singapore. It illustrates that Singapore has to take every opportunity to keep her economy growing. Innovation in public and business administration is essential to improve productivity at all levels.

To diversify its economy, Macau has emphasized on tourism, conventions and meetings to create more non-gaming revenue. Las Vegas has reached the saturation point and developed non-gaming amenities for customers.

As the number of casinos in the region is competing with each other, market saturation is another consideration. If there are too many casinos in competition, the new casino in the big markets cannibalizes other to a greater degree. Whether the late comer is able to attract enough business depends on infrastructure, timing, location and market structure and many other factors.

International gaming expansion: Mexico and Brazil have legalized casinos. Italy also follows suit. There is worldwide proliferation of gaming. If the IRs model is successful in Singapore, it will become a model for other country to emulate. One may argue, however, that every society is unique in some way and hence a direct emulation may not be possible.

For example, Singapore chose to build the IRs near the city center. In Taiwan or Indonesia, such a choice of location to build a casino may not be acceptable to the citizens. But what is essential in the Singapore case is not its specific contents of the policy, but its spirit of innovation. It is the policy innovation and flexibility that contribute to the success of Singapore's development.

As a coda to this essay, we note that Japan is currently in need to raise a large amount of revenues for the reconstruction of the disaster-hit region after the March 11 Incident. In addition to the measure to raise the consumption tax to achieve this aim, building an integrated resort instead of casino in the disaster area is also worth considering by the Japanese government.

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