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Socio-Economic Impacts of Japanese Integrated Resorts

Review & Recommendations

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Executive Summary

About this Report

As the leading academic institute studying the global gaming industry, the University of Nevada, Las Vegas (UNLV) International Gaming Institute (IGI) serves as an objective third party providing an expert, rigorous, research-based approach to understanding integrated resort (IR) impacts. This study is intended to inform policymakers and other interested parties.

This report consists of analyses of existing academic literature, existing socio-economic data in Japan, and case study analysis of related jurisdictions. To inform the analysis and readers more generally, we describe Japan's existing gaming market and introduce foundational concepts related to IRs, economic impacts, and social impacts.

To ensure that this report adheres to the strictest academic standards, it has undergone a double-blind peer review process by two reviewers that have no affiliation with the project itself. Per University policy, the project team holds final editorial control and any content found in this report is the work of the authors.

Overview

The Japan Casino Implementation Act has the potential to enable multiple large-scale integrated resort projects, thereby launching a new era of increased inbound tourism in the post-Tokyo Olympics era. Projects at this scale of capital may well be unprecedented, falling in the range of ¥700 billion to over ¥1 trillion (or perhaps beyond). Given the scale of investment and impact that is possible with these projects, an economic and social analysis is needed to outline how policymakers or other stakeholders should maximize public welfare. Throughout its history of examining similar projects, the IGI has advised that in order to provide useful direction on policy decisions, the goals of IR expansion must first be defined, so that outcomes might be tracked. In Japan, multiple policy goals have been articulated.[1] We have prioritized these goals based on our interpretation of their importance to Japan:

I. Economic goals: grow the tourism market, particularly in terms of foreign visitor trips to Japan, spend per visitor, and total nights stayed.

II. Social goals: minimize social costs of gambling, in particular, impacts associated with addiction and/or crime.

In achieving these goals, we would also note that five sub-objectives might be identified:

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[1] Soble, J. and Gough, N. (2016, December 14). Japan, Looking for Money, Removes Ban on Casino Gambling. *The New York Times*. Retrieved from https://www.nytimes.com/2016/12/14/business/japan-legalize-casino-gambling.html

Gambling Compliance. (2017). Japan IR Expansion. Retrieved from https://gamblingcompliance.com/in-focus/japan-ir-expansion

i. Maximize economic impacts in terms of capital investment and ongoing impacts on gross domestic product (GDP), employment, and income;
ii. Minimize negative impacts and/or maximize positive impacts on other gaming industries;
iii. Grow the meetings, incentives, conventions, and exhibition (MICE) industry to compete better internationally;
iv. Generate sustainable tax revenue for local and federal governments; and
v. Significantly enhance the social safety nets for Japan's problem gamblers.

To help evaluate whether and how IR development might achieve these goals, we have emphasized the importance of understanding differences between types of gambling, in a manner consistent with the work of gambling economics pioneer Dr. William R. Eadington.[2] Eadington posited that not all forms of gambling are created equal – at least as it pertains to maximizing socio-economic benefits and minimizing socio-economic costs.[3] This point is especially important when considering the impacts of tourist-oriented IR development in Japan, as these impacts tend to be different (and much more economically beneficial) than those found with other forms of gambling.

Specifically, we might categorize impacts via a typology (ranking) system that looks at all of the ways that gambling has been commercialized. Atop this typology (scoring most positively) are IRs – those with multiple amenities that target local, regional, or global tourism markets. In fact, at the very top of this typology, Eadington suggested that the "tourist-oriented integrated resort" (such as that which is being contemplated in Japan) generates the most benefits and the fewest costs of any gambling product, given its extreme focus on tourism generation (which can and does, by definition, inject "new money" from afar into a local economy). Given the same level of investment, tourist-oriented integrated resorts sit atop the gambling "food chain", as these properties tend to create the most jobs, generate the most ancillary revenues, produce the largest tax bases, and in general contribute the most macro-economic benefits to a region that sees this "new money" arrive into the economy. Meanwhile, to the degree that there is a strong tourism focus to those who market these properties, local impacts on problem gambling can be minimized relative to other forms of gambling (including some forms that are already widely available in Japan).

Put simply, given the goals of Japan to maximize economic impacts while minimizing negative social impacts, the tourist-oriented IR scores better on these metrics than any other gambling business yet invented. Hence, we believe that tourist-oriented IR development represents the best opportunity for Japan to achieve the socio-economic goals that the nation has articulated.

Findings

Japan is in a fortunate position. There are many jurisdictions that have developed large IR projects and can serve as case studies for appropriate policies. The science behind socio-economic impacts of casino IRs has also improved significantly in the past 15 years, providing practical guidelines for many decisions. Empirically, IR policies are increasingly subjected to ongoing study in the years following

[2] MacDonald, A., & Eadington, W. A. (2008). The case for integrated resorts. *Inside Asian Gambling, Nov*, 37-43.

[3] MacDonald, A., & Eadington, W. A. (2008). The case for integrated resorts. *Inside Asian Gambling, Nov*, 37-43.

construction, providing better evidence of impacts from which we draw our analysis. In the following section, we analyze tourism and other economic impacts, followed by addiction and other social impacts.

Tourism & Other Economic Impacts

The addition of a major tourism-oriented IR development would complement this existing economy and infrastructure with some significant socio-economic advantages. In fact, of all of the ways in which the gambling act can be commercialized, this type of IR achieves the tourism metrics sought by Japan (outlined in the above section) best. Crucially, policymakers have a significant opportunity at this stage to positively impact how the IRs contribute to these desired goals. The areas of critical importance include:

- The number of IR licenses
- The location of IRs
- Tax treatment of IRs
- The operator procurement and licensure process
- The parameters of the pre- and post-licensing regulatory system
- Constraints on available markets (e.g., domestic vs foreign)
- Constraints on product/service provision (e.g., casino size, anti-money laundering or responsible gaming regulations)

Beyond these, factors outside of Japan's direct government control (e.g., the nation's geographic location) will also impact this market. And while not all market characteristics can be changed directly, they must still be weighed as policy decisions are enacted. Fortunately, we find that general market conditions for Japan are quite strong. With a supportive legal and regulatory framework, Japan should be able to take advantage of many natural strengths in its economy, geography, and demography. While no country that has adopted IRs provides a perfect model for Japan, evidence from Singapore and South Korea can be illustrative for potential outcomes. We strongly advise caution in uncritically and uniformly adopting, for instance, the "Singapore Model" or the "South Korean Model", however, as many subtle aspects of those models may lack evidence of effectiveness, may be economically inefficient, and/or may reflect different policy goals than those that Japan has clearly articulated.

As part of our review of the Japanese market opportunity, we critically reviewed, evaluated positively, and then relied upon the scenarios developed by Oxford Economics on the behalf of the U.S.-Japan Business Council (USJBC).[4] In those market projections, two sites are considered: Greater Tokyo and Osaka.

Overall, we found that the projections by Oxford Economics reflected a deliberate and sound methodology. At a high level, the assumptions around the developments appear to be consistent with the market opportunity. As such, we support use of Oxford Economics' report as a reasonable representation of the likely impact of IRs in Greater Tokyo and Osaka. Table ES-1 summarizes the direct, indirect, and

[4] Oxford Economics (2015). Beyond 2020: Tourism Growth and the Economic Impact of Integrated Resorts in Japan.

induced impacts of representative Greater Tokyo and Osaka IRs, as modeled by Oxford Economics. Total GDP (output) impacts are projected to be ¥1.351 trillion and ¥945 billion, respectively. Ongoing employment projected at 102,800 jobs annually in Greater Tokyo and 77,600 in Osaka.[5]

TABLE ES-1: OXFORD ECONOMICS ECONOMIC IMPACT OF REPRESENTATIVE IRS (MONETARY AMOUNTS IN BILLIONS OF 2014 YEN)[6]

	Greater Tokyo	Osaka
Direct		
Output	¥1,173	¥818
Gross value added	¥772	¥510
Employment	34,507	26,147
Personal income	¥199	¥146
Indirect and induced		
Output	¥1,069	¥804
Gross value added	¥579	¥435
Employment	68,324	51,449
Personal income	¥254	¥191
Total		
Output	¥2,241	¥1,622
Gross value added	¥1,351	¥945
Employment	102,831	77,595
Personal income	¥453	¥337

We also appreciate that Oxford Economics has provided multiple visitor scenarios for readers to consider, as this is one area where we expect strong impacts, but with a wide margin of error depending upon (foreseen and unforeseen) policy-related developments. In terms of tax analysis, we find that Oxford Economics addressed each key area of inquiry, and did so in a well-reasoned way. Table ES-2 summarizes the tourism scenario analyses of Greater Tokyo and Osaka IRs by Oxford Economics. In the medium scenario, which they identify as the most likely scenario, we observe 4.1 million international visitors to the IRs. Among this 4.1 million travelers, 2.3 million are projected to be incremental traffic to Japan, with a net incremental spending impact of ¥1.6 trillion.

[5] Jobs figures are not full-time equivalent employment figures.

[6] Oxford Economics (2015). Beyond 2020: Tourism Growth and the Economic Impact of Integrated Resorts in Japan.

TABLE ES-2: OXFORD ECONOMICS INTERNATIONAL VISITOR SCENARIO SUMMARY[7]

	Oxford: Scenario analysis		
	Low	**Medium**	**High**
International visitors to IRs (millions)	3.3	4.1	5.3
As share of total visitors	11.3%	15.0%	19.3%
Incremental visitors (millions)	1.7	2.3	2.8
Incremental visitor days	8.0	13.2	17.7
IR visitor spending (billion ¥)	¥2,170	¥2,470	¥2,730
Net spending impact of IRs (billion ¥)	¥1,060	¥1,550	¥1,860
As share of total spending	49%	63%	68%

This defensible study underscores the economic potential of the tourist-oriented IR, and indeed supports our belief that this represents Japan's best opportunity to achieve its desired economic outcomes.

Addiction & Other Social Impacts

On the social cost side of the ledger, perhaps the most oft-mentioned potentially adverse impact is addiction. We begin this discussion by noting that today, the current level of services for problem gamblers in Japan, especially relative to the supply of gambling options, is quite limited, and hence the opportunity for improvement is quite substantial for Japan's problem gamblers.[8]

Based on a review of literature and relevant case studies, we believe that there is strong research evidence for the addition of several new programs, including enhanced screening/assessment tools for the Japanese market, extensive therapies, brief interventions, and better integration across services. In addition, we note that all programs should be developed by a community of stakeholders, including both global experts and experts within Japan, to inform and adapt practices to existing local services, institutions, and cultures.

If these recommendations are followed, we believe that immediate opportunities to reduce harm can be significant. At the same time, to understand the relative risk of incremental costs in the Japanese market from IR expansion, we assembled Table ES-3, which examines identifiable demographic and health related risk-factors for gambling problems. In general, the analysis below suggests that Japan has a lower

[7] Oxford Economics (2016). International IR Visitors: Scenario Analysis.

[8] Currently, the 12-step Gamblers Anonymous (GA) program – in addition to a small handful of treatment providers (e.g., the Oneness Group) – provide support for persons with a gambling disorder seeking help. There are 115 GA groups in Japan, and another 93 Gam-Anon groups supporting family and close friends.

risk profile than comparable jurisdictions (Singapore/Korea) except with regard to heavy episodic (binge) drinking of alcohol.

TABLE ES-3: SUMMARY OF COMPARABLE RISK-FACTORS ACROSS JAPAN, SINGAPORE, AND KOREA

Risk-Factor	Japan	Singapore	Korea	Comments
Low Age[9]	Average age: 46 Pop. under age 15: 13%	Average age: 38 Pop.under age 15: 16%	Average age: 39 Pop. under age 15: 15%	Japan's older population base versus comparable jurisdictions reduces the likely impacts of this risk factor.
Unemployed	Unemployment rate: 2.8%[10]	Unemployment rate: 3.1%[11]	Unemployment rate: 3.8%[12]	Japan has a very low unemployment rate, and even lower than comparable jurisdictions. Likely minimal impacts of risk factor.
Increased alcohol use[13]	Alcohol consumed per capita: 7.2 liters Prevalence of heavy episodic drinking: 17.5%	Alcohol consumed per capita: 2.0 liters Prevalence of heavy episodic drinking: 4.4%	Alcohol consumed per capita: 12.3 liters Prevalence of heavy episodic drinking: 6.0%	Japan has a high prevalence of heavy episodic drinking, particularly among men. Policies around the distribution of alcohol should address this risk and include appropriate responses to intoxicated players.
Increased drug use[14]	Prevalence: Male – 0.01%	Prevalence: Male – 0.28%	Prevalence: Male – 0.42%	Available evidence is dated (2004) and may have some

[9] World Health Organization (2013). Global Health Observatory (GHO) data.

[10] Statistics Japan (2017, June). Labour Force Survey, Monthly Results.

[11] Singapore Ministry of Manpower (2017, July 28). Labour Market Statistical Information, Summary Table: Unemployment.

[12] Statistics Korea (2017, June). Latest Indicators.

[13] World Health Organization (2013). Global Health Observatory (GHO) data. Heavy episodic drinking defined as consuming at least 60 grams or more of pure alcohol on at least one occasion in the past 30 days.

[14] World Health Organization (2004). Point prevalence (%), drug use disorders, 15+ years (Resources for Substance Use Disorders).

Risk-Factor	Japan	Singapore	Korea	Comments
	Female – 0.00%	Female – 0.07%	Female – 0.10%	measurement error, but Japan clearly has a low risk profile.
Delinquency & illegal acts[15]	Theft rates per 100,000 population: 356.2	Theft rates per 100,000 population: 288.2	Theft rates per 100,000 population: 531.7	Japan has very low rates of reported crime, near Singapore's levels and well below Korea. Japan has a low risk profile.

Note: Risks reflect "well-established" factors for problem gambling, as identified by Johansson, A., Grant, J. E., Kim, S. W., Odlaug, B. L., & Götestam, K. G. (2009). Risk factors for problematic gambling: A critical literature review. *Journal of Gambling Studies, 25*(1), 67-92. Risk factors for which there are no comparative national statistics are excluded.

In addition to these risk factors, scientists have established that the existing exposure level of a population to gambling contributes to public health outcomes. For instance, Harvard Medical School researchers at the Division on Addiction developed a regional exposure model that provides unprecedented empirically-based frameworks for understanding exposure and proximity to gambling on vulnerable and resilient population segments.[16] Exposure is described as dependent on dose (the number of gambling establishments and employees therein), potency (the number of gambling variants), and duration (the length of time that gambling has been available). Based on our analysis, Japanese exposure to gambling is already quite high. To put it in scientific terms, Japan has the second highest number of gaming machines per capita in the world (dose), there are also several different legal forms of gaming/gambling available today in Japan (potency), and all have been available in some variant or another for decades (duration). In sum, Japan has been exposed to a heavy dose of gambling opportunities, and for an extended period.

Because of this, and assuming that public health recommendations are followed, the marginal adverse public health impact of IRs introduction is likely to be low, at least after any initial "novelty effect" erodes. This aligns with "Adaptation Model" of gambling expansion, also developed by Harvard Medical School researchers, which suggests that as the general population learns more about gambling's health impacts, risks, and preventative measures, they adapt their behavior to better prevent and treat those harms.[17] Because of pre-existing exposure to gambling, we expect the introduction of two to three IRs to

[15] United Nations Office On Drugs and Crime (UNODC) (2014). Vienna International Centre. Vienna: Austria.

[16] Shaffer, H. J., LaBrie, R. A., & LaPlante, D. (2004). Laying the foundation for quantifying regional exposure to social phenomena: considering the case of legalized gambling as a public health toxin. *Psychology of Addictive Behaviors*, *18*(1), 40-48.

[17] LaPlante, D.A. and Shaffer, H.J. (2007). Understanding the influence of gambling opportunities: Expanding exposure models to include adaptation. *American Journal of Orthopsychiatry, 77*, 616-623.

have a relatively minor impact on net exposure of the domestic population to gambling, especially if evidence based treatment and prevention programs are also provided.

Recommendations

As academics, it is our role to sift through the complex claims made by various stakeholders by focusing on the findings that can be trusted most – those in the empirical, peer-reviewed academic literature. Peer-reviewed research findings have the benefit of being subjected to rigorous independent, expert evaluations, typically via a "double blind" process, whereby the anonymity of reviewers ensures candid, thorough, and critical feedback to improve the work itself and ultimately decide whether it is worthy of publication. We would note that this report, too, has been subjected to a blind peer review in a manner similar to that which is used in academic journals – a double-blind peer review process by two reviewers that have no affiliation with the project itself. Ultimately, this approach is one that can be trusted by policymakers in a way that non-academic, non-peer-reviewed work often cannot, and as a result this approach should help policymakers make informed decisions, using the most reliable information available. Per our International Gaming Institute policy, the project team holds final editorial control over the final product.

Our review of gaming literature, the Japanese marketplace, and IR case studies led to a set of key recommendations for Japanese policymakers to consider on gaming policies, regulations, and social programs. While many of these recommendations refer specifically to the IR market, we recommend a holistic approach that includes responsible gambling, treatment, education, research, and prevention services. While the introduction of IRs may have low marginal impacts, as we have seen in jurisdictions like Singapore, the arrival of IRs presents an unparalleled opportunity to significantly reduce existing harm through collective action.

Economic Impact Recommendations

(1) Establish a government tax committee with input from operators and outside experts to leverage current understanding of gaming tax theory, with the objective of creating a sustainable and substantial tax framework.
(2) Allow access to the Japanese domestic market to create better incentives for investment, more sophisticated and iconic facility developments, and as a result, a more attractive product for foreign visitors.
(3) Select locations for IRs in areas with strong tourism clusters, transportation infrastructure, and labor markets. In general, this supports a model of locating facilities in major metropolitan areas.
(4) During the procurement process, ensure that management experience with large IRs is heavily weighted, to ensure that management efficiency with these complex facilities – and returns on investment – are maximized with these complex institutions.

Shaffer, H. J., & Martin, R. (2011). Disordered gambling: Etiology, trajectory, and clinical considerations. *Annual Review of Clinical Psychology*, *7*, 483-510.

Public Safety Recommendations

(1) Adopt the regulatory model as advised in the complementary IGI report, "Perspectives on Gambling Regulatory Processes: Eliminating Organized Crime in Nevada Casinos".
(2) Establish an inter-disciplinary committee to oversee, and report to government, on matters of public health and safety.
(3) Modify law enforcement practices to accommodate large increases in temporary visitor volumes onsite. This may also include specialized law enforcement for gaming related investigations.
(4) Establish a long-term research program to assess baseline and ongoing changes in key crime statistics.

Public Health Recommendations

(1) Establish a gambling neutral National Problem Gambling Council, with a mandate to develop a public health safety net for gamblers, and ensure advocacy for persons with gambling disorders throughout government and industry. The Council should lead the following priority initiatives:
    a. Develop gambling industry advertising and marketing standards that limit risk to vulnerable populations while enhancing awareness of services that contribute to positive player health. These standards should evolve over time to recognize new media, and therefore should integrate input from a variety of stakeholders, including the National Problem Gambling Council.
    b. Address youth gambling by developing gambling educational programs delivered through the educational system, and by establishing minimum standards for the prevention of youth gambling.
(2) Establish a harm reduction framework for IR operators. This framework should include the following components.
    a. Require operators to periodically develop a comprehensive responsible gambling strategy to be approved by the government gambling committee overseeing public health & safety. This strategy should include evidence based responsible gambling programs and policies.
    b. Require operators to develop a responsible drinking strategy. This strategy should include policies, procedures, and training on alcohol distribution and responding appropriately to intoxicated persons.
    c. Require operators to develop a research and evaluation strategy for their responsible gambling programs, to ensure transparency and continuous program evaluation improvement.
(3) Invest in problem and responsible gambling research in Japan, beyond the internal research and evaluation of individual license holders. An early priority should be development/validation of gambling disorder screening tools for application in Japanese culture. Collaboration with established researchers internationally and development of domestic capacity should both be emphasized.
    a. Avoid immediate implementation of policies with limited evidence of effectiveness, as there may be unintended consequences – this includes wager limits and admission fees. A long-term research strategy can inform gradual introduction of innovative harm reduction tactics.

Should these recommendations be followed, it is our belief that the incorporation of a tourist-oriented integrated resort into the local economies of Japan represents the country's best opportunity to achieve its desired metrics in both social and economic spheres.

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1 Introduction

1.1 Purpose of Study

The Japan Casino Implementation Act has the potential to enable multiple large-scale integrated resort projects. These projects will be unprecedented capital projects, noted to be in the range of ¥700 billion to over ¥1 trillion. To help inform related policy decisions, an economic and social analysis is needed to frame likely impacts from integrated resort (IR) expansion in Japan, and outline how policymakers or other stakeholders should respond to enhance public welfare. Tokyo, Yokohama, and/or Osaka have each been identified as likely locations for potential expansion of large IRs.

As the leading academic institute studying the global gaming industry, the University of Nevada, Las Vegas (UNLV) International Gaming Institute (IGI) can serve as an objective third party providing an expert, rigorous, research-based approach to understanding IR impacts. To meet the anticipated needs of this project, the IGI has formed a research team with both academic and professional experience in IR socio-economic impact analysis. The project team is comprised of thought leaders in the field of gaming studies, with experts in economics, policy, social, and community issues. In addition, this team has experience over the past 15 years delivering cutting-edge educational programs, lectures, and formal conversations with Japanese leadership in both political and economic spheres.

This IGI team was tasked with evaluating the potential benefits and costs of new IRs under the recently passed Japanese Casino Implementation Act. This study is intended to be used by policymakers and other interested parties. The report consists of analyses of existing academic literature, existing socio-economic data in Japan, and case study analysis of related jurisdictions. To provide the most useful direction possible for readers, the IGI report authors have used their expert judgment to interpret research and secondary data. If literature on a topic area was incomplete or limited, IGI report authors relied on their expert knowledge and experience to address the identified content areas of the report; note that where we have done this, we have highlighted the related limitations.

As academics, it is our role to sift through the complex claims made by various stakeholders by focusing on the findings that can be trusted most – those in the empirical, peer-reviewed academic literature. Peer-reviewed research findings have the benefit of being subjected to rigorous independent, expert evaluations, typically via a "double blind" process, whereby the anonymity of reviewers ensures candid, thorough, and critical feedback to improve the work itself and ultimately decide whether it is worthy of publication. We would note that this report, too, has been subjected to a blind peer review in a manner similar to that which is used in academic journals – a double-blind peer review process by two reviewers that have no affiliation with the project itself. Ultimately, this approach is one that can be trusted by policymakers in a way that non-academic, non-peer-reviewed work often cannot, and as a result this approach should help policymakers make informed decisions, using the most reliable information available. Per International Gaming Institute policy, the project team holds final editorial control over the content found in this report.

1.2 Japanese Government Goals

Jurisdictions have varied reasons for adopting IRs (or gaming more generally). The IGI has long advised that in order to provide useful direction on policy decisions, the goals of IR expansion must first be defined – and then these goals must guide subsequent decision-making. In Japan, multiple policy goals of IR expansion have been well articulated.[18] As a result, we have prioritized these goals based on our interpretation of the perceived importance of those goals, and our correspondence with local experts. We observe that the Japanese government seeks to achieve the following objectives, through expansion of IRs and reform of the market for gaming:

I. Economic goals: grow the tourism market, particularly in terms of foreign visitor trips to Japan, spend per visitor, and total nights stayed.

II. Social goals: minimize social costs of gambling, in particular, impacts associated with addiction and/or crime.

III. In achieving these goals, we would also note that four sub-objectives might be identified:

   i. Maximize economic impacts in terms of capital investment and ongoing impacts on gross domestic product (GDP), employment, and income;
   ii. Minimize negative impacts and/or maximize positive impacts on other gaming industries;
   iii. Grow the meetings, incentives, conventions, and exhibition (MICE) industry to compete better internationally;
   iv. Generate sustainable tax revenue for local and federal governments; and
   v. Significantly enhance the social safety nets for Japan's problem gamblers.

The subsequent sections of this report elaborate on these issues and identify operating strategies consistent with the achievement of these goals. Included in this study are a review of the Japanese market, analyses of comparable markets, an economic analysis (including due diligence on an important recent economic impact study), a social impact analysis, and recommendations for Japanese policymakers.

[18] Soble, J. and Gough, N. (2016, December 14). Japan, Looking for Money, Removes Ban on Casino Gambling. *The New York Times*. Retrieved from https://www.nytimes.com/2016/12/14/business/japan-legalize-casino-gambling.html

2 Market Overview

2.1 Introduction – What is an Integrated Resort?

The term "integrated resort", or IR, came to prominence after Singapore developed its first casinos in the 2000s. Singaporean law states that IR development comprises of a hotel, retail, dining, entertainment, recreation and other facilities, of which a casino may be a part.[19] The term integrated resort was employed to underline the point that any project would be more than just a casino, and incorporate accommodations and an array of leisure and business amenities.[20] That is, the integrated resort is an operation that is not necessarily centered around a casino; the casino is simply one of many facilities within the space.[21]

The concept of having a resort with multiple amenities in addition to the casino, however, is not a new concept. The "integrated resort" concept became more widespread in the early 1990s; a "complete vacation resort" that featured an assortment of nongaming amenities, such as restaurants, entertainment venues, meeting and convention space, pools, spas, shopping malls, and theme parks.[22]

In yet-to-be developed markets like Japan, extensive multi-level planning is required to launch an IR. The process includes addressing infrastructure, social, cultural, and sustainability-related considerations in new ways, for the involved stakeholders. "Integrated planning" is a concept discussed in the academic tourism literature, and the success of tourism development is dependent on the success of integrated multilevel planning that satisfies economic, environmental, and social objectives.[23]

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[19] Casino Control Act (Chapter 33A) (2007). Retrieved from http://www.cra.gov.sg/cra/casino-control-act.aspx/93

[20] Henderson, J. C. (2012). Developing and regulating casinos: The case of Singapore. *Tourism and Hospitality Research*, *12*(3), 139-146.

[21] The casino does play a primary role in the financial model, where it supports lower financial returns in other amenities.

[22] Schwartz, D. (2013). Suburban Xanadu: The casino resort on the Las Vegas Strip and beyond. New York, NY: Routledge.

[23] Haugland, S. A., Ness, H., Grønseth, B. O., & Aarstad, J. (2011). Development of tourism destinations: An integrated multilevel perspective. *Annals of Tourism Research*, *38*(1), 268-290.

Inskeep, E., & Kallenberger, M. (1992). An integrated approach to resort development. *Spain: World Tourism Organization*.

2.2 How is an Integrated Resort Different from Other Forms of Gambling?

To help evaluate whether and how IR development might achieve these goals, we have emphasized the importance of understanding differences between types of gambling, in a manner consistent with the work of gambling economics pioneer Dr. William R. Eadington.[24] Eadington posited that not all forms of gambling are created equal – at least as it pertains to maximizing socio-economic benefits and minimizing socio-economic costs.[25] This point is especially important when considering the impacts of integrated resort development in Japan, as these impacts tend to be different (and much more economically beneficial) than those found with other forms of gambling.

Eadington proposed a typology (or ranking) of gambling's impacts based on the way in which the gambling act was commercialized. At the bottom of this typology, in the least-achieving and least-beneficial category, is illegal gambling, which operates in black markets, generates relatively few jobs and virtually no tourism, and of course contributes little to the governmental tax base. Slightly better, but still sub-optimal, is "convenience gambling" and "saloon-style gambling," such as that which is found in state lotteries, convenience stores with gambling machines, or in a somewhat larger-scale format in environments that contain many gambling machines but little else by way of amenities.

This latter category is, of course, what is observed currently in the Japanese pachinko market, in which more than 4 million machines dot the gambling landscape in saloon-style pachinko parlors. While better, from a socio-economic perspective, than purely illegal gambling, these environments still generate relatively few jobs, achieve significantly lower tax revenues, and very little (if any) "new" revenues generated by tourists. Meanwhile, because they tend to target extremely local markets of gamblers, the social costs associated with problem gambling can be higher, as people who develop gambling disorders will tend to live in and impact the surrounding community.

Atop this typology are integrated resorts – those with multiple amenities that target local, regional, or global tourism markets. In fact, at the very top of this typology, Eadington suggested that the "tourist-oriented integrated resort" generates the most benefits and the fewest costs of any gambling product, given its extreme focus on tourism generation (which can and does, by definition, inject "new money" from afar into a local economy). Tourist-oriented integrated resorts sit atop the gambling "food chain", as these properties tend to create the most jobs, generate the most ancillary revenues, produce the largest tax bases, and in general contribute the most macro-economic benefits to a region that sees this "new money" arrive into the economy. Meanwhile, to the degree that there is a strong tourism focus to those who market these properties, local impacts on problem gambling are minimized relative to other forms of

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[24] MacDonald, A., & Eadington, W. A. (2008). The case for integrated resorts. *Inside Asian Gambling, Nov*, 37-43.

[25] Ibid.

gambling. As we discuss later, these projects must still have a connection to local consumers, in order to warrant the development investment necessary to compete for foreign tourists.

2.3 IR Projects Expected for Consideration

While the final scope and design of Japanese IRs will be subject to a public procurement and licensing process, it is useful to frame discussion of socio-economic impacts and policies by first defining the general scale of facilities that are projected to go into operation. As part of this exercise we consider the scenarios explored by Oxford Economics on the behalf of the U.S.-Japan Business Council (USJBC).[26] We engage in a limited assurance process of Oxford Economics' model in section 3.5.

In those market projections, two sites are considered: Greater Tokyo and Osaka. Both projects are expected to feature the following non-gaming amenities:

- Iconic design and installation features
- High-end hotel accommodations
- Multiple diverse restaurants
- International competitive meeting and convention space
- Extensive retail shopping
- Lounges/Nightclubs
- Spa facilities
- Fitness facilities
- Idiosyncratic entertainment attractions (e.g., theatres, galleries, amusement features)

In terms of investment, projections for the scale of the project includes a ¥1.045 trillion (in 2014 Yen) development expenditure for the Greater Tokyo project and ¥861 billion (in 2014 Yen) expenditure on the Osaka project. Roughly one third of visitor spending for both projects is expected to be derived from international visitors, with an estimated 996,000 international visitors to the Greater Tokyo site per year and 622,000 international visitors to Osaka.[27]

Our analysis throughout this report relates to projects of similar size/scope to those defined by Oxford Economics.

[26] Oxford Economics (2015). Beyond 2020: Tourism Growth and the Economic Impact of Integrated Resorts in Japan.

[27] Ibid.

2.4 Overview of Gaming in Japan

In this subsection, we provide an overview of gambling and gambling-like amusement/entertainment games provided in Japan, including lottery, racing, toto, and pachinko/pachislot. In part, this is an important component of both economic and social analysis, as it not only reveals economic market structure components, but also describes the extent to which Japan society has already been exposed to gambling products – an important variable for predicting social adaptation to new products.

2.4.1 Pachinko/Pachislot

While not legally considered gambling, pachinko/pachislot (pachinko) type games are widely distributed games that serve a similar purpose in the Japanese marketplace. There is a requirement that persons must be at least 18 years of age to enter a pachinko parlor, making it a controlled game, and there are noted social costs that are similar to traditional gambling products, in particular, problematic play similar to gambling addiction.[28]

To play pachinko, money is inserted into a machine, and a supply of steel balls are allocated to the player. The player then uses a handle on the machine to deploy the balls down the front panel of the machine. The balls cascade downward, bouncing through pins placed along the panel. The objective is to guide as many of the balls to various slots along the panel that can open and close. In 1981, 'poker-style' or 'pachi-slot' machines were introduced into the market. These games, which today outnumber traditional pachinko machines, are more similar in design to slot machines where players have to hit stop buttons and align symbols on spinning reels.[29]

In the global gaming marketplace, the decline in popularity and presence of traditional electronic gaming machines and historically strong performing products like draw-lottery is well-established. Further consistent with the notion that pachinko machines serve similar marketplace functions as other electronic gaming machines (EGMs), their popularity seems to be waning. As shown in Table 1, industry sales are in a slow decline. There has been a multi-year declining trend in the size of the industry, but it remains a large market in Japan and compared to other jurisdictions. Recent estimates have suggested that the participation rate in pachinko is roughly 13% among those over 18 years of age,[30] spread across 11,627 parlors. Trends over the past ten years have been towards fewer but larger parlors, with the number of

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[28] Brooks, G., Ellis, T., & Lewis, C. (2008). Pachinko: A Japanese addiction? *International Gambling Studies, 8*(2), 193-205.

[29] Ibid.

[30] Takiguchi, N., & Rosenthal, R.J. (2011). Problem gambling in Japan: A social perspective. *Electronic Journal of Contemporary Japanese Studies,* (1).

outlets falling 23% from 2005 to 2014. The average number of machines per parlor increased by 22% over the same period.

TABLE 1: PACHINKO AND RELATED MACHINE AVAILABILITY

Year	Number of Pachinko, Revolving-type, and other machines	Number of Pachinko Parlors	Average Machines per Parlor
2005	4,899,198	15,165	323.1
2006	4,937,381	14,674	336.5
2007	4,590,577	13,585	337.9
2008	4,525,515	12,937	349.8
2009	4,506,250	12,652	356.2
2010	4,554,430	12,479	365.0
2011	4,582,784	12,323	371.9
2012	4,592,036	12,149	378.0
2013	4,611,714	11,893	387.8
2014	4,575,463	11,627	393.5

Sources: Japan Productivity Center's White Paper on Leisure; Daikoku Denki (DK-SIS) White Paper estimates. [Both] retrieved from http://pachinko-shiryoshitsu.jp/en/structure-industry/scale/

Like the trend in outlets and total machines, industry sales are in a slow decline. It is worth noting that other gaming industry products elsewhere in the world are also experiencing similar trends, such as traditional lottery products.[31] Table 2 lists industry sales from 2005 to 2015 – note that the 'gross profit' column is the most directly comparable figure to typical gross gaming revenue figures, as the reported sales numbers exclude prize payments.

[31] For example: Tuttle, B. (2014). Why People Aren't Buying Lottery Tickets. *Time Magazine*. Retrieved from: http://time.com/money/3541514/lottery-sales-decline-casinos/

TABLE 2: PACHINKO INDUSTRY SALES (HUNDREDS OF MILLIONS OF YEN)

Year	White Paper on Leisure	DK-SIS White Paper	
	Sales	Sales	Gross Profits
2005	348,620	406,000	46,800
2006	336,420	376,000	44,700
2007	301,770	325,000	43,700
2008	288,190	284,000	43,200
2009	282,420	276,000	42,700
2010	259,830	253,000	39,500
2011	254,890	246,000	38,200
2012	256,720	248,000	37,800
2013	250,050	241,000	36,300
2014	245,040	235,000	35,000
2015	232,290	223,000	33,200

Sources: Japan Productivity Center's White Paper on Leisure; Daikoku Denki (DK-SIS) White Paper estimates. [Both] retrieved from http://pachinko-shiryoshitsu.jp/en/structure-industry/scale/

Table 3 provides a summary of the ten largest national markets for gaming machines, as well as the ten largest markets in terms of per capita machines. Based on the figures from the Gaming Technologies Association, Japan is the largest market for machine-based gaming, accounting for roughly 60% of the entire world's inventory. In terms of per capita figures, Japan is the second largest global market with one machine for every 28 residents. Only the small Caribbean island nation, Sint Maarten (part of the Kingdom of Netherlands), has more machines per capita.

TABLE 3: TOP TEN COUNTRIES BY NUMBER OF MACHINES (2015)

Country	Number of Machines	Country	Persons per Machine
Japan	4,597,819	Sint Maarten	12
USA	868,983	Japan	28
Italy	456,367	Monaco	29
Germany	271,650	Aruba	34
Spain	216,974	Macao	41
Australia	197,105	Curacao	49
United Kingdom	166,809	Gibraltar	98
Canada	99,742	Australia	121
Mexico	90,000	Antigua and Barbuda	134
Peru	80,933	Italy	136

Source: Gaming Technologies Association (2016). The World Count of Gaming Machines 2015.

2.4.2 Lottery & Toto

Lottery is regulated by the Law of Tickets with Prizes and Toto is subject to the Law Concerning the Promotion of Sports Tickets. Each are overseen by separate organizations. Toto is a form of legalized wagering on soccer matches in Japan. It is done through a lottery system, which allows fans to pick the winners of matches in a given week. Having the proper number of correct picks pays out cash prizes.[32] Toto was launched in 2001 as a response to two events, a decline in popularity of Japan's national soccer league, or J-league, as well as the hosting of the World Cup in 2002.[33] Toto is regulated by a government agency called the National Agency for Advancement of Sports and Health.[34]

Per capita, lottery/Toto sales are relatively low versus comparable markets for this study (Singapore/South Korea), and other developed economies that are members of the World Lottery Association.[35]

In terms of controls, both lottery tickets and Toto can be purchased through online and brick and mortar channels. The legal age for Toto betting is 19+, while there is no age requirement for lottery games.[36] An estimated 38% of the population over age 15 have participated in the lottery, with an average spend per person equivalent to around ¥20,000.[37]

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[32] Watanabe, N. M., Yan, G., and Wicker, P. (2016). Fantasy sports across the pond. *Fantasy Sports and the Changing Sports Media Industry: Media, Players, and Society*, *41*.

[33] Funk, D. C., Nakazawa, M., Mahony, D. F., & Thrasher, R. (2006). The impact of the national sports lottery and the FIFA World Cup on attendance, spectator motives and J. League marketing strategies. *International Journal of Sports Marketing and Sponsorship*, *7*(3), 115-133.

[34] Brasor, P., & Tsukubu, M. (2010). Soccer Lottery BIG in Japan. *The Japan Times Blog*.

[35] World Lottery Association (2017). The WLA Global Lottery Data Compendium 2016.

[36] Takiguchi, N., & Rosenthal, R.J. (2011). Problem Gambling in Japan: A Social Perspective. E*lectronic Journal of Contemporary Japanese Studies,* (1).

[37] Ibid.

TABLE 4: LOTTERY SALES IN JAPAN, SINGAPORE, AND SOUTH KOREA

Lottery Organization	Country	Population (Millions)	Total sale in 2015 (Millions of Yen)	Per Capita Sales (Yen)
Toto	Japan	126.9	108,419	854.37
Mizuho Bank, Ltd.	Japan	126.9	915,390	7,213.47
Singapore Pools	Singapore	5.7	499,909	87,703.41
Nanum Lotto Inc.	South Korea	49.1	377,025	7,678.71
Ktoto Co., Ltd.	South Korea	49.1	369,127	7,517.87

Source: World Lottery Association (2017). The WLA Global Lottery Data Compendium 2016.

2.4.3 Racing

Racing is the third most popular form of gambling after lottery and pachinko games. Horse racing at the national level (Japan Racing Association; JRA) and local level (National Association of Racing; NAR) make up the majority of this market, but legal bicycle, motorcycle, and motorboat race betting also exists online and offline.[38] The legal age for race wagering is 20+. Japan has the highest betting turnover on horseracing in the world, accounting for 29% of the world total, larger than the US and UK combined. [39]

TABLE 5: HORSE RACING HANDLE BY CATEGORY (MILLIONS OF YEN)

Year	Local (NAR)	National (JRA)
2006	369,062	2,831,571
2007	381,568	2,766,886
2008	379,396	2,756,298
2009	366,268	2,598,259
2010	347,797	2,435,627
2011	325,324	2,299,064
2012	330,690	2,400,040
2013	353,571	2,411,832
2014	375,294	2,499,612
2015	417,197	2,588,692

Source: Annual Statistics (1980-). Japan Association for International Racing and Stud Book (JAIRS). Retrieved from http://japanracing.jp/_statistics/2014/s01.html

[38] Ibid.

[39] McManus, P., Albrecht, G., & Graham, R. (2012). The global horseracing industry: social, economic, environmental, and ethical perspectives. New York, NY: Routledge.

2.5 Current Japanese (Tokyo/Osaka) Responsible and Problem Gambling Programs

2.5.1 General Community Programs

Overall, the current level of treatment options for gambling disorder is fairly limited relative to leading jurisdictions, and the breadth of gambling product availability in Japan. A review by Professors Naoko Takiguchi and Richard Rosenthal provides a useful overview of treatment programs available to Japanese residents; we summarize their review in this section.[40] Self-directed groups interventions – in particular, the 12-step Gamblers Anonymous (GA) program – provide most of the support for persons with a gambling disorder seeking help. There are 115 GA groups in Japan, and another 93 Gam-Anon groups supporting family and close friends.

Apart from GA/Gam-Anon, the authors cite one male-only residential program, Oneday Port, and one female-only outpatient program, Nujumi. Both programs are based in Yokohama and are primarily run by peer counselors that are part of GA. Some Japanese hospitals and alcoholism clinics treat gamblers, as do private therapists – and we would also note that the Oneness Group has worked with the U.S. National Council on Problem Gambling recently. Treatment programs typically include education, group meetings, and some include cognitive behavioral therapy and self-reflection methods. Meanwhile, GA is typically encouraged by these clinics/hospitals.

2.5.2 Industry Supported Activity

The Recovery Support Network (RSN) offers a telephone helpline to support persons with pachinko or pachislot machine gambling issues and their concerned family/friends. The All-Japan Game Business Cooperative Federations (Zen Nihon Yuugi Jigyo Kyoudou Kumiai Rengoukai of pachinko parlors) established the helpline in 2006. It is funded by membership dues, donations, and the *Pachinko-pachisuro Sangyo 21seikikai* (Pachinko-Pachislot Industry the 21st Century Society) – associations relating to the pachinko or pachislot industry.[41] Daikoku Denki Co., Ltd. reports that the RSN anti-addiction campaign poster is put up on walls in restrooms at pachinko parlors, and that campaign handouts and pocket tissues are distributed to raise awareness and introduce RSN.[42]

The RSN reports receiving more than 1,000 calls a year, with 80% new consultations, and 60% of the calls coming from players themselves. Callers are referred to Gamblers Anonymous, Gam-Anon, or other support resources (e.g., legal or financial advice).

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[40] Takiguchi, N., & Rosenthal, R.J. (2011). Problem gambling in Japan: A social perspective. *Electronic Journal of Contemporary Japanese Studies, 2011*(1).

[41] Recover Support Network. Retrieved from: http://rsn-sakura.jp/english.html

[42] Pachinko Industry Web Reference. Retrieved from: http://pachinko-shiryoshitsu.jp/en/effort-community/dependence/

2.6 Markets for Comparison

Japan is in a fortuitous position for policy planning, as there are many jurisdictions that have implemented IR expansion that can serve as case studies for appropriate policies. In several cases, these policies have been subjected to scientific research in the years since implementation, providing robust guidelines. As part of this study, we surveyed several jurisdictions for comparison, and identified Singapore and the Republic of Korea (South Korea) as the most useful for comparison. Broadly, these comparables represent diverse Asian economies with relatively recent IR developments, and have prioritized similar goals in terms of foreign tourism and minimization of social harm. We emphasize that our selection of Singapore and South Korea was not due to a belief that those models were most appropriate for Japan to adopt unilaterally, but rather because they provide useful examples to help illustrate potential outcomes from different policy decisions.

In conducting these kinds of analyses, we note that many policy decisions are inter-linked – for example, tax rates must complement the intended market structure, as a highly competitive marketplace with high taxes will not lead to significant capital investments under normal circumstances.[43] From tax rates, to capital investment, to social policies, to local and foreign demand, each jurisdiction has its own idiosyncrasies. We have taken the approach of identifying key overall lessons learned from the jurisdictions, rather than provide item-by-item comparisons that are largely meaningless given the interconnected nature of policy goals. Just as other gaming jurisdictions have required their own models, Japan will require a uniquely Japanese model. For each of the comparable projects below, we examine both national and local impacts.

2.6.1 Singapore

2.6.1.1 Overview of market

Singapore has an advanced urban economy, with a population of over 5.5 million residents. Casino gaming has been legal in Singapore since the Casino Control Act was passed in 2006, with the first IR opening in early 2010. The market is a two-casino duopoly, with each casino serving as part of significantly broader IR development. In addition to these IRs, Singapore allows regulated electronic gaming machines in private clubs[44], horse racing, lottery games (including Toto), betting on a limited number of sport events, and limited amounts of remote gambling.

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[43] Lee, Y., & Gordon, R. H. (2005). Tax structure and economic growth. *Journal of Public Economics*, *89*(5), 1027-1043.

[44] There are currently an estimated 82 private clubs with just under 1,900 gaming machines. This number is expected to decrease over the next two years (into 2019), as a July 2017 press release from Singapore Ministry of Home Affairs announced a reduction in gaming machine quotas.

Singapore boasts a National Council on Problem Gambling (NCPG) that has a mandate to provide advice and feedback to the Ministry of Social and Family Development on social concerns related to problems arising from gambling. The NCPG also executes exclusions and visit limits to casinos, and more widely supports and implements gambling-related public education, communication, research, responsible gambling, and prevention/treatment services across the nation.

As shown in Table 6, estimated rates of gambling disorder have actually fallen in the post-IR period. This may be attributable to increased public awareness around gambling risks, improved responsible gambling behaviors/beliefs, and improvement in treatment and support resources. However, we would note that no firm causal evidence has been established to explain these positive changes.

TABLE 6: PREVALENCE OF PROBABLE PATHOLOGICAL AND PROBLEM GAMBLING [45]

	2005	2008	2011	2014
Probable Pathological Gambling	2.1%	1.2%	1.4%	0.2%
At-Risk/Potential Problem	2.0%	1.7%	1.2%	0.5%
Total (Past 12 Months)	4.1%	2.9%	2.6%	0.7%

Note: Prevalence figures are calculated using questions from the Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV) developed by the American Psychiatric Association (APA)

Ministry of Home Affairs. (20, July 2017). Changes to regulation of fruit machines [Press Release]. Retrieved from https://www.mha.gov.sg/Newsroom/press-releases/Pages/Changes-to-Regulation-of-Fruit-Machines.aspx

Yi, S.S. (20 July, 2017). Tighter regulations for clubs with jackpot machines to guard against problem gambling. *The Straits Times.* Retrieved from http://www.straitstimes.com/singapore/tighter-regulations-for-clubs-with-jackpot-machines-to-guard-against-problem-gambling

[45] Ministry of Community Development, Youth and Sport. Report of Survey on Participation in Gambling Activities among Singapore Residents, 2014. Retrieved from https://www.ncpg.org.sg/en/pdf/2014%20NCPG%20Gambling%20Participation%20Survey_FINAL.pdf

Ministry of Community Development, Youth and Sport. Report of Survey on Participation in Gambling Activities among Singapore Residents, 2008. Retrieved from: https://www.ncpg.org.sg/en/pdf/publications-survey-gambling08.pdf

The are several treatment resources available in Singapore, creating a seemingly robust safety net. Core services are primarily delivered by the NCPG, but private/non-profit organizations also support various wellness initiatives. Available resources across Singapore include (but are not limited to):[46]

- A national problem gambling helpline
- A national problem gambling "WebChat" resource
- Exclusion/visit limit services
- Free counseling services and group therapy for gamblers and their families
- Social assistance programs
- Crisis/debt management counseling/advisory services
- Integrated-addiction treatment
- Self-directed programs

2.6.1.2 Economic model

Singapore has adopted a duopoly tourist-oriented integrated-resort model, with limited forms of other gambling available in the city-nation. Singapore's casino model was selected to maximize the foreign tourism impacts of the gaming industry, while limiting potential social impacts – making it appealing to Japanese observers given the similarities of these goals.[47] To these ends, this policy approach: a) limits development to two casino licenses; b) requires multi-billion SGD capital investment in a destination IR model; and c) selects moderate tax rates to enable higher capital investment and investment in non-gaming amenities. Singapore's variable tax rate also recognizes international competition in the VIP gaming market, as those desirable customers are subject to a lower tax rate than the mass gaming market.

We can summarize the following key economic variables in Singapore:

- **Casino model:** Integrated-resort
- **Number of casino-gaming licenses:** Two
- **Other regulated gaming:** Private club EGMs, lottery, Toto, horseracing, limited betting, limited remote gambling.

[46] More information about Singapore's programs is available from the National Council on Problem Gambling: https://www.ncpg.org.sg/en/Pages/home.aspx

[47] The Casino Control(Amendment) Bill (2012). Retrieved from: http://www.cra.gov.sg/cra/the-casino-control-amendment-bill.aspx

- **Casino GGR tax rates:** Premium players (deposit account with 100,000 SGD (~¥8.12 million) or more) - 5%; mass players – 15%.[48] Singaporean casinos also pay a 7% goods and services tax (GST) on gross gaming revenue.[49]
- **Demand constraints:** Entry levies on Singapore citizens and permanent residents - $100 SGD (~¥8,120) for every consecutive period of 24 hours or $2,000 SGD (~¥162,330) for an annual membership.

2.6.1.3 Responsible Gambling (RG) and Problem Gambling (PG) Regulations

Singapore enacted several policies based either in legislation or in regulation to address social harms from gambling. In addition to generally accepted best practices, including age restrictions, self-exclusion programs, casino employee responsible gambling training, and resources to connect players with gambling disorder treatment programs, Singapore has adopted several more aggressive requirements. We note that some initiatives have limited or no evidence of effectiveness.[50]

Enhanced Singapore responsible gambling policies include:

- Entry levies: Casino operators may not allow any person who is a citizen or permanent resident of Singapore to enter or remain on the casino premises unless the person has paid an entry levy of:
    - $100 SGD (~¥8,120) for every consecutive period of 24 hours; or
    - $2,000 SGD (~¥162,330) for a valid annual membership of the casino.

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[48] Inland Revenue Authority of Singapore. Retrieved from: https://www.iras.gov.sg/irashome/Other-Taxes/Casino-tax/Computing-Casino-Tax--Gross-Gaming-Revenue--Casino-Tax-Rates-/

[49] Gross gaming revenue is calculated net of GST.

[50] Here we provide a summary of initiatives generally without direct comment, but we note that available evidence may not exist to support given policy's effectiveness in reducing social costs or otherwise improving social outcomes. Our recommendations (outlined in Section 5) derive primarily from peer-reviewed academic studies and widely adopted best practices. With tactics that are not validated or limited trial, there may be potential for unintended consequences, which warrants cautious implementation processes with complementary and rigorous research/evaluation plans.

For example of potential maleficence, in the second reading of Singapore's Casino Control Bill 2006, DPM and Minister for Home Affairs, Wong Kan Seng, described that an entry fee for the casino would, "…discourage locals from developing into problem gamblers," and "…will also underscore the message that gambling is an expense and not a means to get rich." While that may be the case, it may also be the case that the fee would serve as an additional financial burden, or incentivize local players to wager more on the occasions they do gamble.

- Third-party exclusion: Separate from self-exclusion programs, various pathways exist for third-parties to ban players from casinos, including processes initiated by family members or the legal system.
- Forfeiture of winnings by excluded players: Banned players are not eligible to retain winnings, if they manage to evade security and play while subject to a ban.
- Approved responsible gambling plans: Operators are required to submit responsible gambling programs for approval to regulators. Among the requirements of the submission are inclusion of:[51]
    - Goals, targets, performance indicators, and timelines of the responsible gambling program;
    - Procedures and guidelines to identify casino patrons with suspected or known gambling-related problems;
    - Procedures and guidelines regarding availability of information, treatment, counselling services or intervention services for casino patrons regarding problem gambling, responsible gambling, and related issues;
    - Details of a system to enable casino patrons to set time and money limits on gambling;
    - Details of a system to enable casino patrons to set monthly visit limits;
    - Details of jurisdictions, casinos or responsible gambling bodies selected for comparison to improve the quality and standard of the responsible gambling program;
- Annual responsible gambling reviews: Operators are required to have an outside entity review their responsible gambling measures, and are required to produce a related report to the regulatory authority.
- Advertising bans: Operators are not allowed to advertise their casino, with limited exceptions. The more noteworthy exceptions are:[52]
    - Use of any brand name, trademark or service mark of a casino for the purpose of promoting or identifying any goods or services unconnected with the casino.
    - Printed publications whose principal market is not Singapore.
    - Advertising on the website of an operator if it does not have particular appeal to Singapore residents.
    - Other limited forms of advertising aimed at tourists.

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[51] Casino Control Act (Chapter 33A) (2007). Retrieved from: http://statutes.agc.gov.sg/aol/download/0/0/pdf/binaryFile/pdfFile.pdf?CompId:b1d5a05e-5a7a-4958-9261-0579b598bc38

[52] In addition to other minor exceptions, the casino regulatory authority may approve additional advertising outside the restrictions provided by the regulations on application by an operator.

2.6.2 South Korea

South Korea has an advanced economy and a dense population of over 50 million residents. Despite the large domestic market, the casino industry is primarily structured to serve the foreign market, with only one (geographically isolated) casino, Kangwon Land, allowed to permit domestic residents, and 16 properties - eight of which are located on the mainland – permitted to take wagers from foreigners-only. In 2015, Kangwon Land generated 1.56 trillion won (~¥153.3 billion) in gross gaming yield, while the foreigner casinos generated a total of 1.24 trillion won (~¥121.9 billion). In addition to the casino-gaming market, South Korea has regulated lottery games (including Toto), limited betting, land-based race wagering, and bullfighting.

South Korea's National Gaming Control Commission (NGCC) was established in 2007, and in addition to typical commission responsibilities, it has the mandate to provide problem gambling prevention and treatment programs, and conduct research to enhance gambling policy. The NGCC has provided prevention and treatment services through the Addiction Prevention & Treatment Center since 2007, and in 2012, the Gambling Control Commission Act was amended, establishing a new industry tax to support addiction prevention and treatment. This led to the creation of the Korea Center on Gambling Problems (KCGP) in 2013. The KCGP has the following stated mandate:

- Program development and delivery, including counseling, education, and promotion of prevention and treatment;
- Research and evaluation;
- Developing prevention and treatment staff;
- Collaboration with medical institutions; and
- International exchange and cooperation regarding prevention and treatment.

As shown in Table 7, rates of gambling received less consistent measurement than in Singapore, but appear to be similarly trending towards improved social outcomes. It is unclear what has enabled the population to continue to adapt despite ongoing gaming expansion, but improved awareness, prevention, and treatment programs likely contributed to the change.

TABLE 7: PREVALENCE OF PROBABLE PATHOLOGICAL AND PROBLEM GAMBLING[53]

	1984	2006/2007	2011
Probable Pathological Gambling	1.02%	0.8%	0.33%
At-Risk/Potential Problem	-	3.0%	0.70%
Total	-	3.8% (lifetime)	1.03% (past year)

Note: Data not directly comparable across years - 1984 data based on lifetime prevalence estimated based on Diagnostic and Statistical Manual of Mental Disorders, third edition (DSM-III) criteria developed by the American Psychiatric Association (APA); 2006/2007 data based on lifetime prevalence estimated based on DSM-IV criteria; 2011 data based on past year prevalence estimated based on the Problem Gambling Severity Index, using 3+ (At-Risk) and 8+ (Problem Gambling) cutoff criteria.

2.6.2.1 Economic model

South Korea has a unique economic model for its casino-gaming industry, as the policy decisions around license limitation and taxation have effectively created three different markets:

(1) The domestic mainland market is effectively a monopoly, with Kangwon Land the only authorized casino to serve South Korea residents. This property is also somewhat isolated geographically, as it is built in a former coal-mining region, creating further departures from equilibrium level consumption.
(2) The Mainland Korea foreigner-only casinos are best described as a regulated oligopoly, where there are a limited number of firms serving the market, with constraints on future licenses. This

[53] Lee, C. K., Kwak, Y. S., Yamamoto, J., Rhee, H., Kim, Y. S., Han, J. H., ... & Lee, Y. H. (1990). Psychiatric epidemiology in Korea: Part I: Gender and age differences in Seoul. *The Journal of Nervous and Mental Disease*, *178*(4), 242-246.

Park, S., Cho, M. J., Jeon, H. J., Lee, H. W., Bae, J. N., Park, J. I., ... & Hong, J. P. (2010). Prevalence, clinical correlations, comorbidities, and suicidal tendencies in pathological Korean gamblers: results from the Korean Epidemiologic Catchment Area Study. *Social Psychiatry and Psychiatric Epidemiology*, *45*(6), 621-629.

Williams, R. J., Lee, C. K., & Back, K. J. (2013). The prevalence and nature of gambling and problem gambling in South Korea. *Social Psychiatry and Psychiatric Epidemiology*, *48*(5), 821-834.

creates adequate market power to warrant increased capital investment, but evidence suggests that there are strong limitations to investment in this model by private firms.[54]

(3) Jeju Special Self-Governing Province is a more loosely regulated market than the mainland, due in part to the higher self-governing authority held by the island-province. Jeju has eight smaller casinos, and has a policy that will allow for construction of more properties by foreign firms if accompanied by a US$500 million (~¥55.1 billion) investment. Facilities found on the island are smaller, which reflects higher competition, the threat of more competition, and the decreased convenience of access by potential target markets.

In addition to the unique regulatory structure, tax structure in South Korean casinos is similarly differentiated. Kangwon Land donates 25% of its pre-tax profits to an abandoned mine region development fund, and 10% of casino sales are paid to government through the Tourism Promotion and Development Fund.[55] Foreign-only casinos in Jeju and the mainland pay the 10% Tourism Promotion and Development Fund.

The national tax code requires casinos to pay collection of 4% individual consumption taxes, and progressive corporate taxes ranging from 10% for companies that earn up to KRW 200 million per year, 20% for companies with earnings between KRW 200 million (~¥19.7 million) and KRW 20 billion (~¥1.97 billion), and 22% for companies with earnings of more than KRW 20 billion. We note that progressive corporate taxes provide poor economic incentives in the IR industry, as they discourage increased investment in capital projects that may elevate total profits but lower relative profitability.

2.6.2.2 Responsible Gambling (RG)/Problem Gambling (PG) Regulations

South Korea has adopted many best practice programs related to treatment, employee training, helpline services, and other commonly observed interventions in well-developed casino-gaming markets. In terms of more novel practices, South Korea is heavily invested in a few solutions that are still establishing potential for effectiveness. These are:

- The "CAP" system: South Korea has put in place a "CAP" system with a purpose of restricting the share of gross domestic product produced by the gaming industry. This CAP is applied to each industry and firms therein, and includes potential sanctions/remedies if not met. The NGCC has identified the stated goal of the CAP as to minimize the "social side effects" and to lead the "sound enhancement" of the gambling industry. Built into this policy is the implicit assumption

[54] Ribet, S. (18 February 2016). What future for Korean IRs? Retrieved from: http://www.asgam.com/in-focus/item/2744-what-future-for-korean-irs.html

[55] Kangwon Land Sustainability Report 2014 (2015). Retrieved from: http://kangwonland.high1.com/fileManager/link-download.high1?file=KL_2014SR_eng_web.pdf

that social costs from gaming revenue are linear[56] where the source of the revenue generated cannot change to have fewer negative social outcomes. We do not share this opinion.

- The electronic player card system: As part of its first National Master Plan for Responsible Gambling, South Korea developed and trialed a player card system that has enhanced limit setting and "gambling addiction prevention" tools. As part of 2nd National Master Plan for Responsible Gambling in February 2014, the NGCC committed to expanding on its limited pilot of a limit setting card system that reached casino (Kangwon Land), horse-racing, bike-racing, motorboat-racing, and Toto. Evidence of effectiveness is not presently available. Evidence from other jurisdictions on play card systems is unclear in terms of effectiveness, but our overall perspective is that these tools have a potential to be useful for some players but significant research and development is needed to understand effective design parameters.[57]
- The evaluation logic model: South Korea has developed a logic model consisting of 16 measures used to evaluate performance of industry. In addition, advertising has been subject to reviews against a broad set of guidelines related to both integrity and social impacts.

2.7 Summary of Market Findings

Outside of IR/casino-gaming, Japan has a well-developed market, with different forms of gambling available across the country and generally high consumption per capita compared to other jurisdictions (particularly in electronic gaming machines). By all available measures, Japanese residents have been exposed to many forms of gambling, and would benefit from a more comprehensive social safety net. Across product categories, the existing forms of suppliers available in Japan are either heavily gambling focused (pachinko/horse racing) or transactional (lottery/Toto), and differ significantly from the IR projects under consideration that combine multiple forms of business and leisure activities.

While no country that has adopted IRs provides a perfect model for Japan, evidence from Singapore and South Korea are the most illustrative to help understand potential outcomes from different policies. Both have adopted license models that restrict competition much more than jurisdictions like Macau or Las Vegas, and both have also taken an integrated planning model, combining diverse economic and social goals. While both have adopted many of the evidence-based best practices in responsible gambling, they also have legislated responsible gambling programs with limited or no evidence of effectiveness. Hence, we advise caution in uncritically adopting the "Singapore Model" or the "South Korean Model", as many

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[56] Or more precisely, "monotonic".

[57] Ladouceur, R., Blaszczynski, A., & Lalande, D. R. (2012). Pre-commitment in gambling: a review of the empirical evidence. *International Gambling Studies*, *12*(2), 215-230.

Thomas, A., Christensen, D., Deblaquiere, J., Armstrong, A., Moore, S., Carson, R., & Rintoul, A. (2016). *Review of electronic gaming machine pre-commitment features: Limit setting*. Australian Institute of Family Studies (AIFS).

subtle aspects of those models may cause increased harm, be economically inefficient, or may reflect different policy goals than those important to Japan.

3 Economic Impact Analysis

This section of the report describes elements necessary to understand economic impacts of IR expansion. This includes an overview of economic impact models, general impacts of IRs, Japan's economic competitiveness, and a rigorous review of Oxford Economics' projections on the Japanese IR market. We view this section as complementary to both the rest of this report and to Oxford Economics' work.[58]

In all analyses, we consider Japan's unique economic structure and the novel characteristics of the IR gaming industry. Much of our review derives from expertise gained through study and authorship of gaming and tourism research, and more subtle experience in economic impact modeling. In the next subsections, we provide an explanation of economic impact studies and summarize our considerations for Japan to maximize the direct, indirect, and induced impacts from IR expansion.

3.1 Economic Considerations in IR Models

IRs require several business and market conditions to be successful. Given the considerable time and resource investments that operators and policymakers must make to begin the development process, it is important that stakeholders understand necessary conditions required to build a sustainable industry. In this section, we discuss those requirements under 'Firm Structure', 'Market Structure', and 'Tax Structure' sub-headings.

3.1.1 Firm structure

Integrated resorts are large-scale leisure and recreation developments that include casino gaming as a core component of the entertainment offering. Models for IRs differ in terms of the amenities provided, but generally will include a casino, hotel, and restaurant mix, with other potential additions, such as convention space, showrooms, nightclubs, golf courses, spas, shopping malls, and/or amusement parks. For an effective model in terms of maintaining firm profitability while maximizing economic welfare, there are three necessary conditions: 1) An adequate mix of gaming and non-gaming amenities, 2) A high level of management expertise, and 3) Access to sufficient development capital.

A casino business model that reasonably complements and supports the wider resort must accompany the mix of IR amenities. This includes adequate numbers of table games and EGMs for the catchment area. As described by MacDonald and Professor William Eadington, "The casino component, while physically small, must still act as the primary economic engine which drives overall returns and facilitates investment in other facilities and amenities."[59] This impact is two-fold, the casino is a complementary good which creates a stronger value proposition for consumers, enabling stronger overall returns; and, the

[58] Oxford Economics (2015). Beyond 2020: Tourism Growth and the Economic Impact of Integrated Resorts in Japan.

[59] MacDonald, A., & Eadington, W. A. (2008). The case for integrated resorts. *Inside Asian Gambling, Nov*, 37-43.

returns generated by the casino can offset lower than investor required returns with amenities that may be desired by the community overall.

While the business model described above is generally sufficient to sustain operations and to optimize public and private returns, an experienced management team with adequate access to financial capital is also needed. Given that integrated resorts are typically built in markets where there is a constraint on competition through gaming license restrictions, firms with inadequate expertise or financing may still be able to maintain solvency through their market power – that is, poorer run companies can still have some success due to an absence of competition. To ensure that government objectives are met, firms should be scrutinized to ensure they have adequate experience and expertise in building and operating destination IRs, and that they have adequate access to capital to finance development through a range of economic scenarios.

IRs are among the most expensive buildings in the world, with complex management needs – multiple diverse businesses co-located often under a single leadership and governance structure. This warrants treatment of these developments as unique entities with idiosyncratic economic models.

3.1.2 Market structure

Adopting policies to develop economically efficient market structure is among the most important tasks for IR policymakers. At its most basic level, market structure refers to the core characteristics of a gaming market, including the number of firms, consumer demand, the ease of entry/exit from the market, and the nature of firm competition. Governments have an important ability to impact IR market structure (and therefore business and social outcomes) through several policies, including:

- The number of IR licenses
- The location of IR licenses
- The tax code
- The operator procurement and licensure process
- Constraints on available markets (e.g., domestic vs foreign)
- Constraints on product/service provision (e.g., anti-money laundering or responsible gaming regulations)

In addition, factors outside of Japan's direct government control will also impact market structure. While not all market characteristics can be changed directly, they must still be weighed as policy decisions are enacted. These factors include:

- The availability of IRs in foreign jurisdictions
- Complementary and substitute industries
- Foreign and domestic demand conditions
- Foreign and domestic infrastructure and institutions (e.g., transportation infrastructure)

To better describe the current state of the Japanese market, we adapt a model proposed by Chao-Yang University of Technology Professors Hung, Yang, and Lee, based on management Professor Michael Porter's *Diamond Model* of national competitiveness. While some factors may be more important than others, the model outlines key considerations for the success of IR in a country and serves as broad checklist for evaluation.

The model and our comments are provided in Table 8. We review each condition, implications for the Japanese market, and highlight policy maker insights where relevant. Overall, we find that general market conditions for Japan are quite strong. With a supportive legal and regulatory framework, Japan should be able to take advantage of natural strengths in its economy, geography, and regional demographics.

TABLE 8: NATIONAL COMPETITIVE ADVANTAGES FOR IRS IN JAPAN[60]

Context for Competition (Hung et al.)	Comments (IGI authors)
Geographical location	Both Osaka and Tokyo have substantial air service capacity, sea ports, and dense local population catchment areas. A substantial foreign population, including much of East and North China, is within ~4-hour flight or less.
Tourism industry clustering effect	The World Economic Forum's Travel & Tourism Competitiveness Report ranks Japan #4 in global rankings, and IRs are planned for major tourist markets.[61]
National infrastructure	Japan ranks 11th in the World Bank's Infrastructure section of its Logistics Performance Indicator, and 3rd in Asia, closely following Singapore and Hong Kong.[62]
Government-related policy regulation (monitoring and governance policy)	Government policies surrounding social issues (including public health and anti-crime measures) are yet to be determined. Evidence to date suggests that future policies will be robust, but this is a critical

[60] Adapted from Hung, J.Y., Yang, W.G. & Lee, S.S. (2010). Integrated resort industry development- experience of Macau and Singapore. *Chaoyang Business and Management Review, 9*(2), 1–22.

[61] Crotti, R., & Misrahi, T. (2017). The travel & tourism competitiveness index 2017. In *World Economic Forum*. Retrieved from http://www3.weforum.org/docs/ WEF_TTCR_2017_web_0401.pdf

[62] The World Bank (2016). Logistics Performance Indicator. Retrieved from http://lpi.worldbank.org/international/global

	parameter for future consideration and impact.[63]
Professional operation, management ability and operating mode	Evidence to date suggests that government procurement process will attract international IRs investment with strong IRs operation and management experience.[64]
National differential competitive advantage (leverage effect)	Some spillover effects from the 2020 Olympic Games may carry through tourism related impacts, but potential sources of competitive advantages remain unclear due to uncertainty over developments.
Easy visa approval	Japan allows short term visa exemption with 60+ countries including South Korea, USA, and the European Union. Mainland China travelers generally require a visa, though this is not necessarily a competitive disadvantage relative to other markets.
Clear and attractive IRs theme	Brands that will operate IRs appear likely to be well established international gaming brands.
Factor Conditions	
Nation has adequate workforce	Japan ranks 4th worldwide in the World Economic Forum's Human Capital Index (2016).[65] Low unemployment rates, demographic trends, and related immigration policies are a concern.
Sustainable IRs development strategy	National strategy that integrates multiple perspectives is under development. This is an important area for policy maker consideration.
Diverse and abundant tourism	The World Economic Forum's Travel & Tourism Competitiveness Report ranks Japan #4 in global rankings.[66]

[63] Johnston, E. (2017, April 4). Task force looks into minimizing social cost of casinos. *The Japan Times.* Retrieved from http://www.japantimes.co.jp/news/2017/04/04/national/task-force-looks-minimizing-social-cost-casinos/

[64] Ibid.

[65] The Human Capital Report (2016). World Economic Forum. Retrieved from: http://www3.weforum.org/docs/HCR2016_Main_Report.pdf

[66] Crotti, R., & Misrahi, T. (20017). The travel & tourism competitiveness index 2017. In *World Economic Forum*. Retrieved from http://www3.weforum.org/docs/ WEF_TTCR_2017_web_0401.pdf

resources	
Adequate funding	Few projects worldwide can match capital needs of potential projects for comparison. Barring restrictive government policies or high tax rates, adequate funding appears highly likely with listing likely on mix of foreign and domestic exchanges.
Increase national competitiveness through continuous dynamic thinking	Unclear at this time, though there is little reason to think there would be a competitive disadvantage in this area.
IRs management talent and sound associated organizations	Evidence to date suggests that government procurement processes will attract international IRs investment with strong IRs operation and management experience.[67]
Demand Conditions	
Basic citizen quality	High cultured and educated population, ranks 4th worldwide in the World Economic Forum's Human Capital Index (2016).[68]
Citizen attitude towards and perceptions of the social value	Citizen support is low.[69] Research evidence from Macau, Korea, and USA suggests that positive attitudes generally reduce after opening, unless residents benefit directly as players or economic beneficiaries.[70]

[67] Ibid.

[68] The Human Capital Report (2016). World Economic Forum. Retrieved from: http://www3.weforum.org/docs/HCR2016_Main_Report.pdf

[69] Du, L. (2017, August 16). Casino Giants Look for Clarity as Japan Begins Public Debate. *Bloomberg*. https://www.bloomberg.com/news/articles/2017-08-16/casino-giants-look-for-clarity-in-japan-as-public-debate-begins

[70] Fong, D. K., Fong, H. N., & Li, S. Z. (2011). The social cost of gambling in Macao: Before and after the liberalisation of the gaming industry. *International Gambling Studies*, *11*(01), 43-56.

Hsu, C. H. (2000). Residents' support for legalized gaming and perceived impacts of riverboat casinos: Changes in five years. *Journal of Travel Research*, *38*(4), 390-395.

Lee, C. K., & Back, K. J. (2003). Pre-and post-casino impact of residents' perception. *Annals of Tourism Research*, *30*(4), 868-885.

of IRs development	
Citizen attitude toward risk	Japan is already a well-developed gambling market.
Citizen innovation and creativity	Japan ranks 7th in Bloomberg's 2017 Innovation Index.[71]
Service industry is the main contributor to national GDP	Japan's service sector comprises 70% of GDP.
Stable political and economic environment	Japan is generally seen as a stable country in which to do business, but there are meaningful risks, particularly in the macroeconomy. Budget deficits and risks from low inflation remain concerns for ongoing stability.[72] For example, conventional monetary policy tactics to stimulate spending may not be possible at a zero-lower bound of nominal interest rates.
Stable and attractive commodity prices	Prices are highly stable in Japan compared to other jurisdictions. The GDP deflator has not risen above 2% annually since 1991.[73]
Related and Supporting Industries	
Up-to-date information equipment and technology	Japan ranks 19th in technological readiness among 138 countries in the

Vong, F. (2009). Changes in residents' gambling attitudes and perceived impacts at the fifth anniversary of Macao's gaming deregulation. *Journal of Travel Research*, *47*(3), 388-397.

[71] Jamrisko, M., and Lu, W. (2017, January 16). These Are the World's Most Innovative Economies. *Bloomberg Markets.* Retrieved from https://www.bloomberg.com/news/articles/2017-01-17/sweden-gains-south-korea-reigns-as-world-s-most-innovative-economies

[72] Schwab, K. (2017) The Global Competitiveness Report 2016-2017. World Economic Forum. Retrieved from http://www3.weforum.org/docs/GCR2016-2017/05FullReport/TheGlobalCompetitivenessReport2016-2017_FINAL.pdf

[73] The World Bank (2017). Inflation, GDP deflator (annual %). Retrieved from http://data.worldbank.org/indicator/NY.GDP.DEFL.KD.ZG?locations=JP

	World Economic Forum's Global Competitiveness Report.[74]
Competitive IRs related support industries	IRs are planned for locations in or near major metropolitan areas.
Talent cultivation and development projects	Japan ranks 17th in the United Nations Human Development Index, placing it in the "Very High Human Development" category.[75]
Sound transport facilities	Both Osaka and Tokyo have substantial air service capacity, sea ports, and public transport services.
Relevant support for industry and enterprise image and brand value	Unclear, but it appears there is a strong interest for alignment with wider tourism industry.
Relevant support for industry diversification and options on offer	Unclear, but it appears there is a strong interest for non-gaming amenities, and programs could support these interests in the highly populated markets under consideration.

3.1.3 Tax structure

The choice of tax rate and tax structure for Japan's IRs will have many impacts on the industry's economy. There are several items that will be directly or indirectly affected by those decisions, including:

- Direct gaming tax revenue
- Capital investment by gaming firms
- Direct employment by gaming firms[76]

[74] Schwab, K. (2017) The Global Competitiveness Report 2016-2017. *World Economic Forum*. Retrieved from http://www3.weforum.org/docs/GCR2016-2017/05FullReport/TheGlobalCompetitivenessReport2016-2017_FINAL.pdf

[75] United Nations Development Program (2016). Human Development Report. Retrieved from http://hdr.undp.org/sites/default/files/2016_human_development_report.pdf

[76] GGR tax rates have been linked to changes in casino employment. It has been estimated that a 1% increase in direct gross gaming tax revenue is related to a 0.6% decrease in direct casino employment. Source: Philander, K. S., Bernhard, B. J., Wimmer, B. S., Singh, A. K., & Eadington, W. R. (2015). US casino revenue taxes and short-run labor outcomes. *Journal of Policy Modeling, 37*(1), 35-46.

- Indirect economic impacts of gaming firms
- Induced economic impacts of gaming firms
- Catalytic economic impacts of gaming firms (e.g., tourism)

Clearly the tax structure will be a core component driving the success of any IR industry. While tax structures need to be adapted for the local economic and social conditions, a few general principles for gaming tax rates are provided in a study by one of this report's authors, which can assist in decision making:[77]

- Products whose demand is more sensitive to price changes should be taxed less and products whose demand is less sensitive should be taxed more. E.g., Singapore's tiered VIP vs Mass tax rate model reflects this principle, as VIP play is subject to more foreign competition and therefore taxed at a lesser rate.
- Taxes on gambling activities should be lower if they have complementary effects on other industries – that is, if they complement, enhance and help grow nearby businesses – and higher if they have substitutionary effects (i.e., cannibalization). This is a strong argument for lower IR taxes relative to other gaming products, as IRs increase demand for many tourism and hospitality products/services.
- Lump-sum taxes (e.g., license fees) are generally preferable to percentage/sales (ad valorem) taxes, as they lead to fewer distortions in ideal supplier/consumer behavior in the economy.
    - Percentage of sales taxes can be efficient if they offset external social impacts (negative externalities) in the local economy. There can also be some room for such taxes, if supply is already constrained creating "distorted" supply (e.g., limited number of licenses).
- Tax rates on percentage of sales/revenue should generally be fixed or regressive (declining at higher levels of revenue). Progressive tax rates discourage growth of economic activity, and reduce incentives for firms to service lower margin consumers.
- Tax rates cannot be assessed in a domestic vacuum, and must reflect competitive pressures from foreign jurisdictions.

Tax policy is a complex endeavor in the simplest of industries, and the complexities that exist in the IR-gaming market creates even more challenges. A careful study of the proposed tax code and IR market is necessary to ensure that the proper incentives are in place and outcomes are reached. Few policy challenges are as important as creating the correct tax code, and Japan's policymakers should devote careful study to this topic in conversation with industry and outside experts.

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[77] Philander, K. S. (2013). A normative analysis of gambling tax policy. *UNLV Gaming Research & Review Journal*, *17*(2), 17-26.

3.1.3.1 Other taxes

Along with the most widely used GGR based taxes (and pre-existing general economic taxes such as sales or income taxes), other mechanisms exist to tax the gaming and/or tourism industry. These tools all have different effects on incentives, impacts, and fairness, and caution should be used in understanding their likely effects. Below, we summarize taxes observed in other jurisdictions.

Other gaming taxes

While the GGR tax is the most applied gaming industry tax, many jurisdictions often levy additional fees on the industry. These may include one-time application fees, annual license fees, or periodic fees for individual gaming devices. Often these fees are levied to offset costs of regulation, which allows for the GGR revenue to solely be earmarked for other government programs, such as problem gambling treatment. License fees can create good incentives for gaming companies, since they are one-time or annual fees paid that do not discourage companies from serving the less profitable (e.g., casual) gamblers.

Accommodation taxes

Many jurisdictions impose an accommodation tax on the tourism industry, which requires a fee to be paid for each night spent at a lodging location. These taxes appear to have less of negative impact on travel than a general price increase (at least in the short-run), due to an absence of transparency. For this reason, many resorts not subject to these fees often charge "resort fees" that are typically not revealed in the initial quoted price. These taxes create fairness and integrity issues.

Live entertainment taxes

While not a tax widely used by jurisdictions, the State of Nevada imposes a sales tax on live entertainment performances (e.g., concerts, acrobatics, or sporting events). The tax is levied as either 10% or 5% of ticket revenue, based upon the size of the performing venue.

Departure/Passenger tax

Visitor taxes are often imposed by governments, and are collected by airlines at the time of ticket purchase. These are typically flat fees paid for arriving to, or departing from, the country. These taxes are more useful than accommodation taxes if the objective of the tax is to only collect revenue from international tourists, rather than domestic tourists. For example, the U.S. has a $13.40 international departure tax for more international travelers.

Airport taxi tax

Many local governments impose an extra fee on taxi or ride-share trips that arrive or depart from an international airport. Again, this is a tax that is useful for targeting foreign travelers, who are more likely to use taxi transport than local residents.

3.2 Economic Impacts of Japan IRs

The United States-Japan Business Council and the Japan-United States Business Council contracted Oxford Economics to assess the economic impacts and strategic benefits of two representative IRs (one in

the Greater Tokyo area and one in the Osaka area). In addition, Oxford Economics engaged in added scenario analyses to better understand likely impacts of foreign visitors. In this section, we provide a review of the economic impact model built by Oxford Economics.[78]

To start, we observe that economic impacts studies are challenging projects to develop, particularly when they are intended to measure future developments. In addition to creating a model that adequately approximates the flow of goods and services through a future economy, economic impact analysts must make assumptions or estimates about decisions by policymakers, industry, and consumers – most of whom have not yet made those decisions themselves. For these reasons, we note that our review is not intended to holistically validate or refute the findings or decisions made by Oxford Economics.

In the comments that follow, we provide further context for readers of their study. We also provide another layer of due diligence by analyzing this study more deeply than typical readers can, by reviewing confidential documentation that is not publicly available, and through direct communication with Oxford Economics analysts to clarify other uncertainties. We acknowledge and thank Oxford Economics for their support and cooperation throughout this process.

3.3 What is Economic Impact?

Economic impact is a measure of the spending and employment associated with a business, a sector of the economy, a specific project (such as the construction of a new facility), or a change in government policy or regulation. Economic impact can be measured in many ways. Two of the most popular ways to assess economic impact are in terms of the monetary value of output produced or in terms of person years (also known as full-time equivalents - FTEs) of employment generated. These figures attempt to assess the gross level of activity or expenditure. As such, they are not "net" measures that weigh benefits against costs, but nevertheless these measures can be useful in developing an appreciation of businesses, projects, investments and economic sectors.

Typically, economic impact studies estimate three types of impacts: direct, indirect and induced economic impacts.

- Direct economic impact is employment or economic output that can be attributed to the development, operation, and management of the IRs. Typically, construction related impacts are reported separately to operating impacts.
- Indirect economic impact is employment, value-added or economic output created in industries that supply goods and services to the IRs. For example, this may be a local trucking company that transports supplies to the resort.

[78] Oxford Economics (2015). Beyond 2020: Tourism Growth and the Economic Impact of Integrated Resorts in Japan.

- Induced economic impact is employment, value-added or economic output generated because of expenditures by individuals employed directly or indirectly by the IR. For example, IR employees may spend their wages within Tokyo by dining at a local restaurant.
- Total economic impact is the sum of direct, indirect and induced effects. The multiplier (indirect and induced) economic impacts represent the maximum potential stimulus to the economy resulting from activity gaming related businesses.

3.4 Understanding Economic Multipliers

Measurement of indirect and induced economic activity is difficult. While it might be possible to conduct a survey of such upstream (indirect) and downstream (induced) firms, the survey would need to reach thousands of businesses. In fact, for induced employment, the entire regional economy would need to be measured. In addition to the time and financial resources needed to conduct such surveys, the quality of responses relative to actual impacts would be poor. And with projects that have not yet been developed, this may be not possible altogether.

As an alternative to costly and inaccurate surveys, indirect and induced effects are typically measured by economic multipliers. Typically, multipliers used in economic impact methodologies are derived from general equilibrium analysis of the local economy using Input-Output (I-O) analysis derived from National Account statistics.

Multipliers are derived from economic/statistical/accounting models of the general economy, and they come in a variety of forms – differing greatly in definition and application. Because of these variations, care must be exercised in choosing the appropriate set of multipliers to use. The use of multiplier analysis is limited by a number of factors, including:

- The accuracy of the structure and parameters of the underlying model, such as the economic accounts data;
- The application of multipliers to industries "grouped together", e.g., consider whether indirect gaming impacts are similar to other tourism industries;
- The level of unemployment in the economy;[79]
- The assumption of constant returns to scale in production;
- The assumption that the economy's structure is static over time; and
- The assumption that there are no displacement effects.

Two economists may each exercise a high level due diligence in developing their own models, but produce much different estimates of impacts. For example, labor tends to become more productive over

[79] Multiplier impacts must be interpreted with caution since they may be misleading when the economy experiences high employment and output near industry capacity.

time, but assumptions around this change will vary projections significantly over a project with a multi-decade lifespan. For this reason, it is important to understand the analyst's assumptions, and focus more of "orders of magnitude" than precise estimates.

3.5 The Oxford Economics Model

To provide relevant information for the discussion of IRs as an economic development opportunity, the USJBC and Japan-US Business Council (JUBC) asked Oxford Economics to assess the economic impacts of two representative IRs. In this subsection, we summarize their estimates for readers unfamiliar with their work, and in the next subsection we provide a critical review of their modeling procedures.

Oxford Economics delivered two key reports. The first was an overall economic impact study that considered representative Greater Tokyo and Osaka area IRs with development costs of ¥1.0 trillion and ¥850 billion, respectively.[80] The second was a tourism scenario analysis, that considered the potential outcomes in Japan in terms of foreign visitors/spending and net incremental visitors/spending (i.e. what would impacts be over the counterfactual scenario with no IRs and no direct alternative project).[81]

Table 9 summarizes the direct, indirect, and induced impacts of representative Greater Tokyo and Osaka IRs, as modeled by Oxford Economics. Total GDP (output) impacts are projected to be ¥1.351 trillion and ¥945 billion, respectively. Ongoing employment projected at 102,800 jobs annually in Greater Tokyo and 77,600 in Osaka.[82]

[80] Oxford Economics (2015). Beyond 2020: Tourism Growth and the Economic Impact of Integrated Resorts in Japan.

[81] Oxford Economics (2016). International IR Visitors: Scenario Analysis.

[82] Jobs figures are not full-time equivalent employment figures.

TABLE 9: OXFORD ECONOMICS ANNUAL ECONOMIC IMPACT OF REPRESENTATIVE IRS (MONETARY AMOUNTS IN BILLIONS OF 2014 YEN)[83]

	Greater Tokyo	Osaka
Direct		
Output	¥1,173	¥818
Gross value added	¥772	¥510
Employment	34,507	26,147
Personal income	¥199	¥146
Indirect and induced		
Output	¥1,069	¥804
Gross value added	¥579	¥435
Employment	68,324	51,449
Personal income	¥254	¥191
Total		
Output	¥2,241	¥1,622
Gross value added	¥1,351	¥945
Employment	102,831	77,595
Personal income	¥453	¥337

Table 10 summarizes the tourism scenario analyses of Greater Tokyo and Osaka IRs by Oxford Economics. In the medium scenario, which they identify as the most likely scenario, we observe 4.1 million international visitors to the IRs. Among this 4.1 million travelers, 2.3 million are projected to be incremental traffic to Japan that would not otherwise visit Japan, with a net incremental spending impact of ¥1.6 trillion.

[83] Oxford Economics (2015). Beyond 2020: Tourism Growth and the Economic Impact of Integrated Resorts in Japan.

TABLE 10: OXFORD ECONOMICS INTERNATIONAL VISITOR SCENARIO SUMMARY[84]

	Oxford: Scenario analysis		
	Low	**Medium**	**High**
International visitors to IRs (millions)	3.3	4.1	5.3
As share of total visitors	11.3%	15.0%	19.3%
Incremental visitors (millions)	1.7	2.3	2.8
Incremental visitor days	8.0	13.2	17.7
IR visitor spending (billion ¥)	¥2,170	¥2,470	¥2,730
Net spending impact of IRs (billion ¥)	¥1,060	¥1,550	¥1,860
As share of total spending	49%	63%	68%

3.6 Review of The Oxford Economics Model

As part of this analysis, we built Table 11, outlining each factor of inquiry, and what considerations would be most material during the review process. Next, we reviewed Oxford Economics's main report, presentation documents, presentation notes, working paper notes, representative profit and loss figures, facility assumptions, and key tables. After that review, we communicated with staff at Oxford Economics, and inquired about more specific areas of focus. What follows in the *Comments* column of Table 11 is our summary that highlights what we found were the most material notes to add in response to our pre-defined considerations.

TABLE 11: SUMMARY OF ECONOMIC IMPACT MODEL EVALUATION

Factor	Consideration	Comments
Development Costs	Reflect likely spend of successful license holders; comparable to other projects given opportunity; reflects reasonable return given financial	Facility assumptions are ~¥1,045,500 in Tokyo and ¥861,000 in Osaka. Hotel rooms (3,500 and 2,500) are reasonable for well-developed metro area. Facility assumptions include arena, theatres, and all large IR amenities. Slot (5,500 and 4,500) and table (750 and 600) projections will be necessary to reach target development spend levels, but figures

[84] Oxford Economics (2016). International IR Visitors: Scenario Analysis.

Factor	Consideration	Comments
	projections; reflects planned amenities	otherwise appear reasonable. Financial projections of EBITDA exceed profitability requirements for build.
Direct Employment	Staffing levels consistent with Japanese market and other IR models; reasonable precision by job type if bottom-up forecast	Employment estimates are 34,507 and 26,147 direct jobs respectively. We note that these are not full-time equivalent employees, and reflect part-time work. These figures are higher than comparable markets, as Oxford Economics built their model capturing the entire IR footprint (e.g., leased retail) and derived their figures off of compensation levels relative to revenue (a reasonable method). Given Japan's low unemployment economy and comparative markets, we would view these projections as an employment ceiling (although if revenue figures are exceeded, employment could rise above these projections).
Meetings, Incentives, Conventions and Events (MICE)	Size of meeting, convention and events space; assumptions for resorts' business vs leisure vs local visitors	Meeting and event space is 72,000 and 51,000 m^2, this is comparable to space found in other markets' largest IRs.
Domestic Market Size: Visits	Reflects catchment area; reasonable given domestic competition; not constrained by transport infrastructure; delineated overnight and day trips;	Inferred from foreign share, domestic visitor count is estimated at 28.6 million per year for the two properties. This figure is potentially conservative given IR visitation in comparable markets. Based on a review of the Narita International Airport Corporation's management plan, there is adequate flexibility to accommodate Greater Tokyo airport transport demand.[85] Due to its reclaimed land/island location, Kansai International Airport would face only economic constraints on any capacity needs.

[85] Narita International Airport Corporation (2016). Fiscals 2016-2018 NAA Group Mid-term Management Plan. Retrieved from: http://www.naa.jp/en/2016/04/25/docs/20160425-cyuukikeieikeikaku-en.pdf

Factor	Consideration	Comments
Domestic Market Size: Gaming Spend	Reasonable assumptions given i) personal financial demographics, ii) other Japan gaming markets; iii) comparable domestic markets in foreign jurisdictions	Ratio of non-gaming revenue to gaming revenue appears in reasonable range relative to other IR markets. Aggregate split of VIP/Mass appears to be ~15% VIP table, 85% mass table/EGM. Domestic share of total visitor spending is 65.1% and 68.2%, below World Travel & Tourism Council 2016 estimates of all Japan tourism spend.[86]
Foreign Market Size: Visits	Reasonable given foreign competition; potential transport infrastructure constraints considered; catchment area well defined;	Medium scenario analysis suggests 4.1 million foreign visitors. Figure is reasonable given visitation to other IR markets and properties. Based on a review of the Narita International Airport Corporation's management plan, there's adequate flexibility to accommodate Greater Tokyo airport transport demand.[87] Due to its reclaimed land/island location, Kansai International Airport only would face economic constraints on any capacity needs. Top markets viewed as China, Indonesia, Malaysia, Philippines, South Korea, Taiwan, and Thailand.
Foreign Market Size: Gaming Spend	Reflects reasonable VIP/Mass mix; average spend levels consistent with foreign markets; reflects reasonable length of stay	Ratio of non-gaming revenue to gaming revenue appears in reasonable range relative to other IR markets. Aggregate split of VIP/Mass appears to be ~15% VIP table, 85% mass table/EGM. Spending per visitor is assumed to be ¥384,000. This is more than the average spend for high income foreign individuals' (>¥30 million household income per year) when visiting Japan, ¥211,000.[88] We would not

[86] World Travel & Tourism Council (2017). Travel & Tourism Economic Impact 2017 Japan. Retrieved from https://www.wttc.org/-/media/files/reports/economic-impact-research/countries-2017/japan2017.pdf

[87] Narita International Airport Corporation (2016). Fiscals 2016-2018 NAA Group Mid-term Management Plan. Retrieved from: http://www.naa.jp/en/2016/04/25/docs/20160425-cyuukikeieikeikaku-en.pdf

[88] Japan Tourism Agency (2016). Consumption Trend Survey for Foreigners Visiting Japan. Retrieved from http://www.mlit.go.jp/common/001173129.xls

Factor	Consideration	Comments
		view these estimates as "conservative" but given the significant impact of VIP gamblers, they may reasonable risk-neutral projections.
Gaming Tax Revenue	Reasonable implied tax rate and consistent with GGR estimate; clear if differentiated VIP/Mass rate; clear on consumption tax assumptions	Gaming tax based on 15.0% tax of GGR on mass and EGM win, 5.0% on VIP win. Aggregate split of VIP/Mass revenue is 40% VIP table, 60% mass table/EGM. Based on 21,475 gaming positions (slots and table positions), the implied win per unit is reported as ¥159,283, a conservative figure given the market opportunity and breakdown of gaming positions.
Consumption Tax	Reasonable non-gaming spend figures; consistent with tax structure	Consumption tax based on 7.8% national consumption tax share applied to value added portion of non-gaming spending
Income/Payroll Tax	Reflects likely employment levels; consistent with tax structure	Individual income taxes and social security contributions of based on average tax ratios and estimates of employee compensation.
Corporate Tax Rate	Reflects likely levels of earnings; consistent with tax structure	Corporate tax rates based on estimated effective tax rate within reasonable range of likely scenarios.
Local Taxes	Consistent with tax structure; includes any hotel night taxes; reasonable idiosyncratic tax assumptions	Local taxes include business establishment; fixed asset; city planning; accommodations tax (Tokyo); enterprise tax; inhabitants tax; and local share of consumption tax. Also included are land leases for lease of government controlled site.
Indirect/Induced Multipliers	Reflects national and/or regional economy; reflects appropriate industry(ies); reasonable approach	Output multiplier (ratio of direct to indirect/induced) is ~0.92 in Tokyo and ~1.00 in Osaka. The jobs multiplier is 1.99 and 1.98, which is conservative relative to World Travel and Tourism Council's 2015 estimates of tourism industry's impacts (2.92). These figures appear to be based on input-output models

Factor	Consideration	Comments
	to leakages from economy; any unique assumptions of procurement requirements from local firms; do induced multipliers account for low unemployment (net) or are they gross impacts	that are separate from firm profit & loss models built by Oxford Economics. If the firms are more profitable than those in the economy used to build the multipliers, then indirect/induced impacts may be lower than estimated as firms will produce more profit per unit of labor. Induced impacts may not be fully realized if part of employment is diverted from other firms.
Catalytic effect of IR investment	Any qualitative information to support mechanisms for catalytic economic impacts;	We agree with the authors claims that, "As substantial, high-profile private investments, the representative IRs would play a critical role activating master-planned redevelopments in areas surrounding the IRs." These impacts are sensitive to the final development locations and parameters, but do have potential for significant impacts beyond those typically modeled in an economic impact study.

3.7 Discussion of Findings

Overall, we found that the projections by Oxford Economics reflected a deliberate and sound methodology. At a high level, the assumptions around the developments appear to be consistent with the market opportunity. We expect that any project to move forward in Greater Tokyo or Osaka will see outcomes similar to those projected in this study, in terms of the order of magnitude of the economic impacts. Projections of direct employment impacts were relatively high compared to other significant IR projections. This was done to account for other jobs created outside of the facility itself (e.g., leased), due to higher labor to patron levels found in Japan, and due to the high levels of revenue expected in Japan's facilities.

Oxford Economics visitor modeling reflects a complex and somewhat ambiguous modeling challenge. After their initial report, Oxford Economics produced multiple scenario analyses of visitation and visitor behavior to the two sites. The *Most Likely* scenario includes 4.1 million foreign visitors, with an average spend of ¥384,000. The visitor figure is quite conservative given Japan's national competitive advantages (Table 8) and what we observe in other markets. The average spend figure is high relative to other Japanese tourist groups, but we do agree that spend levels will be higher from IR visitors, and the impact of VIP gamblers creates the potential for a significant skew to average (mean) spend levels. If the visitor

figure is somewhat conservative and the spend figure is somewhat aggressive, it may be reasonable to view the projections as roughly correct, and we are encouraged that Oxford Economics has provided multiple scenarios for readers to consider.

In terms of tax analysis, Oxford Economics addressed all the areas of inquiry that we had identified and did so in a well-reasoned way. GGR, employment, corporate, and local taxes were all estimated, with reasonable assumptions about their likely size and scope. Part of the GGR tax analysis includes high revenues, which reflects high win per units on table games and EGMs. We feel that these figures are easily attainable, but they will require a market structure (including government policies) that support ease of access to the facilities by locals and foreigners.

While every economist and every economic impact study will have some variation based on modeling decisions that are made by the principal analyst, we feel comfortable supporting Oxford Economics' report as a reasonable representation of the potential impact of IRs in Greater Tokyo and Osaka.

Final economic impacts will notably depend a few different key variables. Given the strong competitive advantages of the Japanese market, and the selection of experienced private operators that have expressed interest in building and operating an IR in Japan, the decisions made by policymakers will have the largest positive effect on the actual economic impacts observed. These decisions include setting moderate tax rates, providing access for domestic consumers, and establishing a thoughtful and transparent regulatory system.

4 Social Impact Analysis

This section outlines the key considerations for Japan related to social impacts of IR gambling expansion. In general, this analysis refers to potential negative consequences of gambling, but we emphasize that previously described economic impacts (i.e., jobs, investment, tax revenue, and tourism) have important social and health related benefits. For example, several prospective studies have found strong relationships between employment and improved mental health – and often, analysts can underestimate (or ignore) these positive impacts generated by a given job.[89]

The analysis in this section is framed around negative social impacts in order to provide better context for the recommended harm mitigation plan – as we seek to align with the stated objectives of the Japanese government.[90] These recommendations outline key steps Japanese policymakers should take to in their development of legislation and regulation to prevent, treat, and evaluate potential social costs of IR gambling.

In the next subsection we outline the present scientific understanding of IR social costs, then we provide an overview of literature on crime impacts and problem gambling impacts from gaming expansion, before outlining the present state of gambling social issues in Japan. Last, we summarize evidence based best practices to support our recommendations to minimize potential harm from gambling in Japan.

4.1 Socio-Economic Cost Theory and Issues

The field of gambling studies is interdisciplinary. It includes researchers from psychology, sociology, economics, public health, neuroscience and several other disciplines, and each have a separate but connected literature on the social costs associated with gambling. The pioneer in the gambling studies field, Professor William Eadington, characterized a broad perspective of categories of costs into three commonly held (but not necessarily scientifically validated) themes:[91]

> *Gambling is immoral and inconsistent with religious views;*
> *Gambling is linked to organized crime, fraud, and corruption; and*
> *Gambling leads to problem gambling and consequent social costs.*

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[89] van der Noordt, M., IJzelenberg, H., Droomers, M., & Proper, K. I. (2014). Health effects of employment: A systematic review of prospective studies. *Occupational and Environmental Medicine, 71*(10), 730-736.

[90] Rather than, for example, to frame a cost/benefit-type analysis.

[91] Eadington, W. R. (1996). The legalization of casinos: Policy objectives, regulatory alternatives, and cost/benefit considerations. *Journal of Travel Research*, *34*(3), 3-8.

In most jurisdictions, the first point tends to speak less to specific religious views, but still holds relevance in terms of overall socio-cultural values. The latter two points are more specifically defined as "social costs" of gambling, capable of empirical study and measurement (to some extent).

Researchers from all fields agree that social costs are real, and deserve consideration by policymakers and their stakeholders. However, there remains strong division between different fields – and within fields among researchers – as to what particular items account for these social costs and how these costs should be measured. This disagreement is not purely a function of methodology, and relates to specific concepts where there is disagreement on what should be measured. Professor Douglas Walker has extensively published on these topics, and has noted consistently that the gambling research literature lacks consensus in defining the appropriate scope of social costs, despite significant attempts to do so.[92]

This is an important measurement issue that we encourage stakeholders to consider when contemplating social costs of gambling: there can be meaningful differences in the way that costs are measured (e.g., including harm caused only by problem gamblers on other people or calculating harm to all people, including non-problem gamblers' infrequent deviations from their desired spend levels). Similarly, the variables used to measure costs (e.g., assigning dollar values or using qualitative descriptions) can also impact an approach. Costs may affect regions differently (e.g., in some cases, costs are borne by non-resident tourists – should those be factored into government decisions?), and therefore impact how findings should be interpreted. While these are somewhat philosophical topics of discussion, they have critical impacts on directing appropriate policies.

Outcomes of any social impact analysis will be influenced heavily by the definitions and approach of the researcher. For this reason, we attempt to provide transparency in insights that research studies provide, highlighting reasonable limitations on their application. This is done to provide more useful direction as to how health and public safety programs should be structured, to minimize potential harm from gambling products.

In the next two subsections, we summarize the broad and conceptual literature in gambling social costs and crime to provide a foundation of knowledge for the reader. Subsequently, we more specifically examine literature around harm reductions tactics, including prevention and treatment options.

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[92] Hongo, J. (2014). Five million Japanese have gambling problem, says ministry study. Wall Street Journal. Retrieved from: http://blogs.wsj.com/japanrealtime/2014/08/22/five-million-japanese-have-gambling-problem-says-ministry-study/

Walker, D. M. (2008). Clarification of the social costs of gambling. *Journal of Public Budgeting, Accounting & Financial Management*, *20*(2), 141-152.

4.2 Public Health Impacts of Gambling

Many (if not most) of the social concerns expressed when new casino resorts are developed pertain to effects on problem gambling rates. While rates of gambling disorder have been cited as high as five percent in present day Japan (though it must be noted here that these figures have not been subjected to academic peer review), typically these rates fall in a range of 0.2% to 3% of adults worldwide, though this depends a great deal on the screening methods and instruments used.[93]

In trying to understand the impact of gaming facility expansion on prevalence, gambling health researchers initially thought that gambling problems within a population would increase as exposure to legalized gambling increased. For example, John Kindt hypothesized extreme impacts in new gaming jurisdictions, suggesting that PG prevalence could increase by up to 550%.[94] Subsequent research has not supported this speculation, as impacts have occasionally been mitigated (and even reduced) over time.

In fact, as data access and collection improved, and more advanced research practices developed, researchers identified limitations to these early perspectives. In particular, the field has observed that despite significant expansion of gambling availability over the past 40 years, prevalence rates of gambling disorder are relatively unchanged (and they can even decline). For example, in 1979 Kallick and colleagues found a national lifetime rate of 0.7% in the United States, but nearly 30 years later, comparable figures of 0.4% to 0.6% were found by Kessler et al. and Petry et al. – despite significant expansion of lottery, casino, and online gambling.[95]

To better explain these phenomena, the research community has developed more sophisticated theoretical models, which have been tested using more robust empirical analyses. Based upon this new understanding, a subtler perspective has emerged. Evidence of increasing, stabilizing, *and* decreasing PG

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[93] Hodgins, D.C., Stea, J.N., Grant, J.E. (2011). Gambling disorders. *Lancet, 378*, 1874-1884.

[94] Kindt, J. W. (1994). US national security and the strategic economic base: The business/economic impacts of the legalization of gambling activities. *Louis ULJ*, *39*, 567.

[95] Kallick, M., Suits, D., Dielman, T., Hybels, J. (1979). *A survey of American gambling attitudes and behavior*. Ann Arbor, MI: University of Michigan Press.

Kessler, R. C., Hwang, I., LaBrie, R., Petukhova, M., Sampson, N. A., Winters, K. C., and Shaffer, H. J. (2008). DSM-IV pathological gambling in the National Comorbidity Survey Replication. *Psychological Medicine*, *38*(09), 1351-1360.

Petry, N.M., Stinson, F.S., & Grant, B.F. (2005). Comorbidity of DSM-IV pathological gambling and other psychiatric disorder: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Journal of Clinical Psychiatry, 66*, 564-74.

rates after the introduction of casinos appears to more accurately describe the likely impacts. In the most comprehensive review of this literature, Howard Shaffer and his colleagues label the earlier belief the "exposure" model, and argue that the perspective that gambling opportunities lead to linear increases in the PG rate is insufficient and incomplete.[96]

In a 2007 study, Professors LaPlante and Shaffer observed that "an evaluation of available research studies provides some support for the exposure effect, but also raises questions about the durability of that phenomenon across settings and time points." In a 2011 article following up on this work, they explain:

> "…recent empirical research indicates that individuals adapt relatively quickly after exposure to gambling opportunities, and the prevalence of PG only increases during the short term – as a novelty effect – after the introduction of new gambling opportunities." (p.485)

These phenomena are actually quite common, and the adaptation curve can be observed with many diseases. In essence, this curve occurs when the most vulnerable groups develop problems first, but then the illness' spread begins to diminish as the general population learns more about the health impacts, risks, and preventative measures, and then ultimately adapts their behavior accordingly to better prevent and treat those harms. Gambling disorder (or problem gambling) appears to work in much the same way. This literature suggests that the impacts of gambling expansion on PG rates are more complex than some had speculated before large data sets were available, and the notion that problem gambling rates simply rise as facilities are built (i.e., as exposure increases) appears to have been debunked.

The question remains, of course, how best to respond when building a "safety net" (the challenge Japan faces today). Dr. Richard Wood and his colleagues have highlighted the importance of having a comprehensive responsible gambling program, emphasizing the role of learning and protective measures in supporting healthy behaviors in non-problematic players.[97] Similarly, evolving understanding of effective treatment protocols has contributed positively to outcomes, while further interest in public health

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[96] LaPlante, D.A. and Shaffer, H.J. (2007). Understanding the influence of gambling opportunities: Expanding exposure models to include adaptation. *American Journal of Orthopsychiatry, 77*, 616-623.

Shaffer, H. J., & Martin, R. (2011). Disordered gambling: Etiology, trajectory, and clinical considerations. *Annual Review of Clinical Psychology*, *7*, 483-510.

[97] Wood, R. T., Shorter, G. W., & Griffiths, M. D. (2014). Rating the suitability of responsible gambling features for specific game types: A resource for optimizing responsible gambling strategy. *International Journal of Mental Health and Addiction*, *12*(1), 94-112.

Wood, R. T., & Griffiths, M. D. (2015). Understanding positive play: An exploration of playing experiences and responsible gambling practices. *Journal of Gambling Studies*, *31*(4), 1715-1734.

approaches continue to develop.[98] Together with the available macro-level prevalence data, this suggests that there is a dynamic and multi-factorial set of conditions to understand when trying to project the impacts of gambling expansion. To help inform the considerations in Japan, we deconstruct factors (from responsible gambling programs to treatment to prevention to facility design) individually, but consider the dynamic of these institutions in our summary and recommendations.

4.2.1 Accounting of Social Costs Impacts

Measuring social cost impacts is an important consideration for gambling expansion projects. Understanding relative social impacts is a key consideration for comparing project options, and the magnitude of costs should determine the appropriate level of response. The challenge presented within the field of gambling studies is that as a multi-disciplinary field, there are differences in how different professional and researchers will recommend that these challenges are analyzed and measured.

In an illustrative study of these challenges, Professor Doug Walker highlights three different perspectives for socioeconomic cost/benefit analyses that have gained traction, each of which is generally believed to have merit in the overall body of research literature:[99]

(1) *The cost of illness approach:* This approach, often associated with early attempts to characterize problem gambling as an "illness," attempts to estimate the social costs of treatment, prevention, research, law enforcement and lost productivity from problem gamblers;
(2) *The economic approach:* This approach examines at how much less output an economy may produce as a result of gambling-related costs, ignoring transfers among different people or parties. For example, costs of collecting gambling-related debts would be included since it is an added transaction cost, but the debt itself would not be included since it is simply a transfer of wealth from one individual to another, and there would therefore be no loss of total output in the market, using this economic point of view.
(3) *The public health approach:* This approach is a more holistic view of gambling-related problems that includes some cost analysis, but also considers components that researchers cannot measure as easily as a monetary cost; focusing on items like prevention, treatment, and quality of life.

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[98] Adams, P. J., Raeburn, J., & De Silva, K. (2009). A question of balance: prioritizing public health responses to harm from gambling. *Addiction*, *104*(5), 688-691.

Korn, D. A., & Shaffer, H. J. (1999). Gambling and the health of the public: Adopting a public health perspective. *Journal of Gambling Studies*, *15*(4), 289-365.

[99] Walker, D.M. (2007). Problems in quantifying the social costs and benefits of gambling. *American Journal of Economics and Sociology, 66*(3), 609-644.

Within each disciplinary perspective of social costs, there is another layer of debate. To illustrate how these (and other) issues can create substantial differences in the size of social cost estimates, consider an article by Professor Walker that critiqued a prior study by Professors Thompson and Schwer.[100] In this article, Walker re-calculated the estimated social costs framed by Thompson and Schwer, but used a methodology based on the definition of social costs that is favored by economists (one that was not used by the original authors).

The refined approach yielded enormous differences in estimates of social costs that were more than an order of magnitude less (indeed, one tenth) than the original study. While empirical estimates can be valuable, it is clear that even with a very careful review of the inputs of a social cost calculation, the output of any study will depend heavily on methodological decisions made by individual researchers.

Maintaining a critical approach to social impact analysis is crucial to making informed decisions, but even if different methodological approaches lead to different conclusions, there should still be a general interest in, at the very least, tracking potential social impact metrics. This is where Japan must, in our view, commit to ongoing research to measure problem gambling-related outcomes. Massachusetts provides some useful guidance here, investing in longitudinal research of socio-economic impacts across the jurisdiction, and more focused research on new innovations. Collins and Lapsley provide a fairly complete description of all costs and benefits that may occur from gambling expansion.[101] These items, which may develop directly, or may indirectly impact a non-gambler/non-operator (through what is called a negative externality), include the following:

- Reduced workforce production
- Health and counseling costs
- Increased policing, judicial system, and insurance costs from higher crime
- Regulatory, research, and evaluation costs
- Social assistance costs
- Suffering, stress, loss of life, and cultural impacts

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[100] Walker, D.M. (2008). Clarification of the social costs of gambling. *Journal of Public Budgeting, Accounting & Financial Management, 20*(2), 141-152.

Thompson, W. and Schwer, K. (2005). Beyond the Limits of Recreation: Social Costs of Gambling in Southern Nevada. *Journal of Public Budgeting, Accounting & Financial Management, 17*(1), 62-93.

[101] Collins, D., & Lapsley, H. (2003). The social costs and benefits of gambling: An introduction to the economic issues. *Journal of Gambling Studies*, *19*(2), 123-148.

While these impacts consider potential costs from new gambling adoption, Walker highlights an additional type of cost that is incurred in the absence of adoption.[102] He calls this a "restriction effect", which is defined as a social cost that recognizes that restricting casino operations can lead to its own negative effects. In his application of economic theory, Walker demonstrates that limits on business will prevent mutually beneficial transactions from occurring. As many people are willing to pay for an experience that they enjoy, a limitation of residents' ability to engage in these transactions imposes a different type of social cost.

In sum, while the academic literature does not provide concrete, reliable estimates of the size of social costs associated with integrated casino resort expansion, it does provide us with an increasingly sophisticated series of considerations on how to do so on a move-forward basis. Effective policy making must rely upon thoughtful measurement of key social outcome indicators, before and after policy changes, and must consider different paradigms of thought.

4.3 Crime Impacts of Gambling

This section describes the existing research on the relationship between casinos and crime. While a separate study by the International Gaming Institute describes the regulatory model for gaming and the protections created therein, this section of the report summarizes the sociological, criminological, and economic literature examining crime and venue based gambling. As most of this literature analyzes North American jurisdictions, we summarize the more aggregate insights for Japan's purposes. Note that statistics related to casino developments are often collected at the "county" level in the U.S. The county is of a smaller scale than the state level but generally larger than the city level. The state and county scale in the U.S. would be most analogous to the prefecture and sub-prefecture level as it relates to Japan.

At a high level, available academic literature supports a view that the expansion of casinos will increase the total volume of crime in an area, but this literature also suggests that this increase will be related to the higher number of people drawn to the area (caused by increases in tourism and traffic levels) rather than by the direct effect of casino gaming itself. We would note here, of course, that Japan has already articulated its goals of increasing tourism. In sum, individual victimization risks do not increase, but absolute amounts of crime do (and the latter is related to the presence of more people). This literature suggests that that the average Japanese citizen, then, would not be less safe even with casinos.

As such, casinos appear to have impacts that are actually similar to large recreation/tourism draws that Japan is quite familiar with, such as a special event or sporting match e.g., major sporting events like the Olympic Games). Our perspective from this literature is that an increase in law enforcement and security

[102] Walker, D. M. (2013). *Casinonomics*. New York, NY: Springer.

presence will be required to handle the increase in temporary visitors to the area, but the probability of being victimized for the average Japanese resident will likely remain unchanged.

To provide further context for this view, consider the results of Professors Grinols and Mustard, whose study examined crime data from 1977 to 1996.[103] Their study concludes that roughly 8% of crime in regions with casinos can be attributed to the casinos. Importantly, these authors focus on the structural costs rather than the probability of being victimized and they specifically note that their analysis excludes the number of visitors in the area when calculating crime rates. They refer to their calculation as the "undiluted crime" rate based on pure population counts not separating out visitors.

In a strong critique of this study, Professor Walker describes how the results from Grinols and Mustard can be misleading, arguing that tourists should be included in these calculations.[104] He states that the diluted crime rate (adjusted for temporary visitors) is the appropriate one to use when assessing the risk to residents. Further, Grinols and Mustard run the risk of overstating crime rates. These same warnings are reiterated by Giacopassi, Stitt, and Nichols, who reference a data handbook from the FBI and engage in their own analysis to demonstrate the policy risk of ignoring changes in the tourist population.[105]

Generally speaking, most recent publications in this area agree with Walker, and there is a growing body of evidence that supports the perspective that casinos do not directly increase victimization rates (despite increases in absolute volumes of crimes). For instance, Reece used many controls to account for the tourism in his study of casino related crime and found declines in certain rates of criminal behavior, including vehicle thefts and aggravated assaults, and robbery.[106] Other authors who controlled for increased levels of visitation near casinos have reached similar conclusions. Barthe and Stitt authored a series of papers, arguing in their final conclusions that casinos were similar to non-casino attractions in terms of crime impacts.[107] The research concluded that modern casinos do not seem to merit suggestions that they become a crime 'hot spot', and that if there were increases, these increases mirror those of other non-casino tourist attractions (such as theme parks or stadiums).

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[103] Grinols, E. L., & Mustard, D. B. (2006). Casinos, crime, and community costs. *Review of Economics and Statistics*, *88*(1), 28-45.

[104] Walker, D. M. (2008). Do casinos really cause crime? *Econ Journal Watch*, *5*(1), 4-20.

[105] Giacopassi, D. J., Stitt, B. G., & Nichols, M. (2000). Including tourists in crime rate calculations for new casino jurisdictions: what difference does it make?. *American Journal of Criminal Justice*, *24*(2), 203-215.

[106] Reece, W. S. (2010). Casinos, hotels, and crime. *Contemporary Economic Policy*, *28*(2), 145-161.

[107] Barthe, E., & Stitt, B. G. (2009). Temporal distributions of crime and disorder in casino and non-casino zones. *Journal of Gambling Studies*, *25*(2), 139-152.

A more recent study of Las Vegas found a positive relationship between casino revenue and crime rates, but some empirical choices made by those authors did not align well with their data, and this finding is not convincing when compared to other authors findings.[108] Using a stronger modeling approach than many past studies, Humphreys and colleagues explored crime rate effects of gambling in Canada, specifically looking at both VLTs and casinos[109] – the modeling was then repeated by Humphreys and Soebbing in 2014. The authors used a model that controlled for other different variables (such as unemployment) that could affect crime rates, but also examined how crime may develop over time (this temporal limitation was a common criticism of prior literature). In general, they found weak relationships between the introduction of a casino and crime rates (including breaking and entering, credit card fraud, other fraud, drugs, illegal gambling, prostitution, robbery, and shoplifting). In their study, with the exception of an increase in robberies and a decrease in shoplifting under $5000, all other measures of criminal activity were not statistically different from zero. Regarding long-term crime effects, they found little evidence that casinos affect crime rates up to three years after opening.

While the studies summarized above provide reasonable evidence of findings from casino developments primarily found across North America, there is limited direct insights in those studies about more directly relatable IR impacts in comparable markets to those being proposed in Japan, where crime rates are generally low. However, where evidence does exist, it seems to be consistent with those findings – a case study from the Lee Kuan Yew School of Public Policy at the National University of Singapore noted that:

> "The introduction of [Singapore] casinos [saw] relatively moderate incidences of petty crimes specific to casinos. For instance, there were 282 incidences in 2011, and 299 in 2010. General island-wide crime rates remained low, indicating that the casinos had not negatively affected safety and security."

In order to preemptively address potential crimes associated with gambling, Singapore established a special police unit, the Casino Crime Investigation Branch, consisting of 20-30 staff. The group is responsible for policing forgery, counterfeiting and interference with gaming equipment.[110] Actions against loansharking and harassment began in 2009, before the opening of the casinos. Based on the

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[108] Man-Keun, K., Pang, A., Bao, W., & Bosworth, R. (2016). Endogeneity in casino revenue and crime rates: The case of Las Vegas, Nevada. *The Review of Regional Studies, 46*(3), 223-236.

[109] Humphreys, B. R., & Lee, Y. S. (2010, November). Legal gambling and crime: Evidence from EGMs in Alberta. In *70th International Atlantic Economic Conference, Charleston, SC*.

Humphreys, B. R., & Soebbing, B. P. (2014). Access to legal gambling and the incidence of crime: evidence from Alberta. *Growth and Change*, *45*(1), 98-120.

[110] Bin, Tan S. (2014). Managing the Sin in Singapore's Casinos. Retrieved from https://lkyspp.nus.edu.sg/wp-content/uploads/2014/08/20140814-Managing-the-Sin-in-Singapores-Casinos.pdf

available crime statistics, the Lee Kuan Yew School found that these initiatives were effective, reducing cases of unlicensed moneylending and harassment from 18,649 in 2009 to 8,306 in 2013.

4.3.1.1 Crime and Problem Gamblers

While there is a lack of evidence to support the idea that casinos and crime rates are related overall, we also explore a more specific proposition relevant to Japan's interests: whether problem gamblers (or gamblers in general) are more likely to commit crimes than the general population. This notion was proposed by many researchers before sound data existed, as early researchers saw correlations (and not causations) with clinically-based populations. That is, similar individuals may be more likely to both commit crimes and exhibit problematic gambling behavior.

As a means of addressing the "correlation/causation" methodological issues that plague these research questions, Clark and Walker developed a model that controlled for many factors that may also contribute to criminal behavior using a large sample of young adults from the U.S.[111] This sample is arguably more applicable to policymakers, since it focuses on a population that includes individuals from all types of gambling involvement: non-gamblers, non-problem gamblers, and problem gamblers. Many micro studies look only at-risk factors for problem gamblers, which makes drawing causal inferences difficult.

Clark and Walker provided an analysis that suggests that gamblers "other than casino and lotto gamblers," are more likely to commit crimes. That is, while gamblers who participate in certain forms of gambling are associated with criminal activity, the authors found no evidence that casino gamblers were more likely to commit crimes than the general public. Gamblers who are more susceptible to committing crimes are found to participate in other non-casino and non-lottery forms of gambling. For example, sports wagering, private gaming, and horse race betting would fall into this category of higher risk forms of gambling. Even in these cases, that the authors point out that their analysis does not allow them to make a strong conclusion regarding their likelihood of committing a crime, since the category is simply an "other gambling" catch-all term. We note a potential limitation in applying to Japan is that these findings may be related to the focus on the gaming market in North America.

4.3.1.2 Intoxicated Driving

Given high rates of binge alcohol consumption in Japan, and the social focus that has existed on drunk driving more generally, understanding the relationship between alcohol and casino gambling is important to effective policy design.

While the general literature on crime and casinos has developed to a point where the findings are sufficiently consistent for reliable policy decisions, the specific literature on drunk driving has been fairly

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[111] Clark, C., & Walker, D. M. (2009). Are gamblers more likely to commit crimes? An empirical analysis of a nationally representative survey of US young adults. *International Gambling Studies*, *9*(2), 119-134.

limited with serious methodological flaws often present. For example, McGowan conducted a study to examine the relationship between the presence of casinos and the rate of driving under the influence (DUI) citations in a sample of many U.S. states.[112] McGowan simply tested whether DUIs were higher in casino regions than non-casino regions so the methods do not provide useful information about causation. Many other local attributes would be important factors affecting the volume of DUIs (e.g., concentration of local bars/liquor vendors), but this study fails to control for these factors or examine differences pre/post-adoption of the casino.

In one of the few studies that attempted to build a causal model to explain the effect of casinos on drunk-driving, a rather complex relationship was found between casinos and alcohol-related fatal accidents by Cotti and Walker.[113] The authors note that there is a strong link between the presence of a casino in a county and the number of alcohol-related fatal traffic accidents. However, they also found that this relationship is negatively related to the local population. That is, when casinos are located in areas with larger populations, the increased drunk driving effect dissipates and is lower relative to markets with no casinos.

The authors offer two possible explanations for the population effect (what is noted to be a robust finding). One is a driving distance argument, where casinos near large population bases require less relative road time than rural casinos, both because of driving distance and because of public transit options. The authors also suggest that casinos in large urban areas may act as a substitute to other venues where alcohol may be served, thereby decreasing aggregate risk. Cotti and Walker note that instead of pursuing other discretionary pursuits like bars and nightclubs in isolation, the casino resort could provide an environment where gambling activities act as a substitute experience.

In the dense Japanese markets where IRs are presently under consideration, it would seem that the risk-reducing factors identified by Cotti and Walker would have a significant impact. Most importantly, there are both viable (indeed, world-class) public transportation options providing a viable alternative to driving, and many substitute locations for alcohol service.

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[112] McGowan, R. (2013). Casino Gambling and Drunk Driving: How Are Communities Impacted? *Gaming Law Review and Economics*, *17*(10), 747-759.

[113] Cotti, C. D., & Walker, D. M. (2010). The impact of casinos on fatal alcohol-related traffic accidents in the United States. *Journal of Health Economics*, *29*(6), 788-796.

4.4 Summary of Japanese Related Health Issues

4.4.1 Problem Gambling Prevalence Study

The only identified source of problem gambling prevalence estimates in Japan is a study conducted by the Health, Labour, and Welfare Ministry and reported by Japan's Kyodo News press agency.[114] That study found that 4.8 percent of the population had problems with gambling, including 8.7 percent of men and 1.8 percent of women. Unfortunately, this study does not appear in a peer-reviewed journal, and there are no clear details on the methodology used to estimate the prevalence (in this field, small variations in methodological choices have been shown to have significant impacts on prevalence impacts).[115] Based on personal correspondence and a draft document we reviewed entitled, "Compilation of Points of Discussion Regarding Bolstering Countermeasures for Gambling Dependence (Proposal)," it is our understanding that the prevalence study focused on lifetime prevalence values. Past year prevalence studies are generally used nowadays, making these figures more challenging to assess against other jurisdictions, and against future studies.

Previous research in Japan identified pachinko and pachislot as the forms of gaming most associated with gambling-related harm, as these players appear most often in treatment-seeking populations. [116] In a survey of Gamblers Anonymous members reviewed by those same authors, 77 percent stated their first gambling choice was pachinko or pachislot, with males heavily outnumbering females. Some industry data provides a bit of insight into the motivations for pachinko players, with heavy players (twice weekly or more) citing 'easily accessible and solitary' (53.1%), 'to cope with stress' (47.4%), and (3) 'to have fun' (43.5%) as their leading motivations. Light players (once a month or less) were less likely to report stress, highlighting 'to pass the time' (50.4%), 'easily accessible and solitary' (39.0%), and 'to win jackpots' (35.4%) as their motivations. Similar trends were found in pachislot players.[117]

4.4.2 Higher Risk Populations

To understand the relative risk in the Japanese market given potential vulnerable populations, we have assembled Table 12 to assess identifiable demographic and health related risk-factors. We note that some risk factors are excluded, as there are no comparable national statistics and we also exclude gender comparisons, given that policies will impact both genders. Availability of gambling and some structural

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[114] GGR Asia (2016). Nearly 5 pct of Japanese have a gambling problem: study. Retrieved from: https://www.ggrasia.com/nearly-5-pct-of-japanese-have-a-gambling-problem-study/

[115] Williams, R. J., & Volberg, R. A. (2010). *Best practices in the population assessment of problem gambling*. Faculty of Health Sciences.

[116] Takiguchi, N., & Rosenthal, R.J. (2011). Problem gambling in Japan: A social perspective. *Electronic Journal of Contemporary Japanese Studies, 2011*(1).

[117] Ibid.

characteristics of the games are identified, though we note that given the widespread availability of other games, there is a low marginal impact of limited IR expansion.

In general, the analysis below suggests that Japan has a lower risk profile than comparable jurisdictions (Singapore/Korea) except regarding heavy episodic (binge) drinking of alcohol. To help mitigate potential risks, we outline certain policies that can be considered in subsection 4.6.1.9.

TABLE 12: SUMMARY OF COMPARABLE RISK-FACTORS ACROSS JAPAN, SINGAPORE, AND KOREA

Risk-Factor	Japan	Singapore	Korea	Comments
Low Age[118]	Average age: 46 Pop. under age 15: 13%	Average age: 38 Pop. under age 15: 16%	Average age: 39 Pop. under age 15: 15%	Japan's older population base versus comparable jurisdictions reduces the likely impacts of this risk-factor.
Unemployed	Unemployment rate: 2.8%[119]	Unemployment rate: 3.1%[120]	Unemployment rate: 3.8%[121]	Japan has a very low unemployment rate, and even lower than comparable jurisdictions. Likely minimal impacts of risk-factor.
Increased alcohol use[122]	Alcohol consumed per capita: 7.2 liters Prevalence of heavy episodic drinking: 17.5%	Alcohol consumed per capita: 2.0 liters Prevalence of heavy episodic drinking: 4.4%	Alcohol consumed per capita: 12.3 liters Prevalence of heavy episodic drinking: 6.0%	Japan has a high prevalence of heavy episodic drinking, particularly among men. Policies around the distribution of alcohol should address this risk and include appropriate

[118] World Health Organization (2013). Global Health Observatory (GHO) data.

[119] Statistics Japan (2017, June). Labour Force Survey, Monthly Results.

[120] Singapore Ministry of Manpower (2017, July 28). Labour Market Statistical Information, Summary Table: Unemployment.

[121] Statistics Korea (2017, June). Latest Indicators.

[122] World Health Organization (2013). Global Health Observatory (GHO) data. Heavy episodic drinking defined as consuming at least 60 grams or more of pure alcohol on at least one occasion in the past 30 days.

Risk-Factor	Japan	Singapore	Korea	Comments
				responses to intoxicated players.
Increased drug use[123]	Prevalence: Male – 0.01% Female – 0.00%	Prevalence: Male – 0.28% Female – 0.07%	Prevalence: Male – 0.42% Female – 0.10%	Available evidence is dated (2004) and may have some measurement error, but Japan clearly has a low risk profile.
Delinquency & illegal acts[124]	Theft rates per 100,000 population: 356.2	Theft rates per 100,000 population: 288.2	Theft rates per 100,000 population: 531.7	Japan has very low rates of reported crime, near Singapore's levels and well below Korea. Japan has a low risk profile.

Note: Risks reflect "well-established" factors for problem gambling, as identified by Johansson, A., Grant, J. E., Kim, S. W., Odlaug, B. L., & Götestam, K. G. (2009). Risk factors for problematic gambling: A critical literature review. *Journal of Gambling Studies, 25*(1), 67-92. Risk factors for which there are no comparative national statistics are excluded.

4.5 Measuring Exposure to Gambling in Japan

The exposure level of a population to gambling is thought to contribute to public health outcomes. In one of the seminal studies on this topic, Harvard Medical School researchers at the Division on Addiction proposed a regional exposure model that provided for research on vulnerable and resilient population segments.[125] Those authors described exposure as dependent on dose (the number of gambling establishments and employees therein), potency (the number of gambling variants), and duration (the length of time that gambling has been available).

As previously outlined in Section 2.4, Japan has the second highest number of gaming machines per capita in the world (dose). There are also several different legal forms of gaming/gambling available today in Japan, including pachinko/pachislot, lottery, toto, and many types of racing (potency) – this is in

[123] World Health Organization (2004). Point prevalence (%), drug use disorders, 15+ years (Resources for Substance Use Disorders).

[124] United Nations Office On Drugs and Crime (UNODC) (2014). Vienna International Centre. Vienna: Austria.

[125] Shaffer, H. J., LaBrie, R. A., & LaPlante, D. (2004). Laying the foundation for quantifying regional exposure to social phenomena: considering the case of legalized gambling as a public health toxin. *Psychology of Addictive Behaviors*, *18*(1), 40-48.

addition to illegal or grey market gambling, which is often carried out online. Of the available legal forms of gaming, all have been available in some variant or another for decades (duration).

Given the circumstances described above, it is reasonable to suggest that the Japanese population is already experiencing a high level of exposure to gambling products. Therefore, the marginal problem gambling impact of introduction of IRs may be low, at least once any novelty effect erodes. Based on pre-existing exposure, we expect the introduction of two to three IRs to have a relatively minor impact on net exposure of the population to gambling, as compared to a jurisdiction without any existing legal forms of gambling.

4.6 Best Practices in Harm Reduction

To effectively reduce gambling-related harm, an integrated approach involving policymakers, operators, public health experts, clinicians, researchers, gambler advocacy groups, law enforcement, and other stakeholders is necessary. Any thoughtful decision-making should involve consideration and consultation with these groups to better understand their needs, constraints, and potential contributions.

In addition, many decisions will need to reflect the country's and region's values around public health, commerce, and individual liberties. While many policies can be Pareto improvements (that improve one or more individuals while having no adverse impact on others), some policies will require a tradeoff between some stakeholders' interests. To help guide those decisions, we advocate adoption of the "Reno model" and its extensions.[126] The Reno model outlines a widely embraced science-based framework to help make evidence-based decisions on important responsible gambling and harm reduction programs. The model also engages the above-mentioned ethical issues associated with different stakeholders' interests. The authors emphasize the following ethical principles:

a) Autonomy: Self-rule and the ability for individuals to make their own decisions
b) Beneficence/Non-maleficence: The balance and independent obligations of efforts to be helpful/do good against efforts to avoid doing harm

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[126] Blaszczynski, A., Ladouceur, R., & Shaffer, H. J. (2004). A science-based framework for responsible gambling: The Reno model. *Journal of Gambling Studies*, *20*(3), 301-317.

Ladouceur, R., Blaszczynski, A., Shaffer, H. J., & Fong, D. (2016). Extending the Reno Model: Responsible Gambling Evaluation Guidelines for Gambling Operators, Public Policymakers, and Regulators. *Gaming Law Review and Economics*, *20*(7), 580-586.

Shaffer, H. J., Ladouceur, R., Blaszczynski, A., & Whyte, K. (2016). Extending the RENO model: Clinical and ethical applications. *American Journal of Orthopsychiatry, 86*(3), 297-309.

c) Justice: Moral obligation to act on the basis of fair adjudication between competing claims

In the subsections that follow, we outline industry best practices and evidence-based recommendations for gambling-related harm reduction but note that final determination will also need to balance ethical issues and scarce resources. We describe policies/programs framed around three broad categories: industry led responsible gambling, prevention through community and educational programs, and addiction/mental health aligned treatment services. However, these services and their deliverers have many interconnections. For example, an effective harm minimization strategy requires operators to effectively refer players seeking help to treatment. Similarly, community prevention programs should educate the public on positive play behaviors, should they choose to gamble.

4.6.1 Responsible Gambling: Industry Targeted Programs

4.6.1.1 Positive Play

A core component of any operator focused harm reduction strategy should be encouraging positive play. Positive play refers to the behaviors and beliefs of players that are associated with a reduced likelihood of excessive or disordered gambling. Effectively, this is player-oriented responsible gambling. Research suggests that there are four key components, which operators and related parties should encourage players to adapt:[127]

(1) Honesty and Control – Openness with family and friends about time and money spent gambling, and maintaining control when gambling.
(2) Pre-commitment – Considering the amount of time and money spent before gambling, and adhering to those limits.
(3) Personal Responsibility – Recognizing a personal responsibility to gamble safely and under control.
(4) Gambling Literacy – Understanding of gambling myths and misconceptions around randomness and winning likelihood.

Positive play is an emerging area of study in the field of gambling studies, and the evidence suggests that the behaviors and beliefs described above can be protective against gambling-related harm and/or development of a gambling disorder.[128] Most best practice gambling programs have positive play at the core of the operator strategy (either implicitly or explicitly).

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[127] Wood, R. T., Wohl, M. J., Tabri, N., & Philander, K. (2017). Measuring Responsible Gambling amongst Players: Development of the Positive Play Scale. *Frontiers in Psychology, 8*.

[128] Wood, R. T., & Griffiths, M. D. (2015). Understanding positive play: An exploration of playing experiences and responsible gambling practices. *Journal of Gambling Studies, 31*(4), 1715-1734.

4.6.1.2 Employee Training

Employee training is an important component of a comprehensive responsible gambling program, which should include all consumer facing gaming staff and refresher training.[129] While there is no evidence that suggests employees should or are capable of identifying at-risk players, employees can be successfully trained to know how to respond appropriately to specific signs of distress (e.g., disruptive behavior or suicidal language) or inquiries directly from players (e.g., requests for more information about treatment or self-exclusion).[130] These programs have the added benefit of improving job satisfaction. [131]

Overall, research that examines responsible gambling training for casino employees suggests that there are measurably positive impacts for this practice. Two studies based in Quebec, Canada, found that training programs improved employee understanding of helping gamblers with problems, and those who completed the training approached at-risk gamblers more often than those who didn't complete the training. [132]

In 2012, a published report on a large-scale examination of Las Vegas Sands responsible gambling employee training focused on the efficacy of their training program, based on The Reno Model.[133] The empirical examination found that training led to reliable improvements in employees' responsible

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[129] Quilty, L. C., Robinson, J., & Blaszczynski, A. (2015). Responsible gambling training in Ontario casinos: employee attitudes and experience. *International Gambling Studies*, *15*(3), 361-376.

Ladouceur, R., Shaffer, H. J., Blaszczynski, A., & Shaffer, P. Responsible gambling: a synthesis of the empirical evidence. *Addiction Research and Theory, 25*(3), 225-235.

[130] Giroux, I., Boutin, C., Ladouceur, R., Lachance, S., & Dufour, M. (2008). Awareness training program on responsible gambling for casino employees. *International Journal of Mental Health and Addiction*, *6*(4), 594-601.

[131] Ibid.

[132] Ibid.

Ladouceur, R., Boutin, C., Doucet, C., Dumont, M., Provencher, M., Giroux, I., & Boucher, C. (2004). Awareness promotion about excessive gambling among video lottery retailers. *Journal of Gambling Studies*, *20*(2), 181-185.

[133] Blaszczynski, A., Ladouceur, R., & Shaffer, H. (2004). A science-based framework for responsible gambling: The Reno model. *Journal of Gambling Studies, 20*, 301-317.

gambling knowledge and a follow-up survey of employees demonstrated somewhat-reliable knowledge retention. [134]

An Australian study found that training on typical observable signs of at-risk gamblers was useful, but finding effective responses was challenging.[135] Further, the challenge of offering help to players believed likely to have a gambling problem was inversely related to job satisfaction.[136] Additional research has found that employees have greater job satisfaction and stronger customer-orientation when their employer has a strong supplementary responsible gambling program – that is, when it goes above and beyond what is required by the law.[137] Overall, employees appear to support responsible gambling training and policies, but view interventions as a challenge.

4.6.1.3 Voluntary/Self-exclusion and Other Exclusion Programs

There is evidence that self-exclusion programs are a useful tool in addressing problem gambling, and gamblers who self-exclude regularly report experiencing benefits from the programs.[138] Regarding exclusion length, research that examines the efficacy of voluntary self-exclusion has found that default lifetime exclusions are not a best practice for voluntarily self-excluded players – since permanent bans can serve as a deterrent for enrolling in the first place.[139] If lifetime bans are offered, it is recommended

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[134] LaPlante, D.A., Gray, H.M., LaBrie, R.A., Kleschinsky, J.H., & Shaffer, H.J. (2012). Gaming industry employees' responses to responsible gambling training: A public health imperative. *Journal of Gambling Studies, 28*, 171-191.

[135] Quilty, L. C., Robinson, J., & Blaszczynski, A. (2015). Responsible gambling training in Ontario casinos: Employee attitudes and experience. *International Gambling Studies, 15*(3), 361-376. doi:10.1080/14459795.2015.1056206

[136] Ibid.

[137] Lee, C.-K., Song, H.-J., Lee, H.-M., Lee, S., & Bernhard, B. J. (2013). The impact of CSR on casino employees' organizational trust, job satisfaction, and customer orientation: An empirical examination of responsible gambling strategies. *International Journal of Hospitality Management, 33*, 406-415. doi:10.1016/j.ijhm.2012.10.011

[138] Ladouceur, R., Sylvain, C., & Gosselin, P. (2007). Self-exclusion program: A longitudinal evaluation study. *Journal of Gambling Studies, 23*, 85-94. doi:10.1007/s10899-006-9032-6

Gainsbury, S. (2014). Review of self-exclusion from gambling venues as an intervention for problem gambling. *Journal of Gambling Studies, 30*, 229-251. doi:10.1007/s10899-013-9362-0

[139] National Council on Problem Gambling. (2003). Discussion paper on current voluntary exclusion practices. Washington, DC: National Council on Problem Gambling Task Force on Self-Exclusion; Steinberg, M., & Velardo,

that excluded individuals have an opportunity to appeal their ban after a set period of time (e.g., one year). Overall, there is no preferred and scientifically-based ban length, but best practices tend to favor patrons selecting their own ban lengths to suit their specific needs and goals, with a minimum duration of six months.

Self-exclusion participants who also enroll in treatment report more positive outcomes than those who do not, and treatment and self-help are significantly related to post-exclusion quality of life and gambling abstinence.[140] The requirement that excluded gamblers be provided with information on responsible gambling measures and available treatment services is recommended in multiple academic studies.[141] Because problematic gambling is considered a mental health disorder[142], assistance for excluded individuals, rather than strict punishment, is the advised approach. Mandatory counseling, however, is *not* recommended, as it may deter some individuals from entering a self-exclusion program if they are unwilling or unable to attend counseling sessions.[143]

W. (2002). Preliminary evaluation of a casino self-exclusion program. In *Responsible Gambling Council of Ontario Discovery 2002 Conference. Niagara Falls, Canada*.

[140] Gainsbury, S. (2014). Review of self-exclusion from gambling venues as an intervention for problem gambling. *Journal of Gambling Studies, 30*, 229-251. doi:10.1007/s10899-013-9362-0

Nelson, S., Kleschinsky, J. H., LaBrie, R., Kaplan, S. A., & Shaffer, H. (2010). One decade of self exclusion: Missouri casino self-excluders four to ten years after enrolment. *Journal of Gambling Studies, 26*, 129-144. doi:10.1007/s10899-009-9157-5

[141] E.g., Blaszczynski, A., Ladouceur, R., & Nower, L. (2007). Self-exclusion: A proposed gateway to treatment model. *International Gambling Studies, 7*(1), 59-71; Nowatzki, N. R., & Williams, R. J. (2002). Casino self-exclusion programmes: A review of the issues. *International Gambling Studies*, *2*(1), 3-25.

[142] American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.

[143] Gainsbury, S., & Blaszczynski, A. (2011). Online self-guided Interventions for the treatment of problem gambling international gambling studies. *International Gambling Studies, 11*, 289-308. doi:10.1080/14459795.2011.617764

Gainsbury, S., & Blaszczynski, A. (2011). A systematic review of internet-based therapy for the treatment of addictions. *Clinical Psychology Review, 31*(3), 490-498. doi:10.1016/j.cpr.2010.11.007

In terms of exclusion enforcement, several researchers have recommended computerized identification checks at entry points to the casino venue.[144] While studies have found that self-exclusion participants attempting to enter gambling venues can be a common occurrence, recent research has found that enrollment in self-exclusion can still be beneficial despite imperfect exclusion effectiveness.[145] With this in mind, regulation can provide the necessary power to ensure an exclusion program is effective, can empower venues to enforce their commitments to harm reduction, and can impose penalties for industry operators and individuals who do not comply with agreed strategies. Without any ramifications for breaking a self-exclusion agreement, the program's efficacy suffers.

Regarding penalties for those who self-exclude, some research has shown that self-excluded individuals view forfeiture of winnings to be an effective means of deterring those who seek re-entry.[146]

Overall, best practices in creating an exclusion program include:[147]

- Provision of clear information and promotion of the program to increase awareness and utilization. Casino staff should be knowledgeable about the program, including what self-exclusion involves, what to say to patrons about self-exclusion, and know to whom the patron should be referred for further information or registration.
- Timely and respectful registration, both at the gambling venue and at an off-site venue
- A range of time periods for exclusion, with a recommended minimum of 6-months to allow individuals time to seek treatment. An automatic lifetime ban is not recommended.
- Individuals who enroll in the exclusion program should be removed from mailing lists and not be offered promotional materials or incentives to gamble during their exclusion period.
- Excluded gamblers should be provided with resources to assist in controlling their gambling.

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[144] Ibid; Collins, P., & Kelly, J. M. (2002). Problem gambling and self-exclusion: A report to the South African responsible gambling trust. *Gaming Law Review, 6*(6), 517-531.

[145] Ladouceur, R., Jacques, C., Giroux, I., Ferland, F., & Leblond, J. (2000). Analysis of a casino's self-exclusion program. *Journal of Gambling Studies, 16*(4), 453-460.

Nelson, S.E., Kleschinsky, J.H., LaBrie, R.A., Kaplan, S., Shaffer, H.J. (2010). One decade of self exclusion: Missouri casino self-excluders four to ten years after enrollment. *Journal of Gambling Studies, 26*(1), 129-44. doi: 10.1007/s10899-009-9157-5

[146] Verlik, K. (2008). *Casino voluntary self-exclusion program evaluation*. Paper presented at the 7th European Conference on Gambling Studies and Policy Issues, Nova Gorica, Slovenia. www.easg.org/media/file/conferences/novagorica2008/thursday/1400-ses3/verlik_kent.pdf

[147] Gainsbury, S. M. (2014). Review of self-exclusion from gambling venues as an intervention for problem gambling. *Journal of Gambling Studies*, *30*(2), 229-251.

- Excluded gamblers should be provided with clear information to describe the conditions of their self-ban and the consequences if they violate this ban.
- Operators should establish meaningful steps to identify and remove self-excluded individuals who attempt to gain entry to the gambling venue.
- A reinstatement process should be established for individuals before they are permitted re-entry to gambling venues. It is recommended that the reinstatement process require the individual to elect to be reinstated, rather than an automatic reinstatement process.
- Any exclusion program should be regularly monitored and evaluated for efficacy.

Currently, there is no available scientific information that explicitly validates the effectiveness of third-party exclusion in reducing harm or negative outcomes from gambling, though there are some jurisdictions that have forms of such exclusion programs. Singapore, a handful of individual venues in Australia, Macau, and Bermuda, have third-party exclusion programs, but nearly all other jurisdictions offer only self-exclusion programs. Outside of Singapore, those jurisdictions that allow family and friends to put gamblers on the exclusion list will do so only with the gambler's consent.[148] One small study of the Singapore measure found that outcomes for families were generally positive, but the study did not assess any player related outcomes.[149]

4.6.1.4 Gambling Controls

In general, research on gambling controls (i.e., loss limits, betting limits, time limits) shows that many patrons express positive feelings about the concept of pre-commitment and monetary limit setting, though many non-problem and low-risk gamblers consider these programs to be unnecessary for themselves.[150]

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[148] Gaming Inspection and Coordination Bureau Macao SAR. (2016). Self-exclusion and third-party exclusion applications. Retrieved from http://www.dicj.gov.mo/web/en/responsible/isolation/isolation.html

Hing, N., & Nuske, E. (2011). Assisting problem gamblers in the gaming venue: An assessment of practices and procedures followed by frontline hospitality staff. *International Journal of Hospitality Management, 30*(2), 459-467. doi:10.1016/j.ijhm.2010.09.013

[149] Goh, E. C., Ng, V., & Yeoh, B. S. (2016). The family exclusion order as a harm-minimisation measure for casino gambling: the case of Singapore. *International Gambling Studies*, *16*(3), 373-390.

[150] Ladoucer, R., Blaszczynski, A., & Lalande, D.R. (2012). Pre-commitment in gambling: a review of the empirical evidence. *International Gambling Studies, 12*(2), 215-230. doi: 10.1080/14459795.2012.658078

Gainsbury S., Parke J., & Suhonen N. (2013) Attitudes towards Internet gambling: Perceptions of responsible gambling, consumer protection, and regulation of gambling sites. *Computers in Human Behavior, 29*, 235–245.

Research on the topic has generated mixed results on its efficacy, and the greatest success appears to come in online gambling, and when limit setting is voluntary.

There can be many implementation difficulties with land-based gambling limit setting, and some researchers and government entities (including Canada's Responsible Gambling Council) do not see sufficient scientific support for these approaches. The Reno Model, for example, discusses loss limits and expresses concern over too much required control, "Unjustified intrusion is likely not the way to promote responsible gambling. For example, player reactions to time limits forced on their gaming session might increase their problem behaviors."[151]

Voluntary limit setting allows those who have problems controlling their own gambling spend to limit their losses, and provides an opportunity for recreational gamblers to manage their gambling budget.[152] Operator-assisted mechanisms for limit setting are encouraged to assist in maintaining control over gambling and in the case of online gambling, deposit limits have also been found to reduce gambling activity overall.[153]

Overall, gamblers facing voluntary pre-commitment systems tend to fit into one of three types:

(1) Those who set and (generally) adhere to self-set limits
(2) Those who set limits but fail to adhere to them
(3) Those who do not set limits, but rarely spend more on gambling than they had intended.[154]

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[151] Blaszczynski, A., Ladouceur, R., & Shaffer, H. (2004). A science-based framework for responsible gambling: The Reno model. *Journal of Gambling Studies, 20*, 301-317.

[152] Blaszczynski, A., Parke, A., Harris, A., Parke, J., & Rigbye, J. (2014). Facilitating player control in gambling. *Journal of Gambling Business and Economics, 8*(3), 36-51.

[153] Nelson, S., LaPlante, D. A., Peller, A. J., Schumann, A., LaBrie, R., & Shaffer, H. (2008). Real limits in the virtual world: Self-limiting behavior of Internet gamblers. *Journal of Gambling Studies, 24*, 463-477. doi:10.1007/s10899-008-9106-8

Hing, N., Cherney, L., Gainsbury, S., Lubman, D. I., Wood, R. T., & Blaszczynski, A. (2015). Maintaining and losing control during internet gambling: A qualitative study of gamblers' experiences. *New Media & Society, 17*(7), 1075-1095. doi:10.1177/1461444814521140

[154] Maddern, R.L. (2004). *The limit maintenance model: Temptation and restraint in gambling* (Unpublished PhD thesis). Penrith: University of Western Sydney.

Research suggests that slightly over half to more than three quarters of gamblers set their own monetary gambling limits, though few will set time limits (around 20-30% in academic survey settings).[155] Auer and Griffiths demonstrated that voluntary limit-setting had a significant effect on those players who needed it most; that is, those players who played with the highest intensity.[156] Low-risk and non-problem gamblers will usually set lower, less variable limits than high-risk gamblers, who also exceed their limits more often than low-risk gamblers. [157] Researchers further suggest that some problem gamblers will set higher limits for themselves to avoid any restrictions on their desire to chase losses.[158]

Chasing losses is also a concern in messaging techniques used in pre-commitment systems – frequent reminders of the total amount of losses may trigger chasing behaviors or irrational beliefs on "hot" or "cold" machines. Pop-up messages that generally encourage limit-setting, on the other hand, have been

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Wohl, M.J.A., Lyon, M., Donnelly, C.L., Young, M.M., Matheson, K., & Anisman, H. (2008). Episodic cessation of gambling: A numerically aided phenomenological assessment of why gamblers stop playing in a given session. *International Gambling Studies, 8*, 249–263. doi: 10.1080/14459790802405855

[155] McDonnell-Phillips. (2006). *Analysis of gambler precommitment behaviour.* Melbourne: Gambling Research Australia.

Schellinck, T., & Schrans, T. (1998). *1997/98 Nova Scotia video lottery players survey*. Halifax: Nova Scotia Department of Health Problem Gambling Services.

Ladoucer, R., Blaszczynski, A., & Lalande, D.R. (2012). Pre-commitment in gambling: a review of the empirical evidence. *International Gambling Studies, 12*(2), 215-230. doi: 10.1080/14459795.2012.658078

[156] Auer, M., & Griffiths, M. (2013). Voluntary limit setting and player choice in most intense online gamblers: An empirical study of gambling behaviour. *Journal of Gambling Studies, 29*(4), 647-660. doi:10.1007/s10899-012-9332-y

[157] Lalande, D.R., & Ladouceur, R. (2011). Can cybernetics inspire gambling research? A limit-based conceptualization of self-control. *International Gambling Studies, 11*(2), 237–252.

Schottler Consulting. (2010). *Factors that influence gambler adherence to pre-commitment decisions*. Retrieved from http://www.gamblingresearch.org.au/home/research/gra+research+reports/factors+that+influence+a+gambler+pre-commitment+decisions+%282010%29

[158] Ladoucer, R., Blaszczynski, A., & Lalande, D.R. (2012). Pre-commitment in gambling: a review of the empirical evidence. *International Gambling Studies, 12*(2), 215-230. doi: 10.1080/14459795.2012.658078

recently recommended to remind individuals that the limit-setting tool is available, as these capture the gambler's attention and reduce the state of dissociation.[159]

Even well-designed pre-commitment schemes must be prepared for varied adoption rates; there may be temporary pushback with the new, unfamiliar technology.[160] Further, venue staff should be appropriately trained in these pre-commitment technologies and the system should be monitored for frequent unanticipated use.[161]

Not all research on limit-setting has generated positive results, however. Data collected during trial implementation in Canada and Australia show that while approximately half of gamblers in these trials reported spending less while setting their own limits, approximately 40% reported spending more than their limits.[162] This large percentage of those who increased their spending is cause for concern – after all,

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[159] Stewart, M. J., & Wohl, M. J. A. (2013). Pop-up messages, dissociation, and craving: How monetary limit reminders facilitate adherence in a session of slot machine gambling. *Psychology of Addictive Behaviors, 27*(1), 268-273. doi:10.1037/a0029882

Wohl, M. J. A., Parush, A., Kim, H. A. S., & Warren, K. (2014). Building it better: Applying human–computer interaction and persuasive system design principles to a monetary limit tool improves responsible gambling. *Computers in Human Behavior, 37*, 124-132. doi:10.1016/j.chb.2014.04.045

Wohl, M. J. A., Sztainert, T., & Young, M. M. (2013). The CARE model: How to improve industry-government-health care provider linkages. In D. C. S. Richard, A. Blaszczynski, & L. Nower (Eds.), *Handbook of Disordered Gambling*. Chichester, UK: John Wiley & Sons Ltd.

[160] Nisbet, S. L., Jackson, A., & Christiensen, D. R. (2015). The influence of pre-commitment and associated player-card technologies on decision making: Design, research and implementation issues. *International Journal of Mental Health & Addiction, 14*(3), 228-240. doi:10.1007/s11469-015-9574-x

[161] Ibid.

[162] Omnifacts Bristol Research. (2005). *Nova Scotia player card research project: Stage I research report*. Retrieved from http://nsgc.ca/research/responsible_gaming_device_research_project/.

Omnifacts Bristol Research. (2007). *Nova Scotia player card research project: Stage III research report*. Retrieved from http://nsgc.ca/research/responsible_gaming_device_research_project/.

Schottler Consulting. (2009a). *Major findings of a trial of a card-based gaming product at the Redcliffe RSL*. Retrieved from http://www.olgr.qld.gov.au/resources/responsibleGamblingDocuments/SchottlerConsultingReportintoCBGtrialRedcliffeRSLExemptMaterialRemoved.pdf

a pre-commitment system is intended to help gamblers control their spending and avoid any gambling-related harm.[163]

Some research has considered the possibility of setting win limits, rather than loss limits, as a responsible gambling tool, but this is still preliminary and the researchers suggest additional studies be conducted before implementation.[164]

Looking forward, limit-setting or play-management systems appear to have much potential to support healthier levels of play, but researchers, regulators, and industry have not yet identified the most effective model. Any progress with these systems will require heavy investment in research and innovation.

4.6.1.5 Gambler Assistance – On-site Patron Assistance

Gambler assistance on the casino floor is also a standard component of responsible gambling policy. Several studies have examined how casino employees can initiate contact with individuals who appear to have a gambling problem and how to otherwise assist players who may be distressed. The most comprehensive of these studies was conducted in Australia and published in 2011, and outlined three scenarios in which employees may interact with patrons about problematic gambling:

1) Staff responses to patrons who ask for assistance for a gambling problem
2) Staff approaches to patrons who hint and/or show signs of problem gambling
3) Staff responses to third-party concerns.[165]

It is worth consideration that the new Japanese regulations include a mechanism to ensure a gambling venue to develop a code of conduct that includes instructions to staff on how to interact with patrons, as described above, to foster responsible gambling. This could include directly through regulation or indirectly through operator responsible gambling strategy requirements. In Victoria, Australia, for

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[163] Maddern, R.L. (2004). *The limit maintenance model: Temptation and restraint in gambling* (Unpublished PhD thesis). Penrith: University of Western Sydney.

Wohl, M.J.A., Lyon, M., Donnelly, C.L., Young, M.M., Matheson, K., & Anisman, H. (2008). Episodic cessation of gambling: A numerically aided phenomenological assessment of why gamblers stop playing in a given session. *International Gambling Studies, 8*, 249–263. doi: 10.1080/14459790802405855

[164] Walker, D. W., Litvin, S. W., Sobel, R. S., & St-Pierre, R. A. (2015). Setting win limits: An alternative approach to "responsible gambling"? *Journal of Gambling Studies, 31*, 965-986. doi:10.1007/s10899-014-9453-6

[165] Hing, N., & Nuske, E. (2011). Assisting problem gamblers in the gaming venue: An assessment of practices and procedures followed by frontline hospitality staff. *International Journal of Hospitality Management, 30*(2), 459-467. doi:10.1016/j.ijhm.2010.09.013

example, the Victoria Commission for Gambling and Liquor Regulation (VCGLR) requires that gambling venues include processes for interacting with patrons who:

- Have requested information about or assistance with a gambling problem or self-exclusion, and/or
- Are displaying indicators of distress that may be related to problem gambling.[166]

Singapore's responsible gambling code requires that gambling venues keep records of staff interactions with patrons,[167] a practice also worth consideration for Japanese gambling regulation. There is empirical support for the efficacy of this practice: having records of patron interactions can help staff better assess risk levels, and may make them more confident in initiating interactions.[168] In addition, keeping records creates a resource for employees to reference and learn what interactions are most likely to be well-received by patrons.[169]

Employee training for these processes – both interaction and record-keeping – is a key part of employee training and education,[170] as described in Section 4.6.1.2.

4.6.1.6 Problem Gambling Educational Materials

An essential service for operators to deliver is to provide adequate information about problem gambling services to enable informed decision making and effective referral to treatment/support. While there is little direct evidence of these resources directly increasing awareness of resources, indirect evidence from referred resources demonstrates their value. In the California Problem Gambling Helpline annual report, for example, casinos and cardrooms were the largest cited referral source.[171] Similarly, a study of an

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[166] See http://assets.justice.vic.gov.au/vcglr/resources/c4bd06f7-9ead-44d7-b2a1-09ea79aa43fd/bestpracticeguidelines_rgcodeofconduct.pdf for more information on the VCGLR's guidelines for best practices in gambling operators' codes of conduct

[167] Casino Control (Responsible Gambling) Regulations 2013 (Singapore), § II.5.2 (2013).

[168] Delfabbro, P., Borgas, M., & King, D. (2012). Venue staff knowledge of their patrons' gambling and problem gambling. *Journal of Gambling Studies*, *28*(2), 155-169.

[169] Davies, B. (2007). iCare: Integrating responsible gaming into casino operation. *International Journal of Mental Health and Addiction, 5*, 307-310.

[170] Williams, R. J., West, B. L., & Simpson, R. I. (2012). *Prevention of problem gambling: A comprehensive review of the evidence and identified best practices*. Retrieved from Ontario Problem Gambling Research Centre and the Ontario Ministry of Health and Long Term Care: http://hdl.handle.net/10133/3121

[171] BDA Morneau Shepell (2017). Problem Gambling Helpline Report. Retrieved from Chicago: http://www.calpg.org/wp-content/uploads/2017/02/2016-CA-Annual-Helpline-Report.pdf

Italian problem gambling helpline found that 14.7% of calls from gamblers were sourced through venue information.[172]

4.6.1.7 Advertising and Promotion

The scope of this section is limited to the impacts of advertising and promotion on vulnerable populations (e.g., problem gamblers, youth populations, etc.). Academic research frequently warns against the possible negative impacts of advertising and promotion, though there is currently a lack of empirical information on non-vulnerable populations.

Youth populations appear to be particularly vulnerable to certain forms of gambling advertising, and parallels are often drawn between youth attraction to gambling advertising and attraction to tobacco and alcohol advertisements.[173] Problem gamblers, too, regularly report being influenced more by gambling advertising and promotion, when compared to non-problem gamblers.[174] Advertising and promotional materials may act as triggers for problem gamblers, making it more difficult to abstain from gambling. These are issues that should generally be addressed at the regulatory level than the legislative level, as the advertising and marketing fields are quite dynamic. The new Japanese gambling commission, when it is formed, should review casino advertising codes of conduct to ensure they are aware of these sensitivities and are taking steps not to target these vulnerable populations.

With respect to direct marketing, gambling regulations to ensure that recognized problem gamblers (e.g., those on an exclusion list or those who have requested to be removed from mailing lists) should not

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[172] Bastiani, L., Fea, M., Potente, R., Luppi, C., Lucchini, F., & Molinaro, S. (2015). National Helpline for Problem Gambling: A Profile of Its Users' Characteristics. *Journal of Addiction*, *2015*, 1-9.

[173] Binde, P. (2014). *Gambling advertising: A critical research review*. Retrieved from London: http://www.responsiblegamblingtrust.org.uk/user_uploads/binde_rgt_report_gambling_advertising_2014_final_color_115p.pdf

Friend, K.B., & Ladd, G.T. (2009). Youth gambling advertising: A review of lessons learned from tobacco control. *Drugs: Education, Prevention & Policy, 16*(4), 283-297. doi: 0.1080/09687630701838026

[174] Binde, P. (2014). *Gambling advertising: A critical research review*. Retrieved from London: http://www.responsiblegamblingtrust.org.uk/user_uploads/binde_rgt_report_gambling_advertising_2014_final_color_115p.pdf

Korn, D., Reynolds, J., & Hurson, T. (2008). *Commercial gambling advertising: Understanding the youth connection (Final report)*. Guelph, ON: Ontario Problem Gambling Research Centre.

Bonke, J. (2007). Ludomani i Danmark II: Faktorer af betydning for spilleproblemer. København: Socialforskningsinstituttet.

receive targeted promotional marketing materials, and that there is an opportunity for all players to opt-out from this solicitation.

4.6.1.8 Underage Gambling

Minimum age requirements are generally viewed as an important harm reduction tool. While there is limited research in this area, evidence from changes in national policy in Finland revealed that a minimum gambling age of at least 18 years (or higher) is associated with reductions in problem gambling prevalence among teenagers.[175] This is consistent with some correlative evidence suggesting that age of onset of gambling and legal availability for young adults is associated with gambling disorder, and that participation by minors in jurisdictions with restrictions is fairly low.[176] There is growing evidence that part of the relationship between youth participation and future problem gambling relates to brain development among adolescents.[177]

Evidence from other fields suggests that effective enforcement of age requirements will improve compliance by users.[178] An appropriate regulatory model should therefore include minimum age requirements as well as guidelines for satisfactory enforcement, and we suggest that this be made consistent across all gambling products in Japan.

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[175] Nordmyr, J., & Österman, K. (2016). Raising the legal gambling age in Finland: problem gambling prevalence rates in different age groups among past-year gamblers pre-and post-implementation. *International Gambling Studies*, *16*(3), 347-356.

[176] Gainsbury, S. M., Blankers, M., Wilkinson, C., Schelleman-Offermans, K., & Cousijn, J. (2014). Recommendations for international gambling harm-minimisation guidelines: Comparison with effective public health policy. *Journal of Gambling Studies, 30*(4), 771-788.

Welte, J. W., Barnes, G. M., Tidwell, M. C. O., & Hoffman, J. H. (2009). Legal gambling availability and problem gambling among adolescents and young adults. *International Gambling Studies*, *9*(2), 89-99.

Wilber, M. K., & Potenza, M. N. (2006). Adolescent gambling: research and clinical implications. *Psychiatry (Edgmont)*, *3*(10), 40.

[177] Chambers, R. A., & Potenza, M. N. (2003). Neurodevelopment, impulsivity, and adolescent gambling. *Journal of Gambling Studies*, *19*(1), 53-84.

Wilber, M. K., & Potenza, M. N. (2006). Adolescent gambling: research and clinical implications. *Psychiatry (Edgmont)*, *3*(10), 40-48.

[178] Gainsbury, S. M., Blankers, M., Wilkinson, C., Schelleman-Offermans, K., & Cousijn, J. (2014). Recommendations for international gambling harm-minimisation guidelines: Comparison with effective public health policy. *Journal of Gambling Studies, 30*(4), 771-788.

4.6.1.9 Responsible Alcohol and Gambling Policy

Developing evidence-based policies around alcohol distribution in integrated resorts is a challenging task. Alcohol consumption is a normative adult behavior, as is its consumption in many IR amenities, including restaurants, convention centers, and casinos. With gaming in particular, alcohol use disorder has shown a consistent relationship (co-morbidity) with gambling disorder, and alcohol consumption also leads to more risky decision-making.[179]

To mitigate potential harm, general best practices include developing policies to reduce the likelihood of patrons over consuming at the venue, or harming themselves or others after leaving. These policies can include:

- Training on signs of intoxication and appropriate service of alcohol for player-facing staff;
- Restricting access by visibly intoxicated persons;
- Restricting access to intoxicated persons for a 24-hour period;
- Refusing access to gamble to anyone refused alcohol service;
- Providing transportation home or overnight accommodation for restricted persons; and
- Reporting to local law enforcement if intoxicated patrons attempt to drive a personal vehicle.

Alcohol policies are described here in relation to responsible gambling programs, but we note that they should also exist independently and throughout the IR.

4.6.2 Prevention: Community and Education Programs

4.6.2.1 Public Health Messaging/Gambler Education

Overall, educating the population about gambling and its potential risks is a commonly accepted best practice, and is an optimal intersection for both operators and community organizations to work together to shape and deliver the messages. It is important to note, however, that simply transplanting training modules from other jurisdictions is not advised. Following the model of California, Japan could adapt training requirements based on the common education levels and licensing certificates of doctors and

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[179] French, M. T., Maclean, J. C., & Ettner, S. L. (2008). Drinkers and bettors: Investigating the complementarity of alcohol consumption and problem gambling. *Drug and Alcohol Dependence*, *96*(1), 155-164.

Hodgins, D.C., Stea, J.N., Grant, J.E. (2011). Gambling disorders. *Lancet*, *378*, 1874-1884.

Kyngdon, A., & Dickerson, M. (1999). An experimental study of the effect of prior alcohol consumption on a simulated gambling activity. *Addiction*, *94*(5), 697-707.

clinicians in the country.[180] However, training and treatment services should also embrace Japan's unique culture, which differs from the geographically and culturally diverse populations found in California.

Regarding educational material content, general information about disordered gambling and typical signs and symptoms, risky gambling behaviors, and information about available help services are typically considered best practices. Researchers disagree over whether educating gamblers about the underlying mathematics of the games will alter behavior, though some empirical research indicates that this can be a good educational tool in conjunction with other lessons.[181] Some recent research has also shown that educating gamblers about the mechanics of electronic games (e.g., slot machines) can serve as a useful tool for responsible gambling.[182]

Two studies additionally examined different communication approaches. In an early study (2000), researchers found that the ubiquitous responsible gambling brochures were a useful tool for providing information about problem gambling, at-risk behaviors, and the availability of specialized help for those with gambling problems.[183] A more recent study (2009) found that the Onsite Casino Information Centre in Montreal contributed to increased understanding of the misperceptions about chance.[184] Empirical evidence for electronic-based education (e.g., through the casino website or via an app) was not found,

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[180] California Office of Problem Gambling. (2016). Problem and Pathological Gambling Treatment. Retrieved from http://problemgambling.ca.gov

[181] Bărboianu, C. (2015). Mathematical models of games of chance: Epistemological taxonomy and potential in problem gambling research. *UNLV Gaming Research & Review Journal, 19*(1), 17-30.

Turner, N. E., Macdonald, J., & Somerset, M. (2008). Life skills, mathematical reasoning and critical thinking: A curriculum for the prevention of problem gambling. *Journal of Gambling Studies, 24*, 367-380. doi: 10.1007/s10899-007-9085-1

Williams, R., & Connolly, D. (2006). Does learning about the mathematics of gambling change gambling behavior? *Psychology of Addictive Behaviors, 21*(1), 62-68. doi:10.1037/0893-164X.20.1.62

[182] Wohl, M. J. A., Gainsbury, S., Stewart, M. J., & Sztainert, T. (2013). Facilitating responsible gambling: The relative effectiveness of education-based animation and monetary limit setting pop-up messages among electronic gaming machine players. *Journal of Gambling Studies, 29*, 703-717. doi:10.1007/s10899-012-9340-y

[183] Ladouceur, R., Vézina, L., Jacques, C., & Ferland, F. (2000). Does a brochure about pathological gambling provide new information? *Journal of Gambling Studies*, 16(1), 103-107.

[184] Boutin, C., Tremblay, N., & Ladouceur, R. (2009). Impact of visiting an onsite casino information centre on perceptions about randomness and gambling behaviours. *Journal of Gambling Studies*, *25*(3), 317-330.

but given Japan's status as one of the more technologically-advanced countries in the world, the country may want to consider trialing education on such platforms as a research goal.

4.6.3 Treatment Programs: Addiction and Mental Health

Along with responsible gambling and prevention programs, treatment services are an essential part of a gambling harm reduction strategy. Evidence from around the world suggests that most people do not seek formal treatment for gambling disorder, often citing shame, denial, or self-sufficiency as reasons for note seeking help.[185] These are emotions that are like views of other mental health issues in Japan, though it is illustrative to note that mental health stigma has not been found to be an outlier versus other countries – an inter-country comparison found stigma was higher than Australia but lower than China.

Despite this behavior, evidence from a handful of longitudinal studies suggests that most people meeting criteria for gambling disorder cycle into a period of recovery within two years.[186] Treatment programs have evolved significantly over the past three decades, and there is compelling evidence for several different paths to recovery among persons with gambling disorder. In this section, we highlight the forms of treatment with the strongest evidence of impact, but note that many other tools are used that presently lack adequate research to be considered a scientific consensus of effectiveness.

4.6.3.1 Screening and Assessment

An effective program requires adequate tools for evaluation. While we recommend a comprehensive research program to assess impacts and opportunities for improvement, a more immediate need exists to validate commonly used tools in gambling research among Japanese populations.[187]

4.6.3.2 Gamblers Assistance - Helpline

A popular source for offering assistance to those who need it is a nationwide helpline. A helpline can be a resource for educational materials, as well as information on treatment, legal, financial, and other services that problem gamblers might need. Research has shown that helplines can be useful tools to support access of treatment, and as a tool that can benefit both gamblers and their families.[188]

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[185] Hodgins, D.C., Stea, J.N., & Grant, J.E. (2011). Gambling disorders. *Lancet, 378*, 1874-1884.

[186] Williams, R. J., Hann, R. G., Schopflocher, D. P., West, B. L., McLaughlin, P., White, N., ... & Flexhaug, T. (2015). *Quinte longitudinal study of gambling and problem gambling*. Ontario Problem Gambling Research Centre.

[187] Kido, M., & Shimazaki, T. (2007). Reliability and validity of the modified Japanese version of the South Oaks Gambling Screen (SOGS). *Shinrigaku kenkyu: The Japanese Journal of Psychology*, *77*(6), 547-552.

[188] Bastiani, L., Fea, M., Potente, R., Luppi, C., Lucchini, F., & Molinaro, S. (2015). National Helpline for Problem Gambling: A Profile of Its Users' Characteristics. *Journal of Addiction*, *2015*, 1-9.

A helpline is a highly recommended tool, but prior to implementation, Japan should consider how their culture and community would respond to it. In the United States, for example, the national and regional helplines are very well received and highly utilized. In South Korea, however, the gambling helpline was not initially a success. South Korea is a much more collectivistic culture than the very individualistic nature of United States culture. The collectivistic culture has very strong commitment to the family and society, and offenses (perceived or real) can lead to shame or loss of face.[189] In South Korea, concerns that one might call the helpline and be speaking to someone they know (thus potentially losing face in the community), or sharing a very personal thing with someone known or unknown outside their familial group, meant that very few people would call the helpline. South Korea re-launched with improved messaging about how reaching out for help can strengthen the family bond.[190]

4.6.3.3 Extensive Therapies

In terms of extensive therapies, cognitive-behavioral therapy (CBT) has been most reviewed through treatment/control procedures. CBT will emphasize aspects of emotions, behavior, and thinking that may be applied to topics such as managing triggers/cravings, analyzing gambling periods, or developing alternate activities to gambling. Other therapies, such as cognitive therapy, mindfulness, or motivational therapy have shown some effectiveness, though there is no clear consistent benefit of one approach.[191] In terms of impact, psychological treatments have been estimated to be about twice as effective as no intervention controls, with impacts still observed over a year later.[192]

4.6.3.4 Brief Interventions

Given high dropout rates and low rates of treatment seeking for more extensive treatment, brief interventions have received much attention for treatment of gambling disorder. Studies reviewing single-

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[189] Hofstede, G. (2015). Dimensions - Geert Hofstede. Retrieved from http://geert-hofstede.com/national-culture.html

[190] Korea Center on Gambling Problems. (2016). Korea center on gambling problems - Main functions and tasks. Retrieved from https://www.kcgp.or.kr/eng/center/SecretariatBase.aspx

NewsWorld Korea. (2014). Preventing and minimizing gambling harm: Tough act to follow. *NewsWorld Korea*. Retrieved from http://newsworld.co.kr/detail.htm?no=1359

[191] Rash, C. J., & Petry, N. M. (2014). Psychological treatments for gambling disorder. *Psychology Research and Behavior Management*, *7*, 285-295.

[192] Pallesen, S., Mitsem, M., Kvale, G., Johnsen, B. H., & Molde, H. (2005). Outcome of psychological treatments of pathological gambling: a review and meta-analysis. *Addiction*, *100*(10), 1412-1422.

session treatments, from 10 minutes to 90 minutes, delivered both in-person or over the phone, have all shown effectiveness versus controls, and generally have similar outcomes to longer term therapy.[193]

4.6.3.5 Self-Directed Interventions

Self-directed strategies, including gamblers anonymous (GA), workbooks (bibliotherapy), and internet-based interventions, have all shown some levels of effectiveness in creating positive outcomes. The limited evidence suggests that they are most effective when paired with professional treatment.[194] GA is a particularly interesting strategy to understand, given its existence today as the pre-eminent treatment tool in Japan. Unfortunately, there is limited understanding of the effectiveness of GA, and how it might best compliment other protocols. A recent review of all GA research did not find any clear link between GA and recovery, also noting that GA attendees tend to have more severe gambling issues and have more motivation to seek help than other population groups.[195]

That said, given the barriers to help-seeking among gamblers with problems, having adequate self-directed programs appears to be a useful component of a harm reduction safety net, including GA.

4.6.3.6 Psychopharmacology

Psychopharmacology is area that continues to show promise for treatment of gambling disorder. While no medications have received regulatory approval for treatment of gambling disorder, there is increasing support for certain classes of drugs (in particular, opioid antagonists) as effective treatment protocols. A 2014 review of pharmacological interventions found that their use in treatment is promising, but that most research has used small sample sizes, short duration and potentially non-representative subjects.[196] More work is needed in this area to determine its place in a national harm reduction strategy.

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[193] Rash, C. J., & Petry, N. M. (2014). Psychological treatments for gambling disorder. *Psychology Research and Behavior Management*, *7*, 285-295.

[194] Ibid.

[195] Schuler, A., Ferentzy, P., Turner, N. E., Skinner, W., McIsaac, K. E., Ziegler, C. P., & Matheson, F. I. (2016). Gamblers Anonymous as a recovery pathway: A scoping review. *Journal of Gambling Studies*, *32*(4), 1261-1278.

[196] Grant, J. E., Odlaug, B. L., & Schreiber, L. (2014). Pharmacological treatments in pathological gambling. *British Journal of Clinical Pharmacology, 77*(2), 375-381.

5 Summary of Recommendations

In this section, we summarize our review of literature and the marketplace to make specific recommendations around IR policies, regulations, and social considerations. We have organized these recommendations based on specific requirements found in the "Bill Promoting Implementation of Specified Integrated Resort Areas".[197] This is a slightly different presentation than the consolidated list in the Executive Summary, but reflects the same content.

While some recommendations may be specific to casinos located in IRs, taken together they constitute a holistic strategy that recognizes enhancements to the wider Japanese tourism and gambling/gaming sectors.

5.1 II-1-7: Strengthening the International Competitiveness of the Tourism Industry and Other Matters, and Development of the Regional Economies

Increasing international tourism through IR development is predicated on two key principles: maximizing capital investment by operators, and encouraging ongoing international business development by operators. Through tax codes, market structures, and procurement processes, there are meaningful opportunities available to policymakers to influence those positive outcomes.

Tax policies are among the most important decisions that affect the success of this (or any) gaming marketplace. Tax policy is also challenging, as there is no template that can be simply applied from one jurisdiction to another; given that each marketplace is affected differently by the local economy, license restrictions, social needs, and dozens of other factors. Broadly speaking, we recommend that Japan adopt a differential tax rate, with lower rates on VIP gaming to ensure competitiveness with foreign markets. We also suggest a preference for license fee (fixed periodically or lump-sum) taxes instead of high GGR tax rates, in order to encourage solicitation of lower-margin customers and foreign visitors. If the primary objective of IR expansion is tourism competitiveness, we would caution against any onerous tax rates, which would discourage investment and ongoing business development in inbound tourism markets like China and South Korea.

To develop the final tax code, we recommend that policymakers form a committee to work collaboratively with members of industry and 3rd-party experts with an understanding of gaming tax structures. This will allow policymakers to understand the business models of industry members, and leverage understanding from outside experts in tax theory and gaming tax in other markets.

With market structure, Japan has already committed to a limited licenses model, which we agree would lead to maximum investment in a high-attraction facility in a major metropolitan market. In terms of

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[197] Ishihara, H. (2017). Bill Promoting Implementation of Specified Integrated Resort Areas (English Translation). Retrieved from https://www.imgl.org/sites/default/files/media/member_pdfs/english_translation_of_the_japanese_casino_bill.pdf

demand, we strongly discourage placing any constraints on the domestic market (either through visit limits or entry fees). By limiting or significantly constraining the marketplace to foreigners, there will be less demand to warrant capital investment by operators – and we do not find support for any positive social benefits to offset these shortcomings. By allowing access to the domestic market, there will be a greater financial incentive for operators to invest in assets that will attract both domestic and international visitors, and social impact outcomes are better achieved via other approaches outlined in this document.

In addition, and this is no small consideration, policymakers should act to ensure that Japan's national competitive advantages for IRs are leveraged to attract visitors in what is an increasingly competitive global marketplace for IR visitation. This includes taking advantage of locations with strong tourism clusters, transportation infrastructure, and labor markets. In general, this supports a model of locating facilities in major metropolitan areas.

On procurement processes, we recommend that policymakers develop a process that ensures that the most talented and experienced management teams will lead these projects, perhaps in collaboration with the world-class Japanese businesses that already have demonstrated a capacity to create iconic, technology-driven, and/or tourist experiences. While local partnerships can be helpful, IRs are among the largest and most complex businesses in the world, and if non-expert parties have excessive control over their operation, positive industry impact and growth will be reduced.

5.1.1 Key Recommendations

I. Establish a government tax committee with input from operators and outside experts to leverage current understanding of gaming tax theory, and create a sustainable tax framework.
II. Allow access to the domestic market to create better incentives for investment, and as a result, a more attractive product for foreign visitors.
III. Locate IRs in areas with strong tourism clusters, transportation infrastructure, and labor markets. In general, this supports a model of locating facilities in major metropolitan areas.
IV. During procurement process, ensure management experience with large IRs is heavily weighted, to ensure returns on investment are maximized with these complex institutions.

5.2 II-1-10-(4): Matters for the Purpose of Preventing the Occurrence and Reporting of Crimes

While most of our recommendations around regulation and law enforcement appear in our complementary report, "Perspectives on Gambling Regulatory Processes: Eliminating Organized Crime in Nevada Casinos", we reemphasize here that the available evidence suggests that a well-regulated integrated resort (or casino, more generally) does not attract any increase in overall crime rates. Modifications to law enforcement practices around property and other crimes should simply reflect relevant increases in overall temporary visitor volumes.

In order to ensure that these issues are consistent and adequately managed in Japan, we recommend that a research program include crime as a relevant area of study. In particular, the program should assess, using

a causal methodology where possible, changes in crimes often thought to be associated with gambling, including burglary, forgery, fraud, theft, robbery, domestic assault, child abuse, and impaired driving.

5.2.1 Key Recommendations

I. Modify law enforcement practices to accommodate large increases in temporary visitor volumes onsite. This may also include specialized law enforcement for gaming related investigations.
II. Establish a long-term research program to assess baseline and ongoing changes in key crime statistics.
III. Adopt the regulatory model as advised in the complementary IGI report, "Perspectives on Gambling Regulatory Processes: Eliminating Organized Crime in Nevada Casinos".

5.3 II-1-10-(5): Matters concerning the regulations necessary to maintain public morals or the like

Regulatory oversight of matters related to public health, societal values, and related issues are complex, requiring careful consideration at many steps in the establishment of the appropriate institutions. For this reason, we recommend that a gambling commission committee or responsible Ministry committee be established with the oversight and responsibility for public health and safety, along with a staff to support that mandate. To ensure a broad range of expertise, this committee should include membership with individuals that have experience in:

- Responsible gaming in gaming operations and/or gaming industry manufacturing
- Criminal investigations and law enforcement
- Public health and addiction
- Legal and policy issues
- Corporate finance and securities

The committee should govern the development and ongoing operation of a gambling-neutral National Problem Gambling Council, with a mandate for advocacy and to develop a public health safety net for gamblers (inclusive of non-IR gambling), including:

- Development of evidence based gambling treatment programs. This should consider:
    - Delivery of specialized gambling treatment services across Japan
    - Capacity building in gambling treatment among existing medical and addiction service providers
    - Capacity building in gambling treatment within post-secondary addiction and mental health education programs
    - Support for self-directed strategies, including Gamblers Anonymous
    - Support for affected others
- Develop a public education program to build awareness of:
    - Support resources for problem gamblers and their affected others

    - Myths and misconceptions of gambling
    - Gambling age requirements
    - Other risks of gambling
- Work cooperatively with operators to support positive player health and effective referral protocols for players with issues or potential problems
- Generally, advocate on the behalf of those persons with gambling disorders and affected others
- Evaluate trends, developments, and etiology of gambling behavior and addiction over time; this should include identification of high-risk groups

5.3.1 Key Recommendations

I. Establish an inter-disciplinary committee to oversee, and report to government, on matters of public health and safety.

II. Establish a gambling neutral National Problem Gambling Council, with a mandate to develop a public health safety net for gamblers, and ensure advocacy for persons with gambling disorders throughout government and industry.

5.4 II-1-10-(6): Matters concerning the regulations on advertising and provision of information

Advertising and marketing standards should be developed for the gambling industry that reinforce several key principles. Those principles should include:

- No targeting of self-excluders, individuals in treatment, or other high-risk populations
- No targeting of children/youth under the legal gambling age
- No reinforcement of gambling myths/misconceptions
- Enforcement of the legal gambling age
- Enhancement of player awareness of responsible gambling and problem gambling programs and services
- Consistency with other standards in place for all Japanese advertising/marketing

As the proposed IR developments include non-gaming amenities, it will be important that advertising standards distinguish between gaming and non-gaming marketing, to ensure that competition on non-gaming amenities is equal with other businesses.

5.4.1 Key Recommendations

I. Develop gambling industry advertising and marketing standards that limit risk to vulnerable populations while enhancing awareness of services that contribute to positive player health. These standards should evolve over time to recognize new mediums, and therefore should integrate input from a variety of stakeholders, including the National Problem Gambling Council.

5.5 II-1-10-(7): Matters concerning the dissemination of knowledge required to protect youths, and other measures necessary for the sound upbringing of youths

As youth are a vulnerable population to gambling-related harms, specific measures are necessary to protect their health. The education of youth is also an opportunity to development long-term understanding and awareness of positive gambling behaviors and potential risks. As part of the response, a formal education program should be developed as part of the national educational curriculum. This content should be developed in partnership between the National Problem Gambling Council and the Ministry of Education, Culture, Sports, Science and Technology. At a minimum, this curriculum should include content on:

- Signs/symptoms of gambling-related problems
- Risks of gambling for youth
- Problem gambling support resources

In addition to development of an education, minimum compliance standards should be developed to minimize opportunities for youth gambling. This should include establishment of a minimum required gambling age, and expectations for industry enforcement of age requirements.

5.5.1 Key Recommendations

I. Develop gambling education program delivered through the educational system.
II. Establish minimum standards for prevention of youth gambling.

5.6 II-1-10-(8): Matters concerning the measures necessary to prevent visitors of the casino facilities from being adversely affected by the use of the casino facilities such as gambling addiction

The purpose of casino related health programs is two-fold. First, programs should promote and support healthy behaviors and beliefs by players, to prevent the development of gambling-related harms. Second, programs should be in place to effectively refer players that are experiencing significant negative impacts of gambling to support resources – and we emphasize that responses should only be driven by clearly defined signs of distress or specific requests from players themselves. These resources may include formal treatment, but they may consist of responsible gambling programs that support more normative behaviors and beliefs.

Given that responsible gambling programs must be integrated into other business operations and player communications, a prescriptive (and indeed restrictive) model may not lead to optimal outcomes for all of Japan's interests. Instead, operators should be rewarded for contributing meaningfully to these approaches. This can be done by tasking operators with developing periodic responsible gambling

strategies, submitted for approval to the government gambling committee overseeing public health & safety, with input from the National Problem Gambling Council.[198]

Responsible gambling strategies should consider the following programs with moderate or strong evidence of importance/effectiveness:

- Positive play programs – responsible gambling programs that promote positive behaviors and beliefs by players
- Self-exclusion programs and enforcement protocols
- Age gating enforcement protocols
- Training programs for front-line employees, management, and corporate staff
- On-site patron assistance, including escalation protocols for clear signs of distress or requests, and specialized staff for responsible gambling education and support
- Voluntary gambling budgeting tools
- Conspicuous location of materials/signage to provide awareness of positive play and support resources
- Responsible alcohol service policies – given then focus of binge alcohol use and intoxicated driving in Japan more generally, alcohol strategies should go beyond the relationship to gambling

In addition to those specific tactics, operators' strategies should describe how performance will be evaluated to ensure transparency/accountability and how they will invest in research and development to ensure continuous program improvement.

5.6.1 Key Recommendations

I. Require operators to periodically develop a comprehensive responsible gambling strategy to be approved by the government gambling committee overseeing public health & safety. This strategy should include evidence based responsible gambling programs and policies.

II. Require operators to develop a responsible drinking strategy. This strategy should include policies, procedures, and training on alcohol distribution and responding appropriately to intoxicated persons.

III. Require operators to develop a research and evaluation strategy for their responsible gambling programs, to ensure transparency and continuous program improvement.

5.7 Other Considerations

In addition to the items organized above, there are several other considerations where we have elected to provide commentary. These include recommendations that are not directly related to the categories above,

[198] Some minimum standards may be appropriate if there is a need for coordination across multiple operators (e.g., a national self-exclusion list).

and comments on items that are not included in our recommendations, but may be presently under consideration by government.

5.7.1 Problem and Responsible Gambling Research in Japan

While there is a large international community of gambling researchers and research centers, jurisdictions often have unique circumstances, institutions, player behaviors, and other idiosyncrasies that can limit the application of insight from one jurisdiction to another. Therefore, Japan should invest in responsible and problem gambling research (both leveraging established international experts and developing local expertise), including improving understanding of:

- Problem gambling prevalence measurement tools
- Positive play measurement tools
- Risk-factors and protective-factors for gambling disorder
- Strategies to improve informed decision making
- Emerging technologies in responsible gambling
- Emerging gaming technologies
- Barriers to help-seeking
- Effective interventions for Japanese problem gamblers and affected others

5.7.2 Admission and Admission Fees

As part of our recommendations, we have not included any admission restrictions (apart from the self-exclusion program) or admission fees. As there is limited information about the effectiveness of these programs in reducing harm, there is no evidence for such a recommendation. Theoretical research on the topic suggests that admission fees may have unintended consequences due to its differential impact on behavior by players with and without gambling disorders. Worryingly, admission fees likely increase the share of revenue from players with a gambling disorder.[199]

5.7.3 Wager Limits

As part of our recommendations, we have not included any wager limits (apart from voluntary budgeting tools). As there is limited information about the effectiveness of these programs in reducing harm when they are mandatory, there is no evidence for such a recommendation. In addition, there is potential for unintended consequences of such programs – for example, wager limits may increase the length of time spent gambling if there is no change in players' budgets – this would increase potential negative impacts of the policy.

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[199] Philander, K.S. (2017). Entry Fees as a Responsible Gambling Tool: An Economic Analysis. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3011079

5.7.4 Key Recommendations

I. Invest in problem and responsible gambling research in Japan. An early priority should be development/validation of gambling disorder screening tools. Collaboration with established researchers internationally and development of domestic capacity should both be emphasized.

II. Avoid immediate implementation of policies with limited evidence of effectiveness, as there may be unintended consequences – this includes wager limits and admission fees. A long-term research strategy can inform gradual introduction of innovative harm reduction tactics.

6 About the Authors

6.1 Kahlil Philander, Ph.D.

Dr. Kahlil Philander is one of the world's leading economic experts on the global gaming industry. He is currently an Assistant Professor at Washington State University's Carson College of Business. Prior to his work in this role, Dr. Philander served as Director of Social Responsibility at the Government British Columbia's BC Lottery Corporation, where he oversaw the Province's responsible gambling programs. Dr. Philander has also served as an Assistant Professor at the UNLV William F. Harrah College of Hotel Administration, and as a Senior Policy Researcher at the Responsible Gambling Council of Canada.

Dr. Philander's academic and research background includes extensive experience in socio-economic modeling, having completed over two dozen economic impact and forecasting studies in the tourism sector. Dr. Philander has worked in the gambling and policy field as an economist since 2005. He has provided analysis and research for private- and public-sector organizations based in the U.S., China, Singapore, Canada, Central America, Europe, and Australia/New Zealand.

Dr. Philander has published widely in peer-reviewed academic journals, including Tourism Economics, Frontiers in Psychology, Journal of Gambling Studies, and the Gaming Law Review and Economics. He is a member of the editorial board of International Gambling Studies, Harvard's Division on Addiction's Brief Addiction Science Information Source, and the UNLV Gaming Research & Review Journal. Among other outlets, he has been interviewed by the Washington Post, Toronto Star, CBC, Los Angeles Times, Huffington Post, and New Scientist magazine. In 2015, Dr. Philander was named to Global Gaming Business Magazine's 40 under 40 list, and was a co-recipient of the Research of the Year Award from the National Council on Problem Gambling.

Dr. Philander received his Doctorate from the University of Nevada, Las Vegas, where his dissertation focused on the economic impacts of gambling policy. He has also received a Master of Arts in Economics from the University of Toronto, and a Bachelor of Commerce degree with Honours, from the University of British Columbia

6.2 Brett Abarbanel, Ph.D.

Brett Abarbanel, Ph.D., is Director of Research at the UNLV International Gaming Institute, with a joint appointment at the UCLA Gambling Studies Program. Dr. Abarbanel has expertise in global gambling and social science applications, and her research covers Internet gambling policy and behaviour, esports and gambling, operations and technology use, and responsible gambling and community relations. She has managed and contributed to over $1 million in grant and contract funding. Dr. Abarbanel serves as co-Executive Editor of the *UNLV Gaming Research & Review Journal*, which publishes internationally-relevant gambling research articles representing a broad array of academic disciplines. She has been interviewed as a gambling expert for the New York Times, Wall Street Journal, and the Discovery Channel and served as a consultant for multiple industry and government entities.

She was recently honored by the Global Gaming Expo and The Innovation Group with their 2015 Emerging Leader Award, and was named to the 2016 Global Gaming Business 40 Under 40 list. Dr. Abarbanel completed her B.S. in Statistics at Brown University, where she received the Hartshorn Hypatia Award for excellence in mathematics. She completed her M.S. and Ph.D. at University of Nevada, Las Vegas, where she received the Best Thesis and Best Dissertation awards for her work on sports book patronage and online gambling user experiences, respectively.

6.3 Bo Bernhard, Ph.D.

Dr. Bo Bernhard calls Las Vegas home, but he works frequently in jurisdictions as diverse as South Africa, Australia, Singapore, South Korea, Macao, Mexico, Vietnam, Japan, Taiwan, Argentina, Brazil, Russia, Portugal, Austria, Greece, England, and Canada – as well as dozens of states in the U.S. Dr. Bernhard began his research career at Harvard University, where as an undergraduate he completed a double major (sociology and psychology) magna cum laude thesis on the community impacts of the gaming and industry in Nevada. The foundations of this analysis have since been extended worldwide, and by the age of 30, Dr. Bernhard had lectured on six continents.

After earning his Ph.D. in 2002, Dr. Bernhard was named the inaugural Research Director at the UNLV International Gaming Institute, and he was awarded a dual professorship in hotel management and sociology. In 2011, he was named Executive Director at the IGI, where he now oversees all research and academic functions. Representing the university in these roles, Dr. Bernhard has delivered over 200 keynote addresses in clinical, regulatory, government, and policy settings. He has published in the top journals in both the business sciences (including Cornell Quarterly) and the social sciences (including a guest edited special volume of American Behavioral Scientist), and currently serves as executive editor for a leading peer-reviewed academic journal, Gaming Research and Review.

Dr. Bernhard's projects have been prominently featured in local and national media outlets (including CNN, PBS, NPR, The New York Times, The Australian Broadcasting Channel, and The History Channel). Overall, he has directed over $4 million in grant-funded projects, on subjects ranging from problem gambling to the social impacts of casino industries to gaming regulation and policy features to internet gambling. These efforts have earned him several awards of late: in 2007, his focus on globalization earned him the World Affairs Council's International Educator of the Year award; in 2008, he was given the UNLV Hotel College's Boyd Award for Research; in 2009, he was given the Hotel College's top teaching award and the university-wide Spanos Teaching Award; in 2010, he was named a Lincy Fellow at Brookings Mountain West; and more recently he was given the university-wide Barrick Scholar Award, a CoRE (Collaborative Research and Education) Fellow Award, and the hotel college's Denken Award for research.

6.4 Disclosures

Dr. Philander stands to make no financial gains related to any topics discussed in this report, and does not directly hold any financial instruments related to gaming organizations. Over the past five years, he has

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