
8. Conclusion

This final section of the report reviews how the analytical framework developed for this project contributes to a comprehensive and integrated picture of the social and related economic impacts of gaming. In particular, this section: (1) discusses how the analytical framework improves on previous gambling impact models; and (2) identifies future directions for gambling impact research as suggested by the analytical framework.

8.1 Comparison with previous gambling impact models

As discussed in detail in Section 5.1 of this report, three conceptual models examining aspects of the social and economic impacts of gambling were identified as part of the literature search for this project, and were subsequently used as a basis for developing the analytical framework presented in this report. These three models were:

- Model 1 presented in *Summary of Findings 1996-97 Research Program* (Arthur Andersen, 1997);
- Model 2 presented in *Annual Gaming Report 1997-98* (Alcohol and Gaming Authority, 1998); and
- Model 3 presented in *Australia's Gambling Industries* (Productivity Commission, 1999).¹

8.2 Limitations of previous gambling impact models

Four limitations were identified as occurring consistently across the models listed above. These limitations can be summarised as:

1. use of overly broad and/or a limited number of impact areas and levels of data analysis in the structure of these models restricts specificity in their classification and evaluation of research findings.
2. limited consideration is given in these models to establishing linkages across areas of gambling impact and levels of data analysis which restricts their capacity to integrate research findings and determine an overall net gambling effect.
3. these models fail to consider the influence of variables such as gender, age, cultural group, and location (ie. metropolitan or rural) in moderating the nature (ie. positive or negative) and scale of gambling impacts.
4. these models offer limited analysis of the availability and adequacy of indicators used to measure positive and negative gambling impacts.²

¹ See Section 5.1 of this report for a description of the purpose, key components and structure, and specific limitations of each of these models.

² Refer to Section 5.1 of this report for more detailed information about the implications of these limitations in developing a comprehensive understanding of gambling impacts.

8.3 Advantages of the analytical framework developed in this report

The analytical framework developed by SERC for this project presents a conceptual structure aimed at overcoming these limitations. Specifically, this new model is represented by a two-dimensional matrix comprising twenty-eight cells (see Table 5.1). The horizontal axis of the framework shows the four “levels of analysis” at which gaming impacts are examined in the literature (ie. individual and family, community, regional, and State), with the vertical axis of the framework dividing these impacts into seven outcome areas or “dimensions of impact” (ie. health and wellbeing, culture, recreation and tourism, employment and education, legal/justice, economic development, and financial).³

This conceptual structure extends previous work on gambling impact models by:

- incorporating in a single model the four levels at which data is analysed in the gambling literature. That is, inclusion of “individual and family”, “community”, “regional”, and “State” as discrete units of analysis within the analytical framework allows for a more comprehensive summary and evaluation of research findings.
- drawing a distinction between “community” and “regional” levels of data analysis. This highlights the need to distinguish between data collected on a predominantly spatial/social entity (ie. community) and data collected on a predominantly geographical/economic entity (ie. region).
- including (on a single “dimensions of impact” axis) specific, clearly defined social and related economic impacts, in conjunction with the use of uniform levels of analysis across social and economic impacts, facilitates the integration and evaluation of gambling data. Previous models have relied on separating social and economic impacts by level of analysis—for example, ignoring economic impacts at the individual level and social impacts at the State level.
- including “cultural impacts” as a specific impact dimension within the model.

In addition to these structural advantages of the analytical framework, use of the data summary format within each framework cell (ie. Positive impacts—nature of positive impacts, indicators, data availability, measurement issues and approaches; Negative impacts—nature of negative impacts, indicators, data availability, measurement issues and approaches) allows researchers to:

- Examine the nature (ie. positive or negative) and scale of gambling impacts within each cell, and variables that moderate these relationships (eg. gender, age, cultural group, regional area).

³ Definitions of each of these “levels of analysis” and “dimensions of impact” are provided in Table 5.2 and 5.3 respectively.

- Assess the availability and adequacy of indicators used to measure gambling impacts.
- Isolate gaps in our current understanding of gambling impacts and identify new directions for gambling impact research.

To summarise, the matrix structure and specific “dimensions of impact” and “levels of analysis” adopted in the analytical framework improves precision in the classification and summary of research findings, and allows researchers to identify and evaluate linkages across “dimensions of impact” (ie. columns in the matrix) and “levels of analysis” (ie. rows in the matrix). Also, the format of cells within the analytical framework assists in determining gaps in gambling impact research and refining the measurement of these impacts. Finally, the generic structure of the analytical framework makes it readily adaptable for use in other social impact research domains (eg. alcohol and illegal drug use).

8.4 Future directions for gambling impact research

In developing the analytical framework required for this project and using it to summarise and evaluate the Authority’s *1998-99 Research Program*, several “gaps” in gambling impact research were identified. Broadly, these gaps can be divided into conceptual issues and methodological problems (see Table 8.1), and are discussed below in the context of future research.

Table 8.1 Considerations for Future Gambling Impact Research

Conceptual issues:

- Areas of impact requiring further research: cultural and workplace impacts
- Factors affecting the distribution of impacts
- Length and level of industry development
- Causality

Methodological problems:

- Lack of comparative data within and across studies
 - Lack of availability and adequacy of impact data
 - Reliance on a single method of data collection
-

8.5 Conceptual issues

Development and application of the analytical framework revealed a number of conceptual issues that require consideration in future research. Key among these were: (1) the absence of research on particular areas of gambling impact; (2) the need to isolate factors that affect the distribution of positive and negative gambling impacts; (3) the lack of sensitivity to the length and level of gaming industry development; and (4) the inappropriate use of causal assumptions. These conceptual issues are discussed below.

Areas of impact requiring further research. Use of the analytical framework to summarise the gambling literature highlights a lack of research into specific cultural variables (eg. gender, age, ethnicity, social class) that affect gambling

impacts. In arguing that greater attention be given to the cultural implications of gambling, Jan Macmillan (personal correspondence) notes that:

Few gambling impact studies examine the tensions between the commercialisation of gambling and traditional cultural values and practices. Similarly, future gambling research is needed which contextualises gambling as an everyday social practice in relation to 'community', in both its spatial and cultural dimensions.

In addition to a lack of research on the cultural impacts of gambling, the social and economic effects of gambling on the workplace requires further research. Research suggests that gambling is becoming more integrated into “everyday life”. Therefore more research is needed to examine how work sites are being impacted by the commercialisation of ever increasing gambling products. Do specific industries or organisations have higher gambling rates than others? Are these rates related to job stress, boredom, lack of control, access to funds (company credit cards), opportunities to be out of the office, proximity to gambling venues, etc.? What workplace practices are effective in promoting responsible gambling and detecting problem gambling? Although preliminary evidence suggests that gambling is not considered a major problem by employers (Alcohol and Gaming Authority, 1998), this has not been well documented in the academic literature generally or in the Australian context specifically.

Factors affecting the distribution of impacts. Despite a growing amount of research into the positive and negative impacts of gambling, limited attention has been given to identifying the factors which affect the distribution of these impacts at different levels of data analysis. For example, certain demographic variables (eg. gender, age, income level, ethnicity) have been implicated in preliminary research as factors moderating gambling impacts at the individual level of data analysis. However, additional research is needed to isolate those factors affecting the distribution of gambling impacts at other levels of data analysis. Such factors may include: (1) family structure and level of cohesion at the family level of data analysis; (2) size and spatial location of members at the community level of data analysis; (3) geographical location (metropolitan or rural) at the regional level of analysis; and (4) size and location at the State level of data analysis.

Length and level of industry development. Despite almost a decade since the introduction of gaming machines to Victoria, research on the impacts of gaming within the State continues to be framed in terms of the effect of the “introduction” of gaming machines. This lack of sensitivity to the length and level of industry development may distort research findings on the current nature and scale of gaming impacts in Victoria. Future research questions, designs, and instruments should acknowledge the length and level of industry development to facilitate an accurate understanding of the current impacts of gaming.

Causality. The majority of gambling impact studies fail to adequately address the issue of causality. For example, studies on the impact of casinos on

community crime often assume (rather than investigate) a direct causal relationship between the introduction of a casino and statistics showing increased crime. Mediating issues such as displacement, changes in policing practices and general environmental factors are not systematically examined. Similar criticisms can be made of many studies that explore the relationship between gambling and economic hardship. Future research that distinguishes between direct and indirect gambling impacts is required.

8.6 Methodological problems

In addition to the conceptual inclusion of gambling-related factors, research designs and data collection must enable researchers to make accurate statements about the nature, scale, and links between gambling impacts. A number of methodological problems reducing the accuracy and generalisation of gambling research have been cited in the literature. These include: (1) lack of comparative data based on control groups, longitudinal research designs, and national studies; (2) lack of availability and adequacy of impact data; and (3) reliance on single data collection methods. New directions for gambling impact research are discussed below in terms of overcoming these methodological problems.

Lack of comparative data within and across studies. Studies investigating the impacts of gambling rarely incorporate control groups (eg. non-problem gamblers), regions or States⁴. In addition, much of the existing research on the social and related economic impacts of gambling is based on studies conducted in a single State or country observed over one or two time periods, or focused on one particular type of impact (eg. crime, problem gambling). Studies of a single State or region based on limited time points do not provide enough reliable information for trends or impacts to be identified with any confidence. The absence of longitudinal research means that most studies provide only snapshots that are incapable of demonstrating trends, the duration of impacts, or the factors which influence these trends. Moreover, inadequacies in data sets, changes in data categories, and changes in calculation and reporting procedures for statistics prevent reliable time series analysis and comparisons across studies.

Lack of availability and adequacy of impact data. Many official statistics (eg. crime data) are not sensitive enough to allow specific gambling-related impacts to be disentangled from more general patterns and trends. For example, no particular tracking mechanisms are in place to monitor crimes motivated by problem gambling. The development and implementation of such mechanisms should be explored to facilitate future research.

Other data are available only in aggregate form at the State level, and indicate nothing, for example, about community or regional issues. Use of such

⁴ In the current Australian context, for example, Western Australia (which is the only Australian State without clubs and hotel EGMs) provides a useful control for studies of the impact of gaming machines outside casinos (Australian Institute for Gambling Research, 1999).

aggregate statistics may lead to invalid assumptions about the nature and scale of gambling impacts at lower levels of data analysis.

A further problem is that social impacts are often difficult to quantify. This absence of “hard data” restricts the reliability and generalisation of social impact findings. Methods and indicators that quantify social impacts are required for future gambling research.

Reliance on a single method of data collection. There is a marked reliance in gambling impact research on the use of single methods of data collection. In particular, the social impacts of gambling are almost exclusively examined via qualitative methods with limited attempts to verify findings through quantitative means. There is a tendency in gambling impact studies to identify the types but not scale of impacts. This may reflect an excess reliance on qualitative data collection methods. Use of multiple data collection methods in future research will provide a clearer picture of the nature, stability and scale of gambling impacts.

8.7 A final note

An informal set of standards and practices exist among researchers in this field, however accuracy of interpretations can be problematic due to the complexity of gambling impacts, lack of data, inadequate methods, imperfect models, and biasing assumptions. As a final point, it is inappropriate for Australian researchers to assume that they can simply transfer concepts, findings or assumptions from research conducted in other countries to their own work. Significant differences between Australia and other countries in the socio-cultural environment, the structure of gambling industries, gambling products and public policies make such assumptions invalid (Australian Institute for Gambling Research, 1999). Australian gambling research should be sensitive to the distinctive characteristics of the local environment.