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Gambling with policy



*The economic impacts of removing
gaming machines from clubs and pubs*



Prepared for

Gaming Technologies Association



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Introduction

The Centre for International Economics has been engaged by the Gaming Technology Association to evaluate the economic impacts of removing gaming machines from clubs and pubs. This briefing sets out preliminary estimates of the employment, economic activity, investment and government impacts arising from such a policy change. This briefing does not value social impacts related to problem gambling or the activities of clubs.

Spending on gaming machines comprises almost 2 per cent of Australia's household consumption. There are currently just over 200 000 gaming machines in Australia, with 94 per cent of these located in clubs and pubs. Annual expenditure on gaming machines in 2005-06 was \$10.4 billion. Clubs and pubs derive more than half and a quarter of revenues from gaming machines respectively.

Australia is a world leader in gaming machine technology and manufacturing. Revenue from the manufacture of gaming machines was \$610 million in 2006-07, with manufacturers employing 2900 people. Exports of gaming machines were approximately \$310 million in 2006-07, with exports therefore comprising more than half of the revenues for the industry.

Gaming machine revenues earned by clubs and pubs are subject to state government taxes. In 2006-07, state governments received \$3 billion in tax revenue from gaming machine activities. This represented 6 per cent of total state government tax revenues. GST is also collected on gaming machine expenditure, contributing approximately \$1 billion in revenue, which is allocated to the states.

If gaming machines were removed from clubs and pubs, then clubs, pubs, manufacturers and state governments will all be directly impacted. Many other parts of the Australian economy will also be indirectly affected. This briefing reports preliminary estimates of these economic impacts using a computable general equilibrium (CGE) model that accounts for industry linkages, economic adjustment and consumer behaviour. CGE models have been widely used by the Productivity Commission and the CIE for the analysis of policy changes.

Before setting out the results, there are a number of key uncertainties around any estimation of the economic impacts of removing gaming machines from pubs and clubs.

- The analysis is indicative of the economic impacts that might arise from the intent of the *Poker Machine Harm Reduction Tax*. There is considerable uncertainty about

when the tax outlined in this legislation may result in gaming machines becoming unprofitable and the amount of tax that may be collected before this. At the latest, all gaming machines will be removed from clubs and pubs before 2015 when the tax will amount to more than the returns available from the machines (15 per cent).

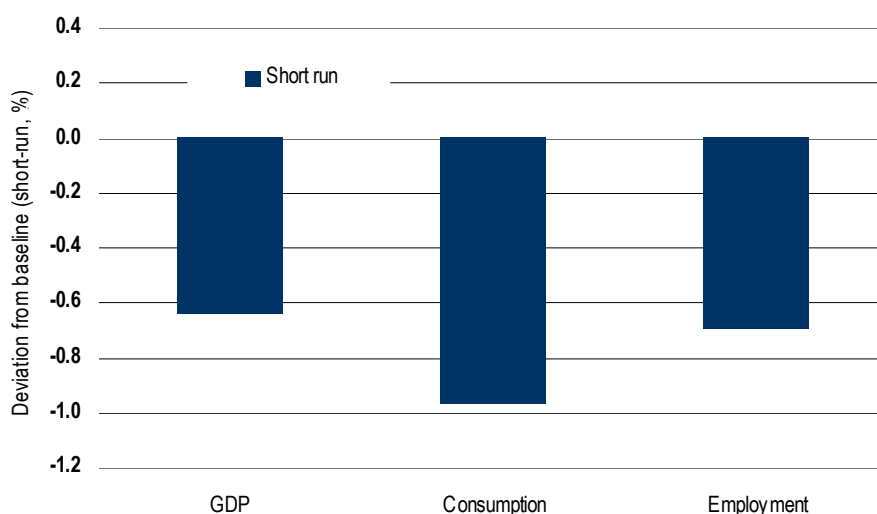
- Clubs and pubs are likely to lose revenue from gaming and from other sources such as food and beverage sales. The degree to which these revenue streams are complementary to gaming is not well understood, although it is clear that there are substantial differences between clubs with and without gambling facilities. For example, clubs in Western Australia, where gaming machines are not allowed, employ 74 per cent less staff per club than in other states and territories and receive 60 per cent less revenue from non-gambling activities per club. The estimates presented in this briefing assume a conservative 30 per cent decrease in non-gambling revenue from clubs following the removal of gaming machines and no change in the non-gambling revenue of pubs.
- Australian manufacturers of gaming machines export approximately \$310 million of machines per year. The removal of gaming machines from clubs and pubs will significantly reduce their Australian market and may lead to a shift in export operations to other countries. The primary analysis considers economic impacts if export manufacturing remains in Australia. The additional economic impacts if all export manufacturing relocates out of Australia are assessed in sensitivity analysis.
- State governments will have to raise other taxes, provide fewer services or go into debt to replace tax revenue from gaming machines. The primary analysis assumes that state governments replace tax revenue through an increase in Australian government taxes (the GST), directed to states through grants. The sensitivity of results to this assumption is tested by replacing an increase in Australian Government taxes with an increase in state payroll taxes. Both the GST and state payroll taxes are relatively efficient taxes, providing a conservative estimate of the economic contraction from additional taxation.
- A prohibitively high additional tax on gaming machines that removes them from clubs and pubs will likely lead to increased gambling in casinos, racetracks and online. The analysis captures economic linkages but does not assess the impact of the regulatory changes on the amount of gambling undertaken in total.

The preliminary results reported below set out the expected impacts in the short-run and the long-run of the removal of gaming machines from clubs and pubs as a result of additional prohibitively high taxes on this activity. In the short-run, the economy is less flexible and negative impacts will be larger. There may be reductions in employment levels, capital will not be reallocated optimally and people will not move between regions. The long-run negative impacts are smaller as adjustments ameliorate some of the consequences of taxing gaming machines, such as lower employment.

Short-run economic impacts of additional gaming taxes

The removal of gaming machines from pubs and clubs through additional taxation is expected to have significant deleterious impacts on Australian consumers, businesses and the Australian economy. In the short-run, before the economy adjusts to the incentives embodied in the regulatory changes, preliminary results suggest that the economy is expected to be 0.6 per cent, or \$6.6 billion, smaller than it would otherwise have been (chart 1). Consumption, the best measure of consumer welfare, is expected to be about 1.0 per cent lower, equivalent to \$5.7 billion. (Consumption measures everything that people spend money on, including sporting facilities and the like provided by clubs. These activities are valued according to the price that people pay for them.) There are expected to be 74 000 fewer jobs than would be the case without regulatory changes, reflecting a fall in employment of 0.7 per cent.

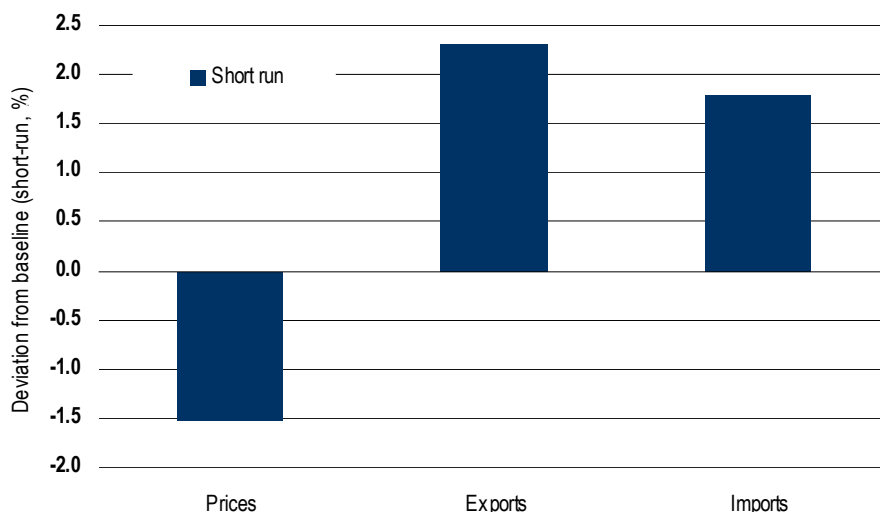
1 Short-run impacts of additional gaming taxes levied on pubs and clubs



Data source: CGE model simulations.

Prices are expected to be lower than they would otherwise have been, as aggregate demand is lower (chart 2). Exports and imports are both expected to be more than 1.5 per cent higher than without regulatory changes. With lower domestic prices and lower domestic demand, businesses focus on the export market. Imports rise as exports require intermediate inputs that are imported. There is also a consumer effect as consumer demand shifts away from gaming, a domestic activity, and towards other products and services, some of which are imported (for example, electronic equipment and transport equipment). In the long-run, the increase in exports and imports is strengthened by a falling wage, pushing exports higher again and increasing demand for imported inputs.

2 Short-run impacts on prices, exports and imports



Data source: CGE model simulations.

The short-run economic impacts do not fall evenly across the states. Western Australia, which has no gaming machines in pubs and clubs, is impacted only minimally, reflecting flow-on effects of lower aggregate demand in the other states and the effects of a higher GST. The GST impacts on Western Australia as it is levied nationally, meaning that all states bear the burden of replacing revenues lost from gaming machines.

NSW and ACT are the most affected states proportionally, with gross state product, a measure of the amount of the difference between revenue and the cost of intermediate inputs, expected to be about 1 per cent lower in these regions (table 3). The reduction in gross state product is equivalent to over \$3 billion for NSW. The other states and territory economies are expected to be about 0.5 per cent lower than without changes in gaming regulations. Employment patterns mimic the impacts on gross state product. Employment in NSW is expected to be 35 000 people lower than in the absence of regulatory changes in the short-run. More than 4000 fewer people are expected to be employed in each of Queensland, Victoria and South Australia in the short-run.

3 Short-run regional impacts of additional gaming taxes

<i>State/territory</i>	<i>Gross state product</i>		<i>Employment</i>	
		%	%	No.
NSW		-0.99	-1.04	-35 310
VIC		-0.49	-0.50	-13 221
QLD		-0.65	-0.73	-16 155
SA		-0.54	-0.60	-4 690
WA		-0.05	0.00	14
TAS		-0.65	-0.81	-1 948
NT		-0.40	-0.55	-632
ACT		-0.95	-1.05	-2 033

Source: CGE model simulations.

Not all sectors contract in the short-run. The accommodation, hotels and cafes, which contains the activities of pubs and clubs, is expected to be 17 per cent smaller in terms of industry output than without changes in gaming machine regulations. Employment is expected to be 23 per cent lower, equivalent to 63 000 people. Sectors that are inputs into clubs and pubs, such as other food manufacturing, also contract. Sectors that are exporters and are unconnected to the supply chain of clubs and pubs perform better than they otherwise would. Output and employment in recreation services, such as casinos and racetracks, increase, as people substitute spending at clubs and pubs for spending on these activities. Other manufacturing, which contains the activities of gaming machine manufacturing, is able to export more and maintain its size despite the loss of gaming machine manufacturing activities to supply clubs and pubs.

Long-run economic impacts of additional gaming taxes

In the long-run, businesses will adjust their activities and people will find new jobs that will ameliorate the substantial short-term impacts of gaming machine regulation. The period of time required for this to occur will depend on the ability of the economy to adapt. The types of adaptation that would reduce the economic impact of regulatory change include a reallocation of capital to more productive sectors, adjustments in wage rates so that employment levels return to their original level and the migration of people between Australia's states and territories according to differentials in the wages offered. The time required to ameliorate short-run effects is therefore dependent on the flexibility of labour, capital and wages and the extent of job creation in industries other than clubs and pubs.

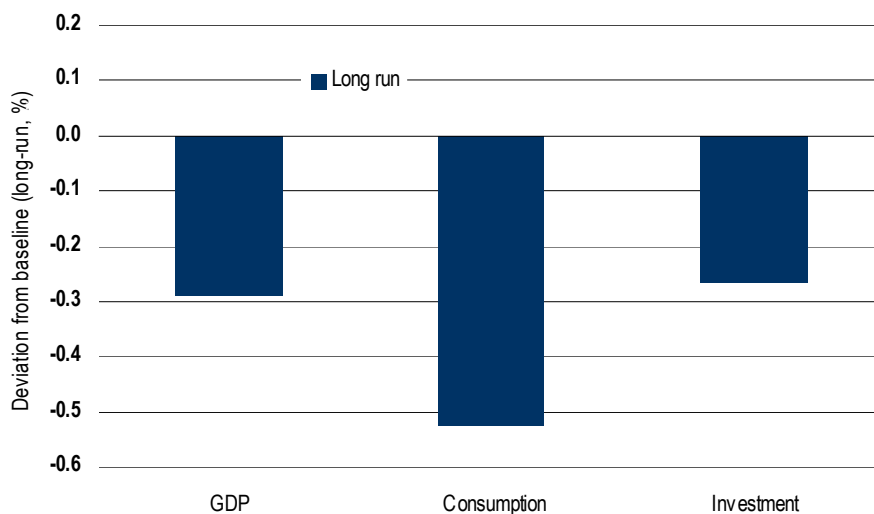
The financial crisis and a looming recession in a number of Australia's trading partners are likely to considerably slow the time taken for new jobs to be created. Businesses will be less willing to invest and less able to access credit, increasing the time taken for capital to shift into new sectors. The flexibility of the economy will be stretched by the impact of changes in global conditions on the Australian economy. It is reasonable to expect that the economy will take upwards of five years to adjust to a

removal of gaming machines from pubs and clubs. The results presented below set out the magnitude of economic impacts once all adjustment has occurred.

Even after all adjustments in the economy have taken place, preliminary analysis suggests that there are substantial negative economic impacts from levying a prohibitive tax on gaming machines that removes them from pubs and clubs. Consumption is expected to be 0.5 per cent or \$3 billion below what it would otherwise have been (chart 4). This reflects people spending their money on activities that they value less than gaming, as well as lower incomes as the economy contracts. GDP is less affected, falling by 0.3 per cent (also \$3 billion in equivalent terms for 2007-08). The production impacts are smaller as people previously employed in clubs, pubs and gaming machine manufacturing find new jobs in other sectors and regions of the economy in the long-run. These impacts on GDP and consumption occur every year – the aggregate impact of the removal of gaming machines from clubs and pubs is therefore much larger than the annual impact on GDP or consumption.

In the long-run, investment is expected to be 0.3 per cent lower, reflecting the removal of the gaming machine sector as a profitable sector for investment. There are also substantial compositional changes in investment with investment moving to export industries such as manufacturing and mining and away from services.

4 Long-run impacts of additional gaming taxes levied on pubs and clubs

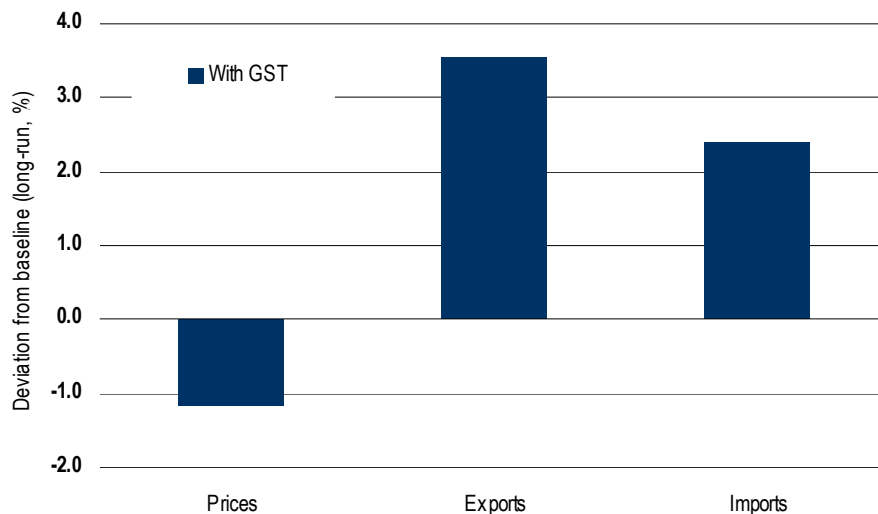


Data source: CGE model simulations.

Prices, as measured by the consumer price index are expected to be 1.1 per cent lower in the long-run (chart 5). The removal of gaming machines from pubs and clubs is expected to push down nominal wages, with flow-on effects to prices. Lower aggregate demand also places downward pressure on prices. Exports are expected to

rise by 3.1 per cent, as lower wages improves the competitiveness of Australia's exporters. Higher exports contribute to higher demand for imports of intermediate inputs, leading to an expected increase in imports of 2.1 per cent.

5 Long-run impacts on prices, exports and imports



Data source: CGE model simulations.

Accommodation, hotels and cafes, which includes the activities of clubs and pubs, is the most heavily affected sector, with industry output in this sector expected to fall by 16 per cent (table 6). Employment in the sector is expected to decline by 18 per cent, equivalent to about 50 000 people. Some industries benefit from the regulation, as people spend their money on activities such as casinos, racetracks and other recreational activities, electronic equipment, clothing etc. Export industries, such as mining and metal ores, also benefit as lower wages increases their ability to compete on international markets.

Other manufacturing, which includes the manufacturing of gaming machines increases in the long-run. This reflects an increase in the manufacture of other products not related to gaming that more than offsets gaming machine manufactures for the Australian market. The other manufacturing industry contracts in the long-run if exporters of gaming machines choose to relocate overseas, as discussed in the sensitivity analysis.

6 Long-run sectoral impacts from additional gaming taxes

Sector	Industry output	Employment	Exports
	%	%	%
Accommodation, hotels and clubs	-16.0	-17.7	2.4
Recreation services (incl. casinos and racetracks)	2.9	3.4	2.5
Other services	2.4	2.5	4.3
Other manufacturing (incl. gaming machines)	0.4	0.5	4.3
Electronic equipment	1.1	1.3	4.2
Transport equipment	1.9	2.2	3.3
Metal ores	2.6	3.2	3.1
Other mining	2.2	2.7	4.1
Other food manufacturing	-0.9	-0.6	4.3

Source: CGE model simulations.

States that have larger gaming machine industries and are less export-oriented, such as NSW, ACT and Victoria are expected to be hardest hit by a ban on gaming machines in pubs and clubs. Employment in NSW is expected to be 0.7 per cent or 22 000 people lower and gross state product 1 per cent lower (table 7). Export oriented states such as Western Australia and the Northern Territory grow as they attract people and capital from other states due to resources shifting into export activities. The ability of Western Australia to generate an additional 20 000 jobs while the mining sector is affected by falling commodity prices and lower demand for commodities suggests that the long-term impacts may be a long time coming.

7 Long-run regional impacts of additional gaming taxes

State/territory	Gross state product	Investment	Employment	
	%	%	%	No.
NSW	-1.08	-1.04	-0.66	-22 349
VIC	-0.26	-0.44	0.13	3 515
QLD	-0.15	-0.04	0.05	1 197
SA	-0.36	-0.53	0.02	164
WA	1.59	1.52	1.69	19 932
TAS	-0.30	-0.45	-0.04	-99
NT	0.63	0.61	0.68	780
ACT	-0.94	-1.16	-0.50	-974

Source: CGE model simulations.

The modelling assumes revenue neutrality for all governments, maintained through increasing the GST and returning the money to the states through grants. To maintain revenue neutrality requires an increase in the GST (or an equivalent increase in other taxes) from 10 per cent to 10.13 per cent. This introduces a secondary distortion in economic activity. The first distortion is from increasing the tax on gaming machines until they are removed from clubs and pubs. The secondary distortion is the increase in other government taxes to fund current service levels, as revenue from gaming taxes is lost. The secondary distortion accounts for almost half the overall expected reduction in GDP, although the impact on consumption is small.

The revenue implications for governments extend beyond the direct impacts from the loss of gaming revenue and the increase in another tax. The contraction of the economy reduces the tax collected by state and federal governments from other taxes making it more difficult for governments to meet their expenditure requirements and requiring additional increases in tax rates.

Sensitivity analysis

The preliminary results presented above assume that governments maintain their budget positions through an increase in an Australia-wide GST. This means that states without gaming machines bear part of the tax burden if other states no longer collect revenue from pubs and clubs. An alternative would be for each state to be required to raise its own taxes, such as payroll taxes, to cover its expenditure commitments. States that are worst affected by the removal of gaming machines from pubs and clubs and that are least benefited by movement of resources into other economic activities are even more affected if they have to recover revenues through their own tax base (table 8). This is because their revenues have fallen most, requiring a commensurately larger increase in their payroll tax. For instance, employment in NSW is expected to fall by 36 000 people if revenue is recovered by a payroll tax, compared to 22 000 if revenue is recovered from an Australian government tax such as the GST. Western Australia would have to absorb even more of the employment losses in other states, under a payroll tax increase.

8 Long-run impacts under GST and payroll collection

<i>State/territory</i>	<i>Gross state product</i>		<i>Employment</i>	
	<i>GST</i>	<i>Payroll</i>	<i>GST</i>	<i>Payroll</i>
	%	%	No.	No.
NSW	-1.08	-1.43	-22 349	-36 177
VIC	-0.26	-0.07	3 515	7 190
QLD	-0.15	-0.36	1 197	-4 457
SA	-0.36	-0.31	164	188
WA	1.59	2.86	19 932	34 435
TAS	-0.30	-0.01	-99	449
NT	0.63	1.04	780	1173
ACT	-0.94	-0.55	-974	-392

Source: CGE model simulations.

The broader economic impacts of a payroll tax and GST collection are reasonably similar.

The sensitivity of results to a movement of gaming machine manufacturing exports overseas was also tested. Under this scenario, consumption across Australia is expected to be an additional \$100 million lower in the short-run and \$18 million in the long-run. Australian exports are expected to be \$100 million lower in the short-run and \$25 million lower in the long-run. This export result reflects the

responsiveness of other exporters to price signals that result from the loss of exports of gaming machines of \$310 million. The effects fall primarily on NSW and Victoria and on the other gaming manufacturing industry.