

Economic Impact Assessment of The Star Sydney

FINAL Report

August 2016

Disclaimer

This Report was prepared for The Star Entertainment Group for inclusion in a development application. In preparing this Report we have only considered the requirements of The Star Entertainment Group. Our Report is not appropriate for use by persons other than The Star Entertainment Group, and we do not accept or assume responsibility to anyone other than The Star Entertainment Group in respect of our Report.

The information, statements, statistics and commentary (together the 'Information') contained in the Report have been prepared by PricewaterhouseCoopers Consulting (Australia) Pty Limited (PwC) ¹ from material provided by The Star Entertainment Group, and from public sources. PwC may at its absolute discretion, but without being under any obligation to do so, update, amend or supplement this document.

The Information contained in this document has not been subjected to an audit or any form of independent verification. PwC does not express an opinion as to the accuracy or completeness of the information provided. PwC disclaims any and all liability arising from actions taken in response to this Report.

¹ Liability limited by a scheme approved under Professional Standards Legislation

Contents

Executive summary	ii
1 Introduction	1
2 Overview of current operations	5
3 The Star Sydney's current and future economic contribution	7
4 Economic contribution of additional planned investments	8
Appendix A Application of CGE modelling	12

Executive summary

Background

Located on the waterfront of Sydney's Pyrmont Bay, The Star Sydney is New South Wales' premier integrated resort and entertainment destination, including the state's only casino. From 2009 to 2013 The Star Sydney underwent an \$870 million redevelopment and expansion program to integrate world class gaming with hotel, restaurant, theatre, conference and major event facilities to become a world class entertainment destination.

On completion of this transformation, The Star Sydney was named 'Australia's Leading Casino Resort' in the World Travel Awards and has been the recipient of a number of building and design awards as well as receiving culinary awards for excellence for its restaurants.

The transformation of The Star Sydney has driven increases to visitation and revenue, with The Star Entertainment Group now planning additional investment in The Star Sydney.

Next phase of investment at The Star

The Star Entertainment Group plans to continue to invest in The Star Sydney to maintain the resort's position as a regionally competitive integrated resort. Under The Star's 2016 five year plan the group plans to invest approximately \$557 million of capital in the resort in a range of projects (the 'Additional Planned Projects'). These projects comprise a range of maintenance or infrastructure projects as well as growth projects that will drive an increasing number of visitors to the property.

The Additional Planned Projects being undertaken by The Star in the Modification 14 application include:

- the upgrade and expansion of the Sovereign Gaming area and complementary non-gaming facilities
- a range of upgrades on on-site infrastructure and public area upgrades
- other non-gaming and property specific upgrades
- internal upgrades to back-of-house facilities.

Scope of report

This report estimates the current and future economic contribution The Star Sydney is expected to make to the state of New South Wales (NSW). This is achieved through two key activities – assessment of:

- the ongoing economic contribution made by The Star Sydney in its current state
- the potential economic contribution made by the Additional Planned Projects in The Star Sydney.²

² These investments are in preliminary planning stages and include upgrades to accommodation, dining and gaming facilities as well as improvements to customer access and flow

The Star Group's Additional Planned Projects are aimed at both securing the existing benefits The Star Sydney generates for the State of NSW through maintaining the property at a level that is competitive with other resorts in the region as well as generating additional benefits to NSW from the further expansion and improvement of the product offering.

Key findings

The Star Sydney's ongoing operation makes a considerable economic contribution to the state of NSW. In its current state, The Star Sydney is estimated to make the following economic contributions:

- the creation of an additional 6,500 jobs (4,400 direct, 2,200 indirect) each year (on average from FY2016 to FY2030)
- a \$6.8 billion contribution to the NSW economy from FY2016 to FY2030 (in real, present value terms)
- a \$4.2 billion contribution to NSW's exports from FY2016 to FY2030 (in real, present value terms)
- a \$2.3 billion increase in direct nominal tax revenue for the NSW Government from FY2016 to FY2030 in present value terms
- a \$2.2 billion increase in direct nominal tax revenue for the Commonwealth Government from FY2016 to FY2030 in present value terms.

Additional planned investments in The Star Sydney are estimated to make the following economic contributions to the NSW economy (incremental to the ongoing contribution made by The Star Sydney in its current state):

- a \$377 million contribution to the NSW economy from FY2016 to FY2030 (in real, present value terms) and will create an extra 500 jobs every year (average from FY2016 to FY2030)
- a contribution of 915 construction jobs through the additional planned investments.

After undergoing additional planned investments, The Star Sydney is estimated to make the following cumulative economic contributions to the NSW economy:⁵

- an additional 7,000 jobs (4,700 direct, 2,300 indirect) each year (on average from FY2016 to FY2030)
- a \$7.1 billion contribution to the NSW economy from FY2016 to FY2030 (in real, present value terms)
- a \$4.3 billion contribution to NSW's exports from FY2016 to FY2030 (in real, present value terms)
- a \$2.4 billion increase in direct nominal tax revenue for the NSW Government from FY2016 to FY2030 in present value terms
- a \$2.3 billion increase in direct nominal tax revenue for the Commonwealth Government from FY2016 to FY2030 in present value terms.

1 Introduction

Located on the waterfront of Sydney's Pyrmont Bay, The Star Sydney is New South Wales's premier integrated resort and entertainment venue, including the state's only casino. The Star Sydney has recently undergone an \$870 million redevelopment and expansion. The Star Sydney features world class gaming facilities, more than 20 restaurants, bars and cafes, three hotels and short stay accommodation venues, a 16 room spa, theatres, a high-end retail collection and an event and conferencing centre.

Through its provision of gaming, bar and restaurant activities, hotel and apartment accommodation, live performances, conferences and events, banquets and retail services to local, interstate and international visitors, The Star Sydney makes a considerable contribution to the NSW economy.

1.1 Objective

PricewaterhouseCoopers Consulting (Australia) Pty Limited (PwC) has been commissioned by The Star Entertainment Group to estimate The Star Sydney's contribution to the NSW economy. This report estimates the direct and flow-on (broader) economic contribution of The Star Sydney from FY2016 to FY2030, inclusive of its recent expansion and consequent uplift in visitation and revenue.

1.2 Scope

This PwC report draws on data provided by The Star Entertainment Group and subsequent computable general equilibrium (CGE) modelling to estimate the economic contribution of The Star Sydney across the following areas:

- employment (FTEs)
- income/household consumption (\$)
- impact on gross state product (GSP) (\$)
- NSW tourism
- contribution to taxes, licence fees and other charges to the NSW and Commonwealth governments.

While this report does not specifically quantify the economic costs of The Star Sydney, it considers the net of benefits and dis-benefits on a state-wide level through the interactions between sectors and industries of the economy. This allows The Star Sydney's investment to flow through, generating an overall net impact.

1.3 Approach

The Star Sydney's contribution to the NSW economy has been modelled by a large-scale, state of the art, multi-regional CGE model that simulates the economic impact of The Star Sydney on the NSW economy each year.

The approach to modelling The Star Sydney's economic activity involved separating direct effects from indirect effects:

- *Direct effects:* the result of The Star Sydney operating in NSW, largely driven by overseas and interstate visitor spend at the venue, as well as the venue's direct contribution to employment measured by the number of people employed at The Star Sydney
- *Indirect effects:* flow-on impacts throughout NSW include (i) the impact of consumer spending in the economy by The Star Sydney employees; and (ii) the impact of additional spending by businesses that supply goods and services to The Star Sydney.

The direct effects were derived by PwC from information provided by The Star Entertainment Group. Specifically, this information included:

- gaming and non-gaming revenue by source and region
- visitation
- employment
- taxes paid
- capital expenditure
- operating expenditure.

The indirect and total economic contribution of The Star Sydney draws on CGE modelling conducted by the Centre of Policy Studies (CoPS) at Monash University, applying the Monash Multi-Regional Forecasting (MMRF) model in 2013.³ This modelling was undertaken specifically for The Star Sydney and has been updated with 2016 inputs to account for changes in visitation and revenue associated with The Star Sydney's transformation and recent strong performance.

The MMRF is a multi-regional CGE model that simulates the effects on the economy in each year, taking into account indirect and substitution effects, for example the impact a development or activity might have on prices or resource constraints. It models the economic behaviour across multiple industry sectors in the eight states/territories of Australia. Relative to more simplistic input output modelling (IO), this type of model is preferred by governments and treasuries because they have been peer reviewed, meaning the inputs and assumptions are fully and publicly documented.

The MMRF model produces estimates of standard economic measures, which serve as indicators of changes in economic activity. These are as follows:

- value added and GSP
- employment
- household and government consumption.

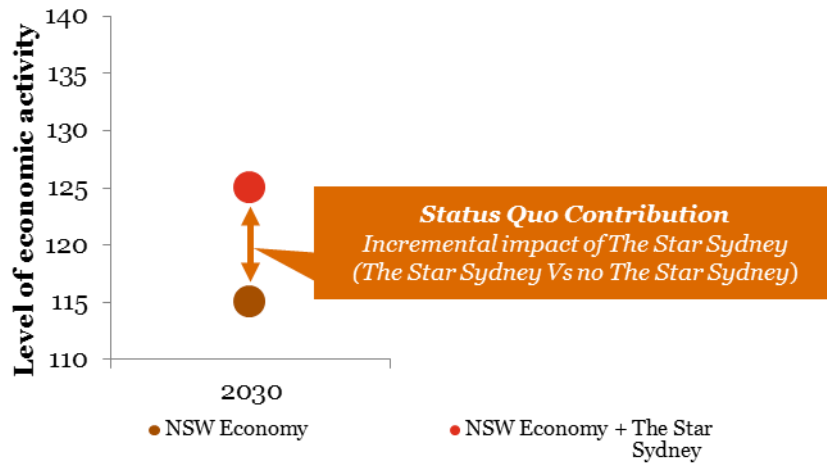
The Star Sydney's contribution to NSW tourism expenditure and its contribution to taxes, licence fees and other charges to NSW Government have been modelled outside the CGE model.

The current and future economic contribution made by The Star Sydney in its current state has been derived through benchmarking The Star Sydney's current (and projected) operations against a theoretical case in which The Star Sydney does not exist. This scenario assumes that The Star Sydney does not undertake any expansionary capital investments over the 15 year period of analysis.

The difference between these cases has been taken as the economic contribution made by The Star Sydney in its current state, which is reported on an annual basis and as a cumulative amount over the 15 year period of analysis. This scenario is referred to as the 'Status Quo contribution' throughout this report. The approach to estimating the contribution in its current state (the Status Quo Contribution) is shown in Figure 1.

³ PwC Australia (2013), *Economic Assessment of The Star*, prepared for Echo Entertainment

Figure 1: Estimating the contribution of The Star Sydney in its current state
(ILLUSTRATIVE ONLY)

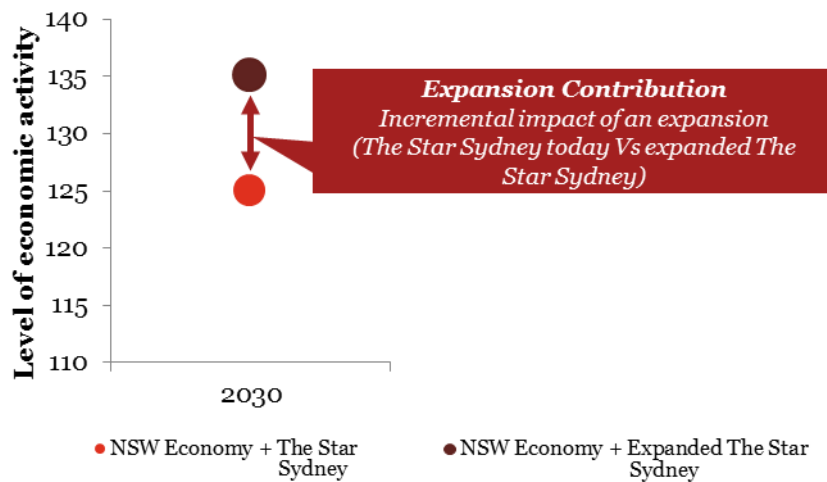


Source: PwC Analysis

The direct contribution of additional planned investments in The Star Sydney has been derived from data supplied by The Star Entertainment Group with CGE modelling being employed to estimate the total (direct and flow on) contribution of an expansion to The Star Sydney.

Under the expansion scenario, the economic contribution of an expansion to The Star Sydney is the incremental impact of the additional planned investments. It is the activity generated by the expansion only, which is the incremental difference between the economic contribution of an expanded The Star Sydney and the ongoing contribution made by The Star Sydney in its current state (the Status Quo Contribution).

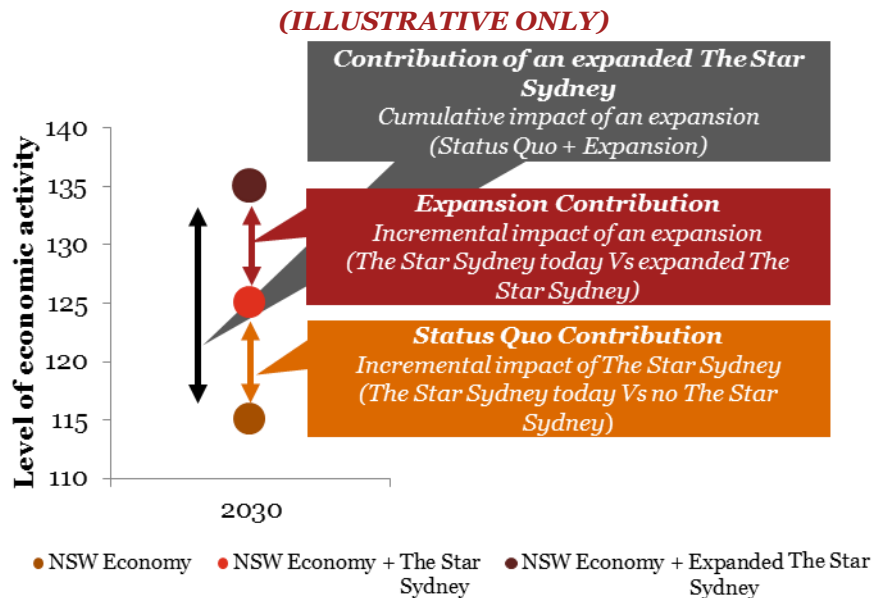
Figure 2: Estimating the incremental contribution of an expansion
(ILLUSTRATIVE ONLY)



Source: PwC Analysis

In addition to the incremental contribution made by an expansion, the cumulative contribution made by an expanded form of The Star Sydney has also been reported. The process for estimating the incremental contribution of additional planned investments and the cumulative contribution of an expanded The Star Sydney are shown in Figure 2 and Figure 3 respectively.

Figure 3: Estimating the cumulative contribution of an expanded The Star Sydney



Source: PwC Analysis

In this report, the results are presented from an ‘economy-wide’ perspective. That is, the model is indifferent as to which specific organisations are affected. For example, the model identifies that investment in The Star Sydney will generate a net gain in economic activity in NSW. In addition to a gain in economic activity at The Star Sydney, other organisations may see either increases in economic activity (e.g. where they provide complementary products or services) or a decline (where they provide competing products and services). Even when an organisation is providing potentially competing services (e.g. a restaurant in the vicinity of The Star Sydney), it may benefit from the attraction of additional patrons to the Pymont area.

1.4 Report Structure

The structure of the remainder of this PwC Report is as follows:

- Chapter 2 provides an overview of The Star Sydney’s operations
- Chapter 3 details The Star Sydney’s current and future economic contribution to NSW in its current form
- Chapter 4 outlines a potential expansion scenario for The Star Sydney and estimates the impact of this investment.

2 Overview of current operations

2.1 History

The Star Sydney commenced operations in FY1995 on a temporary site in Pyrmont Bay, under the banner of Sydney Harbour Casino. The permanent casino facility, named Star City Casino, opened in 1997 under the ownership of Star City Holdings Limited (SCY).⁴ The original licence granted to the casino in FY1995 was for 99 years, with exclusivity for 12 years.

Following a takeover bid in 1999, SCY and the Star City Casino were acquired by Tabcorp Holdings Limited. A demerger, effective June 2011, established the former casino division of Tabcorp Holdings as Echo Entertainment Group Limited. In November 2015, Echo Entertainment Group changed its name to The Star Entertainment Group. The Group owns and operates three casinos – including The Star in Sydney, the Jupiter Hotel and Casino on the Gold Coast and the Treasury Casino and Hotel in Brisbane. The Star Entertainment Group also operates the Gold Coast Convention and Exhibition Centre on behalf of the Queensland Government. The licence exclusivity arrangement for The Star Sydney was renewed for a \$100 million fee with the NSW Government during 2007 until 13 November 2019.⁵

Following expiration of The Star Sydney's exclusivity arrangements, Crown Sydney will commence operations that include VIP gaming facilities in Barangaroo, having obtained a 99 year NSW gaming license in 2013.⁶ In doing so, Crown Sydney will compete with The Star Sydney for VIP visitation and gaming revenue.

2.2 Redevelopment and expansion (2009-2013)

Star City Casino underwent a redevelopment and expansion program called 'Project Star' from 2009 to 2013. The project aimed at transforming the casino from a gambling destination to a premium entertainment destination, and a truly integrated resort that would compete with comparable operations internationally.⁷ The Project Star transformation involved the re-orientation of the building to embrace Sydney Harbour and the city skyline.

The redevelopment and expansion cost \$870 million and involved the development and opening of signature restaurants and bars, new VIP gaming suites, additional hotel rooms, gaming tables, seats and gaming machines. The project was completed when the 4,000 seat capacity Event Centre opened in January 2013. The Star Sydney, as it is now known, was officially relaunched on 15 September 2011.

Following redevelopment and expansion, The Star Sydney was developed into a world class integrated resort for Sydney, including the following key facilities:

- Harbour-side glass façade to embrace Sydney Harbour and the city skyline

⁴ Intelligent Investor, *Star City Holdings Limited (SCY)*, <http://shares.intelligentinvestor.com.au/company/Star-City-Holdings-Limited-SCY-251185/>

⁵ Casino Liquor and Gaming Control Authority, *Annual Report 2008/09*, 2009, p. 2

⁶ Independent Liquor and Gaming Authority, NSW Government, http://www.ilga.nsw.gov.au/__data/assets/pdf_file/0020/42806/Section-5A-Ministerial-Direction-Barangaroo-RGF.pdf

⁷ Tabcorp, *Project STAR – Marketing Brief*, http://www.tabcorp.com.au/resources.ashx/mediareleases/377/downloadableVersion/11DA8FF4DE20D8C57B81780B19A6F00D/10_October_-_Project_STAR.pdf

- more than 20 restaurants, bars and cafes
- signature restaurants, including BLACK by Ezard, Balla, Momofuku, The Century and Sokyō
- a new luxury boutique hotel and 16 room spa – Sydney’s first new build five star hotel since the 2000 Olympics (The Darling with 57 five star suites and 114 five star hotel rooms)
- the complementing Astral Tower and Residences bring the total room offering to around 630
- expanded premium retail collection comprising leading international and Australian brands including Gucci, Salvatore Ferragamo and Bottega Veneta
- luxurious new gaming areas, with significant investment made in the VIP offering to attract international and interstate visitation
- the brand new Event Centre, which can be configured up to a capacity of 4,000 for conferences, balls, banquets concerts and stage shows
- Sydney Lyric, one of Sydney's premier live entertainment venues and home to numerous musicals, theatre, concerts, opera and ballet and a 10-plus year history of welcoming legendary performers from all over the world.

3 *The Star Sydney's current and future economic contribution*

The Star Sydney's \$870 million transformation into an integrated resort and entertainment venue has driven visitation and revenue, enhancing its overall economic contribution to the state of NSW. In its current state, The Star Sydney's ongoing operation makes a considerable contribution to the NSW economy.

All total contributions to the NSW economy are reported in real dollars. These contributions have been reported as undiscounted amounts for annual totals but have been discounted for reporting the cumulative totals over the entire 15 year analysis period. Refer to Table 1 for the economic contribution of The Star Sydney in its current state.

Table 1: Total (Direct and flow-on) economic contribution of The Star Sydney

<i>Economic Indicator (2016 real dollars)</i>	<i>FY2016</i>	<i>Cumulative total (FY2016 to FY2030)</i>
		<i>Discounted</i>
Gross state product/Gross value added (\$ millions)	\$804	\$6,754
Exports from NSW (\$ millions)	\$536	\$4,177
Household consumption (\$ millions)	\$142	\$1,362
NSW Output (\$ millions)	\$1,436	\$12,088
Average annual employment (FTEs)	6,283	6,520
Contribution to taxes, licence fees and other charges to NSW Government (nominal)	\$227	\$2,330
Contribution to taxes, licence fees and other charges to Comm. Government (nominal)	\$229	\$2,207

Source: PwC Analysis based on Monash University Centre of Policy Studies modelling (using dynamic MMRF CGE model)

4 Economic contribution of additional planned investments

In addition to the contribution of The Star Sydney in its current state (Chapter 3), in this chapter we present the economic contribution of potential future investments in The Star Sydney. The incremental contribution of the additional planned investment itself and the cumulative contribution made by an expanded form of The Star Sydney are outlined in the following sections.

4.1 The incremental contribution of an expanded The Star Sydney

This planned investment comprises a combined expansionary and maintenance capital investment of around \$231 million (nominal, undiscounted) assumed to take place over the investment period FY2017 to FY2019.⁸ The capital investment modelled under the expansion scenario includes the following items:

- expansion and redevelopment of the Sovereign private gaming room and other gaming areas
- new food and beverage facilities across the property
- a range of maintenance and other projects.

The total incremental contributions of additional planned investments in The Star Sydney are shown in Table 2.

⁸ Note that data on additional planned investments provided by The Star Entertainment Group are in preliminary planning phases.

Table 2: Total (direct and flow-on) contribution of an expansion (incremental)

<i>Economic Indicator (2016 real dollars)</i>	<i>Cumulative total (FY2016 to FY2030) Discounted</i>
Gross state product/ Gross value added (\$ millions)	\$377
Exports from NSW (\$ millions)	\$113
Household consumption (\$ millions)	\$143
NSW Output (\$ millions)	\$763
Average annual employment (FTEs)	479
Contribution to taxes, licence fees and other charges to NSW Gov. (nominal)	77
Contribution to taxes, licence fees and other charges to Comm. Gov. (nominal)	113

Source: PwC Analysis based on Monash University Centre of Policy Studies Modelling (using dynamic MMRF CGE model)

4.2 The total contribution of an expanded The Star Sydney

The contribution of an expanded The Star Sydney is the sum of the incremental contribution of additional planned investments (section 4.1) and the contribution made by The Star Sydney in its current state (Chapter 3). In other words, the contribution of an expanded The Star Sydney is the cumulative contribution of additional planned investments.

After undergoing planned additional investments, The Star Sydney is estimated to make the following direct and total contributions to the NSW economy (see Table 3).

Table 3: Total (direct and flow-on) contribution of an expanded The Star Sydney

<i>Economic Indicator (2016 real dollars)</i>	<i>FY2016</i>	<i>Cumulative total (FY2016 to FY2030) Discounted</i>
Gross state product/ Gross value added (\$ millions)	\$804	\$7,131
Exports from NSW (\$ millions)	\$536	\$4,290
Household consumption (\$ millions)	\$142	\$1,504
NSW Output (\$ millions)	\$1,436	\$12,851
Average annual employment (FTEs)	6,671	6,999
Direct contribution to taxes, licence fees and other charges to NSW Government (nominal)	\$227	\$2,408
Direct contribution to taxes, licence fees and other charges to Comm. Government (nominal)	\$229	\$2,321

Source: PwC Analysis based on Monash University Centre of Policy Studies modelling (using dynamic MMRF CGE model)

Appendices

Appendix A Application of CGE modelling

12

Appendix A Application of CGE modelling

As discussed in Chapter 3, PwC has drawn on computable general equilibrium (CGE) modelling undertaken by the Centre of Policy Studies (CoPS) at Monash University to quantify the economic contribution of The Star Sydney.

What is a CGE Model?

A CGE model is a mathematical model of an economy capable of capturing economy-wide impacts and inter-sectoral reallocation of resources that may result from a shock to the economy. CGE modelling is useful when a direct impact, at either the specific industry or regional level, is expected to have economy-wide implications or significant ‘flow-on’ effects. CGE models are generally designed for quantitative analysis of:

- resource allocation issues
- changes in technical efficiency
- government tax or expenditure policy related issues
- external events that can be represented as price or activity shocks.

The core of a CGE model is an Input-Output (I-O) table. An I-O table is a system of accounts which shows, in value terms, the supply and disposal of goods and services within the economy in a particular year. An I-O table captures sales of products to other industries for further processing (intermediate usage), together with sales of products to final users. It also captures the inputs used in an industry’s production, whether they be intermediate or primary inputs (such as labour and capital). The table is balanced such that total inputs to each industry are equal to total outputs from each industry. Essentially, an I-O table is a snapshot of an economy (whether it is a region, state or country) in a particular year. More information on I-O tables can be found in Catalogue 5216.0, Australian Bureau of Statistics.

A CGE model ‘pushes forward’ the base I-O table through time by utilising a set of equations that capture neoclassical microeconomic theory⁹ to determine behaviour of economic agents when they are faced with changes in key economic variables (especially relative prices). The equations are solved simultaneously, where some variables are determined by the model (endogenous variables) and some are determined outside the model (exogenous variables). The classification of endogenous and exogenous variables is determined by the user based on the set of assumptions derived for the specific modelling exercise.

The CGE Model used for this modelling exercise is the Monash Multi-Region Forecasting (MMRF) model. MMRF is a multi-sector CGE model of the Australian economy that encompasses all states and territories. It was developed by the Centre of Policy Studies (CoPS) at Monash University.

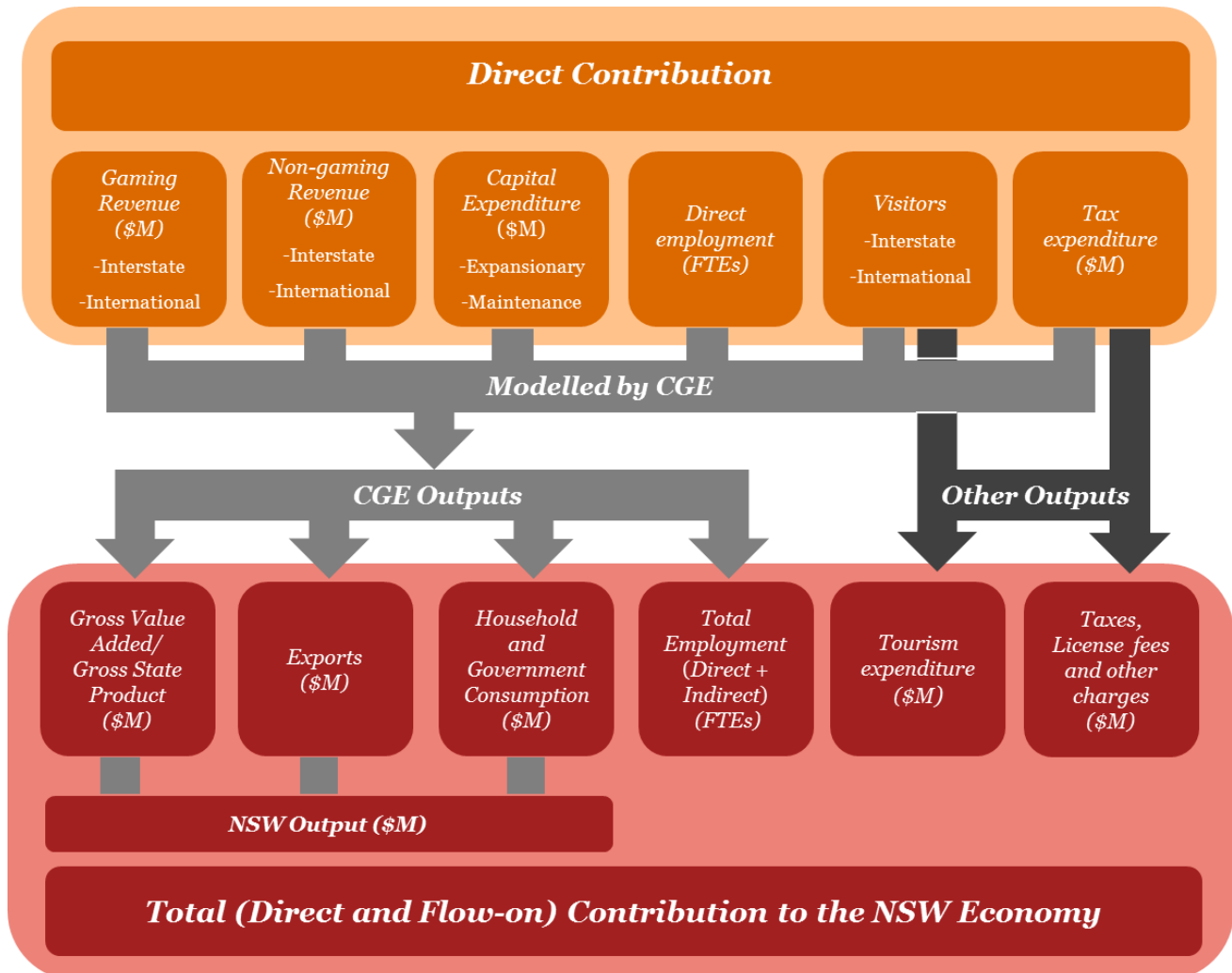
Estimating the economic contribution of The Star Sydney

The economic contribution The Star Sydney makes to the NSW economy has been reported in terms of its direct and total (direct and flow-on) contribution. Figure 4 displays this distinction, depicting how data provided by The Star Entertainment Group were used to derive the direct contribution of The Star Sydney before flowing through the CGE model to determine the total economic contribution to the NSW economy.

⁹ For example, households maximise utility subject to a budget constraint while industries minimise costs subject to production functions

The economic impact of The Star Sydney can be both positive and negative. Industries that provide goods and services to The Star Sydney will mostly benefit from The Star Sydney’s operations. However, some sectors of the wider state and national economy may be adversely affected, due to competition for labour, competition for other business inputs, and a higher Australian dollar exchange rate.

Figure 4: Estimating the economic contribution of The Star Sydney



Source: PwC analysis

The key inputs required to estimate the economic contribution of The Star Sydney included:

- Visitor spend at The Star Sydney, estimated by The Star Entertainment Group. To ensure that the results do not overstate the benefits, all spend from visitors that reside in NSW has been removed as it is assumed that if they did not spend at The Star Sydney they would spend elsewhere in the state, therefore there would be no impact on GSP. This means only the interstate and international visitor spend at The Star Sydney has been considered for the purposes of this modelling.
- Tourism spend outside of The Star Sydney. Using visitation data supplied by The Star Entertainment Group, it has been assumed that 25% of hotel guests travel to NSW primarily to visit The Star Sydney. Therefore using spend estimates collected in the Australian and International surveys an estimate has been generated of tourist spend outside of The Star Sydney. To ensure that there is no double counting, tourist spend on food, beverages gaming and accommodation has not been included as this would already be capture through visitor spend at The Star Sydney.

- The Star Sydney's operating expenditure, estimated by The Star Entertainment Group.
- The Star Sydney's capital expenditure, inclusive of the \$870million redevelopment, estimated by The Star Entertainment Group.

The CGE model produces estimates of standard economic measures, which serve as indicators of changes in economic activity. These are defined as follows:

- **Value added and gross state product (GSP)** - The measure of economic value used in this report is 'value added', which is the gross value of production less the cost of intermediate inputs used in production. Value added represents the returns to primary factor inputs – capital, labour and land. The sum of value added for all Australian industries is approximately equal to Gross Domestic Product (GDP). At the State level, the equivalent measure of economic value is referred to as Gross State Product (GSP). Where the economic benefit is incurred offshore, through for example the payment of dividends to foreign shareholders or repayments of foreign debt, the benefit is not included in GDP and GSP measures. For the purposes of this modelling it has been assumed that 80 percent of The Star Sydney is domestically owned and 20 percent foreign owned.
 - **Employment** - Estimates of indirect and induced employment (in FTE terms) are made by the CGE model. Indirect employment impacts refer to changes in employment across regions and industry sectors that are a result of The Star Sydney's purchase of goods and services and the flow on impacts. Induced employment impacts refer to the number of jobs generated as a result of wages expenditure – for example, the increased demand for goods and services by households.
- Household and government consumption (welfare)** - Change in household and government consumption expenditure is reported as an output of the CGE model. This is a proxy measure of the effect on living standards, or welfare, of households.

