

Economic Impact of Wagga Civic Theatre 2018/19

Prepared for the City of Wagga Wagga

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INTRODUCTION

Lawrence Consulting was commissioned by the City of Wagga Wagga to undertake an assessment of the economic impact of the Wagga Civic Theatre, together with the associated tourism impact, on the City of Wagga Wagga, the Riverina region and New South Wales.

The Wagga Civic Theatre is a main focus of cultural activities within the Wagga Wagga community. Based in the Civic Precinct on the banks of the Wollundry Lagoon, the theatre attracts a great variety of National and International Touring shows as well as many local events. The Theatre boasts a 491-seat auditorium and features an orchestra pit seating up to 38 musicians as well as professional lighting and sound systems.

The economic impact assessment has concentrated on the quantitative impact of the Wagga Civic Theatre – specifically, the impact of visitor (patron) spending in Wagga Wagga and the Riverina more generally – together with the turnover of the Theatre and consequent local and regional purchases of goods and services. Also of major importance, but not included in the analysis due to the difficulty to enumerate, are the qualitative long-term effects on regional marketing and competitiveness of out-of-region visitors, cumulative television audiences and newspaper and online media coverage.

The following sections of this report present the results of the economic impact analysis.

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Prepared by:



ECONOMIC IMPACT

Approach

Cultural precincts such as the Wagga Civic Theatre generate economic benefits for the regional economy through operational expenditure associated with the organisation as well as benefits associated with tourism expenditure within the region. As a part of ongoing operations, economic impacts from the Theatre are generated by organisational and facility operations, visiting performers and patron spending. The most visible direct impacts are patron spending on tickets, food and beverages, parking and merchandise, whilst subsequent rounds of spending include indirect or off-site tourism expenditure and business supply chain purchases.

The contribution made by the Wagga Civic Theatre to the economy of the City of Wagga Wagga, the Riverina region and New South Wales has been assessed using the City of Wagga Wagga **LocalImpact** economic model developed specifically for the region by Lawrence Consulting. All input data, except where referenced in the report, has been supplied by Wagga Civic Theatre. The stimulus from economic activity can be traced through the economy in several different ways:

- The first-round effect, or direct effect, are those from the activities expenditure in purchasing goods from other industries;
- The second-round effects are those from the supplying industries increasing their purchases to meet the additional demand. The second and subsequent rounds of purchasing are termed the indirect effects; and
- The consumption-induced effects, which recognise that the level of local production is important in determining regional levels of household consumption, that this in turn will be spent locally to a large extent and therefore influence the level of regional consumption and the level of output of each sector.

Note: Caution should be exercised when interpreting the consumption impacts as they are generally expected to overestimate the actual impact as they involve assumptions about fixed relationships between income and consumption patterns. These factors mean that the consumption-induced effects should generally be treated as the upper bound of estimates of economic activity. A full explanation of the assumptions underpinning the use of input-output modelling is contained in Appendix A.

These effects can be represented by multipliers. There are commonly four different types of multipliers:

- Output;
- Income;
- Employment; and
- Value added.

Output

The output impact measures the increase in gross sales throughout the whole economy by summing all the individual transactions resulting, directly and indirectly, from the economic stimulus. The output impacts, are however, regarded as overstating the impact on the economy as they count all goods and services used in one stage of production as an input to later stages of production, hence counting their contribution more than once.

Income

The income impact measures the additional amount of wages and salaries paid to employees of the industry under consideration and to other industries benefiting from the stimulus to the economy.



Employment

The employment impact measures the number of jobs created by the stimulus, both directly and indirectly. It should be noted that the short-term response to increased demand might be for employers to ask existing staff to work overtime. As a consequence, lower employment than the level indicated by the economic impact of the stimulus will result. This short-term scenario is particularly true where the demand stimulus is seen as temporary or where there is spare capacity in the economy (i.e. unemployment).

Value Added

The value added or Gross Regional Product (GRP) impact measures only the net activity at each stage of production. GRP is defined as the addition of consumption, investment and government expenditure, plus exports of goods and services, minus imports of goods and services for a region. The GRP impacts are the preferred measure for the assessment and contribution of a stimulus to the economy.

Input-output techniques provide a solid approach for taking account of the inter-relationships between the various sectors of the economy in the short-term and hence are an appropriate tool for determining the direct and indirect economic impact of the Wagga Civic Theatre.

Data Inputs

The assessment is to estimate the economic impact to the City of Wagga Wagga and Riverina region of the operation of the Wagga Civic Theatre and the indirect tourism benefits generated by increased visitor levels. The sectors of the economy that will be impacted through the analysis include:

Table 1: Wagga Civic Theatre, Industry Sectors Affected

• Printing (including the reproduction of recorded media)	• Finance
• Wholesale Trade	• Rental and Hiring Services (except Real Estate)
• Retail Trade	• Professional, Scientific and Technical Services
• Accommodation	• Employment, Travel Agency and Other Administrative Services
• Food and Beverage Services	• Building Cleaning, Pest Control and Other Support Services
• Road Transport	• Public Administration and Regulatory Services
• Air and Space Transport	• Public Order and Safety
• Postal and Courier Pick-up and Delivery Service	• Heritage, Creative and Performing Arts
• Telecommunication Services	• Personal Services

The total annual expenditure for the Wagga Civic Theatre was approximately \$1.8 million in 2018/19, of which approximately \$1.2 million, or 66.1%, was spent in the City of Wagga Wagga, with major local spending inputs including \$0.7 million in salaries to 10.4 fulltime equivalent (FTE) staff and \$0.5 million in other operating costs. A further \$0.4 million (20.1%) was spent in New South Wales and \$0.3 million (13.8%) across the rest of Australia. A summary of input purchases by expenditure type and region is provided in the following table (Table 2).

Table 2: Wagga Civic Theatre Annual Operating Expenditure by Region of Purchase, 2018/19 (\$)

Region	Level (\$)	% of total
City of Wagga Wagga	1,202,052	66.1%
Riverina	17,815	1.0%
Rest of New South Wales	346,842	19.1%
Interstate	250,466	13.8%
Total	1,817,176	100.0%

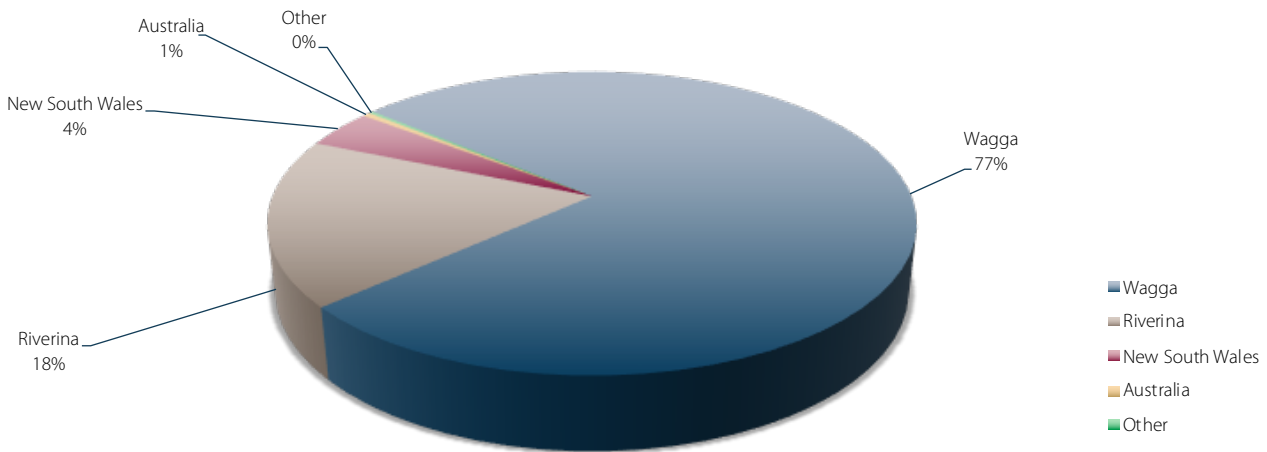
Source: Wagga Civic Theatre



The Wagga Civic Theatre is also a significant cultural and tourism attraction for both local residents and visitors to the region. The total number of persons attending all ticketed events at the Theatre in 2018/19 was estimated at 49,581, as measured through individual sales. Based on postcode, the origin of attendees was determined, including the following patterns:

- 77% of attendees were from the City of Wagga Wagga;
- A further 18% of attendees were from the wider Riverina region;
- 4% of attendees were from the rest of New South Wales; and
- 1% were from interstate.

Wagga Civic Theatre Attendance by Origin, 2018/19



Source: Wagga Civic Theatre

Taking into account regional length of stay, visitor origin and expenditure patterns, the gross annual stimulus to the City of Wagga Wagga economy associated with the total attendance numbers at the Wagga Civic Theatre in 2018/19 were estimated at \$1.7 million. A summary of the indirect tourism expenditure is provided in the following table.

Expenditure type	Expenditure (\$M)	% of total
Accommodation	0.1	3.5%
Food & beverage	0.4	23.5%
Road transport	0.1	3.3%
Retail shopping	1.0	60.6%
Attractions	0.0	0.9%
Other	0.1	8.1%
Total expenditure (away from venue)	1.7	100.0%

Source: Wagga Civic Theatre, Lawrence Consulting

Displacement & Leakages

Displacement arises when an economic stimulus such as the Wagga Civic Theatre takes market share from other existing local firms or organisations, or ‘displaces’ alternative uses of project funds that might otherwise have occurred. Leakages are defined as the proportion of project outputs that flow out of the catchment area, i.e. purchases from outside the region. In relation to the operation of the Wagga Civic Theatre and the indirect tourism benefits created by the precinct, for the purpose of this analysis it has been assumed that the City of Wagga Wagga is a closed economy, i.e. any displacement and leakages are considered marginal. All expenditure related to these elements of the project is therefore assumed to be made within the region – where not otherwise identified – in order to represent the additional economic activity generated by the Wagga Civic Theatre.

Impact Assessment

Operating Impact

The net annual regional economic impact – i.e. direct, indirect and consumption-induced – associated with the existing Wagga Civic Theatre operations in 2018/19 on the economy of the City of Wagga Wagga include:

- An estimated direct output of \$1.2 million and additional flow on increases in output of \$1.5 million through other industries, for a total industry impact of \$2.7 million. A further \$0.8 million in output in the region can be associated with consumption-induced effects;
- Estimated direct income (wages and salaries) of \$0.7 million, with \$0.5 million in additional income generated through flow on effects in other industries and a further \$0.2 million from household spending;
- Approximately 10.4 direct full-time equivalent (FTE) employment positions, with an estimated additional 10.7 employment positions supported indirectly through other industries and household consumption for a total employment impact of 21.1 FTEs; and
- An estimated contribution to GRP of \$0.9 million from direct effects, with a further flow on impact of \$0.8 million through other industries for a total industry value added of \$1.7 million. An additional \$0.4 million in gross regional product can be attributed to consumption-induced effects. The total value added impact of \$2.1 million represents a contribution of 0.05% to the GRP for the City of Wagga Wagga (\$4.4 billion in 2019/20).

Economic Impacts

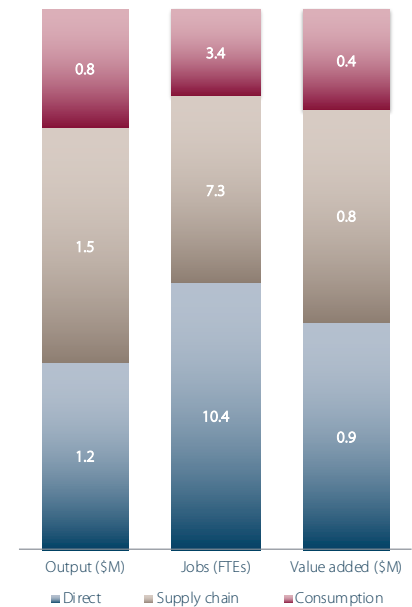


Table 4: Economic Impact of Wagga Civic Theatre – Operating Expenditure

	Wagga Wagga	Riverina	New South Wales	Australia
Output (\$ million)				
Direct	1.2	1.2	1.6	1.8
Indirect	1.5	1.6	2.3	3.0
Consumption	0.8	0.8	1.6	1.9
Total	3.5	3.6	5.5	6.7
Income (\$ million)				
Direct	0.7	0.7	0.7	0.7
Indirect	0.5	0.5	0.7	0.9
Consumption	0.2	0.3	0.6	0.7
Total	1.4	1.4	1.9	2.2
Employment (fte persons)				
Direct	10.4	10.4	10.4	10.4
Indirect	7.3	7.5	10.7	13.3
Consumption	3.4	4.3	8.0	9.4
Total	21.1	22.1	29.1	33.1
Value added (\$ million)				
Direct	0.9	0.9	0.9	0.9
Indirect	0.8	0.8	1.2	1.6
Consumption	0.4	0.5	1.1	1.5
Total	2.1	2.2	3.2	3.9
% change in baseline GRP	0.05%	0.03%	0.00%	0.00%

Note: Annual impact



Indirect Tourism Spending Impact

The economic impacts of the indirect tourism expenditure associated with visitors attending the Wagga Civic Theatre in 2018/19 for the City of Wagga Wagga include (refer Table 5 below):

- An estimated direct output of \$1.7 million and additional flow on increases in output of \$0.9 million through other industries and a further \$1.2 million associated with consumption-induced effects;
- Estimated direct income (wages and salaries) of \$0.5 million, with \$0.2 million in additional income generated through flow on effects in other industries and a further \$0.3 million from household spending;
- Approximately 13.0 direct full-time equivalent (FTE) employment positions, with an estimated additional 7.3 employment positions supported indirectly through other industries and household consumption for a total employment impact of 20.3 FTEs; and
- An estimated contribution to GRP of \$0.9 million from direct effects, with a further flow on impact of \$0.4 million through other industries for a total industry value added of \$1.3 million. An additional \$0.6 million in gross regional product can be attributed to consumption-induced effects. The total value added impact of \$1.9 million represents a contribution of 0.04% to the GRP for the City of Wagga Wagga.

Economic Impacts

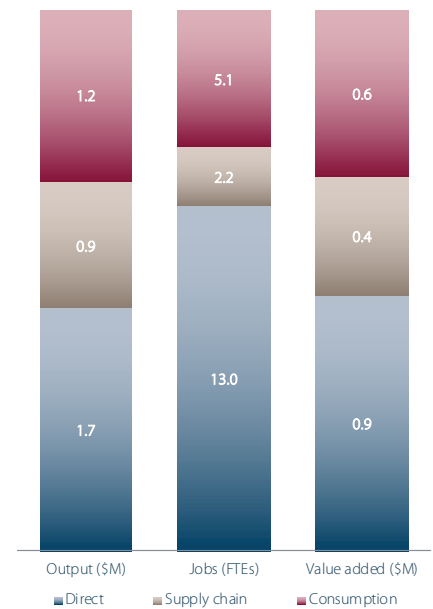


Table 5: Economic Impact of Wagga Civic Theatre – Indirect Tourism Spend

	Wagga Wagga	Riverina	New South Wales	Australia
Output (\$ million)				
Direct	1.7	1.7	1.7	1.7
Indirect	0.9	0.9	1.1	1.3
Consumption	1.2	1.3	1.9	1.9
Total	3.7	3.8	4.6	4.8
Income (\$ million)				
Direct	0.5	0.5	0.5	0.5
Indirect	0.2	0.2	0.2	0.3
Consumption	0.3	0.4	0.7	0.7
Total	1.1	1.1	1.5	1.5
Employment (fte persons)				
Direct	13.0	13.0	13.0	13.0
Indirect	2.2	2.3	2.7	3.3
Consumption	5.1	6.4	9.5	9.7
Total	20.3	21.7	25.2	26.0
Value added (\$ million)				
Direct	0.9	0.9	0.9	0.9
Indirect	0.4	0.4	0.5	0.6
Consumption	0.6	0.8	1.3	1.5
Total	1.9	2.1	2.7	3.0
% change in baseline GRP	0.04%	0.03%	0.00%	0.00%

Note: Annual impact

Impacts on Other Industries

The flow-on impacts from the Wagga Civic Theatre to other industries across the City of Wagga Wagga as derived from the **LocalImpact** model are substantial and have been disaggregated in order to measure the contribution in other areas of the economy. The following table (Table 6) demonstrates that the Arts & Recreation Services industry benefits most in terms of total output (\$1.5 million), followed by Retail Trade (\$1.4 million) and Accommodation & Food Services (\$0.8 million).

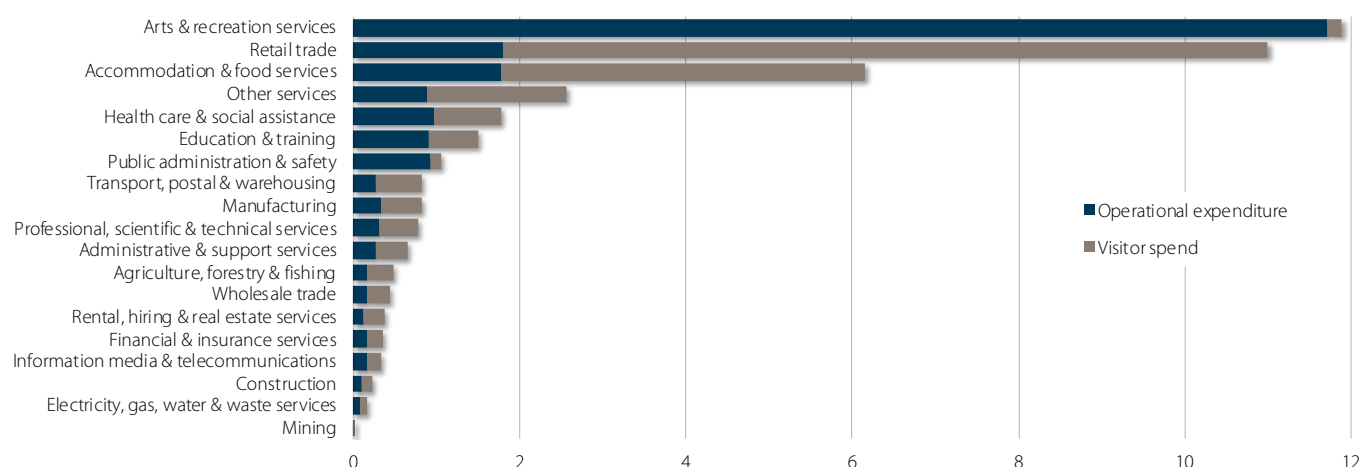
Table 6: Estimated Disaggregated Annual Industry Impacts of Wagga Civic Theatre, City of Wagga Wagga

Industry division	Operating phase		Indirect visitor expenditure	
	Industry output (\$ million)	Direct employment (FTEs)	Industry output (\$ million)	Direct employment (FTEs)
Agriculture, Forestry and Fishing	0.1	0.2	0.1	0.3
Mining	0.0	0.0	0.0	0.0
Manufacturing	0.2	0.3	0.3	0.5
Electricity, Gas, Water and Waste Services	0.1	0.1	0.1	0.1
Construction	0.0	0.1	0.1	0.1
Wholesale Trade	0.1	0.2	0.1	0.3
Retail Trade	0.2	1.8	1.2	9.2
Accommodation and Food Services	0.2	1.8	0.6	4.4
Transport, Postal and Warehousing	0.1	0.3	0.2	0.6
Information Media and Telecommunications	0.1	0.2	0.1	0.2
Financial and Insurance Services	0.1	0.2	0.1	0.2
Rental, Hiring and Real Estate Services	0.1	0.1	0.2	0.2
Professional, Scientific and Technical Services	0.1	0.3	0.2	0.5
Administrative and Support Services	0.1	0.3	0.1	0.4
Public Administration and Safety	0.2	0.9	0.0	0.1
Education and Training	0.2	0.9	0.1	0.6
Health Care and Social Assistance	0.1	1.0	0.1	0.8
Arts and Recreation Services	1.4	11.7	0.0	0.2
Other Services	0.1	0.9	0.2	1.7
Total	3.5	21.1	3.7	20.3

Note: Annual impact

Estimated Annual Employment (FTEs) Supported by Wagga Civic Theatre

City of Wagga Wagga



In summary, the economic activity generated from the annual operation of the Wagga Civic Theatre and associated visitor spending impacts are substantial and therefore, based on the conservative assumptions presented in this analysis, the net economic impact from the facility on the City of Wagga Wagga and Riverina is highly positive.

APPENDIX A: ADVANTAGES AND ASSUMPTIONS OF LOCALIMPACT MODEL

Input-output (I-O) modelling techniques provide a solid approach for taking account of the inter-relationships between the various sectors of the economy in the short-term and hence are an appropriate tool for determining the direct, indirect and induced economic impact of economic stimuli.

The I-O technique was developed by Wassily Leontief in the 1930s to describe how impacts in one sector of an economy interacted with other sectors to generate economic changes, with matrix algebra used to perform the complex calculations. More advanced forms of I-O models are computable general equilibrium models, which are used for analysis of larger national economies, but are generally not as applicable for smaller areas. The standard I-O model approach is particularly useful for predicting the impacts of events or projects in an economy, or analysing local or regional level economies.

I-O models can be used to capture only the indirect impacts that occur through other industry sectors (Type I models), or the indirect plus the consumption-induced effects (Type II models), which have been adopted for the current study. Further, the **LocalImpact** economic model used in this study was based on the ABS model of the Australian economy generated from general equilibrium models.

A concept underlying I-O modelling is that an initial economic shock or stimulus can have multiplier effects through a series of successive spending rounds. The size of the economic multiplier in a local or regional area can be summarised in the following way:

- The extent to which project operators purchase inputs from the local or regional economy. Examples of inputs include wages for labour supplied from the local or regional area, and purchases of goods and services. The more that a project operator sources from the local or regional economy, the more money that is directly injected into the economy; and
- The extent to which money spent in a local or regional economy is retained within that economy. If there is not much opportunity for people receiving income to spend it on goods and services in their local or regional area, then not as much money will be kept in the local or regional area. Larger and more diverse regional economies tend to be better at keeping expenditures in their economy and not 'losing' it to other regions.

Key advantages of using input-output models are the fineness of detail available at a disaggregated industry level, the relative ease of application, particularly for sub-regional levels, and the ability to model effects in a timely manner. However, care has to be taken in its application and interpretation of results. Key assumptions that underpin the application of I-O models include:

- The inputs purchased by each industry are a function of the level of output of that industry. The input function is generally assumed linear and homogenous of degree one (which implies constant returns to scale and no substitution between inputs);
- Each commodity (or group of commodities) is supplied by a single industry or sector of production. This implies that there is only one method used to produce each commodity and that each sector has only a single primary output;
- The total effect of carrying on several types of production is the sum of the separate effects. This rules out external economies and diseconomies and is known simply as the additivity assumption. This generally does not reflect real world operations;



- The system is in equilibrium at given prices. This is obviously not the case in an economic system subject to external influences;
- In the static input-output model, there are no capacity constraints so that the supply of each good is perfectly elastic. Each industry can supply whatever quantity is demanded of it and there are no capital restrictions. This assumption would come into play depending upon the magnitude of the changes in quantities demanded, brought about through changes in taxation levels; and
- The input-output model is an optimisation model that allocates resources between sectors to their most efficient use. This is not expected to happen all of the time in the “real world” and as such results from the input output analysis may overestimate the actual impact delivered on ground.

Type II models involve additional assumptions about fixed relationships between income and consumption patterns. These factors mean that the results of I-O models should generally be treated as the upper bound of estimates, and that care has to be taken in interpreting the results of very large changes in demand or production.