Economic contribution of South Australian screen production

South Australian Film Corporation
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# Glossary

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABS</td>
<td>Australian Bureau of Statistics</td>
</tr>
<tr>
<td>CGE</td>
<td>Computable general equilibrium</td>
</tr>
<tr>
<td>EBITDA</td>
<td>Earnings before interest, taxes, depreciation, and amortisation</td>
</tr>
<tr>
<td>FTE</td>
<td>Full time equivalent</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross domestic product</td>
</tr>
<tr>
<td>GOS</td>
<td>Gross operating surplus</td>
</tr>
<tr>
<td>GSP</td>
<td>Gross state product</td>
</tr>
<tr>
<td>GST</td>
<td>Goods and services tax</td>
</tr>
<tr>
<td>IO</td>
<td>Input-output</td>
</tr>
<tr>
<td>PDV</td>
<td>Post production, digital and visual effects</td>
</tr>
<tr>
<td>SA PDV rebate</td>
<td>South Australian post production, digital and visual effects rebate</td>
</tr>
<tr>
<td>SAFC</td>
<td>South Australian Film Corporation</td>
</tr>
</tbody>
</table>
**Economic contribution of South Australian screen production**

- The screen production industry in South Australia contributed a total of **$119.5 million to gross state product (GSP)** in 2017-18, with **1,170 full time equivalent (FTE) employees** employed directly and indirectly across South Australia.

- The **direct economic contribution in 2017-18 was $65.5 million**, with 761 FTEs across the industry. The indirect economic contribution captures the value added to the economy as a result of the purchase of intermediate inputs. In 2017-18, the South Australia screen production industry indirectly contributed **$54.0 million** in value added, and 409 FTE jobs.

- This means that **for every two jobs within the screen production industry, roughly one job is supported elsewhere in the South Australian economy**.

- Screen Australia estimates that expenditure on drama production in South Australia reached **$82 million in 2017-18** – representing 10 per cent of Australia’s total expenditure on drama. It is estimated that a further $39 million was spent on the production of other genres in South Australia, based on Australian Bureau of Statistics’ national data.

- The **South Australian Film Corporation (SAFC) supported 18 projects which commenced principal photography during the 2017-18 financial year**. These projects, which received funding of $5.3 million from SAFC, collectively spent **$35.5 million in South Australia during production**.

- The South Australian Government approved **$1.4 million to seven productions in the 2017-18 financial year as part of the South Australian Post Production, Digital and Visual Effects (SA PDV) rebate**. Those **productions receiving the SA PDV rebate are anticipated to spend $13.9 million in South Australia**.
Contribution to GSP

$119.5 m

Total jobs

1,170
1 Background

1.1 Purpose and scope of engagement
The South Australian Film Corporation (SAFC) was established by the South Australian Government in 1972 as a production company. In 1994 it ceased producing and became South Australia’s central screen development agency, which provides a range of support for screen production, industry development and audience development, and operates production facilities at Adelaide Studios.

SAFC engaged Deloitte Access Economics to assess the economic contribution of South Australia’s screen production in 2017-18 to the South Australian economy. This analysis represents an update to a previous Deloitte Access Economics report for SAFC published in 2015, which analysed the economic contribution of the industry in 2013-14.

In both the earlier and current analysis, the screen production industry is defined as the production of film, television and digital media; distribution and exhibition is excluded from the analysis, as is the development of video and online games.

This report provides an overview of the economic contribution of the screen production industry in South Australia in the 2017-18 financial year.

1.2 Screen production in South Australia
Screen Australia, the screen industry’s peak body, estimates that expenditure on drama production in South Australia reached $82 million in 2017-18 – representing 10 per cent of Australia’s total expenditure (Chart 1.1). Expenditure increased only in South Australia (nearly doubling, from $43 million to $82 million) and Western Australia (increasing from $10 million to $37 million) compared to the previous year, with expenditure decreasing in New South Wales, Victoria and Queensland (Chart 1.2).

While drama expenditure only represents a proportion of total expenditure in the screen industry, these figures nevertheless indicate the increasing importance of South Australia as a screen production destination.

SAFC supported 18 projects which commenced principal photography during the 2017-18 financial year. These projects, which received funding of $5.3 million from SAFC, collectively spent $35.5 million in South Australia during production.

The South Australian Government also approved $1.4 million to seven productions in 2017-18 as part of the South Australian Post Production, Digital and Visual Effects (SA PDV) rebate. Those productions receiving the SA PDV rebate are anticipated to spend $13.9 million in South Australia.

Key Australian productions shot in South Australia in 2017-18 included I Am Mother, Pine Gap and Storm Boy, while post production, digital and visual effects (PDV) work on foreign feature films included Tomb Raider and Peter Rabbit. The fact that these large-budget, internationally financed productions choose to hire skilled South Australian workers and produce in South Australia instead of elsewhere presents a stark contrast to the origins of the South Australian film industry in the 1970s – before the decision to create a state film agency, South Australia lacked both the skills and technical infrastructure required for basic screen production, such as advertisements, while Australia’s film industry was ‘renascent’.

The move from analogue to digital screen content creates opportunities for South Australian content to reach broader global audiences through global digital platforms, such as on-demand services. However, digital disruption is also creating significant challenges for the screen production sector, such as losing traditional release window markets and altering content monetisation, paving the way for new business models.
Chart 1.1: Drama expenditure in South Australia, 2013-14 to 2017-18 ($m)

Source: Screen Australia

Chart 1.2: Drama expenditure by state, 2013-14 to 2017-18 ($m)

Source: Screen Australia
2 Economic contribution of the South Australian screen production industry

2.1 Economic contribution studies
Economic contribution studies measure the direct and indirect contribution to gross state product (GSP) and employment arising from activity in a particular industry, firm or event. This report assesses the economic contribution of the screen production industry in South Australia.

The direct contribution to GSP is defined as the value added by labour and capital inputs employed directly by the industry. Direct activities related specifically to the screen production industry include filming and post production activities such as editing and special effects.

Value added is the most appropriate measure of the economic contribution to GSP. It is the sum of the returns to the primary factors of production – labour and capital (i.e. wages to workers and returns on capital) – and can be calculated by adding the gross operating surplus (GOS) and wages paid to workers in the screen industry for the direct contribution, in addition to production taxes less subsidies. GOS is typically represented by a company’s earnings before interest, taxes, depreciation, and amortisation (EBITDA); however, the methodology adopted for this analysis excludes depreciation and amortisation from the estimate for GOS due to data limitations. This results in a conservative estimate of returns on capital and thus direct value added.

The indirect contribution is a measure of the demand for goods and services produced in other sectors of the economy as a result of the direct economic activity in the screen production sector. Screen production requires a large number of inputs, such as expenditure on sets, props and hospitality, which stimulate activity in the sectors of the economy providing those inputs.

The estimates of the direct and indirect economic contribution are based on input-output (IO) modelling techniques. The Australian Bureau of Statistics (ABS) produces IO tables which provide the value added for each sector of the South Australian economy, as well as the linkages between sectors. This allows the expenditure relating to films produced in South Australia to be traced through the economy, to estimate the value added at each stage.

The total economic activity generated by the screen production industry is the sum of the direct and indirect components.

2.2 Methodology and approach
The methodology used to measure the economic contribution of the South Australian screen production industry is based on Deloitte Access Economics’ previous work for SAFC.

Data used for the analysis included SAFC’s 2017-18 financial statements and budget acquittals of SAFC-supported projects as provided by SAFC, and industry data from the ABS and Screen Australia. These data sources were used to estimate total spending in the screen production industry in South Australia and the structure of businesses, including their expenditure profiles.

Screen Australia’s Drama Report found that drama production expenditure in South Australia reached $82 million in 2017-18, nearly doubling compared to the $43 million spent in 2016-17 – and representing 10 per cent of industry expenditure across Australia, compared to 3 per cent in the previous year. This figure relates to the production of feature films, TV drama and online drama programs only, and therefore does not capture the screen industry as a whole. Other screen production includes documentaries and reality television, as well as educational, commercial and corporate videos, for example.

Total expenditure in the screen production industry was estimated to be $121 million using ABS national data, applying a proportion derived from South Australia’s average proportion of drama production expenditure between 2013-14 and 2017-18.

Other inputs for the analysis, including the average profit margin across the industry, were also derived from the ABS, while the expenditure profiles of firms (including spending on wages and intermediate inputs) were estimated using budget acquittals of SAFC-supported projects. While the latest ABS data relates to 2015-16, the data was used to derive average ratios which could be applied to 2017-18 data (such as average profit margin).

It is noted that this analysis does not specifically estimate the economic contribution of businesses based in South Australia; some businesses may be based elsewhere in Australia or the world, but provide goods and services in South Australia.

Further detail on the methodology and analytical framework is provided in Appendix A.
2.3 Results

2.3.1 Direct economic contribution
The direct economic contribution of the South Australian screen production industry in 2017-18 was $65.5 million, with 761 full time equivalent (FTE) employees across the industry. Approximately $58.5 million was paid to workers in wages who are employed directly in screen production, while GOS totalled $12.3 million, net of $5.3 million in subsidies paid to production companies.

2.3.2 Indirect economic contribution
The indirect economic contribution of the South Australian screen production industry captures the value added to the economy as a result of the purchase of intermediate inputs. In 2017-18, the South Australia screen production industry indirectly contributed $54.0 million in value added, and 409 FTE jobs. Further detail is shown in Table 2.2.

2.3.3 Total economic contribution
The screen production industry in South Australia contributed a total of $119.5 million to GSP in 2017-18, with 1,170 FTEs employed directly and indirectly. This means that for every two jobs within the screen production industry, around one job is supported elsewhere in the South Australian economy.

In 2013-14, Deloitte Access Economics estimated that the screen production industry contributed $77.2 million to the South Australian economy, and 754 FTE jobs. While this analysis is based on a similar methodology to that adopted in 2013-14, the results are not directly comparable due to changing data availability over time. In addition, screen production expenditure varies significantly year-on-year; this analysis assumes other screen production expenditure (i.e. excluding drama production expenditure) has also increased over time, based on national averages.

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Table 2.1: Direct economic contribution of the screen production industry in South Australia, 2017-18

<table>
<thead>
<tr>
<th></th>
<th>Direct contribution</th>
<th></th>
<th>Indirect contribution</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value added ($m)</td>
<td>$65.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wages ($m)</td>
<td>$58.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GOS ($m)</td>
<td>$12.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less subsidy ($m)</td>
<td>-$5.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment (FTE)</td>
<td>761</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Deloitte Access Economics, using data provided by SAFC, the ABS, and Screen Australia

Note I: Value added presented in the above table is the sum of wages and GOS net of the subsidies provided by SAFC

Table 2.2: Indirect economic contribution of the screen production industry in South Australia, 2017-18

<table>
<thead>
<tr>
<th></th>
<th>Direct contribution</th>
<th>Indirect contribution</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value added ($m)</td>
<td>$54.0</td>
<td>$30.2</td>
<td>$84.2</td>
</tr>
<tr>
<td>Wages ($m)</td>
<td>$30.2</td>
<td>$23.8</td>
<td>$54.0</td>
</tr>
<tr>
<td>GOS ($m)</td>
<td>$23.8</td>
<td></td>
<td>$23.8</td>
</tr>
<tr>
<td>Employment (FTE)</td>
<td>409</td>
<td></td>
<td>409</td>
</tr>
</tbody>
</table>

Source: Deloitte Access Economics, using data provided by SAFC, the ABS, and Screen Australia

In 2013-14, Deloitte Access Economics estimated that the screen production industry contributed $77.2 million to the South Australian economy, and 754 FTE jobs. While this analysis is based on a similar methodology to that adopted in 2013-14, the results are not directly comparable due to changing data availability over time. In addition, screen production expenditure varies significantly year-on-year; this analysis assumes other screen production expenditure (i.e. excluding drama production expenditure) has also increased over time, based on national averages.
For every two jobs within the screen production industry, around one job is supported elsewhere in the South Australian economy.
3 Other benefits of local screen production

While this report quantifies the economic contribution of South Australian screen production to the state, supporting local screen content and production also generates other important economic and social benefits.

3.1 Tourism and branding
Local screen production generates tourism by attracting domestic and international visitors to the locations portrayed in South Australian screen productions. ‘Set-jetting’, or film-induced tourism, is a recognised relationship in Australia and overseas.

Supporting local screen production generates ‘location tourism’, where visitors are drawn to particular destinations or attractions in order to visit the physical locations where the content was filmed. While not evaluated in this report, additional tourism expenditure injects new spending into the state, and has flow-on economic benefits. Visitors are often drawn to destinations by the broader features and characteristics of the location as portrayed in TV or film content (‘destination tourism’). Modern global screen distribution platforms (such as streaming services) mean that local screen productions reach large audiences across Australia and overseas, exposing potential visitors to South Australian stories and scenery.

Exporting local screen content therefore brings attention to the state as a location for tourism, strengthening the state’s brand value.

3.2 Value for audiences
Beyond the value of screen production to South Australia’s GSP or employment, the key beneficiaries of local screen production are the audiences who ultimately view the screen content. While not calculated in this report, this value can be captured through consumer surplus, an economic measure of consumer satisfaction. Consumer surplus is calculated by estimating the difference between how much consumers pay for South Australian screen content and how much they are willing to spend.

Deloitte Access Economics found in 2016 that the total audience value for Australian content was $17.4 billion – almost seven times the economic contribution.

The creation of South Australian screen content which is in demand by audiences also has broader benefits – with the South Australian screen production industry supporting skilled jobs within the sector.
3.3 South Australia’s identity

Supporting local South Australian artistic and creative ventures also contributes to South Australia’s cultural landscape in ways that cannot be quantified through economic estimates. For example, supporting South Australian screen production enables local cast, crew, heads of departments and key creatives to live and work in South Australia, meaning their talent and expertise remains in the state: an important opportunity in an otherwise challenging environment for creative professionals.

Further, supporting local screen production enables more South Australian narratives and aspects of local history or culture to be represented on screen. Ipsos Australia found that audiences value screen content which portray familiar characters, locations, humour and stories. South Australian consumers therefore obtain value from viewing uniquely South Australian content which they can relate to.

More fundamentally, viewing locally produced screen content also contributes to shaping the local cultural environment and sense of identity. Although quantifying the value of these social and cultural benefits is outside the scope of this report, they are also important to consider when holistically evaluating the screen industry’s economic contribution to South Australia.
Appendix A: Economic contribution modelling framework

A.1. Economic contribution studies

Economic contribution studies are intended to quantify measures such as value added, exports, imports and employment associated with a given industry or firm, in a historical reference year. The economic contribution is a measure of the value of production by a firm or industry.

All direct, indirect and total contributions are reported as gross operating surplus (GOS), labour income, value add and employment, with these terms defined in Table A.1.

Table A.1: Definitions of economic contribution estimates

<table>
<thead>
<tr>
<th>Estimate</th>
<th>Definition</th>
</tr>
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<tbody>
<tr>
<td>Gross operating surplus (GOS)</td>
<td>GOS represents the value of income generated by the entity's direct capital inputs, generally measured as the earnings before interest, tax, depreciation, and amortisation (EBITDA).</td>
</tr>
<tr>
<td>Labour income</td>
<td>Labour income is a subcomponent of value add. It represents the value of output generated by the entity's direct labour inputs, as measured by the income to labour.</td>
</tr>
<tr>
<td>Value add</td>
<td>Value add measures the value of output (i.e. goods and services) generated by the entity's factors of production (i.e. labour and capital) as measured in the income to those factors of production. The sum of value add across all entities in the economy equals gross domestic product. Given the relationship to GDP, the value add measure can be thought of as the increased contribution to welfare.</td>
</tr>
<tr>
<td>Employment (FTE)</td>
<td>Employment is a fundamentally different measure of activity to those above. It measures the number of workers (measured in full-time equivalent terms) that are employed by the entity, rather than the value of the workers' output.</td>
</tr>
<tr>
<td>Direct economic contribution</td>
<td>The direct economic contribution is a representation of the flow from labour and capital committed in the economic activity.</td>
</tr>
<tr>
<td>Indirect economic contribution</td>
<td>The indirect contribution is a measure of the demand for goods and services produced in other sectors as a result of demand generated by economic activity.</td>
</tr>
<tr>
<td>Total economic contribution</td>
<td>The total economic contribution to the economy is the sum of the direct and indirect economic contributions.</td>
</tr>
</tbody>
</table>

Source: Deloitte Access Economics
A.2. Value added

The measures of economic activity provided by a contribution study are consistent with those provided by the Australian Bureau of Statistics. For example, value added is the contribution the sector makes to total factor income and gross domestic product (GDP) and gross state product (GSP).

There are a number of ways to measure GDP:

- **Expenditure approach** – measures the expenditure of households, on investment, government and net exports
- **Income approach** – measures the income in an economy by measuring the payments of wages and profits to workers and owners.

Below is a discussion measuring the value added by an industry or firm using the income approach.

**Measuring the economic contribution – income approach**

There are several commonly used measures of economic activity, each of which describes a different aspect of an industry’s economic contribution. One measure is value added.

Value added measures the value of output (i.e. goods and services) generated by the entity's factors of production (i.e. labour and capital) as measured in the income to those factors of production. The sum of value added across all entities in the economy equals gross domestic product. Given the relationship to GDP, the value added measure can be thought of as the increased contribution to welfare.

Value added is the sum of:

- **Gross operating surplus (GOS)** represents the value of income generated by the entity's capital inputs, generally measured as the earnings before interest, tax, depreciation and amortisation (EBITDA)
- **Tax on production less subsidy provided for production.** Note: given the manner in which returns to capital before tax are calculated, company tax is not included or this would double-count that tax. In addition it excludes goods and services tax, which is a tax on consumption (i.e. levied on households)
- **Labour income** is a subcomponent of value added. It represents the value of output generated by the entity's direct labour inputs, as measured by the income to labour.

Contribution studies generally outline employment generated by a sector. Employment is a fundamentally different measure of activity to those above. It measures the number of workers that are employed by the entity, rather than the value of the worker’s output.

A.3. Direct and indirect contributions

The **direct** economic contribution is a representation of the flow from labour and capital in the company.

The **indirect** contribution is a measure of the demand for goods and services produced in other sectors as a result of demand generated by the screen production industry. Estimation of the indirect economic contribution is undertaken in an input-output (IO) framework using Australian Bureau of Statistics IO tables which report the inputs and outputs of specific sectors of the economy.

The total economic contribution to the economy is the sum of the direct and indirect economic contributions.
Other measures, such as total revenue or total exports are useful measures of economic activity, but these measures alone cannot account for the contribution made to GDP. Such measures overstate the contribution to value added because they include activity by external firms supplying inputs. In addition, they do not discount the inputs supplied from outside Australia.

A.4. Limitations of economic contribution studies
While describing the geographic origin of production inputs may be a guide to a firm's linkages with the local economy, it should be recognised that these are the type of normal industry linkages that characterise all economic activities.

Unless there is unused capacity in the economy (such as unemployed labour) there may not be a strong relationship between a firm's economic contribution as measured by value added (or other static aggregates) and the welfare or living standard of the community. The use of labour and capital by demand created from the industry comes at an opportunity cost as it may reduce the amount of resources available to spend on other economic activities. This is not to say that the economic contribution, including employment, is not important. As stated by the Productivity Commission in the context of Australia's gambling industries:

Value added trade and job creation arguments need to be considered in the context of the economy as a whole ... income from trade uses real resources, which could have been employed to generate benefits elsewhere. These arguments do not mean that jobs, trade and activity are unimportant in an economy. To the contrary they are critical to people’s well-being. However, any particular industry’s contribution to these benefits is much smaller than might at first be thought, because substitute industries could produce similar, though not equal gains.

In a fundamental sense, economic contribution studies are simply historical accounting exercises. No 'what-if', or counterfactual inferences – such as 'what would happen to living standards if the firm disappeared?' – should be drawn from them.

The analysis – as discussed in the report – relies on a national IO table modelling framework and there are some limitations to this modelling framework. The analysis assumes that goods and services provided to the sector are produced by factors of production that are located completely within the state or region defined and that income flows do not leak to other states.

The IO framework and the derivation of the multipliers also assume that the relevant economic activity takes place within an unconstrained environment. That is, an increase in economic activity in one area of the economy does not increase prices and subsequently crowd out economic activity in another area of the economy. As a result, the modelled total and indirect contribution can be regarded as an upper-bound estimate of the contribution made by the supply of intermediate inputs.

Similarly the IO framework does not account for further flow-on benefits as captured in a more dynamic modelling environment like a computable general equilibrium (CGE) model.

A.5. Input-output analysis
Input-output tables are required to account for the intermediate flows between sectors. These tables measure the direct economic activity of every sector in the economy at the national level. Importantly, these tables allow intermediate inputs to be further broken down by source. These detailed intermediate flows can be used to derive the total change in economic activity associated with a given direct change in activity for a given sector.

A widely used measure of the spill-over of activity from one sector to another is captured by the ratio of the total to direct change in economic activity. The resulting estimate is typically referred to as ‘the multiplier’. A multiplier greater than one implies some indirect activity, with higher multipliers indicating relatively larger indirect and total activity flowing from a given level of direct activity.

The IO matrix used for Australia is derived from the ABS 2015-16 IO tables. The industry classification used for IO tables is based on the Australian and New Zealand Standard Industrial Classification (ANZSIC), with 114 sectors in the modelling framework.
Endnotes


2 Vincent O’Donnell, ‘...something of quality’: factors in the establishment of the South Australian Film Corporation’ (1999) 27 *Journal of the Historical Society of South Australia* 44.


4 Ibid.

5 Ibid.

6 Australian Bureau of Statistics, *Film, Television and Digital Games, Australia, 2015-16*, cat. no. 8679.0 (15 June 2017).


Limitation of our work

General use restriction
This report is prepared solely for the use of the South Australian Film Corporation. This report is not intended to and should not be used or relied upon by anyone else and we accept no duty of care to any other person or entity. The report has been prepared for the purpose set out in our contract dated 19 December 2018. You should not refer to or use our name or the advice for any other purpose.