
ECONOMIC SIGNIFICANCE OF INDEPENDENT SCHOOLS TO THE QUEENSLAND ECONOMY

REPORT PREPARED FOR INDEPENDENT SCHOOLS
QUEENSLAND
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Client: Independent Schools Queensland
Client Contact: Callum Bentley
Project Manager: Kieron Lacey
Email: kieron.lacey@aecgrouppltd.com
Telephone: 1300 799 343
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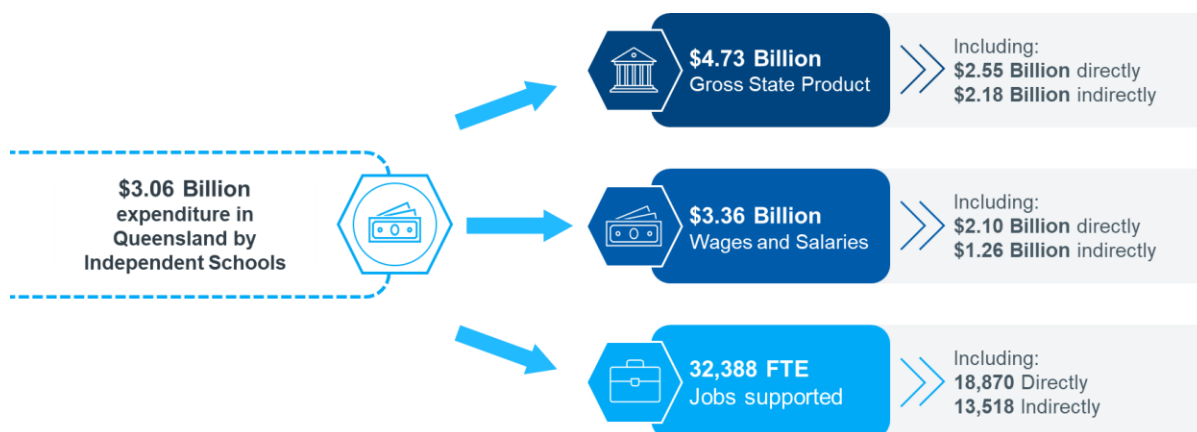
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EXECUTIVE SUMMARY

QUICK STATS

Independent schools delivered the following economic activity in Queensland in 2021-22, as a result of educating 136,227 students:



Note: FTE = full time equivalent, where one FTE is equivalent to one person working full time for a period of one year.
Source: AEC.

Independent schools also:

- **Saved \$1.56 billion for taxpayers; and**
- **Delivered \$235.2 million in additional Queensland economic growth through enhanced education outcomes.**

BACKGROUND

Independent Schools Queensland (ISQ) is the peak body representing Independent Schools in Queensland. Independent schools, which are autonomous education providers that are not run by government, have earned a reputation for providing high quality education services. In 2021 over 136,200 students were enrolled at over 230 independent schools across 37 local government areas in Queensland located from Cooktown in the north, to Normanton in the west, and Goondiwindi in the south. This represented over 15 percent of the total Queensland student population in 2021.

In 2016 and then again in 2020, ISQ engaged AEC Group Pty Ltd (AEC) to analyse and quantify the important contribution independent schools made to Queensland in 2013-14 and 2017-18, respectively. The assessments considered the contribution to Queensland Gross State Product (GSP), employment and household incomes, as well as the savings they deliver to governments and therefore taxpayers and the economic value that flows from the enhanced education outcomes achieved by independent school students. ISQ has engaged AEC in 2024 to provide an update of the study based on the most recent available information (2021-22).

In undertaking the analysis, AEC used Input-Output modelling techniques within an economic significance framework. This is a recognised modelling approach to assess the economic contribution of an existing industry. Verified data from ISQ for 2021 was used (the most recent year that validated data was available) as well as published financial year data from the Australian Bureau of Statistics (ABS) and other agencies to produce the estimates in this report for the 2021-22 year.

KEY FINDINGS

Economic Contribution of Independent Schools

In 2021-22 independent schools in Queensland:

- **Contributed approximately \$4.73 billion to Queensland's Gross State Product (GSP)** through direct and flow-on contributions. This accounted for 1.1 percent of the total contribution to GSP by all industries in Queensland for the year. Of note:
 - Independent schools' total contribution to GSP was **comprised of more than \$2.55 billion directly** through activities such as school operations, capital expenditure of independent schools and expenditure of overseas students in the broader economy, and **\$2.18 billion through flow-on demand for goods and services** by independent schools for the delivery of their education services (e.g. utilities, teaching materials, equipment), subsequent flow-on production-induced activity for the production of these goods and services, and household consumption from independent school employees; and
 - The direct contribution of independent schools was larger than the contribution of Queensland's rail transport industry (\$2.3 billion), the automotive repair and maintenance industry (\$2.1 billion) and the accommodation industry (\$2.0 billion).
- **Made significant contributions to the local and regional economies in which they operate.** For example, including direct and flow-on activity, independent schools contributed:
 - Independent schools contributed \$2.70 billion in GRP to the Brisbane region equating to 1.4, percent of total GRP. Independent schools also contributed nearly 18,000 FTE jobs to the Brisbane regional economy (1.5% of total), paying \$1.84 billion in wages and salaries. Around 10,350 of these FTE jobs were supported in Brisbane LGA, followed by Moreton Bay (2,750 FTEs), Logan (1,900 FTEs), Ipswich (1,650 FTEs) and Redland (1,150 FTEs);
 - In the Gold Coast region 1.9 percent of total GRP and employment was supported by independent schools (\$784.8 million in GRP and over 5,400 FTE jobs paying \$556.3 million in wages and salaries). Similarly, in the Sunshine Coast, independent schools supported 1.7 percent of total GRP and employment (\$411.6 million in GRP and nearly 2,800 FTE jobs paying \$293.1 million in wages and salaries);
 - In the Wide-Bay Burnet region, independent schools contributed approximately \$182.0 million to Wide-Bay Burnet's GRP in 2021-22 and supported over 1,300 FTE jobs (including direct and flow-on activity). Within the Wide-Bay Burnet region, independent schools contributed 1.6 percent of GRP in the Fraser Coast LGA, 1.3 percent in the Gympie LGA, and 1.0 percent in the Bundaberg LGA in 2021-22; and
 - Further north, independent schools have considerable presence in the LGAs of Carpentaria and Charters Towers. In Carpentaria, independent schools contribute 1.7 percent of the total GRP, 2.7 percent of total employment and 1.7 percent of the area's wages and salaries. Similarly, Charters Towers contribute 1.3 percent of total GRP, 3.4 of total employment and 2.5 percent of the area's wages and salaries.
- **Supported jobs for nearly 32,400 full-time equivalent (FTE) employees**, which equated to around 1.4 percent of total jobs in Queensland in 2021-22. Of note:
 - The employment contribution by independent schools was comprised of 18,870 FTE employees directly supported through operational activity, capital expenditure and overseas student expenditure, as well as approximately 13,500 FTE employees supported through flow-on activity;
 - Independent schools provide approximately one full-time job for every 7.6 students enrolled;
 - The direct contribution of independent schools to employment was (in terms of the number of people employed):
 - Similar to the number of mechanics (or workers in automotive repairs) across Queensland and greater than sheep, beef cattle and grain farming and the number of people employed in personal care services (such as hairdressers, beauticians, etc.); and

- Similar to the entire workforce of LGAs such as Gympie, Noosa, Isaac and Whitsunday (in terms of the number of people employed).
- **Contributed \$3.36 billion in employee wages and salaries**, which represented approximately 1.3 percent of total wages and salaries paid to workers in Queensland. Approximately \$2.10 billion was paid by independent schools directly to school employees, representing approximately 74.9 percent of total independent schools' operational expenditure for the year.

This is reflective of the large labour component in service delivery and the important role independent schools play in providing jobs and incomes to Queensland. It is worth noting that **jobs in Queensland independent schools are predominantly highly skilled, service sector positions and are key to growing the Queensland economy**. A further \$84.0 million in employee wages and salaries was directly contributed to the Queensland economy by independent schools through capital works and expenditure of overseas students and approximately \$1.26 billion was also paid to workers as a result of flow-on activity.

Savings to Governments and Taxpayers

There were over 136,200 school children in Queensland enrolled in independent schools in 2021 that were entitled to but did not take up a place in a government school. In 2021, Queensland independent schools **saved the Australian and Queensland Governments approximately \$1.56 billion in expenditure**. This comprised \$1.28 billion in recurrent education costs and \$283.0 million in infrastructure costs, representing a significant and ongoing saving to taxpayers.

The Economic Value of Enhanced Education Outcomes

Enhanced educational outcomes provided by **independent schools can be linked to an estimated contribution to growth in Queensland GSP of around \$235.2 million in 2021-22**. This economic benefit is estimated to be provided annually by the enhanced education outcomes delivered by independent schools.

The quality of learning and teaching provided by Queensland independent schools support students in achieving excellent outcomes across a range of educational measures:

- Students attending independent schools are estimated to have contributed to a 2.98 point increase in the mean PISA test score for Queensland's overall student body in 2022;
- Australian independent schools recorded a mean PISA test score of 538 for scientific literacy, 526 for reading literacy, and 519 for mathematical literacy (ACER, 2023). These scores were well above the overall mean PISA test scores for all Australian schools, as well as the OECD average (Table 4.1);
- Independent schools are among the top performing schools across all NAPLAN assessment domains and the four year levels assessed, reporting an average 19.3 points higher in primary school and 14.5 points higher in secondary school; and
- Higher proportions of independent school students graduate with a senior education profile.

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1. INTRODUCTION

1.1 BACKGROUND AND PURPOSE OF THE REPORT

Independent schools are an integral and growing part of Queensland's education system serving the diverse needs of communities and students across the state. Independent schools, which are autonomous education providers that are not run by government, have earned a reputation for providing high quality education services.

Independent Schools Queensland (ISQ) is the peak body representing the interests of Queensland's independent schooling sector, representing over 230 independent schools from 37 local government areas across Queensland. ISQ is a not-for-profit organisation.

Over the past two decades, enrolments in the Queensland independent schools sector have increased by more than 75%, from 83,841 students in 2003 to 147,268 students in 2023, to comprise 16.8 percent of Queensland's total student population (ISQ, 2024).

In 2016 and then again in 2020, ISQ engaged AEC Group Pty Ltd (AEC) to analyse and quantify the important contribution independent schools made to Queensland in 2013-14 and 2017-18, respectively. The assessments considered the economic contribution of independent schools in terms of their contribution to Queensland Gross State Product (GSP), employment and household incomes, as well as the savings they deliver to governments and therefore taxpayers and the economic value that flows from the enhanced education outcomes achieved by independent school students.

ISQ has engaged AEC to provide an update of the study for 2021-22 based on the most recent available information.

1.2 SCOPE OF THE REPORT

1.2.1 Geographic Scope

The scope of this report covers the economic significance of independent schools to Queensland. Additional modelling was also undertaken to assess the economic contribution of independent schools to regional and local economies. These findings and a current list of Queensland independent schools can be found on ISQ's website (www.isq.qld.edu.au).

1.2.2 Independent Schooling Sector

In 2021, over 136,200 students were enrolled at independent schools across 37 local government areas in Queensland from Cooktown in the north, to Normanton in the west, and Goondiwindi in the south. They serve a diverse range of students including those from high and low socio-economic backgrounds, Indigenous and international students, disengaged youth and students with disability.

1.3 METHODOLOGY

1.3.1 Measuring the Economic Contribution of Independent Schools

The estimates in this report were produced using Input-Output transaction tables and models developed by AEC, within an economic significance framework. This is a recognised and standard modelling approach to assessing the economic contribution of an existing industry.

Data from ISQ for 2021 was used (ISQ, unpublished) to produce the estimates in this report as this was the most recent year that validated data was available. Other data sources used include State and National Accounts and industry specific Australian Bureau of Statistics (ABS) and other agency data. The significance model was developed based on a 2020-21 Input-Output transaction table from the Australian Bureau of Statistics, which was then 'rebased' to the 2021-22 financial year using available data from the Australian Bureau of Statistics and AEC internal datasets on Gross Regional Product and employment.

Data from ISQ regarding operations of independent schools (e.g. revenue, expenditure, staffing, enrolments) is for the 2021 calendar year, but has been used as a reasonable estimate of ISQ activity for the 2021-22 financial year. Modelling was undertaken based on financial year as outside of data from ISQ, all other available data is primarily based on financial years.

The Input-Output significance model was used to produce estimates of the direct and flow-on contributions of independent schools to the Queensland economy. Additional models were also developed to assess the contribution of independent schools to regional and local communities with the findings reported on ISQ's website (www.isq.qld.edu.au).

Measures used in this report include industry output, Gross State Product (GSP), employment, and income (i.e. wages and salaries).

Appendix A presents a detailed description of the methodology. Appendix B provides definitions and explanations of the terms and measures used.

1.3.2 Quantifying the Savings to Taxpayers from Independent Schools

Estimates of taxpayer savings were developed across two key components:

- Cost savings in terms of recurrent education costs, including expenditure on user costs of capital; and
- Cost savings in terms of contributions made by parents to capital infrastructure and improvements.

To identify the cost savings in recurrent education costs, data from the Productivity Commission (Productivity Commission, 2024) regarding average Commonwealth and Queensland Government expenditure per state school student in 2021-22 was used and applied to the number of independent school students. This was then compared to data from ISQ (unpublished) regarding the level of government funding received to provide a net difference in government funding required if independent school students were enrolled in state schools.

To estimate the capital cost saving, school capital income data by source of income ISQ (unpublished) was analysed to determine the total amount and proportion of capital contributions made by parents and the community to Queensland independent schools.

1.3.3 Identifying the Benefits of Independent Schools' Enhanced Education Outcomes

Desktop research was undertaken to review academic studies, reports and the latest industry views on the enhanced educational outcomes provided by independent schools. The enhanced educational outcomes provided by independent schools have economic impacts for Queensland. Estimates of the benefits independent schools provide to Queensland GSP are estimated using the difference in PISA scores between Australian independent schools and state schools and research identifying a relationship between education performance and economic growth (using PISA scores). The latest PISA results available are from the 2022 calendar year, it is assumed for the purpose of analysis, that these results can be used to estimate the economic value of enhanced education outcomes in 2021-22.

2. CONTRIBUTION TO QUEENSLAND'S ECONOMY

This chapter describes the economic contribution of independent schools to the Queensland economy.¹ It includes estimates of direct and flow-on contributions to other industries where relevant. The approach used in identifying the economic contribution, and measures used, are detailed in Appendix A.

2.1 DIRECT CONTRIBUTION OF INDEPENDENT SCHOOLS TO QUEENSLAND

Independent schools directly contributed to the Queensland economy through their provision of education services to more than 136,200 FTE students in 2021. In providing these services, independent schools:

- Undertook operating activities and expenditure, including:
 - Employing staff, such as teaching staff, administrative/ clerical staff, and operations and maintenance staff;
 - Generating turnover (or revenue), including revenue from student fees and charges, income from excursions/ trips, and private and government grants and funding; and
 - Purchasing goods and services for operational activities, for example on education/ class materials, and building and grounds maintenance.
- Made capital purchases and expended money directly on items such as land acquisition, building/ facility construction and other capital purchases.

Independent schools also contribute to the Queensland economy through the attraction of fee-paying overseas school students. These students would otherwise not be expected to live in Queensland during the course of their studies.

In addition to overseas students, domestic boarding students also contribute to the local economies in which they are staying. However, the activity of domestic boarders has been excluded as boarding students with a usual place of residence elsewhere in Queensland represent a transfer of activity from one Queensland locality to another, rather than generating an overall increase in economic activity in Queensland. Living expenses of interstate boarding students does provide an increase in Queensland's economic activity that would not otherwise occur, however, there was insufficient data available to identify the total number and expenditure of interstate boarders. Interstate boarders have therefore been excluded from the assessment. The effect of this exclusion will be to underestimate the value of independent schools to Queensland, but this is expected to be relatively modest.

Estimates of the direct economic activity associated with operational activities and capital expenditure of independent schools, as well as overseas student expenditure, are outlined below. Note that all estimates presented of these activities are for the 2021 calendar year, but for modelling of impacts have been used a proxy for the activity of independent schools during the 2021-22 financial year. From here onwards, all 2021 data is referred to as being for the 2021-22 financial year.

Operational Activities

In 2021-22 independent schools generated approximately \$3.06 billion in turnover (similar to industry output – see Appendix B for a description) and spent approximately \$668.0 million on goods and services (excluding expenditure on staff) for operational activities. Subtracting independent schools' operational expenditure on goods and services (excluding staff) from turnover provides an estimate of the value independent schools' operational activities added to the Queensland economy in 2021-22. This equates to a direct contribution of approximately \$2.39 billion to Queensland's Gross State Product (GSP).

¹ The estimates presented are likely an underestimate of the total contribution of independent schools as the financial data provided does not include independent school revenue and expenditure derived through some avenues, for example study tours. Living expenses of interstate boarding students within the Queensland economy was also unable to be estimated due to insufficient data.

Independent schools employed 17,871.1 FTE staff in 2021-22 comprised of:

- 232.1 FTE principals;
- 1,127.2 FTE specialist support staff;
- 10,147.0 FTE general teaching staff;
- 24.9 FTE senior executive staff;
- 4,767.0 FTE administrative/ clerical services staff; and
- 1,572.9 FTE building operations and maintenance staff.

Staff at independent schools were paid a total of around \$2.0 billion in wages, salaries and other compensation in 2021-22. This equates to expenditure on salary and wages of approximately \$111,674 per FTE employee. As the majority of this expenditure was on teaching staff it highlights the sector's focus on the provision of high-quality educators.

Capital Expenditure

Independent schools spent \$412.7 million on capital expenditure in 2021-22, of which \$33.5 million was Australian/ Queensland Government funded, \$282.95 million privately funded, and \$96.26 million funded through new loans. Capital expenditure was allocated to relevant industries represented in the Input-Output transaction tables as outlined in Table 2.1.

Table 2.1. Capital Expenditure of Independent Schools by Industry, 2021-22

Input-Output Industry	% of Expenditure Item	Estimated Capital Expenditure (\$M)
Non-Residential Building Construction	55%	\$227.0
Heavy and Civil Engineering Construction	25%	\$103.2
Wholesale Trade	20%	\$82.5

Note: Total may not sum due to rounding.
Sources: ISQ (unpublished), AEC.

In estimating the direct economic contribution of this capital expenditure, standard Input-Output production functions for the industries outlined in Table 2.1 were assumed, using a Queensland transaction table developed as outlined in Appendix A. Based on these production functions, independent schools' capital expenditure is estimated to have directly generated the following economic activity for Queensland businesses in 2021-22:

- \$131.7 million in GSP;
- \$84.0 million in incomes; and
- 697 FTE jobs.

Overseas Student Expenditure

Independent schools attract international students to study in Queensland in a range of individual or group programs. Students can enrol in registered schools for periods of longer than three months on a full-time basis, while many independent schools also offer short-term study programs of less than three months.

Independent schools received \$37.5 million in revenues from overseas students in 2021-22, through student fees and charges as well as for boarding. Overseas students also spend money in the broader Queensland economy (i.e. outside of expenditure for school tuition and boarding). Revenue from overseas students in 2021-22 was lower than previous assessments of the contribution of the independent schools sector (e.g., in the 2017-18 study undertaken by AEC the income generated through overseas students was \$49.7 million). This can largely be attributed to the lingering impact border closures during the COVID-19 pandemic have had on international student enrolment. The impact from overseas students can be expected to return to and exceed pre-COVID levels in the coming years.

Information identifying the expenditure of overseas students in the broader Queensland economy is not available. In order to develop an indicative estimate of their expenditure on goods and services, data from the ABS (2023e) regarding expenditure of international school students on tuition fees compared to goods and services was used. This data indicates around 60 percent to 65 percent of overseas school student expenditure over the ten years between 2013-14 and 2022-23 was on goods and services, compared to 35 percent to 40 percent on tuition fees.

For the purpose of assessment it was assumed 40 percent of international student spend is on fees and the remaining 60 percent is on living expenses. This equates to an estimate of the independent school overseas student expenditure on goods and services, other than tuition and boarding, in the Queensland economy of \$56.3 million in 2021-22. Expenditure of overseas students on tuition and boarding is not included in this section as this represents revenue of independent schools and is therefore already captured within the operational activity of independent schools estimated above.

To allocate expenditure on goods and services to Input-Output industries, average expenditure splits from the most recent household expenditure survey (ABS, 2017) was used and allocated to their most relevant Input-Output industry. Expenditure on education and housing costs were excluded, as this expenditure is already accounted for in tuition fees and boarding. A summary of expenditure by overseas students is presented in Table 2.2.

Table 2.2. Expenditure on Goods and Services by Independent School Overseas Students, 2021-22

Input-Output Industry	% of Expenditure Item	Estimated Expenditure (\$M)
Retail Trade	52.6%	\$29.6
Accommodation	0.2%	\$0.1
Food and Beverage Services	7.8%	\$4.4
Road Transport	0.8%	\$0.4
Rail Transport	0.2%	\$0.1
Water, Pipeline and Other Transport	0.1%	\$0.0
Air and Space Transport	0.1%	\$0.0
Postal and Courier Pick-up and Delivery Service	0.1%	\$0.1
Motion Picture and Sound Recording	0.2%	\$0.1
Broadcasting (except Internet)	0.4%	\$0.2
Internet Service Providers, Internet Publishing and Broadcasting, Websearch Portals and Data Processing	0.8%	\$0.4
Telecommunication Services	3.8%	\$2.1
Finance	0.2%	\$0.1
Insurance and Superannuation Funds	14.9%	\$8.4
Auxiliary Finance and Insurance Services	0.1%	\$0.0
Rental and Hiring Services (except Real Estate)	2.3%	\$1.3
Non-Residential Property Operators and Real Estate Services	0.5%	\$0.3
Professional, Scientific and Technical Services	0.0%	\$0.0
Building Cleaning, Pest Control and Other Support Services	0.4%	\$0.2
Public Administration and Regulatory Services	5.9%	\$3.3
Health Care Services	2.4%	\$1.3
Heritage, Creative and Performing Arts	1.0%	\$0.6
Sports and Recreation	1.3%	\$0.8
Gambling	0.3%	\$0.2
Automotive Repair and Maintenance	1.5%	\$0.8
Other Repair and Maintenance	0.3%	\$0.2
Personal Services	1.7%	\$1.0
Other Services	0.3%	\$0.2

Sources: ABS (2023e), ABS (2017), ISQ (unpublished), AEC.

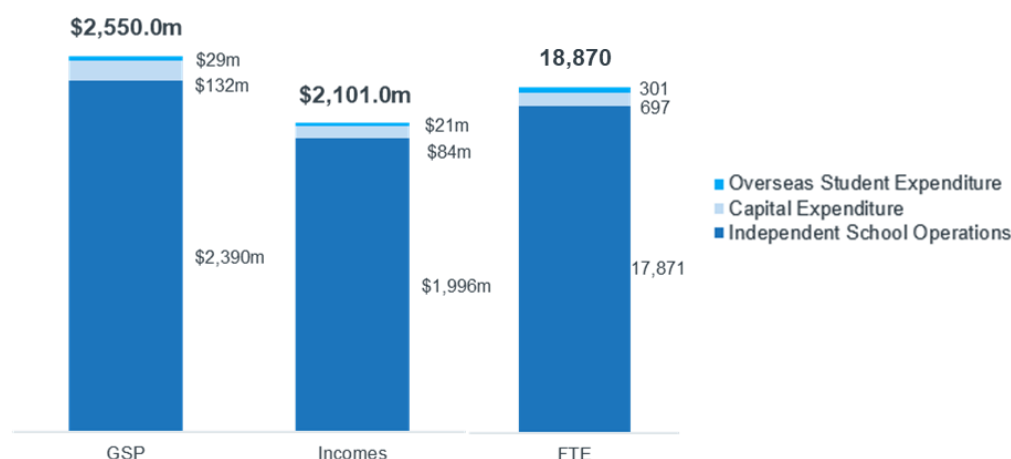
In estimating the direct economic contribution of this expenditure on goods and services by overseas students, standard Input-Output production functions for the industries outlined in Table 2.2 were assumed, using a Queensland transaction table developed as outlined in Appendix A. Based on these production functions, expenditure on goods and services by independent school overseas students is estimated to have directly generated the following economic activity for Queensland businesses in 2021-22:

- \$28.9 million in GSP;
- \$21.3 million in incomes; and
- 301 FTE jobs.

Summary of Direct Contribution of Independent Schools to Queensland

A summary of the direct economic contribution of independent schools to the Queensland economy in 2021-22 is presented in Figure 2.1. In total, independent schools directly contributed more than \$2.55 billion to Queensland GSP. Importantly, independent schools are largely a labour driven service provider, directly supporting 18,870 FTE jobs in 2021-22. Approximately 75 percent of total operational expenditure by independent schools in 2021-22 was spent on staff wages and salaries (\$2.0 billion), with a further \$105.3 million in incomes delivered through capital expenditure and expenditure of overseas students. This is indicative of the important role independent schools play in providing jobs for Queenslanders.

Figure 2.1. Direct Contribution of Independent Schools to Queensland, 2021-22



Note: Total may not sum due to rounding.
Sources: AEC.

2.2 FLOW-ON CONTRIBUTION OF INDEPENDENT SCHOOLS TO QUEENSLAND

The flow-on (or indirect) contribution of independent schools to Queensland has been estimated using Input-Output models, as outlined in Appendix A. In undertaking the modelling, direct operational activity, capital expenditure and expenditure on goods and services by overseas students outlined in section 2.1 was allocated to relevant industries in the Input-Output model:

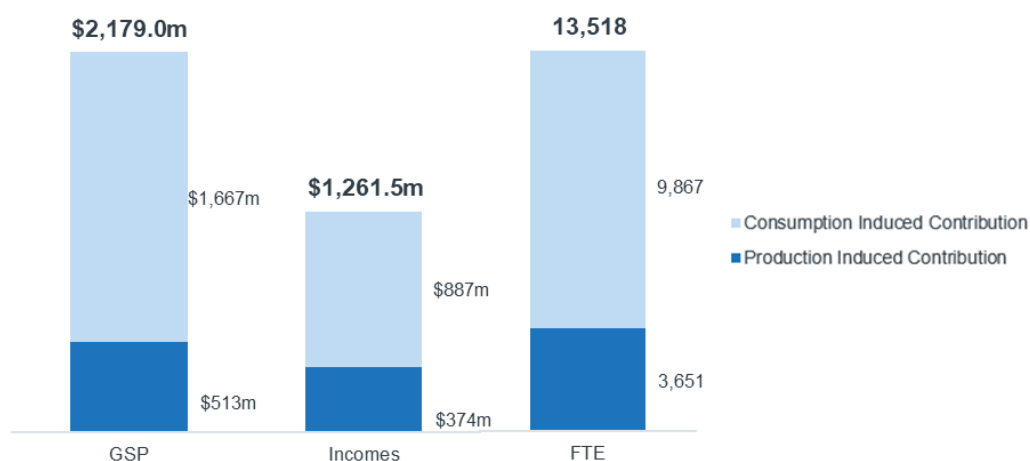
- For operational activity, this process is based on estimating the inter-industry purchases of goods and services by independent schools, which was done using financial data for independent schools (ISQ, unpublished) broken down to 114 Input-Output industries using the structure for the 'Primary and Secondary Education Services (incl Pre-Schools and Special Schools)' industry; and
- For capital expenditure and expenditure on goods and services by overseas students, standard industry purchasing patterns were applied for expenditure by industry outlined in Table 2.1 and Table 2.2.

The above process provides the multipliers used for estimating Type I flow-on activity (or production induced impacts). Financial data for independent schools (ISQ, unpublished) was also used to estimate the total purchases

of independent school services by households. This is used in developing multipliers for estimating Type II flow-on activity (or household consumption induced impacts). Refer to Appendix B for additional descriptions of Type I (i.e. production induced) and Type II (i.e. consumption induced) flow-on impacts.

In total, independent schools are estimated to have contributed approximately \$2.18 billion to Queensland GSP through flow-on activity in 2021-22, including both production induced (type I) and consumption induced (type II) impacts (Figure 2.2). Flow-on activity supported over 13,500 FTE jobs in Queensland in 2021-22, paying more than \$1.26 billion in wages, salaries and other employee compensation for the year.

Figure 2.2. Estimated Flow-On Contribution of Independent Schools to Queensland, 2021-22

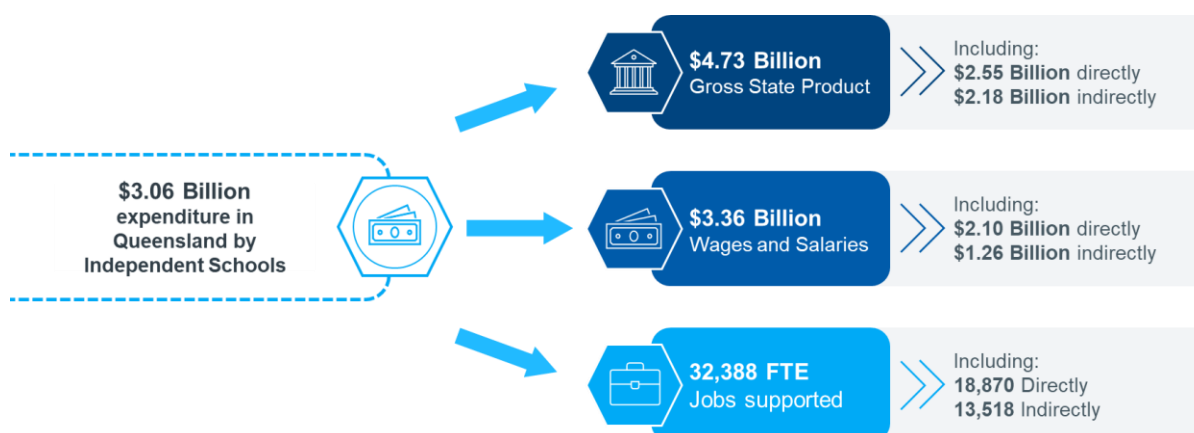


Note: Total may not sum due to rounding.
Sources: AEC.

2.3 TOTAL CONTRIBUTION OF INDEPENDENT SCHOOLS TO QUEENSLAND

Including direct and flow-on activity, independent schools are estimated to have contributed \$4.73 billion to Queensland GSP in 2021-22, while supporting nearly 32,400 FTE jobs paying a total of \$3.36 billion in total employee compensation.

Figure 2.3. Direct and Flow-On Contribution of Independent Schools to Queensland, 2021-22



Sources: AEC.

The contribution of \$4.7 billion to the Queensland economy represented 1.1 percent of the total contribution to Queensland GSP by all industries for the year². Independent schools also supported 1.4 percent of total jobs and 1.2 percent of total employee compensation in Queensland in 2021-22, including direct and flow-on contribution.

Table 2.3. Direct and Flow-On Contribution of Independent Schools to Queensland, Percent of Queensland Total Economy, 2021-22

Percent of Queensland Total Economy	Gross State Product (%)	Incomes (%)	Employment (%)
Direct Contribution	0.6%	0.8%	0.8%
Production Induced Contribution	0.1%	0.1%	0.2%
Consumption Induced Contribution	0.4%	0.3%	0.4%
Total Contribution	1.1%	1.3%	1.4%

Note: Total may not sum due to rounding.
Sources: AEC.

Independent Schools – Significant Regional Contributors

Independent schools are key contributors to many of Queensland's largest regional economies, providing high quality education options in many of Queensland's most populous areas. The contribution of independent schools to many of these regions is greater proportionally than to Queensland as a whole. This is especially true within the Gold Coast, the Sunshine Coast, and the Wide-Bay Burnet regions³. In each of these regions independent schools' direct contribution to GRP, incomes and employment is greater than the Queensland average (when measured as a proportion of the total). The Brisbane region⁴ provides the highest overall contribution to Queensland GSP, incomes and employment, though the percent contribution that independent schools comprise of the overall Brisbane region is approximately on par with the Queensland averages.

Independent schools contributed \$2.70 billion in GRP to the Brisbane region (including direct and flow-on activity), \$784.8 million in GRP in the Gold Coast region and \$411.6 million in the Sunshine Coast region; this equates to 1.4, percent, 1.9 percent and 1.7 percent of total GRP, respectively. Independent schools contributed nearly 18,000 FTE jobs to the Brisbane regional economy (1.5% of total), paying \$1.84 billion in wages and salaries. Around 10,350 of these FTE jobs were supported in Brisbane LGA, followed by Moreton Bay (2,750 FTEs), Logan (1,900 FTEs), Ipswich (1,650 FTEs) and Redland (1,150 FTEs). In the Gold Coast region 1.9 percent of total employment was supported by independent schools (over 5,400 FTE jobs) paying \$556.3 million in wages and salaries. Similarly, in the Sunshine Coast, independent schools supported 1.7 percent of total employment (nearly 2,800 FTE jobs), paying \$293.1 million in wages and salaries.

In the Wide-Bay Burnet region, independent schools contributed approximately \$182.0 million to Wide-Bay Burnet's GRP in 2021-22 and supported over 1,300 FTE jobs (including direct and flow-on activity). Direct GRP (\$119.8 million) equated to 0.7 percent of total GRP within the Wide-Bay Burnet region. Within the Wide-Bay Burnet region, independent schools contributed 1.6 percent of GRP in the Fraser Coast LGA, 1.3 percent in the Gympie LGA, and 1.0 percent in the Bundaberg LGA in 2021-22.

Further north, independent schools have considerable presence in the LGAs of Carpentaria and Charters Towers. In Carpentaria, independent schools contribute 1.7 percent of the total GRP, 2.7 percent of total employment and 1.7 percent of the area's wages. Similarly, independent schools in Charters Towers contribute 1.3 percent of total GRP, 3.4 of total employment and 2.5 percent of the area's wages.

In total, independent schools contributed approximately \$245.1 million to the North Queensland, Far North Queensland, and North-West Queensland economies in 2021-22, and supported nearly 1,900 FTE jobs.

² Total industry contribution to Queensland GSP in 2021-22 (including the sector of ownership of dwellings) was \$447.49 billion (ABS, 2023b). An additional \$28.18 billion in GSP was contributed through taxes less subsidies on final demand (e.g. demand by households) rather than production by industry. Only the industry contribution to GSP has been examined in the economic contribution assessment.

³ The Gold Coast region contains on the Gold Coast LGA. The Sunshine Coast region includes both Noosa LGA and Sunshine Coast LGA. The Wide-Bay Burnet region comprises Bundaberg, Cherbourg, Fraser Coast, Gympie, North Burnett and South Burnett LGAs.

⁴ The Brisbane region includes the LGAs of Brisbane, Ipswich, Logan, Moreton Bay and Redland.

2.4 COMPARISON WITH OTHER INDUSTRIES

Economic modelling presented in the sections above highlights the important contribution Queensland's independent schools make to the state economy. The significance of this contribution to the Queensland economy can best be outlined through comparisons with other, recognisable Queensland industries.

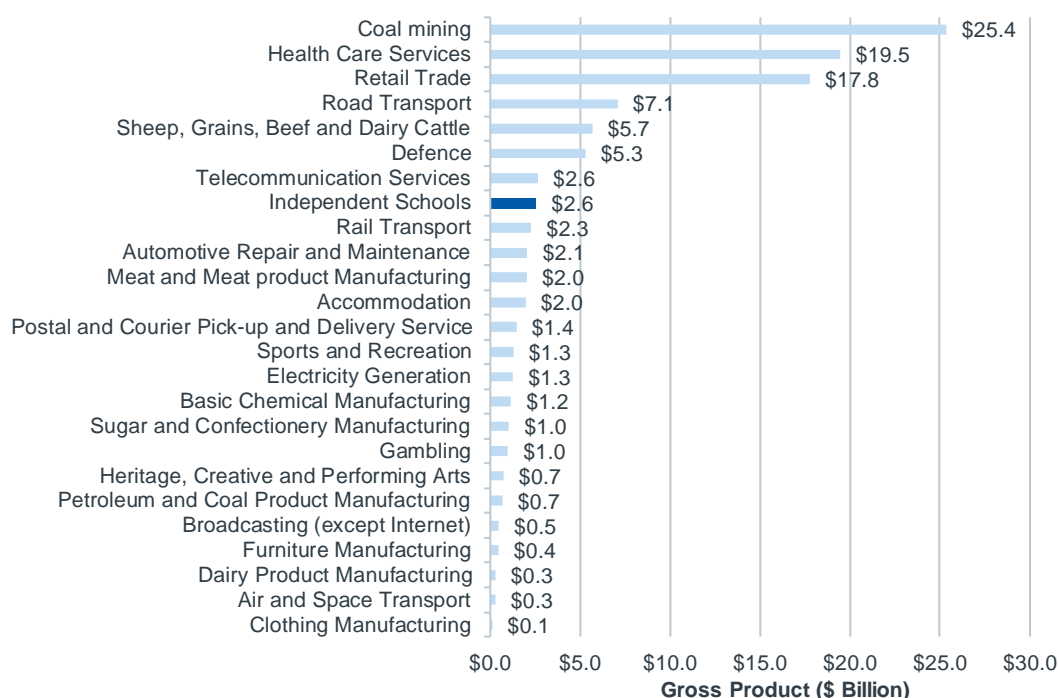
The following sections present comparisons of the direct contribution independent schools make to the Queensland economy against other industries modelled within the significance model developed for this project.⁵ This section only presents the direct contribution of independent schools compared to the direct contribution of other industries. Flow-on contributions cannot be presented as this would introduce double counting across Queensland economic activity (as flow-on contributions of independent schools represent direct activity of the industries it purchases from, and vice versa).

While a total of 115 industries were modelled, including Queensland independent schools, the figures below present comparisons between independent schools and a selection of 24 other industries (to provide 25 in total). This was done in order to provide a meaningful and manageable presentation of data. The industries selected provide a cross section ranging in size from some of the largest contributors to the Queensland economy to some of the smallest.

2.4.1 Gross State Product

Queensland's total industry contribution to GSP was \$447.49 billion in 2021-22⁶, of which independent schools directly contributed approximately \$2.6 billion. This is comparable with the contribution of Queensland's telecommunication services, and more than key Queensland industries such as the rail transport industry, the automotive repair and maintenance industry and the accommodation industry. Overall, independent schools ranked 36th of the 115 industries modelled in terms of contribution to GSP.

Figure 2.4. Direct Contribution of Select Industries to Gross State Product, 2021-22 (\$ Billion)



Sources: AEC.

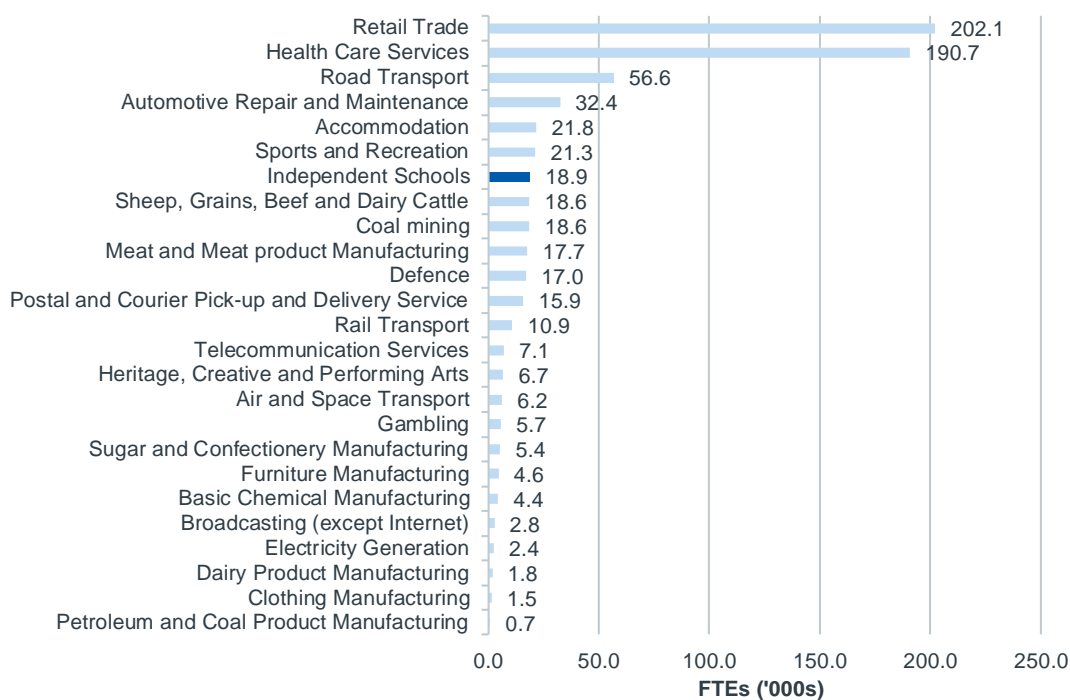
⁵ A total of 115 industries were modelled – the 114 industries classified in the Input-Output transaction table produced by the ABS (2023) plus independent schools. Additional details are provided in in Appendix A.

⁶ Total GSP for Queensland in 2021-22 was \$475.66 billion (ABS, 2023b). The difference between total GSP and the industry contribution to GSP comprises taxes less subsidies on final demand rather than production by industry. Only the industry contribution to GSP has been examined in the economic contribution assessment.

2.4.2 Employment

There were over 2.37 million FTE workers in Queensland in 2021-22, of which 18,870 were employed directly as a result of the operational activities and capital works of independent schools, or through expenditure of overseas students studying at independent schools. Independent schools were the 28th largest contributor overall to Queensland jobs of the 115 industries modelled, employing more people than Queensland's coal mining industry, the sheep, grains, beef and dairy cattle industry and defence. The direct employment of independent schools is more than double that of the telecommunication services industry.

Figure 2.5. Direct Contribution of Select Industries to Employment, 2021-22 ('000 FTEs)

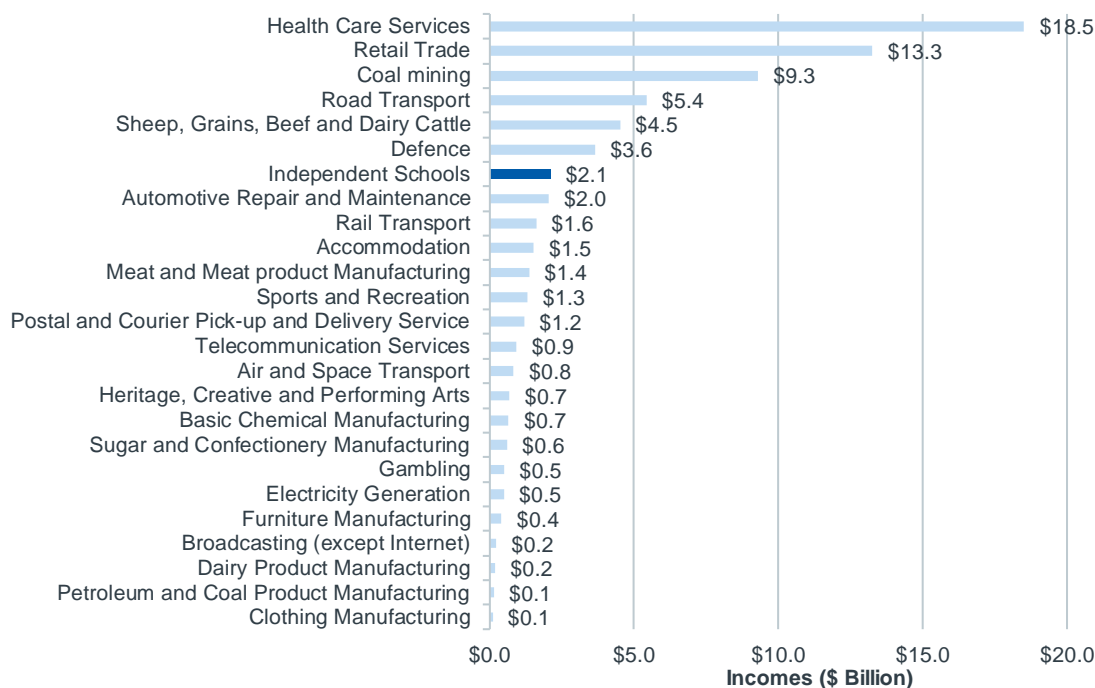


Sources: AEC.

2.4.3 Employee Incomes

Independent schools contributed approximately \$2.1 billion in incomes to Queensland workers in 2021-22, ranking the industry as the 28th largest contributor overall to Queensland employee incomes of the 115 industries modelled. Independent schools provided more incomes to Queenslanders than industries such as rail transport, accommodation, and automotive repair and maintenance.

Figure 2.6. Direct Contribution of Select Industries to Employee Incomes, 2021-22 (\$ Billion)



Sources: AEC.

3. SAVINGS TO GOVERNMENTS AND TAXPAYERS

This chapter provides an indicative estimate of the savings independent schools deliver to state and federal governments, and therefore taxpayers, as a result of the education services they provide to Queensland students.

Students at independent schools are entitled to a place at a state school. On average independent schools receive a lower per student rate of government funding than state schools. By providing tuition to independent school students who would otherwise be enrolled in a state school, independent schools deliver direct savings to governments, and therefore taxpayers.

In estimating the savings generated by independent schools, two categories have been examined:

- Cost savings in terms of recurrent education costs, including expenditure on user costs of capital (which effectively refers to the cost for accessing capital assets, and can be considered to encompass the ongoing maintenance and upkeep of school assets); and
- Cost savings in terms of contributions made by parents to capital infrastructure and improvements.

Independent schools are estimated to have saved taxpayers a total of \$1.56 billion in 2021-22, through a combination of savings of \$1.28 billion in recurrent education costs and \$283.0 million in capital costs.

3.1 RECURRENT EDUCATION COSTS

In estimating the recurrent education cost savings delivered by independent schools, Productivity Commission (2024) data was used detailing the average recurrent costs to the Commonwealth and Queensland Governments (including user costs of capital) per government school student. The data indicates \$21,585 in government funding per government school student in Queensland in 2021-22, with \$19,874 in funding per primary school student and \$24,019 per secondary school student.

Data from the National Schools Statistics Collection (2021 Commonwealth August Collection) (ISQ, unpublished) indicates there were 136,227 FTE school students at independent schools in 2021, of which 59,939 were primary school students and 76,288 were secondary school students. Applying the above average government expenditure per government primary and secondary school student provides an estimate in government funding required for recurrent education if independent school students were enrolled in government schools of \$3.02 billion for the year.

By comparison, independent schools received an estimated \$1.75 billion in combined Commonwealth and Queensland Government funding for recurrent education expenses in 2021-22 (ISQ, unpublished). This equates to a difference of \$1.28 billion in government funding received by independent schools for recurrent education expenses compared to what governments would pay if independent school students were enrolled in government schools or approximately \$9,380 per student educated through the independent school system. This is indicative of the savings to taxpayers provided by independent schools in terms of recurrent education costs.

3.2 CAPITAL EXPENDITURE

Independent schools provide education facilities and infrastructure that is primarily paid for through private contributions, reducing the overall tax burden on Queensland households that would be incurred if all school infrastructure was required to be paid for in full by public funds from the Queensland and Australian Governments.

Financial data from ISQ (unpublished) indicates that in 2021 approximately \$283.0 million was contributed by parents of Queensland independent school children and the community to fund capital infrastructure and improvements. This is representative of the savings to Queensland and Australian Governments resulting from private funding for the provision of independent schools.

4. THE ECONOMIC VALUE OF ENHANCED EDUCATION OUTCOMES

Enhanced educational outcomes provided by independent schools can be linked to an estimated contribution to growth in Queensland GSP of around \$235.2 million in 2021-22. This economic benefit is estimated to be provided annually by the enhanced education outcomes delivered by independent schools.

The quality of learning and teaching provided by Queensland independent schools support students in achieving excellent outcomes across a range of educational measures:

- Students attending independent schools are estimated to have contributed to a 2.98 point increase in the mean PISA test score for Queensland's overall student body in 2022;
- Australian independent schools recorded a mean PISA test score of 538 for scientific literacy, 526 for reading literacy, and 519 for mathematical literacy (ACER, 2023). These scores were well above the overall mean PISA test scores for all Australian schools, as well as the OECD average (Table 4.1);
- Independent schools are among the top performing schools across all NAPLAN assessment domains and the four year levels assessed, reporting an average 19.3 points higher in primary school and 14.5 points higher in secondary school; and
- Higher proportions of independent school students graduate with a senior education profile.

Table 4.1. PISA Scores, Australian Independent Schools versus Australian and OECD Means, 2022

PISA Scores	Reading	Mathematics	Science
Australian Independent Schools Mean	526	519	538
Australian Schools Mean	498	487	507
OECD Schools Mean	476	472	485

Source: ACER (2023).

4.1 CONTRIBUTION TO ECONOMIC GROWTH

Education is a fundamental building block for economic growth. It imparts the learnings and experience gained throughout human history to young minds, allowing generation after generation to build upon the collective knowledge, infrastructure and technology of our predecessors, and advance economies and communities through new and innovative practices. The contribution independent schools make to Queensland's economic growth through enhanced education outcomes was estimated based on research by the OECD (2010), which found a causal relationship between academic performance and economic growth (using standardised PISA test scores⁷ against economic performance over 40 years across 23 OECD countries), and results of the 2022 PISA scores (ACER, 2023) for Australian independent schools compared to Australian state schools, accounting for student level socio-economic background⁸. The approach (and findings) to estimating economic growth is presented in Appendix C.

Without independent schools, it can be indicatively estimated that Queensland's mean PISA score would be 2.98 points lower. Based on the OECD's findings, this would have equated to a reduction in Queensland growth of approximately 0.05 percentage points, which is equivalent to approximately \$235.2 million in GSP for 2021-22. This economic benefit is estimated to be provided annually by the enhanced education outcomes delivered by independent schools. They also deliver legacy benefits with the increased activity and productivity delivered by enhanced education outcomes being carried forward to subsequent years.

⁷ PISA tests 15-years olds on Reading, Mathematics and Science.

⁸ Assuming the difference between national independent schools and state schools PISA scores accounting for student level socio-economic background applies to Queensland.

4.2 MEASURES OF ACHIEVEMENT

4.2.1 Strong Growth in Enrolments

Enrolment in independent schools increased 75% over the past two decades, reaching 147,268 students in 2023. The independent school sector has been growing at a faster rate than both State and Catholic schools in Queensland for the past five years at an average of 4.2% each year. The growth has been particularly significant since the beginning of the COVID-19 pandemic in 2020 with an influx of 16,901 students across the past three years as migration to Queensland has increased.

The growth in independent school student enrolments across Queensland since the beginning of 2020 has induced a similar increase in new full-time staff. Independent schools employed an additional 2,865 full-time equivalent (FTE) staff throughout the last three years which represents 53% of all new direct employment in the school sector across Queensland.

4.2.2 Higher Levels of Academic Performance

Queensland independent schools cater for a diversity of students from a range of backgrounds. Whilst variations in academic performance generally relate to individual student characteristics as well as the characteristics of schools and school systems, schools with a high degree of autonomy, such as independent schools, generally have been shown to achieve higher levels of performance in academic outcomes, even after adjusting for students' socio-economic background.

At a national level, results of the 2022 PISA scores (ACER, 2023) show that students from Australian independent schools on average recorded higher PISA scores than students from Australian state schools in each category (reading, mathematics and science), by an average score of around 43 points. Adjusting for socio-economic background, Australian independent schools still outperformed state schools by around 19 points on average across reading, mathematics and science (see Table 4.2).

Table 4.2. Difference in PISA Scores, Australian Independent Schools versus State Schools, 2022

PISA Scores	Reading	Mathematics	Science	Average
Base Scores	41	44	44	43
Adjusted for Socio-Economic Background	17	20	19	19

Source: ACER (2023).

2022 PISA results for Queensland independent schools relative to other schools were not available. Even so, the results achieved by all students within Queensland's independent schooling sector is strong evidence of the quality teaching and learning provided by independent schools.

NAPLAN is the National Assessment Program – Literacy and Numeracy (NAPLAN) for students in Years 3, 5, 7 and 9. It tests all students in all schools in reading, writing, spelling, grammar, punctuation, and numeracy. Non-government schools in Queensland, and particularly independent schools, are consistently among the top performing schools across all NAPLAN assessment domains. NAPLAN scores across Australia show consistently higher results for private schools across four year levels tested.

Results show primary private school students (Year 3 and Year 5), on average, score 19.3 points higher than their public-school counterparts and 14.5 points higher (on average) in secondary school (Year 7 and Year 9). While this data is for Australian private schools compared to Australian public schools, combined with the PISA score differential it is considered indicative of the higher levels of academic achievement that Queensland independent schools provide.

Table 4.3. Difference in NAPLAN Results, Australian Schools, 2022

NAPLAN Results	Year 3	Year 5	Year 7	Year 9
Private school	449.9	532.9	576.8	618.1
Private school (switched by public in year 7)	464.9	547.9	588.5	629.3
Public school	441.0	518.1	568.9	608.5

Note: The source does not distinguish independent schools separate from other non-government schools.
Source: Larson, S. & Forbes, A. (2022).

The Queensland Curriculum and Assessment Authority (QCAA) issue a senior education profile (SEP) to each student who completes year 12 in Queensland. In 2022, 15.6 percent of all students enrolled in an independent secondary school in Queensland (or 11,890 students) received a SEP (QCAA, 2023). Comparatively 28,678 students (or 7.3% of enrolled students) in a government secondary school received a SEP.

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APPENDIX A: SIGNIFICANCE ASSESSMENT METHODOLOGY

The economic significance estimates in this report are produced using Input-Output transaction tables and models developed by AEC for the purposes of this assessment, combined with data from a range of sources, including State and National Accounts data, other industry data from the ABS, and data on ISQ member schools from ISQ. The Input-Output models were used to produce estimates of the direct and flow-on contribution of ISQ schools to the Queensland economy, Queensland LGAs, and Queensland State and Federal Electorate economies in terms of output, gross product, employment and income (i.e., wages and salaries).

OVERVIEW OF INPUT-OUTPUT MODELLING

Input-Output analysis demonstrates inter-industry relationships in an economy, depicting how the output of one industry is purchased by other industries, households, the government and external parties (i.e. exports), as well as expenditure on other factors of production such as labour, capital and imports. Input-Output analysis shows the direct and indirect (flow-on) effects of one sector on other sectors and the general economy. As such, Input-Output modelling can be used to demonstrate the economic contribution of a sector on the overall economy and how much the economy relies on this sector or to examine a change in final demand of any one sector and the resultant change in activity of its supporting sectors. The types of measures examined and reported on using Input-Output modelling is outlined in Appendix B.

SIGNIFICANCE ASSESSMENT VERSUS IMPACT ASSESSMENT

The framework employed in significance assessment **differs from that employed in traditional economic impact analysis** in that economic significance assessment primarily seeks the contribution of an existing industry as opposed to the impact of a “stimulus” (or expansion) in a particular industry or in several industries. The usual approach of comparing what the economy would be with and without the industries whose contributions are to be assessed does not work because the inter-relationship between industries means whether or not the industries to be assessed exist, there will still be demand for their outputs (e.g., a complete vehicle needs tyres so that whether or not the entire tyre manufacturer is closed down, the car manufacturer’s demand for tyres still exists). From a modelling stance, this problem is solved by assuming that demand for outputs of the industries to be assessed will instead be met by imports.

MODEL DEVELOPMENT

The models used in this assessment are derived from sub-regional transaction tables developed specifically for this project. The process of developing a sub-regional transaction table involves developing regional estimates of gross production and purchasing patterns based on a parent table, in this case the 2020-21 Australian transaction table (ABS, 2023a).

Estimates of gross production (by industry) in the study areas (Queensland, each LGA and each State and Federal Electorate) were developed based on the percent contribution to employment (by place of work) of the study areas to the Australian economy. This is based on AEC’s annual employment estimates by industry by small area (AEC, unpublished^a) applied to Australian gross output identified in the 2020-21 Australian table. Estimates for 2021-22 were developed based on estimates of annual change across a range of data sets, including:

- GRP from AEC’s in-house estimates of GRP by small area (AEC, unpublished^b), as well as Gross State Product and Gross Domestic Product (ABS, 2023b), was used to estimate change in both gross product and output between years (from the base of 2020-21).
 - An exception to this approach was construction-based industries, which used data regarding the change in total value of construction work done by State for buildings (ABS, 2023c) and engineering construction activity (ABS, 2023d).

- Annual employment by industry estimates from AEC's in-house employment by industry by small area model (AEC, unpublished⁹) was used to estimate changes in employment between years for each industry.

Industry purchasing patterns within the study area were estimated using a Flegg Location Quotient approach, as described in Flegg *et al.* (2021), with a fixed degree of convexity applied to the regional size scalar. These were then adjusted based on differences in industry value added activity per employee between the State/ region and Australia, as estimated using AEC's GRP and employment estimates models.

INPUT-OUTPUT ASSUMPTIONS

The key assumptions and limitations of Input-Output analysis include:

- **Lack of supply-side constraints:** The most significant limitation of economic impact analysis using Input-Output multipliers is the implicit assumption that the economy has no supply-side constraints so the supply of each good is perfectly elastic. That is, it is assumed that extra output can be produced in one area without taking resources away from other activities, thus overstating economic impacts. The actual impact is likely to be dependent on the extent to which the economy is operating at or near capacity.
- **Fixed prices:** Constraints on the availability of inputs, such as skilled labour, require prices to act as a rationing device. In assessments using Input-Output multipliers, where factors of production are assumed to be limitless, this rationing response is assumed not to occur. The system is in equilibrium at given prices, and prices are assumed to be unaffected by policy and any crowding out effects are not captured. This is not the case in an economic system subject to external influences.
- **Fixed ratios for intermediate inputs and production (linear production function):** Economic impact analysis using Input-Output multipliers implicitly assumes that there is a fixed input structure in each industry and fixed ratios for production. That is, the input function is generally assumed linear and homogenous of degree one (which implies constant returns to scale and no substitution between inputs). As such, impact analysis using Input-Output multipliers can be seen to describe average effects, not marginal effects. For example, increased demand for a product is assumed to imply an equal increase in production for that product. In reality, however, it may be more efficient to increase imports or divert some exports to local consumption rather than increasing local production by the full amount. Further, it is assumed each commodity (or group of commodities) is supplied by a single industry or sector of production. This implies there is only one method used to produce each commodity and that each sector has only one primary output.
- **No allowance for economies of scope:** 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.
- **No allowance for purchasers' marginal responses to change:** Economic impact analysis using multipliers assumes that households consume goods and services in exact proportions to their initial budget shares. For example, the household budget share of some goods might increase as household income increases. This equally applies to industrial consumption of intermediate inputs and factors of production.
- **Absence of budget constraints:** Assessments of economic impacts using multipliers that consider consumption induced effects (type two multipliers) implicitly assume that household and government consumption is not subject to budget constraints.

Despite these limitations, 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 provide useful insight into the quantum of final demand for goods and services, both directly and indirectly, likely to be generated by a project.

In addition to the general limitations of Input-Output analysis, there are three other factors that need to be considered when assessing the outputs of sub-regional transaction table developed using the above approach, namely:

- It is assumed the sub-region has similar technology and demand/ consumption patterns as the parent (Australia) table (e.g. the ratio of employee compensation to employees for each industry is held constant).
- Intra-regional cross-industry purchasing patterns for a given sector vary from the national tables depending on the prominence of the sector in the regional economy compared to its input sectors. Typically, sectors that are more prominent in the region (compared to the national economy) will be assessed as purchasing a higher proportion of imports from input sectors than at the national level, and vice versa.
- The size of the regional economy is assumed to have an inverse relationship with the requirement to import goods/ services to meet its needs (i.e. the smaller the economy, in general the greater the reliance on imports).

SIGNIFICANCE ASSESSMENT APPROACH

Contribution to Queensland

Input-Output tables utilise an aggregated system of industry classifications based on the ANZSIC system. In total, the 2020-21. Input-Output tables produced by the ABS (2023a) define 114 distinct industries. In assessing the contribution of independent schools, the activities of independent schools were extracted from the relevant Input-Output aggregated industries.

In practical terms this is achieved in the model by splitting each of the 114 industries represented in the Input-Output transaction tables into an “Independent Schools” and “Non-Independent Schools” component based on financial and employment data provided by ISQ (unpublished) on their operating activities and capital expenditure, and attributing these to their most relevant industry in the transaction tables. Assumptions regarding expenditure of overseas students were also developed and allocated to relevant industries. An overview of the aggregate expenditure and industry allocation is presented in section 2.1.

Once the transaction tables were complete, the significance models were developed through the development of coefficients using a Flegg Location Quotient approach. The significance assessment is initially undertaken for the 2020-21 financial year to be consistent with the IO transaction tables utilised. These estimates are then “rebased” to 2021-22 values based on the approach outlined in the ‘Model Development’ section of this Appendix above.

Data Consistency

Data provided regarding independent school revenues, expenditure and employment are for the 2021 calendar year. However, the Input-Output models and GSP data used are compiled and presented by financial years. While it is acknowledged there is a discrepancy in data sets, independent schools data was assessed and compared against 2021-22 economic data, and has been reported as reflecting the economic contribution of independent schools in 2021-22 throughout the report.

Contribution to Queensland’s Regions

Regional allocation of the direct and flow-on effects is performed as follows.

- 1 Individual Input-Output transaction tables and significance assessment models were developed for each LGA and State and Federal Electorate (as described in the ‘Model Development’ section of this Appendix). This approach produces regional estimates of direct and flow-on independent school contributions assuming each region operates in isolation, and therefore does not account for any inter-regional flow-on relationships.
- 2 To account for inter-regional flows of demand for goods and services between regions, the difference between the total Queensland flow-on effects and the sum of flow-on effects for each region by industry (the “inter-regional” flow-on effects) has been redistributed to each region based on the proportion that each region contributes to total Queensland activity in each industry (i.e., if the Brisbane LGA accounts for 50% of total Queensland output in retail trade, then 50% of the inter-regional retail trade flow-on effects have been allocated to Brisbane LGA).

In undertaking modelling for State and Federal electorates, while expenditure and employment data was available and used from ISQ, other data required to undertake economic modelling for State and Federal Electoral divisions was not available from the Australian Bureau of Statistics. To undertake analysis for the State and Federal Electorates correspondence files (based on area) between State/ Federal Electorates and Statistical Area 2 (SA2) geographic boundaries from the Australian Bureau of Statistics were utilised to convert ABS data at the SA2 geography to State/ Federal Electorates. All estimates of independent school activity at the State and Federal Electorate level are therefore subject to a softer confidence due to any inconsistencies introduced by transforming data using these correspondence files.

APPENDIX B: MEASURES USED IN MODELLING

The contribution of independent schools to the Queensland economy is estimated across the following three key measures:

- **Gross Product:** Refers to the value of all outputs of an industry, including taxes/ subsidies on its final products, after deducting the cost of goods and services inputs in the production process. Gross product (e.g., Gross State Product/ Gross Regional Product) defines a true net economic contribution of a State/ Region and is subsequently the preferred measure for assessing economic impacts.
- **Incomes:** Measures the level of wages and salaries paid to employees of each industry, as well as gross mixed income of owner-operators/ self-employed workers.
- **Employment:** Refers to the part-time and full-time employment positions supported by an industry (including owner-operators/ self-employed workers), and is expressed in terms of full-time equivalent (FTE) positions⁹.

An additional measure is also referenced:

- **Industry output (or turnover):** Refers to the total dollar value of all goods and services produced during the year, thereby including the costs of goods and services used in the development and provision of the final product. This measure overstates the true economic contribution of the industry as it double counts the value of material and services inputs used in the production of an industry's goods and services.

The economic contribution is measured in terms of:

- **Direct (initial) impacts**, which represents the economic activity of the independent schools themselves, as well as activity from their capital expenditure and from overseas student expenditure.
- **Flow-on impacts**, comprising:
 - **Production Induced (Type I)**, which represent the effects from direct expenditure on goods and services by independent schools and overseas students, as well as the second and subsequent round effects of increased purchases by suppliers in response to increased sales.
 - **Household Consumption Induced (Type II)**, which represent the consumption induced activity from household expenditure on goods and services resulting from wages and salaries being paid to independent school employees and those within the independent schools' supply chain.

⁹ Where one FTE equates to one person employed full time for a period of one year.

APPENDIX C: CONTRIBUTION TO ECONOMIC GROWTH

The enhanced educational outcomes provided by independent schools have economic impacts for Queensland. Estimates of the contribution to economic growth by independent schools in Queensland were developed using research findings from the OECD (2010) and differences in PISA scores that can be attributed to independent schools per data from ACER (2023).

The approach used is consistent with that used in estimating the contribution of Queensland's independent schools in 2013-14 and 2017-18 (AEC, 2016 & 2020), as well as that applied by Oxford Economics (2014) in their study of the contribution of independent schools to the British economy.

ACADEMIC PERFORMANCE AND ECONOMIC GROWTH

Research by the OECD (2010) found a relationship between academic performance and economic growth. The study, which examined standardised PISA test scores¹⁰ against economic performance over 40 years across 23 OECD countries (including Australia), found that a one standard deviation increase in PISA scores (which equates to 100 points on the PISA scale) correlates with a 1.74 percentage point increase in GDP growth.

This relationship was used to identify the contribution of Queensland's independent schools to economic growth, by identifying the enhanced academic performance of independent schools compared to state schools.

DIFFERENCE IN PISA SCORES

Results of the 2022 PISA scores (ACER, 2023) show that students from Australian independent schools on average recorded higher PISA scores than students from Australian state schools in each category (reading, mathematics and science), by an average score of around 43 points.

However, it is important to recognise the effect that family and socio-economic background have on student performance. ACER present PISA scores accounting for variance in socio-economic background, and found Australian independent schools still outperformed state schools by around 19 points on average across reading, mathematics and science. In estimating the benefit to economic growth derived from independent schools, the difference in PISA scores of 19 points has been used to ensure results are not influenced by variance in socio-economic background of students between independent schools and state schools.

Table C. 1. Difference in PISA Scores, Australian Independent Schools versus State Schools, 2022

PISA Scores	Reading	Mathematics	Science	Average
Base Scores	41	44	44	43
Adjusted for Socio-Economic Background	17	20	19	19

Source: ACER (2023).

In assessing the contribution of Queensland's independent schools to economic growth, the difference in PISA scores (accounting for socio-economic background) of 19 points between Australian independent schools and Australian state schools has been assumed to also apply in Queensland.

¹⁰ PISA tests 15-years olds on Reading, Mathematics and Science.

OVERALL INCREASE IN QUEENSLAND PISA SCORE BY INDEPENDENT SCHOOLS

Without independent schools, it can be assumed the approximately 136,200 students enrolled at Queensland independent schools in 2021 would otherwise be educated in Queensland's state school system. Based on ACER (2023) findings, it can further be assumed that the PISA scores received by the approximately 136,200 students enrolled at independent schools in Queensland would otherwise be approximately 19 points lower on average if they were enrolled in state schools.

It is assumed the 15.7% of Queensland's total student body who attend an independent school in 2021 would receive a PISA score 19 points lower if they attended a state school and PISA tests were undertaken (or alternatively, by having independent schools, PISA scores received would be 19 points higher than they would have otherwise have been for 15.7% of Queensland's overall student body).

Without independent schools, Queensland's mean PISA score across all students in 2021 (had PISA tests been conducted in 2021) can therefore indicatively be estimated to have been 2.98 points lower without independent schools (i.e., 19 points multiplied by 15.7% of Queensland's overall student body).

CONTRIBUTION TO ECONOMIC GROWTH

OECD's research findings regarding the change in economic growth of 1.74 percentage points for every 100 point increase on the PISA scale, combined with an estimated overall difference in Queensland's mean PISA score of 2.98 points as a result of independent schools, suggests that without independent schools Queensland's economic growth would be approximately 0.05 percentage points lower.

Queensland recorded Gross State Product of \$447.49 billion in 2021-22 (ABS, 2023b). A reduction in economic growth of 0.05 percentage points is equivalent to approximately \$235.2 million in GSP for 2021-22. This economic benefit is estimated to be provided annually by the enhanced education outcomes delivered by independent schools. They also deliver legacy benefits with the increased activity and productivity delivered by enhanced education outcomes being carried forward to subsequent years.

BRISBANE

Level 5, 131 Leichhardt Street
Spring Hill QLD 4000
Australia
T: +61 (0)7 3831 0577

TOWNSVILLE

233 Flinders Street East
Townsville QLD 4810
Australia
T: +61 (0)7 4771 5550

SYDNEY

Level 14, 25 Bligh Street,
Sydney NSW 2000
Australia
T: +61 (0) 2 9283 8400

DARWIN

Level 1, 48-50 Smith Street
Darwin NT 0800
Australia
T: 1300 799 343

MELBOURNE

Level 13, 200 Queen Street
Melbourne VIC 3000
Australia
T: +61 (0)3 8648 6586

PERTH

Level 2, 580 Hay Street
Perth WA 6000
Australia
T: +61 (0) 8 6555 4940

AFFILIATED OFFICES:**BANGKOK**

2024/129-130 Sukhumvit 50
Prakanong Klongtoey,
Bangkok, Thailand 10260
T: +66 2 107 0189

SHANGHAI

Level 35, 1st Building,
700 Lique Road, Putuo District,
Shanghai, China 200333
T: +8618 516293312

aecgrouppltd.com

OUTCOME DRIVEN

