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Alcohol Beverages Industry
Economic contribution and future opportunity
March 2021

Deloitte Access **Economics**

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Australia's agricultural sector provides inputs into alcohol beverages manufacturing



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Glass, plastic and other manufacturing goods are used within the alcohol beverages industry



Transport

The transport sector supports manufacturers, wholesalers, retailers, exporters and consumers in the alcohol beverages industry

Alcohol Beverages Industry



Manufacturers

This includes beer, wine and spirits manufacturing



Wholesalers

This covers liquor wholesalers who distribute alcohol beverages products



Retailers

This covers liquor retailers who sell alcohol beverages to consumers both online and in bricks and mortar stores



Food and beverage services

This includes cafes, restaurants, pubs, clubs, bars, motels, hotels, and casinos.

End users



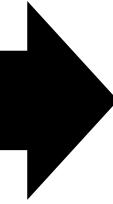
Consumers

Australian consumers purchase alcohol products either directly from manufactures, or through wholesalers and retailers



Export markets

Manufacturers, wholesalers and retailers provide their products and services to export markets, including tourists



Alcohol beverages industry overview Playing a role throughout the economy

The alcohol beverages industry covers a broad range of sectors, with a supply chain stretching from manufacturers through to wholesalers, retailers and hospitality services. In addition, sectors across the economy provide key inputs into the industry, including agricultural inputs.

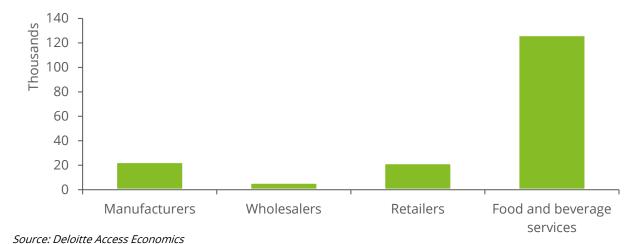
The industry directly supports employment of 176,000 full time equivalent jobs (FTEs), or 238,000 employees. ¹ The manufacturing sector employs around 22,500 FTEs, but it is the downstream sectors where the majority of jobs are held. This includes the retail sector (21,600 FTEs) and the food and beverage services sector (126,300 FTEs).

There were over 76,000 businesses operating in the industry as at June 2019, accounting for 3% of all

businesses in Australia. The industry is dominated by small to medium sized businesses, with a higher than average share of businesses employing under 20 people which accounts for around 60% of the industry. This share is driven by businesses in the food and beverage and retail components of the industry. This segment of the market grew 1.2% in 2019, offsetting a 1.9% decline in large businesses.

Businesses operating in the industry require liquor licences to sell or serve alcohol. There were 68,600 active liquor licences in December 2019. The majority of these were on-premise licences (65%) followed by off-premise (14%), hybrid (11%), and distribution and sales (11%).

Direct employment (FTEs) breakdown of the alcohol beverages industry, 2018-19

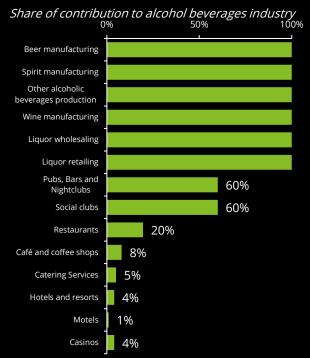


¹The alcohol beverages industry is a weighted average of the industries listed based on alcohol share of revenue, as outlined in the share of contribution to alcohol beverages industry chart.

For the purpose of this report, the alcohol beverages industry covers the following sectors:

- manufacturers including beer, spirits, wine and other alcohol beverages
- liquor wholesaling
- liquor retailing
- food and beverage services including accommodation, cafes and restaurants, catering services, pubs, taverns and bars, clubs, and casino operations.

The degree to which each sub-sector contributes to the alcohol beverages industry is outlined below.



Alcohol consumption in Australia \$26 billion spent by Australians on alcohol consumption in 2019-20

The latest figures reveal that Australians spent \$26 billion on total alcohol consumption in 2019-20, 4.0% more than in 2018-19.²

Since 2000 there has been an increasing divergence between the growth of spending and volume of alcohol purchased.

Total spending on alcohol beverages has grown 4.9% between 2007-08 and 2017-18, while the chain volume measure (stripping out price inflation) of beverage purchases has grown at a slower 2.6% over the same period. The difference between these two rates is growth in prices, with most of this due to higher excise rates.

Growth in the volume of alcohol beverages purchased has outstripped growth in litres of alcohol consumed, which increased just 0.5% over this same period. The shift in consumer preferences towards premium quality alcohol over quantity has supported this growth in the sector.

While alcohol consumption and spending has grown over time, litres per capita per year have gradually declined. Australians consumed 9.5 litres per capita in 2017-18, in contrast to 10.8 litres in 2007-08.

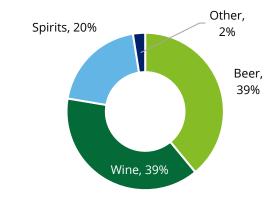
Australian's consumption of beer and wine account for 78% of total consumption. Spirits also make up a substantial portion at 20%, with a relatively small but growing role for other products such as ready to drink products.

Household consumption of alcohol (off-premise), volume and value measure



Source: ABS, Table 8. Household Final Consumption Expenditure (HFCE). Index 2000 = 100.

Alcohol consumption shares, 2017-18



Source: ABS, Apparent Consumption of Alcohol, Australia

Changing consumer preferences

Consumer preferences for alcohol have also been shifting within the industry over time. Between 2007-08 and 2017-18, beer's share of total alcohol consumption decreased from 44% to 39%. Due to the relatively smaller decline in wine consumption, that sector has grown four percentage points to equal beer consumption at 39%.

The decreasing rate of beer consumption in Australia has been predominantly due to a decline in the consumption of mainstream beers. This decline has been a result of a strengthening craft beer segment of the market, which has seen a surge in popularity in recent years with sales estimated to be growing at 10% per year.

A 2019 Australian craft beer survey revealed 66% of respondents love following the latest craft beer trends and 85% of respondents are excited about the direction craft beers is heading. (Beer Cartel, 2019 Australian Craft Beer Survey Results)

Cider has also grown in popularity over this period. Between 2007-08 and 2017-18 cider consumption (in litres) has grown at 16% per year compared to a fall of nearly 1% per year for beer.

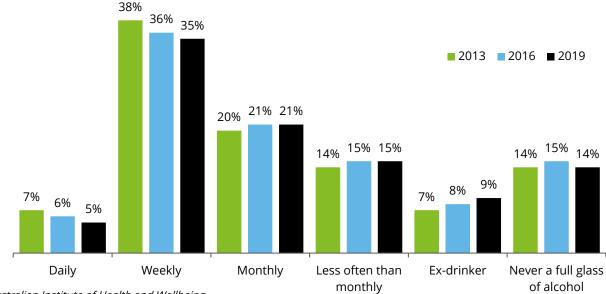
²This figure has been estimated using ABS household consumption data and IWSR estimates of share of consumption by channel for 2018 and 2019

Changes in drinking behaviour Responsible drinking behaviours are on the rise

Over the last decade there have been significant changes in how Australians consume alcohol. The majority of Australians are changing the frequency and intensity of how they drink:

- The share of people drinking daily is falling: In 2019, peopled aged over 14 who drank on a daily basis made up 5.4% of the population, down from 6.7% in 2013.
- The share of people drinking weekly is falling: In 2019, peopled aged over 14 who drank on a weekly basis made up 34.9% of the population, down from 37.8% in 2013.
- The share of people drinking less than once a month has increased: In 2019, peopled aged over 14 who drank less than monthly made up 15.2% of the population, up from 14.1% in 2013.
- The number of abstainers has increased: In 2019, peopled aged over 14 who have never had a full glass of alcohol made up 14.4% of the population, up from 14.0% in 2013.

Alcohol drinking status, people aged 14 and over, %



Source: Australian Institute of Health and Wellbeing

³https://www.anu.edu.au/news/all-news/alcohol-consumption-increases-during-covid-19-crisis

The impact of COVID-19 on alcohol consumption

Consumers have changed their drinking behaviour through COVID-19. Alcohol spending for at home (off premises) consumption increased 13% between March and June 2020. At the same time, spending on alcohol via hospitality venues fell sharply due to social distancing measures and business operating restrictions.

The ABS survey of households explored this changed behaviour during late April and early May:

- 14% of respondents reported an increase in alcohol consumption, while 10% reported a decrease in alcohol consumption
- Of those who increased drinking, 46% had an extra 1-2 drinks per week, 28% had an extra 3-4 drinks per week
- Women were more likely than men to increase alcohol consumption, with 18% of women consuming more alcohol while just 11% of men reported an increase in consumption.

Further research from the Australian National University³ during May indicated that while 20% of respondents increased their consumption of alcohol, similar to the ABS figures obtained above, a higher 27% indicated they had actually decreased consumption.



Current state of the industry

Total economic contribution of the alcohol beverages industry was \$52 billion in total value add and 484,900 jobs in 2018-19.

Direct contribution

\$16 billion in value add and over 238,100 jobs



Manufacturers \$4.4 billion GVA Over 25,900 jobs



Liquor retailers \$2.0 billion GVA Over 27,200 jobs



\$0.5 billion GVA Over 6,100 jobs



Food and beverage services \$8.8 billion GVA Over 178,900 jobs

Indirect contribution

\$36 billion in indirect value add and over 246,800 jobs

Every \$1 of value-add in the Australian alcohol beverages industry supports another \$2.30 throughout the Australian economy.

Every person employed in the Australian alcohol beverages industry supports another employed person.

Value added is the most appropriate measure of an industry's economic contribution to gross domestic product (GDP) at the national level. It is defined as the total value of goods and services produced by an industry, after deducting the cost of goods and services used in the process of production.

Economic contribution

In 2018-19 the alcohol beverages industry contributed 2.7% to Australian GDP.

In 2018-19, the total economic contribution of the Australian alcohol beverages industry was \$52 billion. This contribution consists of gross operating surplus (returns to capital owners) and wages paid to labour, which collectively determine the industry's value add.

The industry generates value added both directly and indirectly. Direct value added captures the wages and gross operating surplus of the industry's own operations. The industry generated \$16 billion in direct value add and employed over 238,100 people in 2018-19.

Indirect value added captures the flow-on economic activity associated with purchases of intermediate goods and services by the industry. For instance, manufacturers in the industry utilises inputs from the agricultural sector to produce alcohol beverages.

Further details on the methodology used to estimate the economic contribution of the industry are in the Appendices of this report.

Alcohol beverages industry:

Economic contribution (\$m) to Australia, 2018-19

	Direct	Indirect	Total
Value added	15,600	36,300	51,900
Gross operating surplus	5,400	19,000	24,400
Labour income	10,300	17,200	27,500
Employment (jobs)	238,100	246,800	484,900
Employment (FTE)	176,000	182,500	358,500

Note: An FTE (full time equivalent) job is a unit of employment that is measured by a standard work week rather then a headcount number of jobs. Deloitte's in-house input-output model produces FTE employment figures, which have been converted to headcount job numbers using ABS census data on full-time and part time employment splits, and hours worked where appropriate.

Employment figures have been rounded to the nearest hundred.

In 2018-19, \$36 billion of the total economic contribution of the alcohol beverages industry was through indirect value added.

The top five industries account for almost two thirds of the indirect contribution.

Breakdown of indirect valued added in 2018-19 (top 5)

	\$ billion
Rental hiring and estate services	5.0 (14%)
Agriculture, forestry and fishing	5.0 (14%)
Professional, scientific and technical services	4.6 (13%)
Financial and insurance services	4.1 (11%)
All manufacturing	3.2 (9%)

The alcohol beverages industry also contributes to a range of other sectors.

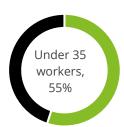
For example, \$65 million was indirectly contributed to the Technical, Vocational and Tertiary Education Services in Australia.

The agriculture sector plays an important role in the alcohol beverages industry. As an input to the manufacturing process, agricultural products support an additional 90% in value add across the industry supply chain.

Characteristics of the workforce

The alcohol beverages industry supports a diverse workforce

Share of Alcohol Beverages Industry







Source: Census 2016

The alcohol beverages industry is a weighted average of the industries listed based on alcohol share of revenue

The industry plays an important role in supporting younger workers. Around 55% of the workforce is aged below 35, higher than the national average of 37%. This is driven by consumer-facing sectors, with the share of younger workers in food and beverage services (61%) and retailers (54%) well above average. The share of young people working in the industry has remained relatively stable over the past 10 years.

The representation of female workers is mixed across the industry. Just under 50% of industry employees are women, with the share of women holding management jobs is lower at 40% across the industry. The food and beverage services sector has a relatively higher share of females, at 52%, but this drops to just 36% for manufacturers and wholesalers. On a positive note, the share of female employment has risen for manufacturing and wholesaling over the past 10 years, up 3 percentage points. However, the share of women in management roles in the alcohol beverages industry is consistently lower than the total share of female employees across all industries.

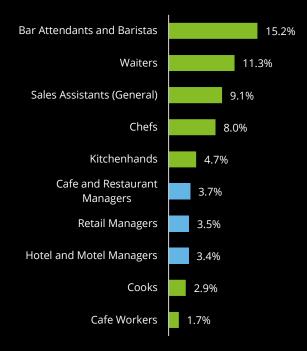
The industry supports both full-time and part-time workforces. The manufacturing and wholesaling sectors employ a large share of full-time workers. Nearly 80% of employees in the wholesale sector are full time, with around 75% in the manufacturing sector. Meanwhile the retail and food and beverage sectors employ around 50% full-time and 50% part-time.

The industry also has a higher than average share of businesses employing less than 20 people, at just over 60% compared to just under 35% for the national average. However, the industry has a smaller share of sole traders (non-employing businesses).

Some parts of the industry experience high levels of staff turnover. In the broader hospitality sector around 14% of staff had changed jobs over the past 12 months, compared to the Australian average of 8%. This is less of a factor for the manufacturing sector, where just 8% of workers changed jobs over the past 12 months.

There is a wide range of career paths within the sector. The sector has a higher than average share of hospitality and sales roles, predominantly driven by the food and beverage services sector. However, there is also a higher than average share of managers in the sector, which is consistent across the various components of the industry.

Top 10 occupations



Source: Census 2016

Training and skillsPeople working in the alcohol beverages industry have a wide range of skills

There is a broad skill base among workers in the alcohol beverages industry. Around 45% of the workforce hold post-school qualifications, with 17% holding a bachelor degree or higher. The manufacturing sector has the highest share of post-school qualifications, at nearly 60%. This aligns with a rising supply of new courses, including microbrewing and viticulture.

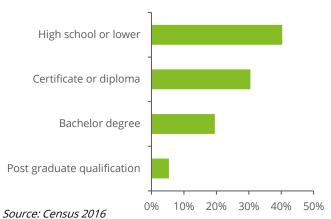
Of the top 10 fields of study, four are related to business, three to hospitality, and three to science. The most common field of study for post-school qualification is hospitality (13%) driven by the food and beverage services sector. This changes to food science and biotechnology for the manufacturing workforce, and business and management for the wholesale and retail workforce.

The alcohol beverage manufacturing sector employs a high proportion of workers with STEM (science, technology, engineering and mathematics) degrees. This ranges from 19.7% for spirit manufacturing to 25.0% for beer manufacturing, well above the national average of 12.0%.

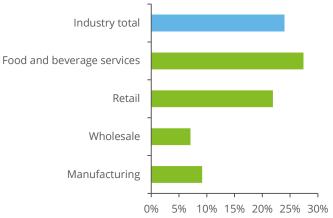
Nearly one in four workers in the alcohol beverages industry are studying. This is driven by the retail and food and beverage services sector, with less than 10% of workers in the manufacturing and wholesale sectors undertaking further studies.

Those with lower skill levels are more likely to be undertaking further education. Of the 55% of employees that do not have a post-school qualification, 30% are enrolled in further study.

Industry workforce qualifications



Share of workforce undertaking further study



The alcohol beverages industry is a weighted average of the industries listed based on alcohol share of revenue

There are an increasingly wide range of courses specific to the industry

The alcohol beverages industry workforce requires training specific to the skills needed across the various sectors. This includes requirements across regulation (RSA), technical skills (winemaking), and functional roles (business administration).

Any role that provides service, sale or supply of alcohol to patrons requires a Responsible Service of Alcohol certification. This certification differs across the various States and Territories, with some offering online accreditation courses.

There are many courses provided through universities that are specific to winery operations. This includes viticulture and winemaking, as well as wine science. In addition, the Wine & Spirit Education Trust provides globally recognised education and qualifications in the industry. In 2018-19, there was a 15% increase in candidate figures globally, and Australia was one of the top 10 markets with growth of 7%.

There has also been a rise in courses dedicated to brewing activities. This includes certificates in food processing across micro-brewery, brewpub and brewery operations.

International trade environment

\$3.6 billion worth of alcohol exports in 2019, accounting for 1% of total Australian exports

Australian alcohol beverages exports have grown strongly, driven by demand for premium alcohol products in key markets. Between 2012-13 and 2018-19, Australia's alcohol beverages exports grew at 9% per year. The growth was supported by various Free Trade Agreements (FTAs) and growing global demand for quality alcohol beverages.

Australian wine is known for its quality worldwide, "Australian wine is famous for its elegance, vibrance, quality and consistency all over the world".4 This supported growth of 8% per year between 2012-13 and 2018-19.

The international market is very important for Australian wine makers with 62% of all wine produced in Australia in 2020 heading to export markets.⁵ Australia is the world's 4th largest wine exporter responsible for 6% of all global wine exports. Around 39% of Australia's wine exports are to China, while the United States (15%), United Kingdom (13%) are also large markets.

China's share of Australian wine exports has grown strongly from 22% in 2016 to 39% in 2019. Australia has become China's largest source of wine imports,

growing from a 16% share in 2014 to 35% in 2019, overtaking French wines (29% of China's wine imports).

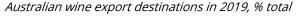
Australian wine producers have a strong footprint in major export markets:

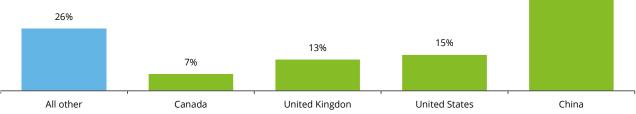
- The United States is the world's largest wine importer accounting for 17% of global imports. Australia is currently the 5th largest exporter to the United States.
- China is the world's fourth largest wine importer accounting for \$3.4 billion worth of global imports in 2019.

International exports are a less prominent feature for both beer and spirits producers in Australia. Only 1% of beer produced in Australia is exported and more than half of those exports are to New Zealand. In Australia 7% of spirits produced are exported. A quarter of these exports are to New Zealand, although Thailand, the Netherlands and the United States each account for more than 5%.

However, exports of these products are growing rapidly. Both beer and spirits have grown at a faster pace than wine between 2012-13 and 2019-20, at 17% and 19% per year respectively.

39%



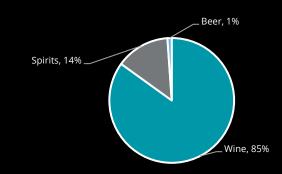


Source: ABS international trade

Australia's alcohol beverages exports consist of wine (85%), spirits (14%) and beer (including cider) (1%).

Spirit's share of total exports has surged from around 5% in 2009 to 14% in 2019, which in turn has seen wine's share gradually decline from 95% to 84% over the same period. However, the value of wine exports has continued to grow, up \$655 million over the same period. Beer (including cider) has maintained its export market share of around 1%.

Australian alcohol exports by type, 2019



Source: ABS international trade

5 https://www.wineaustralia.com/news/media-releases/australian-wine-exports-slow-due-to-china-tariffs

https://justwines.com.au/blog/aussie-wine-exports-surging-taking-the-taste-of-australia-to-the-world/

International trade agreements and barriers The rise of free trade agreements have been key to supporting export growth

Australia has a number of Free Trade Agreements (FTAs) in place with key export markets which have supported Australian alcohol beverages exports. This has mostly supported Australian wine exporters who represent a mature export sector within the alcohol beverages industry.

The China Australia Free Trade Agreement (ChAFTA) eliminated tariffs on Australia wine from previous rates of 11-16% in 2015. Tariffs on spirits and other fermented alcohol beverages were also reduced. Wine exports to China have subsequently grown from \$400 million in 2015 to \$1.3 billion in 2019 which is now nearly 40% of Australia's total wine exports.

The introduction of the Japan-Australia Economic Partnership Agreement (JAEPA) in January 2015 which eliminated tariffs on bulk wine provided an impetus for Australian wine exporters. After 5 years of declining exports to Japan between 2009-2014, export subsequently grew by 37% to \$55 million in 2019 following the introduction of the JAEPA.

The signing of the **Korea-Australia Free Trade Agreement** (KAFTA) has also been supportive for Australian wine exporters. Following the introduction of the KAFTA in December 2014, wine exports grew by 138% from \$8.4 million in 2014 to \$20 million in 2019.

Free Trade Agreements that cover Australian alcohol exports



Trade barriers

Tariffs are one of the largest barriers to trade. While there has been progress in reducing tariffs for Australian alcohol beverages exporters, there are still many markets where high tariffs impact the competitiveness of Australian products. For example, the tariff on Australian wine into India is 150% of cost, insurance and freight.

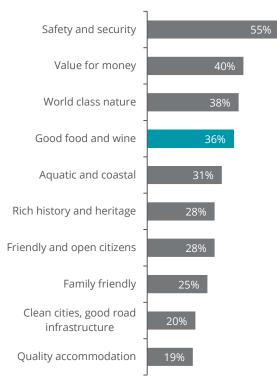
In addition to tariffs, there are many non-tariff trade barriers that Australian alcohol beverages exporters can face. This includes increased red-tape, additional product requirements, and minimum price requirements.

During 2018, Australia formally lodged a complaint against restrictions Canadian provinces placed on the sale of imported wine in grocery stores which formally launched in the World Trade Organisation (WTO) in January 2018. The Canadian government agreed in July 2020 to remove the restrictions on Australian wines at a federal level and in the provinces of Ontario and Nova Scotia.

Alcohol's role in tourism Quality food and beverages are a key driver of tourism into Australia

globally. In 2016, 36% of travellers surveyed across beverage sector. Spending by international and the globe rated good food and wine among the top domestic visitors on food and drinks exceeded five most important factors when choosing a holiday \$29.2 billion in 2019, up 12% from 2018. The destination, and 52% of respondents who visited majority of this spend is from domestic visitors, Australia associated the country with good food and wine.

Most important factors when selecting a holiday destination



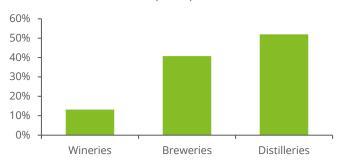
Source: Consumer Demand Project, Tourism Australia, 2016

Gastronomy is a top-five driver of destination choice Tourists support substantial sales in the food and accounting for 77% of total spend on food and beverages.

> Stand alone alcohol purchases by domestic visitors were just under \$4.5 billion in 2019. This was an increase of over 20% compared to 2018, growing at a faster rate than total food and drink purchases.

> Visits to breweries have been growing in popularity in recent years. In 2019, 1.5 million overnight trips in Australia involved a visit to a brewery and 480,000 trips included a visit to a distillery. This was a substantial increase on 2018, up 41% and 52% respectively. However, overnight visits to wineries still remain higher at 5.4 million. The majority of overnight visitors to breweries, distilleries and wineries are domestic tourists.

Growth in visitor numbers, 2019, %



Source: National Visitor Survey, International Visitor Survey, Tourism Research Australia

Wine tourism

Wineries play an important role in the tourism landscape. There were 9.1 million visitors to wineries in 2019, up 13% on a year earlier. The majority of these were domestic visitors (88%), with international visitors playing a smaller role (12%).

Despite accounting for a smaller share of total visitors, 1 in 8 international visitors visited an Australian winery during their trip in 2019. This is much higher than the 2% of Australians visiting wineries.

Among Australia's international visitor markets. Chinese visitors overtook UK visitors as the largest source market for wine tourism in Australia in 2019, with the USA, Singapore and Korea following.

International visitors ('000), by top five markets, wine tourism



Source: National Visitor Survey, International Visitor Survey, Tourism Research Australia

Regional tourism case study – Tourism activities across wineries, breweries and distilleries are supporting regional Australia

Margaret River



The Margaret River sits within the south west region of Western Australia.

There were 3.2 million visitors to the region in 2019. This is an increase of 8.1% from the previous year.

The region ranked as the most popular destination for Australian travellers to visit a winery, with just over 510,000 visitors in 2018-19. This accounted for 30% of all domestic visitors to the region.

In addition to wineries, the region is one of the fastest growing microbrewery destinations in Australia according to Tourism Research Australia.

Visitors to the region spent \$3.2 billion in 2018-19, with \$159 million attributed to alcohol beverage and other beverage consumption.

Tourism directly contributed \$914 million towards economic activity in the region in 2018-19, with over \$100 million attributable to clubs, pubs, taverns and bars. This directly supported over 900 jobs in the industry.

Mornington Peninsula

The Mornington Peninsula is located just a few hours from Melbourne, and is one of Victoria's major wine regions.

There were 8.5 million visitors to the region in 2019, up 9.2% compared to previous year.



The region ranked as the second most popular destination for Australian travellers to visit a winery, with just over 500,000 visitors in 2018-19. This accounted for 7% of all domestic visitors to the region.

In addition to its established wine sector, the region also has a strong distillery footprint. Bass and Flinders Distillery took out a number of awards at the 2020 Spirit Awards, including best Brandy.

Visitors to the region spent \$1.7 billion in 2018-19, with \$91 million attributed to alcohol beverage and other beverage consumption alone.

Tourism directly contributed \$539 million towards economic activity in the region in 2018-19, with over \$50 million attributable to clubs, pubs, taverns and bars. This directly supported just under 700 jobs in the industry.

Hobart

Tasmania is one of Australia's most well known Whiskey regions, with a strong footprint in Hobart and the South.

There were 13 million visitors in 2019, up 19.5% compared to 2018 numbers.



There are around 56 distilleries operating in Tasmania, which is nearly 20% of all Australian distilleries. This is an important factor drawing tourists to the region.

In the 2020 Spirit Awards, the coveted Best Whisky award was given to Tasmanian distillery Sullivan's Cove.

Visitors to the region spent \$2.5 billion in 2018-19, with \$142 million attributed to alcohol beverage and other beverage consumption alone.

Tourism directly contributed \$860 million towards economic activity in the region in 2018-19, with over \$60 million attributable to clubs, pubs, taverns and bars. This directly supported over 700 jobs in the industry.

Source: Regional tourism satellite accounts, Tourism Research Australia, The Whisky List

Supporting regional economies

There is a wide spread of businesses operating liquor licences across Australia

The alcohol beverages industry plays a prominent role in regional economies of Australia supporting hospitality, accommodation and retail services. These are all segments that are heavily focused on tourism activities.

One way to understand the footprint of the industry is to consider the distribution of liquor licences across the nation. This is a good proxy for businesses operating in the industry due to the requirement to hold a liquor licence in the sale or service of alcohol.

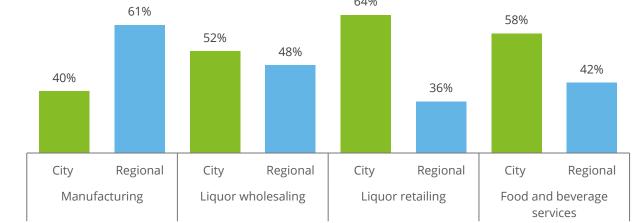
Businesses operating in the alcohol beverages industry play a larger role in regional economies relative to metropolitan areas. While just 33% of businesses operate in regional areas, 43% of liquor licences are held in regional areas. There are 3.8

liquor licences for every 100 businesses operating in regional Australia, compared to 2.6 for Australia's capital cities.

The alcohol beverages industry plays a large role in regional economies particularly relating to manufacturing (beer, spirits, wine and other alcohol manufacturing). In the manufacturing sector, 61% of all liquor licences are located in regional areas, compared to 39% in capital cities.

The alcohol beverages industry plays a relatively smaller role in regional economies through the liquor retailing and the food and beverage services industries. The proportion of liquor licences in these industries located in regional areas is 36% and 42% respectively.

The distribution of alcohol licences between Capital Cities and regional areas, by sector, 2019

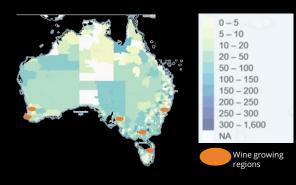


Source: Drinks Australia

While the majority of liquor licences (57% of total licences) are located in cities, there are several regional areas which have a high concentration of licences.

Wine manufacturing related activities and associated licences do not occur in Northern Australia due to difficult growing conditions. However, other manufacturing activities such as brewing and distilling play a role in these regional areas.

Number of liquor licences per Statistical Area 2 (SA2), 2019



Source: Drinks Australia

Supporting regional jobs The industry employs a strong regional workforce

The alcohol beverages industry plays an important role in supporting regional jobs. The industry employs 35% of their workforce in regional Australia, higher than the national average of 29%.

Manufacturers in general employ a much higher share of regional workers (55%) followed by food and beverage services (35%) and retailers (31%). In the wine manufacturing sector, this increases to over 60%, more than double the national average.

The regional workforce is heavily skewed towards hospitality occupations, compared to capital cities. Hotel and motel managers, cooks, and food and drink factory workers play a larger role in the industry's regional workforce.

The industry also employs a high share of women in regional areas, at 52%. This is higher than the female share in capital cities (46%), driven by the retail and food and beverage services sectors.

The industry faces a smaller pool of skilled workers in regional Australia. While nearly 50% of workers in capital cities hold post-school qualifications, this falls to just 40% in regional Australia. This discrepancy is highest for the manufacturing and wholesale sectors, despite the fact that these sectors generally have a larger proportion of higher qualified workers.

Share of alcohol beverages industry



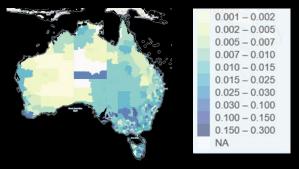


Source: Census 2016
The alcohol beverages industry is a weighted average of the industries listed based on alcohol share of revenue

The regional areas with a high alcohol beverages industry employment footprint include:

- Lyndoch, SA (34%)
- Upper Yarra Valley, VIC (34%)
- McLaren Vale, SA (27%)
- Barossa Angaston, SA (26%)
- Branxton Greta Pokolbin, NSW (23%)
- Penola, SA (20%)
- Tanunda, SA (20%)
- Nuriootpa, SA (19%)
- Gilbert Valley, SA (18%)

Industry share of employment in the alcohol beverages industry



Source: Census 2016

Investment by the industry Investment by manufacturers in the industry has outperformed the Australian average

Alcohol manufacturers are the most capital intensive sector in the alcohol beverages industry. The ratio of capital expenditure to sales in the sector is 3.1% compared to 1.3% and 0.7% for retailers and wholesalers, respectively.

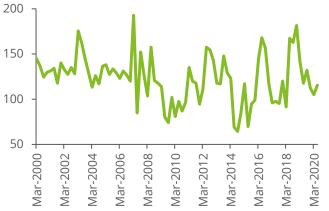
In 2019-20, the alcohol manufacturing sector invested \$465 million in capital expenditure. Investment in the sector has grown by an average of 6.7% per year over the last five years compared to Australia's total nonmining capital expenditure which has grown 2.5% per year over the same period.

Australia's Manufacturing Modernisation Fund has supported investment in beer, wine and spirits production. Currently \$1.2 million has been granted to beer, wine and spirits manufacturers which has

supported in total \$4.6 million of investment. These investments have been directed towards growth and innovation including automated packaging and bottling, new brewing, distilling and vinification technology, expanding capacity and greenhouse gas abatement.

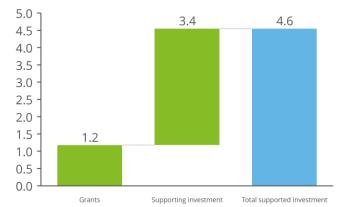
Additionally, a further \$1.7 million has been granted to Australian grape and wine producers. Recipients have been both small and large businesses receiving grants of between \$1,200 to \$150,000. These grants have been deployed to fund R&D, job creation, export development, improving manufacturing processes and promoting tourism.

Alcohol manufacturing capital expenditure, \$m



Source: ABS, Private new capital expenditure and expected expenditure, Australia

Alcohol industry Manufacturing Modernisation Fund Grants and supported investment, \$m



Source: Business.gov.au, Manufacturing Modernisation Fund Grant Recipients as at 2020

Innovation within the industry

Alongside investments directed towards innovation and efficiencies, brewers have also been investing in becoming more environmentally friendly. Several brewers have achieved self-sufficiency in their energy needs via solar panels. Certain brewers even capture enough solar energy to export to the grid. Brewers have also been investing into greener supply chains and production lines. These measures include eliminating the use of plastic, adopting 100% recyclable aluminium cans and using reusable glass growlers.

The industry has also invested in subscription services which are opening up new revenue streams for brands as consumers begin to purchase alcohol online.

The use of delivery services has experienced an uplift during COVID-19 as consumers were unable or unwilling to venture out to retail and hospitality venues due to restrictions and self isolation. These services have provided support to alcohol producers as revenue via traditional channels such as hospitality has been severely impacted. But this has also come with disruption to supply chains and logistics.

Industry regulation

A large number of regulations add to the complexity of doing business in the industry

The industry faces many sector-specific costs of doing business. This includes liquor licencing, restrictions on operating hours and requirements around packaging. Licencing requirements are particularly cumbersome for the industry.

There were over 68,000 active liquor licences in 2019. The majority of these were held by businesses operating in Australia's most populous states, Victoria (just under 24,000) and New South Wales (just under 19,000). This provides a substantial revenue stream for state governments, with Queensland receiving over \$20million in 2018-19 and New South Wales receiving nearly \$18million in the same year.

Differences across jurisdictions and purposes increases the burden on businesses when applying for liquor licences. Each state and territory in Australia has its own classification system for the types of licences, as well as additional requirements at the local government level.

Australian alcohol licencing depends on the purpose of each premises - for drinking on the premises or takeaway, food and gaming.

Businesses in the ACT face some of the highest licencing fees and charges on the sale of liquor, with application fees alone range from \$2,262 to \$3,399. In addition to this fee is the annual renewal cost, which can be upwards of \$20,000 depending on the occupancy and operating hours. 6

Businesses that require a liquor licence to operate generally need a longer timeframe to set up operations. Applying for a liquor licence in Victoria can extend opening a venue between 3 to 6 months, in excess of the lease agreement, council permission and construction phases.

Having a wide range of licences creates substantial compliance costs, and uncertainty, on businesses, especially if they undergo structural changes and move between different licencing categories.

Liquor licence revenue by state, 2018-19



Source: QLD Office of liquor and gaming regulation, NSW Department of Customer Service, WA Department of local government, sport and cultural industries, and Tasmanian Department of Treasury and Finance

The effect of red tape on the sale, supply and taxation of alcohol Submission 4 - Attachment 1 ©2021 Deloitte Access Economics. Deloitte Touche Tohmatsu

State comparison

The Northern Territory enacted a moratorium on all new take-away alcohol licences including at greenfield sites in May 2020. The moratorium followed recommendations from the Riley Review and from the Northern Territory Alcohol Harm Minimisation Action Plan 2018-2019.

The ACT has a simple process with an onpremise licence covering most of the food and accommodation services sector. The ACT On Premises Liquor Licence authorises the serving of alcohol at venues such as bars, nightclubs, restaurants and cafes.

In Queensland, the type of liquor licence depends on the type of business or organisation. Each liquor licence has different requirements, different application and annual fees. The types of liquor licences available in Queensland are, commercial hotel, commercial other, commercial special facility, community club, nightclub and wine licence. To operate a detached bottle shop, the business must hold a commercial hotel licence which allows up to three detached bottle shops within 10km from the main premises. This is a significant investment needed by business to operate a retail outlet.

Industry taxation

Alcohol excise tax in Australia has grown faster than the total government tax intake

The Australian alcohol beverages industry pays a substantial amount of tax. GST on alcohol beverage products consumed in Australia is estimated to have provided \$2.4 billion to government in 2019-20 alone. In addition to general business tax such as payroll tax, company tax, and GST, the industry pays alcohol specific excise and wine equalisation tax.

A total of \$6.9 billion was raised in alcohol excise and wine equalisation taxes during 2018-19. Beer contributed \$2.6 billion, spirits contributed \$2.3 billion, and wine and other alcohol beverages both contributed \$1 billion.

Total excise and wine equalisation tax payments have grown at an average rate of 6.6% between 2008-09 and 2019-20, compared to total government tax

growth of 5.8%. Alcohol excise represents 1.4% of total tax revenue in Australia.

A large portion of the growth in excise is driven by rising excise rates, which are indexed to headline inflation. This adds to the cost of producing alcohol beverages, compounding the general cost pressures across the supply chain. For example, while headline inflation grew 2.1% on average between 2009 and 2019, the price of beer has risen a faster 2.9%.

Excise tax accounts for a substantial portion of total alcohol price. Previous analysis estimated that around 33% of the retail price of a typical carton of full-strength beer can be attributed to excise tax, with a further 9% paid towards GST.⁷

Breakdown of alcohol tax8, 2018-19, \$b



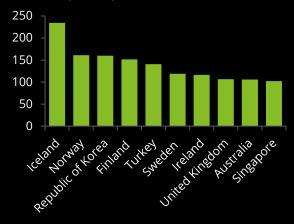
Source: Budget 2018-19, Paper 1: Budget Strategy and Outlook ⁷https://www.brewers.org.au/beer-facts.html

Global comparison

The World Health Organisation noted in its 2018 global status report on alcohol and health that 95% of countries have some form of alcohol excise tax. Australia features, along with comparative markets such as the UK and US.

A recent study in the journal of wine economics estimated alcohol tax as a share of wholesale pre-tax price. This work found that Australia pays the 9th highest tax on alcohol, just below the UK and well above the US.

Top 10 weighted average of combined ad valorem CTE of excise, import and value added taxes on the retail price of all alcohol (wine, beer and spirits), % of wholesale pre-tax price as at 2020



Source: Wine Economics Research Centre, School of Economics, University of Adelaide

⁸This includes only excise and wine equalisation tax.

Social responsibility The industry takes an active role in supporting responsible drinking behaviours

Drinking alcohol often occurs during social events and gatherings, including celebrations. These types of events play an important role in social connection, supporting wellbeing for Australians.

Research conducted in 2008 found that drinking a small amount of alcohol each day is associated with high wellbeing. However, excessive drinking can have detrimental health outcomes. Indeed, analysis from of the Medibank Health Index Score indicated that while red wine drinkers are the healthiest of those who drink, this decreases with each extra drink consumed per week. 10

The alcohol beverages industry plays an active role in supporting responsible drinking behaviour. The industry adheres to important codes such as advertising and labelling, as well as supporting responsible drinking behaviours.

The alcohol beverages industry is subject to the responsible alcohol marketing code. The Alcohol Beverages Advertising Code (ABAC) Scheme is the centrepiece of alcohol marketing regulation in

Australia, and is administered by a not-for-profit organisation which aims to promote responsible alcohol marketing.

At both an individual company and collective level, the industry has voluntarily committed many millions of dollars to a range of harm minimisation programs, including DrinkWise, an independent not for profit organisation with the purpose of helping bring about a healthier and safer drinking culture in Australia.

This funding has enabled DrinkWise to develop programs focused on parental influence, young adults, consumption at events, the importance of abstinence for those underage and pregnant, and alcohol awareness for Indigenous communities.

These programs use a multitude of channels, specifically targeted to each audience, to increase awareness of and improve drinking culture. The *Kids Absorb Your Drinking* campaign is an example of an effective campaign that helped to create better role modelling behaviour when parents were consuming alcohol in front of their children.

DrinkWise - young adult campaign

DrinkWise undertook a campaign aimed at influencing young adults to drink responsibly by moderating the intensity and frequency of binge drinking occasions. Tracking research indicated significant attitudinal and behavioural changes among the target audience that saw the campaign.

Key outcomes from the campaign included:

- 40% of the target audience drinking less on a night out as a result of seeing the campaign
- 44% of the target audience reported that the campaign provided the platform to talk to friends about their drinking
- 76% of the target audience agree that the campaign has made them think about the benefits of moderation
- 91% of the target audience have tried to moderate their drinking behaviour either before or during the evening out.

21

⁹The Wellbeing of Australians – Links with exercise, nicotine and alcohol , Australian Centre on Quality of Life Deakin University, 2008 ¹⁰ Are red wine drinkers healthier?, MediBank, 2016



Looking to the future

Australia's recovery from recession COVID-19 sent the Australian economy into recession which will take some time to recover

While Australia has managed COVID-19 well relative to most other Western nations, we have still experienced a deep recession through 2020.

Many parts of the Australian economy were hurt by border controls and a national lockdown, with elements of consumer spending faring particularly poorly. Amid health fears and lockdown rules, households were either unwilling or unable to venture out to spend, driving a 12% fall in spending in the June quarter of 2020.

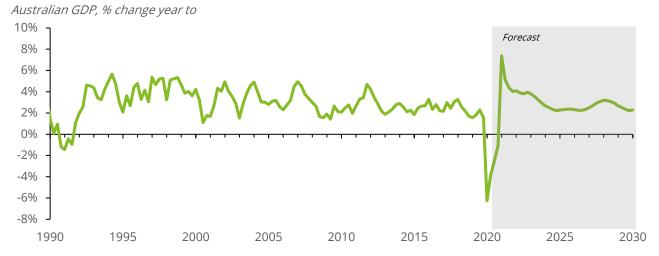
Spending on many services was affected, particularly in areas like hospitality which have been forced to close or have capacity restrictions.

Australia's decline in consumer spending occurred despite a 2% rise in household disposable income. This increase was driven by significant government stimulus,

offsetting a dramatic fall in employment incomes as job losses mounted.

Consumer confidence took a hit during the peak of the downturn, but had rebounded in late 2020 on account of decreasing case numbers, loosened restrictions and good news on the vaccine front. Yet, confidence, and by extension, the Australian economy, will be highly sensitive to what happens with the roll out of the vaccine.

Looking forward, the Australian economy is expected to strengthen as restrictions are eased, the vaccine is rolled out, and borders open. Economic growth is expected to rebound in 2021, reaching pre-COVID levels through the year. But the damage to the economy will linger for some time for some industries, including hospitality sectors that rely on tourism and trade.



Source: Deloitte Access Economics, 2020

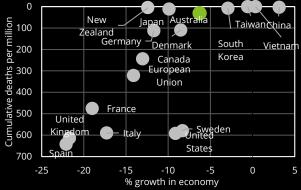
Australia in a global context

Impacts of COVID-19 have been varied by country. GDP over the June quarter in the United Kingdom and Spain fell more than 20% as case numbers soared, while China, the first country to be hit by the virus, was also the first to recover.

Countries that have managed to suppress the virus have generally experienced the least economic damage. In addition to China, other parts of Asia have emerged relatively less harmed, in comparison to large parts of Europe and the US, where policy was often slow to react or ineffective.

Australia has performed relatively well compared to many countries, though restrictions have still caused economic damage, and there is a long road to full recovery.

Country performance against June quarter GDP and COVID deaths



Employment losses have been severe The hospitality sector will play an important role in the jobs recovery path ahead

The impact of COVID-19 on Australia's labour force was significant. The unemployment rate spiked at just over 7.5% in July 2020, following two years of recording rates between 5% to 5.5%. This resulted in nearly one million job losses at the peak of the crisis from February to May 2020. The part-time and casual workforce bore the brunt of the downturn, accounting for 60% of total job losses.

Consumer facing businesses faced the largest job losses, but impacts have been far reaching. The hospitality, retail and recreation sectors lost just under 450,000 jobs between February and May 2020. That said, some industries posted job gains over the same period, including health, agriculture and public administration.

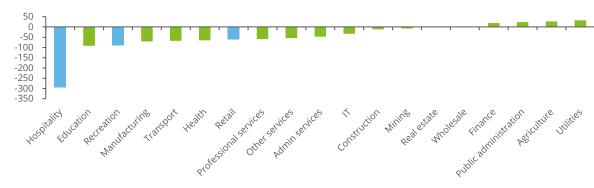
Smaller businesses were hit harder than large

organisations during the peak of the crisis according to payroll data. Payroll jobs were 12.3% lower in April for businesses employing between 20 to 199 people, while the fall was a smaller 5.3% for businesses with employee numbers over 200.

But the end to 2020 was a positive story for jobs, as the number of people in employment neared pre-COVID levels. Around 9 out of 10 jobs lost through the pandemic were recovered by the end of the year. Furthermore, the underemployment rate also fell a massive 0.8pp in December, which brings this measure below what was seen in January of 2020.

Looking forward, total employment was expected to reach pre-COVID levels in early 2021, but the unemployment rate is likely to remain above 6% until 2023.

Change in jobs, '000s February to May 2020



Source: Deloitte Access Economics

The headline job numbers mask some of the hit to jobs and incomes

The JobKeeper program means that unemployment understates the current labour market pain. Workers who work zero hours are still classified as employed in official statistics. As at June 2020, there were approximately 3.5 million workers covered by JobKeeper. There is a risk that these jobs won't survive, and these employees will lose their job and income as JobKeeper is tapered.

Many workers are disengaging from the labour market given difficulties finding a new role. The participation rate slumped in April and May, falling from 65.9% to 62.7%. While there has been a slight recovery as restrictions eased, it remains nearly a percentage point lower than pre-COVID levels.

Underemployment has risen faster than unemployment, and is generally stickier in the recovery. The underemployment rate shot to 13.8% in April from 8.8% earlier in the year. While unemployment has steadily fallen after each downturn, underemployment has been much stickier.

Business as usual outlook for the industry The alcohol beverages industry will continue to grow, albeit at a slower rate compared to history

After a period of strong growth, the alcohol beverages industry is expected to face some headwinds going forward.

Under a business as usual outlook, domestic spending on alcohol beverage products is expected to grow at an annual average rate of 2.1% in the decade to 2029-30. This is a deceleration from the 4.9% rate seen between 2007-08 and 2017-18.

Per capita consumption of alcohol is expected to continue declining as Australians focus on health outcomes and drinking in moderation. Combined with slower population growth due to border restrictions, a falling fertility rate, and ageing population, this is likely to result in sluggish consumption volumes.

Instead it will be the ongoing premiumisation trend which will play an important role in supporting the contribution of the industry to economic activity.

On the trade front, headwinds in key markets including China, UK and the US may limit growth in exports. Under the current outlook, exports are expected to continue growing at a steady pace. Opening up new markets and reducing trade barriers will be key for the industry to achieve higher levels of growth going forward.

Overall, this is likely to see the industry grow between 2018-19 to 2029-30 at an annual average rate of 1.0%, and add over just 25,000 direct FTE by 2029-30.



Exports up 0.7% per annum



Industry value add up 1.0% per annum

Domestic spending up 2.1% per annum



Additional 33,000 jobs by 2030



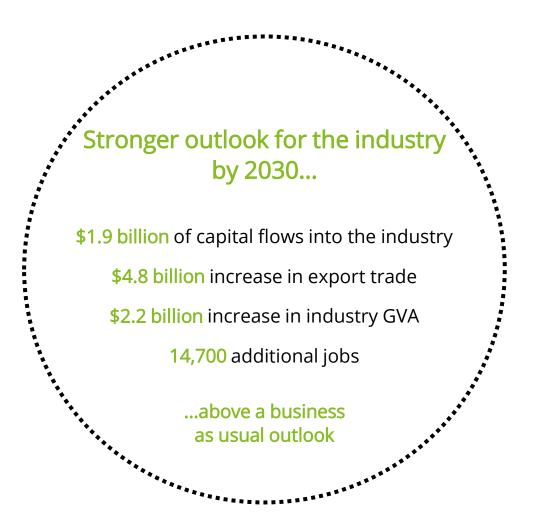
Assumptions underpinning the business as usual outlook

This outlook is based on the following assumptions:

- Population growth slows from 1.5% to 1.2% per annum over the coming decade
- Per capita consumption of alcohol continues to fall at a rate of 1.2% per annum
- Premiumisation supports an increase of 2.1% per annum in industry value
- Export growth achieves a growth rate of 0.7% per annum.

Uplift from a more attractive industry

A more attractive alcohol beverages industry will support capital inflows and drive growth



Assumptions to drive a more attractive industry for businesses and investors

This outlook is based on the following assumptions:

- Reducing cost of doing business including through less red tape
- Expanding focus on R&D and sustainable investment activity
- Reducing trade barriers for new and current export markets

The alcohol beverages industry could grow to a \$19.7 billion industry directly employing 285,800 people by 2029-30

285,800 \$8.6 billion \$19.7 billion Aspirational outlook for the industry jobs exports direct industry value add Uplift from more attractive \$2.2 billion 14,700 \$4.8 billion industry Business as usual industry \$17.5 billion 271,100 \$3.8 billion outlook Current industry size, \$16.0 billion 238,100 \$3.6 billion¹¹ 2018-19

¹¹Exports refer to 2019 calendar year results

Reducing cost of doing business Supporting a more attractive operating environment within the industry

Improving the attractiveness of the alcohol beverages industry means addressing underlying barriers to investment. There are a range of such barriers, many of which are also common across the broader economy. Two of the most significant barriers to investment for the alcohol beverages industry are the regulatory environment and the cost of production.

Cost of production

While the Australian alcohol beverages industry is a diverse array of sectors, the inputs it uses are relatively common across the supply chain.

As it incorporates both manufacturing and services sectors, labour and energy are important costs. Collectively, these inputs are estimated to account for between 12% (liquor retailing) and 40% (social clubs) of total costs. ¹²

Rising prices for these inputs, alongside interjurisdiction variability and volatility creates considerable complexity for investors.

The challenges of rising costs also put Australian industry at a significant competitive disadvantage both in export markets and at home. This cost disadvantage has for example contributed to a steady increase in import penetration for beer with imports share of demand effectively doubling in the last decade. ¹³

Regulatory risk

Regulation, while aiming to address market failures, can impose considerable burden on businesses by increasing the cost of operations, introducing legal and administrative hurdles, or even restricting entities from participating in the market.

These costs are significant, and changes to the regulations introduce considerable risk for investors.

Changes to the alcohol beverages industry regulatory environment are frequent and significant, occurring regularly at both the state and federal level. Key issues include:

- · waste and recycling policy,
- harmonisation of regulation across States
- · labour market and award complexity
- licencing and permits.

Supporting a globally competitive industry

The alcohol beverages industry is a globally competitive market, and Australia competes for investment dollars with many of the largest alcohol producing nations.

An uncertain or restrictive operating environment can limit investment inflows into an industry, hurting the productive capacity of the industry going forward. Changes to regulation without industry consultation, difficulties with export markets, and cumbersome red tape reduce investor appetite.

¹²IBISworld, market reports 2020

¹³SG Helibron Economic & Policy Consulting, Analysis of regulatory and related costs in Red Meat Processing (2018)

Encouraging investment into the industry Enabling a more sustained level of investment within the industry

The alcohol beverages industry is estimated to have attracted nearly \$1.5 billion in investment in each of the last 3 years. But relative to growth in the broader economy, investment has remained relatively flat. Since 2000, investment as a share of sales across the broader industry has fluctuated around an average of 10%.

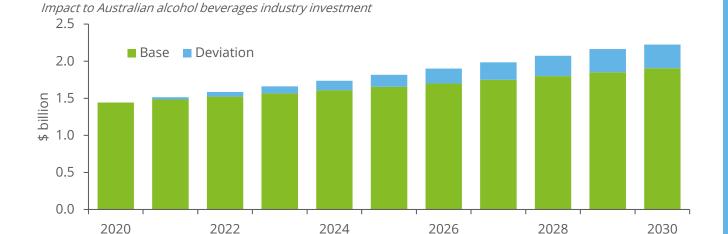
There have been periods of considerably higher growth in investment. For example between 2008 and 2012 where investment maintained historically high rates.

Making the alcohol beverages industry more attractive for investors will ultimately improve capital flows to the sector, supporting a thriving industry moving forward. A stronger investment outlook can be achieved if the rate of return on capital can be lifted to recent highs.

As investment drives future growth, increased capital would secure the future of the alcohol beverages industry.

Investment can be used to:

- Replace, upgrade or expand plant and equipment
- Undertake research and development
- Expand product offerings
- Support sustainable practices in the supply chain



Source: Deloitte Access Economics

Improved investment conditions are projected to deliver....



... an increase in annual investment inflows by almost 15%, reaching \$1.9 billion in 2030.



... significantly higher industry output, around \$2.2 billion above the baseline in 2030

A growing role for exports Improving access to overseas markets across the industry

Increasing the Australian industry's overseas exposure would provide significant growth opportunities, particularly in the face of a slowing local market for alcohol beverages.

Currently, global trade in alcohol beverages is heavily regulated. Many countries (including Australian export markets and trade competitors) subsidise their domestic industries. Australia, with limited domestic support, has in recent years performed remarkably well in such an environment.

The Australian wine industry has grown it's export footprint substantially over the past 30 years, with exports increasing from \$50 million per annum in mid-1980s to over \$3 billion in 2019. There may be an opportunity for beer and spirits to achieve a similar growth trajectory, as exports currently sit at under \$600 million.

In a scenario where trade barriers are reduced and investment conditions improve, the value of industry exports is projected to increase by around half by 2030. Around 10% of this increase in exports could be sourced from tourism, an important contributor to Australian GDP, regional economies and employment.

Importantly, exports provide industries and firms with a range of benefits beyond new markets.

Because exporting firms are exposed to international trends in technologies, products and consumer behaviour, exporting allows for knowledge spillovers and adaptation. This delivers *improved productivity growth*, which drives greater innovation and value added. 14

Moreover exporting firms have also been linked with improved *job prospects*, employing more people on average and in these typically higher skilled positions. ¹⁵

Improved access to export markets are projected to deliver....



.... around half of the increase in industry output is driven by exports

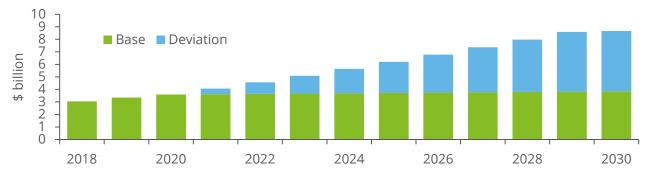


... with the value of trade increasing by over 100% by 2030....



... of which around 10% comes from greater output in the tourism sector.

Impact to Australian alcohol beverages exports



Source: Deloitte Access Economics

¹⁴Harcourt, Why Australia needs Exports: The Economic Case for Exporting

¹⁵Department of Industry, An overview of Australian exporters (2018)



Appendix: Economic contribution methodology

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.

A.1. Value added

Value added is the most appropriate measure of an industry's economic contribution to gross domestic product (GDP) at the national level, or gross state product (GSP) at the state level. Other measures, such as total revenue or total exports, may be easier to estimate than value added, but they 'double count'. That is, they overstate the contribution of a company to economic activity because they include, for example, the value added by external firms supplying inputs or the value added by other industries.

A.2. Measuring the economic contribution

There are several commonly used measures of economic activity, each of which describes a different aspect of an industry's economic contribution.

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 GDP. 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), which represents the value of income generated by the entity's direct capital inputs, generally measured as earnings before interest, tax, depreciation and amortisation (EBITDA).
- Labour income, which represents the value of output generated by the entity's direct labour inputs, as measured by the income to labour.
- Tax on production less subsidy provided for production, which generally includes
 company taxes and taxes on employment (given the returns to capital before tax
 (EBITDA) are calculated, company tax is not included or this would double count
 that tax). Gross output measures the total value of the goods and services
 supplied by the entity. This is a broader measure than value added because it is
 an addition to the value added generated by the entity. It also includes the value
 of intermediate inputs used by the entity that flow from value added generated
 by other entities.
- 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 workers' output.

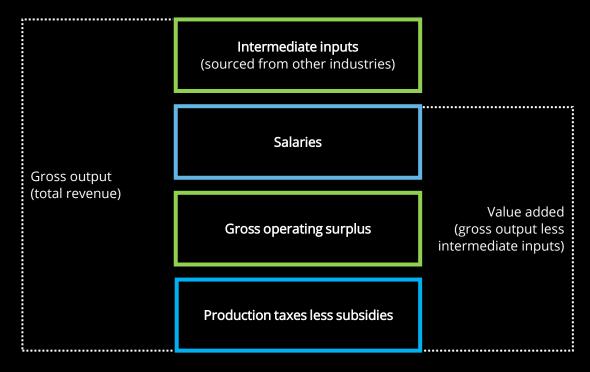
Figure A.1 shows the accounting framework used to evaluate economic activity, along with the components that make up gross output. Gross output is the sum of value added and the value of intermediate inputs. Value added can be calculated directly by summing the payments to the primary factors of production, labour (i.e. salaries) and capital (i.e. gross operating surplus), as well as production taxes less subsidies. The value of intermediate inputs can also be calculated directly by summing up expenses related to non-primary factor inputs.

A.3. Direct and indirect contributions

Direct economic contribution is a representation of the flow from labour and capital within the sector of the economy in question. Indirect contribution is a measure of the demand for goods and services produced in other sectors as a result of demand generated by the sector in question.

Estimation of the indirect economic contribution is undertaken in an input-output (IO) framework using Australian Bureau of Statistics input-output 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.

Figure A.1: Economic activity accounting framework



A.4. Estimating economic contribution for the alcohol beverages industry

An economic contribution for the alcohol beverages industry can be generated using either a 'top-down' (using publicly available data at the sector level) or bottom up (survey of industry members) approach. A top down approach is used here.

For this analysis, we have elected to conduct a top-down approach to measuring economic contribution. As there are hundreds of participants throughout the supply chain, a bottom-up approach would impose significant burden on the industry and likely provide little additional value of undertaking a bottom up approach. We have use publicly available data sourced form IBISWorld (supplemented by ABS data where possible) to model the direct economic contribution of the industry.

We have utilised evidence-based assumptions for the alcohol share of sales for downstream sectors. We have drawn on the latest ABS data for alcohol's share of revenue for each of the sectors considered in this analysis (**Table A.1**).

To estimate the indirect flow-on contribution of the industry we have utilised the expenditure patterns identified in the national I-O tables for each of the sectors as identified by the ABS relating to the alcohol beverages industry. These expenditure profiles have been adjusted for imports so that only domestic contribution is considered.

For the indirect economic contribution, backward linkages throughout the supply chain have been quantified. As this study seeks to quantify the total economic contribution of an entire supply chain, the estimation of backward linkages for each sector is challenging. For example, the direct and indirect contribution of liquor wholesalers already includes purchases from manufacturers. Similarly, the direct and indirect effects of the liquor retailing sector includes purchases from the liquor wholesalers.

To add up the direct and indirect effects for each actor in the supply would result in double counting and an overestimation of total economic contribution.

To account for double counting we have excluded backward interactions between each supply chain actor in the economic contribution modelling. For example, expenditure from 'liquor wholesaling' associated with beer manufacturing, has been excluded for the indirect calculations in the I-O modelling.

Table A.1: Sectors considered in this analysis

ABA sector	I-O table sector	Alcohol share
Beer manufacturing	Beer manufacturing	100%
Spirit manufacturing		100%
RTD Mixed Spirit Production	Wine, spirits and tobacco	100%
Wine manufacturing		100%
Liquor wholesaling	Wholesale Trade	100%
Liquor retailing	Retail Trade	100%
Café and coffee shops		8%
Restaurants	Food and Davison	20%
Pubs, Bars and Nightclubs	Food and Beverage	60%
Social clubs	Services	60%
Catering Services		5%
Hotels and resorts	Assamanadation	4%
Motels	Accommodation	1%
Casinos	Gambling	4%

A.5. 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 significant unused capacity in the economy (such as unemployed labour) there is only a weak 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.

Indeed, 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 — relies on a national input-output 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 model.



Appendix: Computable General Equilibrium modelling

CGE models estimate economic impacts by comparing a policy scenario against a baseline.

Here the baseline represents 'business as usual' with the policy scenario representing a stylised world where the alcohol beverages industry is relatively more attractive to investors

The baseline scenario is built off historical data with the economy growing as per 'business as usual' (1).

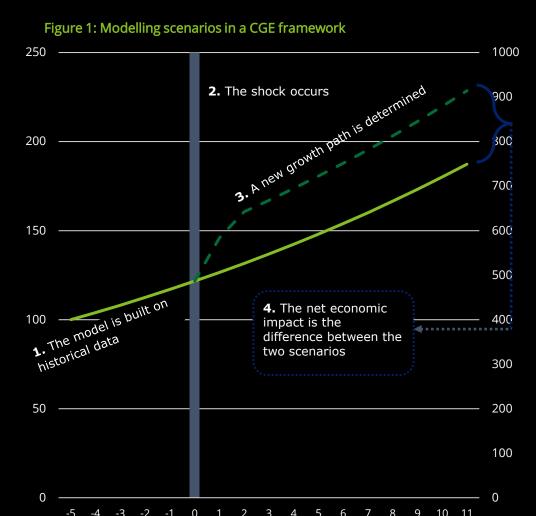
A shock is introduced into the model (2) that is a represents the issue, project or policy in focus. Here the shock to the economy is an increase in the rate of return on investment for the beverage industry which stylises how the sector may become more attractive if various regulatory and non-regulatory barriers are addressed.

CGE models then solve for the market-clearing (equilibrium) levels of demand and supply across all specified goods and factor markets in the economy. This effectively creates a new path for the economy over time (3).

Here the new path describes a unique policy scenario, where the alcohol beverages industry is relatively more attractive to investors. In this scenario it receives greater inflows of capital investment than would have occurred in the baseline scenario.

Comparing this new 'policy' path to that of the baseline (where the change does not occur), shows the economic impact of the shock (4).

These differences are estimated across a range of variables including economic growth, industry value added, employment, trade or prices, including for wages, capital and other factors of production.



To accurately model the impacts of promoting investment in the alcohol beverages industries we have used our whole-of-economy model (DAE-RGEM) which describes the impacts on jobs and economic activity across the country

Computable general equilibrium (CGE) modelling is the framework that is best suited to modelling the impact of large projects and policies on the economy. In this framework, it is possible to account for resourcing constraints and opportunity costs, and to model changes in prices and the behaviour of economic agents in response to changes in the economy.

Our in-house CGE model is known as Deloitte Access Economics regional general equilibrium model (DAE-RGEM).

DAE-RGEM represents the interaction of households and firms with factor markets and goods markets over time.

DAE-RGEM encompasses all economic activity – including production, consumption, employment, taxes and trade – and can run scenarios through time involving multiple regions, industries and commodities.

This stylised diagram shows the circular flow of income and spending that occurs in DAE-RGEM. To meet demand for products, firms purchase inputs from other producers and hire factors of production (labour and capital). Producers pay wages and rent (factor income) which accrue to households. Households spend their income on goods and services, pay taxes and put some away for savings.

DAE-RGEM is unique, it is both a highly detailed yet customisable model of the global economy with a bottom up database of Australia.



DAE-RGEM is able to model policy or program changes in any one of includes 140 countries, and includes economic interactions between these countries.

This includes for example, modelling tax changes for the ASEAN region, or emissions policies in north America.



DAE-RGEM is also a bottom-up model of regional Australia, and able to simulate economic impacts across different states and sub-state regions.

This includes for example, modelling new mines in specific local government areas such as the Isaac region. As well as changes to education or health policy in Victoria or South Australia.



DAE-RGEM includes more than 65 industries that are able to be aggregated and disaggregated to meet specific modelling needs.

Recent work has isolated the emerging hydrogen industry, as well as focussed on specialised parts of the agriculture supply chain such as feedlotting.

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Goods markets

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DAE-RGEM also has a range of modules that can be incorporated to target specific questions or built at your request. This includes:

DAE-Skills: which incorporates greater diversity in employment qualifications and skills. This module is typically used to assess labour and education type questions.

DAE-damages: which incorporates the physical risks of climate change. This module is typically used to assess how climate change might impact various sectors of the economy.

DAE-emissions: Which includes a full emission accounting framework. This module is typically used to assess how climate change policy might impact various sectors of the economy.

The policy scenario is modelled as an increased rate of return for the alcohol beverages industry, aiming to capture the effects of improved attractiveness for investors.

The baseline is shocked with an increased rate of return to capital for the alcohol beverages industry

This shock represents a variety of regulatory (and non-regulatory) reforms that ultimately would improve the attractiveness of the industry for investors.

The increase in industry rate of return was modelled as a stylised return to peak past performance, with the increase calculated as the difference between the recent average and recent historical peaks.

The shock was informed using historical data on capex and industry revenue.

Capital expenditure figures were adjusted to account for industry growth trends

Capital expenditure for the alcohol and tobacco industry was sourced from the ABS Private new capital expenditure and expected capital expenditure.

As many of the ABA industries do not neatly fit within the ABS data sources, where appropriate, values were scaled using weights informed by industry size.

To avoid issues associated from trending data, the alcohol beverages industry capital expenditure figures were normalised by dividing by industry sales. Industry sales were sourced from the ABS Business Indicators.

Once normalised, the median (2.9%) and peak values (3.15%) were estimated.

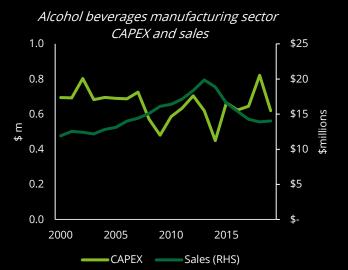
The industry rate of return is revised upwards to reflect a more favourable investment environment

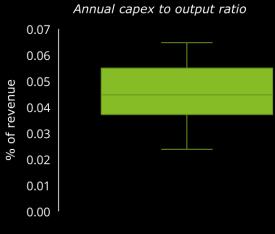
The percentage difference between these two (9%) was the estimated shock to industry rate of return.

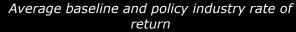
The percentage difference was applied to the baseline rate of return, lifting the level of the policy rate or return above the baseline.

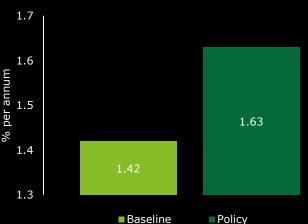
On average between 2021 and 2030 the policy rate of return is assumed to be 1.63% compared to the baseline of 1.42%.

The model assumes the rate of return declines steadily over time as the difference between the cost of capital and return on capital slowly reduces over time.









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