

INDUSTRY REPORT C11.02EU

Wine Production in the EU

Stormy weather: Climate change is threatening harvests, creating volatile prices

Biagio Olivieri | February 2022

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Industry at a Glance

Key Statistics



Annual Growth 2017-2022 -0.3%

Annual Growth 2022-2027 **Annual Growth** 2017-2027

4.8%







Annual Growth 2017-2022 0.0%

Annual **Annual Growth** Growth 2017-2027

2022-2027

2.6%

Employment

Annual Growth 2017-2022

2.7%

Annual **Annual Growth** Growth 2017-2027

2022-2027

3.3%





Annual Growth 2017-2022 0.4%

Annual Growth 2022-2027

Annual Growth 2017-2027

3.9%

Key External Drivers

% = 2017-22 Annual Growth

7.4% 8.3%

Average temperature change

-2.1% Consumer sentiment Health consciousness

0.7%

Real household disposable

income

0.5% 0.3%

Private consumption expenditure Real effective exchange rate on alcoholic beverages

Key Trends

- Strong demand from new markets has propelled export growth over the past five years
- Smaller operators have been particularly hard hit by the coronavirus outbreak
- Potential new trade deals will help to expand the export market for operators
- Operators are forecast to contend with rising temperatures and erratic rainfall due to climate change

Products & Services Segmentation



Temperature and pressure regulated wine and grape must



Quality PDO wine and grape must with fermentation control



Wine and grape must containing less than 15% alcohol



Champagne



White wine with a protected designation of origin (PDO)



Sparkling wine from fresh grapes

Wine Production in the EU Source: IBISWorld

Major Players



- 2.7% Grands Chais de France
- 2.6% Copagef
- 2.5% Henkell
- 1.5% Cantine Riunite & Civ
- 1.4% J. García Carrión
- 1.0% Caviro Extra
- 88.3% Other

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Wine Production in the EU Source: IBISWorld

SWOT

S STRENGTHS

Low Customer Class Concentration Low Product/Service Concentration

WEAKNESSES

Low Profit vs. Sector Average High Capital Requirements

OPPORTUNITIES

High Revenue Growth (2022-2027) High Performance Drivers

THREATS

Low Revenue Growth (2017-2022)

Business Locations



Wine Production in the EU Source: IBISWorld

Key Insights

France

Highest Revenue

France

Fastest Growth 2017–2022

France

0

Largest Exporter

riance

12

orter Slov

24

Slowest Growth 2017–2022

Romania

36

Growth Highest Number of Businesses

Spain

Italy

Highest Wages

About this Industry

Definition Participants in this industry produce wine from grapes. Grapes are either purchased or grown and harvested on the

estate. Products include still and sparkling wine of red and white varieties. The industry also produces wine blends,

vermouth, fortified wines, port, madeira and sherry.

Main Activities The main activities of this industry are:

Red and white wine production

Sparkling wine production

Low- or non-alcoholic wine production

Crushing and fermenting wine grapes

Blending and purifying wine

Bottling wine

Similar Industries C11.05EU Breweries in the EU

I56.10EU Restaurants & Takeaway Food Operators in the EU

I56.30EU Pubs, Bars & Nightclubs in the EU

Related Industries C1123-GL Global Wine Manufacturing

31213 Wineries in the US

C1214 Wine Production in Australia

1524 Wine Production in China

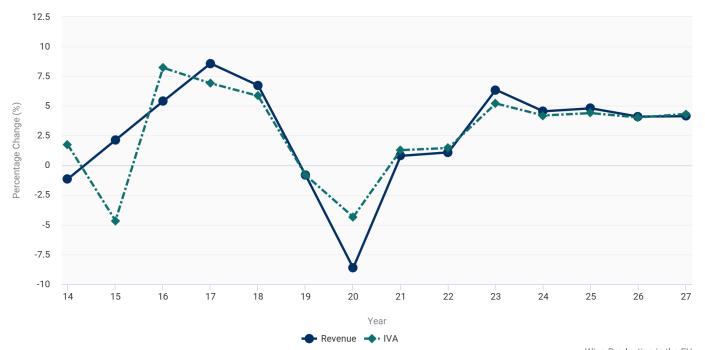
C1214NZ Wine Production in New Zealand

Industry Performance

Current Performance

7

Industry Performance 2014–2027



Wine Production in the EU Source: IBISWorld

Europe is the world's largest wine-producing continent, accounting for approximately 45% of the world's wine-growing surface area, 65% of global wine production, 60% of global consumption and 70% of exports.

Italy, France and Spain alone produced approximately 45% of global wine and almost 80% of EU wine production in 2021, according to estimates from the International Organisation of Vine and Wine (OIV).

Industry revenue is expected to contract at a compound annual rate of 0.3% over the five years through 2022 to €41.3 billion. Industry operators have contended with volatile conditions over the past five years. The performance of the global wine market has been hindered by high geopolitical tensions, the growing threat of climate change and the shock of the COVID-19 (coronavirus) pandemic.

The industry recorded growth at the start of past five-year period, as improving disposable incomes among European consumers, coupled with strong export sales, created favourable demand conditions and supported price growth. However, industry revenue contracted in 2019, as EU wine production declined by 14.4% to 156 million hectolitres, according to OIV, as a result of challenging weather conditions in the main EU wine producing countries. In contrast, weather conditions had been favourable during the 2018 production season. Industry operating conditions deteriorated sharply following the coronavirus outbreak in 2020, severely disrupting industry operations and contributing to sharp declines in revenue and profitability. Although the industry returned to growth in 2021, this growth was extremely weak, as operators contended with historically low wine harvests, due to adverse climatic conditions in southern Europe, including spring frosts which decimated approximately 30% of the cultivations in France and northern Italy. Industry growth is anticipated to remain subdued in 2022, with revenue forecast to grow by just 1.1%.

A global industry

European wines enjoy a worldwide reputation for quality.

Industry exports are estimated to account for a significant 36.4% of revenue in 2022, a share which has grown over the past five years. Strong demand from new markets, including China, Vietnam, Australia, New Zealand and Mexico, has propelled export growth, with the value of exports estimated to rise at a compound annual rate of 0.1% over the five years through 2022. In contrast, while mature markets such as the United States, Canada and Switzerland still account for the bulk of European wine exports, demand from these markets has weakened over the period.

Domestic demand has also dwindled, due to the long-term trend of falling alcohol consumption among most European countries. According to estimates by the World Health Organization, alcohol consumption across EU countries was 9.7 litres of pure alcohol per adult in 2019, down from 10.6 litres in 2008. Public health policies aimed at increasing awareness about the negative health repercussions of alcohol consumption, coupled with growing competition from beer and non-alcoholic drink alternatives, are the main factors causing this decline. Furthermore, import competition has increased over the period, with European wine producers contending with strongly emerging wine industries in the New World. In 2022, imports are expected to account for 6.7% of European wine domestic demand.

US tariffs

In October 2019, the United States introduced a 25% tariff on wine from a number of European countries, including Spain, France and Germany.

Formally authorised by the WTO on 16 October 2019, this tariff caused a significant reduction in the total value of wine exports, particularly for countries such as Spain and France, which export significant proportions of their wine output to the United States. As a result, wine exporters were forced to either absorb the extra cost, therefore directly affecting their operating profit, or increase prices, making their products less competitive during a time of already adverse conditions due to the pandemic. Although the tariff was suspended in March 2021, according to the Assembly of Wine Regions of Europe, the tariff caused lost sales of €1.6 billion.

Wage costs and depreciation expenses are both expected to increase as a share of revenue over the period, accounting for 9.7% and 6.3% of revenue respectively in 2022. The combined effect of tariffs, loss of competitiveness and increasing costs is expected to contribute to a fall in the industry's average margin to 5.6% in 2022, down from 6.2% in 2017.

COVID-19

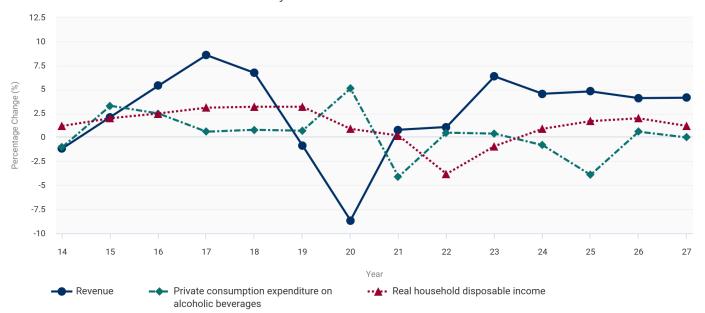
The pandemic disrupted industry operations severely, as downstream demand from the hospitality sector plummeted and a glut of stock caused wine prices to plunge.

However, operators recorded varying levels of disruption, depending on factors such as the size of their operations, their product portfolio and target markets. Smaller operators and those specialising in high-end wines and primarily serving hospitality and accommodation markets, fared worse than producers of

| Historical Performance Data | | | | | | | | | |
|-----------------------------|------|-------------|-------------------------|--|---------|-------------|-------------|-------------|-------------|
| | | Revenue | Industry Value Added | Enterprises Employment Exports Imports Wages | | | | | |
| | Year | (€ million) | (€ million) | (Units) | (Units) | (€ million) | (€ million) | (€ million) | (€ million) |
| | 2013 | 36,298 | 7,715 | 10,916 | 84,120 | 13,219 | 1,989 | 3,478 | 25,067 |
| | 2014 | 35,885 | 7,847 | 11,797 | 89,340 | 12,937 | 1,850 | 3,516 | 24,799 |
| | 2015 | 36,653 | 7,482 | 11,900 | 100,891 | 13,783 | 1,944 | 3,546 | 24,813 |
| | 2016 | 38,630 | 8,097 | 12,036 | 95,471 | 13,861 | 1,962 | 3,640 | 26,731 |
| | 2017 | 41,946 | 8,658 | 11,866 | 99,415 | 14,980 | 1,908 | 3,930 | 28,873 |
| | 2018 | 44,773 | 9,164 | 11,695 | 103,358 | 14,970 | 1,938 | 4,180 | 31,741 |
| | 2019 | 44,404 | 9,089 | 11,937 | 109,974 | 15,192 | 1,862 | 4,196 | 31,073 |
| | 2020 | 40,570 | 8,693 | 11,623 | 108,759 | 13,564 | 1,808 | 3,978 | 28,814 |
| | 2021 | 40,895 | 8,805 | 11,745 | 110,876 | 14,362 | 1,856 | 3,979 | 28,389 |
| | 2022 | 41,342 | 8,934 | 11,859 | 113,603 | 15,052 | 1,887 | 4,006 | 28,178 |
| | | | | | | | | | |

Key External Drivers

Key External Drivers 2014–2027

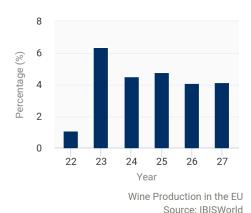


Wine Production in the EU Source: IBISWorld

Industry Outlook

Industry revenue is forecast to grow at a compound annual rate of 4.8% over the five years through 2027 to reach €52.2 billion.

Industry Outlook 2022–2027



Rising competition in the global wine market, particularly from New World winemakers that are able to produce wine more cost effectively, such as from Australia, Chile, Argentina and South Africa, is expected to constrain the industry's global competitiveness. In response, European winemakers are likely to shift production increasingly towards premium-branded, higher-priced wine, aiding revenue growth. In addition, large industry operators are anticipated to adopt production automation to remain competitive and protect profit margins. As a result, wages are anticipated to fall as a share of revenue over the five years through 2027 to 9.3%.

PREMIUM WINES

Industry operators are anticipated to benefit from potential new trade deals currently being negotiated by the European Commission.

These agreements aim to open up new markets for European wine exporters, such as with Australia and New Zealand. As a large share of European premium wines are destined for these markets, the value of industry exports is anticipated to rise at a compound annual rate of 4.5% over the five years through 2027. In contrast, producers of low-cost bulk wine are anticipated to struggle to boost their export sales, due to an increasingly crowded global wine market. Therefore, the percentage of industry revenue accounted for by exports is projected to decline slightly over the next five years, from 36.4% in 2022 to 36% in 2027.

While winemakers will likely contend with more variable weather patterns than ever, operators specialising in fine wine could fare better and make higher profit. Europe boasts some of the most prestigious wineries in the world. Fine wines from France, Italy and Spain are anticipated to command increasingly high prices, as greater numbers of investors see them as a lucrative commodity. The Liv-ex's Fine Wine 100 index, a benchmark tracking the price movement of 100 of the most sought-after fine wines in the world, is currently at historical highs, having risen by 24.6% over the year through January 2022. Over the past two decades, this index has returned more than the S&P 500.

CLIMATE CHANGE

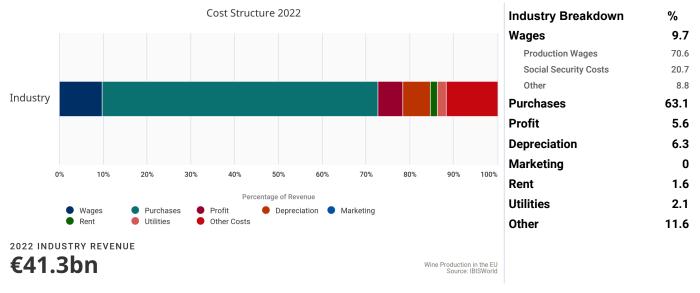
The industry is anticipated to contend with the growing threat of climate change.

Rising temperatures, increasingly erratic rainfall and water scarcity are likely to compromise the volumes, quality and predictability of harvests, leading to severe supply chain disruption and price volatility. In turn, this may reduce operators' ability to generate strong profit. As a result, industry profitability is anticipated to deteriorate over the next five years, with the average industry profit margin expected to be just 5.3% in 2027. In response, industry operators are anticipated to increasingly adopt new forms of technology and innovation, such as robotics and computerised equipment for winery operations. As a result, depreciation costs are anticipated to increase as a proportion of revenue to 6.6% in 2027.

While European winemakers have traditionally taken pride in their artisanal skills and technology has represented just a niche segment of the winemaking sector, an increasing number of innovative start-ups are anticipated to emerge. These companies are anticipated to introduce initiatives that improve the industry's environmental and economic sustainability, focusing on energy efficiency, reducing grapevine disease, and addressing the use of chemicals in vineyards and wineries. The number of industry world.com enterprises is expected to rise at a compound annual rate of 2.6% over the five years through 2027.

Competitive Landscape

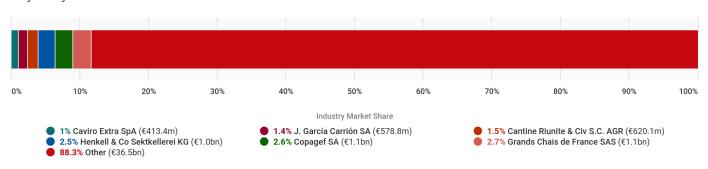
Cost Structure Benchmarks



Market Share Concentration

Market share concentration is ⊗ Low

Major Player Market Share



2022 INDUSTRY REVENUE

€41.3bn

Wine Production in the EL

Major Players

Grands Chais de France SAS

Market Share: 2.7%

Copagef SA

Market Share: 2.6%

Henkell & Co Sektkellerei KG

Market Share: 2.5%

Cantine Riunite & Civ S.C. AGR

Market Share: 1.5% Other Companies Market Share: 90.7%

Key Statistics

Industry Data

| Industry Value Revenue Added | | Enterprises | Employment | Exports | Imports | Wages | Domestic Demand | |
|---------------------------------|-------------|-------------|------------|---------|-------------|-------------|--------------------|-------------|
| Year | (€ million) | (€ million) | (Units) | (Units) | (€ million) | (€ million) | (€ million) | (€ million) |
| 2008 | 35,500 | 7,134 | 11,214 | 85,974 | 10,754 | 1,822 | 3,463 | 26,568 |
| 2009 | 31,221 | 6,453 | 10,259 | 82,129 | 9,049 | 1,711 | 3,431 | 23,883 |
| 2010 | 32,069 | 6,958 | 10,586 | 82,606 | 10,648 | 1,846 | 3,457 | 23,266 |
| 2011 | 36,350 | 7,495 | 10,913 | 84,220 | 12,162 | 1,871 | 3,495 | 26,058 |
| 2012 | 35,150 | 7,583 | 11,064 | 83,895 | 13,142 | 1,905 | 3,414 | 23,914 |
| 2013 | 36,298 | 7,715 | 10,916 | 84,120 | 13,219 | 1,989 | 3,478 | 25,067 |
| 2014 | 35,885 | 7,847 | 11,797 | 89,340 | 12,937 | 1,850 | 3,516 | 24,799 |
| 2015 | 36,653 | 7,482 | 11,900 | 100,891 | 13,783 | 1,944 | 3,546 | 24,813 |
| 2016 | 38,630 | 8,097 | 12,036 | 95,471 | 13,861 | 1,962 | 3,640 | 26,731 |
| 2017 | 41,946 | 8,658 | 11,866 | 99,415 | 14,980 | 1,908 | 3,930 | 28,873 |
| 2018 | 44,773 | 9,164 | 11,695 | 103,358 | 14,970 | 1,938 | 4,180 | 31,741 |
| 2019 | 44,404 | 9,089 | 11,937 | 109,974 | 15,192 | 1,862 | 4,196 | 31,073 |
| 2020 | 40,570 | 8,693 | 11,623 | 108,759 | 13,564 | 1,808 | 3,978 | 28,814 |
| 2021 | 40,895 | 8,805 | 11,745 | 110,876 | 14,362 | 1,856 | 3,979 | 28,389 |
| 2022 | 41,342 | 8,934 | 11,859 | 113,603 | 15,052 | 1,887 | 4,006 | 28,178 |
| 2023 | 43,975 | 9,400 | 12,161 | 117,884 | 15,984 | 1,983 | 4,199 | 29,974 |
| 2024 | 45,976 | 9,796 | 12,441 | 121,578 | 16,745 | 2,059 | 4,354 | 31,290 |
| 2025 | 48,188 | 10,228 | 12,744 | 125,212 | 17,463 | 2,149 | 4,516 | 32,874 |
| 2026 | 50,164 | 10,641 | 13,095 | 129,220 | 18,107 | 2,233 | 4,677 | 34,290 |
| 2027 | 52,244 | 11,102 | 13,485 | 133,590 | 18,794 | 2,319 | 4,850 | 35,769 |

Annual Change

| Domesti | | | | | | lustry Value | Ind | |
|---------|-------|---------|---------|------------|-------------|--------------|---------|------|
| Deman | Wages | Imports | Exports | Employment | Enterprises | Added | Revenue | |
| (% | (%) | (%) | (%) | (%) | (%) | (%) | (%) | Year |
| -10. | -0.94 | -6.08 | -15.9 | -4.48 | -8.52 | -9.55 | -12.1 | 2009 |
| -2.5 | 0.76 | 7.84 | 17.7 | 0.58 | 3.18 | 7.82 | 2.71 | 2010 |
| 12. | 1.10 | 1.36 | 14.2 | 1.95 | 3.08 | 7.71 | 13.3 | 2011 |
| -8.2 | -2.35 | 1.84 | 8.05 | -0.39 | 1.38 | 1.17 | -3.31 | 2012 |
| 4.8 | 1.88 | 4.38 | 0.59 | 0.26 | -1.34 | 1.73 | 3.26 | 2013 |
| -1.0 | 1.09 | -6.96 | -2.14 | 6.20 | 8.07 | 1.71 | -1.14 | 2014 |
| 0.0 | 0.83 | 5.03 | 6.54 | 12.9 | 0.87 | -4.66 | 2.13 | 2015 |
| 7.7 | 2.65 | 0.94 | 0.56 | -5.38 | 1.14 | 8.22 | 5.39 | 2016 |
| 8.0 | 7.95 | -2.77 | 8.07 | 4.13 | -1.42 | 6.91 | 8.58 | 2017 |
| 9.9 | 6.36 | 1.58 | -0.08 | 3.96 | -1.45 | 5.85 | 6.73 | 2018 |
| -2.1 | 0.40 | -3.94 | 1.48 | 6.40 | 2.06 | -0.83 | -0.83 | 2019 |
| -7.2 | -5.20 | -2.89 | -10.7 | -1.11 | -2.64 | -4.35 | -8.64 | 2020 |
| -1.4 | 0.01 | 2.66 | 5.88 | 1.94 | 1.04 | 1.28 | 0.80 | 2021 |
| -0.7 | 0.69 | 1.65 | 4.80 | 2.45 | 0.97 | 1.46 | 1.09 | 2022 |
| 6.3 | 4.80 | 5.11 | 6.19 | 3.76 | 2.54 | 5.21 | 6.36 | 2023 |
| 4.3 | 3.70 | 3.79 | 4.76 | 3.13 | 2.30 | 4.20 | 4.55 | 2024 |
| 5.0 | 3.71 | 4.40 | 4.28 | 2.98 | 2.43 | 4.40 | 4.80 | 2025 |
| 4.3 | 3.56 | 3.89 | 3.68 | 3.20 | 2.75 | 4.03 | 4.10 | 2026 |
| 4.3 | 3.68 | 3.86 | 3.79 | 3.38 | 2.97 | 4.33 | 4.14 | 2027 |

Key Ratios

| , | IVA/Revenue | Imports/ Demand | Exports/ Revenue | Revenue per Employee | Wages/ Revenue | Employees per Ent. | Average Wage |
|------|-------------|--------------------|---------------------|-------------------------|-------------------|-----------------------|--------------|
| Year | (%) | (%) | (%) | (€'000) | (%) | (Units) | (€) |
| 2008 | 20.1 | 6.86 | 30.3 | 413 | 9.76 | 7.67 | 40,283 |
| 2009 | 20.7 | 7.17 | 29.0 | 380 | 11.0 | 8.01 | 41,775 |
| 2010 | 21.7 | 7.93 | 33.2 | 388 | 10.8 | 7.80 | 41,853 |
| 2011 | 20.6 | 7.18 | 33.5 | 432 | 9.62 | 7.72 | 41,503 |
| 2012 | 21.6 | 7.97 | 37.4 | 419 | 9.71 | 7.58 | 40,689 |
| 2013 | 21.3 | 7.93 | 36.4 | 432 | 9.58 | 7.71 | 41,345 |
| 2014 | 21.9 | 7.46 | 36.1 | 402 | 9.80 | 7.57 | 39,356 |
| 2015 | 20.4 | 7.83 | 37.6 | 363 | 9.67 | 8.48 | 35,142 |
| 2016 | 21.0 | 7.34 | 35.9 | 405 | 9.42 | 7.93 | 38,125 |
| 2017 | 20.6 | 6.61 | 35.7 | 422 | 9.37 | 8.38 | 39,526 |
| 2018 | 20.5 | 6.11 | 33.4 | 433 | 9.33 | 8.84 | 40,437 |
| 2019 | 20.5 | 5.99 | 34.2 | 404 | 9.45 | 9.21 | 38,158 |
| 2020 | 21.4 | 6.27 | 33.4 | 373 | 9.81 | 9.36 | 36,578 |
| 2021 | 21.5 | 6.54 | 35.1 | 369 | 9.73 | 9.44 | 35,883 |
| 2022 | 21.6 | 6.70 | 36.4 | 364 | 9.69 | 9.58 | 35,266 |
| 2023 | 21.4 | 6.62 | 36.3 | 373 | 9.55 | 9.69 | 35,619 |
| 2024 | 21.3 | 6.58 | 36.4 | 378 | 9.47 | 9.77 | 35,815 |
| 2025 | 21.2 | 6.54 | 36.2 | 385 | 9.37 | 9.83 | 36,068 |
| 2026 | 21.2 | 6.51 | 36.1 | 388 | 9.32 | 9.87 | 36,194 |
| 2027 | 21.2 | 6.48 | 36.0 | 391 | 9.28 | 9.91 | 36,301 |

Additional Resources

Additional Resources

Comité Européen des Entreprises Vins

http://www.ceev.eu

European Federation of Origin Wines

http://www.efow.eu/en/

International Organisation of Vine and Wine

http://www.oiv.int

European Commission – Wine market observatory

http://www.ec.europa.eu/info/food-farming-fisheries/farming/facts-and-figures/markets/overviews/market-observatories

Assemblee Des Regions (Assembly of European Wine Regions)

http://www.arev.org/?lang=en

Industry Jargon

FERMENTATION

The process of turning grape juice into an alcoholic beverage.

FORTIFIED WINE

A wine to which a distilled spirit, usually brandy, has been added.

GRAPE MUST

Must is freshly crushed fruit juice that contains the skins, seeds, and stems of the fruit.

NEW WORLD WINE

A wine produced outside of the traditional wine-growing regions of Europe and North Africa.

VERMOUTH

A red or white wine flavoured with aromatic herbs.

Glossary

BARRIERS TO ENTRY

High barriers to entry mean that new companies struggle to enter an industry, while low barriers mean it is easy for new companies to enter an industry.

CAPITAL INTENSITY

Compares the amount of money spent on capital (plant, machinery and equipment) with that spent on labour. IBISWorld uses the ratio of depreciation to wages as a proxy for capital intensity. High capital intensity is more than €0.333 of capital to €1 of labour; medium is €0.125 to €0.333 of capital to €1 of labour; low is less than €0.125 of capital for every €1 of labour.

CONSTANT PRICES

The euro figures in the Key Statistics table, including forecasts, are adjusted for inflation using the current year (i.e. year published) as the base year. This removes the impact of changes in the purchasing power of the euro, leaving only the 'real' growth or decline in industry metrics. The inflation adjustments in IBISWorld's reports are made using the European Commissions' implicit GDP price deflator.

DOMESTIC DEMAND

Spending on industry goods and services, regardless of their country of origin. It is derived by adding imports to industry revenue, and then subtracting exports.

EMPLOYMENT

The number of permanent, part-time, temporary and casual employees, working proprietors, partners, managers and executives within the industry.

ENTERPRISE

A division that is separately managed and keeps management accounts. Each enterprise consists of one or more establishments that are under common ownership or control.

ESTABLISHMENT

The smallest type of accounting unit within an enterprise, an establishment is a single physical location

where business is conducted or where services or industrial operations are performed. Multiple establishments under common control make up an enterprise.

EXPORTS

Total value of industry goods and services sold by domestic companies to customers abroad.

IMPORTS

Total value of industry goods and services brought in from foreign countries to be sold in the respective country.

INDUSTRY CONCENTRATION

An indicator of the dominance of the top four players in an industry. Concentration is considered high if the top players account for more than 70% of industry revenue. Medium is 40% to 70% of industry revenue. Low is less than 40%.

INDUSTRY REVENUE

The total sales of industry goods and services (exclusive of excise and sales tax); subsidies on production; all other operating income from outside the firm (such as commission income, repair and service income, and rent, leasing and hiring income); and capital work done by rental or lease. Receipts from interest royalties, dividends and the sale of fixed tangible assets are excluded.

INDUSTRY VALUE ADDED (IVA)

The market value of goods and services produced by the industry minus the cost of goods and services used in production. IVA is also described as the industry's contribution to GDP, or profit plus wages and depreciation.

INTERNATIONAL TRADE

The level of international trade is determined by ratios of exports to revenue and imports to domestic demand. For exports/revenue: low is less than 5%; medium is 5% to 20%; and high is more than 20%. Imports/domestic demand: low is less than 5%; medium is 5% to 35%; and high is more than 35%.

LIFE CYCLE

All industries go through periods of growth, maturity and decline. IBISWorld determines an industry's life cycle by considering its growth rate (measured by IVA) compared with GDP; the growth rate of the number of establishments; the amount of change the industry's products are undergoing; the rate of technological change; and the level of customer acceptance of industry products and services.

PROFIT

IBISWorld uses earnings before interest and tax (EBIT) as an indicator of a company's profitability. It is calculated as revenue minus expenses, excluding interest and tax.

VOLATILITY

The level of volatility is determined by averaging the absolute change in revenue in each of the past five years. Volatility levels: very high is more than $\pm 20\%$; high volatility is $\pm 10\%$ to $\pm 20\%$; moderate volatility is $\pm 3\%$ to $\pm 10\%$; and low volatility is less than $\pm 3\%$.

WAGES

The gross total wages and salaries of all employees in the industry. The cost of benefits and social security is also included in this figure.



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