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The Globalization (and Regionalization) of Wine

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The Globalization (and Regionalization) of Wine

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The Globalization (and Regionalization) of Wine

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Virtually all industries and households are affected by what has come to be called 'globalization', even though the term connotes different things to different people. On the one hand, economists think of it rather clinically as simply the lowering of transaction costs of doing business across space, and therefore a 'good thing' because it conserves resources. In the more-specific case of business across national borders, economists refer more precisely to 'internationalization': to the growth in international trade in goods, services and the various forms of capital (human, physical, knowledge) relative to national output or expenditure.

For a vocal minority in many countries, on the other hand, one or more of the perceived consequences of globalization is considered a 'bad thing'. People in that set of anti-globalization groups may be concerned about such things as homogenisation of marketed products, a growing dominance of multinational corporations, or the disappearance of small firms with their individualistic goods or services. When applied to wine, they worry that what for centuries has been characterized as largely a cottage industry, with its colourful personalities and wide variety of wines that differ from year to year because of the vagaries of weather or the vigneron's experimentation, will soon be difficult to distinguish from any other high-tech industry with a small number of large firms churning out standardized products for global rather than just local markets.

This paper explores the possibility that in the case of wine at least, the forces of globalization and consequent market responses will be such as to please both the pro- and anti-globalization groups, while at the same time allowing the industry to prosper. One of the necessary ingredients for such a win-win outcome will be a stronger 'regionalization' or localization of the wine industry.

The paper begins with a brief exploration of the forces of globalization in general. It then looks historically at the globalization of the wine industry in particular and Australia's place in that, before turning to the prospects ahead. It concludes with a discussion of the future role of regionalization of the industry and its impact on Australia's wine producers and consumers.

What is globalization?

- *Its nature and extent*

If we accept that globalization is the lowering of transaction costs of doing business across space, then one of its key effects is to enhance the integration of markets for goods, services, technology, ideas, financial and other capital, and labour. An indicator of its progress is reducing differences in prices for those products and factors within and between countries.

Both technological and governmental barriers contribute to the costs of interacting globally. Both have changed hugely over the centuries, the first always downwards and the second both up and down around a very long run downward trend.

Even though globalization is something that has been going on for millennia, the huge decline in communication and information costs and the cuts in tariff and non-tariff governmental barriers to trade in goods and services have combined in the late 20th century to accelerate globalization to an unprecedented speed that shows no sign of abating. The extent of that acceleration in globalization cannot be captured in a single statistic, but several provide partial indications of what is involved.

A standard indicator is the comparison between international trade and GDP growth. While merchandise trade for centuries has grown faster than output for all periods except between the two world wars, the gap has been larger in the 1990s than in any earlier period since the mid-nineteenth century. More than one-fifth of global output is now exported, double the proportion in the 1950s (Anderson 2000).

As well, annual outflows of foreign direct investment grew more than six-fold between 1983 and 1990, and continued to grow more than twice as fast as goods trade in the 1990s. Intra-firm trade among multinational corporations (MNCs) is estimated to account for one-third of world trade, and another one-third is MNC trade with non-affiliates. International portfolio investment is growing even faster than foreign direct investment (FDI). Between 1991 and 1999, the annual value of cross-border mergers and acquisitions grew from $100 billion to more than $700 billion, or from 0.5 to 2.5 per cent of global GDP. In 1999 those cross-border activities accounted for nearly one-third of all mergers and acquisitions globally, and were valued at four-fifths that of FDI flows that year (UNCTAD 2000, pp. 10-12).

The 1990s have also seen an explosion in the world's capacity for electronic commerce. In the decade to 2001 the WTO expects a doubling in the number of telephone lines, a 25-fold increase in the number of cellular phones, a near quadrupling in the number of personal computers, and an expectation that two-thirds of those PCs will have internet access (WTO 1998, p. 8).

- *The technological dimension of globalization*

There have been three technological revolutions in transport and communication technologies in modern times. The cost of transporting goods was lowered enormously in the 19th century by the advent of the steam engine, which created the railway and steamship. Steel hulls for ships and refrigeration further lowered the real cost of transport late last century, particularly for perishable goods. The telegraph helped too (O'Rouke and Williamson 1999).

The second technological revolution lowered hugely also the cost of moving people. It was dominated, in the middle half of the 20th century, by the falling cost of transport by car and aeroplane thanks to mass production of such goods and associated services. Ocean freight rates (helped by containerization) and telephone charges also fell massively over this period.[1]

The third and current revolution in transport and communications technology, beginning towards the end of the 20th century, is digital. Aided by deregulation of telecom markets in many countries, it is lowering enormously long-distance communication costs and especially the cost of rapidly accessing and processing knowledge, information and ideas from anywhere in the world.[2]

A side-effect of the Internet's expansion is the growth in the use of the English language. It has been claimed that there are now more people using English as a second language than there are people for whom it is a first language (Cairncross 1997). This too is lowering costs of communicating between countries. And science has been among the beneficiaries of the digital revolution, spawning yet another revolution, namely in biotechnology.

- *The governmental contribution to globalization*

The above developments have stimulated and been reinforced by government decisions to liberalize goods and services trade and currency and investment regimes and to better assign and enforce property rights.

In the nineteenth century, trade reform involved the repeal of the corn laws in 1846 followed by the gradual opening up of continental Europe (Kindleberger 1975). That century also saw substantial international capital flows to develop primary export industries and associated services in the colonies of European powers. And it saw massive migration of workers and entrepreneurs from Europe to the so-called New World.

Following the protectionist inter-war period of the 20th century, market liberalization was again on the agenda with the lowering of import tariffs on trade in manufactures between industrial economies. Within Western Europe that trade was especially liberal following the Treaty of Rome and the formation of the European Free Trade Area. In the 1980s trade reform was followed by extensive liberalizations of foreign exchange markets and of restrictions on financial capital flows, leading (with the help of new digital technologies) to the development of new varieties of internationally tradable financial security instruments. At the same time many non-OECD countries – including China, the Soviet bloc and Indo-China -- began moving away from inward-looking to outward-oriented trade and investment

[1] Between 1920 and 1980, the real charge per tonne for ocean freight fell by almost three-quarters and between 1960 and 1980 the real cost of a telephone call from New York to London fell by 90 per cent. Meanwhile, between 1930 and 1980 the real cost of air travel fell 85 per cent (Hufbauer 1991). Transport costs can be crudely captured by the extent to which the c.i.f. import price exceeds the f.o.b. export price of a product. For United States merchandise trade, that mark-up has fallen from 9.5 per cent in the 1950s to 6 per cent in the 1990s (Frankel 2000).

[2] Two book titles summarize this 150-year history: Blainey's *Tyranny of Distance* which refers to Australia's early isolation from the Old World prior to steamships, and Cairncross' *Death of Distance* which refers to the latest communications revolution (Blainey 1966; Cairncross 1997). For comparisons of the nineteenth and late twentieth century episodes of globalization, see Baldwin and Martin (1999) and Bordo, Eichengreen and Irwin (1999).

policies. The 1980s also saw the deregulation of domestic markets in a growing number of countries, which reinforced the effects of deregulating transactions at national borders.

Together with the above-mentioned technological revolutions, these policy reforms have brought about a more-integrated global trading system, a much more-integrated global capital market, and more integrated firms as international transactions that formerly took place between independent entities are being internalized within single firms or corporate alliances. The increasing mobility of the productive assets of firms also is encouraging governments to compete for the presence of firms via regulatory reforms, lower tax rates, and other investment incentives.

Globalization of the wine industry

- *An historical perspective of the world market*

An important aspect of globalization is the movement of crucial inputs and know-how from established to new areas of application. The first systematic cultivation of grapevines for wine probably took place between and to the south of the Black and Caspian Seas at least six thousand ago. Production knowledge and cuttings of the best sub-species, *Vitis vinifera,* gradually spread west to Egypt, Greece and perhaps southern Spain by 2,500 BC. The Etruscans began vine cultivation in central Italy using native varieties in the 8th century BC, which is also when the Greek colonists began to take cuttings to southern Italy and Sicily. Viticulture was introduced to southern France by the Romans around 600 BC, and was spread north in the 2nd and 1st centuries BC. It took only until the 4th century AD for winegrape cultivation to be well established in the Old World of Europe and North Africa (Robinson 1994, pp. 697-8). Meanwhile, the drinking of wine in the Middle East went into decline, following Mohammed's decree against it in the 7th century AD (Johnson 1989, pp.98-101).

The first explorers of the New World took vine cuttings and know-how with them first to South America and Mexico in the 1500s and to South Africa from 1655. Attempts to export the same technology and varieties to the eastern part of North America from as early as 1619 were unsuccessful, and it took until the Spanish-Mexican Jesuits moved north from Baja California in the early 19th century before cultivation began to flourish in what is now the US State of California. The first grape cultivation in Australia began with cuttings imported by the earliest British settlers in 1788, while for New Zealand it was three decades later (Robinson 1994, page 666).

Thus for many centuries wine had been very much a European product, and it still is. More than three-quarters of the volume of world wine production, consumption and trade still involves Europe, and most of the rest involves just a handful of New World countries settled by Europeans. In the late 1980s Europe accounted in value terms for all but 5 per cent of wine exports and three-quarters of wine imports globally.

However, Europe's dominance is beginning to weaken, particularly in international markets. In the ten years to 1997, the rest of the world's share of wine export dollars rose ten percentage points, with virtually all of it coming from California and six Southern Hemisphere countries. When intra-European Union (EU) trade is excluded, the decline in Europe's share of global exports is even greater over that decade: a fall from 88 per cent to 70 per cent (Anderson and Berger 1999).

The rapid growth in wine exports from the New World over the past decade is ironic, in that it coincides with a decline in world wine production and consumption. Over the decade to 1997, global wine production fell at 0.8 per cent per year, and yet global wine trade rose by 4.1 per cent per year in volume terms and 6.5 per cent in value terms -- or 9.7 per cent if intra-EU trade is excluded (Anderson and Berger 1999).

Traditionally the countries producing wine were also the countries consuming it, with only about one-tenth of global sales being across national borders -- and most of that was with near neighbours. The proportion traded rose a little over the 1980s, but it has since risen much more so that now about one-quarter of the volume of sales is international (Anderson and Berger 1999). That is, despite a slight decrease in the per capita volume of consumption globally, wine is becoming much more of an internationally traded product. Most of that trade is in premium (bottled) wine, as is most of the production growth in the New World during the past decade. By contrast, most of the decline in wine sales is in the non-premium category, whose production is being replaced by premium-quality product.

Government policies have had profound influences on the globalization of wine markets. Up until recent centuries wine export taxes were common. The Greek island of Thasos in the second millennium B.C., for example, allowed exports only of wine sealed with the name of the magistrate not only as a guarantee of authenticity but also in order to tax exports (Robinson 1994, p. 465). Along the Rhine River in the 14th century, there were no less than 62 customs points to tax wine trade.[3] Taxes on Bordeaux exports were so high in the dark ages that when lowered in 1203, tax revenue actually increased (and allowed consumption by 1308 to rise to 4.5 litres of claret per capita in Britain -- Johnson 1989, p. 142). Fluctuations in relations between Britain and France were reflected in changes in export or import taxes on wine such that Bordeaux exports to Britain fluctuated from an annual average of 79 Ml during 1303-37 to 14 in 1337-56 to 29 in 1356-69 and back to 11 for 1440-53. Total French exports to Britain fell from around 10 Ml in 17th century to an average of just 1 Ml from 1690 to 1850 when British preferences allowed Portugese exports to grow from 0 to 12 Ml and Spain’s from 4 to 6 Ml p.a. (Francis 1972, Appendix). The biggest policy influences on wine’s globalization post-World War II have been the European Union’s Common Agricultural Policy (CAP) and the COMECON arrangements within the communist bloc. With the breakup of the latter and the imminent expansion eastwards of the EU, it will be the wine policy within the CAP that matters most over the next few years. Also important, though, are wine consumption taxes which in many of the non-producing countries are extremely high (Berger and Anderson 1999).

What is globalization doing to the extent of firm concentration within the global wine market? Certainly concentration has been high in the past: at the time of Nero soon after the birth of Christ, for example, there were only six proprietors operating in the whole of Roman North Africa (Johnson 1989, p. 59). Currently, however, wine is the least concentrated of the beverage and tobacco industries. According to SBC Warburg as quoted by Bruce Kemp at the Wine Industry Outlook Conference in Adelaide on 11 November 1999, the world market share of the top four wine firms is just 7 per cent in the wine industry compared with 20 per cent for beer, 44 per cent for spirits, 60 per cent for tobacco, and 78 per cent for soft drinks.

[3] Since an export tax is equivalent to the combination of a production tax and a domestic consumption subsidy (and because drinking water was unsafe), the volume of wine consumed per capita by the 15th century in Germany is estimated to have exceeded 120 litres or more than five times the current level (Johnson 1989, p. 120).

Australia's four large wine corporations, while big within the Australian market, are not even in the top dozen globally: as of the late 1990s they were ranked 13th (Southcorp), 16th(BRL Hardy), 18th (Mildara Blass) and 20th (Pernod Ricard, strictly a French company but whose main wine holding is Orlando Wyndham). Southcorp had only one-quarter the sales of each of the world's top two wine firms then (LVMH of France and E&J Gallo of the United States -- see Rachman 1999), although it has since grown significantly following its merger in 2001 with Rosemount.

Perhaps more significant than the extent of firm concentration in the global market is the extent to which wine companies are becoming multinational in terms of their production and distribution and/or are forming alliances with foreign companies. While Western European firms are investing in Eastern Europe, South America and China, Australian firms are investing in North America and Europe (east as well as west). For example, Mildara Blass planted more than 120 hectares to red wine grapes in the Napa Valley in California in the 1990s and has since acquired the Californian firm Beringer; Southcorp has its own vines and a joint venture on California's Central Coast; and BRL Hardy has a major winery (La Baume) in the south of France and a big joint venture in Sicily. Even smaller Australian firms such as Petaluma have acquired a large vineyard in Oregon State and established an alliance with a wine distribution company in Washington State. This should not be surprising, given the huge growth reported above in cross-border mergers and acquisitions in other sectors, but it is nonetheless a new and significant development for the wine industry.

International technology transfer is accelerating not only with the spread of multinational firms but also through individual viticulturalists and winemakers exporting their services through spending time abroad as consultants – many of them Australians (Williams 1995; Smart 1999). Those individuals and firms so engaged as consultants and investors abroad may be spreading abroad ideas developed in Australia, but they are also continually bringing back new ideas to Australia, so producers and consumers here as well as abroad benefit.

- *Globalization of the Australian wine industry*

Globalization's impact may start but certainly does not end with the establishment of an industry in a new location of course. In Australia's case there has been on-going importation for two centuries of such things as winegrape varieties, viticultural and oenological technologies, machinery, oak barrels and irrigation equipment aimed at improving the quality and profitability of grape and wine production. Without globalization forces in the past, Australia and other Southern Hemisphere countries simply would not have a wine industry.

Government policy changes also have been influential. The formation of the Federation of Australia in 1901 had profound effects on the wine industry because prior to that each colony had its wine industry protected by high tariffs on imports from other colonies (or overseas suppliers). Section 92 of the Constitution required free trade between the states of the new federation, the result of which was the emergence of South Australia as the dominant supplier of wine.

Australia's liberal post-World War II immigration policy encouraged for the first time many wine-drinking Southern Europeans to settle here, thereby raising domestic demand for table wine. Immigrants also had a significant impact on domestic production, most notably those privately sponsored to come from Germany to establish the Barossa Valley vineyards in the mid-19th century.

Trade policies also have played a major role. The removal of the favourable treatment of South African wine imports by Britain in the 1850s enabled Australian producers to begin exporting there. As a consequence, Australia switched from being a net importer to a net exporter of wine, and between the 1890s and World War I as much as one-fifth of production was being exported as bulk red table wine. Then in the inter-war period the Australian government promoted the settlement of returned soldiers on irrigable land and, when winegrape surpluses appeared, it provided an export subsidy for fortified wine. That, together with a 50 per cent imperial tariff preference on fortified wine into the British market, raised the share of exports from Australian wine production to one-quarter before the Second World War intervened.

The removal of those distortionary trade policies after World War II caused wine exports to plummet such that by the latter 1970s and early 1980s Australia was a net importer of wine (Figure 1). Over the same period fortified wine also decreased in popularity among Australian consumers, as did beer from the 1970s, as the influence of Mediterranean diets spread and encouraged the consumption of table wine (Figure 2).

What explains the dramatic growth in Australia's wine exports from the late 1980s as shown in Figure 1? Since domestic consumption has not fallen it means domestic production has risen, which in turn means the area of vines has expanded. Indeed, as Figure 3 shows, the vineyard area has almost trebled over the past dozen years. The current boom is mainly market-driven, which contrasts markedly with the inter-war boom that evaporated once government assistance measures (the export subsidy and the preferential UK tariff) were withdrawn. What first triggered the growth in export demand for Australian wine was the change in liquor licensing laws in the United Kingdom in the 1970s, allowing supermarkets to retail wine to the post-war baby boomers (by then adults). By the mid-1980s supermarkets, dominated by Sainsbury's, Marks and Spencer, Waitrose and Tesco, accounted for more than half of all retail wine sales in the United Kingdom (Unwin 1991, p. 341). Given also Australia's close historical ties with Britain, it is not surprising that Australian companies recognised and responded to this new market opportunity. The timing of the initial export surge was helped by the devaluation of the Australian dollar in the mid-1980s, which was due to a sharp fall in international prices of Australia's coal, grain and other major primary export products. That devaluation, together with low domestic prices for premium red grapes at the time (due to a domestic fashion swing to whites from the mid-1970s), increased substantially the incentive to consolidate wine companies to reap the economies of size necessary to invest in developing overseas markets for Australian wine.

Other factors expanding foreign demand for Australian wine at the time were food-safety scares associated with Chernobyl in April 1986 and scandals involving additives in Austrian and Italian wines (Rankine 1996). Meanwhile, competition was minimal from South Africa because of anti-apartheid sentiment and from Argentina and Chile because their domestic and trade policies for a long time had discriminated against exportable agricultural products (and the wine style produced for their domestic market was heavier than that sought in the northern hemisphere).

Australian companies were able to expand exports faster than European suppliers because the latter have been hamstrung by myriad regulations and insulated from market forces by price supports in the West and socialist planning in the East.[4] To exploit this rapidly growing market required large volumes of consistent, low-priced premium wine. Land- and capital-abundant Australia had the right factor endowments to supply precisely that. High labour costs were overcome for larger firms by adapting and adopting new techniques, e.g. for mechanical pruning and harvesting. That stimulated a number of mergers and acquisitions among Australia's wine firms that resulted in several large and four very large wine companies.[5] This has provided the opportunity to reap large economies of scale not only in grape growing and wine making but also in viticultural and oenological R&D, in brand promotion and related marketing investments, and in distribution systems including through establishing their own sales offices abroad rather than relying on foreign distributors.[6] The volumes of grapes grown and purchased from numerous regions by these large firms enable them to provide massive shipments of consistent, popular wines, with little variation from year to year, for the UK and now also North American supermarkets.[7]

Another major difference between now and the past is that the quality of wine output has improved hugely during the past decade or so, relative to the cost of production. Moreover, for the first time, the industry is in a position to build brand, regional, and varietal images abroad to capitalize on those improvements in the quality of its grapes and wines. That image building has been partly generic, with the help of the Australian Wine Export Council's activities in Europe and elsewhere. It has come also from the promotional activities of individual corporations and their local representatives abroad as those firms became ever-larger and more multinational via mergers and takeovers during the past dozen or so years. That promotion has been helped by being able to point to the legislated wine quality standards in the Australian Food Standards Code, and to the fact that Australian wines are still exceptionally good value for money in Northern Hemisphere markets, despite the real

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[4] Australia's share of the value of the UK's wine imports between 1988 and 1997 grew from 2 to 10 per cent, while the share of the four traditional West European exporters in UK imports fell from 78 to 65 per cent and that of Central and Eastern Europe remained flat at less than 2 per cent (Berger, Spahni and Anderson 1999, p. 90). It is understandable that exports from the economies in transition from communism have yet to be dramatic, given the myriad adjustment difficulties producers face in those countries. As for the European Union producers, they have been slow to respond because the Common Agricultural Policy provided such high prices for non-premium EU wine (largely destined for distillation, as its direct demand has slumped) that they did not find it worthwhile to make the considerable investments necessary to upgrade their product and to market it abroad.

[5] On the one hand, there has been a huge increase in the number of Australian wine producers (currently more than 1200, compared with fewer than 200 in the early 1970s and 300 in the early 1980s – see Winetitles (2001 and earlier issues)), but most of them are very small. On the other hand, there have been numerous mergers and takeovers by larger firms to form even larger conglomerates (see Halliday (1994, p. 59) for a chronology of ownership changes since the early 1980s). The net result has been a substantial increase in firm concentration. Whereas in 1978 those crushing more than 1000 tonnes accounted for 17 per cent of wine firms, a decade later they accounted for just 4 per cent of all wine firms. The top three producers now account for about 50 per cent of the annual vintage, of the number of bottles of wine sold, and of the value of domestic sales, and for 70 per cent of wine exports; for the top nine producers those shares are about 75 and 95 per cent, respectively (Osmond and Anderson (1998, Tables 11 and 12)).

[6] The corporatization of firms has helped in raising the enormous amounts of capital required for rapid expansion. In Australia the capital intensity of winegrape growing is about 50 per cent above that of other agriculture and that of winemaking is more than one-fifth higher than that of other manufacturing.

[7] Indeed some wine types (e.g. Lindemans Bin 65 Chardonnay) were specifically developed for and only sold in those markets initially, being released in Australia several years later only after sufficient expansion in production of the required grapes.

price increases of the 1990s. The depreciation of the Australian dollar during 1997-98 and again in 2000 has allowed overseas consumers and Australian producers to share the benefits: the unit value of Australia's wine exports rose from A$2.80 in 1993 to A$4.80 in 2000, a period when inflation averaged just 2 per cent per year.[8]

This export-oriented boom is a coming of age of the Australian wine industry. More than 100 years ago it was claimed that "Many of the leading wine merchants of London and other important commercial centres admit that Australia promises to become a powerful rival in the world's markets with the old-established vineyards of Europe" (Irvine 1892, p. 6).[9] The first *Yearbook of Australia* made a similar claim in 1908, but by the 1922 edition it added the following comments on why that had not happened: "The production of wine in Australia has not increased as rapidly as the suitability of soil and climate would appear to warrant. The cause of this is probably twofold ... Australians are not a wine-drinking people and consequently do not provide a local market for the product, and ... the new and comparatively unknown wines of Australia find it difficult to establish a footing in the markets of the Old World, owing to the competition of well-known brands. Active steps are being taken in various ways to bring the Australian wines under notice, and it may be confidently expected that when their qualities are duly recognised the wine production of this country will exhibit a rapid development." It took seven more decades before that potential began to be recognised by the market.

What are the prospects ahead?

The dramatic rise in Australia's grapevine area since the late 1980s (see Figure 3) has led some to suggest that we are in for a glut, given that global wine consumption per capita has not been growing yet premium wine production is currently expanding in many countries. It is true that Australia's grape and wine production is being increasingly oriented towards higher-quality products in response to the demand for premium wine growing rapidly at the expense of non-premium wine. However, other New World producers are also upgrading the quality of their product, as are previously low-quality regions of traditional supplying countries (the south of France, La Mancha in Spain, northern Italy, Southeastern Europe). It raises the question: are there physical (physiological/climatic, agronomic, water) limits on the expansion of premium winegrape production in the various regions of the world?

The greatest influence on wine quality is the climate for grape growing. Virtually all winegrapes are the sub-species *Vitis vinifera* which, ten plus millennia ago, grew wild in Transcaucasia and the Middle East (but not in the Americas or the southern hemisphere). To date they have been grown successfully only between 30^o and 50^o north and south of the

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[8] Those Australian consumers finding it difficult to adjust to the recent surge in domestic wine prices are nonetheless grateful for the very low prices they enjoyed for so long prior to the recent export take-off. Even the relatively high current prices are low by the standards of the Roman Empire: according to Unwin (1991, pp. 123-26) and Johnson (1989, p. 83), in the first century B.C. the price of a (roughly 22 litre) jar of standard wine exported from Italy to France was one Gaul slave!

[9] Such an admission was not forthcoming from the French, however. At the international wine competition of the Vienna Exhibition of 1873, for example, the French judges, on hearing of the identity of the wines they had judged blind, are reported to have resigned when they learnt a prize-winning shiraz was not French but from the Colony of Victoria (Beeston 1994, p. 62).

equator where their distinctive annual cycle can be accommodated. That cycle involves winter dormancy when temperatures can be below freezing, but the mean daily temperature has to reach 10°C in spring before shoots grow and 20°C in summer for flower clusters to bloom. Frosts in spring can cause severe damage, as can rain prior to the autumn harvest (Unwin 1991, p. 33-35). Hence the idealness of a winter-rain Mediterranean climate, with the addition of local or meso-climatic features that include the right combination of access to sunlight, shelter from wind, freedom from spring frosts, sufficient irrigable water in case of a summer drought, etc. Given that, it is not surprising that the world's top 30 wine-producing countries are in the temperate zone. But as Table 1 shows, there is a huge variance in the vine intensity of cropping in those countries.

At one extreme are the traditional producing countries of France, Italy, Spain and Portugal with 5, 6, 8 and 10 per cent of their cropped area under vines, respectively. Nearly as extreme are the Balkan states of Southeastern Europe. Having had the opportunity there to cultivate grapes for more than two millennia, and given the financial supports provided by the European Union in recent decades, it is likely that virtually all suitable land in Western Europe is already under vines. Hence their only hope for growth is in terms of quality improvement, that is, expanding premium wine at the expense of non-premium. Normally that means lowering vine yields, so such viticultural quality upgrading probably will lower the aggregate volume of wine produced (although the improvements in viticultural practices that are accompanying the introduction of irrigation in the La Mancha region of Spain could cause the quantity as well as quality of winegrapes from there to rise).

At the other extreme are the New World wine producers, with the United States, Australia and New Zealand each having only 0.2 per cent of their crop area under vines – barely above the ratio for China.[10] And Argentina, Uruguay and South Africa also have vines accounting for less than 1 per cent of their crop area. Hence in those countries, which have ample land with suitable climates for expansion, the main influence on vineyard area is the expected long-term profitability of grapes relative to that of alternative uses for the land.

With both sets of regions in mind, what might be the net effect on global wine markets of recent and prospective trends in grape and wine supply and demand? The trend towards premium and away from non-premium wine production and consumption, together with the data on new plantings (the most recent of which will take until 2005 to produce significant crops), provide enough information to attempt to project wine markets a few years into the present decade. That has been done recently using a global model of grape and wine markets that differentiates not only according to region of origin but also as between premium and non-premium segments of each market and each bilateral trade flow (Wittwer, Berger and Anderson 2001).

The Wittwer et al. (2001) projection has the world market for premium wine (40 per cent of global wine output) growing by 38 per cent over the six vintages to 2005 while that of non-premium wine growing very little. It has premium production more than doubling for Australia, while it increases by a bit over 50 per cent for the US and nearly doubles for other Southern Hemisphere wine-exporting countries. However, it grows by only one-fifth in Western Europe. That growth in premium output is projected to outstrip the expanding demand because of income and adult population growth and preference changes, causing

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[10] Even with the massive planting of vineyards in recent years this bearing area number for Australia will still be less than 0.3 per cent in 2005.

premium producer prices to fall. In the model's base case they fall most for Australia, by 12 per cent for premium grapes and 15 per cent for premium wine between 1999 and 2005, reflecting the very large premium acreage expansion in this country over the past few years. Meanwhile non-premium prices change little because the assumed slowdown in its demand is matched by a slowdown in supply. This base projection has Australia exporting nearly three-quarters of its premium wine by 2005, compared with a bit under three-fifths in 1999.

The usefulness of that base case projection is less in providing a market forecast (since it is dependent on assumptions about demand and supply growth) than in providing a basis for comparison with alternative scenarios over which participants may or may not have control. Several have been analysed quantitatively by Wittwer et al. (2001) and are explored in the following section which examines ways the Australian industry is attempting to improve its future competitiveness and reduce the prospects of a decline in profitability. All involve more investment in knowledge creation and dissemination, which means there is a role for collaboration both among firms and at an industry-wide level.

- *How can collaboration among firms improve prospects for Australia's wine industry?*

Two levels of collaboration between wine firms are important: vertical (that is, between the grapegrower, other input supplier, wine maker, and wine marketer), and horizontal. The various channels through which it can occur include mergers, acquisitions, and a range of other alliances.

There are far more winegrape growers than there are wineries, with the former depending heavily on the latter to process their highly perishable and virtually non-internationally tradable product. That dependence has not been a problem during the past decade when winegrape demand has grown much faster than supply. Indeed the shortage period has led to the widespread signing of long-term (often ten-year) contracts, providing wineries with security of supply in the 1990s and growers with greater security of demand into the next decade. Should supply grow faster than demand in the next few years, the vulnerability of the non-winemaking grapegrower could return. However, the increasing emphasis on producing and promoting consistent high-quality wine, and the fact that much of that quality is determined in the vineyard, has led Australia's wineries to improve their two-way relationships with contract grapegrowers.

Another form of vertical integration is occurring between wine making and wine marketing. An example is e-commerce, which is lowering the cost, especially for smaller wineries, of using email and the internet to market their wines directly. One Australian firm even experimented in 2000 with selling its entire release by tender over the internet. The exemption of small wineries from the Australian Government's wine sales tax for own-marketed wines has added to the incentive to explore these new options. Another example is wineries getting involved in tourism, going beyond standard cellar-door activities to restaurant and entertainment services.

Turning to horizontal collaboration, wineries are beginning to diversify their markets abroad as their production grows. Knowledge about the various niches and the distributional networks in those foreign markets is expensive to acquire, however. Hence new alliances between Australian and overseas wine companies are being explored with a view to capitalizing on their complementarities in such knowledge. The purchase by the owner of Mildara Blass (Fosters Brewing Group) of Napa Valley-based Beringer, the alliance between two family-owned firms, Rosemount and California's Mondavi, Petaluma's alliance with a Washington State-based distributor (Stimson Lane), and the purchase by New Zealand's biggest wine firm (Montana) of the second largest (Corbans) were all cases in point during 2000. These may achieve the desired result much quicker than direct foreign investment, although that has been happening increasingly too (not least from the US because of the strong US dollar in 2000). As well, in this era of floating exchange rates, cross-border operations can be a form of currency hedge; and it can also serve as insurance against a major disease outbreak (e.g., Phylloxera, Pierce's Disease) in the home country.

Horizontal mergers and acquisitions are also taking place domestically. A key objective is to get economies of scale not only in marketing but also in producing. This is especially important if firms wish to move beyond the boutique size and penetrate the large-scale (particularly supermarket) distribution networks abroad. The most recent in Australia is the merger of St Hallett, Tatachilla and Hillstowe to create a new listed firm, Banksia Wines.

While this trend may increase concentration in the wine industry, that should do little to reduce competition among winemakers, including in their purchase of grapes. Possibly a few left-behind wineries will be disadvantaged by the new alliances among more-progressive firms, but even they could benefit as those merging ones improve their export performance. They could benefit either by getting in the slipstream of the progressive firms' success abroad in promoting 'Brand Australia', or in supplying a less-crowded domestic market while the merging firms focus on markets abroad.

More worried are Australia's specialist grapegrowers. They are aware that the big wine corporations have valuable so-called 'knowledge capital' that is internationally mobile and hence tends to locate in places where it can earn the highest rewards. During recent years Australia's grapegrowers have enjoyed an exceptionally high proportion of the benefits of the growth in demand for premium wine, in the form of high prices for their grapes. Were those high prices to continue, large wine firms (which source three-quarters of their grapes from independent growers) may find it more profitable to expand their crushing capacity in lower-priced countries rather than in Australia in the years ahead -- thereby causing winegrape prices to tend to equalize across countries, even though the grapes themselves are not traded internationally. Such developments help to keep profits of Australian-based multinational wine companies higher than they otherwise would be, while lowering profits to Australian grapegrowers. However, there is also the possibility that multinational wine corporations from abroad will invest in Australia, which would have an offsetting, positive effect on Australian grapegrowers. Some of that happened in 2000 in response to the fall in the US price of the Australian dollar, and more still could occur as such firms seek a hedge against the possible spread of Pierce's Disease in California.

Horizontal collaboration stimulated by the digital revolution is also occurring at the retail level. A recent example is the new alliance, scheduled to begin March 2001, between the supermarket giant Sainsbury's and the discount liquor chain Oddbins in the United Kingdom. While each will continue their traditional mode of selling, the combined venture is to sell wine exclusively via the internet, TV and email.

How are the savings from increased marketing efficiencies via supermarketing and e-commerce likely to be distributed between the consumer, marketer, winemaker and grapegrower? Wittwer et al. (2001) explore this question with their global wine model. They suggest that in the short run the innovative distributors will gain most but that, over time as competition among distributors drives down consumer prices, the gains will be shared among consumers and producers. Given even further time, the benefits to producers would encourage increased plantings and winemaking capacity and so consumers end up with the lion's share of the benefits (all but one-eighth in the empirical simulation experiment they report).

What role for collaboration at the regional level?

In addition to collaboration to improve the efficiency of grape growing, wine making and wine marketing at the firm level, the Australian wine industry during the past decade has enjoyed a high and envied degree of collaboration also at the industry level. Maintaining and expanding those activities requires a non-stop flow of deliberate and skilful leadership, something that the Australian wine industry has been fortunate to have in relative abundance compared with both other Australian industries and the wine industry abroad. Three key areas are discussed in Anderson (2001): investments in research, education and training (and now also statistical information); investments in marketing; and lobbying governments (most notably for lower taxes on wine consumption at home and lower barriers to imports overseas). For present purposes, attention focuses just on the role of collaboration in promotion, particularly at the regional level.

Boosting profitability by promoting Australian wine as being different from and superior to what others produce has been done in two key ways. One is generic promotion abroad by the Australian Wine Export Council. The other is corporate brand promotion both at home and abroad. Both are becoming more cost-effective with the huge increase in the quantity and quality of Australia's exportable wine, and together they have greatly enhanced the reputation of the Australian industry as a producer of dependable, high-quality, value-for-money wines. Being acutely aware of the prospect of premium prices falling during the next few years from their historically very high 1990s levels, the Australian industry has launched an *Australian Wine Marketing Agenda 2000-2010* (WFA and AWEC 2000). That calls on firms to boost not only their own brand promotional efforts but also to support spending on 'Brand Australia' generic promotion. Recent empirical research suggests there may well be scope for Australia to gain from generic promotion in the United States at least, as its wines continue to attract lower prices than wines from Napa Valley that receive similar sensory ratings in magazines such as the *Wine Spectator* (Schamel 2000).

However, national generic and brand promotion is starting to be complemented by regional generic promotion. This is now a far more viable option thanks to the EU-Australia bilateral Wine Agreement of 1994, which was a side-product of the Uruguay Round's trade-related intellectual property rights agreement ('TRIPs') that is now legally binding under the World Trade Organization. That means once the definition of boundaries for the various regions ('geographical indications') are finalized, they can be legally registered and recognised globally. The payoff from exploiting that piece of intellectual property may be non-trivial: a new study by Schamel and Anderson (2001) finds that equally rated wines in sensory terms attract significantly different prices according to their regional origin within Australia. Corporate brand advertising will still remain the dominant form of promotion, but regional branding will add to 'Brand Australia' as an additional and more-specific means of generic promotion of the nation's wines, just as France has done for centuries.

Domestically, the formal definition of regions is leading to more information-sharing among producers within regions, and to better coordination with regional tourism activities.

The latter are linking wine not only with food but also with music and other cultural events. This level of collaboration seems to be much stronger than at, say, the State level, and may reflect in part a desire for localization of some activities to complement the globalization of so many others. The differentiation between wine labels lends itself to localization more than is possible with most other farm products.

Conclusion

With increasing affluence comes an increasing demand for many things including product variety (the spice of life). Thus while homogeneous wines such as those in the basic Jacob's Creek family are wonderfully easy to mass-market to newcomers to wine drinking through such outlets as supermarkets in the UK, over time many of those consumers will look for superior and more-varied wines. They will begin to differentiate between grape varieties and regions of origin and, with the help of wine critics such as James Halliday in Australia, Hugh Johnson in the UK and Robert Parker in the US, between brands and between labels within a brand. That preference for heterogeneity on the demand side, and the infinite scope for experimentation on the supply side, ensures that there will always be small and medium producers alongside the few large corporations in the wine industry. The new forces of globalization together with the boom in premium winegrape supplies will lead to more mergers, acquisitions and other alliances among wineries within and across national borders, but their success in the global marketplace will provide a slipstream in which astute smaller operators can also thrive.

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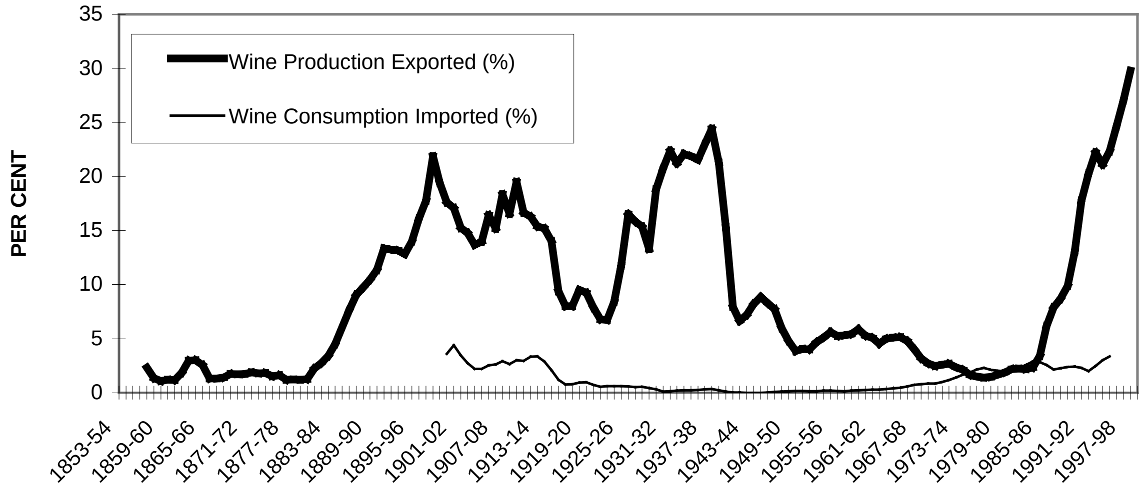
Table 1: Vine intensity of cropping in the 30 largest wine-producing countries, 1999[a]

Rank in global wine production, 1999	**Volume of wine production (mill hl)**	**Area of bearing grapes (including for non-wine uses) ('000 ha)**	**Bearing grape area as % of total crop area**
1. France	64	871	4.5
2. Italy	54	871	7.9
3. Spain	33	1163	6.1
4. United States	24	350	0.20
5. Argentina	13	250	0.9
6. Germany	12	102	0.8
7. Australia	**9**	**79**	**0.15**
8. South Africa	8	120	0.8
9. Portugal	7	252	9.8
10. Romania	7	255	9.8
11. Chile	6	122	5.3
12. China	5	193	0.14
13. Greece	4	124	3.2
14. Hungary	4	99	2.0
15. Austria	3	48	3.3
16. Bulgaria	2	107	2.4
17. Brazil	2	57	0.09
18. Russia	2	70	0.05
19. Croatia	2	55	3.5
20. Moldova	1.8	152	7.0
21. Uzbekistan	1.5	102	2.1
22. Serbia/Mon.	1.4	79	2.0
23. Mexico	1.4	43	0.16
24. Macedonia	1.2	29	4.5
25. Switzerland	1.1	15	3.4
26. Uruguay	1.1	10	0.8
27. Slovenia	0.9	18	5.8
28. Ukraine	0.7	110	0.3
29. New Zealand	0.6	8	0.23
30. Cyprus	0.6	20	13.9
WORLD	**283**	**7426**	**0.49**

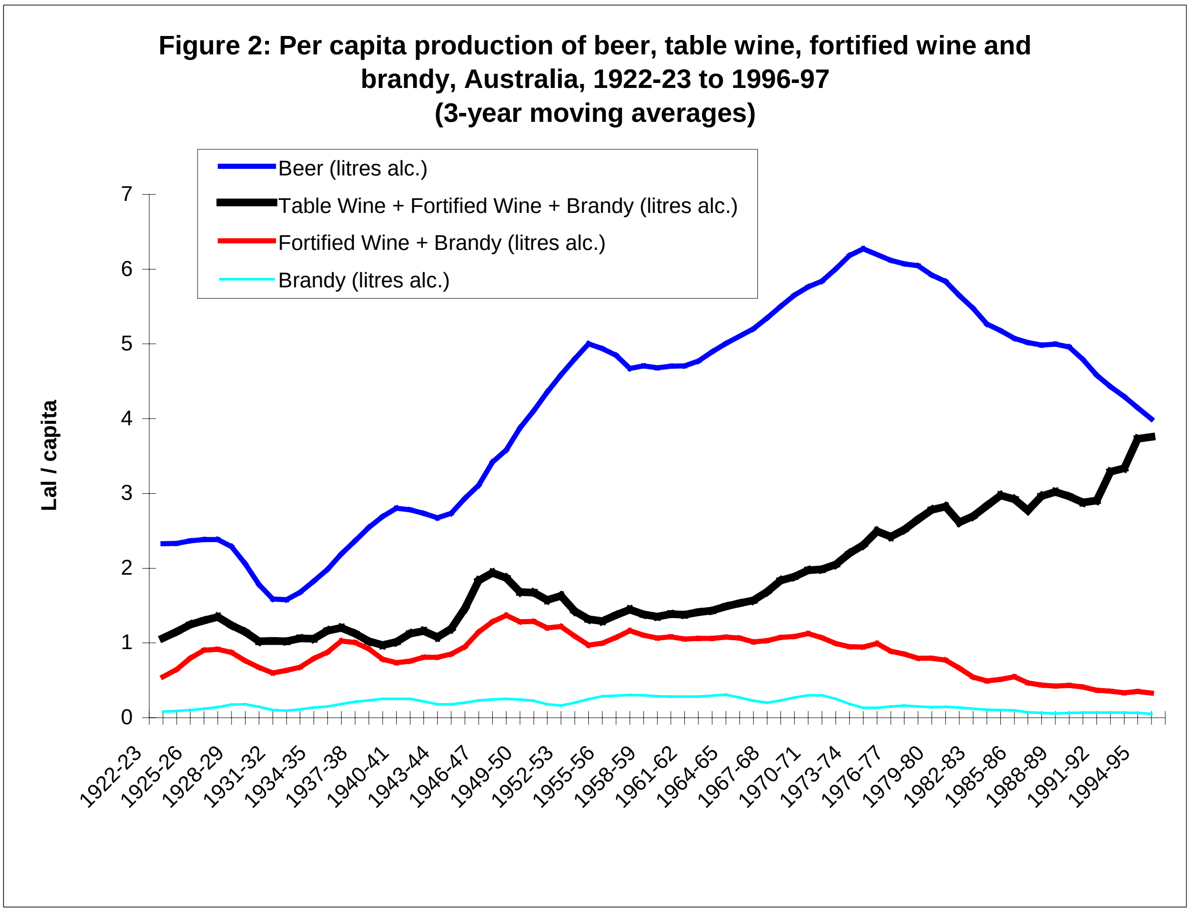
[a] Together, these 30 countries produce more than 95 per cent of global wine production.

Source: FAO *Production Yearbook,* Rome (from FAO website) and Rosset (2000) in the *Bulletin de l' OIV*, Paris.

Figure 1: Shares of wine production exported and wine consumption imported, Australia, 1856-57 to 1999-2000 (per cent, 3-year moving averages)

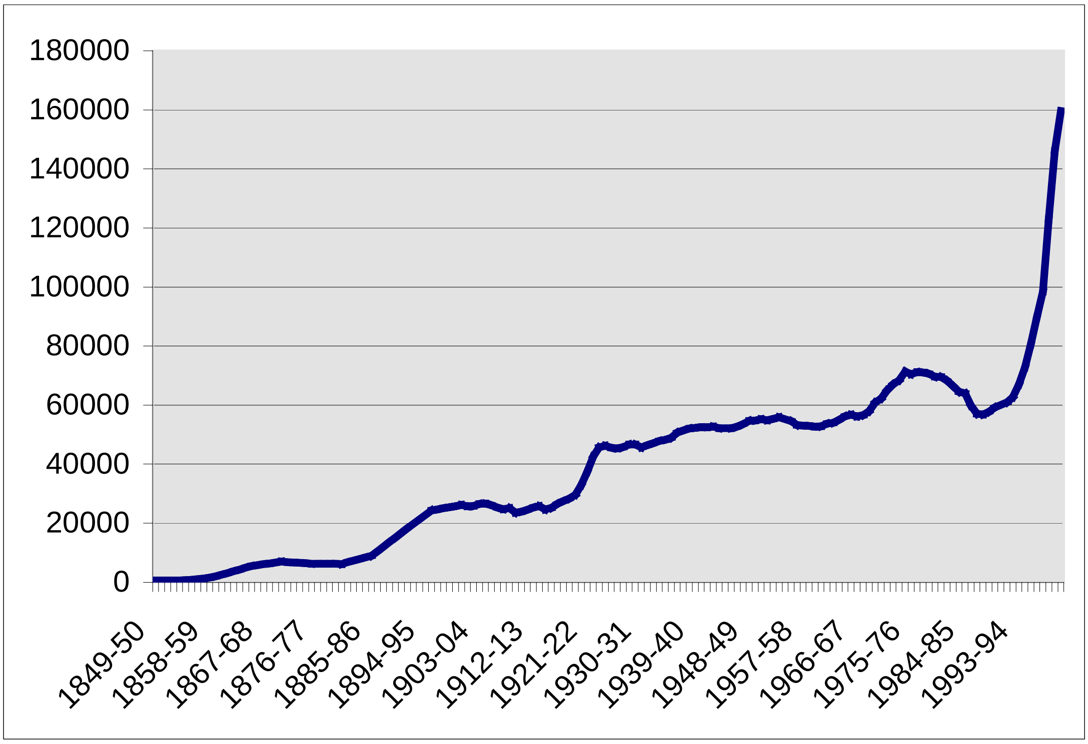


Source: Osmond and Anderson (1998, Figure 4).



Source: Osmond and Anderson (1998, Figure 6).

Figure 3: Area of vineyards (hectares), Australia, 1849-50 to 2000-01



Source: Updated from Osmond and Anderson (1998, Table 2).

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