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The World Wine Market in 2005: Effects of Faster Asian Demand Growth

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Summary

This paper addresses two sets of questions. First, what will global wine markets look like by 2005, when premium wine from recently expanded plantings will be ready to market? And second, how much impact could greater promotion of premium wine sales in East Asia, and China's accession to WTO, have in absorbing some of that increased production? These questions are addressed using a newly developed economic model of world wine markets that distinguishes premium from non-premium grapes and wine. After describing the model, we present results of projecting it from 1999 to 2005 to estimate the impact of known winegrape plantings of the late 1990s on prices in different regions, without and then with additional effective market promotion by Australia. Using the latter 2005 scenario as the base, we then examine the effects on global markets of a faster strengthening of demand for premium wine in China and Japan, for example because of increased promotion there. This is done assuming first modest and then more substantial growth of domestic production in China. The paper concludes that even rapid demand growth in East Asia is likely to do little to slow the expected decline in premium wine prices over the next few years, but a cut in wine import tariffs by China following its accession to WTO would provide significant relief.

The world wine market is the subject of increasing interest as New World wine production and its export orientation increase. Some fear that, with world wine consumption declining slightly while output is rising, export prices will fall. However, despite per capita consumption declining in a number of significant wine-consuming nations, consumption is still increasing in many other countries, including in East Asia. As well, consumers are moving up-market and substituting quality for quantity, to the extent that the demand for premium wine has been outstripping supply growth. Within that premium segment, the relatively low-priced, fruity wines that are available in large volumes from the New World have enjoyed the fastest demand growth. This is reflected in the rising unit values for their bottled wine exports over the past decade, which has stimulated a rush of new plantings. The falling demand for non-premium wine, on the other hand, is being matched by a steady decline in the production of non-premium wine. Hence any assessment of future prospects for the world's wine markets needs to distinguish both between regions and between premium and non-premium segments within each region's market.

The present paper addresses two sets of questions. First, what will global wine markets look like by 2005, when premium wine from recently expanded plantings will be ready to market? And second, how much impact could greater promotion of premium wine sales in East Asia, and China's accession to WTO, have in absorbing some of that increased production? These questions are addressed using a newly developed economic model of world wine markets that distinguishes premium from non-premium grapes and wine. After presenting brief details of the model in the next section, results of several model simulations are discussed. The first simulation projects the model from 1999 to 2005 to estimate the impact of known winegrape plantings of the late 1990s on prices in different regions assuming no other shocks. We then repeat that projection except we assume there has been additional effective market promotion by Australia, as called for in the industry's wine marketing strategy released in November 2000 (WFA and AWBC 2000). Using that revised 2005 scenario as the base year, we then examine the effects on global markets of a faster strengthening of demand for premium wine in China and Japan. This is done first without and then with (a) the reinforcing shock of China's wine tariff being cut as promised in its Protocol of Accession to the World Trade Organization, and (b) the offsetting shock of China's domestic grape and wine production accelerating.

The world wine model

As detailed in Wittwer, Berger and Anderson (2001), the world wine model assumes that in each regional market, utility- and profit-maximizing behaviour prevails; prices clear so that supply equal demand globally for each region's grape and wine products; and competitive prices equal unit costs. While the model has several commodities it is partial equilibrium in the sense that the prices of intermediate inputs, other than grapes used in production of wine, are taken as given.

On the supply side, the model assumes that most factors used in grape and wine production are fixed. This is reasonable for the medium term, given the large fixed costs and partly irreversible nature of vineyard and winery investments. Labour is a mobile factor within each region but human capital is assumed to be fixed in the medium term, and all factors are assumed to be immobile internationally. Importantly, each region's supply is differentiated from the wine of each other region, so no region's domestically produced wine product is a perfect substitute for wine from other regions.

Within the model there are two types of grapes (premium winegrapes and multipurpose grapes) and three types of wine: premium, non-premium and non-beverage (i.e., for distillation or industrial use). This disaggregation is the minimum necessary to deal with the issue of wine quality up-grading in different markets. Any further disaggregation awaits better data. The underlying database distinguishes 47 countries or country groups but, for ease of presentation in the tables below, these are aggregated to eleven regions spanning the world. The regions are: Western European wine Exporters (WEE), United Kingdom (UK), Germany (GER), Rest of Western Europe (OWE), Central & Eastern Europe (CEE), United States & Canada (USC), Australia (AUS), Other Southern hemisphere wine Exporters (OSE), China (CHI), Japan (JAP) and the Rest of the World (ROW).

The 1999 database for the model is from Anderson and Norman (2001), apart from the split between the expanding premium and shrinking non-premium segments of the world wine market which is compiled by Wittwer, Berger and Anderson (2001). Premium is defined as wine that is sold by the winery at more than US\$1 per litre pre-tax.

We impose Armington elasticities of substitution in consumption between domestic and imported wine of 8.0, slightly higher than for beverages within the GTAP database (Hertel 1996) because of the greater possibilities for substitution the more disaggregated is a product category. For the elasticities of substitution between different sources of wine imports, we chose 16.0. The expenditure elasticities in the initial database are assumed to be 1.5 for

premium wine and 0.6 for non-premium. The Frisch parameter is initially -1.8 in Australia, the European Union and North America, and a slightly larger (absolute) value elsewhere, reflecting the latter's lower per capita incomes. On the supply side, in which industry-specific factors are exogenous, the elasticity of substitution in production between primary factors is set at 0.5. Were we to allow for endogeneity of primary factors other than labour, as would be appropriate for long-run scenarios, supply within the model would be more price-responsive.

Projecting the model's database to 2005

Australia's grape growers have planted unprecedented areas to premium winegrapes since the mid-1990s. Other New World producers also accelerated plantings then, although to a lesser extent. These will translate into substantially increased winegrape supplies by the early years of the new millennium and, after allowing for lags associated with wine maturation, a much larger volume of sales by 2005. This section analyses the projected effects of these expected supply increases, and of assumed trends in supplies elsewhere and in demand, on the global wine market by 2005.

Growth in primary factor use is based on available plantings data. We assume that the wine industry attracts an accommodating increase in other factor supplies to match the new plantings, and that there are no changes in consumer or import taxes on wine (to be relaxed later for China).

In addition to this first base case, an alternative base scenario is presented in which we assume that, between 1999 and 2005, consumers show an increasing preference for Australian wines over those from other regions in response to the major marketing strategy launched by the Australian industry in November 2000 (WFA and AWBC 2000). That alternative scenario is then taken as the base to examine the effects of additional shocks to East Asia's wine market.¹

Tables 1 and 2 show the effects on producer prices and output volumes of the projected changes from 1999 to 2005 first without Australia's marketing drive (top half), and then with that marketing drive to boost "Brand Australia" (bottom half). In terms of producer prices and, by implication, returns earned by industry-specific capital, the expected fall in premium grape and wine prices in the New World is evident in the upper part of Table 1. It is largest for Australia where output growth is expected to be largest (a 124 per cent increase for premium wine over the six years to 2005). Recall, however, that even though returns in the

New World fall, they are doing so from a relatively high base in 1999 and so need not imply a crisis. For the Australian industry, for example, the massive recent expansion in vineyard area (a 150 per cent increase between 1993 and 2000) was a consequence of unprecedented returns in the 1990s. Declines in those returns may indicate no more than a movement back towards rates of return earned in other industries.

The 9-13 per cent drops in premium grape and wine prices for Australian producers (in constant US dollars) disappears in the alternative base scenario in which Australia is assumed to effectively promote “Brand Australia” over the next few years, as proposed by the Winemakers’ Federation of Australia and the Australian Wine and Brandy Corporation (WFA and AWBC 2000).² In this alternative version of the 2005 base projection, we assume that additional promotion causes a further taste swing of 10 per cent towards Australian premium wine and away from that of other foreign suppliers in the UK, German, OWE and USC markets. Notice from the lower part of Table 1 that in addition to virtually eliminating the price drop in Scenario 1 for Australian producers, that marketing strategy reduces slightly the price fall for other Southern hemisphere exporters but exacerbates it for US producers whose products are substitutes for Australian premium wine in North American markets. Assuming a continuing global swing towards premium wines, coupled with a limited increase in European supply, the price results in Table 1 imply better times may be ahead for European winegrape growers.³

¹ See Anderson and Wittwer (2001, Table 1) for the key growth assumptions in projecting the model from 1999 to 2005.

² We assume that additional “Brand Australia” generic promotion is undertaken in this scenario by the wine industry to the extent of \$US50 million per year. Since our model also assumes perfect competition in all markets, this added cost to wine producers reduces the amount they can afford to pay for grapes. If that promotion campaign were to be financed not by wineries but by a government grant, our model suggests wine prices would be much the same but the producer price of premium grapes in Australia would be 4.4 percentage points higher (i.e, 2.7 per cent above instead of 1.7 per cent below the 1999 level).

³ However, it is possible that the European Union will remove CAP subsidies on wine distilled for industrial purposes, thereby lowering returns to non-premium producers.

Table 1: Grape and wine producer price change

(% change from 1999 to 2005 in 1999 constant US dollars)

1. 2005 base	AUS	WEE	GER	OWE	CEE	USC	OSE	World
Premium grape	-9.2	37.1	12.4	27.0	12.5	0.0	-4.0	19.1
Multipurpose grapes	3.4	8.9	3.5	8.3	4.6	18.9	34.2	17.0
Premium wine	-12.5	0.6	-10.8	-0.4	9.3	-9.0	-10.5	-3.8
Nonpremium wine	7.7	12.6	11.4	12.1	17.6	14.8	7.7	12.8
2. 2005, "Brand Australia"								
Premium grape	0.9	37.3	12.0	17.5	12.4	-4.0	-3.6	18.5
Multipurpose grapes	1.8	8.8	3.4	8.7	4.7	19.0	33.8	17.0
Premium wine	1.5	0.7	-11.0	-4.8	9.2	-11.9	-10.2	-3.8
Nonpremium wine	10.1	12.4	11.2	11.6	17.5	14.0	7.5	12.6

Source: Authors' WMWM model results.**Table 2: Decomposition of growth in the volume of premium wine output**

(% change from 1999 to 2005)

1. 2005 base	AUS	WEE	GER	OWE	CEE	USC	OSE
Local Market	22	17	25	25	27	40	23
Import							
Substitution	2	-1	-33	-5	-2	7	0
Export	99	2	22	0	-2	6	71
Total	124	18	14	20	23	53	95
2. 2005, "Brand Australia"							
Local Market	16	17	25	24	27	41	23
Import Substitution	-1	-1	-33	-14	-2	2	0
Export	110	2	22	7	-3	10	72
Total	125	18	14	18	23	52	95

Source: Authors' WMWM model results.

**Table 3: Growth in the volume of bilateral premium wine trade
between major exporters and importers**
(% change from 1999 to 2005)

<i>1. 2005 base</i>							
Sales to:	UK	GER	WEN	USC	CHI	JAP	Total exports
From:							
AUS	164	531	282	160			179
WEE	-31	78	-1	-25			4
GER	127	89	210	119			149
USC	86	345	160	-20			142
OSE	123	412	206	111			149
WORLD	42	87	55	15			55

<i>2. 2005, "Brand Australia"</i>							
Sales to:	UK	GER	WEN	USC	CHI	JAP	Total exports
From:							
AUS	172	683	350	280	181	88	203
WEE	-40	72	-1	-16	59	8	4
GER	102	-9	212	151	125	51	144
USC	119	470	247	43	276	150	218
OSE	92	386	199	129	304	163	148
WORLD	39	86	62	40	91	43	60

Source: Authors' WMWM model results.

Table 4: Decomposition of growth in the volume of premium wine consumption
(% change from 1999 to 2005 "Brand Australia")

	AUS	WEE	UK	GER	OWE	CEE	USC	OSE	World
Income	20	22	22	21	22	24	17	17	21
Price	-1	0	5	-5	1	-4	3	6	2
Taste	9	9	9	8	9	9	9	9	8
Other	7	1	1	1	1	2	8	10	2
Total	35	31	36	26	32	30	36	42	33

Source: Authors' WMWM model results.

For each of the two projection scenarios, output growth for premium wine is decomposed into component parts (Table 2). An increase in a region's production of wine, considered from the perspective of sales, may arise from any of three causes. The first is the local market effect on both domestically produced and imported wine, brought about by changes in prices, incomes, population and tastes within the region. The second is the import substitution effect, which is positive if the share of locally sourced sales in total domestic sales increases. Finally, there is the export effect, due to an increase in export sales of wine. Consider Australia, for example: as its imports account for less than 5 per cent of the domestic volume of wine consumed, there is almost no scope for import replacement despite the massive increase in output expected between 1999 and 2005 (see rows 2 and 6 of Table 2). The domestic market remains an important component of total sales in the projection period, although less so when "Brand Australia" promotion is expanded (contributing 22 out of total growth of 124 percentage points without that marketing strategy but only 16 out of 125 percentage points with it). But the vast bulk of the growth in output goes to exports (99 out of total growth of 124 percentage points without and 110 out of total growth of 125 percentage points with "Brand Australia" promotion). Among the regions of the model it is in Australia that export growth makes the largest contribution to premium output growth. Compare this with the remaining New World producers. Much of the premium growth in USC production is sold domestically (accounting for 40 out of 53 percentage points of output growth), reflecting the large and growing domestic market. Other Southern Hemisphere Exporters (OSE) have an even smaller import replacement effect on output growth than Australia. In the base projection to 2005, their local market effect accounts for 23 and the export effect 71 of their total growth of 95 percentage points (Table 2).

As can be seen from Table 3, as a consequence of a successful "Brand Australia" campaign USC exports rise substantially, albeit from a relatively low base. This is a case of trade diversion: increased consumption of Australian wine within USC increases the amount of USC wine available for export. The growth in trade values, not shown in this table, is a little lower than in volume in most cases because of the (on average 4 per cent) decline in premium wine prices over the projection period.

Table 4 shows the decomposition of premium wine consumption growth in each region. There is little difference in this variable between the two projection scenarios, reflecting Australia's relatively small share of world wine production (2 per cent), so only the "Brand Australia" scenario is reported. Population growth, rising incomes per capita, and shifts in preferences (assumed to contribute 8-9 per cent) all make positive contributions to growth in

consumption in all regions. The price effect is smaller but also positive in most regions, reflecting generally falling consumer prices for premium wine.⁴

Having established a base projection for the world wine market in 2005 with the effects of “Brand Australia” promotion included, which suggests the producer price of premium wine would fall globally by almost 4 per cent in real terms between 1999 and 2005 (final column of Table 1), we now consider possible additional developments in East Asia.

What if wine demand grew faster in East Asia?

The above projection assumes that real incomes grow by 25 per cent in China and 20 per cent in Japan between 1999 and 2005, that there are taste changes in both countries of 8 per cent towards premium and 16 per cent against non-premium wine, and that domestic wine production expands by one-quarter over those six years. How would the results differ if the taste swing towards premium wine in these two countries were to be twice as big (16 instead of 8 per cent)? This could be because of a concentrated promotional campaign, for example based on the health benefits of red wine. If the taste swing applied equally to domestic and foreign wine sales in China and Japan, it turns out its impact on the rest of the world would be very modest. Producer prices for grapes and wine in the EU would be higher by no more than 0.8 and 0.4 per cent respectively, and in the New World by less than 0.4 per cent on average. These changes are small because East Asia starts with such small shares of world wine consumption and imports (both shares less than 4 per cent), with total wine consumption being less than 2 litres per capita in Japan and less than 0.3 litre in China.⁵ Imports of premium wine would be greater by 23 per cent for China and by 10 per cent for Japan in 2005 than without this additional taste swing. As a result of that and greater domestic production, the consumption of premium wine would be 5 per cent higher in China and 8 per cent higher in Japan in this alternative scenario (while that of non-premium wine would be very slightly lower). But the aggregate impact on global imports of premium wine is to make

⁴ In each region, growth in production and consumption of non-premium and non-beverage wines is relatively small. Indeed, consumption of such wines declined globally in the 1990s. These wine types therefore are of less interest for regions where output and export growth has been mainly in the premium end of the beverage wine market. For that reason the reported results focus on the premium segment.

⁵ The scope for consumption growth via a preference swing in favour of wine may be far greater than assumed in this scenario, however. This is because wine currently accounts for less than 5 per cent of alcohol consumption in Japan and less than 1 per cent in China. Beer and spirits are equally important in Japan while in China more than four-fifths of alcohol is consumed as spirits (Anderson and Norman 2001). A promotional campaign to encourage drinkers in these countries to switch to wine (e.g., for health reasons and/or to conserve grain supplies for food) may therefore be able to generate several times the consumption growth assumed in this scenario, at least over the longer term. Our conservative scenario is based on the sober assessment of the medium term outlook by Hopkins (2001).

them higher by only 0.3 per cent. Clearly, even a major promotional campaign in these two large East Asian economies is likely to make only a modest contribution to absorbing the expanding global supplies of premium wine, especially (as assumed here) if that campaign boosts demand for home-produced wine in East Asia in addition to imported wine.

What impact would China's WTO accession have?

A further boost to China's demand for imported wine could come if China accedes to the World Trade Organization, in which case it has promised to lower its tariff on wine imports from 65 per cent to 14 per cent by 2005. That will lower the domestic price of imported wine considerably. Despite the (assumed) relatively low degree of substitutability in consumption between imported and Chinese wine, sales of imported wine can be expected to expand substantially. Since this is an ad valorem tariff, wine will enjoy a larger absolute price cut the higher its price. The model suggests China's imports of premium wine would rise by an additional 45 per cent because of that tariff reduction.

But what is domestic plantings continue to expand in China?

The above two alternative scenarios each assume producers respond as normal to changes in producer prices and that, in addition, investors exogenously raise domestic output between 1999 and 2005 by 25 per cent. How much difference would it make if that assumed rise in China was 40 rather than 25 per cent? China already produces as much wine today as Australia did just a decade ago, it employs flying vigneronns from Australia, the US and elsewhere, and foreign direct investors are joining with local companies in mergers and takeovers to improve the industry's international competitiveness in readiness for the expected reduction in wine tariffs. Such a production increase is thus quite feasible. According to our model results, that relatively modest increase in the assumed rate of domestic production growth would have a substantial impact on China's imports of premium wine in 2005. Indeed it more than wipes out the growth in imports that would result from the assumed promotional campaign discussed above: in contrast to premium wine imports being greater by 23 per cent as in the earlier promotion scenario, they would be 38 per cent lower as a consequence of the faster production expansion as in this scenario. That is, the two shocks together would result in a net drop in imports of 15 per cent over what they otherwise would be in 2005 (not taking into account the tariff cut that should follow China's accession to WTO).

Conclusion

In developing the world wine model and projecting it to 2005, we have attempted to incorporate key features of the global wine market. These include rapid growth in premium production among New World producers and a global taste swing by consumers from non-premium to premium wine. Data on the shares of each market attributable to the premium segment are, however, patchy. It may be that we have under-estimated the swing towards premium production in Europe, for example. If so, given Europe's huge share of the global wine market, we have underestimated the likely decline in premium grape and wine prices in the New World. Our hope is that this paper might stimulate the provision of better disaggregated data and thereby allow more realistic global wine modelling analyses.

Such modelling is worthwhile not least because, through ensuring an internally consistent data base and allowing behavioural adjustments of all grape and wine markets to any modelled shock, it can provide a perspective on the relative impacts of different shocks. The base projection to 2005 has of course many assumptions that can be questioned, but the fact that they are explicit in the model allows users to change them at will and examine the sensitivity of results to those changes. (Unfortunately space limitations preclude the reporting of systematic sensitivity analysis in this paper.) The 4 per cent average decline in the real price (in 1999 US dollars) of premium wine globally over the six years to 2005 does not seem unreasonable, however.

In any case, the subsequent comparisons between that base projection and alternative scenarios for 2005 are not likely to be altered greatly by changes to the base projection. Three key conclusions emerge from examining those alternative scenarios:

- (i) while East Asia is an area of rapid growth in wine demand, it is growing from a very low base in terms of per capita consumption and imports of premium wine, so even a substantial promotional campaign is unlikely to boost sales there in the medium term enough to absorb more than a small fraction of the expanding global production of premium wine;
- (ii) a single policy change, namely the cut in China's tariff on wine imports as promised once China accedes to the WTO, is projected to boost China's imports of premium wine by as much as 45 per cent; but
- (iii) if China were to expand its grape and wine production just slightly faster than assumed in the base projection, the volume of its imports of wine could slow substantially.

Needless to say there are many other scenarios that might be run with this model. Several are reported in Anderson and Wittwer (2001). They include an examination of the effects of a spread of Pierce's Disease in California, of a strengthening of the US dollar, of a rise in European barriers to wine imports from the New World, and of a reduction in wine marketing margins due to supermarketing and e-commerce. Other experiments could examine the impact of multilateral cuts in import tariffs following the next round of agricultural trade negotiations under the WTO, or a faster transformation of Europe's vineyards from non-premium to premium quality, or of Central and Eastern Europe joining the European Union, or of the European Union adopting common (higher or lower) consumer taxes on wine. But such experiments will have to wait for another day.

References

Anderson, K., Norman, D. 2001. *Global Wine Production, Consumption and Trade, 1961 to 1999: A Statistical Compendium*, Centre for International Economic Studies, Adelaide University (forthcoming October).

Anderson, K., Wittwer, G. 2001. "Projecting the World Wine Market to 2005," Paper for the Enometrics VIII conference, Napa Valley, 21-22 May.

Hertel, T. (ed.) 1996. *Global Trade Analysis: Modeling and Applications*, Cambridge University Press, Cambridge and New York.

Hopkins, N. 2001. "Viniferous China", *The Wine Magazine* (Sydney), pp. 127-28, February/March.

WFA (Winemakers' Federation of Australia) and AWBC (Australian Wine and Brandy Corporation) (2000), *The Marketing Decade: Setting the Australian Wine Marketing Agenda 2000 to 2010*, Winemakers' Federation of Australia, Adelaide.

Wittwer, G., Berger, N., Anderson, K. 2001. "A Model of the World Wine Market", CIES Discussion Paper 0121, Centre for International Economic Studies, Adelaide University, April.

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1. **Anderson, Kym and Robert Osmond**, "How Long Will Australia's Wine Boom Last? Lessons From History" August 1998. (Since published in *The Australian Grapegrower and Winemaker* 417: 15-18, September 1998.)
2. **Wittwer, Glyn and Kym Anderson**, "Impact of Tax Reform on Australia's Wine Industry" September 1998. (Since published in *The Australian Grapegrower and Winemaker* 418: 62-66, October 1998.)
3. **Berger, Nicholas and Kym Anderson**, "Are Australia's Wine Consumers Over-Taxed?" February 1999. (Since published in *The Australian Grapegrower and Winemaker* 423: 59-61, March 1999.)
4. **Anderson, Kym and Glyn Wittwer**, "More on Modeling the Impact of Tax Reform: How Unequal is the Proposed Wine 'Equalization' Tax" May 1999. (Since published in *The Australian and New Zealand Wine Industry Journal* 14(3): 100-101, May/June 1999.)
5. **Anderson, Kym and Nicholas Berger**, "Australia's Re-emergence as a Wine Exporter: The First Decade in International Perspective" October 1999. (Since published in *The Australian and New Zealand Wine Industry Journal* 14(6): 26-38, Nov/Dec 1999)
6. **Anderson, Kym**, "On the Impact of the Canada-United States Free Trade Agreement on U.S. Wine Exports," June 2000. (Since published in *The Australian and New Zealand Wine Industry Journal* 16 (1): 115-117, January/February 2001.)
7. **Anderson, Kym**, "Prospects Ahead for the Wine Industry", March 2001. (Forthcoming in *Australian Grapegrower and Winemaker* 434, April 2001.)
8. **Wittwer, Glyn and Kym Anderson**, "US Dollar Appreciation and the Spread of Pierce's Disease: Effects on the World Wine Market," March 2001. (Forthcoming in *Australian and New Zealand Wine Industry Journal* 16 (2), March/April 2001.)
9. **Wittwer, Glyn and Kym Anderson**, " How Increased EU Import Barriers and Reduced Retail Margins Can Affect the World Wine Market," April 2001. (Forthcoming in *Australian and New Zealand Wine Industry Journal* 16 (3), May/June 2001.)

10. **Anderson, Kym and Glyn Wittwer**, "The World Wine Market in 2005: Effects of Faster Asian Demand Growth", October 2001. (Since published in the *Proceedings of the 26th World Congress of the OIV*, Adelaide, 11-18 October 2001, Paris: Office International de la Vigne et du Vin).