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An Update: Is Globalization Continuing to Benefit American Wine Drinkers?*

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Abstract

As in the 17 years leading up to 2005, as shown in Gokcekus and Fargnoli (2007), there was no change in quality between 2006 and 2012. There was more variety and, perhaps most importantly, the average real price of wines on *Wine Spectator*'s Top 100 List declined even faster. However, rather than wines from the New-New World and Non-incumbent countries, it was wines from Italy, Spain, and Portugal—*New-Old World*—that were primarily responsible for these beneficial changes (greater variety and more affordable wines in the Top 100 List) for American wine drinkers. (JEL Classifications: F120, F140, C200)

Keywords: Globalization, price, quality, U.S. wine market, variety.

Is globalization good for wine drinkers in the United States? Seven years ago, in an article published in the *Journal of Wine Economics*, Gokcekus and Fargnoli (2007) answered this question in the affirmative. Based on statistical analyses of *Wine Spectator*'s Top 100 lists from 1988 to 2005, they found that the increased presence of wines from relatively new wine- producing countries provided more variety, with little to no compromise in quality. And, most importantly, prices were pushed down. Overall, American wine drinkers were better off.

Since 2005, the *Wine Spectator* has continued to publish its Top 100 list by taking into account *the same* four factors—score, price, availability, and the x-factor—excitement. But not everything has remained the same. There has been a global recession and an increased use of social media by American wine drinkers (Gokcekus and Finnegan, 2013). It is conceivable that these two developments have made American wine drinkers more conscious of prices and more informed about

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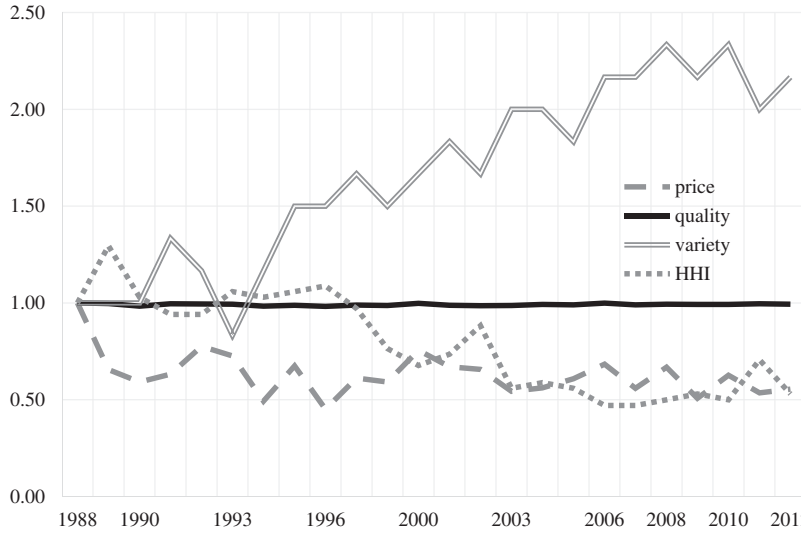
Figure 1

Average Real Price, Herfindahl-Hirschman Index Quality, and Variety of the Top 100 List, 1989–2012



the quality of wines from different countries and regions. During the same period, the wave of globalization in the world wine markets did not wane (Anderson and Nelgen, 2011a, 2011b). Furthermore, wine producers and marketers have had seven years to revisit and update their strategies to produce better wines and build a better reputation in the American wine market. Accordingly, we ask the following question: How have the average real price, variety, and quality of the wines in the Top 100 lists changed since 2005?

As shown in Figure 1, the quality, represented by the average rating of the Top 100 lists, has not changed at all. The dark line representing quality is a straight horizontal line, and the average rating hovered around 93 points within an extremely narrow range.[1]

The variety, shown by the number of countries represented in the Top 100 list, increased from six countries in 1988 (France, Italy, Lebanon, New Zealand, Spain, and the United States) to eleven countries in 2005 (Argentina, Australia, Chile, France, Germany, Italy, New Zealand, Portugal, South Africa, Spain, and the United States). As Figure 1 shows, this number continued to grow. Specifically, the number of countries in the Top 100 lists jumped to 13 in 2006. In five of the next six years until 2012, there were either 13 or 14. After 2005, there were three newcomers

[1] For details, please see the Appendix tables.

to the Top 100 lists: Canada, Greece, and Israel. In addition to the increased number of countries in the list, Spain and Portugal significantly expanded their presence. For instance, they had two to three wines in 1990s, and then five to six in early 2000s; starting in the late 2000s, we consistently found eight to nine wines from Spain in the list. Portugal's consistent appearance with two to four wines in the later years was dramatically different from their occasional appearances in the earlier years.

The changes in the Herfindahl-Hirschman Index (HHI)[2] also reflects these two developments—an increased number of countries in the list and a more consistent and stronger showing by countries such as Spain and Portugal. As Figure 1 indicates, the HHI declined from 34% in 1988 to 19% in 2005. It went down further in 2006, to 16%, and has since remained relatively stable. In other words, the Top 100 list not only has become significantly less concentrated but has moved away from the U.S. Department of Justice's classification of "highly concentrated" and become firmly anchored into the classification of "moderately concentrated."

After 2005, the most striking development was in prices. The average real price for a wine in the 1988 Top 100 list was $43. In 2005, the price was $26 (in 1988 dollars). Following some up and down changes over the next three years, from $29 in 2006 back to $29 in 2008, the average real price ended up at $23 in 2011 and $24 in 2012. Simply put, the average real price continued to diminish between 2006 and 2012 but at a faster rate. The average price declined from 2006 to 2012 by 3.4% per annum, which is 1.19 times the rate of decline from 1988 to 2005, 2.9% per annum.

To determine the effect of having more wines from different countries or of groups of countries on price, we ran the same regressions used by Gokcekus and Fargnoli (2007). We also included RER (real effective exchange rate) as an explanatory variable to take into account the effect of the real exchange rate changes on price.[3] The results are shown in Table 1. The results indicate that the forces of globalization that put downward pressure on price are still in place. Replacing a French wine with an Italian wine lowered the average real price by 4.5% and with a wine from a non-incumbent country (countries other than France, Italy, Australia, and the United States) by 3.0%. (For the period 1988–2005, an Italian wine did not have a statistically significant effect; replacing a French wine with an American wine lowered the average real price by 1.0% and with a non-incumbent wine by 2.6%.)

[2] $HHI = \Sigma_{i=1}^{N} s_{i,t}^2$, where $s_{i,t}$ is the share of a country i in the Top 100 list at year t, and n is the number of countries in the Top 100 list at year t.

[3] Specifically, we included the real effective exchange rate, PX.REX.REER, from the World Bank (2013). We utilized the robust regression command in Stata, rreg, to take into account the presence of outliers or influential observations. The results presented in Table 1 are the robust regression results, except for model 2 (which did not have enough degrees of freedom).

Table 1

Price Effects of Country of Origin Changes
Regression results—*ln(Price$_t$)* is the Dependent Variable

Model #	*Time interval*	*Constant*	*Italy*	*United States*	*Australia*	*Non-incumbents*	*New-World*	*New-New World*	*New-Old World*	*RER*	*F-stat*	R^2
1	1988–2005	3.831	−0.003	−0.009	0.026	−0.026				0.001	2.56	0.56
			(0.39)	(2.45)**	(1.79)*	(3.31)***				(0.14)		
2	2006–2012	1.553	−0.045	−0.002	−0.053	−0.030				0.037	4.27	0.96
			(2.55)**	(0.27)	(1.07)	(1.97)**				(0.04)		
3	1988–2005	3.612					−0.008	−0.024		0.001	2.07	0.32
							(2.08)**	(1.65)*		(0.22)		
4	2006–2012	2.268					−0.011	0.041		0.011	28.87	0.99
							(4.43)***	(6.50)***		(3.50)***		
5	1988–2005	3.107							−0.002	0.002	0.04	0.01
									(0.20)	(0.28)		
6	2006–2012	5.191							−0.031	−0.013	3.07	0.61
									(2.26)**	(0.95)		

Robust *t*-values in parentheses; significance levels (one-tailed):*** 1%, ** 5%, and * 10%. Models 1 and 2 report the effect of replacing a French wine with an Italian, American, or Australian (incumbent countries) wine or with a wine from a non-incumbent country. Models 3 and 4 report the effect of replacing an Old World wine (from Austria, France, Germany, Italy, Portugal, and Spain) with a New World (Australia, New Zealand, and the United States) or New–New World (Argentina, Chile, Hungary, Lebanon, South Africa, Israel, Canada, and Greece) wine.

After 2005, replacing an Old World wine with a New World wine lowered the average real price by 1.1%. Furthermore, replacing an Old World wine with a New-New World wine actually raised the average real price by 4.1%. (For the period 1988–2005, replacing an Old World wine with a New World wine lowered the average real price by 1.0%, and with a New-New World wine by 2.4%)

When we put these two sets of results together (the negative effect on the average real price by replacing a French wine with an Italian wine and the positive effect of replacing an Old World wine with a New-New World wine) with what has been reported about Spain, Portugal, and Italy, we started to think that perhaps the second decade of the globalization in wine markets (Anderson and Nelgen, 2011b) affected the Top 100 list in a different manner. The primary drivers that pushed prices down may have been heavy investment in technology, research, and human capital, benefits from European Union subsidies, higher controls on the quantity and quality of grapes, modernization of their wine-making processes, and the launching of aggressive marketing strategies in the United States (Martinez-Carrion and Medina-Albaladejo, 2010; Panzone and Simoes, 2009; Thach and Cuellar, 2007). Another consideration was presented by Anderson and Wittwer (2013), who have documented the effect of bilateral RER fluctuations on the source and prices of wines in the importing countries' markets.[4] In our analysis, we do not find statistically significant price effects of exchange rates. The countries that gained ground (Spain, Portugal, and Italy) and the country that lost ground (France) are all eurozone countries. Beyond the effect of bilateral RER fluctuations, since 2005, it seems that wines from Italy, Spain, and Portugal—three Old World countries with a new approach—lowered the average real price of the Top 100 list.

To further check the validity of this claim, the effect of having one more wine from these three—what we will call New-Old World countries—on the average real price, we estimated one more regression model. As presented in Table 1, the regression result shows that, after 2005, having one more New-Old World wine reduced the average real price by 3.1%. (For the period 1988–2005, replacing another wine with a New-Old World wine did not have a significant effect on the real price.)

To summarize, as demonstrated in the previous study on the 17 years leading up to 2005, there was no change in quality between 2006 and 2012. There was more variety and, perhaps most importantly, the average real price of the Top 100 list declined even faster. However, rather than wines from the New-New World and Non-incumbent countries, it was wines from New-Old World that were primarily responsible for these beneficial changes—greater variety and more affordable wines in the Top 100 List—for American wine drinkers.

[4] In the four regressions we ran, we did not find any statistically significant price effects of RER in three models; and in the last there was a statistically significant but very small effect. Unfortunately, due to the small sample size, we could not estimate the bilateral, i.e., country-specific RER effects.

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Appendix

Appendix Table 1
Prices and Points of the Wine Spectator's Top 100 List, 1988–2012

Year	*Total Price (in current prices)*	*Total Price (1988 real prices)*	*Total Points*	*Real Dollar/points*
1988	$4,313	$4,313	9,361	$0.46
1989	$2,961	$2,825	9,327	$0.30
1990	$2,819	$2,552	9,201	$0.28
1991	$3,139	$2,726	9,317	$0.29
1992	$3,965	$3,343	9,307	$0.36
1993	$3,826	$3,132	9,299	$0.34
1994	$2,660	$2,123	9,206	$0.23
1995	$3,748	$2,909	9,247	$0.31
1996	$2,582	$1,947	9,195	$0.21
1997	$3,581	$2,639	9,260	$0.28
1999	$3,595	$2,553	9,237	$0.28
2000	$4,742	$3,258	9,341	$0.35
2001	$4,327	$2,890	9,247	$0.31
2002	$4,307	$2,834	9,226	$0.31
2003	$3,645	$2,343	9,240	$0.25
2004	$3,866	$2,421	9,290	$0.26
2005	$4,328	$2,622	9,270	$0.28
2006	$5,009	$2,946	9,354	$0.31
2007	$4,218	$2,410	9,266	$0.26
2008	$5,243	$2,880	9,299	$0.31
2009	$3,961	$2,188	9,289	$0.24
2010	$4,975	$2,703	9,293	$0.29
2011	$4,392	$2,311	9,321	$0.25
2012	$4,637	$2,390	9,296	$0.26

Sources: Various issues of the *Wine Spectator;* for CPI, the U.S. Department of Labor, Bureau of Labor Statistics, www.bls.gov/cpi/, and authors' calculations.

Appendix Table 2

Various Statistics for the Wine Spectator's Top 100 List, 1988–2012, and Wine Sales in the United States

Year	*Number of Countries Represented in Top 100*	*Number of wines from non-incumbent countries in Top 100*	*Herfindahl-Hirschman Concentration Index*	*Total wine sales in the United States (in thousand cases)*	*Table wine sales in the United States (in thousand cases)*
1988	6	5	34	182,183	145,426
1989	6	2	44	176,819	141,550
1990	6	8	35	176,682	142,870
1991	8	9	32	169,015	140,160
1992	7	7	32	179,811	153,019
1993	5	3	36	174,386	148,628
1994	7	11	35	181,075	156,968
1995	9	10	36	187,424	164,112
1996	9	6	37	199,922	175,994
1997	10	15	33	207,374	183,297
1999	9	15	26	220,401	194,661
2000	10	14	23	226,619	204,489
2001	11	14	25	229,470	207,651
2002	10	12	30	242,221	220,277
2003	12	26	19	255,370	233,050
2004	12	21	20	265,580	242,830
2005	11	24	19	271,465	248,800
2006	13	25	16	219,049	199496
2007	13	26	16	226,009	206,372
2008	14	20	17	227,995	208,594
2009	13	21	18	229,594	210,052
2010	14	31	17	234,164	214,578
2011	12	20	24	241,190	221,141
2012	13	26	18	NA	NA
1988–2012 Average	10	15	27%	214,079	189,740

Sources: Various issues of the *Wine Spectator*, Beverage Information Group (2012), *Wine Handbook*, and authors' calculations.

Appendix Table 3

Composition of the Wine Spectator's Top 100 List, 1988–2012

Year	*France*	*Italy*	*Spain*	*Portugal*	*Old World*	*United States*	*Australia*	*New World*	*New-New World*
1988	45	15	3	0	63	34	1	36	1
1989	25	8	1	0	34	61	4	66	0
1990	24	15	5	0	47	51	2	53	0
1991	39	13	1	1	60	38	1	40	0
1992	42	11	5	0	58	36	4	41	1
1993	44	14	0	0	61	38	1	39	0
1994	6	14	3	5	39	54	5	61	0
1995	15	11	3	3	32	56	8	65	3
1996	16	6	1	1	24	56	16	73	3
1997	28	4	5	4	43	48	5	55	2
1999	24	10	5	0	43	42	9	55	2
2000	22	19	4	3	51	35	10	48	1
2001	40	19	2	1	65	22	5	31	4
2002	13	21	3	1	38	48	6	59	3
2003	27	15	7	3	58	25	7	35	7
2004	19	17	6	1	45	33	10	44	11
2005	20	15	6	4	47	30	11	45	8
2006	27	11	4	4	51	25	12	40	11
2007	24	13	8	2	53	28	9	40	7
2008	31	15	6	3	62	22	6	29	9
2009	17	19	6	2	48	33	10	46	6
2010	19	9	9	3	46	35	6	43	11
2011	17	20	7	4	52	41	2	45	3
2012	22	16	9	2	53	32	4	39	8
1988–2012 Average	25	14	5	2	49	38	6	47	4

Sources: Various issues of the *Wine Spectator* and authors' calculations.