Global Challenges and Local Solutions: Wine Sector Changes in Europe and in Portugal

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A. Problem Statement

The wine sector industry is one of the main activities in several agro-regions in Europe representing one of the agro-industrial sectors with tradition and in general with a strong technological evolution in the past few decades. Adding value to a crop, which is mainly processed with the objective of providing pleasure rather then for its nutritional value, has been a successful activity in most regions where consumption grows and where the competitiveness of the products produced is achieved. Open markets have been growing just as international trade has, but nowadays the challenge in Europe is not to increase production, (Europe has structural surplus) but to increase quality, value for product and competitiveness worldwide. Global challenges are quite obvious in international competition, but one of the solutions is to create value along the chain based on local characteristics, differentiation and aggregation of value linked with cultural background. Portugal is a specific case of great changes and challenges, being one of the main producers in the world (among the first 10 major producers) and also one with great tradition in production and in the international markets, which has been successful in some regions with technological innovation.

B. Objectives

The work presented will outline the evolution of the Wine Sector in Europe and specifically in Portugal, such that the main drivers of the changes can be identified along with the major strengths and constraints in the context of worldwide competition. The main objective is to show how important local characteristics are, and how aggregating value linked with cultural values can be a key aspect for competitiveness.

C. Procedures

The paper will describe the sector and its evolution in Europe and specifically in Portugal, and will use development models, based on the principle of the induced changes and innovation, but also showing how important consumer behavior is, in the context of the global challenges. New comers into the market are very important new players in international markets, with specific importance of some tropical countries entering into production, but also representing enormous opportunities for the traditional producers. Markets will expand, and will do so in less developed countries with space for local producers but also for international trade opportunities. Market regulation and good

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economic policies for good market behavior will also be an important aspect to be explored.

D. Data Collection and Analysis

D1 – European Framework

Production area in Europe has been declining in almost every important country in the sector (in terms of national production).

Area harvested (1000 ha) – per year

Country	1961	1980	2000	2007
France	1418.0	1113.8	861.0	830.0
Germany	66.2	89.5	101.5	99.5
Greece	247.1	185	124.8	80.0
Italy	1690.7	1349.0	872.7	770.0
Portugal	225.0	250.0	232.0	222.6
Spain	1742.0	1657.4	1167.7	1200.0
United King.			0.8	0.7

Source: FAO estimates

Italy is a leading country in production and area of production, along with France, with great declines in production areas. Greece is the country with the biggest relative decline in production areas, being Portugal the most stable. Germany is the only one with significant increase in production areas. Looking now at the production behavior it is amazing to see how stable production has been in almost every country

Production (1000 tons)

Country	1961	1980	2000	2007
France	7 491.0	10 321.0	7 762.6	6 500.0
Germany	428.5	625.7	1 360.9	1 300.0
Greece	1 420.1	1 521.0	1 251.5	950.0
Italy	8 447.0	13 244.5	8 869.5	8 519.4
Portugal	1 063.0	1 440.0	1.045.9	1050.0
Spain	3 298.0	6 721.4	6.539.8	6013.0
United King.	0	0	2	1

Source: FAO estimates

D1 – The Rest of the World - most significant countries in the wine chain

It is important to relate to the rest of the world. In doing so, we can look at the table below which presents data on the other important players.

Area harvested (1000 ha) – per year

Country	1961	1980	2000	2007
Argentina	239.0	318.5	187.7	220.0
Australia	49.3	65.2	110.6	163.9
Brazil	64.9	57.3	59.7	76.4
Chile	101.0	115.0	156.9	182.0
China	10.2	34.7	286.1	503.5
Russian Federation			61.4	55.0
South Africa	67.0	115.0	108.4	115.0
USA	206.9	281.9	383.0	380.0

Source: FAO estimates

The production in the rest of the world, on the contrary to what is the trend in most European countries, seems to be climbing, with the exception of Argentina. China is currently the one with the largest relative increase in vine cultivated area, having shown an amazing increase since 1980. In the group outside Europe, the leadership comes from United States of America, China and South Africa. Argentina used to be the most important country outside Europe, and now is the only one with stable level of production.

Production (1000 tons)

Country	1961	1980	2000	2007
Argentina	1 675.0	2 349.0	1 253.7	1 550.0
Australia	153.5	414.2	806.3	962.0
Brazil	158.0	199.6	300.0	240.0
Chile	485.3	586.0	667.4	827.7
China		80.0	1 050.0	1 450.0
Russian Federation			309.0	581.8
South Africa	305.2	706.9	694.9	1 050.0
USA	641.6	1 800.0	2 487.0	2 300.0

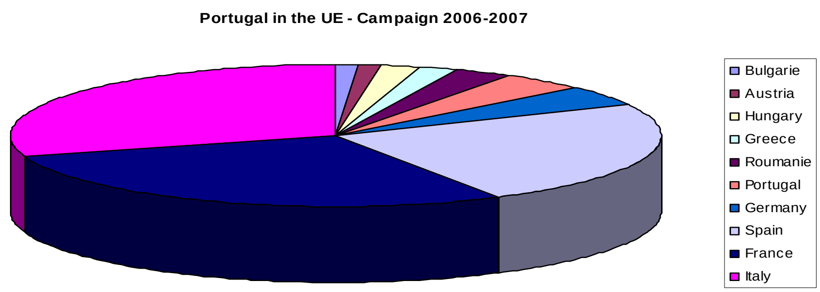
Source: FAO estimates

We do not want to enter into to many details, but the dynamics in the sector come from changes in technology either in production (and/or productivity), quality and/or commercialization/marketing, mainly related with the export markets linked with "mature" economies and emerging markets. Markets can only expand with emerging economies, outside Europe, since the consumption trend in most OECD countries tends to be stable.

Within Europe, however there are new opportunities in the East European countries, as growing markets and/or in local production terms. The graph below shows already the relative position of the East European most significant countries.

Portugal in the UE - Campaign 2006-2007 - Evolution of Wine Production (in Volume – 1000 Hl)

Bulgarie	1 900
Áustria	2 256
Hungary	3 271
Greece	3 947
Roumanie	5 014
Portugal	7 543
Germany	8 995
Spain	43 679
France	53 025
Italy	54 600
Total UE(27)	**186 244**



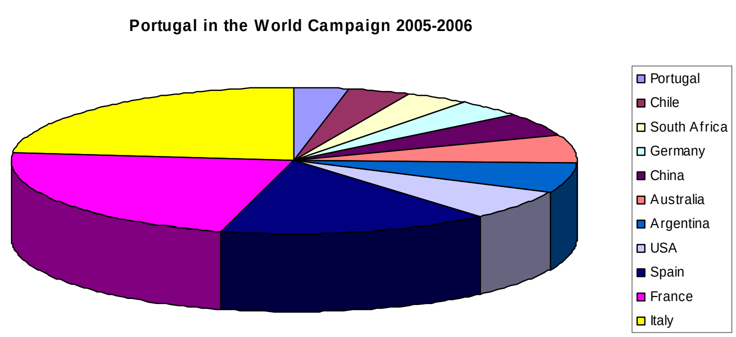
Source: Ministério da Agricultura e Pescas, Anuário 2008

D.2 – Portugal in particular

Portugal is one of the most traditional producers in Europe with tradition in the international markets. However it is also a country with local tradition in consumption with over consumption problems. In the past few decades it was achieved a significant change from almost 100 liters per capita year to about 50 liters per capita year today. The most significant structural changes have been inter-regional changes, maintaining the overall production levels, with quality improvements exploring international market opportunities.

Portugal in the World Campaign 2005-2006 - Evolution of Wine Production (in Volume – 1000 Hl)

Portugal	7 266
Chile	7 886
South Africa	8 406
Germany	9 153
China	12 000
Australia	14 301
Argentina	15 222
USA	15 222
Spain	36 158
France	52 105
Italy	54 021
Total World	**282 276**



Source: Ministério da Agricultura e Pescas, Anuário 2008

According to data from the Portuguese Vitivinicultural Report, the vineyard area in September 2007 was 237,588 hectares, providing the following regional distribution:

Inventory of wine-growing areas per region

Region	Area (Ha) VQPRD[2]	TOTAL
Minho	31.245	31.816
Tras-os-Montes	39.534	68.899
Beiras	11.813	57.321
Ribatejo	1.519	19.518
Estremadura	1.395	25.198
Setúbal	1.590	9.282
Alentejo	10.425	23.491
Algarve	380	2.063
Total	97.901	237.588

Source: Ministério da Agricultura e Pescas, Anuário 2008

In terms of production potential it is estimated that mainland Portugal has 253,655 hectares. This is a result of the addition of available planting rights and rights kept in reserve to the existing area measured in September 2007:

Production potencial

	Area (Ha)
Existing Area (09/2007)	237.588
Available planting rights	15.459
Reserved planting rights	608

Source: Ministério da Agricultura e Pescas, Anuário 2008

Under the national support program Member States will have at their disposal funding which will enable them to adopt the measures best suited to their needs. The list of measures available include: promotion in third countries, restructuring of vineyards, modernization of the sector, innovation and support for green harvest. The distillation of by-products may qualify for financial aid at a level lower than the current, with the abolishment of the minimum purchase price to producers. The funding allocated to Portugal totals 274 million, for use in the period 2009-2013, broken down as follows:

European Union funding available to Portugal – million euros

2009	2010	2 011	2012	2 013
37.802	51.627	53.457	65.989	65.160

Source: Ministério da Agricultura e Pescas, Anuário 2008

[2] V.Q.P.R.D. – Vinho de Qualidade Produzido em Região Determinada stands for Quality wine Produced in a Specific Region. This is the Official Name given to the wines whose originality and individual characteristics have a unbreakable bond to their Region of Production (www.vqprd.com).

The new Common Organization of the Market in Wine was implemented on August 1st, 2008. One of its aims is to increase wine quality and for this it has estimated an amount of 61 million Euros to subsidy the boot of vines.

Export Markets are one of the most important solutions for adjustments in structural changes, and within a competitive environment providing alternatives for the most efficient. Quality and efficiency concerns are crucial, along with the capacity to answer to the new growing markets. It is important to note the case of Angola, clearly an emerging market in less developing countries group.

Main Markets of Destination of total wine products in value- 2007

	Prepackaged		Bulk		Total	
Destination Market	**1000 euro**	**%**	**1000 euro**	**%**	**1000 euro**	**%**
Angola	39.539	83	8.226	17	47.764	18
United Kingdom	21.890	99	218	1	22.108	9
France	12.166	60	8.260	40	20.426	8
U.S.A	18.364	97	504	3	18.868	7
Spain	7.265	48	7.999	52	15.264	6
Brazil	14.038	99	125	1	14.163	5
Germany	10.778	78	3.032	22	13.810	5
Canada	13.487	100	59	0	13.546	5
Italy	4.646	38	7.586	62	12.232	5
Switzerland	10.365	90	1.208	10	11.573	4
Sweden	6.673	98	124	2	6.797	3
Belgium	5.902	98	99	2	6.001	2
Others	45.837	82	10.351	18	56.187	22
Total	**210.949**	**1,069**	**47.790**	**231**	**258.739**	**100**

Source: Ministério da Agricultura e Pescas, Anuário 2008

The evolution of the international competitive position can be evaluated looking at the export volume trend. Portugal in the last 5 years was able to improve global wine exports (around 40% increase) in a significant manner.

Exports Evolution in value (10 000 euros)

Country	2002	2003	2004	2005	2006	2007	Δ % 2007/2006
Angola	15.714	24.937	29.396	33.376	40.900	47.764	16,8
United Kingdom	18.715	16.563	17.355	21.105	18.880	22.108	17,1
France	17.259	30.955	26.854	18.996	18.723	20.426	9,1
U.S.A	17.608	13.288	14.018	15.520	16.626	18.868	13,5
Spain	8.211	10.318	8.230	7.093	10.805	15.264	41,3
Brazil	7.128	7.751	7.931	10.051	12.928	14.163	9,5
Germany	10.490	11.620	15.134	12.108	13.788	13.810	0,2
Canada	6.984	7.338	8.362	9.834	11.763	13.546	15,2
Italy	7.726	15.424	18.886	6.535	6.728	12.232	81,8
Switzerland	6.381	6.582	7.739	7.322	9.390	11.573	23,2
Sweden	4.998	4.937	6.690	7.126	7.451	6.797	-8,8
Belgium	4.943	5.581	5.117	7.354	6.342	6.001	-5,4
Norway	3.993	4.508	4.996	4.170	6.056	5.978	-1,3
Russian Federation	20	133	173	283	2.509	5.779	130,3
Others	31.052	31.999	35.736	35.738	38.891	44.430	14,2
Total	**161.222**	**191.936**	**206.615**	**196.612**	**221.782**	**258.739**	**16,7**

Source: Ministério da Agricultura e Pescas, Anuário 2008

Production and Consumption data below shows how important international markets are today, and how important they have been in the past.

Production and Consumption of Wine in Portugal

	2000/2001	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007
Produção/*Production* (1.000hl)	6.709	7.790	6.677	7.340	7.481	7.267	7.543
Consumo /*Consumption* (1.000hl)	4.709	4.652	5.315	4.911	4.901	4.700	4.611
Capitação (Litros/Hab/Ano)	47,0	46,4	52,9	48,9	48,8	46,7	45,8

Source: Ministério da Agricultura e Pescas, Anuário 2008

Beyond the international market opportunities, it is important to look at the structural internal changes possibilities able to provide alternatives and space for value creation based on local conditions (markets, consumer preferences, cultural and natural conditions, etc). Price differentiation is probably one of the best signs to look and evaluate the market performances (table below).

Annual Average Prices of Bulk Table Wine in the 2007 Production year 2007

	Minho	Tras-os-Montes	Beiras	Ribatejo	Extremadura	Setubal	Alentejo	Algarve
Red Wine	0,58	0,29	0,31	0,32	0,33	0,43	0,97	0,5
White Wine	0,62	0,28	0,33	0,3	0,32	0,41	0,92	0,46

Source: Ministério da Agricultura e Pescas, Anuário 2008

Regional changes are quite obvious looking at the production data below, showing the evolution in the last decade providing evidence of huge changes in the wine production regional distribution.

Evolution of Production (in Volume) by Vitivinicultural Region (in Volume) - Production Statement

Wine Region	2007/2008	2006/2007	2005/2006	2004/2005	2003/2004	2002/2003	2001/2002
Minho	697 176	937 605	939 564	987 715	843 175	835 745	1 446 497
Tras-os-Montes	98 128	232 042	255 798	225 787	216 345	224 223	253 730
Beiras	1 440 798	1 717 728	1 743 865	1 645 627	1 726 461	1 412 142	1 956 731
Beiras	659 218	1 337 992	1 353 938	1 196 325	1 211 920	1 102 113	1 390 412
Ribatejo	669 390	639 747	685 319	845 425	883 672	833 643	592 467
Extremadura	1 053 081	1 195 983	1 177 088	1 294 856	1 125 300	1 234 546	1 162 184
Setúbal	418 304	428 488	338 204	373 125	426 611	347 621	262 324
Alentejo	928 162	961 721	693 364	825 709	817 176	594 135	646 422
Algarve	27 385	31 672	27 955	24 107	30 962	20 231	14 723
Madeira	45 592	49 245	42 656	41 213	48 627	51 084	49 106
Azores	12 091	10 482	8 493	21 339	9 563	21 305	14 832
Total	**6 049 326**	**7 542 706**	**7 266 244**	**7 481 228**	**7 339 811**	**6 676 787**	**7 789 427**

Source: Ministério da Agricultura e Pescas, Anuário 2008

The analysis of the structural changes show that South region (Alentejo + Setubal + Algarve) gained in the last decade, with growth above 30% in a 6 year period, and for the same period the North region lost, with production decreases close to 50% and above that in some cases (Minho, Tras-os-Montes). Basically we have a balanced change within the country overall supply. The drivers for those changes are consumer behavior, but also marketing interventions along with natural competitive factors and economic factors.

Quality and demand behavior are also critical factors to explain the observed changes. It is well known that wine production in the North is much more connected with cultural factors and tradition then wine production in the south, which is also linked with the property land distribution and production systems. North production systems are much smaller than in the south, and a great number of the producers in the north are also producers for self-consumption purposes, carrying the surplus into the market. This is quite evident with the Vinho Verde region (Minho), with most households in agricultural regions with some production used for self-consumption. This situation is not " market dumping," but denotes a real pressure on prices that does not facilitate the existence of "good markets and prices for commercial producers." However, a well organized cooperative structure, with scale and dimension on the supply side was achieved. The sector dynamics and changes in the last years provided an evident competition among grape buyers, and producers began to face a real market in the sense that they have a choice to sell.

We have a clear paradoxical situation: the over normalized and regulated chain in wine production, together with a very active and dynamic system, have been able to provide (in the last decade) alternatives in commercialization, somewhat breaking the designed system aiming for complete producer dependence from buyers (example of the cooperative contracts that try to compromise the producer, avoiding to give them a choice to whom to sell).

In the South we have a completly different structure and evolution of the production system. Most production areas were not in production before, and are clear new areas of vineyards with great dimension, no self-consumption oriented, and market driven. Huge investors have entered into the system, with capacity to invest in quality and marketing purposes. Intrinsic good natural conditions have also been providing low production costs, good quality, and smaller production risks than in the Northern region.

The last table also shows changes in quality choices in Alentejo, the major new production region already achieving production levels close to be the most important region in the country. Red wine gained clear advantage over "White wine," and this phenomenon resulted from revealed preferences but also from induced marketing based on health factors.

Production in the Alentejo region

		2003/2004	2004/2005	2005/2006	2006/2007	2007/2008*
Table Wine	Red / Rosé	22	17	18	27	40
	White	0	40	0	155	1
	Total	22	57	18	182	41
Regional Alentejo Wine	Red / Rosé	293 280	363 970	293 319	474 301	488 411
	White	144 911	75 769	54 543	99 963	59 900
	Total	438 191	439 739	347 862	574 263	548 311
VEQPRD[3]	Red / Rosé	100	155	55	55	280
	Branco	400	461	150	170	275
	Total	500	616	205	225	555
VLQPRD*	Red / Rosé	36	80	68	102	129
	White	467	481	500	70	376
	Total	503	561	567	172	505
VQPRD	Red / Rosé	241 310	264 939	247 875	284 700	283 865
	White	99 097	89 309	94 236	97 053	90 657
	Total	340 407	354 248	342 111	97 053	374 522
Total Alentejo Production	Red / Rosé	539 864	633 261	543 975	763 522	778 355
	White	246 723	168 141	150 563	198 199	151 550
	Total	786 586	801 402	694 537	961 721	929 905

Source: Ministério da Agricultura e Pescas, Anuário 2008
* Interim Values

[3] Diferent wine typology under the VQPRD definition.
* - The same defined above with specific characteristics.

5. Data Analysis Discussion

The evidence provided shows the enormous changes in global terms during the last decades, with the new comers entering into competition with the traditional markets, like U.S.A., South Africa, Chile, Australia and others being able to compete under certain conditions and showing at the same time how the most traditional producers have been adapting to compete. Europe and Argentina are traditional regions which are maintaining levels of production overall across the last 40 years.

The case of Portugal was used to show the big changes introduced into the system and how correct economic policies and regulation have been important, along with the dynamics of the private sector. During quite a long time the sector regulation was basically set with regulamentation, norms and rules creating great problems to the private initiative. The private sector dynamics induced greatly by demand driven factors (fast growing income per capita after 1985 and during 1990 decade), provided the most important incentives for investments in new production. With modern perspective and production systems centered in high quality standards, along with good natural conditions together with entrepreneurs well prepared to work based on markets and marketing strategies provided the "winner factors set" to change quite rapidly. The observed changes also provide evidence that nowadays markets are functioning with price differentiation and producer choice to sell. Data on prices for 2007 show that one of the most fast growing regions (new region - Alentejo) is based on average prices almost double of the rest. The second region also with good prices is exactly the one that lost the most quantity share in production, with the opposite situation (Minho, with the "vinho Verde"). That is, this last region went through a strong effort to adapt and to compete with strong investments and also public support. Markets are also active and producers are, for the first time in many years, facing some freedom to choose the buyer, which is a necessary condition for market oriented changes.

Conclusions

To aggregate value to the raw material has always been one of the main solutions to improve agribusiness and regional development. The wine sector is probably the most important sector with tradition linking agro-production to leisure, culture and pleasure and not only to food needs. The Production Chain has been very dynamic in some regions and continues to offer opportunities to be explore, mainly when the markets work properly with competition and correct regulation. Portugal is an example of huge changes with regional structural base and local solutions rationale under strategies well adapted to the reality providing a good reference (example) of the necessary regulation in food markets (regulation needs for proper market behavior, which some times means "desregulation and desregulamentation"). Starting with a very heavy regulatory framework, the private initiative induced by demand driven factors was able to force a reasonable well functioning market, at least giving more choice to the producer to whom to sell, (which was not the traditional framework). Those changes provided the environment to strength the capacity to compete internationally.

Changes occurred very rapidly according with the induced changes and innovation rational, with the private sector depending of the markets (consumer behavior) and also from the overall regulatory environment. Cultural and historic values were shown to be present on marketing and value added strategies. The value creation chain is very dependent on the commercialization systems, scale and marketing investments. Governments, good governance and institutional background are key factors to provide a good environment for markets to work properly and induced changes occurring in the right direction.

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