Ex-post evaluation of the Common Market Organisation for wine

Final Report

Prepared for:

European Commission - DG Agriculture
Tender AGRI / EVALUATION / 2002 / 6

This study has been financed by the Commission of the European Communities. The conclusions, recommendations and opinions presented in this report reflect the opinion of the consultant and do not necessarily reflect the opinion of the Commission.

Experts involved in the evaluation exercise

The present report has been carried out by:

INNOVA SpA (Italy)
Mr Aleardo Furlani, Ms Rebeca Lucas, Ms Valentina Gentile

Project coordinator and responsible for the analysis of the section on private storage. Innova has also been involved in the analysis of the section on trade with third countries, with the support of HTTC (Greece), and on the section on overall market impact. As project coordinator, Innova has been in charge of the overall project revision and editing.

EUROQUALITY (France)
Mr Olivier Chartier, Mr Marc Ponsar

Responsible for the analysis of the sections on planting rights and overall market impact. Euroquality has also been involved in the analysis of the sections on the description of the CMO and market context and on trade with third countries.

FORSCHUNGSANSTALT GEISENHEIM (Germany)
Dr Dieter Hoffmann, Dr Karl-Heinz Bock, Dr Jana Seidemann

Responsible for the analysis of the sections on distillation, regulatory measures and description of the CMO and market context. Geisenheim has also been involved in the analysis of the sections on trade with third countries and overall market impact.

Fundación para el Desarollo de la Ciencia y Tteconología en Extremadura (FUNDECYT) (Spain)
Mr Carlos Cabo, Ms Manon van Leeuwen

Responsible for the analysis of the section on restructuring and conversion.

SPI SA (Portugal)
Mr Pedro Vieira, Mr Douglas Thompson

Responsible for the analysis of the section on producer's income and production structure.

PHYTOWELT GMBH (Germany)
Mr Peter Welters
Responsible for the administration of the project web site and support to Geisenheim.

Mr JOHN MALCOLM – Consultant (UK)

Responsible for the analysis of the sections on planting rights and overall market impact. John Malcolm has also been involved in the analysis of the sections on the description of the CMO and market context and on trade with third countries.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF GRAPHS

Executive Summary

Introduction

The present evaluation of the Common Market Organisation in the wine sector (Wine CMO) has been produced for the European Commission's Directorate General Agriculture under contract AGRI/EVALUATION//2002/6 and was carried out from October 2003 to June 2004.

A combination of methods and approaches were used in the evaluation of the Wine CMO: (i) a review of the existing literature on the topics covered, (ii) an examination of existing databases and, (iii) direct interviews with stakeholders. The analysis followed a 4-step approach usually adopted for policy evaluation exercises: Structuring, Data Collection, Analysis and Judgement.

Structuring, Analysis and Judgement of each question were carried out according to the specific requirements and characteristics of each measure.

Data Collection centred on quantitative and qualitative information (in the second case by means of interviews with wine industry stakeholders). However, the examination of the effects of the CMO for wine has revealed shortcomings in the available statistical information on the wine sector. Whilst Member States are obliged to collect and submit to the European Commission a wide range of information relevant to policy issues, a number of Member States have been rather dilatory and inconsistent in supplying data. Shortcomings in the market management information system were also found in various Courts of Auditors' Reports.

The present executive summary is divided into 9 main parts: an introductory part on the scope and coverage of the CMO, and 8 sections containing the key findings corresponding to the main chapters of the analysis and edited in the Final Report, as well as a final part containing conclusions and recommendations.

Scope and coverage of the CMO

The aim of the CMO is income stabilisation by influencing market equilibrium through market intervention measures, on the one hand, and regulation and support for the development of a competitive European wine sector by means of regulatory measures and aid for restructuring and conversion, on the other.

Since compulsory distillation ended, EU administrative controls on table wine yields have been abandoned, although crisis distillation can be used to deal with the surpluses arising in years of above-average yields. The experts interviewed mentioned concerns that this might lead to increasing production and hence increased use of crisis distillation with high buying-in prices and rising public budget expenditure. However, the high volume of table wine production in 1999 and 2000 was mainly due to extraordinary weather conditions, comparable with 1992. In contrast, the years 2001 to 2003 registered much lower volumes of production. Over recent years, table wine consumption has continued to decrease, exports of table wine have remained stable and imports of wines from third countries have increased. Thus the two bumper harvests of 1999 and 2000 led to extraordinarily high stocks and affected the political decision to enhance the buying-in prices of crisis distillation with additional national aid.

Finally, we would point out that the Commission's efforts to manage the EU wine market so as to improve the competitiveness of the EU wine industry and thus wine producers' incomes will require up-to-date information on the state of demand as well as supply. In fact, the CMO has neither the instruments nor the budget necessary to monitor shifting patterns of demand.

Planting rights

The evaluation deals with the following issues: impact in terms of efficiency and effectiveness of the limitation of planting rights and the linked different measures on: (i) the volume of supply and hence on market equilibrium, (ii) the level of market prices in the long-term in EU, (iii) adapting of supply to market requirements in qualitative terms, (iv) costs of production in the EU and the competitive position vis-à-vis imports, (v) its appropriateness considering the market evolution.

The limitation of planting rights was introduced to tackle structural surpluses in the late 1970s. Given the cyclical nature of wine production, the ban on new plantings can play a significant role in the long-term stabilisation of wine supply. The ban is one of the main components of the CMO as it interacts with other instruments: the premium for permanent abandonment and the conversion scheme that could not be introduced without control on the vineyard area planted.

Our analysis reveals that despite the limitations on planting rights and the existence of the premium for permanent abandonment of vineyards, surpluses remain at a significant, indeed substantial, level in key Member States. The study shows that yield plays a major role in the size of the annual wine surplus variation. The measures relating to planting rights thus have limited effectiveness in terms of market equilibrium, although the general prohibition on new plantings has prevented an increase in the overall vineyard area and kept the surpluses below the levels they might otherwise have attained.

Given the market context, the premium for permanent abandonment proved to be rather more effective. Between 1988 and 1996 around 500.000 hectares benefited from the premium. Had those vineyards that have been permanently abandoned remained in production, the EU surplus would have been even more abundant than it is. It has been estimated that without the grubbing-up of vineyards the EU surplus in a normal weather year would have increased by about 25 million Hl generating a surplus of around one-third of total production The disposal of the additional surpluses through distillation would have surely had a significant effect on budgetary expenditure on the CMO.

However, the policy shift decided by the Council in 1996, against the background of a run of unusually low-yielding harvests, consisted in reducing the effect of the permanent grubbing-up premium and according new planting rights, and was in clear conflict with previous actions. This shift in policy was confirmed by the 1999 Reform by the allocation of newly created planting rights and regularisation of illegal planting and has clawed back an area equivalent to between a fifth and a quarter of the reduction funded by the premium for definitive abandonment. This counteracts previous efforts to reduce the surplus.

Given the current shift of consumer demand from low quality table wine to quality wine, the rigid system of planting rights transfer might have prevented the European

wine sector from adapting more rapidly and so indirectly contributed to maintaining the EU surplus. The analysis of the impact of restructuring and conversion measures on market equilibrium presents complementary results that confirm this statement.

Concerning the impact on wine prices, no direct effect of the planting rights measures could be demonstrated from a quantitative point of view. It seems very difficult to isolate the impact on prices of these measures from the other elements of the CMO support regime, notably the distillation measures which effectively put a floor price into the wine market.

The premium for permanent abandonment had a positive impact on the adaptation to market requirements. The area of low quality vineyards has decreased significantly. The assessment of the early impact of the measures related to conversion and restructuring supports these conclusions.

In general, it appears that the planting rights measures have little, if any, negative impact on production costs. However, the competitive position vis-à-vis other countries might well have been weakened by preventing more efficient growers from expanding their business and thus their market share. Therefore, whilst the premium for permanent abandonment has slightly reduced the surplus area, planting rights measures as a whole have introduced an additional element of rigidity into the sector. This has hindered the European industry at a time of market change, whilst 'new world' competitors have been able to expand their exports to the EU following the URAA tariff reductions.
The further movements towards trade liberalisation resulting from the Agenda 2000 reforms and the increased pressures from third-country exports to the EU imply that EU producers will need to become more responsive to changes in consumer demand than they have been over the past decade. In this regard, it seems important that those producers who could expand their quality wine production to meet consumer demand should not be hindered by new planting restrictions. Nor should the market be undermined by the continued presence of excess volumes of low quality table wines that depress the general level of producers' returns.

The global efficiency of the measure has been weakened by uncertainty about the area planted under vine in the EU, while the cost effectiveness of the premium for permanent abandonment has been weakened by two main factors:

- Around 10 to 15% of the budget subsidised the grubbing-up of vineyards that do not affect market equilibrium (table-grapes mainly).

- Contradictions among measures: up to 1996 the EU financed, via the premium for permanent abandonment, the reduction of 500,000 hectares of planting rights and thereafter the EU has allowed the introduction of 60,000 hectares of new planting rights.

We consider that measures favouring the transfer of planting rights would have been more efficient than the premium for permanent abandonment. In addition, more effort should have been made to ensure efficient management of the production potential, starting with the collection of reliable data on the planted vineyard area. In this respect, Member States should be obliged in future to implement a reliable vineyard register.

Distillation

The evaluation deals with the impact in terms of efficiency and effectiveness of the support to various distillation measures on: (i) the development of wine prices in the short and medium term, (ii) market equilibrium.

The current analysis shows that the EU wine distillation measures are a relatively effective means of influencing the volume of wine put on the market in the short run. Distillation measures, whose resulting alcohol could be delivered to intervention agencies, act as an additional (artificial) demand; hence imports are not harmed, but indirectly supported.

An impact on prices could not be found in the short term, thus crises are not solved in the short run. In the medium term an impact on prices could be seen at the lower end of the price range, due to CMO distillation measures supporting prices for low quality table wines, particularly in Spain and some regions of France and Italy. In some regions with low-price markets the revenues from distillation generate a significant income for some producers, especially in Spain. Aid for distillation of potable alcohol protects European wine producers against competition from third countries. Aid for distillation of dual-purpose grapes is effective in supporting market prices due to the adequately limited quota of 'quantities normally produced'.

As the reform of the CMO for wine in 1999 is so recent, there are few data for the new period; hence judgement about the effects of the reform is to be considered provisional. In fact, there is already evidence that new crisis distillation is more expensive than former obligatory distillation, but even so in some cases (e.g. France) it is not viable unless additional national aid is provided.

The income stabilising effect of distillation measures fulfils an important aim of EU agricultural policy, but at the same time encourages the continuation of the structural surpluses. Moreover, there is a conflict between the aim of regional income stabilisation and development and that of overall adaptation of vineyard surface and wine production to demand.

Distillation of wine measures are neither effective nor efficient in eliminating structural surpluses. Distillation measures involve fairly high EU expenditure. The short-term income support through buying-in of wines for distillation stabilises surplus production in the long- -term. The wine, which is not needed, is transformed into alcohol, absorbing huge natural resources, such as energy; therefore, wine market disequilibrium is transferred to the alcohol market at high budget cost without ensuring a reduction of production. Additionally, continuous implementation of distillation measures producing industrial alcohol out of wine might be an incentive for higher yields, as the specific wine aroma is not necessary to produce a neutral alcohol for industrial uses. The task for the future should be to develop a wine CMO with less expensive measures than distillation. We consider the following recommendations to be well-founded working hypotheses that need to be developed further through scientific and analytical work.

The income stabilising effect of distillation measures could be accomplished more efficiently by other measures, such as have already been introduced for other agricultural products, e.g. direct income transfers.

Aid for distillation of potable alcohol, dual-purpose grapes and crisis distillation should be abandoned.

To fight against occasional surpluses we suggest introducing premiums for green harvest of grapes. This measure would: (i) fight against surpluses at a very early stage of probably high-yield vintages, (ii) improve the quality of wine, (iii) avoid disposal of alcohol, and (iv) support wine producers' income completely through the remuneration of green harvest work.

By-product distillation is justified only for quality reasons in southern European regions. However, it absorbs a substantial part of the budget. Technological progress raises the question of whether obligatory by-product distillation might be reformed to reduce EU expenditure on this measure. Further analysis is necessary, but the initial conclusion is that by-product distillation could be made on a voluntary basis, especially for quality wine producers in wine-growing zone B. As for distillation of by-products in zone C, interviewees from all Member States where distillation of by-products is obligatory stated that by-product distillation is very important for keeping a minimum standard of good wine quality in the regions. However, it needs to be examined to assess whether composting, for instance, were more cost efficient than distillation of by-products in wine-growing zone C.

Aid for private storage

The evaluation deals with the impact in terms of efficiency and effectiveness of the aid for private storage on (i) fluctuations in the volume of supply between campaigns, (ii) the level of wine prices (during and after the campaign).

From the analysis it has been observed that quantities of table wine under private storage vary with production: volumes of product are withdrawn from the market when supply increases.

Recourse to aid for private storage at national level follows a similar pattern in the countries under study. It has been observed that the quantities of table wine under private storage contracts, in proportion to production and domestic availability, are fairly similar among countries and reflect the overall EU situation. In fact, at EU and country level the share of quantities under private storage contracts in relation to production ranges from 7% to 9%, whereas in relation to domestic availability it ranges from 5% to 6% on average and over the whole period.
Fluctuations in the quantities under private storage contracts are related to movements in production and in domestic availability. This has been confirmed by the analyses performed at national and regional levels, even if exceptions have been registered in some regions (Emilia Romagna, Puglia and Sicily) for certain specific wine years. Notwithstanding this relationship, it has been observed that even in the presence of falls in production, a certain level of quantities under private storage is maintained.

Aid for private storage works on the supply side not by reducing the total volume of supply itself (such as measures on production potential) but by temporarily withdrawing production from the market. As a matter of fact, the part of the current production that is withdrawn from the market and kept in store temporarily relieves market price tensions and postpones the marketing of the quantities stored. In fact, as confirmed by interviewees, in 90% of the cases the quantities under private storage contracts are sold in the market in the following wine year and thus not wiped out.

At country level, the average percentage of table wine production put into private storage contracts during the period 1985-2003 is close to 8% and follows the movements in production. The effect of these quantities on the stabilisation of supply and therefore of prices cannot be clearly discerned at country level. Prices for table wine are the result of many variables and therefore the effects of the private storage measure on the price level cannot be easily isolated. However, since regional markets have a reduced size and a smaller number of factors affecting the price, if the quantities under storage have an effect on prices, this would be more easily identified at regional level. The analysis performed in Italy using regional prices showed that the temporary withdrawal of quantities of table wine from the market activated through the mechanism of the private storage had an effect in maintaining prices stable and even keeping them at a high level during the months of conclusion of the contracts. Overall, it seems reasonable to assume that, in general, the measure is effective in the direction of keeping prices stable or at least preventing them from falling further.

In the light of the analysis performed and the results obtained, it seems that the measure has met the objectives for which it was conceived. In fact, aid for private storage is not used to store wine of low quality that cannot find a market and which is then put under private storage to be finally sent to distillation. On the contrary, it is an instrument used by producers to rationalise the use of a wine which final destination is the marketplace. The aid for private storage encourages producers to take surplus off the market in cases of abundant availability of wine but it also gives them the possibility to rationalise their supply according to their marketing strategies. If producers could not make use of this aid, they would probably sell the wine in the market even at low prices, depressing prices and hence hindering the profitability of the wine production. In fact the aid, covering part of the storage costs, offers producers the possibility to postpone the sale of wine in the market at more favourable prices. Hence, despite the fact that a certain volume of product is put under private storage even when production is low, without the aid for private storage there would be no incentives for producers to keep part of their wine production immobilised for the period of duration of the contracts.

Therefore, it seems reasonable to affirm that aid for private storage, which represents about 5% of public CMO expenditure, has been efficient in meeting its policy objectives. In order to fully assess the efficiency of the measure, a quantitative estimation taking into account both budgetary expenditure on it and the cost of implementation would be necessary.

The interviews carried out with sector experts showed that the costs for the implementation and administrative management of the measure are too high to be sustained by small producers. Therefore, the benefits of the measure are confined to medium/large firms/cooperatives and this may lead to a concentration of the aid among a restricted number of beneficiaries, as it is the case of Sicily. Hence, a possible drawback of the mechanism is that in regions characterised by the predominance of medium to big firms/cooperatives the falls in production not matched by a decrease in the quantities under private storage can imply the existence of some *deadweight effect*. However, since production mismatches seem to be the exception rather than the rule, it cannot be concluded that a permanent or systematic *deadweight effect* exists.

Suggestions have been oriented toward giving the mechanism a higher degree of flexibility since the major criticisms concerned the rigidity of the working of the measure. In particular, the current length of the contracts is considered to be too long, since producers deciding to sell the wine under private storage before the contract is

expired, lose the aid. This rigidity does not allow producers to fully exploit the potential of the measure. Therefore, suggested improvements are:

- The reintroduction of short-term storage contracts (as in one of the previous basic Regulations 377/79), which will be a more useful instrument for producers to plan their production according to the market situation and demand.

- The possibility to interrupt the contracts before their end upon producers' request, subject to proportional loss.

Regulatory measures

The evaluation deals with the impact in terms of efficiency and effectiveness of enrichment on: (i) the market equilibrium, (ii) the quality of the products, (iii) the development of prices in the short and medium term. In addition, the evaluation deals with the impact of the regulatory measures on: (i) the production costs and the price level of the type of wines concerned, (ii) the competitive position vis-à-vis imports, (iii) the volume of supply (including imports) and its composition in qualitative terms, (iv) the volume and composition in qualitative terms of demand in the Member States (producers and non producers) in third countries.

Increasing the natural alcoholic strength

The results of this section in the first part about enrichment show that the use of CM has been decreasing (Italy, Portugal, Greece, France) and that of RCM has been increasing (Italy, Portugal, Germany) or has remained stable (France, Greece) in the Member States. These changes are mainly due to substitution effects between the different materials for enrichment (CM to RCM, sucrose to RCM). There is no evidence that the possibility of using RCM or CM, or enrichment in general, increases the yields per hectare.

Different oenological methods of enrichment have different advantages and disadvantages as regards sensory quality, so there is no one best method. By contrast, there are different optimal application decisions suitable for the different musts. Producers should be allowed to choose their method of enrichment on a case-by-case basis, as the optimal method may vary according to cellar size and specific wine characteristics. In fact, an alcohol content of at least 12% vol. is standard for most of the wine market. Hence, enrichment is an important quality enhancing method to meet the minimum quality demand of consumers concerning alcohol content.

The permission of enrichment does not affect budgetary cost; therefore it is an efficient measure to ensure a competitive wine quality standard of alcohol content. Without aid for the use of CM and RCM, they were not competitive against sucrose, which has the same suitability for enrichment as CM or RCM from a technological point of view. Thus, from a purely economic point of view, aid for the use of CM and RCM was inefficient.

However, according to the social aims of equal competitiveness of different traditions in wine production, particularly concerning varying enrichment methods, on the one hand, and low budget cost for aid for use of CM and RCM, on the other, this aid may be judged politically effective.

As regards direct must concentration, because of the different impact on quality according to the different raw materials processed it cannot be used as general measure. However, the quantity reducing effect is an interesting characteristic to take into account. Existing barriers for application of this new technology should be eliminated and its use promoted. Further technological and economic research into method is necessary.

Oenological practices

There is a broad consensus among the experts interviewed that the oenological practices allowed by the CMO do not imply a restriction for the production of good wines. However, there are concerns that the CMO rules for oenological practices worsen price competitiveness, especially towards 'new world' wine production, and limit technological innovation.

As general concluding advice, for reasons of competitiveness all methods used in third countries should be allowed in the EU if they are, first, completely harmless to health and, second, if they are acceptable to consumers. The work in international organisations such as the O.I.V. should be directed at achieving world-wide consensus about the innovative development of the wine sector.

Quality wine regime

The expert judgements concerning the importance of the quality wine regime for good wine production and market success are rather varied. On the one hand, the EU quality wine regime has advantages for quality and transparency ; on the other, nearly all the Member States can offer examples of successful high quality wines that have been developed outside the quality wine rules. Trademarks are becoming more successful on the EU market, both those produced by EU countries and those of 'new world countries'.

The third countries - especially 'new world countries' - are very successful on the EU market with table wines of high quality. The quality wine regime seems to be too restrictive. For this reason, Italian producers in Tuscany, to give an example, relinquished the quality wine indication that could make their innovative ideas more tangible. This shows that a low level of restriction for table wine, which was initially implemented to facilitate the production of cheap wines for daily consumption, nowadays provides an important framework for innovative developments in the wine sector.

The adaptation of quality wine regimes to technological progress is a very difficult question, and the source of controversy among producers.

Labelling rules

The recent change in the legal principle underlying the labelling rules for the wine sector to a more liberal approach has only been put into practice by a few professionals so far. It is not yet possible to make a judgment about the consequences of the change, except to observe that the stakeholders in the wine sector are very cautiously initiating changes related to the possibilities offered by the new rules. However, it is obvious that concepts which work like brands, or brands themselves, have a growing importance that reduces the impact of the official labelling requirements which consumers are faced with every day as more and more often this information is placed on the back label.

Global assessment

Most regulatory measures (the only exceptions being aid for use of CM and RCM) have no direct impact on the budget of the EU, only on the budget for management and control of their application. This cannot be calculated accurately for the different rules as they are mostly organised and paid by the Member States. Hence the financial investment of the EU for this type of measures is very small. Budget efficiency of obligatory rules is always very high as the rules have to be observed without remuneration.

As regards general efficiency, regulatory measures may lead to increasing overhead costs due to the obligation to keep records, increasing production costs due to the obligation to use more expensive production methods and, last not least, may hinder innovation.

From a more global point of view, the whole question of regulatory measures creates a dilemma: rules that set certain standards to protect the consumer and ensure a certain quality or style are always in danger of hindering new and innovative developments in the interests of better quality. There is no perfect solution for all times and all cases. However, the rules system should include a procedure that makes it easy to adapt the legal rules quickly to market developments and technical progress.

Trade with third countries

The evaluation deals with the impact in terms of efficiency and effectiveness of the measures concerning trade with third countries on: (i) the price level of the type of wines concerned, and in general, (ii) the competitive position of EU wine production, (iii) the volume of supply (including imports) and its composition in qualitative terms, (iv) the volume and composition in qualitative terms of the demand in the Member States (producers and non-producers) and in third countries.

Until the 1980s, the EU-12 collectively comprised the world's largest exporter of wine, but since the 1990s several new world producers became major exporters onto the world market and the share of external trade taken by the EU diminished. In consequence, the external trade balance between the EU and the rest of the world shifted significantly between the beginning and end of the period with the main changes coming in the years following the URAA (Uruguay Round Agricultural Agreement) trade liberalisation measures. An increased proportion of EU wine production is now exported outside the Community, but there has been a substantial rise in the significance of imports as a proportion of EU wine consumption.

The evaluation of the effect of the trade measures has been carried out considering first the specific objective of the measures and then the contribution those measures make to the fulfilment of the general objectives of the wine CMO and of the Common Agricultural Policy in general.

- The measures concerning access to the EU market (rates of duty within the Common Custom Tariff (CCT), countervailing charges, duties on grape juice and grape must) have given considerable protection to EU producers in the low-price, low-quality segment of the market. Whilst the measure has helped to raise prices and prevent the price collapse that could occur if low-priced imports combined with excess internal production, led to supplies exceeding sales, it has to be recognised that the benefits to EU producers were gained at the expense of EU

consumers. Nonetheless, the restrictive effect of the measure is demonstrated by the increase in imports from third countries benefiting from specific concessions related to countervailing charges application (Australia, Chile, Cyprus etc.) during the years 1988 to 1994. Moreover, the rapid increase in imports after 1995 demonstrates the benefits which EU producers had previously enjoyed from the EU's tariffs. However, this protection may well have been to the longer-term disadvantage of EU wine producers because it delayed their response to changing tastes among EU consumers.

- In order to comply with GATT requirements, expenditure on export refunds had to be reduced by 33% (from 60.6 million euros in 1995 to 41.5 million euros in 2000). Wine exporters have been flexible in choosing destinations according to market opportunities. Over the period from 1999 to 2002 there was a significant decrease in the volume of subsidised wines exported to Eastern Europe (from 1 million hl to 550 thousand hl) and a significant increase in subsidised wines exported to Africa from 850 thousand hl to 1.4 million hl. Subsidised exports have been directed to areas where imports at normal prices would be considerably restricted.

- The total market share of imports from countries benefiting from preferential rates of duty is considerable. In 2003, from a total of 9.3 million hl imported into the EU, 12.85% was imported from third countries benefiting from tariff preferences. In particular, imports from Bulgaria were at highly preferential rates. The FYROM also benefited greatly from being able to export to the EU without any standard duty and in 1995 exported some 333.529 Hl (7,2% of total imports to EU from third countries). Having increased their exports in the years following their bilateral agreements, both Bulgaria and FYROM reduced their spending by the end of the 1990s. In more recent years, Chile has also benefited from tariff preferences and has built up its share of the market accordingly – whilst this will be a source of concern to the less competitive EU producers, no doubt EU consumers welcome this additional competition.

The impact of the three main instruments analysed (import duties, export refunds and bilateral agreements) on the EU market shows that:

- The trade measures prevented imports from causing or worsening price collapses in years of bumper harvests. Many of the new world wines are comparable to EU quality wines psr or TGI wines and their price differential reflects this.

- The total volume of imports into the EU remains low, partly due to the success of the import duties and other trade restrictions in raising import prices and partly due to the EU's own continuing structural surplus.

- In recent years, subsidised exports have accounted for around 20% of EU exports even though the maximum permitted volume of subsidised exports and the maximum permitted expenditure on subsidies have not been achieved.

- A measure of the effectiveness of the import restrictions prior to 1994 can be gauged from the rapid increase in imports since the URAA (Uruguay Round Agricultural Agreement) reductions in the tariff and non-tariff barriers. Although factors such as sustained and highly successful marketing campaigns by the exporters have also had a substantial impact, tariff reductions and trade liberalisation have also had a marked effect.

- Export refunds have helped to sustain the competitive position of EU exports. Though less than in the early 1990s, the trade measures continue to protect the competitive position of domestic wine producers in the EU market.

- Before 1995 the trade measures were very effective in keeping the volume of imports from third countries at a low level and thus protecting EU wine producers from greater external competition. Since the completion of the URAA tariff reductions in 2000, the success of extra-EU wines has been more closely associated with non-price factors such as taste, labelling and marketing than with price factors.

- Third country suppliers and particularly those from the "new world" have been more adept than EU suppliers in adopting their products to the changing tastes of EU consumers. In this regard, regulatory measures included in bilateral agreements seem to have had a positive effect on wine demand and increased market transparency. The trade liberalisation effects of the URAA (Uruguay Round Agricultural Agreement) have expanded third country imports into the EU thereby allowing consumers access to an increasingly diverse supply. Meanwhile, export subsidies continue to allow EU exporters a foothold in non-wine producing third countries where there may be potential for market expansion in the future.

Restructuring and conversion

The evaluation deals with the impact in terms of efficiency and effectiveness of the national and regional plans for the restructuring and conversion of vineyards on: (i) the adaptation of supply to market requirements (in quantitative and qualitative terms), (ii) the level of market prices in the long term.

Concerning the effectiveness of the restructuring and conversion measure on European vineyards, it has encouraged vine-growers to adapt their vineyard areas to market requirements. A considerable percentage of European vineyards has been restructured and converted as vine-growers introduced high quality varieties in heavy demand on the market: at the same time, the number of hectares destined for table wine has been reduced. For this reason, we can conclude that in general, the measure has improved the quality of the vineyard area in the EU. Moreover, concerning the number of hectares restructured and converted and the changes in varieties, the comments of the wine experts support this conclusion.

It can also be observed that the number of hectares allocated for restructuring and conversion has decreased, although there are countries which still need the measure in order to adapt their vineyards.

Regarding the change in varieties, the measure has led to the adoption of a new cultivation system, introducing the vertical trellis system, and consequently the mechanization of vineyards.

Since the quality of wine is determined by the quality of the grapes, the measure should improve the general quality of wine in the EU, although a large number of factors influence wine production. This conclusion is also borne out by wine experts consulted.

The improvement of the vineyards will entail an increase in the total volume of wine. The experts think that, although sufficient data are not available yet mainly due to the

specific wine cycle and a large number of hectares are out of production, the volume of wine in the EU will increase in the coming years as a result of the new cultivation systems. These systems not only allow a large number of vines per hectare but also give higher yields per vine, and hence higher yields per hectare. The proportion of wine produced has also changed, with an increase in the volume of quality wine psr and a decrease in that of table wine.

Finally, some of the experts have expressed serious concerns about the market's ability to absorb future red wine production. It is very difficult to confirm this fact, because in a sector as competitive as the wine sector, numerous factors influence the market in addition to the quality of wine. It seems very difficult to isolate the impact on prices of these measures from the other elements of the CMO support regime.

The analysis of the efficiency (cost-effectiveness) of the restructuring and conversion measure shows that the total budget spent in the period amounts to 32.62% of the total budget granted for all measures within the period of application of the restructuring and conversion measures.

Italy, Austria, Portugal and Spain were granted an extra budget and extra hectares for restructuring and conversion whereas France spent less budget than the initial granted in vintage 2000/2001. Spain was the country with the highest budget in 2000/01, with 171.72 million euros for 31.932 Ha.

With respect to the public budget allocated by the EU, the private investment made by the vine-growers, e.g. to adapt the new plantation to the new cultivation system, and by the producers to adapt the wineries to the new wine process, must also be taken into account. Thus, the total cost for the restructuring and conversion measure is higher than the share of the budget contributed by the EU (50-75% depending on the region) and the remainder contributed by the vine-growers, and is very difficult to assess. The experts also commented on the possibility that wine-growers might not be able to recover their investments.

Regarding the efficiency of the results, many of the objectives have not yet been achieved due to the specific wine cycle. This cycle means that some of the restructured and converted areas are not in production yet. Moreover, the improvement in the wine derived from these areas needs more time to be assessed. Thus it is too early to make a quantitative assessment of the efficiency of the restructuring and conversion measure.

The evaluation of efficiency in terms of quality is based to a large extent on the opinion of the experts consulted. One of the most interesting comments regarding quality related to the concern about the market's ability to absorb future red wine production. This is one of the reasons why it is too early to make a judgement regarding efficiency. Moreover, it is impossible to know if the market will absorb the future red wine, because this depends not only on the volume, but also on the efficiency of selling methods.

As concluding remarks it can be said that, since the measure came into force, some countries have used it more than others. In spite of the yearly decrease in the areas of vineyard, it appears that some countries still need the measure in order to modernise both the wine-grape planted and their cultivation system. In addition, the possibility to use vineyards restructured and converted for table wine exists and it would be interesting to introduce measures to guarantee that the vineyards which have received aids from the EU are used only for producing quality wine psr by prohibiting the production of table wine.

Producers' income and production structures

Evaluation deals with the joint impact in terms of efficiency and effectiveness of CMO measures on: (i) winegrowers' incomes development, (ii) development of holdings or enterprises size, (iii) regional distribution of production, (iv) intensity of grape production, (v) processing and marketing development in wine growing regions.

The analysis of the growth in farm incomes, at the EU and country level, and of their composition identified the following trends:

- Between 1989 and 2000 there was a general increase in the income of EU wine producers, as measured by the farm net value added (FNVA) per annual work unit (AWU).[1]
- The income of quality wine producers is higher than that of non-quality wine producers at the EU level;
- The income of quality wine producers is higher than that of all farms, and the income of non-quality wine producers is lower than that of all farms at EU level;
- There is considerable variation between countries, for instance the income of wine producers in France (quality and non-quality wines) is the highest among the EU wine producing countries and is substantially higher than the income of wine producers in some countries such as Portugal;
- There is also considerable annual variation in the income of producers of quality and non-quality wine within the individual EU countries;
- The value (in euros) of total output from vineyards is varies greatly from year to year, and is the main driver of the variability in the annual income of wine producers;
- Quantitative analysis indicates that there is little or no relationship between the size of wine producers' holdings and the annual percentage changes in the income of wine producers between 1989 and 2000.

As confirmed by experts interviewed, it is not possible to quantitatively prove relationships between general and specific CMO measures and the trends identified. Hence, qualitative analysis was used to investigate the relationships between the identified market trends and the CMO measures, including views on causal links between CMO measures and observed trends. This qualitative work was based on a range of interviews and questionnaires with sector experts.

The conclusions of this analysis show that:

- Distillation has had an effect on certain (table) wine regions by enhancing income stabilisation;
- It is likely that rules related to planting rights have led to inflexibility in market, resulting in average wine producer incomes being lower than they could have been. However, it should be noted that planting rights have allowed smaller and traditional wine producers to continue to operate in the market;
- Restructuring and conversion effects are long-term and there is no broad consensus on the efficiency of the return on this investment;

[1] The FNVA represents the payment for factors of production (work, land and capital) whether external or family factors. The AWU measures the total labour input of holdings expressed in annual work units (equal to equivalent full-time workers).

- There are few direct links between regulatory measures and producer incomes;
- Private storage works in the direction of enhancing income stability, although this effect appears to be regional in nature.

Each CMO measure has specific objectives. For instance, the CMO distillation measures (which make up a large proportion of the CMO budget) are mainly targeted at lowering the surplus in the market. Often, the effect of individual CMO measures relating to producer incomes and production structure, whilst not a secondary objective, is a consequence of achieving (or not achieving) the specific objectives.

Quantitative evidence and qualitative analysis of the effect of the CMO measures on producer incomes and production structure show diverse results. However, general opinion is that the CMO measures as a whole have had some positive effect on producer income and production structure, with regional/temporal variations in terms of the level of the effect.

Overall market impact

The evaluation deals with the joint impact in terms of efficiency and effectiveness of the different measures of the CMO for wine on: (i) market equilibrium (in volume terms), (ii) price development and the interaction between the individual measures and their relative importance.

The wine CMO as implemented between 1988 and 1995 was effective in reducing structural surpluses and thus improving market equilibrium. However, it could not completely eliminate the structural surplus, as distillation and other price and income stabilising instruments encouraged marginal producers to remain in the industry. The CMO was more effective in achieving short-term market equilibrium and price stabilisation than in reducing long-term surpluses.

The current wine CMO might not lead to any reduction in the EU's continuing structural surplus because in some regions the wine distillation measures, by acting as a floor price, give income support and thereby maintain productive capacity.

Our analyses reveal that there has been a trend towards yield increases in Member States with traditionally very low yields, especially Spain. Most of the experts interviewed stated that the yield increase is structural and results from restructuring towards more competitive varieties and production methods. Structural surplus depends in part on the competitiveness of the EU wine sector to market wines successfully in competition with wine producers outside the EU.

Regulatory measures, as well as the restructuring and conversion aid, are assisting re-orientation towards quality wines. Some of the EU's oenological regulations may have hindered technical progress and thereby reduced competitiveness vis-a-vis "new world" producers. The 1999 reforms tried to improve the rules on labelling but it is too early to judge the effectiveness of the changes.

CMO measures reducing production potential (planting rights restrictions and the premium for permanent abandonment) have been more cost-effective than market intervention measures like distillation in reducing structural surpluses. However, the CMO could be judged politically efficient in protecting EU producers' incomes and perhaps reducing the possibility of social conflicts in some regions of the EU.

The CMO aims and instruments should be critically examined at the very least and partially reformed. The CMO should not aim to manage the market or regularly intervene to support producer incomes. The industry should be encouraged to eliminate structural surplus production by adapting to the changing world wine demand (e.g. better marketing strategies).

Supporting wine producers' incomes through guaranteed buying-in prices for distillation sends wrong market signals, and this tends to perpetuate structural surpluses. Any aid for income support should be decoupled from prices to avoid misleading market signals.

We conclude that the CMO should try to avoid expensive intervention measures (distillation) for structural surplus quantities; rather, CMO should encourage the wine sector to bring supply into line with demand in terms of both quantity and quality.

"New world" viticulture applies different national rules of production compared with the EU's regulations, which preserve traditional production methods but restrict EU producers in comparison with their overseas competitors.

Many wine sector participants recognise the need to adopt a more consumer-oriented approach to production and marketing of EU wines, but in order to adapt to the changing market they need more detailed, more reliable and more timely market information. Hence, a new task for the CMO will be to assist the wine sector by part-funding the development of better market intelligence through the collection and rapid dissemination of information about developments on both the demand and supply sides of the wine market. This should help market transparency for both large and small producers and their customers.

Several contradictions between CMO measures have already been highlighted in the section on market equilibrium. The main contradictions are related to the management of production potential. The EU financed the grubbing up of around 500,000 ha between 1988 and 1996. Some 4.4 billion euros were spent on premium for permanent abandonment in order to reduce the wine sector's production potential as replanting rights were bought out. However, since 1996, more than 60,000 ha of new planting rights have been awarded, thus adding to the industry's production potential.

The justification given for the Council's decisions was that the premium for permanent abandonment expenditure had been used to rid the industry of unwanted table wine production and the granting of new planting rights was limited to quality wines for which market demand had been demonstrated. In 1999, provisions were introduced to improve the management of production potential through the use of national or regional reserves. A danger from this move is that it allows Member States to avoid any loss of national replanting rights, thereby maintaining their production potential. In our view there is a clear contradiction between these measures.

Moreover, the philosophy that the EU should seek to manage the production potential of the wine sector could be easily challenged both because it implies that the EU authorities can judge the market better than market participants and because it leads to distortions between the protected sector and other sectors of the EU economy. Managing a market in which there is a clear structural surplus of supply, and in which price signals are not allowed to operate efficiently due to an artificial floor price, is inherently difficult unless structural measures are applied consistently.

The Commission's attempts to make the wine sector more responsive to the market are contradicted by the retention of distillation measures which guarantee a certain

minimum return for marginal production. The contradiction between the two philosophies is compounded by the willingness to subsidise distillation of potable alcohol on the grounds that it supplies a traditional commercial outlet. If the outlet is a commercial one, then the producers who use the distillates as an input for their fortified wines and spirits do not need to be subsidised.

Some unanticipated side effects of the instruments may have also weakened the effectiveness of the CMO. Two major unexpected effects can be seen. First, as indicated in the chapter on planting rights, the rigidity of the management of the planting rights system may have hindered the adaptation of supply to the changes in the market's requirement. This rigidity has weakened the effectiveness of the planting rights measures. Second, we estimate that as much as 15% of the premium for permanent abandonment was used for grubbing-up table-grape or dry-grape vineyards that do not affect wine production. The EU financed the grubbing-up of around 50,000 ha that did not affect the equilibrium of wine production. However, in the longer run, distillation of table-grapes and dry-grapes (under Article 36 of Regulation 822/1987 and Article 28 of Regulation 1493/1999) may have been reduced as a consequence of the premium for permanent abandonment incorrectly paid for such vineyards.

Conclusions and Recommendations

THE EUROPEAN WINE INDUSTRY SHOULD BE ENCOURAGED TO REDUCE THE PRODUCTION SURPLUS AND ADAPT MORE RAPIDLY TO CHANGING WINE DEMAND PATTERNS

In the EU market there is a surplus of wine which is transferred to distillation. The wine production surplus cannot be easily disposed of in alternative outlets and enhancing demand for spirits would conflict with concerns associated with the increased risks of damage to health. On the other hand, bio-ethanol for industrial uses may be produced more cheaply using other agricultural plants. Production must adjust to the changing wine demand but, given the past evolution of the support measures, wine producers may need the market adaptation process to be eased.

CMO INTRODUCED ELEMENTS OF RIGIDITY THAT INDIRECTLY JEOPARDISE THE SCOPE FOR INCREASING THE COMPETITIVENESS OF THE EUROPEAN WINE INDUSTRY AND DID NOT FULLY MEET THE OBJECTIVE OF REDUCING WINE PRODUCTION SURPLUSES

The effectiveness of the CMO, both before and since the 1999 reforms, in influencing market equilibrium has been weakened by the rigidity of the planting rights system and by distortions created by subsidising distillation that generates an additional, artificial demand. In addition, the impact of the CMO has been weakened by an inappropriate implementation of the measures related to planting rights due to unreliability of data on production potential that was needed to monitor market changes and correct imbalances.

RIGIDITY IN RULES RELATED TO PLANTING RIGHTS HINDERED THE COMPETITIVENESS OF EUROPEAN INDUSTRY WINE PRODUCTION, WHILE THE IMPACT OF THE PREMIUM FOR PERMANENT ABANDONMENT- THOUGH EFFECTIVE - IS CONTRADICTORY…

Given the continuing shift in consumer demand from low quality table wine to quality wines, the measures related to planting rights introduced an element of market rigidity since they: (i) hindered a more rapid adaptation of the European wine sector; (ii) indirectly contributed to maintaining the EU surplus. Agenda 2000 trade liberalisation reforms and the increased pressures from non-EU countries imply that EU producers who could expand their quality wine psr production to meet consumer demand should not be hindered by new planting restrictions. Nor should the market be undermined by the continued presence of excess volumes of low quality table wines that depress the general level of producers' returns. Transfer of planting rights should be encouraged and an efficient management of the production potential should be ensured through the collection of reliable data on the EU's vineyard area. The premium for permanent abandonment proved to be more effective since it reduced the surplus area. Had those vineyards that have been permanently abandoned remained in production, the EU surplus would have been even larger than it is. The disposal of additional surpluses through distillation would have had a significant effect on the budgetary expenditure on the CMO.

…AND THE ANALYSIS HAS SHOWN THAT DISTILLATION INDIRECTLY ENCOURAGES THE PERPETUATION OF STRUCTURAL SURPLUSES

EU wine distillation measures are an effective means of influencing the volume of wine put onto the market; they act like an additional (artificial) demand and therefore imports are not harmed, but indirectly supported. The impact of CMO distillation measures on prices could be seen at the lower end of the price range, particularly in Spain, France and Italy. In low price markets the revenues from distillation generate a significant income for some producers. This income stabilising effect fulfils some aims of EU agricultural policy, but at the same time encourages the perpetuation of structural surpluses. Moreover, there is an apparent policy conflict between the aim of regional income stabilisation and development and market orientation of the production. The continuous average use of distillation for dual-purpose grapes since 1999/2000 could be an indicator of structural rigidity as it suggests that producers are not responding to changes in consumer demand.

THE CMO SHOULD AVOID EXPENSIVE INTERVENTION FOR STRUCTURAL SURPLUSES AND LAUNCH MORE LIBERAL POLICY INSTRUMENTS TO ENHANCE QUALITY WINE PRODUCTION

Crisis distillation is an effective but expensive method of dealing with periodic surpluses as it then involves the storage/disposal of the resulting alcohol. Distillation is not a cost-effective method of dealing with continuing structural surpluses. Aid for distillation into potable alcohol is particularly controversial since it subsidises part of the EU alcohol market by supplying cheap inputs on the rather dubious grounds that this maintains a traditional outlet for EU wine. There seems to be no good reason for preventing a more market-oriented approach to the supply of inputs to the spirits industry. As the reform of the CMO for wine in 1999 is so recent, only provisional judgement about the effects of the reform is possible but evidence shows that the new crisis distillation is more expensive than former obligatory distillation, although in some cases (e.g. France) it is not effective without additional national aid being provided.

THE RESTRUCTURING AND CONVERSION MEASURE IS ORIENTED TO ENCOURAGE VINE-GROWERS TO ADAPT THEIR VINEYARD AREAS TO MARKET REQUIREMENTS

The measure is improving the quality of the European vineyard area. This should lead to increased quality wine psr production in all Member States (included Germany Austria and Luxembourg despite their different rules). The total wine production could increase in the coming years due to the new yields, but serious doubts exist regarding the market's ability to absorb the future red wine production. Restructuring and conversion effects have a long-term impact but it is likely that these CMO measures will eventually have an important income effect in improving producer returns in the quality wine sector.

CMO'S QUALITY WINE PRODUCTION RULES GENERATE MARKETING CONSTRAINTS RATHER THAN TECHNICAL PROTECTION

The quality wine psr regime in Europe seems to be too restrictive. Large volumes of table wine are produced although they could be considered quality wines psr, because

as table wines enjoy fewer restrictions than needed to qualify as quality wines psr. The consumer takes into account when judging quality not only the differentiation by quality (table wine, quality wine) but also other factors that influence his perception of the price-quality ratio, e.g. packaging, origin and price. Trademarks are becoming more successful on the EU market, and are used by EU countries as well as by "new world countries". Various examples (see "Super Tuscans" which are only indicated as table wine or IGT) show that a lower level of restrictions for table wine, initially implemented to ease the production of cheap wines for daily consumption, is nowadays an important factor in providing a framework for innovative developments in the wine sector. Price competition is not the only explanation for the rapid increase of foreign table wine imports. Liberalisation of the EU market enabled imports of table wines (in particular) and sparkling wines from third countries, which were competitive. As a general concluding advice, wine production methods used in third countries should be allowed in the EC provided they are both safe and accepted by consumers. Hence, a new task for the CMO will be to improve the competitiveness of the EU wine sector; investment in marketing, reliable market information, and product development is needed to enable producers to find market outlets for their wines and thereby avoid future structural surpluses.

The FADN results show that between 1989 and 2000 there was a general increase in wine producers' incomes (as measured by FNVA/AWU). This increase was more for quality wine producers than for table wine producers at the EU level, though there is substantial variation between countries. These results suggest that the CMO measures have been effective in achieving their objective of helping to ensure adequate levels of income for wine producers.

CMO measures as a whole had a positive but limited effect on producer income and production structure, with significant regional/geographical/temporal variations in impact. In total, between 1988 and 2000, CMO expenditure was more than 10 billion euros.

TASTE, PACKAGING, IMAGE, STYLE ARE MAJOR FACTORS THAT NEED TO BE ENHANCED TO INCREASE THE COMPETITIVENESS OF EU WINE PRODUCTION

Taste, packaging, image, style are major factors that allowed foreign importers from Chile and Australia to acquire market shares in the EU market. Therefore, more effort should be spent on enhancing the wine product marketing mix other than price: product revitalisation (branding, labelling, quality perception), channel control and communication.

CMO TRADE MEASURES HAD A POSITIVE ROLE IN THE APPLICATION OF THE WINE CMO OVER TIME

Within this positive framework it is recommended the exploration of different opportunities to allocate the resources destined for export refunds. In fact, the pattern of distribution among Member States of export refunds may simply be the result of different export strategies but could also be due to an application scheme that is unable to preclude discrimination between the operators concerned. In addition, since the URAA (Uruguay Round Agricultural Agreement), the measures available to protect the EU market from serious disruption (additional import duty, prohibition on the use of inward-processing arrangements, appropriate measures to apply safeguard clauses)

have never been applied. Considering that: (i) competition in the world wine market is increasing; (ii) the main new world competitors are experiencing problems of over-production and (iii) the risk of severe imbalances in the market is becoming serious, it is recommended a rigorous analysis of the effectiveness of procedures for the prompt application of the measures.

DATA RELIABILITY IS A KEY FACTOR OF SUCCESS FOR POLICY IMPLEMENTATION

Data problems are significant and what is needed is renewed cooperation in CMO data monitoring and reporting between Member States and the Commission. The enlargement of the EU requires the new Member States to participate in the CMO. Effective participation will depend upon building national data collection capabilities and will require the provision of technical assistance to the relevant institutions. It is clear that greater efforts should be made by some Member States to adopt a common database, founded on the same criteria and terminology. If successful policy interventions are to be made, more reliable information on wine supply and demand is needed. Many wine sector participants recognise the need to adopt a more consumer-oriented approach to production and marketing of EU wines, but to adapt to the changing market they need more detailed, more reliable and more timely market information. Hence, a new task for the CMO should be to assist the wine sector by part-funding the development of better market intelligence through the collection and rapid dissemination of information on developments on both the demand and supply sides of the wine market. This should help market transparency for both large and small producers and their customers. It is therefore necessary to:

1. Ensure an appropriate level of investment in basic monitoring infrastructure: a higher level of investment will be required at the national level in data collection, market evolution monitoring and processing capacities.
2. Establish mechanisms for the provision of CMO information by Member States.

Coherent monitoring, collection, assessment and dissemination systems for providing data and information are required. Substantial efforts are needed to develop a proper network and to improve the capacity of the various national institutes in their task of providing information.

A CMO POLICY FORMULATION EXPERT GROUP SHOULD BE ESTABLISHED

An Expert Group should be established to assist the process of change by:

- exploring improvements in the production and marketing of EU wines to ensure better market balance over the long term;
- examining improvements in the intervention mechanisms;
- formulating a long-term strategy (comparable to Strategy 2025 in Australia, "Vision 2020 in South Africa" and "Wine Vision" in the USA);
- re-classifying wine categories whose differentiation is no longer adapted to market demand.

1. Introduction

This evaluation of the Common Market Organisation in the wine sector (Wine CMO) has been produced for the European Commission's Directorate General Agriculture under contract AGRI/EVALUATION//2002/6. The evaluation is part of the systematic evaluation programme for all agricultural measures.

The evaluation has been conducted and delivered in accordance with the terms of reference between October 2003 and June 2004 by INNOVA (Italy) with the following subcontractors: EUROQUALITY (France), FORSCHUNGSANSTALT GEISENHEIM and PHYTOWELT (Germany), HTTC (Greece), SPI (Portugal), FUNDECYT (Spain) and Mr John Malcolm (United Kingdom).

The Wine CMO covers not only traditional measures within CMOs (intervention, trade) but also other technical matters (provisions concerning production). The CMO for wine has gradually evolved since 1962, with most important regulations being adopted in 1987 (Regulation 822/87) and 1999 (Regulation 1493/99). The latest CMO regulations entered into force on 1st August 2000.

According to the terms of reference, the present study examines the effectiveness[2] and the efficiency[3] of the CMO measures between 1988 and 2003. The evaluation focuses on 6 major instruments:

- Limitation of planting rights and related measures.
- Distillation measures.
- Aid for private storage.
- Regulatory measures (enrichment, oenological practices, quality wine regime, labelling of products).
- Measures concerning trade with third countries.
- Restructuring and conversion of vineyards (included in the Agenda 2000 reform).

The evaluation considers the individual impact of each of the above-mentioned CMO measures as well as their overall impact. The influence of the CMO measures on producers' incomes and the production structure has also been assessed.

1.1. Structure of the report

This report begins with a description of the wine market and of the various regulations which together make up the Common Market Organisation (CMO) for wine. It then answers in detail the evaluation questions given in the terms of reference and sets out conclusions and recommendations.

The report is accompanied by an annex which goes into greater detail on a number of aspects of the evaluation and presents further figures and data used in the analysis.

Chapter 2 describes the general features of international and EU wine, grape juice and alcohol markets and draws attention to relevant changes in those markets.

Chapter 3 sets out a brief background to the wine CMO before and after the reform of 1999. The budgetary cost of the different measures is described. A section focuses on

[2] How the intended impact or the objectives of the measures were achieved.
[3] How the resources (financial, legal, administrative, etc.) were used in relation to the effects produced.

the issue of market equilibrium and the quantification of surplus in the EU wine market.

Chapters 4 to 9 correspond to the analysis of the following evaluation questions: planting rights; distillation; aid for private storage; regulatory measures; trade with third countries; restructuring and conversion.

Chapter 10 analyses the impact of the CMO measures on producers' incomes and on the production structures.

Chapter 11 deals with the overall impact of the CMO measures on market equilibrium and on prices, judging the effectiveness and the efficiency of the CMO as a whole.
In considering each evaluation question, the following structure has been adopted: i) introduction; ii) results of the analysis; iii) conclusions and recommendations (including a judgement on effectiveness and one on efficiency).

Chapter 12 presents the main conclusions and recommendations.

The document finishes with a list of the main references and a glossary of the terms used in the report.

1.2. Methodology

A combination of different methods and approaches has been used in the evaluation. These include reviewing the existing literature on the topics covered by the study, examining existing databases and interviews with stakeholders. It should be pointed out that the literature on several of the topics covered by the analysis is not publicly available or is rather limited.

The analysis of each evaluation question has followed the four-step approach usually adopted for policy evaluation exercises:

1. Structuring
2. Observing (data collection)
3. Analysis
4. Judgement

The **Structuring** consists in defining the key terms contained in the questions, indicating the judgement criteria used to examine each evaluation question and defining the indicators used to measure the impact. The structuring of each question has been carried out following the specific requirements and the characteristics of each single measure. Judgement criteria and indicators which have been used for the various specific measures are set out in the appropriate chapters.

The **Data collection** has been centred on quantitative and qualitative data (the latter gathered through interviews with both external and internal stakeholders)

Interviews with external stakeholders: these interviews elicited the views of experts with respect to the impact of the CMO, the functioning of the measures and the adequacy of funding. The strengths and weaknesses of CMO policies were the subject of questions relating to what should remain the same and what should be changed. The interviews were seen as an evolving conversation that allowed the key stakeholders the opportunity to explore their thoughts about the CMO and that allowed the interviewer to probe interesting comments more fully. The experts have used this approach to reveal routes of influence that might not otherwise be apparent in more formally

structured interviews. The interviewer recorded notes of the conversation on an interview form. Confidentiality of responses was guaranteed to those who agreed to be interviewed. The interviews were scheduled between November 1, 2003 and April 15, 2004. The Report's authors assigned significant importance to the qualitative side of the analysis which consisted in carrying out 48 focused interviews in 7 Member States, of which 35% were addressed to ministries and public agencies, 42% to producers and 23% to research organisations.

Interviews with internal stakeholders: an initial meeting was held between the evaluation team and the European Commission steering group on September 30th 2003. The purpose of the meeting was to explain the project's objectives, agree on the terms of reference and launch the project. On that occasion statistical data and documentation on the wine sector were provided to the evaluators. Subsequent meetings were held on November 17th 2003, January 19th 2004, March 15th-16th 2004 and May 19th 2004 between the experts and the steering group to review progress made in the course of evaluation.
In addition, the management and operations of the CMO were explored in detailed interviews with various members of the steering group. These interviews focused on questions about the structure of CMO governance, the application and awards procedures and the CMO financing. All of the internal stakeholder interviews were conducted in late February and early March of 2004.

Statistical data used have been provided by the European Commission (DG AGRI, Eurostat and FADN) and collected at national and regional level. Other data (vineyard areas, prices, distillation etc.) have been mainly collected by ONIVINS in France, AGEA, ISMEA and ISTAT in Italy, MAPYA in Spain, the National Statistical Office in Germany and IVV in Portugal.

Analysis
Empirical data was analysed using econometric models or descriptive quantitative analysis. Additionally, qualitative analysis was based on interviews and – where available – existing literature on the subject.

Judgement
Each measure has been judged in terms of effectiveness and efficiency.
The judgement of effectiveness mostly focuses on market equilibrium (in volume terms) and on market prices.
The evaluation of the efficiency of individual measures is a complex question because of the co-existence of different measures, which are interlinked and influence each other, and the differences between short- and medium-term effects. It has not been possible to estimate efficiency quantitatively, partly due to the lack of a generally accepted model of the wine market or previous academic studies that might have been used as a reference, and partly due to the inter-connected and overlapping nature of the various measures. Hence, the analysis of efficiency was done by means of a two-stage analysis: first a measure's budgetary cost was calculated and second the wider costs imposed on wine market participants and others were analysed qualitatively.

Last but not least, the chapters containing the detailed analyses are completed with **recommendations** for further development of the CMO.

1.3. Statistical shortcomings

The examination of the effects of the wine CMO has been hampered by shortcomings in the statistical information on the wine sector available to the European Commission. In addition, major data reliability constraints meant that significant time was spent on screening, double-checking, correcting and searching for data.

From the data that has been provided, it appears that the European Commission does not have a complete record of the developments within EU-15 since 1998.

A significant problem is that, whilst Member States are obliged to collect and submit to EUROSTAT a wide range of information relevant to policy issues, a number of Member States have been rather dilatory and inconsistent in supplying this data.

An example[4] can highlight this point: under the provisions of Regulation 1493/1999, any unauthorised plantings post 1st September 1998 must be grubbed-up. As of March 2004, the Commission did not have figures for the areas to which this grubbing-up rule had been applied, although Member States are under obligation to provide this information to the Commission.

A further example is that Italy, which was allocated 12,933 ha of the 51,000 ha of new planting rights allocated under Regulation 1493/1999 to allow the production of quality wines to expand, has yet to notify the Commission of the rights assigned in 2001/02 and 2002/03. Notwithstanding, Italy has requested additional planting rights to be allocated from the Commission's 17,000 ha reserve.

The data collection process was further burdened by the lack of an appropriately organised reporting process at the national level. In fact, some national statistical agencies do not seem to have a complete overview of data available in their country. Some Member States still use monitoring and calculation methods that are not EU harmonised and create problems for comparability.

The data problems are significant and what is needed is renewed co-operation on CMO data monitoring and reporting between existing Member States and the Commission. The expansion of the EU requires the new Member States to participate in the CMO. Effective participation will depend upon building national data collection capabilities and will require the provision of technical assistance to the relevant institutions in data handling and monitoring. It is clear that greater efforts should be made by some Member States to adopt a common database, founded on EU criteria and terminology.

The available data described the supply side, mainly with more or less global figures. Data about consumption in general are the result of calculations and are very global. The fast changes on the demand side caused many market problems, e. g. the switch from white to red wines, the success of "new world wines" in the UK, Germany and in the north of Europe. Therefore, short-term and detailed data about consumption are needed. They have to be reliable and publicly available because of the structure of the European wine industry, which is dominated by smaller estates, cooperatives and trading companies.

[4] Many examples could be given of discrepancies detected in wine prices, in import/export statistics, mistaken distillation quantities (i.e. figure for Italian table-wine distillation smaller than total Italian wine distillation) but here only the most significant discrepancies are illustrated.

2. Overview of the wine market

The chapter presents a description of the markets for wine, grape juice and alcohol, with special focus on the wine market. The analysis of the wine market has been carried out differentiating between the world wine market and the EU market. Further details of this chapter are given in the annex, Chapter 2.

2.1. The wine market

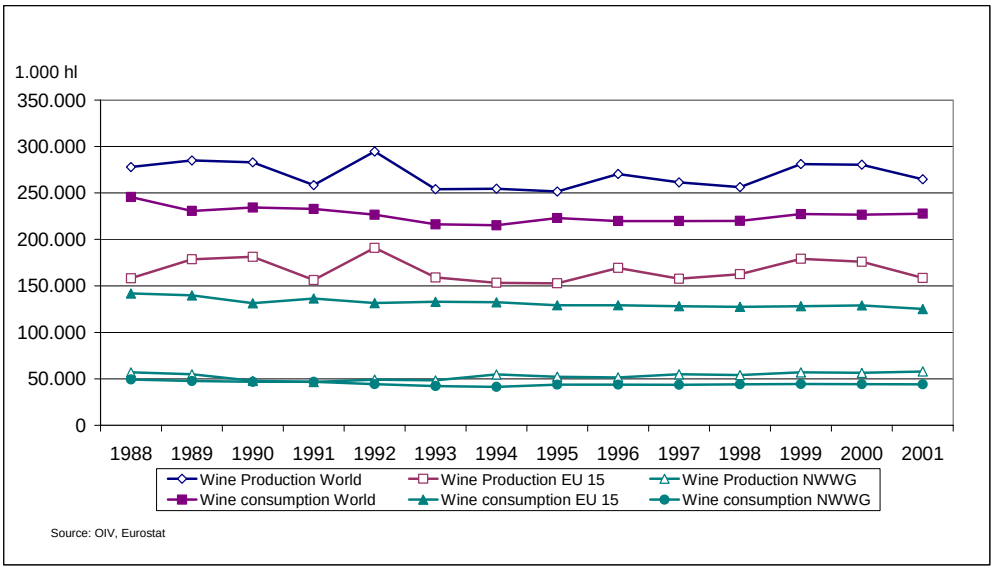
2.1.1. General structure of the wine market

The wine market consists of a number of overlapping and interrelated sub-markets (for a wide range of different quality wines as well as table wine). The wine market is much more vertically differentiated than the markets for other agricultural products. The segments with higher prices are very fragmented and show considerable product differentiation. The segment with lowest prices and lowest qualities is more homogenous and does not focus on particular quality criteria. This segment is related to demand for human consumption as well as for industrial uses.

There is no unique competitive market-clearing price, but a network of market-clearing prices linking the different segments. Surpluses of a high-priced wine category can be down-traded towards the next lower product category, with consequences for the market equilibrium in this sub-market. At the end of the cascade, prices for the lowest qualities of wine can be used as indicators of total market clearing prices because in this segment the demand is much more generalised, treating wine as a commodity.

2.1.2. The world wine market

Graph 1 Development of the wine production and consumption in the world (1.000 hl)



Graph 1 above gives an overview of the development of world wine production and consumption along with a differentiation between the EU-15 and the "new world wine countries"[5].
After a period of decreasing wine consumption up to 1993, the total wine consumption in the world is now steadily increasing, but has not yet returned to the level of the 1980s. The variations in annual world wine production are mainly determined by the variations of the wine production in the EU.

The world market for wine is characterised by tradition and dynamic development. Before 1970, the wine market could be described as a set of regional markets. In more recent years, world trade in wine has developed substantially leading to a significant change in the structure of the wine market worldwide.

Some keywords may describe the situation:

Globalisation
Increasing two-way trade in wine: increasing imports (see Graph 4 in the annex to this chapter) and exports (see Graph 5 in the annex to this chapter). The relative importance of the EU-15 is decreasing, while the relative importance of the "new world wine countries" is increasing (see Graph 2 in the annex to this chapter).

The main world wine exporters (WWE)[6] deliver more than 70% of world wine exports, EU-15 export quantities have been fairly stable in recent years, whereas EU imports in volume more than tripled during the eight years up to 2001, though admittedly from a fairly small base (see Graph 6 in the annex to this chapter). In the same period, EU export values doubled, while imports into the EU-15 more than quadrupled in value (see Graph 7 in the annex to this chapter).

The other main features of the changing world market have been the increasing importance of brands and of named grape varieties, as distinct from regional geographic indicators, in the marketing of wine; the increasing influence of world-wide marketing groups and the globalisation of grape varieties and methods of wine production.

Changes in demand behaviour
On the demand side of the wine market, major features have been reduced per-capita consumption in traditional wine-producing countries,[7] and increasing consumption of wine in a few, traditionally non-wine-producing countries of the Northern hemisphere such as the UK. A more recent development has been a rapid change in tastes from white to red wine since 1990.

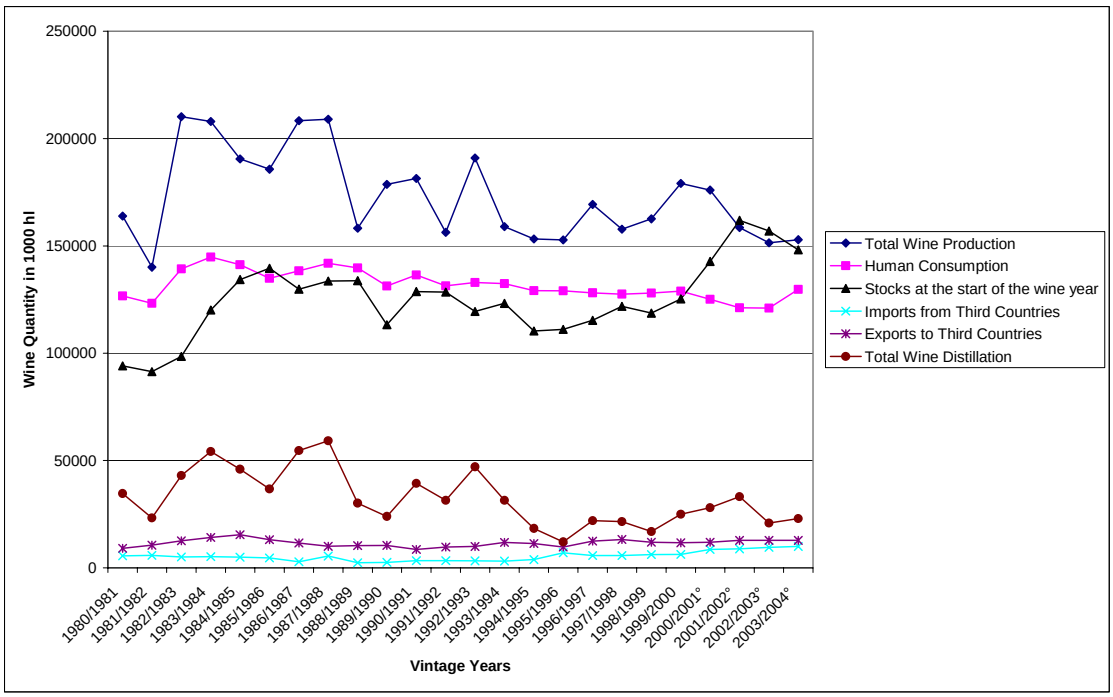
Market balance
Whilst wine consumption worldwide has increased during the past fifteen years, there are now signs that world productive capacity is increasing rather faster than consumption. In EU-15 as a whole, wine self-sufficiency (measured as production divided by consumption) is the highest in the world. Of course, on this definition of self-sufficiency, net exporting countries always exceed 100%. What matters is whether the exports are all commercially determined or some of them are assisted by subsidies. The EU has long had structural surpluses leading to a need to take steps to remove unwanted wine from the market[8].

[5] The new world wine group includes: Argentina, Australia, Chile, New Zealand, South Africa, and the USA.
[6] WWE includes: Italy, France, Spain, Portugal
[7] For example: Italy, France, Spain, Portugal, Argentina and Chile
[8] ABTEILUNG IX/E-5 1988, p.68f + 71-76.

As yet there is little sign of structural surpluses among the "new world wine countries", but the area of new vineyards planted in the very recent past does give rise to some concerns too. Australia, California and Chile between them planted some 100,000 hectares of new vineyards from 1998 to 2000 – this is the equivalent of the entire Bordeaux wine-growing area. Now that these vineyards are coming into full production, the level of self-sufficiency of the "new world wine countries" can be expected to rise further.

2.1.3. The EU wine market

Graph 2 EU wine market



Source: based on data from EUROSTAT: Agriculture: Statistical Yearbook 1999 and **www.europa.int/comm/agriculture/markets/wine/facts/index_en.htm**, updated by data from EC, DG AGRI, given in June 2004.

Graph 2 above shows that EU wine production has clearly exceeded EU wine consumption for more than two decades. That would be no cause for concern so long as net wine exports plus other commercial uses of wine make up the difference, but total wine consumption and net exports declined over the period and stocks have increased substantially. Moreover, not all the EU exports have been commercial sales for some of them have been assisted by subsidies (export refunds) and some of the other uses of EU wines and distillates have similarly been subject to non-commercial factors.

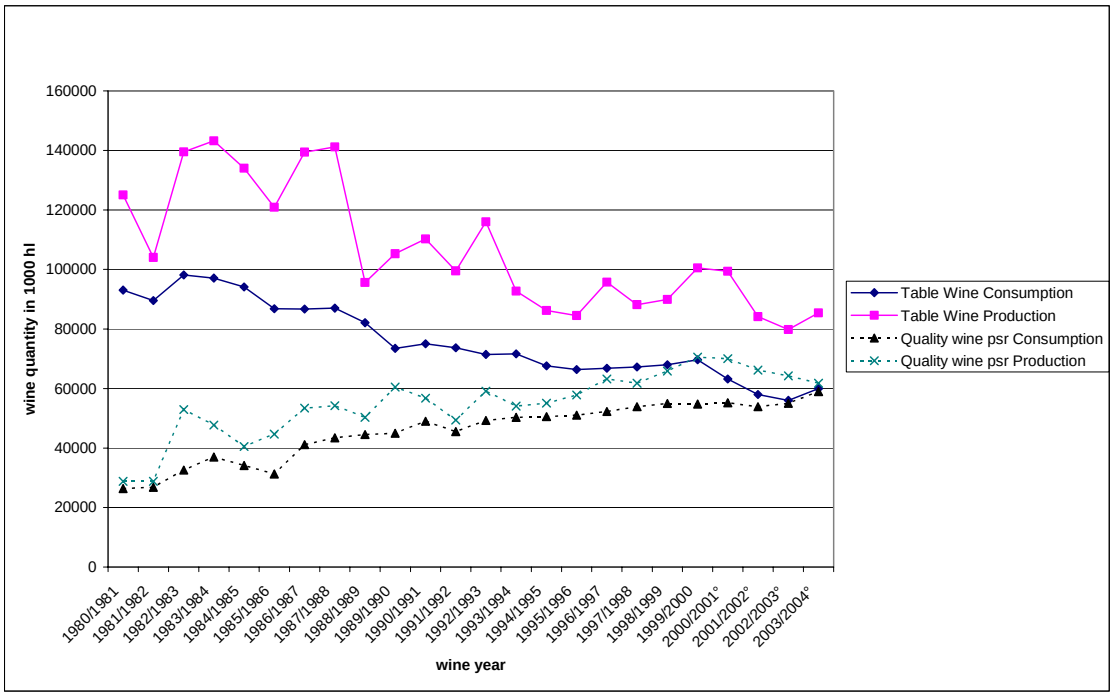
Where non-commercial disposals occur occasionally as a result of bumper harvests, the action to remove small, unwanted surpluses can be stabilising for the market as a whole. However, in the EU there is evidence that some of the surplus has been, and continues to be, of a structural nature leading to a continuing need for measures to remove unwanted wine from the market. This is examined in more detail in section 3.5.

The EU wine market has been affected by long-term changes in demand. The analysis of per capita consumption shows that there has been a long period of decreasing wine

consumption per capita in France, Italy and Spain[9]. Over the same period, wine consumption has increased in other countries such as Denmark, United Kingdom, Ireland and the Netherlands. The figures for Germany show a structural adjustment of per capita consumption due to reunification with the former German Democratic Republic (GDR) [10]. Currently, per capita consumption in Germany is also increasing.

Besides changes in per capita consumption, there has been long-term downward trend in both EU production and consumption of table wine and an increase in both production and consumption of quality wine as can be seen from Graph 3 below. In more recent years demand has shown a significant switch from white wine to red wine - most notably in Germany and the UK. Although EU table-wine production has declined, it has not matched the fall in consumption.

Graph 3 Table and quality wine - development of production and consumption in the EU (in hl)



Source: based on data from EC DG AGRI; °preliminary data.

Since the mid 1990s, imports have increased, whilst EU exports have remained broadly the same (see Graph 2). It is quality wine rather than table wine that finds a commercial export market; hence the basic problem for the EU is surplus table-wine production. As a result of this structural imbalance, substantial quantities of table wine have had to be distilled.

A detailed analysis of the changes in consumer preferences particularly in the non- (or low volume) wine-producing countries (e.g. Denmark, the Netherlands, the UK) and in Germany within the last ten years shows consumers' perceptions of wine quality are not automatically linked to the EU quality-wine regimes.
The reduction of tariffs on third country wines following the Uruguay Round Agricultural Agreement (URRA) coupled with well organised marketing campaigns and consumer-friendly labelling has resulted in a substantial increase in imports

[9] Except the last five years: 1997- 2001 stabilisation of consumption in Spain, see the annex Tables 6,16, 45.
[10] The consumption in the FRG was ca. 24 litres per capita, in the GDR the consumption was ca.12 litres per capita.

especially of "new world wines" into the EU's non-producing countries plus Germany and the UK[11].

In the past, consumers in the other wine-producing Member States have had a strong preference for their domestic wines. Now changes are appearing in their consumers' preferences with increasing sales of regional wine, labelled and marketed in a similar fashion to "new world wines"[12] just as in the EU's non-wine-producing countries.

2.2. Systems for processing grapes and marketing wines

Introduction

This section first summarises some key-points of different systems of processing grapes and marketing wines. Secondly, a basic typology of wine growing regions of Europe is presented, emphasising wine type structures important for the application of the CMO. There are many ways to group or differentiate wine-producing regions. As this study focuses on the effects of the wine CMO, we categorise wine-producing regions according to the importance of their quality-wine regime. However, in the resulting types of wine-producing regions variations may be found has shown in the examples quoted below.

Structures of supply, distribution channels and demand in EU Member States[13]

The EU wine sector shows continuing concentration and falling in the number of producers. During the last decade, the number of wine growers in France fell by 47% to 144,200 wine growers, whilst in Spain the decline was only 14% to 342,096 wine growers. Italian grower numbers fell by 35% to 700,000, but Italy still has the highest number of wine growers in EU. Although decreasing, co-operatives remain important in the European wine market accounting for some 40-50% of wine market volume.

Large players already dominate the distribution channels for wine and their importance is increasing among Member States; statistics on distribution channels show that supermarkets and discount stores have market shares significantly above 60% (France: 80%, Germany: 65%, Italy: 63%). Direct selling by the producer is largest in Germany, with 18% of total purchases.

Trends of wine consumption in EU Member States show decreasing wine consumption per capita in Member States with more than 30 litres consumption per capita and year. Wine consumption is increasing in Member States with per capita wine consumption significantly below 30 litres and is stable in Member States with around 30 litres consumption per capita (Greece).

Red wine consumption has increased significantly in the last decade, except in France, where it was already some 70% of total wine consumption. Table wine consumption is decreasing in the Mediterranean Member States. Wine consumption in restaurants and similar outlets continues to be of considerable commercial significance.

[11] See NOP (2000), RABOBANK (1999), GREEN et al.(2004) DALRUMPLE (2004), HEIJBROEK (2004).
[12] E.g. indication of grape varieties as main differentiating criteria.
[13] More detailed information is given country by country in the annex, Chapter 2.3, section "*short description of the wine sector in each country*".

Typology of wine producing regions in EU

Wine-growing regions with traditional focus on quality-wine regime
Wine-growing regions that traditionally focus on quality-wine regimes typically have long established quality rules and use familiar names. The traditional quality rules may be rather different between the various regions. For example, Burgundy focuses on site classification supported by production rules; Bordeaux uses indications related to (sub-) regional origins and individual wineries; Rioja uses indications related to regions and oenological processes (e.g. *Reserva*) and the German wine-growing regions have indications related to single sites and degree of maturity. These regions quality wines form a high percentage of total output and are mostly sold under regional or local names. The commercial success of wine growers in these regions varies a lot between and within the regions.

Wine-growing regions with main emphasis on table-wine production
A high proportion of wine from these regions is sold in the bulk wine market, where regional indications of origin have little importance. Two typical examples are Sicily and Castilla-La Mancha. Sicily has an old quality-wine regime tradition too, but the characteristics (red and dry) of the most famous Sicilian quality wine, Marsala, are no longer in great demand. Castilla-La Mancha delivers enormous quantities for brandy production, where no regional geographic indication is required. Both regions are making great efforts to move part of their production into a higher price range by developing new medium and high quality types of dry wines, with or without initiating quality-wine regimes.

Wine-growing regions with mixed structure of wine production
The third group of wine-growing regions, which has a mixture of quality and table wines, could also be named the "regional wine group", as wines with this indication have been increasingly successful in recent decades. However, high quality regional wines originating from quality-wine production (e.g. in Tuscany) have been less significant in volume terms than regional wines trading up from table-wine production (e.g. Veneto, Languedoc-Roussillon). A common characteristic of these regions is the existence of little known local quality wines psr that supply niche markets. In contrast, regional wine indications of these regions are well known, often related to specific grape varieties.

Key facts

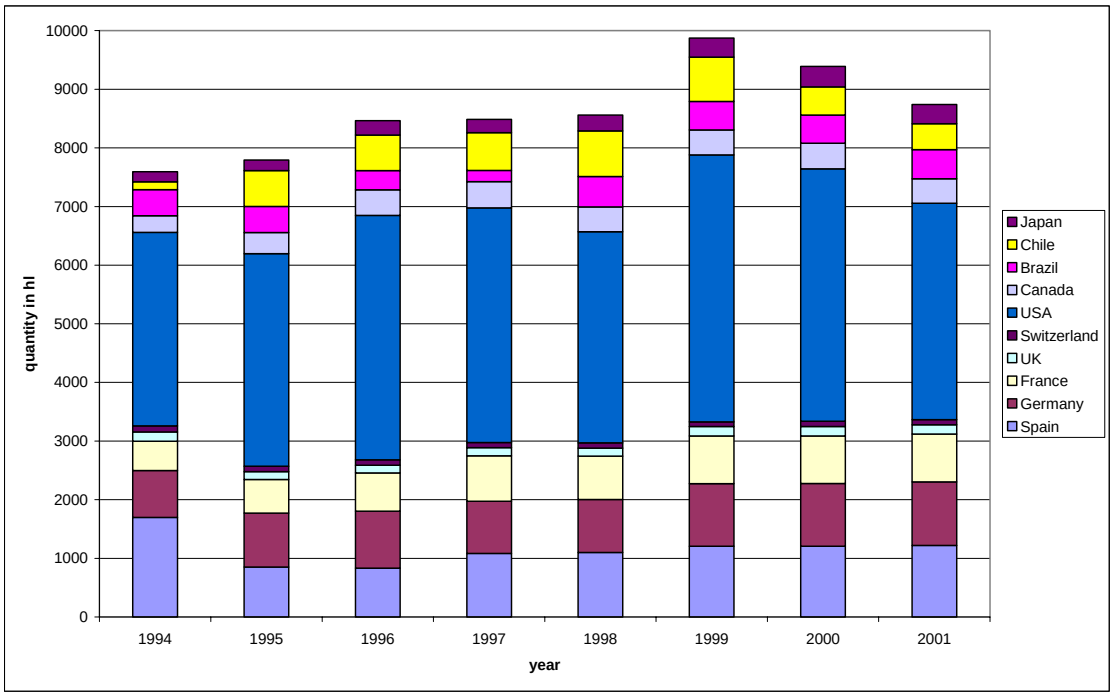
EU wine producers face declining domestic wine consumption per capita and increasing concentration in distribution, increasing imports from third countries and stable EU exports, hence significant price pressures. Overall the number of EU wine growers fell during the last decade by about 30%. The analysis of the three categories of wine-producing regions demonstrates that a number of different strategies can be successful in developing the wine market. The most successful marketing approach in the past decade seems to have been trading-up from table wines to regional wine production.

2.3. The grape juice market

Grape juice has only minor significance in the fruit juice market (around 5% of European as well as world wide total fruit juice consumption), which is dominated by citrus and apple juices[14]. Due to its high sugar content, much of the grape juice is used as an ingredient in mixed juices or juice based beverages to avoid adding sucrose. Pure grape juice has only a limited market due to its taste, (high grape sugar/acidity-ratio[15]) and high price relative to those of citrus and apple juices. Hence in total, only a relatively small amount of usable production of grape must is processed into juice.

In many countries, accurate information on grape juice production does not exist. However, according to consumption data (see Graph 4 below), worldwide yearly grape juice production is estimated around 10 million hl by OIV[16].

Graph 4 Consumption of grape juice in some countries



Source: based on data published by OIV (2004, p.31).

The difference between total and fermented grape must production reported in OSCE statistics was used as an estimator for production of grape must for juice in the EU. According to this approach Spain, France and Italy are the most important EU Member States producing grape must for juice. Unfermented grape must production is on average 3% of total usable production of the EU Member States.

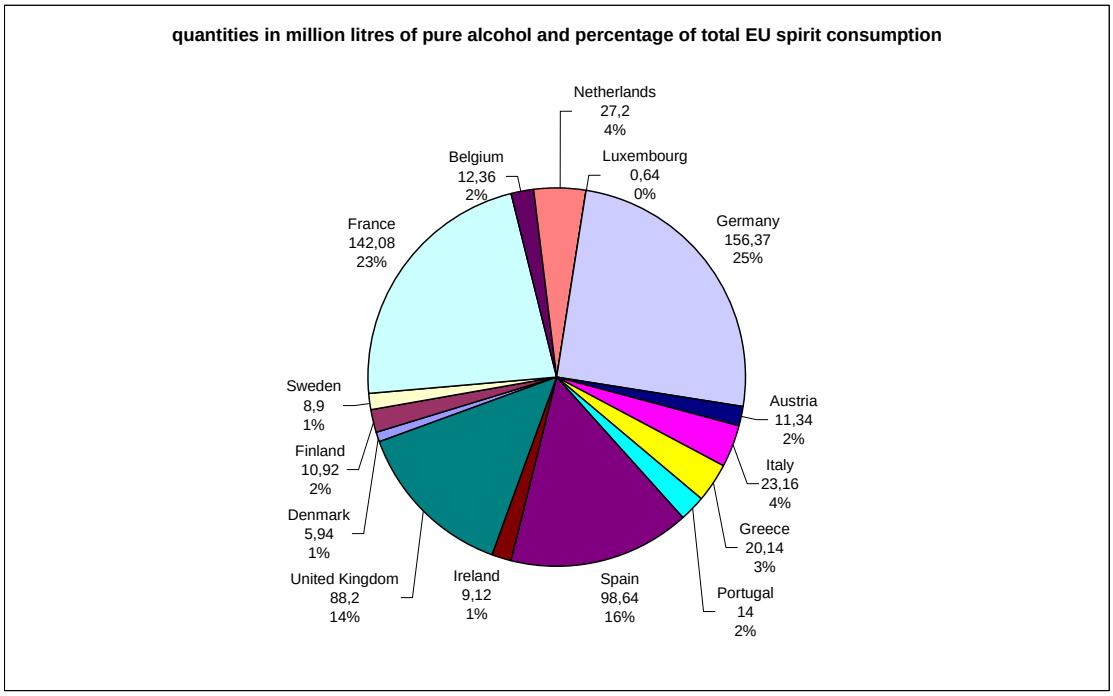
[14] See SCHOBINGER (2001, p.21-23)
[15] High sugar content of grapes leads to a sweeter, less refreshing juice than from citrus fruits and apples.
[16] OIV (2004, p. 31)

2.4. The alcohol (ethanol) market

The ethanol market comprises two sectors: uses for human consumption and industrial uses. Traditionally, for human consumption ethanol based products, such as potable alcohol and vinegar, are made out of agricultural products. Up to 15% of ethanol for human consumption could be replaced by synthetic alcohol, but this is not done.

In absolute figures Germany, United Kingdom and Spain are the most important spirit markets of EU (see Graph 5 below). The development of spirit consumption has been quite different in the various EU Member States: while in Germany, Greece, Portugal and Sweden consumption per capita has tended to decrease, it remains stable in most Member States and is increasing in Belgium, Ireland and United Kingdom.

Graph 5 Spirit consumption in the EU Member States in 2001



Source: based on data in world drink trends 2003 and EUROSTAT population statistics.

For industrial uses, e.g. for fuel, as a solvent and as chemical raw material, synthetic alcohol now meets around two thirds of demand and neutralised alcohol from agricultural origins around one third. Without subsidies, ethanol made out of agricultural products is not competitive with prices of synthetic alcohol.

With respect to the aim of developing renewable energy sources for industrial uses, use of alcohol of agricultural origin for industrial uses is being promoted[17] and partly subsidised. However, there is much controversy concerning subsidies for bio-ethanol[18]. Even if the case for subsidised agricultural bio-ethanol production is accepted, from an economic viewpoint distillation of wine into bio-ethanol is questionable because bio-ethanol can be produced more cheaply from other agricultural products.

[17] See Directive 2003/30/EC of the European Parliament and the Council of 8 May 2003 on the promotion of the use of bio-fuels or other renewable fuels for transport.

[18] "2003/238/EC: Commission Decision of 15 May 2002 on the aid scheme implemented in France applying a differentiated rate of excise duty to bio-fuels (notified under number C(2002) 1866)" gives a good overview of argumentation of different point of views concerning subsidies on alcohol market for industrial uses.

3. The common market organisation for wine

3.1. Background to the wine CMO

The wine CMO is based on the principles of a single market with harmonised technical and administrative legislation, and no customs duties or other trade barriers to the free movement of wine between Member States.[19]

As a result of the Treaty of Rome in 1957, a common agricultural policy for the EC was developed as well as a customs union[20]. This meant an extreme change for wine market policies of the Member States, where the wine markets were usually highly protected[21]. In 1959, the implementation of common customs tariffs initiated the standardisation of the wine market in the EC.

The first legal texts laying down provisions for the progressive establishment of a wine market organisation were published in 1962[22]. The initial measures were aimed at improving the balance between supply and demand within the EC wine market. Vineyard registers were established along with the annual declaration of production and stocks. However, in 1969 wine was the last important agricultural product that was still subject to national rules[23].

In 1970, the first CMO for wine was established by two formal CMO regulations relating separately to table wine and recognised quality wines[24]. Community preference was ensured through a system of variable levies on imports of wines from third countries. These were followed in 1976 by a regulation prohibiting new plantings of vines for table-wine production, and subsidising the conversion of vineyards to other agricultural products.

In 1980, new regulations established premiums for temporary and permanent abandonment of wine-growing areas and special distillation measures were introduced with the objective of reducing the wine surplus.

In 1982, the distillation measures became a permanent feature of market regulation. However, the resulting continuation of large-scale distillation led in turn to the problem of a building up of stocks of alcohol and their disposal costs.[25] The Dublin Agreements in 1984 introduced a stepwise reduction of quota for distillation measures.

The CMO was further reformed in 1987, on the basis of the Dublin Agreements, and again in 1999 when many changes had occurred in the European wine market since the 1987 reform.

Following the 1987 reform, the market balance improved and the size of production surpluses decreased somewhat during the 1990s. However, the success of quality wines produced in specific regions (quality wine psr) did not match the decrease in table wine consumption and the European vineyards were getting old. Added to the

[19] More details concerning basic principles are given in the annex, section 3.1.
[20] ABTEILUNG IX / E-5, 1988, p.43-45. – This EU publication is also available in English language (Wine in the European Community, ISBN 92-825-7666-3) ; in this study the German edition has been used.
[21] ABTEILUNG IX / E-5, 1988, p.47.
[22] ABTEILUNG IX/E-5 1988, p.50.
[23] ABTEILUNG IX/E-5 1988, p.54.
[24] ABTEILUNG IX/E-5 1988, p.54.
[25] Some more details concerning the period 1962-1987 are given in the annex, section 3.1

risk of surplus production due to the substantial weather determined fluctuations of each vintage, there were some clear long-term structural surpluses in various regions where production no longer matched demand. On the other hand, other regions were producing wines for which domestic and foreign demand was outstripping supply, thereby justifying expansion.

The entry in force of the URAA (Uruguay Round Agricultural Agreement) in 1995 had important consequences for the whole sector. The trade regime with third countries profoundly changed and the EU market is now much more open to world competition. The third countries' market has developed and international trade has increased.

Given this new structure and the great complexity of the legislation, a reform was needed to improve competitiveness of EU wine in both the internal and external markets. This led to Council Regulation (EC) 1493/1999.

3.2. EU legislation in the wine sector from 1988 to 2000

In 1987 two main regulations concerning the wine sector, following the old separation between table wine and quality wine, were established:

- Regulation (EEC) 822/87 on the common organisation of the market in wine.
- Regulation (EEC) 823/87 laying down specific provisions relating to quality wines produced in specific regions.

Tables 1, 2 and 3 give an overview of the instruments of the CMO wine in force between 1988 and 1999 and their related expected impacts.

Table 1 Instruments in force between 1988 and 1999

Instruments	Date of introduction	Characteristics	Subject	Expected impact	Budgetary cost
New planting of vines	1976	General ban on planting new vineyards Exemptions: - Derogation for research program, breeding - Development program - new planting right in case of insufficient supply (decided by the European Council)	Production potential	Market equilibrium through the control of vine potential	No direct cost
Replanting	1976	Replanting rights can be allocated to vine grower that 1) have grubbed a certain area of their vineyard 2) buy planting right of another vine grower (transfer)	Production potential	Adapt wine supply to market demand Renewal of the vineyard	No direct cost
Premium for permanent abandonment	1976	Encouragement to temporary or permanent abandonment of areas planted with vines. Premiums may vary according to the yield, the type of cultivation and the vine variety	Production potential	Reduction of vine potential	Yes
Obligatory distillation of table wine	1982	Obligatory distillation of table wine in case of a serious overproduction	Table wine	Market equilibrium	Yes
Obligatory distillation of by-products	1976	Obligatory distillation of by-products as wine lees and grape marc	By-products	Improving wine quality	Yes

Table 2 CONT'D (1) - Instruments in force between 1988 and 1999

Instruments	Date of introduction	Characteristics	Subject	Expected impact	Budgetary cost
Obligatory distillation of wine from dual- purpose grapes	1976	Obligatory distillation of wines, which originate from other than grape wine varieties or dual-purpose grapes produced in excess of the normal verified quantity	wine made of dual-purpose grapes	Market equilibrium by reducing surplus quantities.	Yes
Voluntary distillation	1976	- Preventive distillation at the start of the wine year - Support distillation - Supplementary distillation for guarantee of "Good End" of storage contracts	Table wine	Market equilibrium	Yes
Private storage aid	1970	The amount of aid may cover only technical storage costs and interest charges	Table wine, grape must, (rectified) concentrated grape must	Market equilibrium	Yes
Aid for specific uses	1978	Aid for the use of grape must as grape juice, for enrichment or "home made wine-kits"	Grape juice, concentrated grape must, rectified concentrated grape must	Reducing wine quantity, Balancing enrichment costs for producers in southern and northern wine growing zones	Yes

Table 3 CONT'D (2) - Instruments in force between 1988 and 1999

Instruments	Date of introduction	Characteristics	Subject	Expected impact	Budgetary cost
Rules of oenological practices and processes	1970, modified	General rules for production of wine	All	Quality safety	No direct cost
Quality wine regime	1970, modified	Rules for the production of quality wine	Quality wine	Improving quality	No direct cost
Rules for labelling	1970, modified	Rules concerning description, presentation, use of geographical indications and other practices, e.g. oenological indications	All	Fair competition, Support of quality products	No direct cost
Import requirements	1959	Common customs tariff of the Member States Free circulation between Member States Import licence needed for trade with third countries Import duties for wines from third countries (covered by GATT-agreements)	all	Development of EC single market, Balancing the EC market	No
Export refunds	1987	Refund to cover the difference between world and EC market prices (revised by GATT-agreements)	Table wine	Export support	Yes

3.3. The new Common Market Organisation for wine after the reform in 1999

3.3.1. The aims of the new Common Market Organisation for wine

The wine CMO reform in 1999 focused on seven main targets[26]:

- Maintaining an improved balance between supply and demand on the EU market, by enabling the producers to exploit expanding markets.
- Improving the competitiveness of the sector.
- Avoidance of the use of intervention as an artificial outlet for surplus production.
- Maintaining the traditional outlets for potable alcohol and vine-based products.
- Respecting regional diversity.
- Official acknowledgement of the potential role of the producer and inter-branch organisations.
- Considerable simplification of the legislation.

Ensuring "a fair standard of living for the agricultural community" remains, of course, an important aim of agricultural support measures as it is enshrined in Article 39 of the Rome Treaty.[27]

3.3.2. The application of the CMO for wine after the reform of 1999

The new CMO entered in force on August 1st, 2000. It is based on Council Regulation 1493/1999, subsequently slightly revised by Council Regulation 2585/2001. It was adopted within the framework of the global agreement of Agenda 2000 and on the following application regulations:

- Regulation (EC) 1227/2000 on the production potential.
- Regulation (EC) 1623/2000 on the market mechanisms.
- Regulation (EC) 1282/2001 on the market information.
- Regulation (EC) 1622/2000 on the oenological practices.
- Regulation (EC) 1607/2000 on the quality wine psr.
- Regulation (EC) 2729/2000 on control in the wine sector.
- Regulation (EC) 883/2001 on the trade with third countries.
- Regulation (EC) 884/2001 on documentation.
- Regulation (EC) 753/2002 on labelling.
- Regulations on crisis distillations.

Tables 4 to 6 below give an overview of the CMO instruments in force following the 1999 reforms and the expected impacts. More detailed information concerning the different instruments of the CMO is given in the annex (section 3.3).

[26] European Commission 1998, p.4.
[27] Regulation 1493/1999, paragraph (2) of introduction.

Table 4 Instruments in force following the reform of 1999

Instruments	Date of introduction	Characteristics	Subject	Expected impact	Cost
Planting of vines	1976 (repeatedly renewed)	General ban on planting new vineyard until the end of 2010	Production potential	Market equilibrium through the control of vine potential	No direct cost
New planting rights	Modified in 1999	Allocation of new planting rights up to a limit of 68.000 ha on Community level. Priority can be given to young and newly established producers.	Production potential	Adapt vine potential to market demand and allow an increase of vine potential to producer facing an increase of their demand	No direct cost
Replanting	1976 Modified in 1999	Replanting rights can be allocated to a vine grower that 1) has grubbed a certain area of their vineyard 2) buys planting right of another vine grower (transfer) 3) buys planting right from the national or regional reserve To avoid interruption of production, it is possible to acquire planting right before the corresponding grubbing	Production potential	Adapt vine supply to market demand Renewal of the vineyard	No direct cost
Premium for permanent abandonment	1976	Encouragement to permanent abandonment of areas planted with vines. Premiums may vary according to the yield, the type of cultivation and the vine variety	Production potential	Reduction of vine potential	Yes
Restructuring and conversion	Re-introduced in 1999 (1978 first, but it was not in force immediately before 1999)	Subsidy to compensate loss of revenue and to contribute to restructuring and conversion cost to a maximum of 50 or 75%. Plan to be drawn by region and approved by Member States. Type of cost covered: - Change of the vine variety - Replanting of vineyard on a better site - Improvement of vineyard management	Production potential	Adapt the production to market demand (restructure production potential in term of quality and quantity)	Yes

Table 5 CONT'D (1) - Instruments in force following the reform of 1999

Instruments	Date of introduction	Characteristics	Subject	Expected impact	Cost
Obligatory distillation of by-products	1976	Obligatory distillation of by-products as wine lees and grape marc	By-products	Improving wine quality	Yes
Obligatory distillation of wine from dual- purpose grapes	1976	Obligatory distillation of wines which originate from other than grape wine varieties or wine from dual-purpose grapes produced in excess of the normal verified quantity	wine made of dual-purpose grapes	Market equilibrium by reducing surplus quantities	Yes
Distillation for potable alcohol	1999	Voluntary distillation of table wine	Table wine	Market equilibrium	Yes
Crisis distillation	1999	Voluntary exceptional distillation in case of serious market disturbance	Wine, limited on certain types, areas	Market equilibrium by reducing surplus quantities	Yes
Private storage aid	1970	The amount of aid may cover only technical storage costs and interest charges	Table wine, grape must, concentrated grape must, rectified concentrated grape must	Market equilibrium	Yes

Table 6 CONT'D (2) - Instruments in force following the reform of 1999

Instruments	Date of introduction	Characteristics	Subject	Expected impact	Cost
Rules of oenological practices and processes	1970, modified	General rules for production of wine	All	Quality safety	No direct cost
Quality wine regime	1970, modified	Rules for the production of quality wine	Quality wine	Improving quality	No direct cost
Rules for labelling	1970, modified	Rules concerning description, presentation, use of geographical indications and other practices, e.g. oenological indications	All	Fair competition, support of quality products	No direct cost
Import requirements	1959	Common customs tariff of the Member States Free circulation between Member States Import licence needed for trade with third countries Import duties for wines from third countries (covered by GATT-agreements)	All	Development of EC single market, Balancing the EC market	No
Export refunds	1987	Refund to cover the difference between world and EC market prices (revised by GATT-agreements)	Table wine	Export support	Yes
Aid for specific uses	1978	Aid for the use of grape must as grape juice, for enrichment or "home made wine-kits"	Grape juice, concentrated grape must, rectified concentrated grape must	Reducing wine quantity, Balancing enrichment costs for producers in southern and northern wine growing zones	Yes
Rules concerning producer and sectoral organisations	1999	Definition of the fields of work and responsibilities	All	Improving development of the sector	No direct cost

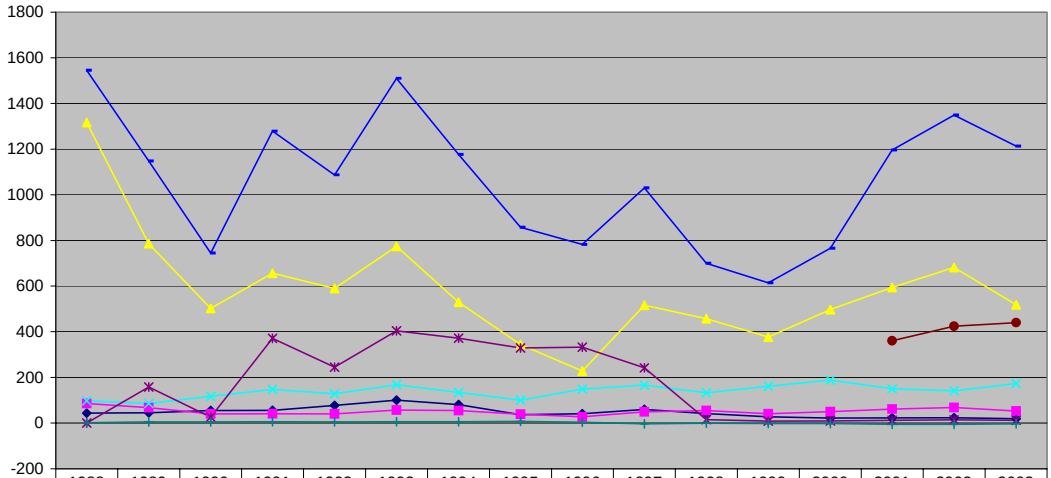
3.4. Budgetary cost of the different measures

3.4.1. The budget of the Common Market Organisation for wine

The guarantee section of the European Agricultural Guidance and Guarantee Fund (Guarantee EAGGF) finances the measures of the wine CMO.

Between the year 1988 and 2001, the wine sector represented on average 3.1% of the total EAGGF (maximum 5.78% in 1988, minimum 1.55% in 1999). This implies that the total budget for the CMO for wine was on average 1,035 million euros per year.

Graph 6 Evolution of the budgetary cost of the CMO (1988 to 2003) in million ECU



	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Export refunds	43,508	45,295	54,655	55,501	77,266	100,213	80,429	36,700	40,800	59,700	41,300	27,400	21,507	22,471	23,776	19,558
Storage	85,522	67,410	39,898	41,149	40,354	57,468	54,446	38,800	27,900	49,100	55,000	41,200	50,250	61,706	68,534	53,182
Distillation	1316,3	785,785	502,336	656,326	590,381	774,165	529,610	344,300	227,700	516,400	457,200	377,100	497,395	594,623	681,909	517,801
Must utilisation	98,115	86,095	117,410	147,609	128,327	167,706	134,000	100,700	148,800	166,400	132,601	161,400	188,414	150,306	141,191	173,502
Abandonment	0,000	157,912	25,719	371,115	245,455	403,765	372,000	329,600	333,100	242,100	15,200	9,000	9,493	12,152	13,959	12,043
Restructuring														360,433	424,277	440,207
Other	2,106	5,248	5,161	6,432	5,358	6,263	5,758	7,400	3,900	-3,600	-1,155	-1,500	-1,566	-4,990	-4,892	-3,253
Total	1.545,5	1.147,7	745,179	1.278,1	1087,1	1.509,5	1.176,2	857,500	782,200	1.030,1	699,971	614,600	765,493	1196,70	1348,75	1213,04

Source: based on data from the European Commission.

Graph 6 shows the evolution of the budgetary cost of the CMO (1988 to 2003).

The following calculations take into account that the budget recorded for one year is mainly related to expenditure concerning the vintage of the previous year, e.g. the budget in 2000 is mainly related to the wine-year 1999/2000. Hence, for differentiating the periods of different CMO frameworks, budgetary costs were distinguished for the periods 1989-2000 and 2001 to date.

Table 7 Breakdown of the budgetary costs per instrument covered by the study

Instruments	Budgetary cost (average 1989-2000)	Budgetary cost (average 2001-2003)
Distillation	Yes, 54% of the CMO budget, 522 million euros/year	Yes, 48% of the CMO budget, 598 million euros/year
Premium for permanent abandonment	Yes, 22% of the CMO budget, 210 million euros/year	Yes, 1% of the CMO budget, 13 million euros/year
Aid for must utilisation	Yes, 14% of the CMO budget, 140 million euros/year	Yes, 12% of the CMO budget, 155 million euros/year
Aid for private storage aid	Yes, 5% of the CMO budget, 47 million euros/year	Yes, 5% of the CMO budget, 61 million euros/year
Export refunds	Yes, 5% of the CMO budget, 53 million euros/year	Yes, 2% of the CMO budget, 22 million euros/year
Restructuring	-	Yes, 33% of the CMO budget, 408 million euros/year
Planting of vines	No	No
New planting rights	No	No
Replanting	No	No

Source: based on data of the European Commission, DG Agriculture.

It should be recognised that whilst there were no direct budgetary costs for the last three measures listed above, indirect (administrative) costs were incurred to the national budgets in monitoring the application of these instruments.

Between 1989 and 2000, the distribution of the total budget between the different measures was as follows (see Table 7):

- 54% for the distillation
- 22% for the premium for permanent abandonment
- 14% for the aid for must utilisation (enrichment)
- 5% for the measures related to private storage
- 5% for the export refunds.

The main features of the wine CMO budget during 1989-2000 were:

- The importance of the measures relating to market intervention and in particular the measures relating to distillation (distillation of wine and by-products plus disposal of alcohol resulting from the distillation) that represent in total over 50% of the CMO budget.
- The reduction in expenditure on the premium for permanent abandonment (from around 300 million euros annually during 1994-1997 to around 10 million euros annually since 1998).
- Nearly 75% of the budget (distillation and premium for permanent abandonment) was dedicated to ensure market equilibrium by reducing the volume of table wine on the market.
- Expenditure on export refunds was reduced as a result of the URAA (Uruguay Round Agricultural Agreement).

Distribution per Member State

Between 1989 and 2000 the largest beneficiary of the wine CMO budget was Italy (40.5% of total budget) followed by Spain (30.0%), France (22.8%), Greece (3.2%), Portugal (2.6%) and Germany (0.8%). Table 8 shows the relative shares of Member States in wine production and in wine CMO expenditure:

Table 8 Share of wine CMO expenditure and wine production per Member State (averages from 1989 to 2000)

	% of the CMO expenditure	*% of the total European wine production*	*% of the total table-wine production*	*% of the total quality-wine production*
Italy	40.46	34.41	46.27	18.17
Spain	29.97	18.54	19.45	18.50
France	22.83	33.26	25.09	39.78
Greece	3.17	2.26	3.55	0.50
Portugal	2.56	4.45	4.84	4.58
Germany	0.79	6.29	0.52	16.80

Source: Based on data from European Commission.

As can be seen, the share of the CMO expenditure is much more closely aligned to Member States' shares of table-wine production than quality-wine or total wine production. Although Italy received the largest share of EU CMO expenditure, the country which benefited most in relation to its volume of production is Spain, with 19% of table-wine production yet 30% of average CMO expenditure.

3.4.2. The budgetary cost after the reform of 1999

The budget of the new CMO was around 1197 million euros in 2001, 1349 million euros in 2002 and 1213 million euros in 2003.

Following the 1999 reform, the relative importance of expenditure on the various instruments has changed. Between 2001 and 2003, the distribution of the total budget between the different measures was as follows (see Table 7):

- Nearly 50 % for the measures related to distillation
- 33 % for the measures related to restructuring and conversion
- 12 % for the aid for concentrated must utilisation (enrichment)
- 5 % for the aid for private storage
- 2 % for the export refunds
- 1 % for the premium for permanent abandonment

Distribution among Member States

Between 2001 and 2003, the biggest beneficiary of the budget was Spain (36.4%) followed by Italy (31.9%), France (21.7%), Portugal (5.0%), Germany (2.5%) and Greece (1.5%).

The main features of the wine CMO budget for the first years following the reform of 1999 are:

- Measures related to market intervention and in particular the measures related to distillation (distillation of wine and by-products plus disposal of alcohol resulting from the distillation) remain as important as before the reform. These still represent over 50% of the CMO budget.

- Restructuring is now the second most important instrument in terms of budgetary expenditure. Since 2001, the European budget dedicated to restructuring measure has been roughly equivalent to the budget dedicated to premiums for permanent abandonment in the years 1988-1995.
- The budget for export refunds has become insignificant in relative terms (from 5 % before the reform to 2% of the total CMO budget since 2001).
- Expenditure on the other instruments (aid for use of grape must and aid for private storage) remains roughly the same.

Key facts

The wine CMO represents only 3% of the total EAGGF expenditure. Italy used to be the most important budget beneficiary of the wine CMO. Since the 1999 reforms, Spain has become the prime beneficiary. Nearly 75% of the CMO budget has been allocated to measures aimed at improving market equilibrium. Following the 1999 reforms, the major change has been the reduction in the budget for the permanent abandonment premium - the distribution of the budget among the other measures did not alter significantly.

3.5. Common market organisation and wine market equilibrium

This section focuses on the problem of market equilibrium. As mentioned in previous sections, the main objectives of the CMO are to stabilise markets and ensure a fair standard of living for the agricultural community concerned. In the previous section on the CMO budget, the budgetary importance of those instruments related to market equilibrium has been underlined: between 1989 and 2000 nearly 75% of CMO budget was dedicated to assisting equilibrium in the wine market.

3.5.1. General considerations on market equilibrium

The total market supply (in Hl) is composed of the volume of the EU production of wine (table wine and quality wine psr) plus imports, plus the accumulated stock. Demand comprises domestic EU demand plus third country demand for EU exports.

If price were the only market clearing mechanism, market equilibrium would occur at the price where the quantity demanded by buyers is just matched by the quantity supplied by sellers. At market equilibrium there would be neither shortage, nor surplus[28]. Reduction of surplus in such a market system would lead, via decreasing prices, to serious income losses for producers. In reality, stock changes and intervention measures such as distillation are used to bring supply into line with demand.

It has to be kept in mind that for a long time the wine market has been subject to intervention measures, which have greatly influenced the development of prices, producers' incomes[29] and market volume. Therefore, no independently developed

[28] In a market with complete price flexibility, surplus is the quantity of a product, which finds no demand at a zero price. Losses due to production costs exceeding the market price would force producers to adapt their production towards the market demand.

[29] Important aim: stabilising prices and avoiding income losses.

market-clearing price exists. Hence, we must look at the question of market equilibrium by looking at the evolution of supply and demand and the unwanted surpluses.

In examining the question of surpluses, it is important to distinguish the occasional surplus production that inevitably arises due to climatic factors from structural surpluses that mean that even in low-yielding years there are unwanted quantities and stocks of wine.

Occasional surpluses or deficits in production occur in many agricultural markets where yields vary significantly form one year to another causing high or low harvests in relation to the level of demand. Such occasional surpluses and shortages would be expected to sum to zero over a period of years, say 5 to 10 years. However where a five-year moving average is consistently above zero this is an indicator of the existence of a long-term, structural, surplus.
A structural surplus of production exists when the productive capacity of the industry is such that even in a below average yield year, more is produced than the market can accommodate.

Wine production is subject to fluctuations from year to year due to climatic factors totally beyond the control of producers. During the 1990s, annual EU wine production fluctuated between a high of 191 million hectolitres (in 1992/93) and a low of 152 million (in 1995/96). Consumption is more stable and where it alters, it tends to do so in a consistent trend over a period of years[30]. Such wide fluctuations in production inevitably lead to market imbalance with years in which production exceeds demand and others in which there is a deficit.

In a free market, the swings between surplus and deficit would result either in price variations from one year to another or changes in the volume of stocks or some combination of the two. Strong price variations – particularly very low prices over a longer period – would have an impact on production and producer income. The highest cost producers would be forced to leave the sector and production would come in line with demand with prices settling around a long-term equilibrium level.

However, over the period covered by this evaluation the economic environment of the European wine sector has been greatly affected by the CMO for wine. Minimum prices were created by the existence of the different distillation measures and a fully functioning free market was not in operation. The risk of a long-term low price situation was eliminated by the distillation measures and annual surpluses were taken off the market. Therefore producers could include the minimum prices in their price expectations.

The quality-wine market seems to be well accustomed to dealing with the annual fluctuations in yield, mainly through storage – which also enhances the quality of many wines. In contrast, table wines, especially the lowest quality wines, do not improve with lengthy storage hence annual fluctuations in production lead to price fluctuations and income instability for producers.

One of the objectives of the wine CMO has been to try to reduce market imbalances through measures such as aid to private storage of wines and the distillation of excess wine in high-yield years. It is vital in this context to distinguish between the occasional surpluses (and their corresponding deficits) caused by climatic variations from one

[30] The detailed annual data are shown in the annex to this chapter, section 3.4.

season to another and structural surpluses which mean that surpluses can arise even in below average-yield years.

Regulation 822/1987 recognised the presence of structural surplus, repeating in its preamble such phrases as: "whereas the situation of the wine market with its large surpluses is deteriorating very rapidly" and "whereas the structural surpluses which are currently a feature of the wine sector". Although the 1999 reforms (regulation 1493/1999) were enacted against a rather different background, the preamble to the regulation nevertheless includes the words "while structural surpluses are less frequent." implying the recognition that they still exist. The issue, therefore, is not whether surpluses exist but rather to identify the size of the overall surplus and determine the extent of structural and occasional surpluses.

3.5.2. Review of indicators and calculations used to identify and quantify the surplus

Stock levels and normal utilisation

The most common indicator that has been used to identify a surplus situation is an abnormal level of stocks. Under Regulation 822/1987, the Commission uses stock levels (in absolute and months of usage terms) as an indicator for market imbalance and a trigger for intervention.

Ratio of availability and utilisation

The French and some other authorities use trends in the ratio between availability and utilisation as an indicator of the state of the market.

Distillation as an indicator of surplus

The wine regime's main market intervention measures, aimed at balancing the market, are distillation measures. Thus the amount of wine going into distillation is an indicator of surplus.

However, since distillation has a number of different objectives, we distinguish between three different categories of distillation measures.

- The distillation of by-products which is aimed at assuring the quality of EU wines and which has no significant volume effects on the wine market[31].
- Distillation into industrial-use alcohol by the measures of dual-purpose grapes distillation, compulsory distillation (or crisis distillation after 1999), supplementary ("good end") distillation which all aim at supporting producers' incomes by taking unwanted product off the market. Quantities that are regularly distilled are indicators of structural surplus, occasionally distilled quantities may be judged as occasional surplus.
- Distillation into potable alcohol (mainly preventive distillation before 1999) which gives rise to marketable related products such as inputs into brandy and vermouth is done every year. The distillers are paid a subsidy in order that they may pay a minimum price to the wine producer, which thus puts a floor price into the wine market. It is argued that the subsidy is to "preserve traditional outlets for EU wine" by enabling the distillate to compete with other sources of alcohol. It is a mechanism to aid the sale of an output for which there is no commercial market at

[31] See Chapter 5 section 5.2.6 on by-product distillation for detailed discussion.

the current price level. Thus the distillation subsidy has the same effect as export refunds in maintaining an otherwise non-commercial outlet[32].

Quantities that are regularly distilled are indicators of structural surplus, temporary increases in the distilled quantities may be judged as addressing occasional surpluses. Hence we show two indicators of surplus: total distillation excluding distillation of by product (indicator for total surplus); and total distillation excluding distillation of by product and distillation into potable alcohol (indicator for mainly occasional surplus).

More details on the indicators can be found in the annex (section 3.4, *Market equilibrium, the problem of quantification*).

3.5.3. Choice of the surplus indicator for this study

In summary, there are several ways of estimating the size of the surplus. The most common indicators used by the Commission and the wine industry are the level of stock expressed in months of normal use as well as the simplified wine balance.

In the annex (section 3.4 *Market equilibrium, the problem of quantification*) we give some estimates of size of the surplus in the main producing countries using figures from OSCE (*Bilan d'approvisionnement définitifs*).
These calculations show that different indicators give very different results. Indicators taking into account stocks are usually higher than indicators without stocks (simplified balance). It also reveals that distillation for potable alcohol has a significant impact on the surplus quantification.

We conclude that the most relevant indicator is the simplified wine balance set out below. We abstract from stock quantity integrating indicators, as storage of wine is part of quality management of many wine types (e.g. Reserva) and hence continuously important quantities of wine have to be stocked.

A simplified wine balance links the annual output and utilisation of wine to calculate whether the year's production has been in surplus or deficit. Because some commentators and policy makers argue that distilling wine for potable alcohol is a commercial outlet, we show two measures of the surplus in the following tables, though we are of the view that the larger measure is more representative of the true position.

Surplus1 Annual Surplus 1 = total EU wine production + total imports – direct human consumption –commercial exports – total other uses (by-product and eau de vie distillation) Surplus 2 Annual surplus 2 = annual surplus 1 - distillation for potable alcohol

[32] It is a political decision to judge the importance of the effect on wine-producers' incomes of surplus disposal via the aid for distillation into potable alcohol. Because it is alleged that distillation into potable alcohol preserves a "traditional outlet" for wine, some policy makers do not include the wine distilled into potable alcohol as being surplus to the market's requirements. However we follow the clear agricultural economics science distinction between a free market and one in which produce can only be sold with the aid of a subsidy, direct or indirect.

3.5.4. Quantification of the surplus at EU level

In the following analysis we show both measures of the surplus, including and excluding wine distilled for potable alcohol (see Table 9 and Graph 7).

Table 9 Quantification of the EU wine surplus (in million HL)

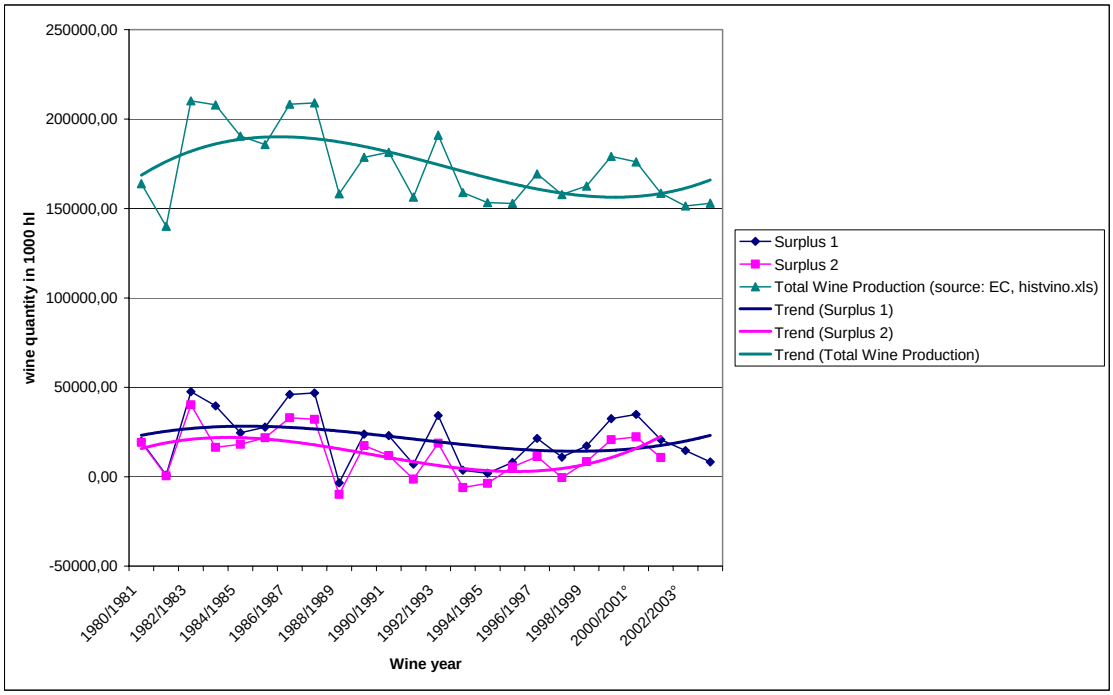
Wine year	Surplus 1	Surplus 2	Distillation for potable alcohol	Total wine intervention distillation (excluding by-product distillation)
1980/1981	19.8	19.2	0.6	23.5
1981/1982	1.0	0.5	0.5	14.3
1982/1983	47.5	40.2	7.3	21.6
1983/1984	39.6	16.5	23.1	34.2
1984/1985	24.6	18.1	6.5	28.4
1985/1986	27.7	21.8	5.9	21.9
1986/1987	46.0	33.0	12.9	37.0
1987/1988	46.8	32.1	14.7	44.7
1988/1989	-3.3	-9.9	6.5	19.0
1989/1990	23.8	17.5	6.3	11.9
1990/1991	23.0	11.9	11. 1	26.3
1991/1992	7.0	-1.4	8.4	21.4
1992/1993	34.2	18.8	15.4	33.1
1993/1994	3.6	-6.1	9.7	20.7
1994/1995	2.0	-3.7	5.7	7.3
1995/1996	8.1	5.5	2.6	3.3
1996/1997	21.5	11.3	10.2	12.6
1997/1998	11.0	-0.5	11.5	13.5
1998/1999	17.3	8.5	8.8	9.5
1999/2000	32.5	20.8	11.7	13.9
2000/2001°	34.9	22.3	12.6	20.1
2001/2002°	20.8	10.8	10.0	18.2
2002/2003°	14.6			
2003/2004°	8.3			

* Annual Surplus 1 = total EU wine production (-2%) + total imports – direct human consumption –commercial exports – total other uses (= brandy (cognac), vinegar, vermouth, losses); Annual surplus 2 = annual surplus 1 - distillation for potable alcohol; ° preliminary data .
Source: based on data from EC, communications of the Member States (wine intervention distillation quantities, excluding by-product distillation) and EC, histvino.xls, updated by EC DG AGRI in June (all other data).

Both measures show the highest surplus in the late 1980s (surplus 1: ca. 46.8 million hl, surplus 2: ca. 32.1 million hl in 1987/88). The surpluses then fell until the mid 1990s, when some low-yielding years reduced surplus measure 1 to low levels; coupled with high levels of distillation for potable alcohol, surplus measure 2 became negative. Since then more normal yields and a somewhat higher production area have raised again the average surplus until 2001/2002 to above 20.8 million hl (surplus 1) and 10.8 million hl (surplus 2). Preliminary estimates show that the surpluses fell back in 2002/03 and 2003/04 but remain significantly above the levels of the mid-1990s.

Where there is a deficit (“negative surplus”) shown, this reflects the fact that in low harvest years a larger than usual share of demand has been met from sales of stocks (particularly of quality of wine) held from earlier years. Indeed an important feature of the quality-wine market is that wine is stored because quality improves with age.

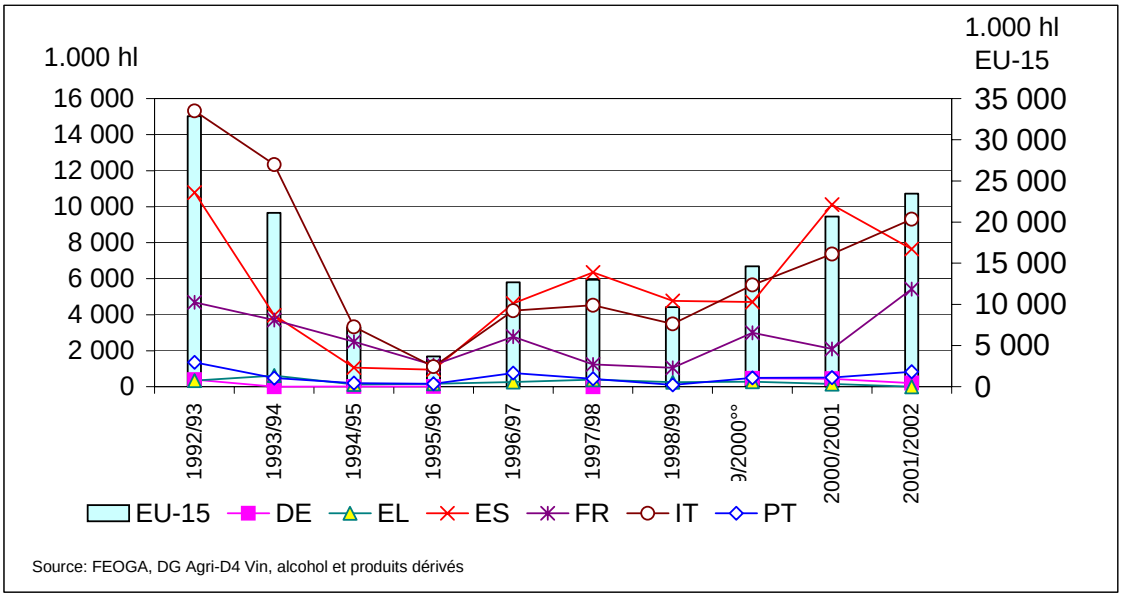
Graph 7 Annual surplus of EU wine market – estimate based on simplified wine balance sheet



Source: based on data from EC, communications of the Member States (wine intervention distillation quantities, excluding by-product distillation) and EC, histvino.xls, updated by EC DG AGRI in June (all other data).

The comparison between EU wine production and EU wine surplus (surplus 1) shows that since 1980/1981 there has only been one deficit year (1988/89) compared to twenty years of surplus. Although the level of the surplus has varied considerably, this demonstrates that as well as temporary surplus due to good harvests, there has also been an underlying structural surplus. The existence of surplus production means that the EU has had to resort to the distillation of unwanted wine on a regular basis as can be seen from Graph 8.

Graph 8 Volume of table-wine distillation in the EU per country (in 1,000 hl)



Source: FEOGA, DG Agri-D4 Vin, alcohol et produits dérivés

An analysis of the data broken down into quality wine psr, table and "other wines"[33] for the EU-15 and the main wine-producing Member States France, Italy and Spain is presented in the annex (section 3.4 – *Market Equilibrium, the problem of quantification*). It shows that, after a decade of decline, the annual surplus started to rise for quality wine psr in the first third of the 1990s and for the table wine towards the end of the 1990s. Now both categories show significant surpluses.

Key Facts

The major issue is not whether surpluses exist but rather to identify the total size of the surplus and determine the extent to which it is structural or occasional. There is no consensus on the way of estimating the size of surplus. We consider that the most relevant indicator is the simplified wine balance. As distilling wine for potable alcohol is a commercial outlet, two measures of surplus are used (surplus 1 including distillation for potable alcohol and surplus 2 excluding distillation for potable alcohol). Since 1980/81 there has been only one deficit year (1988/89) compared to twenty years of surplus. This demonstrates that, as well as temporary surpluses due to good harvests, there has also been an underlying structural surplus.

[33] "Other wines" are defined here according to the EU wine balance sheets: wines from third countries and wines produced in EU that are not table wine or quality wine psr, e.g. wine made from dual-purpose grapes for wine spirit production.

4. Planting rights

Does the limitation of planting rights and the different measures linked to it (in particular the attribution of new planting rights, the possibilities of transfers of replanting rights and aid for abandonment of wine growing area) have a significant impact on:
- the volume of supply, and hence on market equilibrium in the EU
- the level of market prices in the long term
- the adapting of supply to market requirements in qualitative terms
- costs of production in the Community and the competitive position vis-à-vis imports?
If impacts can be identified, what is their dimension (with regard to other determining external factors) and are they achieved at a reasonable cost (budgetary and other)?

4.1. Introduction

The evaluation question deals with two instruments used to reduce production potential:

- The ban on planting new vineyards, which allows derogation (new planting rights and replanting).
- The payment for permanent abandonment of wine growing area.

The measures were introduced to tackle the structural surplus that emerged during the 1970s. When it was first introduced, the ban on new plantings was considered a temporary measure, but since then it has been continually extended. The aim of the instrument is to control the volume of supply of the final product (wine) through a control of the production capacity of the raw material (wine grape).

EU regulations do not impose any direct constraint on the yield, which is the other main factor that determines the volume of supply and is a constraint used in certain Member States for quality-wine production. Table 10 sets out the instruments covered by the evaluation question.

Table 10 Instruments covered by the question

Instruments	*Introduced in*	*Characteristics*	*Expected impact*	*Budgetary cost*
Planting of vines	1976	General ban on planting new vineyards	Market equilibrium	No direct cost
New planting rights	1976	Allocation of new planting rights -new planting right decided by the Council -Derogation for research programme, breeding -Development programme	Adapt supply to market demand by allowing an increase of vineyard area for producers facing increased demand	No direct cost
Replanting	1976	Replanting rights can be allocated to vine growers who 1) have grubbed a certain area of their vineyard 2) buy planting rights (transfer)	Adapt supply to market demand Renewal of the vineyard	No direct cost
Premium for permanent abandonment	1976	Encourage permanent abandonment of areas planted with vines. Premiums vary according to yield, type of cultivation and the vine variety (from 1.4k to 12.3k Euro/ha)	Market equilibrium though the reduction of production potential	Between 1991 -97: 210mln euros/year on average

The volume of production is determined by the area of vineyards (in ha) multiplied by the average yield (Hl of wine/ha). Some aspects of yield can be controlled or

influenced by the grower (e.g. number of vines per ha) but annual yield is mainly dependent on the weather. Hence, the effectiveness of the planting rights measures has to be judged by assessing whether supply controls are appropriate and examining their influence on the trend over time in the structural surplus.

The premium for permanent abandonment also has a direct impact on the wine supply through reducing productive capacity. The measure can be considered effective if it encouraged the grubbing up of vineyards no longer capable of meeting market requirements. Thus for both planting rights measures and the premium for permanent abandonment the analysis centres on the trends in yields and planted areas over time and considers the volume of table-wine production that might now be expected to occur in "average weather" years.

Judgement of the efficiency of the measures depends upon their cost compared to the reduction in surplus wine production.

The analysis, which has been made at national level with a more detailed analysis for some regions, is both quantitative and qualitative, with the views of experts being taken into account. The main statistical sources used are EU (Eurostat), ONIVINS and OIV.

More information on the methodology used to answer the different questions and on the data used in this section can be found in the annex to this chapter.

The chapter starts with background information on the implementation of the measure and the evolution of the area. An answer to the four sub-questions (impacts on market equilibrium, the level of market prices in the long term, adaptation of supply to market requirements in qualitative terms and production cost) is then provided. Judgement of effectiveness and efficiency together with recommendations are given in the concluding section.

4.2. Results of the analysis

4.2.1. Implementation of the measure

The basic principle of the planting rights measures is that vines cannot be planted unless a right to replant or a right to make a new planting is held by the vine-grower. There is a general ban on new vineyard plantings with exemptions. Major features of the planting right measures are recalled in the annex to this chapter (section 4.2 – *Implementation of the planting right measures*).

The 1999 reform made significant changes. The existing ban on new plantings has been maintained and the provisions regarding replanting rights did not significantly change. The major change was the creation of 68,000 ha of new planting rights, of which the Commission allocated 51,000 ha among the Member States for them to distribute to individual wine-growers. The 1999 reforms also reduced the use of the premium for permanent abandonment. This, together with the introduction of new planting rights and national or regional reserves, marked a significant change in EU policy:

- From 1988 to 1996, EU policy encouraged the grubbing up of vineyards.
- Since 1996, the EU has allowed an extension of the vineyard area.

After 1996 there was a weakening of the restrictions on planting rights in that there was decreased use of the premium for permanent abandonment and when the annual agricultural price package was agreed by the Council of Ministers, new planting rights were allocated to relevant Member States for the production of quality wine psr and table wines with geographical indications. In 1999 the approach of reducing the total area was formally abandoned in favour of controlled expansion plus restructuring and varietal conversion.

EU regulations define the legal framework but the implementation of the measure is to a large extent decided by the Member States. A recall of the main principle of the measure and a description of the implementation in the main Member States is given in the annex to this chapter (section 4.2 – *Implementation of the planting right measures*).

Although the planting rights measures have been in place for nearly 30 years, their implementation still poses problems. The most important problem is the unacceptable unreliability of the data on the EU's total vineyard area. This is mainly due to the continuing delay in the implementation of a wine register in some Member States and the statistical shortcomings referred to in the first chapter. Despite new provisions introduced in 1999 (establishment of inventory see Article 16 of Regulation 1493/1999), the situation has not improved. Since the year 2000, detailed figures on the Italian area have not been available.
An analysis of these weaknesses is given in the annex (see the annex to this chapter – section 4.2 *Implementation of the planting right measures*). It shows that despite provisions in different regulations, the European Commission does not have sufficiently reliable information to monitor market changes and correct imbalances.

4.2.2. Evolution of the vineyard area

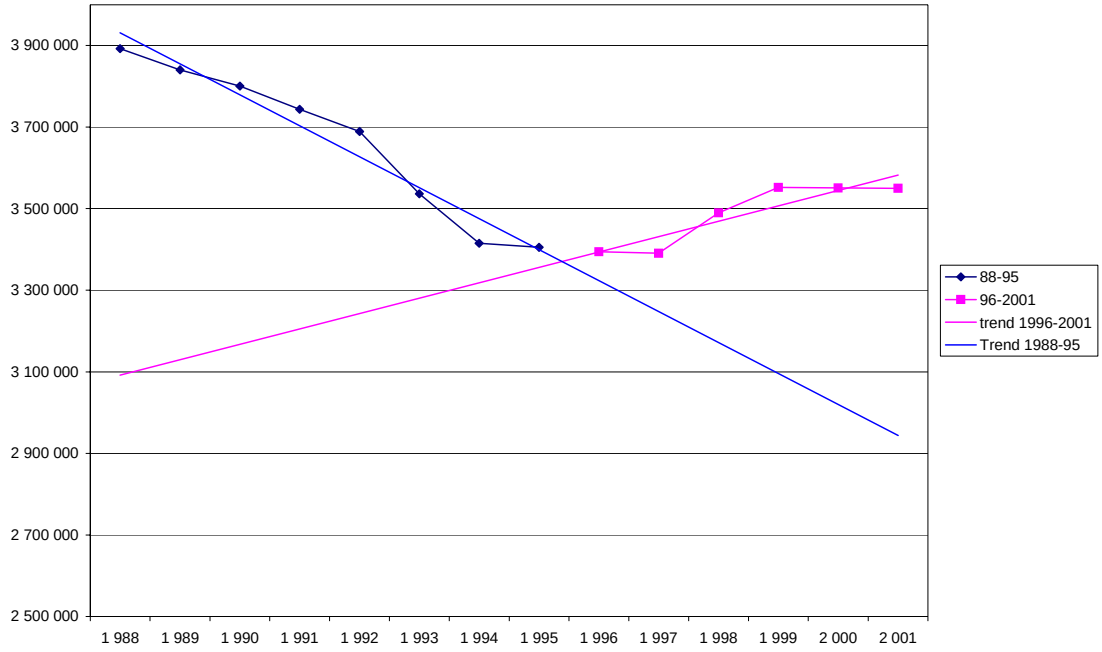
A detailed description of the evolution of the vineyard area at EU, national and regional levels and a summary of the CMO instruments influencing vineyard area are presented in the annex to this chapter (see section 4.3 – *Evolution of the area*). The main findings are summarised below:

- All EU Member States present a similar pattern of vineyard-area evolution, namely a decrease in the area dedicated to table-wine production and increase of the area dedicated to quality-wine production.
- For countries where table wine represents a major share of the total area, the reduction in the table-wine area has outweighed the increase in the quality-wine area.

At EU level, two main periods can be distinguished:

- The area decreased by around 500,000 ha between 1988 and 1996 with a sharp fall between 1988 and 1993 (some 40,000 ha per year) and a smaller reduction between 1994 and 1996 (some 10,000 ha per year). During the same period around 500,000 hectares benefited from the aid for permanent abandonment.
- The area increased by around 160,000 ha between 1997 and 2001 with an increase between 1997 and 1999 and relative stability in 2000 and 2001.

Graph 9 Evolution of the vineyard area (in ha)



In sum, it has been observed that:

- Despite the ban on vineyard plantation, the European vineyard showed important changes between 1988 and 2001.
- The premium for permanent abandonment and the conditions for its implementation seem to have been effective in reducing the table-wine area.
- However, the granting of new planting rights has counterbalanced this reduction, with increased total vineyard area since 1997. This increase was only in quality wine psr and table wine with geographical indications (TGI).
- The transfer of planting rights led to a significant increase of the area of quality-wine vineyards in the main producing countries (Spain, Italy and France).

As a result, the EU table wine area has reduced and that of quality wine psr and table wine with geographical indications has risen.

4.2.3. Area and production: the influence of the yield

An analysis of yield evolution is presented in the annex to this chapter (section 4.4 – *Area and production: the influence of yield*). There is no simple linear relation between the trend of area and that of the volume of production; rather there is a close relation between yield and production[34]. As well as the area, climatic conditions, changes in wine-grape varieties and in husbandry practices influence the year-to-year volume of production.

Yields are directly or indirectly limited by several aspects of the European regulations[35] and are also influenced by vine variety, the age of the vineyard,

[34] As shown in Graphs 37 and 38 in the annex to this chapter.

[35] Compulsory distillation discouraged high-yield production by requiring the distillation of the production in proportion to the yield (the higher the yield, the higher the quantity to be distilled)

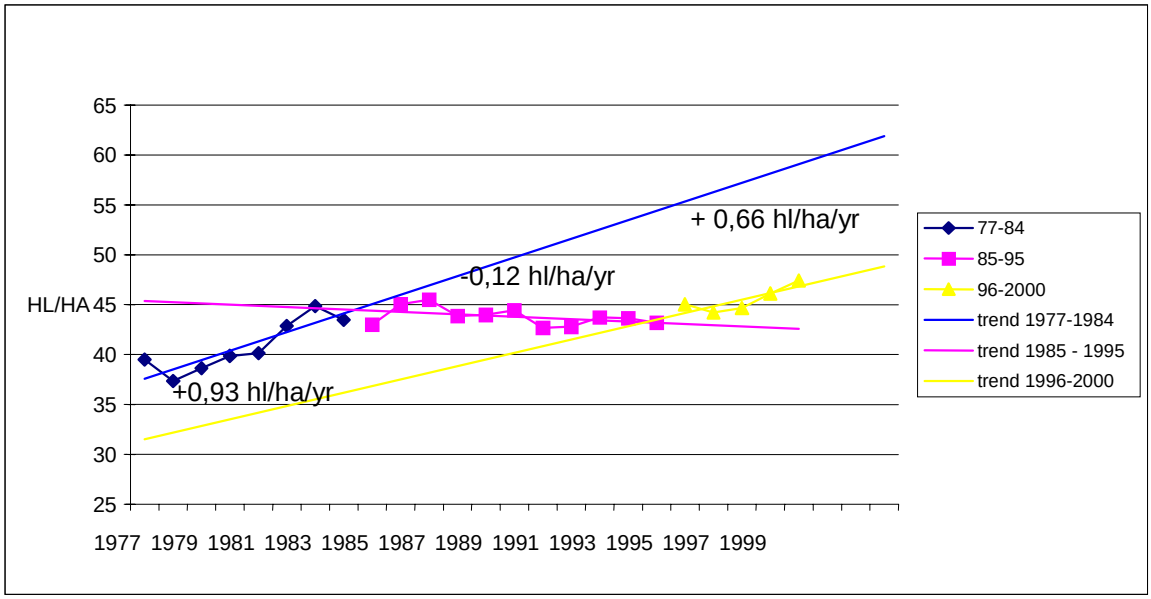
cultivation and wine-making practices. Yield can vary from 20 to 200 HL/ha. Important differences can be noticed between Member States[36]. Yields also vary between regions (due to density of plantation, share of area dedicated to quality wines as well as climatic and soil type factors).

Data on yields from 1973 to 2000 have been examined in details (see the annex to this chapter, section 4.4 – *Area and production: the influence of yield*).

Trends have been calculated for three periods, corresponding to the period of implementation of instruments influencing the yield:

- Before 1984 (no compulsory distillation).
- From 1985 to 1995 (compulsory distillation and premium for permanent abandonment in force).
- After 1996 (end of the use of compulsory distillation, much reduced use of premium for permanent abandonment).

Graph 10 Evolution of yield for the 6 main producing countries



As Graph 10 reveals, during the first period (1977 to 1984), yield was on average increasing from about 0.9HL/ha annually. During the second period (1985 to 1996), yield decreased by about 0.1 HL/ha per year. Between 1996 and 2000 yields annually increase about 0.66 HL/ha.

Figures presented in the annex show that almost all countries present similar trends: increase before 1984, decrease between 1984 and 1996, increase after 1996. This indicates that yields seem to have been influenced by the CMO instruments (compulsory distillation, which discouraged high yields, and the premium for permanent abandonment which reduced the area of high yield, low-quality vineyards). The evolution is Spain has to be underlined with a sharp increase of the yield since 1996 (+1.9 HL/ha per year between 1996 and 2000).

[36] Highest yields in Germany and lowest yields in Portugal and Spain

4.2.4. Impact on market equilibrium in the EU

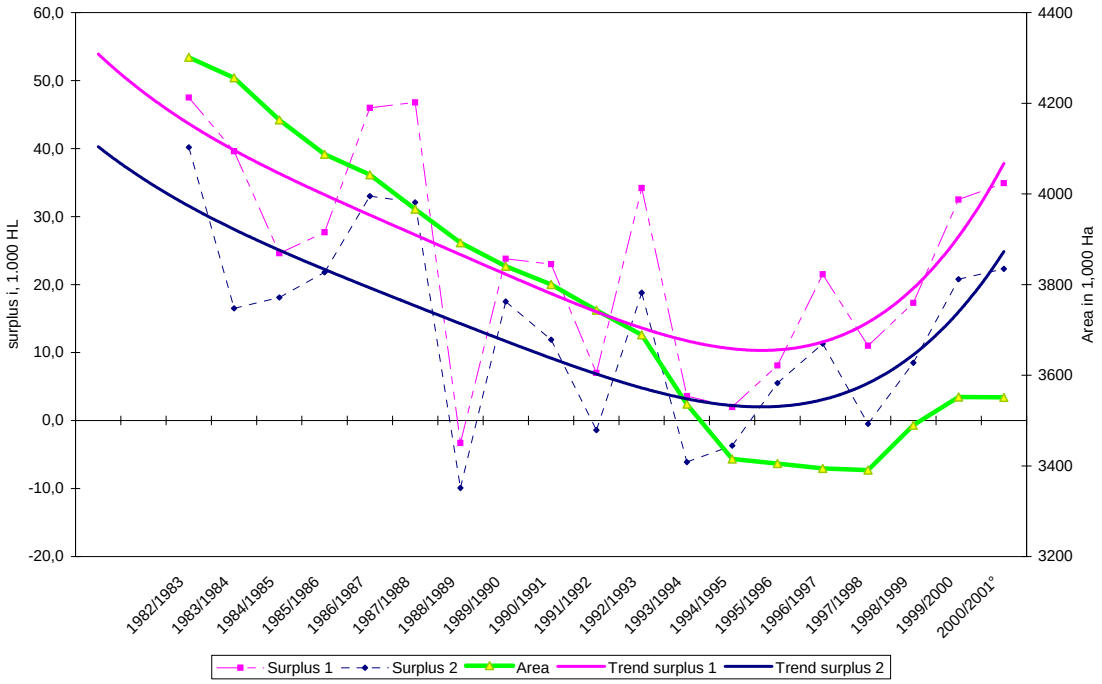
The structuring of the question is given in the annex to this chapter (section 4.1 – *Structuring of the questions*). The effectiveness of the planting rights regulations is judged by assessing their influence on the wine surplus: the measures can be considered effective if they helped reduce the EU's structural surpluses.

The judgement is thus based on a detailed analysis of the wine surplus. The main indicators are the correlation between area and surplus on the one hand and that between yield and surplus on the other hand. To evaluate the aid for abandonment, the main indicators are the area that has been grubbed-up and an estimate (using hypothetical yields) of the volume of wine that would have been produced but for the reduction in area.

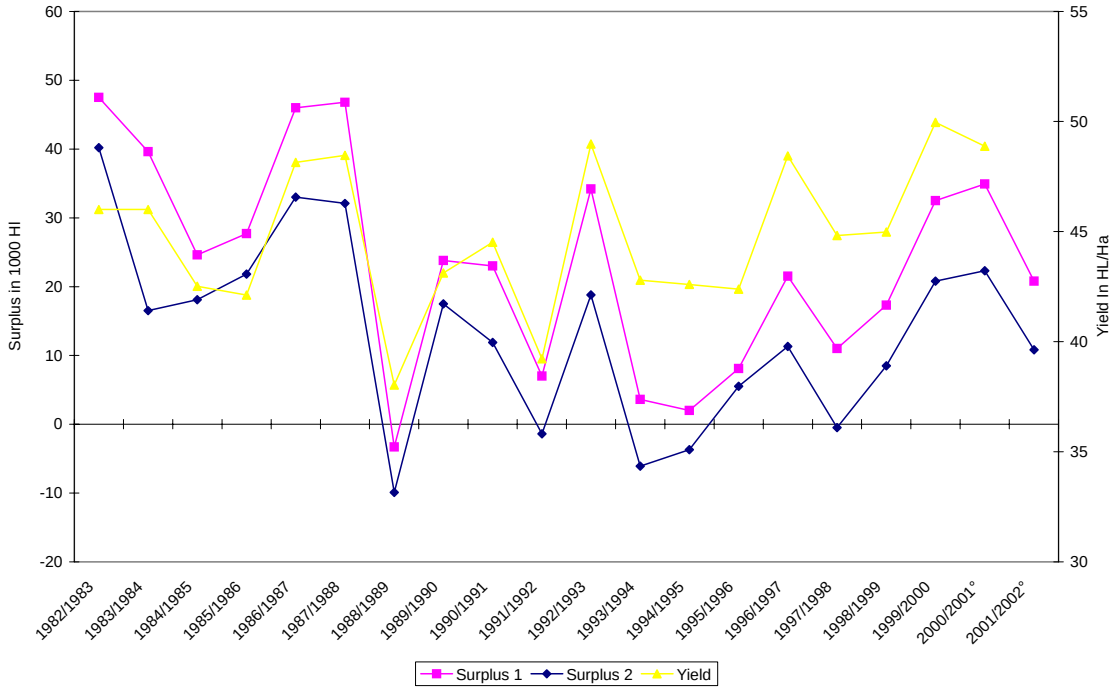
Evolution of the market equilibrium

As can be seen from Graph 12, the annual surpluses have matched the year-to-year fluctuations in yields. Since 1982 the EU surplus (on both measures of surplus) has fluctuated considerably. It rose in the late 1980s and early 1990s, fell back in the mid 1990s and has been rising again since the late 1990s.

Graph 11 Surplus and area evolution

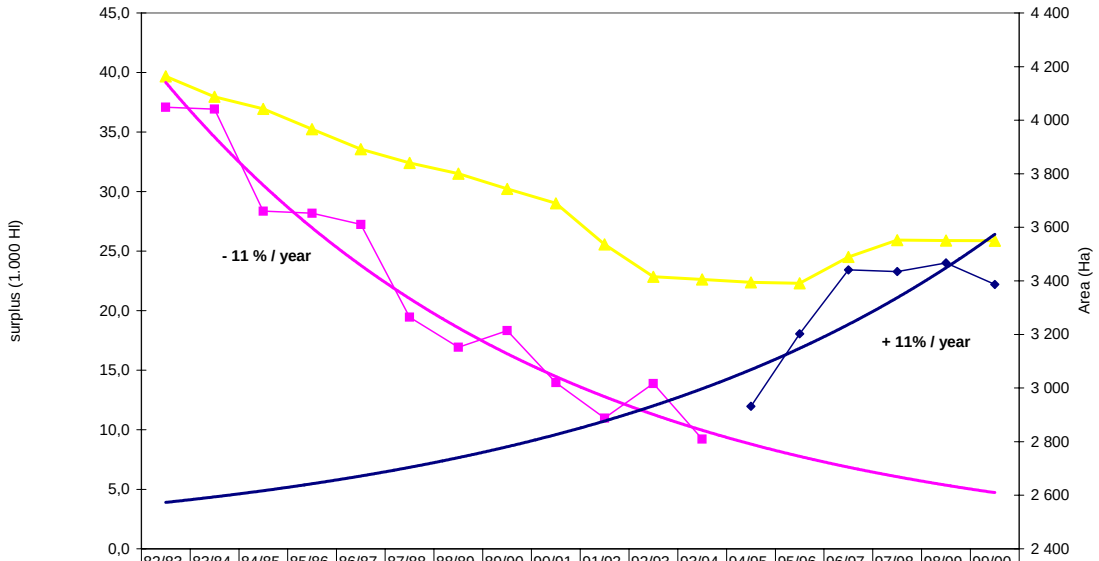


Graph 12 Surplus and yield variation



To examine the trend, the following graph uses the five-year moving average surplus to smooth out the annual production fluctuations. (Thus the figure plotted for 1984/85 is the average of the surplus in the years 1982/83 to 1987/88 inclusive) (see the annex to this chapter, section 4.5 for details).

Graph 13 Trends in surplus



	82/83-86/87	83/84-87/88	84/85-88/89	85/86-89/90	86/87-90/91	87/88-91/92	88/89-92/93	89/90-93/94	90/91-94/95	91/92-95/96	92/93-96/97	93/94-97/98	94/95-98/99	95/96-99/00	96/97-00/01	97/98-01/02	98/99-02/03	99/00-03/04
Surplus 1	37,1	36,9	28,4	28,2	27,2	19,4	16,9	18,3	14,0	11,0	13,9	9,2						
Surplus 1													12,0	18,1	23,4	23,3	24	22,2
Area	4 163	4 087	4 042	3 966	3 892	3 840	3 800	3 743	3 689	3 536	3 415	3 405	3 394	3 391	3 490	3 552	3 551	3 550

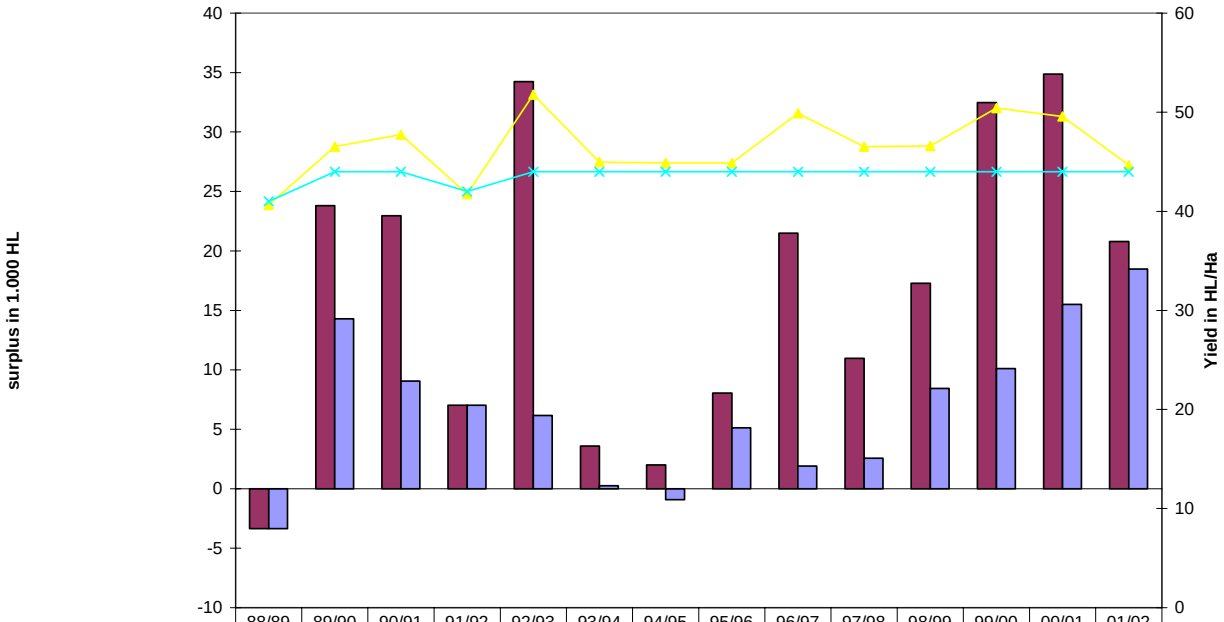
Two periods can be distinguished: the surplus declines from the mid-1980s to the mid-1990s after which it increases to the end of the 1990s, then levels off. Thus it seems

that the planting rights regime implemented until 1995, together with the premium for permanent abandonment was effective in reducing the wine surplus. However, the change of emphasis following the allocation of new planting rights after 1996 or the increase of the yield led to a re-emergence of a significant surplus.

At the national level, France, Spain and Italy have the largest surpluses. Each country shows a similar trend in its surplus: decrease between 1984 and 1995 and increase since 1995. The increase is greatest in Spain (see detailed figures in the annex).

In order to isolate the impact of the measures related to planting rights from yield variation, calculations have been made of what the annual surpluses would have been in the above-average yield years if the yields been at around the average level. In Graph 14, the actual annual surplus (using surplus measure1) is shown along with a calculation of what the surplus would have been had an average (or "normal weather") yield occurred. Detailed figures and results are presented in the annex to this chapter (section 4.5 – *Planting rights and market equilibrium*).

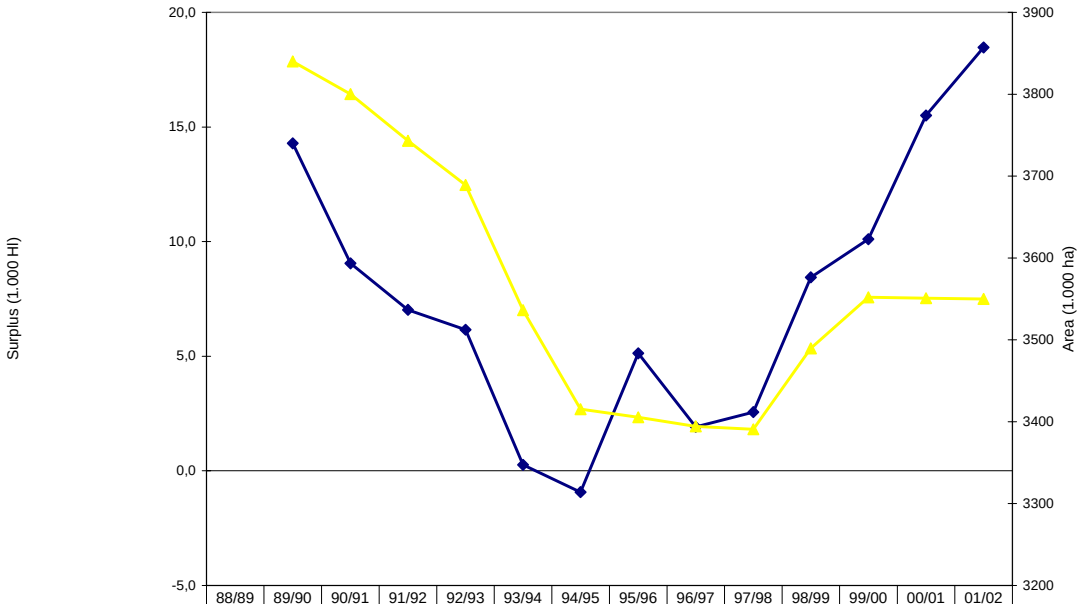
Graph 14 Comparison of actual surplus and estimated average yield surpluses



	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
Actual surplus 1	-3	24	23	7	34	4	2	8	21	11	17	32	35	21
Corrected Surplus 1	-3	14	9	7	6	0	-1	5	2	3	8	10	16	18
Actual yield	41	47	48	42	52	45	45	45	50	47	47	50	50	45
Corrected Yield	41	44	44	42	44	44	44	44	44	44	44	44	44	44

From the comparisons of the actual and the "normal weather" or average-yield levels of production, it is clear that the current EU area would produce continual substantial surpluses. This confirms that the surpluses are not simply a matter of weather-induced yield variations.

Graph 15 Comparison of estimated average yield surpluses and area



	88/89	89/90	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
Surplus 1 corrected		14	9	7	6	0	-1	5	2	3	8	10	16	18
Area		3840	3 800	3 743	3 689	3 536	3 415	3 405	3 394	3 391	3 490	3 552	3 551	3 550

The graph reveals a change in trends in 1994. The trend of the surplus is similar to the trend of area evolution. This indicates that measures related to planting rights did contribute to the reduction in surpluses up to 1995. The introduction of the new planting rights after 1996 has contributed to the increase of the surplus after 1995.

Impact of the premium for definitive abandonment on market equilibrium

Simulations have been made of the volume of wine that would have been produced in the absence of the premium for permanent abandonment (see the annex to this chapter section 4.6 – *Influence of the premium for permanent abandonment on the surplus*). They show that by the mid-1990s some 23 million hectolitres had been removed from the EU market[37]. Compared to our calculated surplus, the premium for permanent abandonment brought about a reduction in the structural surplus of 5.3% by 1989 and by 15% in 1996.

In order to assess the effectiveness of the premium for permanent abandonment, the average evolution of area and production has been calculated for different periods[38]. The premium for permanent abandonment has reduced the EU's potential wine output. It has been estimated that without the grubbing-up of vineyards the EU surplus in a normal weather year would have increased by about 25 million Hl generating a surplus of around one-third of total production.

However, it is not possible to demonstrate what would have happened without any premium for permanent abandonment, since some vineyard abandonment might well have occurred even without the subsidy payments. Expert opinion recognises that an element of deadweight loss arises through subsidy payments for vineyards that would have been grubbed-up in any event, but cannot quantify its size.

[37] For further analysis see the annex to this chapter.
[38] For further analysis see the annex to this chapter section 4.6 - *Influence of the PDA on the surplus*.

Impact of the derogation measures on market equilibrium

Transfer of planting rights

The transfer of planting rights allowed an increase in the area and production of quality wine and TGI. However, had the EU regulations not restricted planting rights, there would have been no need for the derogation and therefore it is almost certain that the shift from table-wine production to higher quality wines would have taken place more easily and quickly.

The regulations and their derogation have led to a market in planting rights but it is not clear whether this has encouraged out-goers who would otherwise have clung on to inefficient vineyards, or discouraged those who might otherwise have expanded but are deterred by the costs of buying planting rights.

New planting rights

Derogations to the ban on new plantings coupled with illegal plantings have led to an increase in the vineyard area in recent years of some 130,000 ha.

EU wine production from the 1996, 1997 and 1998 crops was markedly lower than in the previous years partly due to a combination of a fall in the vineyard area in production, but mainly to below average yields in key Member States. This resulted in a significant fall in the size of EU surplus in those years that may well have lulled decision-makers into believing that the surplus problem had been largely solved. At all events the decision was taken that whilst continuing the general restrictions on new plantings, the Commission would be allowed to allocate up to 60,371 hectares of newly created planting rights. The intention was that these rights should be used for geographical indication wines but they could also be granted for the regularisation of illicit plantings and for vineyard restructuring.

It is, of course, too early for there to be hard evidence of the impact of these new rights and, as the Commission has kept back a Community reserve of 17,000 hectares, the actual addition amounts to only 1.5% of the EU's total area under vines. Nevertheless, this adds to the sectors' production potential, as does vineyard restructuring using more efficient vine-training methods. As shown in the previous chapter, the structural surplus remains and there is therefore a conflict between the general restrictions on plantings and the granting of additional rights.

Global impact of the planting rights measure on market equilibrium

The analysis shows that although structural surpluses decreased between 1988 and 1995, substantial surpluses subsequently re-appeared. Our estimation of the annual quantities of wine produced, if an average (or "normal weather") yield had occurred, confirmed the presence of a structural surplus on the EU wine market and that the surplus fell between 1988 and 1994 and then rose again after 1997.

It is not possible to precise about the size of the structural surplus, which occurs in table-wine rather than quality-wine production nor to estimate the corresponding area because of statistical shortcomings. A global estimation could be misleading. Any estimate of the size of the structural surplus would need to differentiate between market segments - not simply between table wine and quality wine psr but even within the table-wine sector itself. The calculation of the corresponding area should take into account average yields for the highest-yielding, lowest-quality table wines in each country. These data are not available.

The surpluses would have been even greater if the long-term reduction in areas which resulted form the success of the premium for permanent abandonment had not occurred. Consequently, we can conclude that measures related to planting rights limitation and premium for definitive abandonment though not fully effective in controlling production levels nor preventing continuing surpluses, have helped rather than hindered adjustment.

4.2.5. Impact on market prices in the long-run

There is no such thing as *the* market price for wine, or for wine-making grapes, or indeed for vine-growing land but rather a whole series of interlocking and interrelated sub-markets (for a wide range of different quality wines as well as table wine). Hence, there is no unique competitive market-clearing price. Whilst attempts have been made to arrive at hedonic-pricing (i.e. quality-adjusted price) models of the wine market, we have as yet seen no generally accepted price indicator.

A common price indicator used for wine is the price on the bulk wine market. Bulk wine market transactions are registered and this produces reliable information on the volume traded and on average prices. Unfortunately, typically only average weekly prices are published and these show a great deal of volatility since they represent a combination of spot market and contract prices in variable proportions. At best, therefore, the bulk wine prices are only a broad indicator for the overall wine market.

Moreover, it should be recognised that the prices consumers pay for wine are not the same as, and may not have changed over time to the same extent as, those received by vine growers. Producer prices will be for grapes sold for wine making. Where wine is produced on the holding (or within the farm business) wine prices should be available, but in general those will be quality wines rather than table wine. [39]

We might expect that local monopsony buyers might keep down prices to growers so as to enhance their own profits – though if they exercised such market power too vigorously, growers would eventually find an alternative outlet or go out of production.

Many of the above factors cannot be addressed in this study, nor is it possible to isolate the impact of planting rights from the impact of the abandonment aid on producer prices. We therefore focused on a few representative French regions to see if there is a relation (and if so how strong) between the evolution of the area and the evolution of prices using data provided by ONIVINS, CIVB and Syndicat des vins de Corbière.

Table- and quality-wine price series and areas from 1982 to 2000 were examined for a number of French regions but in no case is any significant correlation found between current year prices and current year areas. Detailed results are given in the annex to this chapter (section 4.7 – *Area and prices*). Using lagged variables did not produce any improvement in the relationship; hence the analysis does not reveal any impact on prices of the measures limiting planting rights.

4.2.6. Impact on adapting to market requirements

European wine consumption and demand have experienced important changes in the past years. The main feature is the increase in consumption of quality wine at the

[39] Changes in tax rates, transport costs, wine-makers' productivity and traders' and retailers' margins may well have had at least as much impact upon consumer prices as on-farm changes or the CMO itself.

expense of low quality table wine. This pattern is mainly explained by the increase in consumers' real incomes and a reduction in the frequency of wine consumption. In more recent years there has been a shift from white wine to red wine consumption, particularly in the UK and Germany. Much of the increased demand for red wine has been met by imports from "new world" countries.

The variety of vine is directly linked to wine quality. Hence the scheme for replanting is aimed at changing vine varieties through planting varieties more adapted to consumers' demand and aid for abandonment is aimed at getting rid of vineyards that are no longer commercially viable.

The shift in consumer demand from low- to high-quality wine has led to a supply-side response, with all producer countries moving to a higher proportion of quality-wine vineyards during the 1990s. This movement has occurred in the vast majority of regions and sub-regions[40]. In the great majority of areas, the increased proportion of quality-wine production has been accomplished by grubbing-up table wine varieties rather than planting or replanting a substantial area of quality-wine grapes. Nonetheless, the wide disparity of actual performance noticed in the changes to the total areas is mirrored in respect of the increased significance of quality-wine varieties.

In order to ascertain possible causes of this widely disparate experience, the relationship between the changes in total vineyard areas and the proportion of the total area that produces quality wine as distinct from table wine has been examined. The hypothesis was that as the returns that could be enjoyed from producing quality wines exceed those from table wines; the areas with the lowest proportion of quality-wine vineyards would have the greatest economic incentive to upgrade their quality. Contrary to such expectations, the analysis did not show any significant correlation between the proportion of quality-wine vineyards and the rate of change of the overall vineyard area of the region[41].

However, it has to be recognised that there are both financial and practical production reasons for supposing that vineyard owners in the low quality areas may not be able to make a rapid change to higher quality wines. Quality-wine production depends upon climate, soil type and husbandry as well as the variety of grape. Wine and wine-grape prices are influenced by past reputation as well as current quality. Quality regulations may also hinder the market's recognition of improved quality in a particular area. Hence individual growers face difficulties in gaining recognition for their efforts to improve quality.

Willingness to grub up and replant vineyards is influenced by the age of the vineyard and often by the age of the owner. Moreover, availability of finance for conversion to

[40] Out of the 44 Spanish regions and sub-regions recorded in Eurostat wine data, 33 had a higher proportion of quality wine-grapes in their total grape area in 1998 than in 1990. In Italy the move towards higher quality varieties was even more widespread, with 97 of its 114 regions and sub-regions showing this positive change
(Annex – section 4.2.2 *Implementation of the Planting rights measure* sets out the situation for some of the main wine-producing areas and the tables therein contain more detailed data for Greece, Spain, Italy and Portugal. As Germany only produces quality wine, it has been excluded from the detailed analysis.)

[41] The correlation coefficients between the quality proportion and overall change in area were: Greece –0.09; Spain –0.26; Portugal + 0.01 and Italy +0.4. This means that in Italy the areas with higher proportions of quality vineyards in 1990 increased their area more, or reduced it less, than those with the poorer quality vineyards. Nor were the correlation coefficients for the quality proportion in 1990 and the proportion of the 1990 vineyard area that was grubbed-up during the 1990s any more significant being; Greece –0.4; Spain +0.12; Portugal –0.2 and Italy –0.09. Even in the case of the highest of these measured correlation coefficients, that for Greece, differences in the proportion of quality vineyards at the outset could explain only 16% of the increase or decrease in the total area of the region or sub-region from 1990 to 1998.

higher-quality varieties is a crucial factor. Low incomes in the past have prevented the accumulation of the necessary capital to finance replanting and the absence of collateral security may preclude borrowing. In this regard it is revealing that many of the experts consulted on the impact of the restructuring and conversion measures expressed the opinion that many growers would not be able to recoup their investment in the more modern vineyard management systems.

A detailed analysis of the effect of the premium for permanent abandonment in France is shown in the annex to this chapter (section 4.6 *–Influence of the premium for permanent abandonment on surplus*). The analysis reveals that the premium for permanent abandonment did result in the reduction of the area of vine varieties no longer wanted by consumers. Thus the premium for permanent abandonment can be considered to have been well directed.

The analysis of the overall changes in area at national and regional level shows that changes in a given country or region have not necessarily led to an increase in the quality-wine psr area. We have been unable to obtain sufficient information from the Italian and Spanish authorities on the beneficiaries from the premium for permanent abandonment in Italy and Spain and this prevents us from reaching more general conclusions.

4.2.7. Impact on production cost

Wine production costs comprise two main elements: the cost of producing the grapes for use in wine-making and the costs of making wine from those grapes. As far as the costs of wine-grape growing are concerned, the prohibition of new plantings may have prevented the organic growth of individual farm businesses (i.e. growth other than through take-overs, mergers, or the acquisition of failing businesses). The normal development of the industry would have taken the form of expansion by the more efficient, with the less efficient leaving the market.

There is no reason to suppose that limitations on planting rights make a significant difference to the cost of wine-making as distinct from grape-growing. As indicated above it might lead to slightly higher collection and administrative costs. These extra costs arise due to efficient grape-growers being prevented from expanding whilst inefficient growers, who would otherwise have been forced out of business, remain in the industry.

Overall, the CMO may well have hindered somewhat the development of a more efficient EU wine sector thereby reducing the competitive position of the EU industry *vis-à-vis* third countries who have not imposed limited planting rights on their producers. The rapid rise in imports from third countries since the tariff reductions that followed the URAA demonstrates the speed with which our international competitors respond to changes in the market situation.

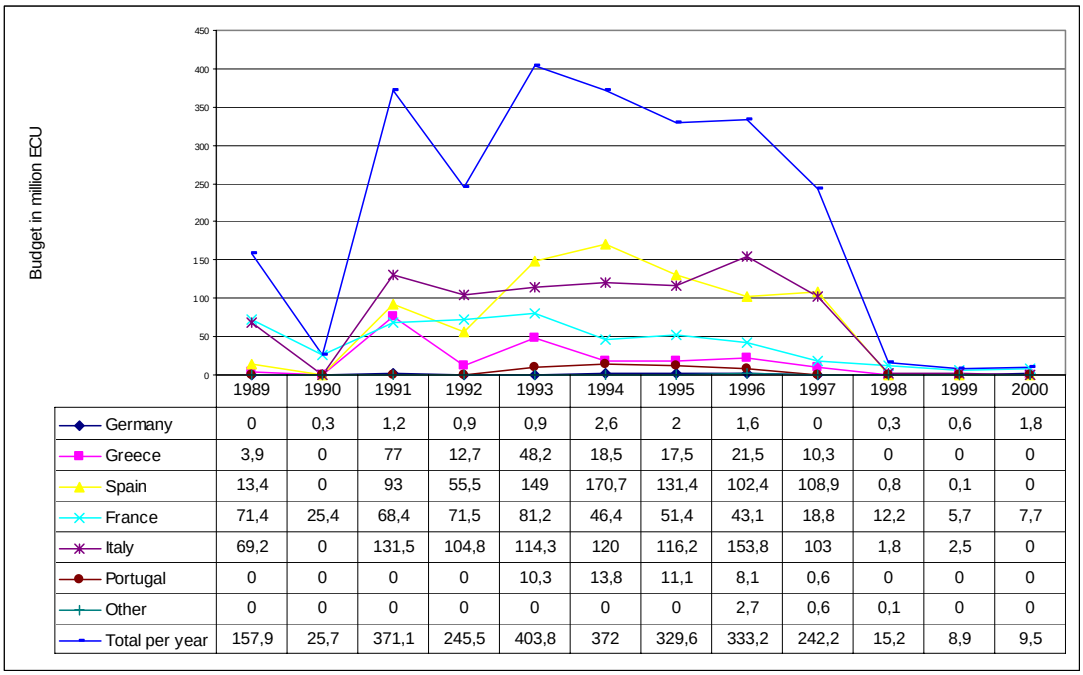
4.2.8. Analysis of the cost effectiveness of the planting right measure

In judging the economic efficiency of the measure, we have to consider the direct and indirect impacts of the measure on all the parties concerned (producers, traders, consumers and public authorities). The following analysis focuses on the impact of the measure on EU expenditure, and on administrative costs.

Impact on EU expenditure

Under the planting rights regime, the only measure financed by the EAGGF is the premium for permanent abandonment hence we examine only the cost-effectiveness of the premium for permanent abandonment. The following graph presents the evolution of budget expenditure for the premium for permanent abandonment.

Graph 16 Budget expenditure of the premium for permanent abandonment



	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Germany	0	0,3	1,2	0,9	0,9	2,6	2	1,6	0	0,3	0,6	1,8
Greece	3,9	0	77	12,7	48,2	18,5	17,5	21,5	10,3	0	0	0
Spain	13,4	0	93	55,5	149	170,7	131,4	102,4	108,9	0,8	0,1	0
France	71,4	25,4	68,4	71,5	81,2	46,4	51,4	43,1	18,8	12,2	5,7	7,7
Italy	69,2	0	131,5	104,8	114,3	120	116,2	153,8	103	1,8	2,5	0
Portugal	0	0	0	0	10,3	13,8	11,1	8,1	0,6	0	0	0
Other	0	0	0	0	0	0	0	2,7	0,6	0,1	0	0
Total per year	157,9	25,7	371,1	245,5	403,8	372	329,6	333,2	242,2	15,2	8,9	9,5

Between 1989 and 1997, about 25% of the total CMO wine expenditure was spent to finance permanent abandonment. In total, around 4.3 billions euros were paid out for some 500,000 hectares. The average aid per hectare was 8,700 euros. In the absence of the area reduction, the additional surplus wine would have to have been distilled and disposed of into the industrial or potable alcohol markets at considerable cost to the EU budget. Thus the premium for permanent abandonment was cost-effective in reducing table-wine production during the main period of its implementation.

However, the cost-effectiveness of the measure was weakened by the fact that part of the aid was used to finance the grubbing-up of table-grape vineyards and not vines for wine production. In France, table-grape vines represent 8.3% of the total area that benefited from the aid (figures for France from 1988 to 2000). In Italy, table-grape vines represented 13% of the total area grubbed with premium for permanent abandonment (figures from 1988 to 1992). Over the same period, only 30% of the total area receiving the premium for permanent abandonment in Greece were involved in wine production. This shows that the implementation of the premium for permanent abandonment was not always well targeted. The use of this premium for grubbing-up vineyards that do not affect the wine surplus is inappropriate. We estimate that as much as 15% of the budget was spent in this way. Thus the cost-effectiveness of the measure was greatly reduced through the inappropriate implementation of the instrument.

Finally, some of the aid may have been paid to vine-growers for vineyards that would have been grubbed-up without aid payments – a “deadweight loss”. However as

receipt of the premium for permanent abandonment meant a loss of replanting rights some of which might otherwise have been sold to other producers, expert opinion assesses the extent of this deadweight loss to be relatively small.

Impact on administrative costs

The costs for the management of the production potential include the costs of implementing and managing the vineyard register, managing planting rights (allocation of new planting rights, transfer and replanting) and, since the entry into force of the 1999 regulation, managing the national or regional reserves.

Each Member States has also needed its own institutional bodies and administrative procedures for the measures. For example in France, the vineyard register is managed by the General Directorate for Customs and Excise Duties of the Ministry of Finance (DGDDI), ONIVINS is in charge of managing the allocation of new planting rights and premium for permanent abandonment (for table wine only) as well as for the national reserve and INAO is in charge of the planting right management for quality wines psr. In Italy the vineyard register and planting rights administration is the responsibility of the regional authorities. It has not been possible to quantify the total of these administrative costs for the management of planting rights.

Efficiency

- <u>The basic instrument (control and limitation of planting rights) and the problem of data reliability</u>

The prohibition of vine planting and the control of planting rights allocation is the main instrument that influences potential output. . As indicated above it has not been possible to quantify the administrative costs – the most significant of which we believe to be related to the establishment and management of the vineyard register.

However, efficiency of the whole measure has been weakened by the unreliability of the data on vineyard area. The Commission has three sources of information on vineyard areas:

- Periodical statistical surveys carried out by Member States under the provisions of Regulation 357/1979, the most recent survey being in 1999.
- Under Regulation 1493/1999, Member States are required to produce an inventory of vineyard areas for the purpose of applying the restructuring and conversion policy.
- Under Regulation 2729/2000, Member States must have a vineyard register as part of the implementing rules on wine sector controls.

A comparison of the areas shown in the 1999 survey and what is reported in the inventories shows large discrepancies for Greece, Italy and Portugal – the inventory areas being 52%, 24% and 23% higher respectively. In the case of Portugal the latest annual figure shows a fall back to 18% above the 1999 survey level, but the Greek area is now 59% above the 1999 survey level. It is not clear why there are such large discrepancies in these Member States. Since the decisions of the Council to increase the potential production area by 2% were taken in the late 1990s against a background of reported falls in the area under production, inadequacies in statistics may have coloured the Council's decision-making.

In addition, significant differences can be found between data on vineyard areas from different sources. It is important to draw attention to this matter since it suggests that official statistics do not reflect the actual situation in the industry. Aggregated data are

subject to significant error margins and information collected for different purposes and by different agencies is likely to come up with slightly different figures.
Nevertheless, the magnitude of the apparent discrepancies has weakened the efficiency of the measure. Where illegal plantings occur – or where growers claim premium for definitive abandonment but then replant (or fail to grub-up) the vineyards – the official data may not be accurate. The fact that the latest reforms include provisions to make legitimate some of the illegal plantings indicates that they may well account for some of the discrepancy. The magnitude of the discrepancies between different sources is sometimes unacceptable. Two examples are given below. Figures in tables 11 and 12 are provided for the same year from two different sources and latest figures provided to the EC.

Table 11 Vineyard area in 1,000 ha

Year	Germany	Greece	Spain	France	Italy	Austria	Portugal	Total
1997 [1)]	102	73	1 154	902	860	49	250	3 391
1997 [2)]	98	112	931	899	825	52	231	3 150
Difference 1000Ha	-4.1	38.7	-222.7	-2.6	-35.3	3.4	-18.6	-241.238
Difference %	**-4%**	**53%**	**-19%**	**0%**	**-4%**	**7%**	**-7%**	**-7%**

Sources:1) DG AGRI, PAC 2000 Situation Vin, Annexe 5, Superficies, page 84 ; 2) Eurostat Structures des exploitations 1997, page42.

Table 12 Vineyard area in ha

	Germany	Greece	Spain	France	Italy	Austria	Portugal	Total
Date of survey	**1999**	**1999**	**1999**	**1999**	**1999**	**1999**	**1999**	
Area (of survey)	104233	50878	1144354	940478	636662	48496	205003	3131452
Date of inventory	31/08/00	01/09/99	31/07/00	31/08/98	01/09/99	31/12/99	01/09/99	
Area(of inventory)	105530	77466	1141986	901412	792440	52226	252709	3325117
Differences 1000 ha (Inventory – Survey)	1297	26588	- 2368	- 39066	155778	-3730	47706	
Differences in %	**1%**	**52%**	**0%**	**- 4%**	**24%**	**8%**	**23%**	**6,18%**

Source: Commission's report on the management of planting rights (COM2004 (161) final)

The most important variations are registered in Greece (53%), in Spain (19%) in table 11; in Italy (24%) and in Portugal (23%) in Table 12. Such large discrepancies demonstrate that figures on the production potential of these four countries are not reliable.

Shortcomings in the market management information system were identified in the Court of Audit's 1993 Annual Report and again in subsequent audit reports. Regulation 2392/1986 obliged Member States to introduce vineyard registers within 6 years because such registers were, and are, considered indispensable to the management/monitoring of the market, especially in regard to support measures and planting rules. Eighteen years later, the registers still have to be completed and submitted to the Commission by some Member States. The 1993 audit revealed the unreliability of the registers that did exist and the delays on the part of some Member States. In 1995 the European Parliament criticised the delays and called on the Commission to make a satisfactory register as a precondition for making payments to Member States. The Council of Ministers, rather than imposing penalties on Member

States, regularly extended the date by which registration was due, jeopardising the European Commission's efforts to regulate efficiently the wine market through the monitoring of the industry's production potential.

- Attribution of new planting rights and possibilities for transfer

It is not possible to quantify the cost of these measures. Both experts and stakeholders suggest that new planting rights are allocated via a complicated process in which non-economic factors play a significant role.

- Premium for permanent abandonment

Although we find the measure to have been cost-effective we are concerned at the deadweight loss that may have occurred through making payments to producers who would have retired and therefore making payments on land that would have ceased to be used for vine growing. Funds could have been saved by making the owners of unauthorised vineyards pay for the transfer of planting rights rather than allocating new rights to legitimise their activities.

4.3. Conclusions

4.3.1. Judgement of Effectiveness

The limitation of planting rights was introduced to tackle structural surpluses in the late 1970s. Given the cyclical nature of wine production, the ban on new plantings could play a significant role in the long-term stabilisation of wine supply. The ban is one of the main components of the CMO as it interacts with other instruments: the premium for permanent abandonment and the conversion scheme could not be introduced without any control on the vineyard area planted.

Our analysis reveals that despite the limitations on planting rights and the existence of the premium for permanent abandonment of vineyards, surpluses remain at a significant, indeed substantial, level in key Member States. Yield plays a major role in the size of the annual wine surplus. The effectiveness of the measures relating to planting rights on market equilibrium can thus be considered limited even though the general prohibition of new plantings prevented an increase in the overall vineyard area and thus kept the surpluses below the levels that they might otherwise have been.

Given the market context, the premium for permanent abandonment proved to be rather effective. Had those vineyards that have been permanently abandoned remained in production, the EU surplus would have been even greater than it is. The disposal of these additional surpluses through distillation would have surely had a significant effect on the budgetary expenditure on the CMO.

However, the policy shift seen since 1996 and undertaken against a background of a run of unusually low-yielding harvests is in clear conflict with the previous actions and has clawed back an area equivalent to about a fifth of the reduction funded by the premium for permanent abandonment. This counteracts the previous efforts to reduce the surplus.

Given the current shift of consumer demand from low quality table wine to quality wine, the rigidity of planting rights transfer might have hindered a more rapid adaptation of the European wine sector and thus indirectly contributed to maintaining

the EU surplus. The analysis of the impact of restructuring and conversion measures on market equilibrium presents complementary results in these aspects (see Chapter 9).

Concerning the impact on wine prices, no direct effect of the planting rights measures could be demonstrated from a quantitative point of view. It is not possible to isolate the impact on price of these measures from the other elements of the CMO support regime, notably the distillation measures which effectively put a floor price into the wine market.

The premium for permanent abandonment had a positive impact on the adaptation to market requirements. The area of low quality vineyards has decreased significantly. The assessment of the early impact of the measures related to conversion and restructuring supports these conclusions.

In general, it appears that the measures have little, if any, negative impact on production costs. However, it can be argued that the competitive position vis-à-vis other countries might well have been weakened by preventing the more efficient growers from expanding their businesses and thus their market share. Thus whilst the premium for permanent abandonment has reduced slightly the surplus area, the planting rights measures as a whole have introduced an additional element of rigidity into the sector. In the current context of deregulation and reduction of the EU market protection, there is a case for ending the planting rights restrictions. However, to allow a free-for-all in planting whilst maintaining floor prices via subsidised distillation would risk a substantial escalation of the expenditure on the CMO. Moreover, given the long history of national regulatory measures in all the EU's major producer countries, complete liberalisation of vine planting seems unlikely to be accepted by Member States.
Nonetheless, the further movements towards trade liberalisation resulting from the Agenda 2000 reforms and the increased pressures from third country exports to the EU mean that EU producers will need to become much more responsive to changes in consumer's demand than they have been over the past decade or so. In this regard, it seems important that those producers who could expand their quality-wine production to meet consumer demand should not be hindered by new planting restrictions. Nor should the market be undermined by the continued presence of excess volumes of low quality table wines that depress the general level of producers' returns.

4.3.2. Judgement of Cost-effectiveness of the premium for permanent abandonment

We consider that the premium for permanent abandonment was cost-effective in reducing table-wine production during the main period of its implementation. The cost-effectiveness of the premium for permanent abandonment has been weakened by two main factors:

- As much as 15% of the budget has been spent inappropriately as it subsidised the grubbing-up of vineyards that do not affect market equilibrium (table grapes mainly).
- The contradiction between measures: up to 1996 the EU financed, via the premium for permanent abandonment, the reduction of 500.000 hectares of planting rights and thereafter the EU has allowed the introduction of around 100.000 hectares of new planting rights. Transfer of planting rights should have been encouraged.

More effort should have been made to ensure an efficient management of the production potential, starting from the collection of reliable data on planted vineyard area.

5. Distillation

Does support to various distillation measures, including aid and support for disposal of alcohol, resulting from distillation, have a significant impact on:
- *Development of wine prices in the short and medium term (after the harvest period and during the following campaign(s))*
- *Market equilibrium (in volume terms)*

If impacts can be identified, what is their dimension (with regard to other determining external factors) and are they achieved at a reasonable cost?

5.1. Introduction

A short overview of the distillation measures before and after the 1999 reform is given in table 13. The main differences between these two sets of measures are: (i) following the 1999 reforms, distillation is no longer an obligatory measure in the event of serious wine market crises and it may also be applied to quality wine; and (ii) the buying-in price system has been changed to a price system fixed in the CMO for the obligatory distillation measures and a flexible price system, per the decision of the European Commission, for the voluntary distillation measures[42].

Table 13 Overview of the distillation measures implemented before and after the CMO wine reform in 1999

Implementation by regulation	Distillation measure	Product concerned	Delivery of alcohol to intervention agency (IA)
822/1987	Article 35 by-product distillation	By-products	May be delivered to IA (70% delivered in 1999/2000)
	Article 36 distillation of dual-purpose grapes	Wine of dual-purpose grapes	May be delivered to IA (94.5% delivered in 1999/2000)
	Article 38 preventive distillation	Table wine	No delivery to IA
	Article 39 obligatory distillation		Obligation of delivery to IA
	Article 41 support distillation		No delivery to IA
	Article 42 supplementary distillation		No delivery to IA
1493/1999	Article 27 by-product distillation	By-products	May be delivered to IA (66% delivered in 2000/2001)
	Article 28 distillation of dual-purpose grapes	Wine of dual-purpose grapes	May be delivered to IA (79% delivered in 2000/2001)
	Article 29 distillation for potable alcohol	Table wine	No delivery to IA
	Article 30 crisis distillation	all wines	Obligation of delivery to IA

Source: based on information in the above regulations; percentages calculated from data provided by EC, DG AGRI regarding communications from the Member States.

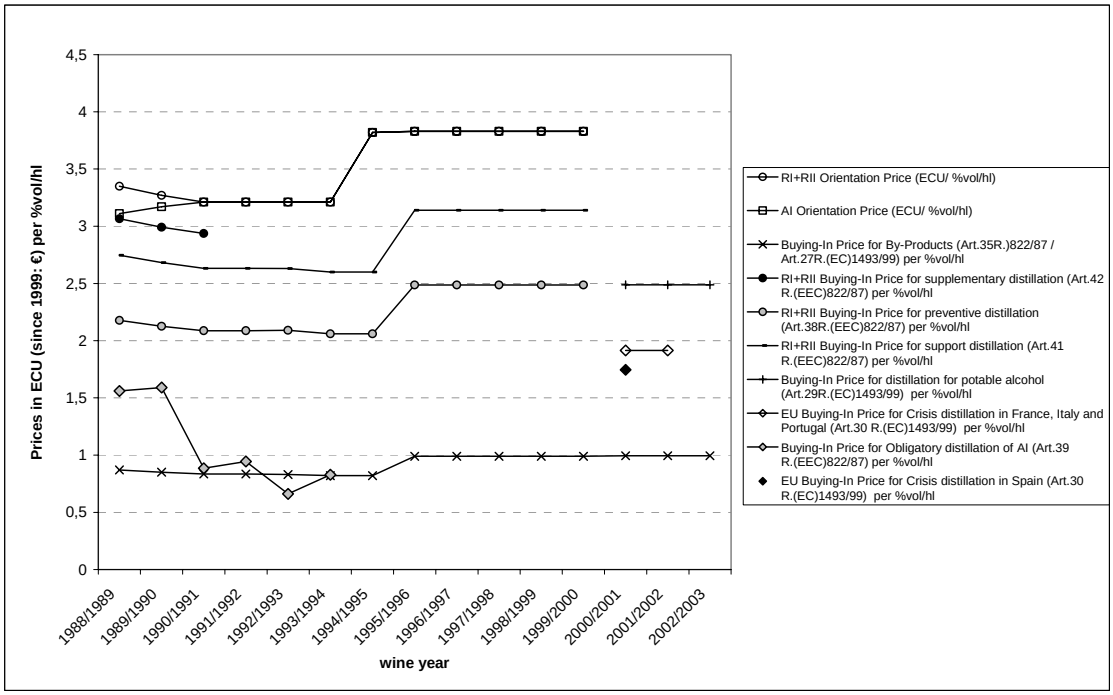
Graph 17 illustrates the different price levels in the EU buying-in price system for table wine before and after the reform of 1999. The buying-in prices for the continued obligatory distillation measures have been set equal to the level before the reform. Until now, the buying-in prices for voluntary crisis distillation, set case by case, are much higher than the preceding prices for obligatory distillation in crisis situations before the reform[43]. The three former voluntary table wine distillation measures of

[42] See Table 91 in the annex to this chapter

[43] Additional national aid for crisis distillation are also given in some Member States in some wine years, further widening these differences, but they are not paid by the EU-budget., see table 27 in the annex.

Regulation 822/1987 are replaced by distillation into potable alcohol. The buying-in price for that measure is equal to the lowest price for a voluntary distillation measure before the reform.

Graph 17 EU buying-in price system for table wine distillation measures



Source: based on data from EC DG AGRI (1998, p. 72-84), ONIVINS and DWV (1998, p.26).

Qualitative analysis based on the theory of agricultural policies and supplemented with information given in expert interviews was used to illustrate some effects, which cannot be quantified by empirical data.

The analysis of empirical data deals with data from the periods before and after the reform of the CMO for wine. Data about distillation quantities are published in records per wine year, monthly processing of data was not available. Hence econometric models could not always deliver clear results, especially for short-term effects on the market[44]. In such cases, a descriptive analysis of empirical data was made.

Distillation measures for the different wine categories and by-product distillation are analysed separately, mainly using the same procedure: for those sub-markets that are most affected by the distillation measures, the effectiveness of distillation measures from the viewpoint of their influence on market equilibrium in volume terms and market prices is examined.

The expenditure on distillation measures will be estimated to obtain monetary indicators for later comparative analysis of the efficiency of different policy measures as one important issue which could be quantified. Other effects on efficiency will be examined from a qualitative point of view.

The concluding section summarises the key points and suggestions are made for alternative policies or measures.

[44] E.g. wine years with a high volume of production are usually coupled with lower market prices during the whole wine year and higher distillation volumes compared with the average – any price enhancing effect of distillation measures during this wine year may not be detected with data that do not indicate when during the wine year distillation was done.

5.2. Results of the analysis

5.2.1. Overview of the importance of distillation measures and their budgetary cost for the EU

Importance in the different EU Member States

In the past, wine distillation measures have been applied in most Member States of the EU with a developed wine production, such as Italy, France, Spain, Germany, Portugal and Greece, but not in Austria or Luxembourg. However, distillation is also done in Austria but without EU aid.

On average (1994/1995 – 2001/2002), 2.55 million hl of pure alcohol (France: 0.85 million hl, Spain: 0.81 million hl, Italy: 0.78 million hl, Portugal 0.06 million hl, Greece: 0.03 million hl, and Germany: 0.03 million hl)[45] result from EU distillation measures. 42% of this alcohol was delivered to intervention agencies and 58% went to the market for potable alcohol.

According to the importance of distillation measures with obligation to deliver the alcohol to the intervention agencies in the Member States[46], the average percentage of total distilled quantities delivered to the intervention agencies (1994/1995 – 2001/2002) varies enormously: Germany 6%, Greece 7%, Italy 13%, Portugal 40%, Spain 41%, and France 72%.

During 1994/1995 – 2001/2002 most of the alcohol produced under distillation measures in the EU was from by-product distillation (53% = 1.3 million hl). In the Member States where by-product distillation is obligatory its volume amounts to 17% (= 0.004 million hl) in Greece, 45% (= 0.33 million hl) in Spain, 50% (= 0.38 million hl) in Italy, 65% (= 0.55 million hl) in France, and 76% (= 0.04 million hl in Portugal) of total distillation; in Germany by-product distillation is negligible.

The volume of wine distilled under EU measures differs considerably among the Member States[47] (see Graph 18). Although the reform of the CMO for wine in 1999 opened up the possibility of crisis distillation for quality wine psr, until now distillation of table wine has remained the most important.

In respect of the structure of wine production and application of distillation measures the Member States can be grouped into three categories: a) Member States with a high volume of table-wine production and distillation: Italy, Spain and France, b) Member States with a medium volume of table-wine production and distillation: Portugal and Greece, c) Member States with a low volume of table-wine production and distillation: Germany.

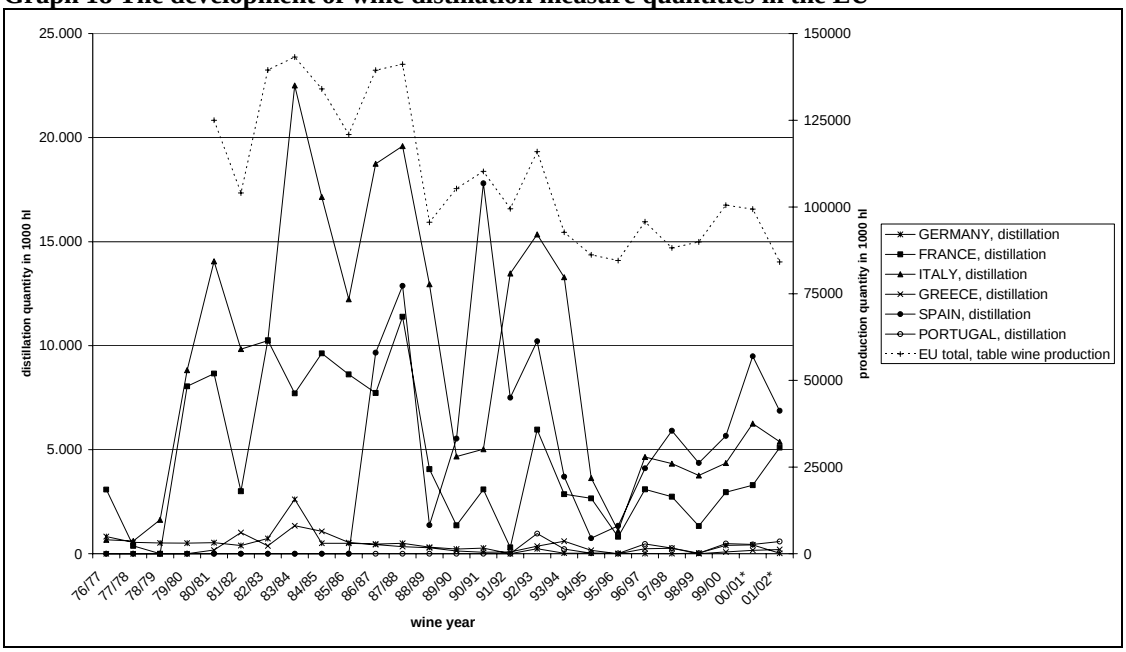
The analysis in the following sections focuses on a comparison of table wine distillation in the EU, especially on the three main markets of Italy, France and Spain, and of by-product distillation.

[45] The source of the data in this and the two following paragraphs is EC DG AGRI, communications by the Member States.

[46] E.g. Germany: no obligatory by-product distillation, France: substantial by-product distillation and distillation of dual-purpose grapes.

[47] Detailed information about the main differences between the Member States is given in the annex to this chapter.

Graph 18 The development of wine distillation measure quantities in the EU[48]



Source: based on data from EC DG AGRI, published in ONIVINS stats, including *preliminary data updated by EC DG AGRI in March 2004.

Cost of the measures

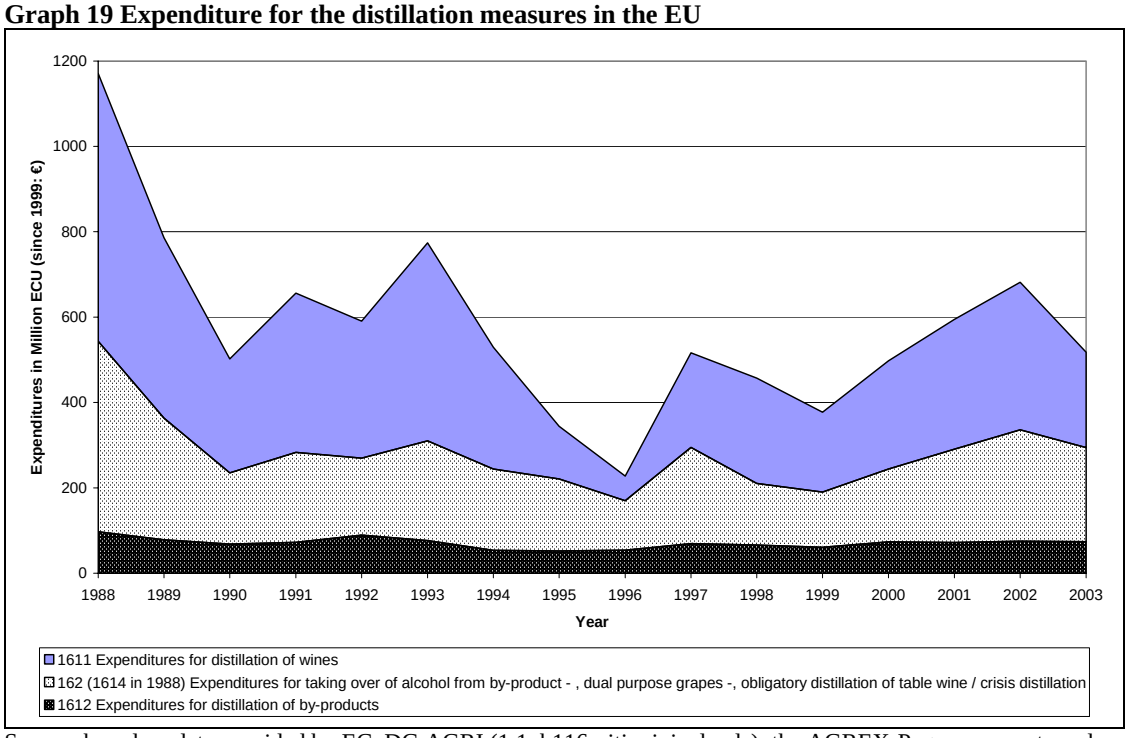
Generally, the cost for support of the wine market by distillation measures has several aspects: i) the budget for the distillation measures spent by the EU (to cover the distiller's losses resulting from the difference between the technical cost of the distillation and the gains from sales of resulting products; if necessary, including storage of resulting alcohol) , ii) the costs to the producer (to prepare the required documentation and for transport to the distillers) and iii) the costs that might arise from a disruption of the markets for distilled alcohol.

EU expenditure per measure defined in the relevant regulations and the budget for the distillation measures will be used as a quantitative database, because data for the other cost aspects are not available[49].

[48] It should be pointed out that these statistics are based on quantities distilled in the Member States, e.g. distillation quantities for Germany include large amounts of wine originating from other Member States, mainly France (see Table 93 in the annex to this chapter). However, for Italy, France and Spain it may be assumed that the distillation quantity is mostly based on domestic wine production.

[49] No concrete information was given in interviews about the costs to the distillers or producers. Distillers mentioned losses due to reduced gains e.g. because of reduced prices for tartaric acid which is produced from distilled by-products, since the entry of China in the market.

Graph 19 Expenditure for the distillation measures in the EU



Source: based on data provided by EC, DG AGRI (1.1_b116-viti_vinicole.xls); the AGREX-Pages were not used, updated in June 2004.

Total EU expenditure for distillation measures

The majority of EU expenditure for distillation measures occurs in the financial year after the harvest year of the distillation measures (see graphs 98 to 103 in the annex to this chapter). In view of that time lag, Graph 19 shows the development of the different costs for the distillation measures in the EU since 1988.

Expenditure for by-product distillation reaches similar values every year, while expenditure for distillation of wine varies considerably. Expenditure for the taking over of alcohol[50] from by-product distillation, other compulsory distillation measures and, since regulation 1493/1999, also from crisis distillation account for a large part of the total sum of the budget for distillation. E.g. expenditure for depreciation of alcohol stocks averaged around 153 million ECU (€) per year from 1989 to 1999; in 1996 the budget for depreciation of alcohol stocks accounted for the largest part of expenses for distillation measures. Following the reform, expenditure averaged 191 million € (2000 to 2003).

5.2.2. Distillation of table wine

Originally, all distillation measures for table wine (see table 13 above) aimed to reduce occasional surplus quantities on the table wine market by stabilising market prices for table wine and hence table wine producer incomes. The differentiated buying-in price system of the various distillation measures tried to reward different attempts by producers to reduce surpluses on the table wine market[51].

[50] Budget B01-162 expenditure for taking over of alcohol includes expenditure for depreciation of alcohol stocks (B01-1623, largest part), technical costs (B01-1620), financial costs (B01-1621) and other costs (B01-1622). Since 2001, new B01-1625 aid for private storage of potable alcohol is summed up under B01-162.

[51] E.g. higher buying-in prices were fixed for preventive rather than obligatory distillation.

After the reform, just two distillation measures exist for table wine[52]. Only crisis distillation aims to reduce occasional surplus quantities on the wine market. The distillation measure for potable alcohol aims to support the volume of the wine market by promoting the continuity of supplies of wine distillates in parts of the potable alcohol sector which traditionally use them[53].

Empirical evidence concerning the use of table wine distillation measures in different market situations

The regulations concerning distillation measures have always contained strict instructions as to when and how they are initiated. Econometric analysis[54] shows distillation quantities rising with increases in production or stocks. Additionally, there is a relation between falling table wine consumption and increasing distillation.

This suggests that distillation is not only initiated by short-term market imbalances, i.e. due to a bumper harvest, but is also used to deal with the longer-term effects of structural changes within the wine market.

Importance in the different EU Member States

The table wine market is strongly affected by distillation measures (on average 14.2% of EU table-wine production 1989/90-1999/2000 and 19.7% 2000/2001-2001/2002 were distilled).

In Member States with a high volume of table-wine production, the total application of distillation measures tended to decrease before the 1999 reform: distillation to supplement long-term storage contracts has been abandoned since 1991/1992, obligatory distillation has not been used since 1994/1995 and support distillation has decreased enormously since then.

After the reform, the use of distillation measures started with larger volumes than before (see graph 20) due to crisis distillation; but in 2003 they decreased slightly from their former level.

Distillation measures into potable alcohol (Articles 38, 41 and 42 of Regulation 822/1987 and Article 29 of Regulation 1493/1999) average about 12% of EU table-wine production, both before and after the reform of the CMO.

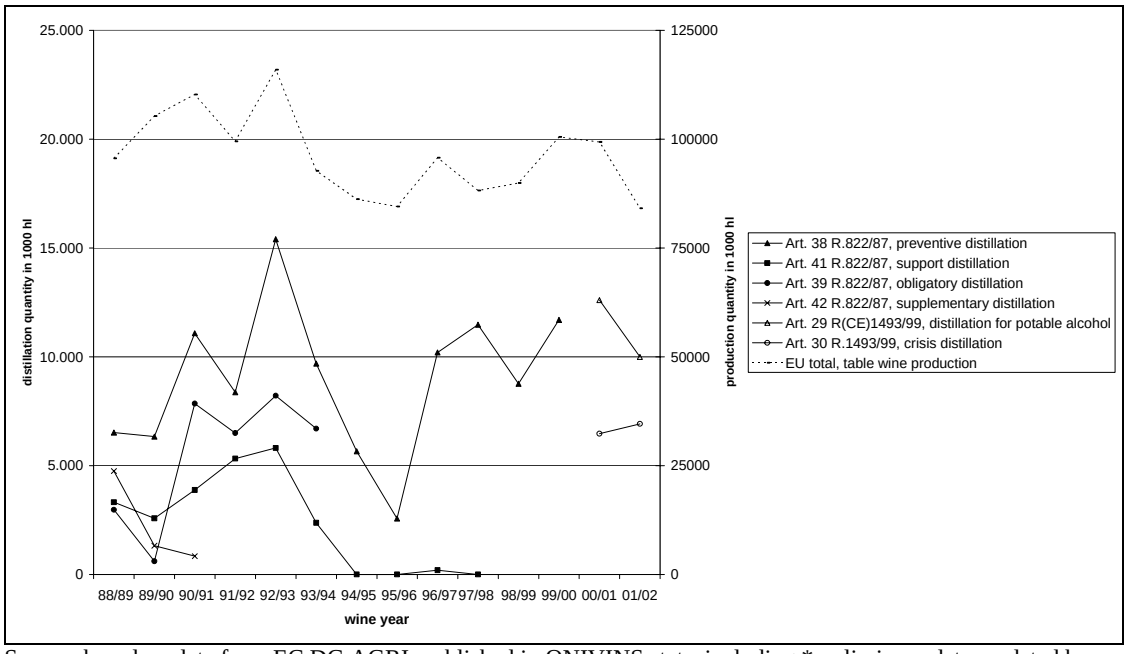
Especially in the last decade before the reform, preventive distillation (Article 38 of Regulation 822/1987) was the most important table wine distillation measure in the Member States with a medium and high percentage of table-wine production (about 40-50% of total table wine distillation since 1988/1989, about 100% of total table wine distillation since 1994/1995).

After the reform, the distillation of potable alcohol became the most widely applied table wine distillation measure in the Member States (about two thirds of the total quantity of the table wine distillation measure). The part of crisis distillation (about one third of that total in 2000/2001and 2001/2002) is comparable to that of obligatory distillation of table wine during the wine years 1990/1991 to 1993/1994.

The national implementation rules for obligatory distillation differ among the Member States. The very restrictive interpretation in France made surplus production most unattractive in the period from 1988/1989 to 1999/2000.

[52] We exclude exceptional delivery of table wine for by-product distillation.
[53] See introductory sentences (35, 38) of regulation 1493/1999.
[54] See table 94 in the annex to this chapter.

Graph 20 Importance of different table wine distillation measures in the EU



Source: based on data from EC DG AGRI, published in ONIVINS stats, including *preliminary data, updated by EC DG AGRI in March 2004.

Concerning table wine distillation measures in different regions / Member States there are great differences in: a) distillation quantities in relation to table-wine production (e.g. Spain: 33.4%, Italy: 16.7%, Portugal: 14.1%, France: 11.4%, Greece: 0.1%)[55] and b) regular[56] (e.g. Spain, Italy, Portugal, France) or periodical[57] (e.g. Germany) occurrence.

Within the countries, there are also regional differences in the level of distillation: e.g. in Italy the average percentage of total wine production distilled in 2000/2001 – 2002/2003 ranged from 0%-1% in various regions to 3% in Puglia, 5% in Campania, 24% in Sicily, 25% in Umbria and 34% in Emilia Romagna.[58]

This indicates that there are probably different levels of adaptation of production to market demand in the Member States and regions, and different types of surplus eliminated by distillation.

Impact on market prices

Price data available for the table wine markets of Italy, France and Spain[59] have been examined. For Italy and France additional regional data were included. The analysis was supplemented with information deduced from expert interviews.

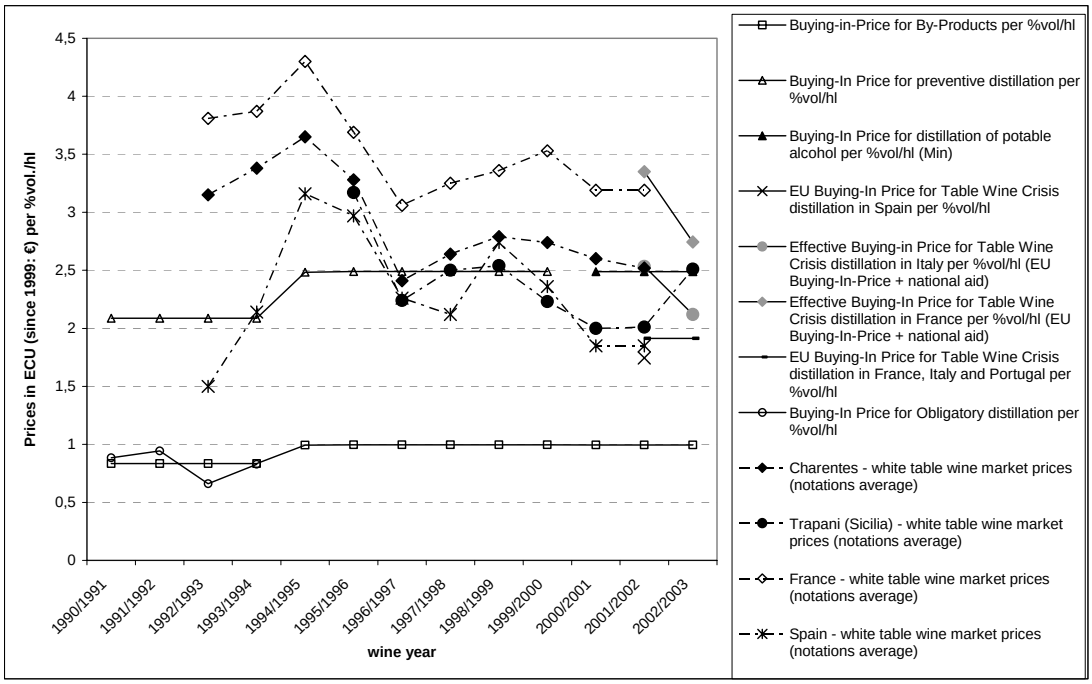
Econometric analysis of the impact of distillation quantities on average national table wine market prices did not reveal any price enhancing effect of the distillation measures. At the regional level, the results differed: the econometric analysis of the impact of distillation quantities on Puglia's red table wine market and Sicily's white

[55] Average percentage of table-wine production distilled between 1989/1999 – 2001/2002; source of data: EC, DG AGRI.
[56] An indication of structural surplus
[57] An indication of annual surplus
[58] Sources of data: ISTAT and AGEA, see table 92 in the annex to this chapter.
[59] Judgement criteria, indicators and detailed description of results per Member State are given in the annex to this chapter, section 5.2.3.

table wine market showed a medium-term market price increasing effect of wine quantities distilled in the previous wine year. [60]

A descriptive analysis of price data for the most important table wine markets in the EU suggests that buying-in prices for distillation had a significant impact on price developments in several regional sub-markets. For example, white table wine markets are discussed (see graph 21 below):

Graph 21 White table wine market prices and buying-in prices for distillation measures



Source: based on data from EC DG AGRI (buying-in prices and prices for Spain, ONIVINS (prices for France and Charentes), ISMEA (prices for Sicily).

When looking at the French Charentes sub-market, it is apparent that its prices are strongly influenced by the preventive distillation (distillation for potable alcohol after the reform) buying-in price. In 1996/1997, when the market price in Charentes fell below the buying-in price for preventive distillation, high volumes of table wine were put to preventive distillation and prices subsequently increased.

Market prices in Sicily were, during three wine years, below the prices for preventive distillation (before the reform) / distillation for potable alcohol (after the reform) – interviewees stated that distillation is very important in that region[61]. Preventive distillation alone could not stabilize prices, but additional new crisis distillation in 2001/2002 seems to have helped to raise prices to the level of distillation for potable alcohol in 2002/2003.

In Spain, the total average price for white table wine is low. Available data show that in Spain a minimum market price was set by crisis distillation buying-in price in 2001/2002. It can be concluded that in some regions the distillation measures are effective in the sense of guaranteeing certain satisfying minimum returns and hence they have an important impact on producer income.

[60] For a detailed description of results see table 95 annex to this chapter.

[61] About 22% of Sicilian table-wine production (average 1997/1998 - 2002/2003) compared with 15.0 % of the total Sicilian wine production (average 1994/1995 - 2002/2003) were distilled. Source: based on data from AGEA and ISTAT.

In some regions or sub-regions (e.g. Charentes, Sicily), the impact of preventive and crisis distillation on prices, market balance, and producers' income are much more important than national data would suggest. The interviews with experts from Spain, Portugal and Greece suggest that there are regions in those countries where this is also true. However, the specific regional impact could not be quantified here, due to the non-availability of regional data and lack of previous empirical research.

The negative medium-term effects if distillation occurs too late or quantities for distillation measures are too high were mentioned in the interviews. According to French experts, in Languedoc-Roussillon high quantities distilled in previous periods, combined with low production in 2003, have actually led to a market imbalance with insufficient supplies and extraordinarily high prices, which may induce losses in traditional outlets for the future.

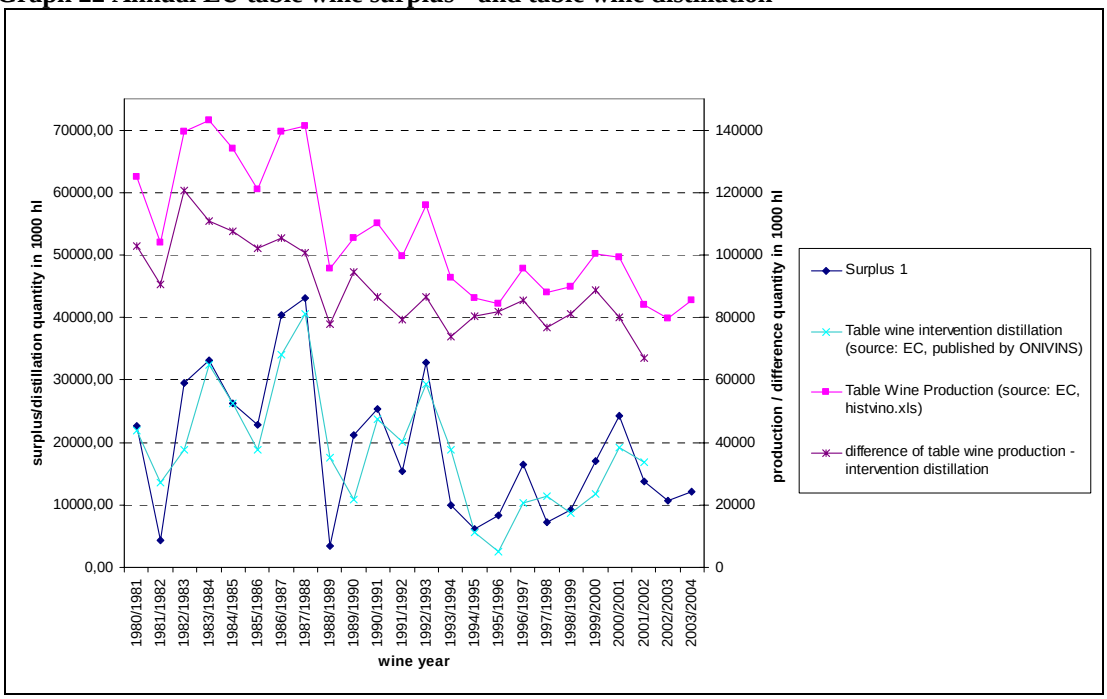
Impact on market equilibrium in volume terms

The impact of wine distillation measures on surplus was measured by comparing the surplus for the EU table wine market with the amount of table wine distillation measures (see graph 22).

On the table wine market, surplus 1[62] exists on varying levels, but always with quantities above zero and therefore continuously. Table wine intervention distillation quantities are strongly related to the annual table wine surplus 1.

However, in 15 of the 22 wine years observed the quantities distilled were below the annual surplus 1 quantities. Hence it was generally not possible to compensate in full for the surplus production on the table wine market and a nearly permanent price pressure on the table wine market resulted.

Graph 22 Annual EU table wine surplus[63] and table wine distillation



Source: based on data from EC DGAGRI: histvino.xls and communications from Member States.

[62] For a definition of surplus used here see chapter 3.5.
[63] For a definition of surplus used here see chapter 3.5.

The following investigation focuses on the stocks, as these are the quantities of production not marketed: changes in the level of stocks are another mechanism (along with prices) to bring demand and supply into line. As the volume of wine produced naturally varies from year to year, unsold stocks may be regarded as over-production or as useful reserves. Hence, we now examine the influence of distillation measures on changes in the level of stocks. Analysis has been done by regression analysis for each Member State separately[64].

The results of the analysis of some EU table wine markets (France, Greece and Italy) prove that the distillation measures have an effect in reducing table wine stocks[65]. This means that the distillation measures are effective in leading stocks towards market equilibrium levels, given the changes in consumer demand. However, the decreasing volume of consumption is often a more important factor for explaining rises in stock levels than quantities of distillation (France, Italy and Portugal). This is an indication of the development of structural surpluses.

Some interviewees suggested the reintroduction of obligatory distillation for table wine with unattractive buying-in prices at about 50% of production costs to deal with market crisis situations whilst avoiding regional increases in structural surplus quantities to be financed by the EU. However, this proposal was strongly rejected by other interviewees.

EU expenditure per litre of wine for the different distillation measures

Actual EU expenditure[66] per litre of wine for the different distillation measures is shown in table 14 below. The expenditure per litre of wine taken away from the wine market by distillation for potable alcohol was reduced by the reform of CMO for wine in 1999. Before the reform, potable alcohol was produced out of preventive, supplementary and support distillation. The expenditure per litre of wine varied significantly according to distillation type and wine category[67]. After the reform, aid was unified for all wine categories on the price of the former lowest price category for preventive distillation.

Obligatory distillation of table wine had not been implemented for a couple of years before the reform[68]. The expenditure per litre of wine bought-in in case of serious table wine market crises increased after the reform of CMO for wine in 1999.

[64] Judgement criteria, indications, regression analysis and detailed description of results per Member State are shown in the annex, section 5.2.4.

[65] The database for Spain presently available was not sufficient for significant results, because of the shorter time series. However, the current calculations for Spain show that the impact of distillation measures is higher than in the other Member States. A confirmation of these results by further analysis with longer-time series in future years would be useful.

[66] The calculations and assumptions for the evaluation of cost of the different distillation measures are described in detail in the annex to this chapter, section 5.2.5.

[67] For preventive distillation it was estimated to reach from 0,18 € / litre for a 10% vol. AI wine to 0,66 € / litre for a 12% vol. AIII wine distilled to raw alcohol; For support distillation it was estimated to reach from 0,24 € / litre for a 10% vol. AI wine to 0,85 € / litre for a 12% vol. AIII wine distilled to raw alcohol.

[68] To give an impression of cost of that measure, example of 1991/1992 was chosen with highest buying-in price level after the Dublin summits. EU-cost per litre of table wine taken away from the market reached from 0, 09 to 0,10 ECU / litre.

Table 14 Producer turnover and cost to the EU of distillation measures after the reform of CMO for wine in 1999

Distillation type	Producer turnover from distillation per litre	EU-expenditure on distillation per litre	Producer turnover from distillation per hectare	EU-expenditure on distillation per hectare
	(Basis: 1 litre wine of 10% vol.)		(Basis: 50 hl / ha wine of 10% vol.)	
Distillation for potable alcohol	0.249 € / litre	0.18 € / litre	1245 € / ha	900 € / ha
Distillation of dual-purpose grapes	0.134 € / litre	0.16 € / litre	670 € / ha	800 € / ha
Crisis distillation of table wine (example of Portugal in 2001/2002)	0.191 € / litre	0.21 € / litre	955 € / ha	1050 € / ha
Crisis distillation of quality wine psr (example of Portugal in 2001/2002)	0.230 € / litre	0.25 € / litre	1150 € / ha	1250 € / ha

Source: based on price data given in the EC regulations, estimation of average depreciation cost of alcohol stocks given by EC, DG AGRI and the indicated assumptions of alcohol content and yield.

A comparison of producer turnover and EU expenditure for different distillation measures after the reform of the CMO for wine in 1999 is given in table 14 to show the different budget cost effects of the distillation measures on the related wine producer income . It demonstrates that wine distillation measures with the obligation of taking over alcohol from the distiller lead to EU expenditure of 108-120% of wine producers' turnover, while EU expenditure for distillation of potable alcohol amounts to about 72% of wine producers' turnover. Hence the direct income effect of distillation for potable alcohol involves less expense for the EU budget than the other wine distillation measures (see Table 14). For an overall comparison of distillation measures with measures which aim to reduce wine production, the distillation expenditure per production of a hectare is also estimated (see chapter 11).

5.2.3. Distillation of dual-purpose grapes

The distillation of dual-purpose grapes is an obligatory measure which aims to avoid wine production of grapes that are not solely classified as wine-grape varieties by distillation of such wine produced in excess of the normal quantities directed to traditional uses in the spirits sector and other traditional outlets[69].

Importance in the different EU Member States

The importance of distillation of dual-purpose grapes decreased enormously between the 1980s and the mid 1990s. In the last decade distillation of dual-purpose grapes has hovered constantly around 2 million hl. It has been used nearly exclusively for several years in the French region that produces Cognac (Charentes).

The permanent abandonment premium had helped to reduce the surplus production of wines from varieties that could also be used as table grapes, especially in Spain and Italy, which no longer have to be distilled.

In France, the continuous use of distillation measures for dual-purpose grapes could be an indicator of structural rigidity as it suggests that producers are not responding enough to changes in the reduced quota of quantities (of dual-purpose grapes) normally produced, which was caused by lower consumer demand for wine spirits.

[69] See preface sentences (35) and (37) of Regulation 1493/1999.

Impact on market prices

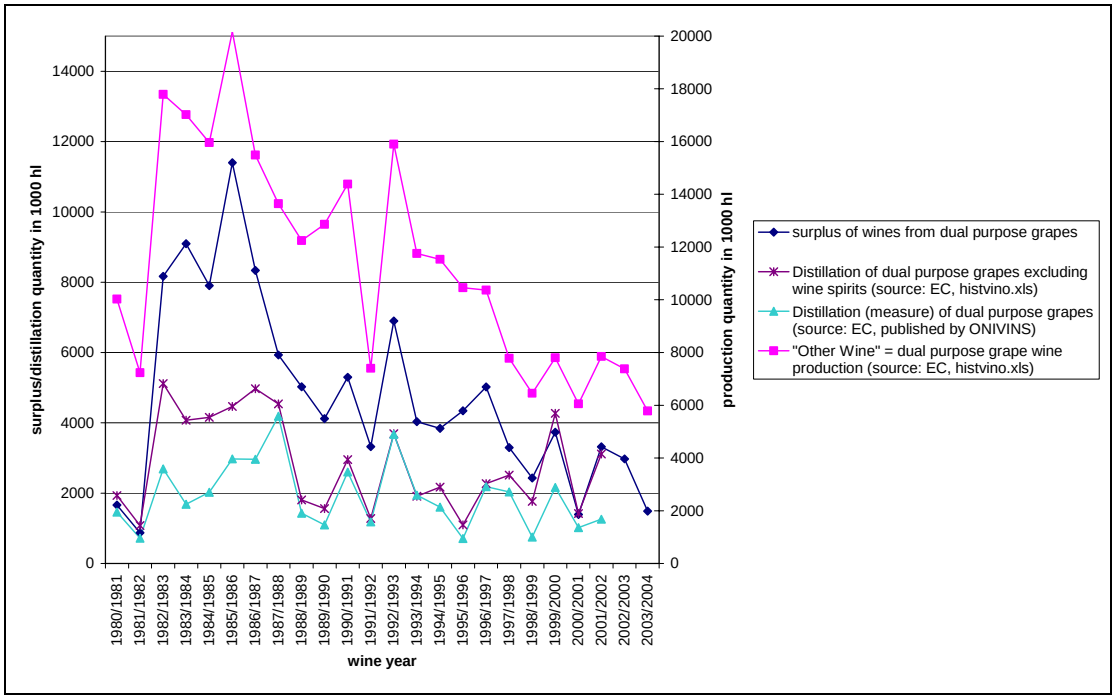
The buying-in price for wines which have to be put to distillation of dual-purpose grapes is significantly lower than the reported market prices for all wine categories in the Charentes region. There is no direct relation between the buying-in price of this intervention measure and market prices, because the quota of "quantities normally produced" limits the free marketed quantities of dual-purpose grapes for the production of Cognac.

Hence, for table wine of the Charentes region, for example, no impact of the quantities distilled subsidised by distillation measures on market prices could be detected, but the quantities distilled for non-subsidised Cognac production showed a significant impact on market prices.[70]

Impact on market equilibrium in volume terms

The analysis of the impact of wine distillation measures on the surplus was done by comparing the EU surplus of wine from dual-purpose grapes[71] with the quantities distilled by the measure for dual-purpose grape distillation (see graph 23).

Graph 23 Annual EU surplus of wine from dual-purpose grapes and distillation of dual-purpose grapes



Source: based on data from DGAGRI: histvino.xls and communications of the Member States.

The figures for wines made from dual-purpose grapes produced in the EU show a large decrease in dual-purpose grape wine production and a surplus on the one hand, and a regular, more varying than decreasing amount of distillation quantities under dual-purpose grape distillation measures since the end of the 1980s; figures for total

[70] For detailed results of the econometric analysis see table 96 in the annex to this chapter.

[71] Production of wine from dual-purpose grapes is indicated as EU production of "other wines" in the statistics of the wine market balance sheet. In contrast with usual surplus calculations, described in the section *"overview of the wine market"* the calculation of surplus has been done here with the EU production data of "other wines" excluding imports from third countries and human consumption of "other wines", as these figures of "other wines" show the development of these imports – "other wines" produced in Europe are only produced for distillation or industrial uses (e.g. juice, vinegar), hence no significant direct human consumption of them as wine exists.

distillation of dual-purpose grapes for uses other than brandy (brandy = mostly Cognac) tend to increase again slightly from 1990/1991 to 2001/2002. Since 1999/2000, the quantities going for this distillation are nearly equal to the surplus of wine made from dual-purpose grapes, and since then production of these wines has tended to stabilise.

EU expenditure for distillation of one litre of wine

EU expenditure for distillation per litre wine of dual-purpose grapes has not changed, but remained the same since the reform of the CMO in 1999 (see table 14).

5.2.4. Crisis distillation of quality wine psr

Crisis distillation of quality wine psr is designed to reduce occasional surplus quantities on the quality wine psr markets. Distillation measures for quality wine psr did not exist before the reform and data for the period since the introduction of the measure are still preliminary or not available yet. Hence judgments may not be based on concrete facts yet. It seems as if the measure is not widely accepted, at least in some of the quality wine producing regions: e. g. in Germany it is stated that much smaller quantities of quality wine psr have been given to crisis distillation than allowed by the EU, even though there were difficult market situations. There may be big differences between the forecast and the actual distilled quantities in the other Member States, too. At least part of the quality wine psr producers prefer to deliver quality wine psr quantities, which may not be sold as quality wine psr, to a few, non-subsidised outlets for industrial purposes, than to be recognised as a producer of non-marketable wine given to crisis distillation measures.

5.2.5. Distillation of by-products

Ensuring wine quality is the fundamental idea of the measure on obligatory distillation of by-products: the quality of the wine is improved by avoiding over-pressing of grapes and the pressing of wine lees. As a consequence, the quantity of usable wine is reduced. The production costs per litre of wine are increased, though this is offset at least partly by the minimum price paid for the taking over of the by-products by the distiller.

Importance in the different EU Member States

Within the EU two different main approaches concerning the handling of by-products can be observed:

- disposal of the by-products, mostly by composting in the vineyards,
- utilising the by-products' contents for industrial use.

The former mostly occurs in the wine producing regions of the northern Member States (Germany, Austria, and Luxembourg) and in Member States where viticulture is less important (e.g. Belgium, UK) and it does not incur any costs for the EU. The second approach is applied in the southern Member States (France, Greece, Italy, Portugal and Spain) and is supported by aid given to the distillers for processing or by buying-in of the resulting alcohol.

By-product distillation is obligatory in most EU Member States, so it should be a logical consequence that it does occur regularly in those States and in comparable percentages of their production quantities.

However, for some of these Member States in some years no by-product distillation is reported to the EU and quantities delivered to by-product distillation relative to wine production vary enormously between the Member States.

On average (1994/1995 - 2001/2002) distillation of by-products[72] amounted 0.38 million hl of pure alcohol in Italy. It may be seen that since 1988/1989 the distillation of by-products has been the most important distillation measure in France, with quantities distilled into about 0.55 million hl of pure alcohol on average (1994/1995 - 2001/2002).
In Spain, distillation of by-products averages (1994/1995 - 2001/2002) around 0.35 million hl of pure alcohol, with some extreme figures related to strong harvest variations. In Portugal distillation of by-products varies mainly according to varying harvest quantities and averages around 0.04 million hl of pure alcohol (1994/1995 - 2001/2002), for the recent wine years only low quantities of by-products distilled in comparison with total wine production are reported. More detailed data or information could not be obtained from the Portuguese institutions[73].
The available EU database for distillation quantities in Greece shows just low quantities of by-product distillation (0.004 hl of pure alcohol on average 1994/1995 - 2001/2002) in relation to total Greek wine production, but the ratio by-product distillation / total wine production is increasing. Efforts to get further information and explanation from the Greek authorities did not produce results.

Impact on wine quality
The importance of the quality protecting effect of the measure on the distillation of by-products has to be viewed with caution nowadays. In contrast with former times, when the measure on the distillation of by-products was created, oenological practices have developed enormously, e.g. lee filter technologies can very carefully separate wines from their lees and the resulting wines are rather acceptable. Countries which are exempt from the distillation obligation , e.g. Germany or Austria, are continually proving that these methods work well.

By-product management in the southern wine growing zones is more susceptible to quality risks for the wine produced than in the northern regions, e.g. due to acetic acid problems. As a consequence of the dominance of white wine production in the northern regions, the resulting fresh marc contains more often sugar instead of alcohol. By-products containing alcohol are more and more quickly susceptible to acetic acid bacteria, which develop more quickly in the warmer climates of the southern regions too. Hence, there is a much bigger risk of acetic acid problems in the southern regions, if by-products from production of red wine are brought back to the vineyard during the harvest period, as is done in the northern zones.
Another phyto-sanitary risk may be black rot disease that may be spread by disposal of fresh marc in the vineyards.

The importance of quality wine psr and regional wine production is increasing (see chapter 3). This production is connected with higher quality standards and limitations on yields per hectare, which are always much lower than the production potential of the vineyards. Irrigation is partially allowed in the EU[74], therefore the quantity and quality risk is reduced. So the temptation for over-pressing grapes is much reduced in

[72] See graphs 104 and 105 in the annex.
[73] Checked at www.ivv.min-agricultura.pt, 6.9.2004
[74] In case of quality wine psr irrigation is linked to explicit permission of the Member State concerned, if the ecological conditions justify it.

comparison with former times; it is easy to harvest enough to produce the allowed production quantity without over-pressing.

Impact on market equilibrium in volume terms

According to the restrictions in Regulation 1493/1999, the quantity impact of obligatory by-product distillation is fixed to an equivalent of at least 10% of alcohol content of produced wines.

Article 46 of Regulation 1623/2000 contains minimum average requirements that wine making by-products must meet on the delivery to the distillery: In the case of grape marc, 2 litres of pure alcohol per 100 kg in wine growing zone B and for dual-purpose grape marc in wine growing zone C, 2.8 litres of pure alcohol per 100 kg for wine-grape varieties in wine growing zone C. For the wine lees an average minimum content of 3 litres of pure alcohol per 100 kg in wine growing zone B and 4 litres of pure alcohol per 100 kg in wine growing zone C are required.

The legal rules for the disposal of by-products under control in the case of exemption from the obligation to distil by-products (Article 51 of Regulation 1623/2000) require for grape marc 2.1 litres of pure alcohol per 100 kg in the case of quality wine psr, and 3 litres of pure alcohol per 100 kg in other cases. For the wine lees a minimum content of 3.5 litres of pure alcohol per 100 kg for quality wine psr and 5 litres of pure alcohol per 100 kg for other cases are required.

In regions with the exemption from obligation to distil by-products (concerning wine production in wine growing zones A and part of wine growing zone B), the figures for remaining alcohol content are quite similar for the handling of by-products by distillation or disposal. Therefore, the real effect of this distillation measure on the wine quantity produced should be nil and there should be no special impact on market equilibrium in volume terms.

A theoretical estimation was made of wine quantity volumes, if there were no legal minimum levels for alcohol content of by-products[75]. We estimated that usually not more than about 1% of wine production might be produced additionally without these restrictions. In the case of quality orientated wine production as practiced in the EU, no additional volume effect without restriction should be expected.

Impact on market prices

The impact of by-product distillation on wine market prices cannot be estimated using empirical data. There is no common wine type which would allow a comparison of the prices of wines produced with and without obligatory by-product distillation. Hence we have made a qualitative analysis .

According to the conclusion of the previous section, we assume that not more than 0 - 1% of additional production could result from abandoning by-product-distillation. If there is a decrease of 1% in the quantity per hectare due to by-product distillation, theoretically it should lead to an increase in wine prices. But if reference is made to experience of the effects of yield variations of different vintage years, no significant price changes can be assumed due to an eventual decrease of 1% in production.

The elimination of aid for the distillation of by-products combined with of the continued obligation to distil the by-products would increase production costs by the amount of the aid no longer given. Some interviewees from southern Member States stated that by-product distillation was a cheap method of avoiding the production of

[75] For details see annex to this chapter, section 5.2.6.

additional quantities of wine of poor quality that cannot be sold in the market, and/or of getting rid of such wines accidentally produced.

Hence, without that measure disposal of unsatisfactory wines would be more expensive and would have to be entered as additional overheads in the producers' price calculations. This might lead to slightly increasing market prices or income losses, if the demand side did not accept the higher prices.

Without obligation to distil, no increase in production costs and hence prices is expected in wine growing zone B, if aid paid for distillation of by-products is abandoned, as the withdrawn by-products may replace fertiliser and hence the cost of this item (see comparison of costs for different humus fertiliser including by-products in table 104 in the annex to this chapter).

EU expenditure for the measure

EU expenditure was estimated per litre of wine[76] included in the by-products. The direct EU expenditure for distillation of one litre of wine by by-product distillation has been estimated to range from 0.15 € / litre to 0.18 € / litre[77].

But from 10% of alcohol content in the by-products, which is not allowed to be produced as wine, not more than 1% might be additionally taken away from the market, the rest is normal loss, which remains in the by-products if they are not distilled. Hence, the direct cost of taking away one litre of wine from the market has to be multiplied by a factor of 10:1 to get the cost of taking away one litre of potential marketed wine. Thus expenditure by the EU may be estimated to range from 1.5 € / litre to 1.8 € / litre wine.

EU expenditure per hectare is estimated as follows: an equivalent of 10 % of alcohol produced has to be delivered, hence a by-product quantity equivalent to 5hl wine if 50 hl wine is produced. This equivalent may be multiplied by the direct expenditure value per litre as above, so that the expenditure per hectare may be assumed for a 50 hl /ha yield of wine with 10 % vol. alc. to be: 500 litre*0.15 €/litre = 75 €/ha, while the wine producer receives 500 litre*0.099 €/litre = 49.50 €/ha.

5.2.6. General impacts of EU distillation measures

The analysis of the impact of distillation as a measure of market regulation should recognise that wine is not a homogeneous commodity, but a clearly differentiated group of products. The derived distilled products and their markets may be separated as well. Producers have a choice whether to make use of the voluntary distillation measures and adapt their production to the given economic and regulatory framework set by them.

General short and medium-term effects of occasionally used wine distillation measures

When occasionally used distillation measures[78] are implemented, they do not reduce the quantities of wine originally produced but influence the market by creating an additional but artificial outlet for wine. Hence the measures may help to raise prices on the commercial market compared with the situation without intervention.

[76] Or the equivalent must quantity.
[77] A description of the estimation method is given in the annex to this chapter, section 5.2.6.
[78] E.g. obligatory distillation of the former CMO crisis distillation.

The EU is an open market with the possibility of imports. For this reason the additional demand from occasional distillation measures not only supports EU wine production but, by raising the general level of wine prices, benefits third country suppliers too.

The degree to which the overall price level is raised by buying-in of wine for distillation depends on the underlying strength of the market. Though the prices of quality wine seem little changed, those of the sensitive category of lower quality table wines are certainly affected.

General long-term effects of occasional wine distillation measures

If wine producers know that occasional production surplus is reduced by occasional distillation measures, then it is a less serious risk for low prices. Hence they receive the best individual income if they adapt their production to a higher average production, which allows higher turnover per hectare in years of low or medium yields.

Quality effects of regular application of distillation measures whose resulting alcohol is delivered to intervention agencies

Over the last twenty years, some distillation measures[79] in theory scheduled for occasional application have been used nearly every year. Therefore, it can be assumed that producers expect there to be certain quantities of subsidised distillations every year.

The possibility of delivering the wine to distillation measures involves only the lowest basic quality aspects. The buying-in prices for wine disposed by these distillation measures does not reflect any quality aspect except alcohol content. Without distillation measures, the wine production would have to be of high quality for potable wine or potable alcohol, as requested by the consumers.

As distillation measures create additional outlets for poor quality wine, some producers who cannot find a regular commercial outlet may adapt their production to supply for distillation, where alcohol content is the important characteristic rather than wine quality. The overall result may be that such producers increase low quality-wine production, at least for part of their production, reduce production costs and gain an adequate income through producing for distillation.

General short and medium-term effects of regular wine distillation measures producing potable alcohol

Aid for distillation of potable alcohol does not create an artificial demand, but it does influence prices on the market for potable alcohol and hence the volume of supply.

Without aid, distillers' expenditure was higher in order to pay the same buying-in price to European wine producers. Wine producers from third countries, who could also potentially deliver wine for distillation of potable alcohol, are hindered from entering this market. They have to accept prices equal to or lower than remaining expenditure for the European wine of the distillers after deduction of aid.

The aid reduces the distillers' cost for raw materials, which leads to lower prices of potable alcohol and hence increasing demand according to its price elasticity.

[79] E.g. obligatory distillation in Italy and Spain until 1994/1995, dual-purpose grape distillation in France

5.3. Conclusions and recommendations

5.3.1. Judgement of Effectiveness

According to the results of econometric analysis and interviews, the impact on market prices occurs with a certain time lag. The impact on prices could be seen at the lower end of the price range, with the CMO distillation measures supporting prices in the medium term for low quality table wines, particularly in Spain, France and Italy.

In the short term, a positive impact of table wine distillation measures on prices could only be found in some very particular market situations. Hence, crises are not usually overcome in the short run and table wine distillation measures have only limited effectiveness as regards income stabilisation by enhancing market prices.

The direct income stabilising effect of distillation measures through turnover resulting from the buying-in prices paid to the wine producer is effective to different extents according to conditions in the various Member States. While for Spain income generated by distillation measures for potable alcohol seems to be sufficient for many producers to continue production, it is apparently not so for most producers in France, Italy or Germany. Aid for distillation of potable alcohol protects European wine producers against price competition from third countries.

As the reform of the CMO for wine in 1999 is so recent, there are few data for the new period; hence only provisional judgement about the effects of changes due to the reform is possible. In fact, there is already evidence showing that new crisis distillation is more expensive than former obligatory distillation, but even so in some cases (e.g. France) it is not attractive unless additional national aid is given.

Aid for distillation of dual-purpose grapes is effective in supporting market prices in Charentes only due to the adequately limited quota of "quantities normally produced".

Concerning market equilibrium of wine quantities, the current analysis shows that the use of the EU wine distillation measures is a relatively effective means of influencing the volume of wine put on the market in the short run. The distillation measures, whose resulting alcohol is delivered to intervention agencies, act as an additional (artificial) demand, so that imports are not harmed but indirectly supported.

As regards the market equilibrium of potential wine production, wine distillation measures are not effective. The income support through price stabilisation hinders the adaptation of vineyard surface to market demand. Hence structural surpluses remain and the overall price level and thus producer income may not increase in the long run.

In low price markets the revenues deriving from regular or repeated distillation measures generate a significant income for some producers, especially in Spain[80]. This income stabilising effect fulfils one aim of EU agricultural policy, but at the same time it encourages the continuation of structural surpluses. Moreover, there is a conflict between the aim of regional income stabilisation and that of the adaptation of production to demand.

[80] In Spain the production of table wine is declining in line with consumption, but by contrast, the quantity of table wine distilled remains fairly stable.

Our analysis shows that the structural surpluses tend to continue (see chapters 3 and 11). Distillation measures may be an adequate method of dealing with periodic surpluses, but they become very ineffective when such surpluses have to be distilled continuously.

Continuous implementation of distillation measures producing industrial alcohol out of wine[81] may cause at least part of production to be made especially with the distillation measures in view, since specific wine aroma is not needed to produce a neutral alcohol for industrial uses.

By-product distillation is justified only for quality reasons in southern regions, where experts judge it to be an effective means of ensuring wine quality. However, nowadays progress in oenological technology should allow the same aim to be achieved by other means. Experts from northern regions confirmed that distillation of by-products is not needed for quality reasons.

5.3.2. Judgement of Efficiency

Distillation of wine is not an efficient measure in the elimination of structural surpluses: wine which is not needed is transferred using large amounts of natural resources, such as energy, into another product, alcohol.

The cost of storage and depreciation of the distilled alcohol remains high. It is inefficient to transfer market disturbances from the wine market to the alcohol market, or to accept monetary losses, without ensuring a reduction in production.

The income effect which is generated by wine distillation measures is not efficient in the long run: distillation measures guarantee a certain minimum, but they hinder the adaptation of production to changing demand. Hence income support will always be necessary.

Guaranteeing basic wine quality standards by by-product distillation absorbs a significant part of the budget. The resulting alcohol may only be sold with large monetary losses. Technological progress raises the question whether obligatory by-product distillation might be reformed at least in part of the wine growing zones so as to reduce EU expenditure on the measure.

5.3.3. Recommendations

The task for the future should be to develop a wine CMO with more efficient measures than distillation[82].

In the following paragraphs we discuss some proposals to reform the distillation measures given by interviewees and resulting from the present analysis. These recommendations are intended to offer a well-founded working hypothesis. They need to be checked and completed by further, in-depth scientific work, which could not be done within the scope of this evaluation.

We suggest that the income stabilising effect of distillation measures could be achieved more efficiently by other measures, such as have already been introduced for other agricultural products, e.g. direct income transfers.

[81] We abstract here from by-product distillation.

[82] A substantial part of the distillation infrastructure has been created to enable the application of wine distillation measures. If the political decision were made to abandon the distillation measures, there would be a certain political responsibility to help distillers adapt to the new situation.

Then distillation measures should focus on extraordinary market situations. There should not be any regular or, over a shorter period, repeated use of distillation measures supported by the EU budget.

Aid for distillation of potable alcohol should be abandoned. If there is a commercial market for potable alcohol produced out of wine, there will be a market price allowing wine producers to exist without aid. If the market price is too low to ensure sufficient income, wine production should be made suitable for other, more profitable segments of the wine market demand or abandoned.

Aid for distillation of dual-purpose grapes should be abandoned. Without aid it will be more attractive not to exceed the "quantities normally produced".

As regards structural surpluses, premiums for permanent abandonment might be an adequate measure to reduce the market exit barrier for producers who have a structural lack of competitiveness. If no aid is given for distillation measures, the expenditure for the measure might be reduced in comparison with former times, as there would no longer be a minimum income effect from distillation measures which has to be exceeded.

Concerning occasional surplus crises, we suggest a completely different approach to reduce surplus production before it has been made into wine: introduction of premiums for green harvest of grapes.

Premiums for green harvest of grapes could be a very interesting and adequate measure for occasional surpluses.
First, unlike distillation measures for crisis situations, which tend, according to our analyses and expert interviews, to have a lagged impact on the market situation, green harvest of grapes fights against surpluses in advance, at a very early stage of probably high yield vintages.
Second, the quality of wine may be improved by reducing the quantity of production.
Third, the harvested green grapes may remain or be brought back to the producer's vineyard as green fertiliser and no alcohol produced, which would have to be sold later with monetary losses.
Fourth, the producer may do the work of green harvesting himself, and the aid paid for the measure would completely support his income.

To illustrate this proposal, we give an example of how the measure might be introduced:
- no application on production of quality wine psr,
- payment according to labour cost, not according to effect: e.g. basic value 40 working hours per hectare for 5- € = 200- € per hectare,
- to control the quantity application of the measure, this basic value would be given for a certain amount of green harvested grapes whose weight should be fixed every year according to the estimated harvest quantities in order to reduce the quantity according to the forecast surplus (in years of low production quantities, the measure would not be implemented),
- to monitor the application of the measure as a quality enhancing method, sample control might be performed to assure that, say, one third of grapes per vineyard were harvested green and not one third of the surface harvested totally.

Aid for crisis distillation should be abandoned. According to the results of our analysis, crisis distillation is not constantly effective in the short term and according to

the interviews it may disrupt the wine market in the medium term; moreover, it is not suitable for combating a structural surplus.

Further analysis is necessary[83], but the initial conclusion is that by-product distillation could be abandoned or at least made voluntary, especially for the quality wine producers of wine growing zone B.

For example, the German wine region of Baden shows that in a quality wine region of wine growing zone B, the disposal of by-products in the vineyard does not give rise to quality problems. It might be more profitable to the wine producers in other EU quality wine regions in zone B to use their by-products as vineyard fertiliser than to have them distilled. This would avoid the need for distillation aid.

As for distillation of by-products in zone C, we note that for low price table wine the temptation to over-press is greater than for quality wines psr.

Interviewees from all Member States where distillation of by-products is obligatory stated that by-product distillation is very important for keeping a minimum standard of good wine quality in the regions. In particular, the risk of illegal production of piquette and blending it with wine was mentioned.

Phyto-sanitary aspects have to be examined as well, such as the risk of acetic acid bacteria and black rot through fresh marc brought back to the vineyard.

The question whether composting is more cost effective than distillation of by-products in wine growing zone C should also be examined.

[83] Taking into account the serious concerns of interviewees in southern European Member States, e.g. scientific research into the consequences of the disposal of by-products in vineyards for wine growing zones B and C.

6. Aid for private storage

Do the aid measures for private storage have a significant impact on the
- *fluctuations in the volume of supply between campaigns*
- *the level of wine prices (during and after the campaign)?*

If impacts can be identified, what is their dimension (with regard to other determining external factors) and are they achieved at a reasonable cost?

6.1. Introduction

The objective of the measure aid for private storage is to support the internal market for wine providing storage aid for table wine and grape musts and encouraging producers to take surplus wine off the market, thus supporting market price stabilisation. The measure acts on the supply side of the market through the temporary withdrawal of production.
In order to justify the usefulness of aid for private storage, it is necessary to consider whether the market itself will provide such mechanisms, for example as it occurs in the quality-wine market.
The study examines the effects of the aid to the private storage system from 1988 to 2003 at EU, national and regional levels. Special focus has been placed on Italy (Sicily, Puglia, Emilia Romagna, Lazio and Veneto), France (Languedoc-Roussillon) and Spain (Castilla - La Mancha) as the main producers of table wine [84]. The study covers the 1988/1989 wine year onwards covering the application period of the two main regulations (Regulation (EC) 822/87 and Regulation (EC) 1493/99) on the Common Market Organisation for wine.

The methodology followed has been centred around the following steps:

1. Analysis of the evolution and distribution of quantities of table wine and grape musts under private storage contracts, which has been performed at EU and national levels.
2. EU budget for private storage.
3. National and regional price analysis, to find out the impact of private storage on table wine prices.
4. Producer's behaviour regarding the decision to put part of the production of table wine under private storage contracts.
5. Analysis of the revenues obtained from private storage, in order to investigate the rationale behind the producer's decision of storing a part of the production.
6. Regional analysis, with the objective of observing the distribution of the quantities stored within the regions, identifying the beneficiaries of the measure and assessing its scope and market impact.
7. Regional comparative analysis among France, Italy and Spain.

In addition, the use of the stored wine when it is taken out of store is an important indicator to evaluate the effectiveness of the aid system and thus answer the questions

[84] Details on data and sources are listed in the annex to this chapter.

posed. Where wine is taken off the market in a surplus wine year and sold during a shortage, this stabilises supply and therefore prices, generating benefit to both producers and consumers. However, if after the storage period, the wine is simply distilled or processed into concentrated grape must or rectified concentrated grape must, then it is arguable that this wine could not find a market as table wine.

6.2. Results of the analysis

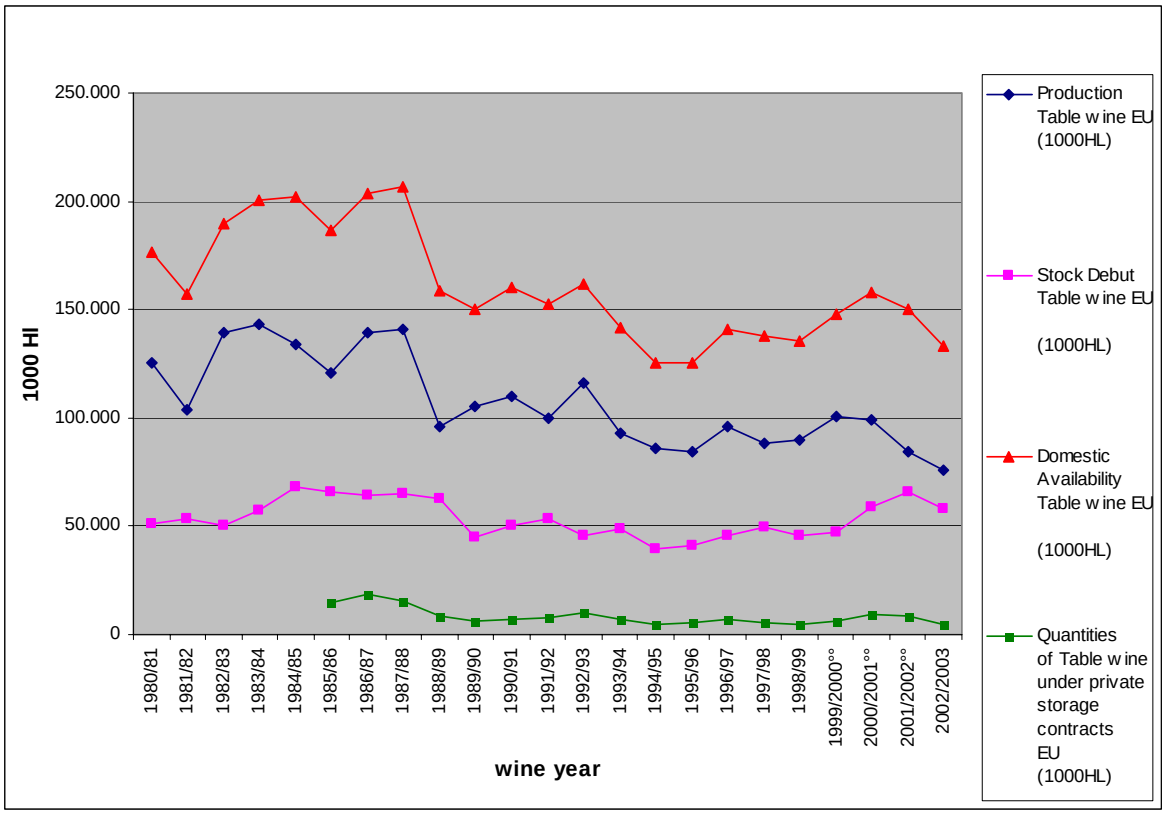
Abundant harvests wine years cause an excess supply that, if not matched by increases in consumption, could drive prices down. Therefore, the quantities of table wine and grape musts taken off the market and put under private storage contracts will increase in periods of rich harvests. Since the effects of abundant harvests may not fade away in the next wine years but persist over several years (under the form of stocks), it is necessary to observe the variation of the quantities under private storage together with the movements of the stock and domestic availability.
On average, over the last 18 wine years, European producers have put 8 million hl of table wine under private storage contracts, equivalent to 5% of the domestic availability at EU level and to 8% of the total EU production of table wine (see table 15).

At EU level, during the wine years 1985/86 – 2002/03, in average, 75,9% of the quantities put under private storage were represented by table wine; 20,2% by grape must and 3,8% by concentrated grape must and rectified concentrated grape must (see table 108 in the annex to this chapter). The distribution of aid for private storage among table wine and grape musts varies according to the country considered (see the annex, graphs 106-121).

6.2.1. Summary of the evolution and distribution of quantities of table wine and grape musts under private storage contracts

The trends in quantities of table wine under private storage, domestic availability, production and stock at EU level are show in Graph 24.

Graph 24 Trends of domestic availability, aid for private storage, production and stock of table wine at EU level.



Source: based on data from European Commission, DG Agriculture

A detailed analysis on this section is presented in the annex to this chapter.

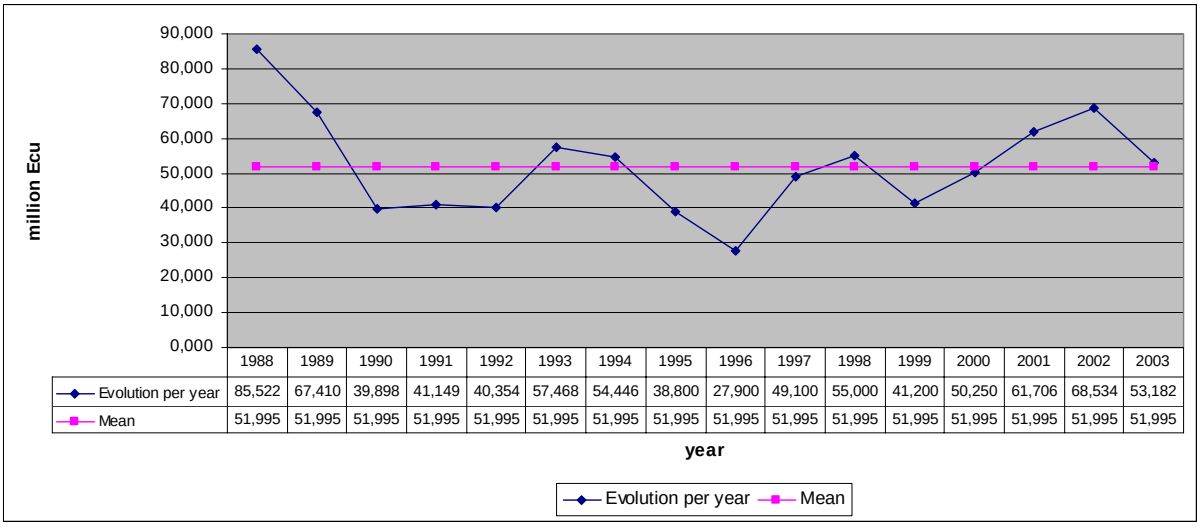
The analysis shows that the recourse to aid for private storage of table wine in Italy, Spain, France and Portugal follows a similar pattern (see table 15).

Before the introduction of the first CMO reform (Regulation 822/87), France was leading country in terms of volumes of stored table wine; the following 11 wine years, from 1988/89-1999/00 showed a considerable reduction in the volumes under private storage at both EU and national level and during this period Italy replaced France as the leading country in volumes under private storage contracts. The leadership of Italy has continued during the last three wine years (2000/01, 2001/02 and 2002/03) after the implementation of the reform with a share of 40% of table wine under private storage contracts.

6.2.2. EU Budget for private storage

Data on the distribution of EU funds per aid show that, on average, during the period 1988-2003 the aid for private storage amounted to 5% of EU budget for the wine sector. The weight of private storage over the total budget for wine has varied from 3% in 1991 to almost 8% in 1998.
Graph 25 shows the development of the EU budget expenditure devoted to private storage over time.

Graph 25 Evolution of the budgetary cost of aid for private storage



	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Evolution per year	85,522	67,410	39,898	41,149	40,354	57,468	54,446	38,800	27,900	49,100	55,000	41,200	50,250	61,706	68,534	53,182
Mean	51,995	51,995	51,995	51,995	51,995	51,995	51,995	51,995	51,995	51,995	51,995	51,995	51,995	51,995	51,995	51,995

Graph 25 shows that the EU budget expenditure for private storage varies from year to year. From 1988 to 2003, the budget devoted to private storage has decreased by almost 38% (from 85 to 53 million ECUs). Although no clear trend can be extrapolated from the data, the graph shows that during the period 1990-2000, the budget devoted to private storage has been below the mean (52 million ECUs), except from the years 1993, 1994 and 1999 where the expenditure for private storage was slightly above the mean. After the 1999 reform, the budget expenditure increased in 2001 and in 2002 to decrease again in 2003.
The period after the reform is too short to determine the effects of the reform on the budget expenditure devoted to the measure. Yet, during the period prior to the approval of the Regulation 1493/99 (reform of the CMO for wine), the budget for private storage has varied and therefore the EU expenditure dedicated to the measure cannot be considered constant.

The distribution of the aid for private storage among EU countries is concentrated in a few countries. Italy, Spain and France receive the highest percentage of aid as main producers of EU table wine. During the period 1989-2000 Italy received the highest average percentage of aid (40%), followed by Spain (25%) and France (24%).

Table 15 Proportion of quantities of table wine under private storage contracts over production and domestic availability.

	EU		Italy		Spain		France		Portugal	
Wine year	Aid in quantity/ domestic availability	Aid in quantity/ production	Aid in quantity/ domestic availability	Aid in quantity/ production	Aid in quantity/ domestic availability	Aid in quantity/ production	Aid in quantity/ domestic availability	Aid in quantity/ production	Aid in quantity/ domestic availability	Aid in quantity/ production
1985/86	7.83%	12.10%	8.06%	12.46%	0.00%	0.00%	12.21%	18.63%		
1986/87	9.18%	13.40%	7.65%	10.69%	10.04%	14.43%	11.79%	17.61%		
1987/88	7.44%	10.89%	6.05%	8.64%	9.44%	13.01%	8.69%	13.45%		
1988/89	5.16%	8.55%	4.25%	6.48%	2.82%	5.82%	7.08%	11.44%		
1989/90	4.02%	5.73%	3.53%	4.68%	7.14%	10.27%	4.29%	6.53%		
1990/91	4.25%	6.18%	4.62%	6.87%	5.65%	7.75%	4.19%	6.23%		
1991/92	5.11%	7.84%	5.83%	8.21%	7.52%	10.21%	5.27%	9.10%		
1992/93	6.27%	8.73%	6.24%	8.01%	7.68%	9.86%	4.44%	6.39%	6.01%	10.71%
1993/94	4.93%	7.53%	5.25%	7.24%	5.72%	8.10%	4.36%	7.04%	4.25%	8.86%
1994/95	3.72%	5.42%	2.88%	3.79%	6.52%	9.42%	3.89%	5.83%	4.88%	8.26%
1995/96	4.12%	6.13%	3.72%	5.00%	6.85%	10.75%	3.88%	5.72%	4.42%	6.93%
1996/97	4.85%	7.15%	4.35%	6.23%	6.00%	8.14%	4.10%	5.88%	6.40%	9.73%
1997/98	4.13%	6.45%	3.60%	5.39%	5.00%	6.66%	3.70%	5.85%	3.93%	7.62%
1998/99	3.66%	5.51%	4.06%	5.61%	3.59%	4.82%	2.73%	4.28%	1.77%	5.09%
1999/2000°°	4.39%	6.45%	4.51%	6.34%	5.63%	7.71%	3.16%	4.52%	2.83%	4.88%
2000/2001°°	5.95%	9.46%	5.37%	8.31%	7.33%	9.87%	5.41%	8.92%	8.12%	17.65%
2001/2002°°	5.65%	10.09%	6.59%	10.74%	6.93%	11.59%	3.71%	7.11%	6.20%	14.51%
2002/2003	3.45%	6.08%	2.39%	4.15%	6.78%	10.19%	1.83%	3.24%	2.48%	5.24%

Source: based on data from EC, DG Agriculture.

6.2.3. Effects on Prices

In order to assess the effects of aid for private storage on prices, we have observed the evolution of national and regional prices for a period of ten years, assuming that if the withdrawal of quantities of wine from the market has an effect on prices, the latter should become more stable during the period of conclusion of contracts and in the subsequent weeks. We have looked at price trends in the weeks prior to the opening of the period of conclusion of aid for private storage contracts and have compared these trends with those registered between December and February, when the contracts are concluded. The evolution of prices in the weeks following the conclusion of contracts has also been observed (for further details see the annex to this chapter, section 6.2.2).

National Prices

From our observations at national level, no clear cut conclusions on the effects of the withdrawal of quantities of wine from the market through the conclusion of private storage contracts on prices can be drawn. Nonetheless, the relationship between prices and quantities under storage has been further discussed taking into consideration regional prices.

Regional Prices

In order to assess the effects of private storage on the development of prices at regional level, the most representative Italian regions in terms of quantities of private storage with respect to production have been selected (i.e. Puglia, Sicily, Emilia Romagna, Lazio)[85].

The evolution of regional prices[86] for these regions from 1995-2003 shows that:

- In Puglia, prices between December and February are higher than prices observed for the rest of the year and this is true throughout the period except for the years 1997 and 2002 where the highest prices have been registered during October and November.
- In Lazio, prices between December and February are higher than the prices observed for the rest of the year during the whole period except for the years 1997 and 2002, where the highest prices have been registered during October and November, as in the case of Puglia.
- In Emilia Romagna, from 2000 to 2003 prices are fairly stable throughout the year and within that period, prices between December and February are always higher or equal to the prices of the rest of the year, except for 2002 where prices are higher in October and November. In the period 1995-1999 prices between December and February are always higher than the prices of the rest of the year. Also for 1997 in November there is a particularly high price (equal to January and December of the previous year).
- In Sicily, prices show greater variability than in the other regions. Prices between December and February are higher than the prices of the rest of the

[85] The lack of data for Languedoc-Rousillon and Castilla La Mancha has not allowed to carry out the same regional analysis for France and Spain.
[86] Prices time series are available in the annex, section 6.2.2.

year only for three wine years; 1996, 1998 and 2000. The same situation as in the other regions for the years 1997 and 2002 is observed.

In the light of the evidence presented above, we can reasonably argue that , at regional level, the withdrawal of quantities of table wine from the market through the mechanism of the private storage contracts has an effect in maintaining prices stable and even keeping them at a high level. Even in regions characterised by high price variability, like in the case of Sicily, it is reasonable to argue that private storage might have an effect on prices. In fact, although the withdrawal of quantities from the market alone might not be enough in itself to stabilise prices, without private storage the variability of prices would have been even higher.

6.2.4. Producers' behaviour

This section deals with the producer's behaviour at the time of deciding whether to put wine under private storage contracts and for which quantities.

We have looked at monthly prices for table wine in December of each year. Our assumption is that, for any given wine year, the producer who plans to put under private storage part of the wine will take into account the market prices in December in order to decide whether or not to conclude the contracts (and for what quantities). If the producer finds out that the price in December is high he would probably prefer to sell the wine in the market rather than to put it into private storage (choosing not to store at all or to store only a small quantity of the wine). Likewise, if the market price for table wine in December is low, he might prefer to store the wine and postpone the sale in the market once the contract is finished.

We would expect that abundant harvests will drive market prices down and this will induce the producer to put high quantities of table wine under private storage. On the contrary, in years of scarce harvest, prices will increase inducing the producer to sell the wine in the market or to store small quantities.

Data for Italy[87] show that in the wine years 1996/97, 1998/99 and 1999/00 when domestic availability increased (be this due to increases in production and/or stock), prices decreased and the quantities of table wine under private storage increased. On the contrary, the wine years 1997/98; 2001/02 and 2002/03 in which domestic availability decreased, prices increased and the quantities of table wine under private storage decreased.

Exceptions to this trend are wine years 1995/96 and 2000/01. In the wine year 1995/96 domestic availability decreased and prices increased, however, quantities of wine under private storage increased. In the wine year 2000/01 domestic availability increased (with low production but high stocks), price increased and quantities under private storage increased. An explanation could be that prices have increased because production decreased.

The evidence found confirms that, in most cases, production and quantities of wine under private storage contracts move in the same direction (if production increases,

[87] For the purpose of the analysis monthly prices for red table wine from ISMEA have been used in this section. Data available for the wine years 1994/95-2002/2003. See table 124.

storage increases) whereas quantities under private storage and prices move in opposite directions (high prices in December induce producers to store less wine).
These findings are in line with the assumption that low prices induce producers to store high volumes of table wine and high prices induce producers to store less.

6.2.5. Revenues from private storage

What is the rationale behind the producer's decision of storing a part of the production recurring to aid for private storage? Is private storage a measure that helps the producer in times of production surpluses or is it the guarantee of an extra-rent for the producer?
At the time when contracts for private storage are opened[88] the producer has to decide whether to store a part of his production or not. Depending on his choice he will obtain two different incomes. If he chooses not to store, his revenues will be made of the quantities sold times the current market price[89]. If he chooses to store, and thus to postpone the sale of the wine in the market, his revenues will be given by the aid for private storage received along the contract duration[90] plus the quantities sold times the market price in the month when the contract is finished[91] (assuming that he will sell the product in the market soon after the contracts expires).

Due to space constrains, the full analysis of this section is presented in the annex (section 6.2.3 - *Revenues from private storage*). Here below only the main results are summarised.

The exercise estimates and compares the revenues obtained in each of the two scenarios presented in detail in the annex (section 6.2.3 - *Revenues from private storage*). From the calculations performed, it is observed that the revenues that producers obtain when they decide not to store are higher than the revenues obtained when deciding to store part of the production. At the light of these results one might conclude that private storage is not a convenient option for the producer. However, the exercise shows that a crucial factor in the determination of the higher revenues obtained when deciding not to store are the high prices registered in the month when private storage contracts are opened. Since it seems reasonable to assume that these prices are high precisely as a result of the quantities of table wine that are stored instead of being offered in the market, it cannot be concluded that private storage is not a convenient option for producers. In fact, it appears that the contribution that producers receive from the recourse to private storage slightly offsets the losses of selling the wine in the market later in the year. If producers could not make use of the measure, they would probably sell the quantities in the market, increasing the supply and lowering the prices and consequently risking to incur in higher losses.

Therefore, it seems reasonable to assume that private storage gives producers the opportunity to plan more effectively when to channel the wine in the market, considering the possibility to rationalise their supply over time and, in this way, limiting the risks of income losses due to possible market imbalances.

[88] For the purpose of the exercise it has been assumed that producers conclude private storage contracts in December of each year.
[89] Following the previous assumption the current market price will correspond to the price in December.
[90] Assumption that the contract lasts 9 months.
[91] The market price when the contract is finished will be the price in September of the following year.

6.2.6. Regional analysis

The analysis of the application of aid for private storage at regional level has been focused on: Sicily, Puglia, Emilia Romagna, Lazio and Veneto in Italy; Castilla La Mancha in Spain and Languedoc-Roussillon in France. An exhaustive analysis has been carried out for the Italian regions given the rich data set available. Although regional comparisons among the three countries have been performed, the main conclusions and judgment are principally based on the Italian case.

Private Storage in the Italian Regions

The following table summarises the main producer regions and the main "storing" regions by type of product in Italy.

Table 16 Main producer and storing regions of table wine and grape musts in Italy

Product	Main producer regions (average wine years 1997/98-2002/03) (percentage of total)	Main regions that recur to private storage aid (average wine years 1997/98-2002/03) percentage of total)*
Table wine	Puglia (22%) Sicily (19%) Emilia Romagna (19%) Veneto (15%)	Sicily (30%) Emilia Romagna (19%) Puglia (18%) Lazio (15%)
Grape must	n.a.	Sicily (64%) Puglia (15%) Emilia Romagna (10%) Veneto (4%)
Concentrated Grape must	Emilia Romagna (52%) Puglia (23%) Veneto (14%) Sicily (6%)	Emilia Romagna (53%) Veneto (19%) Sicily (10%) Puglia (9%)
Rectified Concentrated Grape must	Emilia Romagna (46%) Sicily (18%) Lazio (10%) Puglia (5%)	Emilia Romagna (60%) Sicily (13%) Veneto (13%)

* For grape musts the data presented in the table have been extracted by *legal premises of the firm.*

From the analysis performed, it has been observed that in the majority of cases the actors in the table wine and grape musts markets are essentially the same.

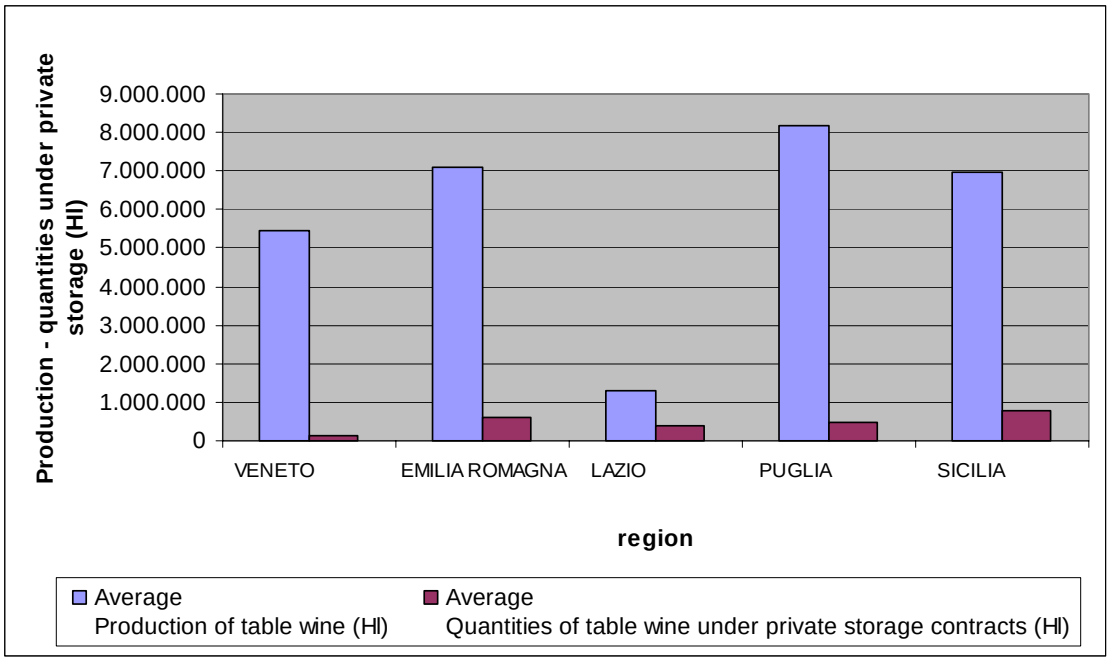
Table wine

The three main producing regions of table wine taken together (Puglia, Sicily and Emilia Romagna) are those that mostly recur to aid for private storage[92]. However, when the regions are taken separately, it is not always the case that the main producer regions are those that mostly recur to private storage. In fact, table 16 shows that the ranking of a region within the "*main producer regions*" and "*main storing regions*" categories is not always the same (e.g. Puglia is first in terms of quantities produced but third in terms of quantities under private storage contracts).

[92] Puglia, Sicily and Emilia Romagna, which together account for 60% of the total production of table wine account for 67% of the total quantities under private storage contracts.

Graph 26 shows the regional distribution of production and quantities of table wine under private storage. Further details on the regional analysis are provided in the annex to this chapter (section 6.2.4).

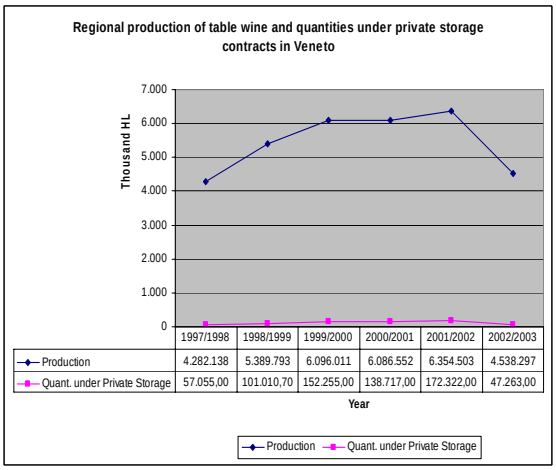
Graph 26 Production and quantities of table wine under private storage, at regional level. Average 1997/98 – 2002/03.



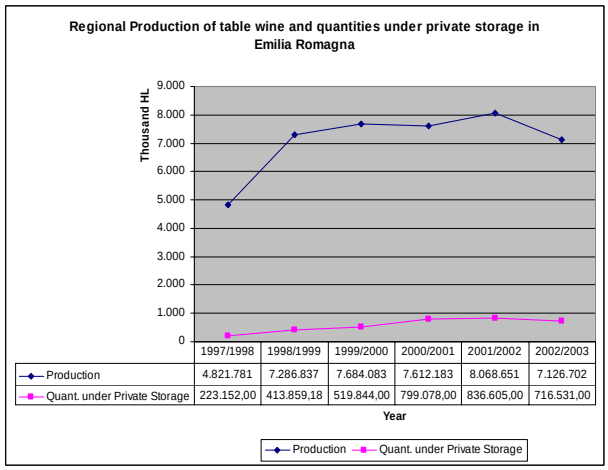
Source: based on data from AGEA

The following graphs show that, in general, at regional level the trends in the quantities of table wine under private storage follow the movements in regional production. Even if a certain level of storage is always maintained, it has been observed that increases in production are matched with increases in the quantities under private storage and when production falls, the quantities put under storage also decrease. This is true in most cases. Some exceptions to this general rule have been observed for Emilia Romagna, Puglia in Sicily for some wine years (see graphs below).

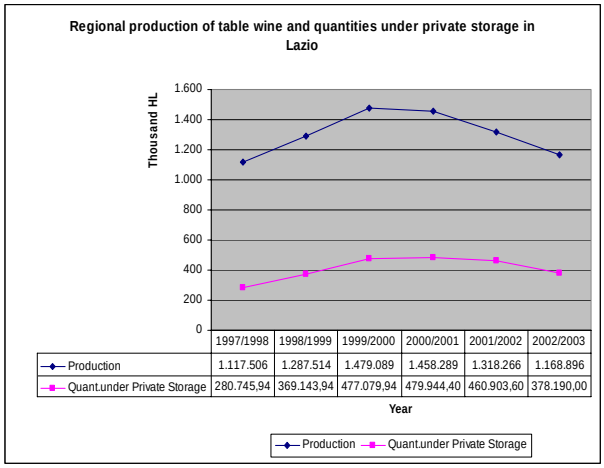
Graph 27 Production and private storage of table wine in Veneto



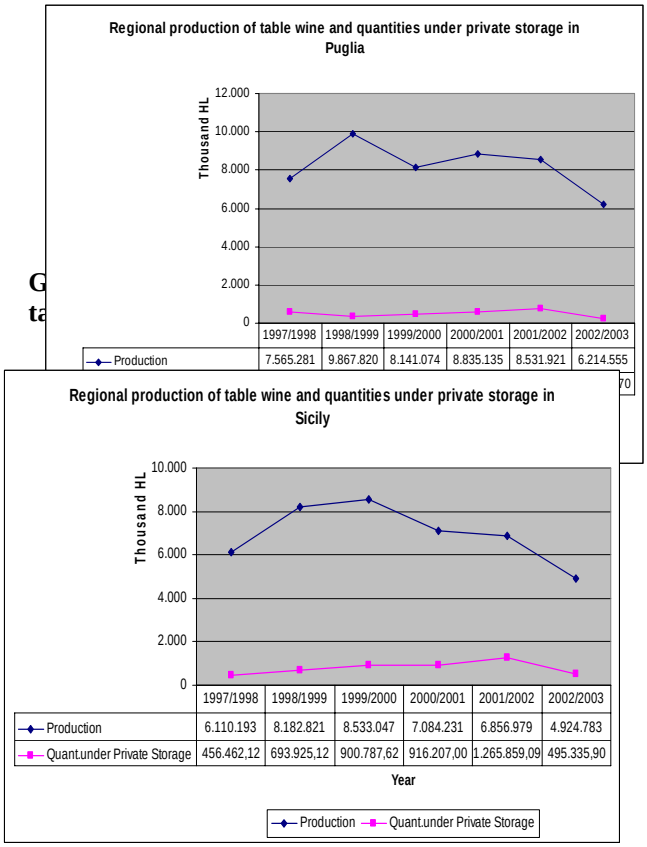
Graph 28 Production and private storage of table wine in Emilia Romagna



Graph 29 Production and private storage of table wine in Lazio



Graph 30 Production and private storage of table wine in Puglia



Other two important parameters to be taken into account in the analysis of private storage are the degree of concentration[93] and the type of firms[94] that recur to the measure.

As far as the degree of concentration is concerned, the analysis reveals differences among regions: Sicily and Emilia Romagna are characterised by a high degree of concentration of quantities on few producers storing big volumes; the degree of concentration is lower in Lazio compared to Sicily, whereas Puglia is characterised by many producers storing low volumes of table wine.

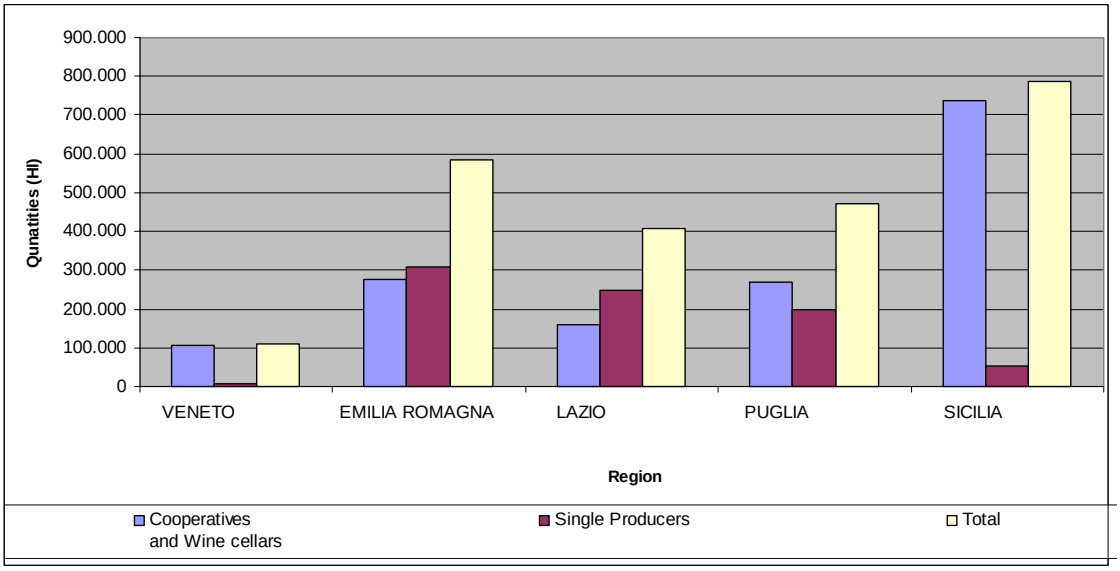
The distribution of the quantities of table wine under private storage between cooperatives/wine cellars and single producers also differs according to the region involved.
In particular, in Sicily and in Veneto nearly the total quantities of table wine (93% and 95% respectively) are stored by cooperatives and wine cellars. Also in Puglia the cooperatives and wine cellars are responsible for high quantities of table wine put under private storage, although to a lesser extent (58%). Emilia Romagna is characterised by an almost even distribution of the quantities under storage between single producers (53%) and cooperatives/ wine cellars (47%). In Lazio, single producers play a larger role since they are responsible for 61% of the total volumes under private storage contracts.

[93] Concentration (quantities under private storage/no. of producers).

[94] Cooperatives and wine cellars / single producers

Therefore, the most representative region, Sicily, is characterised by the highest volumes of table wine put under private storage contracts which are stored mainly by cooperatives and wine cellars.

Graph 32 Quantities of table wine under private storage contracts by type of producer. Average 1997/98 – 2002/03.



Source: based on data from AGEA

Grape must, concentrated grape must and rectified concentrated grape must

The markets for grape musts present different characteristics when compared to the market of table wine;

- while table wine is produced in nearly all regions (with variable volumes), concentrated grape must and rectified concentrated grape must are produced only in a few regions;
- the storage of concentrated grape musts and rectified concentrated grape must of previous wine years is frequent in this market unlike in the market for table wine (this is reflected in the data which show that the quantities of product subject to storage contracts are, in most cases, above the quantities produced);
- a number of producers store grape musts in a region different from the one where the firm has its legal premises which means that the quantities of product stored in one region do not necessarily come only from producers who are located in that region.

The detailed analysis of grape must, concentrated grape must and rectified concentrated grape must is shown in the annex to this chapter (section 6.2.4).

The descriptive analysis of private storage in the Spanish and French regions is also presented in the annex to this chapter (section 6.2.4). Nonetheless, a regional comparison summarising the main findings is presented in the following paragraphs.

6.2.7. Regional comparison

This section focuses on the comparison among the main producing and storing regions in Europe. As shown in table 17, four regions, Sicily, Emilia Romagna, Castilla La Mancha and Languedoc Rousillon, from three countries, Italy, Spain and France, represent on average, over the last three wine years, around 60% of the total quantities put under private storage contracts in the EU.

Given the heterogeneity of the data available it is not possible to perform a thorough regional comparative analysis among the regions involved. However, in spite of the data limitations, it is worth spending a few words on the regional comparisons.

The regional distribution of the quantities of table wine under private storage contracts varies within each country. In Spain and France the quantities under storage and therefore the aid received, are concentrated only in one region: Castilla La Mancha which is responsible of around 75%[95] of the total private storage contracts concluded in Spain, and Languedoc-Roussillon which accounts for more than 80% of the contracts under private storage in France. In Italy the degree of dispersion is higher since private storage contracts although predominant in Sicily (30% of the total national), are also important in Emilia Romagna (19%), Puglia (18%) and Lazio (15%).

Table 17 Quantities of table wine under private storage contracts (HL)

	Italy			Spain	France	IT+SP+FR	EU	(IT+SP+FR)/EU
Wine Year	Sicily	Emilia Romagna	Total Sicily+Emilia Romagna	Castilla-La Mancha	Languedoc-Rousillon			
2000/01	916.207	799.078	1.715.285	1.970.429	1.647.072	5.332.786	9.398.000	56,74%
2001/02	1.265.859	836.605	2.102.464	1.593.040	969.486	4.664.990	8.490.000	54,95%
2002/03	495.336	716.531	1.211.867	1.382.217	482.931	3.077.015	4.606.000	66,80%
Average	**892.467**	**784.071**	**1.676.539**	**1.648.562**	**1.033.163**	**4.358.264**	**7.498.000**	**58,13%**

Sources: the data used in this table come from different sources: for Italy AGEA, for Spain Junta de la Comunidad de Castilla la Mancha, for France ONIVIN and for EU EC, DG Agriculture.

The table above shows the quantities of table wine under private storage contracts in the most representative regions of Italy, Spain and France. In absolute terms, Castilla-La Mancha is the region with the largest volumes of table wine under private storage contracts. The Spanish region alone puts under private storage contracts around the same quantities as Sicily and Emilia Romagna taken together. Languedoc-Roussillon is the region that registers, in absolute terms, fewer volumes of table wine under storage contracts when compared with the regions in the counterpart nations.

From the budget expenditure point of view, Italy is the main beneficiary of the aid allocated to the measure (40%) followed by Spain and France, both of which benefit from ¼ of the budget. In Spain and in France the aid is, for the most part, concentrated only in one region whereas in Italy the number of regions that most benefit from the measure amounts to four.

[95] This calculation has been done dividing the quantities of table wine under private storage contracts in Castilla La Mancha by the total quantities of table wine under storage contracts in Spain. The two figures are, in principle, not directly comparable since they come from different sources (i.e. Junta de la Comunidad de Castilla La Mancha and EC DG Agriculture), but despite the errors incurred, it might still be a reliable estimation.

6.3. Conclusions and recommendations

6.3.1. Judgement of Effectiveness

Impact of the measure on the fluctuations in the volume of supply between wine years

From the analysis performed it has been observed that quantities of table wine follow the movements in production, which means that volumes of product are in effect withdrawn from the market when the supply increases.

The recourse to aid for private storage at national level follows a similar pattern in the countries under study. It has been observed that the quantities of table wine under private storage contracts, as a proportion of production and domestic availability, are fairly similar among countries and reflect the overall EU situation. In fact, at EU and country level the share of quantities under private storage contracts over production ranges between 7%-9% whereas the share over domestic availability ranges between 5%-6% on average and over the whole period.
Fluctuations in the quantities under private storage contracts are related to the movements in production and in domestic availability. This has been confirmed by the analyses performed at national and regional levels, even if some exceptions have been registered in some regions (Emilia Romagna, Puglia and Sicily) for some specific wine years. Notwithstanding this relationship, it has been observed that even in the presence of falls in production, a certain level of quantities under private storage is maintained.

Aid for private storage works on the supply side not by reducing the total volume of supply itself (such as measures on production potential) but by temporarily withdrawing production from the market. As a matter of fact, the part of the current production that is withdrawn from the market and kept in store relieves the market temporarily and postpones the marketing of the quantities stored. In fact, as confirmed by wine experts in 90% of the cases the quantities under private storage contracts are sold in the market in the following wine year and thus not wiped out [96].

Impact of the measure on the level of wine prices

A national estimate of the average percentage of table-wine production put into private storage contracts during the period 1985-2003 is close to 8% even if, as already explained, the quantities of table wine put under private storage contracts follow the movements in production. The effect of these quantities on the stabilisation of supply and therefore of prices cannot be clearly discerned at national level. Prices for table wine are the result of many variables and therefore the effects of the private storage measure on prices cannot be easily isolated. However, since at regional level the market has a reduced size and a smaller number of factors affect the price, if the quantities under storage have an effect on prices, this would be more easily identified. The analysis performed in Italy using regional prices has shown that the temporary withdrawal of quantities of table wine from the market activated through the mechanism of the private storage has had an effect in maintaining prices stable and even keeping them at a high level during the months of conclusion of the contracts. Overall, it seems reasonable to assume that, in general, the measure is effective in the direction of keeping prices stable or at least preventing them from falling.

[96] Experts declared that only in 10% of the cases the wine is used for other uses such as distillation.

In the light of the analysis performed and the results obtained, it seems that, in general, the measure has met the objectives for which it was conceived. In fact, aid for private storage is not used to store wine of low quality that cannot find a market and which is then put under private storage to be finally sent to distillation. On the contrary, it is an instrument used by producers to rationalise the use of a wine which final destination is the marketplace. From this notion, the aid for private storage encourages producers to take surplus off the market in cases of abundant availability of wine but it also gives them the possibility to rationalise their supply according to their marketing strategies. If producers could not make use of this aid, they would probably sell the wine in the market even at low prices, depressing prices and hence hindering the profitability of the wine production. In fact the aid, covering part of the storage costs, offers producers the possibility to postpone the sale of wine in the market at more favourable prices. Hence, despite the fact that a certain volume of product is put under private storage even when production is low, without the aid for private storage there would be no incentives for producers to keep part of their wine production immobilised for the period of duration of the contracts.

6.3.2. Judgement of Efficiency

In general, aid for private storage meets its policy objectives. Moreover, when compared to the other CMO measures, aid for private storage represents a small percentage of the public CMO expenditure (around 5%). Therefore, when looking at the single measure (i.e. without taking into account the other CMO instruments) it seems reasonable to affirm that aid for private storage has been efficient in meeting its objectives at a reasonable cost for the European Commission. In order to fully assess the efficiency of the measure, a quantitative estimation taking into account both budgetary expenditure for the measure and the costs for implementation, would be necessary. However, as anticipated in Chapter 1, section methodology, this quantitative estimation cannot be carried out in this study, therefore qualitative assessment of “other costs” will be taken into account.

The interviews carried out with sector experts have shown that the costs for the implementation and administrative management of the measure are too high to be sustained by small producers. Therefore, the measure itself is oriented towards medium to big firms/cooperatives and this may lead to a concentration of the aid among a restricted number of beneficiaries, as it is the case of Sicily. Hence, a possible drawback of the mechanism is the distribution of the aid for private storage among a limited number of beneficiaries, and in regions characterised by the predominance of medium to big firms/cooperatives the falls in production not matched by a decrease in the quantities under private storage cannot exclude the existence of some *deadweight effect*. However, since these mismatches seem to be the exception rather than the rule, it cannot be concluded that a permanent or systematic *deadweight effect* exists.

6.3.3. Recommendations

Suggestions have been oriented toward giving the mechanism a greater degree of flexibility since the major criticisms concerned the rigidity of the working of the measure. In particular, the current length of the contracts is considered to be too long, since the producer who decides to sell the wine under private storage before the

contract is expired, loses all the aid. This rigidity does not allow producers to fully exploit the potential of the measure. Therefore, suggested improvements are:

- The reintroduction of short-term storage contracts (as in one of the previous basic Regulations 377/79), which will be a more useful instrument for producers to organize their production according to the market situation

- The possibility to interrupt the contracts before their end upon producers' request, subject to proportional loss.

7. Regulatory measures

Increasing the natural alcoholic strength

Does the authorisation to increase the natural alcoholic strength by adding sugar or subsidised concentrated grape must (through aid for enrichment) instead of using only the natural alcoholic strength by volume of the grapes, have a significant impact on:

- *the market equilibrium (in volume terms)*
- *the quality of the products*
- *the development of prices in the short and medium term?*

If impacts can be identified, what is their dimension (with regard to other determining external factors) and are they achieved at a reasonable cost?

7.1. Introduction

The potential alcoholic content[97] of wine is mainly given by the natural sugar content of the grapes. Traditionally, many wine-growing methods have been developed to increase the sugar content in the grapes. For this reason, the evaluation of the general impact of the authorisation to raise the alcoholic strength has to include not only oenological practices, but also wine-growing methods which aim to increase the potential alcoholic content of the grapes.

The first part of the question concerning the impact on market equilibrium in volume terms calls for an analysis of the scientific literature on the technical characteristics of the different methods of increasing the alcoholic strength.

Second, the impact of EU aid for the use of CM[98] and RCM will be analysed. The aim of the measure is to ensure comparable enrichment costs for producers using CM, RCM or sucrose for this purpose. Aid given for the use of CM and RCM varies depending on the origin of the grape must processed to CM or RCM. Empirical data were analysed concerning the influence on production volumes of the use of CM and RCM, especially where the addition of sucrose is limited or prohibited.

The available information concerning the influence of the different methods for increasing the potential alcoholic strength on wine quality will be used for the evaluation.
Potential price effects on the whole of the wine market, as well as empirical evidence relating to the German wine market, will be discussed.

The results of a cost analysis of removing wine from the market by means of the measure, based on the data in the CMO regulations, will be presented.

[97] For definition of "potential alcoholic strength" see R.1493/1999, Annex 2.
[98] CM = concentrated grape must ; RCM = rectified concentrated grape must

7.2. Results of the analysis

7.2.1. The impact of using methods to increase the natural alcoholic strength on market equilibrium in volume terms

The maximum allowed increase in the alcoholic strength in the various zones (zone A : 3.5%vol.=28g/l alcohol; b) zone B : 2.5%vol.=20g/l alcohol; c) zone C : 2.0%vol.=16g/l alcohol) determines the permitted maximum volume effects of different methods of increasing the natural alcoholic strength. The resulting maximum authorized volume changes are shown in table 18, divided according to method and wine-growing zone. It may be seen that enrichment by CM and RCM lead to the highest direct volume increases, up to 11%, which is around two times higher than in the case of enrichment by sucrose. In contrast, direct must concentration reduces up to 20% of the original must volume.

Table 18 Overview of important oenological practices for increasing the natural alcoholic strength of wine and their main characteristics

<table>
<tr><th>Method</th><th>Influence on wine quantity</th><th>Influence of the method to increase the alcoholic strength potential</th><th>Influence on wine characteristics besides the alcoholic strength</th></tr>
<tr><td>Enrichment with sucrose</td><td>Maximal volume increase[99]:
-zone A: + 4,2 %vol.
-zone B: + 3,0 %vol.
-zone C: + 2,3 %vol.
(TROOST 1988,p.579)</td><td rowspan="6">Big, but reduced by law</td><td>None</td></tr>
<tr><td>Enrichment with concentrated grape must</td><td rowspan="2">Maximal volume increase:
-zone A: +11,0%vol.
-zone B: + 8,0%vol.
-zone C: + 6,5%vol.
(R.(EC)1493/99, Annex V D4)</td><td>Addition of other wine substances to the original product</td></tr>
<tr><td>Enrichment with rectified concentrated must</td><td>Dilution of the contents of the original product</td></tr>
<tr><td>Must concentration by vacuum evaporation</td><td rowspan="3">Maximal volume reduction:
- 20%vol.
(R.(EC)1493/99, Annex V D.6.)
Technical possibility of volume reduction: 0-40%</td><td>In general concentration of the substances of the original product,
but losses of free terpenes which are important for muscat grape varieties (AMANN 2001)</td></tr>
<tr><td>Must concentration by cryo extraction</td><td>Concentration of the substances of the original product,
More “body” (DIEHL 1996), losses of acidity (KREBS 2000)</td></tr>
<tr><td>Must concentration by reverse osmosis</td><td>Concentration of the substances of the original product</td></tr>
</table>

[99] The increases of volumes are compiled according to the maximal allowed increase of the alcoholic strength in the different zones: A) zone A : 3,5%vol.=28g/l alcohol, b) zone B : 2,5%vol.=20g/l alcohol c) zone C : 2,0%vol.=16g/l alcohol

Source: based on the indicated literature.

The spread and continuation of wine-growing in the various regions of Europe is, to a great extent, due to the possibilities of producing wines of different aromas. The possibility of increasing the alcoholic strength allows wine production to be preserved in regions whose wine-growing relies first on the potential aroma and whose wines have good aroma but may sometimes lack enough natural alcoholic strength.

The quantities of wine production in Germany, the most important wine producing region in that category, are limited by laws on maximum yields per hectare for all wine categories, including table wine. The yield limitations are defined including any volume increased by enrichment. Therefore, if production reaches the limit, the total production in those regions has to be reduced by the amount increased by enrichment. The volume effect increases if RCM is used instead of sucrose (see table 18). As a consequence, the quantity of wine originating from those quality-wine producing regions has to be reduced before enrichment in favour of the table wine regions, which are usually the producers of RCM.

The general impact of authorisation to use methods for increasing the natural alcoholic strength on yield levels was examined for Germany. The empirical data available from that market lead to the conclusion that the quantity of must production that has to be enriched is mainly due to exogenous bad weather conditions and not to vineyard management leading to excessive yields[100]. This conclusion is confirmed by the fact that the percentage of production of the superior "Qualitätswein mit Prädikat"[101] musts is much higher than the percentage of consumption of wine labelled as "Qualitätswein mit Prädikat".[102] There is more wine of high quality category produced than actually required by the market.

Empirical analysis concerning changes in production volume due to the use of CM or RCM for all wine producing Member States[103] showed no evidence for changing production volume due to the use of CM or RCM, either in Member States with authorisation to use sucrose or the others[104].

Yields per hectare vary according to the vintage. There is no evidence that the possibility of using RCM or CM, or enrichment in general, increases the yields. Taking into account that enrichment by sucrose or RCM may enhance the alcoholic content, but not the other characteristics important for sensory quality, this is quite reasonable: if wine is made to be drunk, taste and aroma are the specific characteristics of wine to differentiate it from other alcoholic beverages and competition forces the producer to optimise these characteristics.

The use of CM has been decreasing (Italy, Portugal, Greece, France) and that of RCM has been increasing (Italy, Portugal, Germany) or has remained stable (France, Greece) in the different Member States. These changes are mainly due to substitution effects between the different materials for enrichment (CM to RCM, sucrose to RCM).

[100] For more details see annex to this chapter, section 7.1.1.
[101] It is not allowed to enrich the must for the "Qualitätswein mit Prädikat".
[102] See graph 131 in the annex to this chapter.
[103] See graphs 132 to 135 and 138 and 139 in the annex to this chapter.
[104] For detailed information see annex to this chapter, section 7.1.2.

7.2.2. The impact of the different methods of increasing the potential alcoholic strength on the quality of wine

The judgement of wine quality has various aspects, mainly the sensory quality, packaging, image, familiarity and health aspects. In the following paragraphs sensory quality and image will be discussed since these are the aspects that may differ among the various methods for increasing the alcoholic content.

Alcoholic content is an important factor for the acceptance of a wine. Wines with a very low content of alcohol are judged thin. However, if a certain minimum content of alcohol is given and a certain maximum is not exceeded, as is the case for marketed wines, the level of the perceived alcoholic content does not directly influence the evaluation of sensory wine quality[105].

All wine-growing methods[106] for increasing the alcoholic strength affect not only the alcoholic potential, but also other wine characteristics very significantly as well, although there is a high level of uncertainty regarding the forecast effect on the final product due to the external influence of weather conditions.

The influence of oenological practices is much less dependant on external factors than wine-growing methods and therefore may be determined very precisely. Previous investigations of the longer established methods for enrichment by sucrose and RCM showed some small differences in the sensory characteristics between wines enriched by sucrose or RCM, but none of the samples was preferred to the others[107].

A taste influence of the non-rectified CM is reported. More recent studies compared the sensory effects of enrichment by sucrose with the different must concentration methods. They pointed out for musts of a higher quality that the concentrated samples had been preferred in comparison with the sucrose enrichment samples[108]. The results of must concentration from immature grapes are unfavourable, as the unripe structure of their musts is concentrated and thus intensified[109.]

Wine-growing methods for increasing the alcoholic strength of wine are not subject of consumer concerns. By contrast, the image quality of oenological practices for increasing the natural alcoholic strength of wine is a difficult question. From an analytical point of view, sugar originated from sugar beet or sugar cane should not be distinguished from sugar made from grapes. Some professionals, especially in the Mediterranean regions, refuse to produce wine with any substance that has not been extracted from grapes.

Many consumers demand a “pure, natural” product without any additions. For this reason, during the last decade, professionals have focused on the must concentration methods, as these involve no addition of substances. However, the current intensification of discussion concerning oenological practices, especially in France and Germany, shows that even must concentration is regarded as artificial and for that reason refused by some consumer groups.

From an analytical point of view, all the methods which reduce must quantity (production of CM, RCM, and must concentration methods) raise problems for wine

[105] Seidemann 2000, p.106.
[106] Table 150 in the annex gives an overview of important wine-growing methods for increasing the natural alcoholic strength of wine and their main characteristics.
[107] Dehoogh, Klein Essink & Dupuy 1991, P.35.
[108] Amann 2001, Diel 1996, Krebs 2000.
[109] Dehoogh, Klein Essink & Dupuy 1991, P.25, Diel 1996, Krebs 2000.

control. Water which is extracted from the must by these methods may hardly be detected by analysis if used for forbidden dilution of wine.

7.2.3. The impact of the different methods for increasing alcoholic strength on the development of prices in the short and medium term

Without indication, consumers may not see a difference between wines which are enriched or not enriched. If the methods for increasing the alcoholic strength do not alter the sensory quality, as is assumed when RCM is used instead of sucrose, consumer prices are not affected by the decision of the producer to use one method or the other. By contrast, since producers' returns are affected by the costs related to the different methods, they will choose the method which is cheapest and therefore more profitable.

Some wine-growing regions, for example Germany, use a differentiated labelling system that allows consumers to identify those wines which have been made without the use of methods to increase their alcoholic strength. Investigations concerning the prices for the different qualities of German quality wine[110] show that the prices for "Qualitätswein mit Prädikat", made without enrichment, are higher than those for other German quality wines[111].

Additionally, among the non-enriched types of wines those which are more difficult to produce command higher prices than the others. But these higher prices force the best of the non-enriched wines in small quantity niches, as price sensitivity in Germany is very important.

7.2.4. The impact of the aid given for the use of CM and RCM in the EU

In general terms, the calculations of Dehoogh, Klein Essink & Dupuy (1991) concerning impact of EU aid for the use of CM and RCM on the cost of enrichment are still valid. However, conditions might change[112].

In regions where both means of enrichment, sucrose and RCM are allowed, big companies prefer using RCM with aid. RCM may be used for particular processes of continuous application and therefore has some advantages for big companies with large volumes of must to manage. Due to the aid, RCM may be cheaper than sucrose for them. Smaller firms prefer using sucrose, which may only be used in discontinuous processes. Due to small must volumes, smaller firms may not take any advantage of continuous application. Moreover, the packaging of RCM is adapted to users of large quantities. Storage of once opened packages of dry sucrose is much less complicated than that of RCM, which is very sensitive to spoilage by micro-organisms.

Because of the aid given in the EU for the use of CM and RCM, these products become economically competitive with sucrose and may substitute it. It has been estimated[113] that since 1989/1990 every year at least 3,500,000 hl of must (in some years up to 7,000,000 hl and on average about 5,000,000 hl per year) have been processed for enrichment. This means that, on average, 3% of the total usable grape

[110] Seidemann 2000, p.54
[111] This can be interpreted as preference for non-enriched wines due to a better image.
[112] A general formula, which includes factors that have to be taken into account for judgement, is given in the annex to this chapter, section 7.1.4.
[113] See graphs 141-143 in the annex to this chapter.

must production has been used via the measure. Hence, on average ca. 90,000 tons of sucrose have been substituted each year by CM and RCM. As the resulting CM and RCM are used for wine production, the used quantities of RCM and CM have to be taken into account as wine quantity, therefore not 3%, but 2.3% of the usable grape must production have been taken away from market by the measure, in absolute figures 3.76 million hl per wine year on average from 1988/89 to 2001/2002[114].

The comparison with the period of stable aid since 1995/1996 shows that large annual variations occurred in the use of CM and RCM; these are probably be due to vintage variations of harvest quantity and natural sugar content of grapes.[115]

The production of CM and RCM reduces the quantity of wine must on the market. Calculations have been made to estimate the cost for the EU of taking away 1 litre of must from the market by the aid given for the use of CM and RCM for enrichment.[116]

The use of RCM of 67°Brix is supported by 1.06 or 1.20 € / litre RCM[117]. Hence 0.24 or 0.27 € are given per litre must processed to RCM. The use of CM of 50.9°Brix is supported by 0.51or 0.59 € / litre. Therefore 0.14 or 0.16 € are paid per litre must processed to CM.

Given the actual conditions of wine-growing in Europe, the market for CM and RCM would disappear where alternatives such as sucrose exist, if the aid for the use of CM and RCM was abandoned.

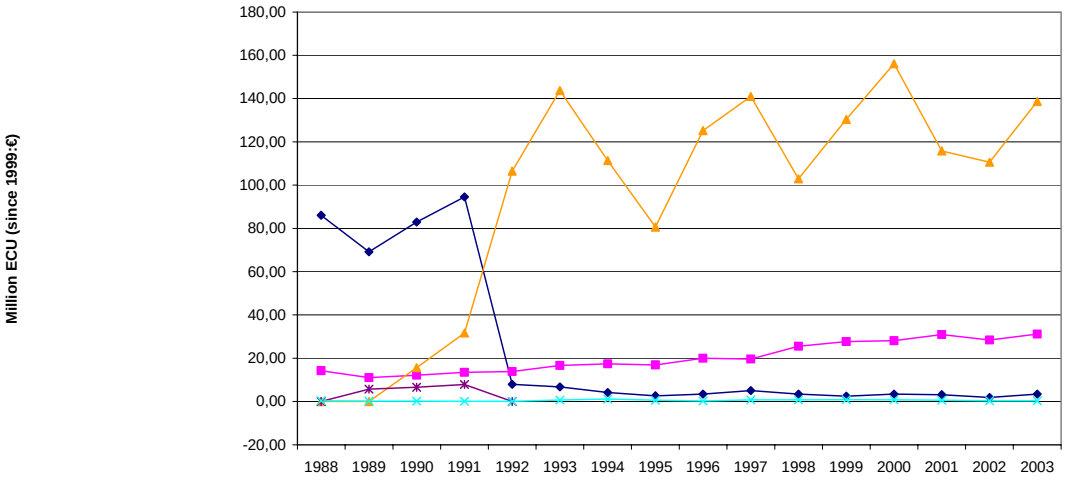
7.2.5. The EU budget for aid given for the use of CM and RCM

Since 1992 aid for the use of RCM for enrichment has constituted most of the total budget for supporting the use of grape must in the EU (see graph 33 below). Before, aid for the use of CM predominated. Aid is given to the producer using RCM, but it covers on average only the difference of cost with respect to the use of sucrose, so generally these wine-producers do not make any significant gains .

Usually these are not producers of RCM and there is an important trade between the Member States of the EU. The producers of the raw material (= grape must) for CM and RCM profit most from the measure, since RCM and CM were not competitive without aid against sucrose and aid has provided them with the outlet for grape must. But the aid is paid to the users. Hence the budget figures may not detect the Member States whose wine-producers profit from the measure which makes CM and RCM competitive with respect to sucrose. Therefore, the financial impact for support of wine-growing may not be apparent at a national level.

[114] See table 152 in the annex to this chapter.
[115] See graph 140 in the annex to this chapter.
[116] For more details see annex to this chapter, section 7.1.6.
[117] The differences are due to the different amounts of aid given: higher for the use of CM and RCM produced in CIIIa + CIIb + others if production started before 30.6.1982(EU10) or before 1.1.1986 (Spain), less for the use of CM and RCM produced in other zones, including Portugal.

Graph 33 EU budget for aid for use of grape must



	Okt 88	Okt 89	Okt 90	Okt 91	Okt 92	Okt 93	Okt 94	Okt 95	Okt 96	Okt 97	Okt 98	Okt 99	Okt 00	Okt 01	Okt 02	Okt 03
CM use aid	86,06	69,20	82,89	94,50	7,94	6,71	4,20	2,60	3,38	5,04	3,42	2,46	3,41	3,12	1,85	3,36
grape juice production aid	14,24	11,03	12,10	13,50	13,83	16,59	17,41	16,90	19,98	19,62	25,50	27,68	28,11	30,88	28,45	31,13
RCM use aid	0,00	0,00	15,64	31,68	106,4	143,7	111,3	80,60	125,2	141,0	102,8	130,4	156,1	115,7	110,5	138,7
aid for must used to feed animals	0,00	5,75	6,59	7,82	-0,03											
other must aids	0,34	0,13	0,18	0,11	0,09	0,67	1,07	0,60	0,21	0,72	0,79	0,86	0,78	0,55	0,34	0,31

Source: based on data provided by EC DG AGRI.

7.3. Conclusions and recommendations

7.3.1. Judgement of Effectiveness

Increasing the natural alcoholic strength of wine improves wine quality and thereby ensures the competitiveness of European wine on world wine market. Additionally, it leads to comparable competitiveness among the different EU wine-growing regions as regards the alcoholic content of wines. Yields are not increased due to enrichment. Hence permission to increase the natural alcoholic strength is an effective means of supporting the development of the European wine sector.

Aid for the use of CM and RCM is an effective measure to ensure the competitiveness of different methods of enrichment, as they lead to comparable prices of CM, RCM and sucrose.

Production of CM and RCM covers about 2.3% of usable grape must production and is an alternative niche outlet for wine grape varieties, especially for table-wine production in southern regions, which in the same circumstances would be reduced without the aid for the use of CM and RCM. This aid works also as a market intervention measure comparable to the distillation measures and income support for producers of the raw material used to produce CM and RCM.

7.3.2. Judgement of Efficiency

Permission for enrichment does not affect budgetary cost and no significant increase in market volume or other negative effect could be found; therefore it is an efficient measure to ensure a competitive standard of alcoholic content.

Without aid CM and RCM would not be competitive against sucrose. From a technical point of view, sucrose has the same suitability for enrichment as CM and RCM and it

is cheaper; consequently, from a purely economic point of view, aid for the use of CM and RCM was inefficient.

The EU expenditure on aid for the use of CM and RCM is justified as an attempt to implement the political decision to ensure a comparable cost of enrichment (and hence comparable price competitiveness) between the different wine production methods, which accept or reject use of sugar originating from other than grapes.

Additionally, the aid works as an intervention measure on wine market volume; in the case of CM it is cheaper, and in that of RCM more expensive than most distillation measures (details of the comparison between different measures are provided in Chapter 11).

Hence, given the social aims of equal competitiveness of different traditions in wine production, particularly concerning varying enrichment methods, and the relatively low budget cost of aid for the use of CM and RCM, this form of aid may be judged politically efficient.

7.3.3. Recommendations

An alcoholic content of at least 12% vol. is the standard requested by consumers for most of the world wine market. Enrichment is therefore an important quality-enhancing method designed to meet consumer demand for minimum quality concerning alcoholic content.

Different oenological practices for enrichment have different advantages and disadvantages as regards sensory quality, so there is no one best method. On the contrary, there are different optimal applications that are suitable for the different musts. Producers should, if necessary, be allowed to choose case by case their method of enrichment, as the optimal method may vary according to cellar size and specific wine characteristics.

Direct must concentration has different effects on wine quality due to different raw materials, so that it cannot be used as a general measure. However, the quantity-reducing effect is an interesting characteristic to take into account. Existing barriers for application of this new technology should be eliminated and its use promoted. Further technological and economic research into the method is needed.

Global Assessment of the Regulatory Measures

Do the regulatory measures of the CMO for wine (oenological practise, quality wine regime, labelling of products) have a significant impact on:

- *the production costs and the price level of the type of wines concerned*
- *the competitive position vis-à-vis imports*
- *the volume of supply (including imports) and its composition in qualitative terms*
- *the volume and composition in qualitative terms of demand in the Member States (producers and non producers) in third countries?*

If impacts can be identified, they should be specified and if possible quantified.

7.4. Introduction

Heterogeneity of the wine sector, especially of the quality-wine segment, and the great variety of specific rules tend to eclipse the effects of the regulatory measures of the CMO. Moreover, sufficient data is not available for a quantitative isolation of visible effects.

Hence, the global assessment of the regulatory measures involves a qualitative analysis of the aspects which are relevant in the sense that they influence competitiveness. Are European rules well adapted to international competition? Is the actual approach of the regulatory measures still suitable for the development of the world wine market, or does it hinder the competitiveness of European producers?

The evaluation looks at this question at a global level, with emphasis on two aspects:

- competitiveness with third countries
- influence on innovation developments in the EU wine sector.

The main subjects considered will be oenological practices, the quality-wine regime and the rules for the labelling of products.

7.5. Results of the analysis

7.5.1. Oenological practices

In the EU numerous oenological practices are allowed and are regulated by a large number of detailed rules. The question is: should the EU shift to new regulations, if such regulations are successful in third countries, e.g. in the wine-producing countries of the so-called "new world"? Traditionalists and innovators have different opinions on how to produce wines.[118]

The discussion concerning oenological practices focuses on the following key-points: industrial versus small-scale wine production; blend management; control of alcoholic content. Enrichment is an international oenological matter and several methods for controlling the alcoholic content, to both increase and decrease it, are discussed, such as acidification / de-acidification, tannin management, and aroma management.

[118] An example may clarify this point. It is a fact that the majority of consumers cannot distinguish wines produced in a barrique from wines produced with oak chips. But the cost of wines produced with chips is about 1/10 of those produced in a barrique.

An examination of the main oenological practices in different Member States of the EU[119] shows that there are different key points regarding their development and use. They depend on the effective state-of-the-art in the several countries and on different climatic conditions, which call for different techniques[120]. Additionally, interviewees from most Member States referred to methods introduced in oenology practice from the "new world". There was a wide range of opinions on the subject, from complete rejection of "industrial technologies" to their growing importance for use in the EU.

The impact of the rules concerning oenological practices on production costs may be divided into two main aspects: a) standardisation of oenological practices, means and materials has an important cost-cutting impact, which enhances competition and supports EU-internal trade; b) only oenological practices which are authorised by the EU are allowed.[121] This hinders the innovative development of cost-cutting methods, or at least their rapid transfer into practice by producers.

The competitive position of the EU wine industry due to oenological practices may be summarised in the following key points:

a) the effect of the authorisation needed for the oenological practices used in the EU creates disadvantages for competitiveness; competitors may use other, cheaper or better methods earlier than EU producers;
b) due to bilateral or other agreements, sometimes wines produced with methods only used and allowed in the third countries can be sold in the European market – a disadvantage for domestic producers who may not use those technologies;
c) in export markets EU producers have to face competition from wines produced in other countries with other methods.

Experts from different EU Member States were asked if the rules of the CMO for oenological practices acted as a restriction on the production of good wines[122]. These interviews show that oenological practices allowed by the CMO are not seen as a restriction for the production of good quality wines. According to some of the respondents, supply may suffer from price competition due to the exclusion of cheaper technologies. By contrast, one single interviewee rejected the cheaper "new world" technologies. A few respondents in Portugal mentioned some concerns about enrichment by sucrose.

Rules for oenological practices in the EU have no direct negative impact on demand in Member States and third countries, but because of a decrease in price competitiveness with respect to technologies possible in other wine-producing countries there is a relative disadvantage.

Increasing imports from third countries show that EU consumers have no major concerns about oenological practices in third countries. In contrast, like consumers from third countries, they also appreciate these wines.

7.5.2. Quality-wine regime

The EU quality-wine regime provides a legal framework (Article 55 of R.1493/1999) to establish individual rules for the different wine-growing regions concerning style of wine, area choice and limitation, grape variety choice and limitation, yield limitation,

[119] Results of interviews, for details see table 153 in the annex to this chapter.
[120] Detailed information is given in the "*Report on the Interviews*".
[121] However, it has to be taken into account that there are some good reasons to do so, e.g. protecting consumers from products made by dubious oenological practices.
[122] See the annex to this chapter, table 154.

wine-growing methods, oenological practices and background philosophy for the definition of good wine-quality.

Hence, quality wine psr has an important and positive impact in keeping individual local and regional product characteristics, traditional products, and production methods. The EU quality wine regime was first introduced in the 1970s and 1980s, leading to an important vertical quality differentiation of the wine market, which resulted in new sub-markets for wine.

Since the beginning of the 1990s, increasing competition within the former new wine sub-markets and the entry of the "new world" on the European markets with comprehensive quality concepts and production technology, has prompted European wine-producers to try to differentiate themselves from their competitors, not always within the traditional framework of the European quality-wine regime.

Some quality-wine regimes are flexible and allow the integration of innovative product developments (such as the use of new non-indigenous grape varieties, for example Dornfelder and Regent in Germany, Chardonnay and Cabernet Sauvignon in North Italy).

On the other hand, overly rigid wine-production rules may constrain innovation of processing and product development: e.g. the wine production of non-traditional grape varieties in the region often prevent producers from using DOC denomination in Italy. The only chance for the producer to market such wines is to declare them lower quality wines (e.g. Tignanello = I.G.T. Toscana). In addition, consumers sometimes become confused between the formal quality-ranking system and the perceived wine quality.

Interviews with experts were carried out to obtain information on the true importance of the quality-wine regime in the different Member States[123]. Opinions about its importance range from the assertion that it offers traditional guarantees for consumers, and its positive impact on prices, to the belief that it has no bearing on the supply and demand of quality wine.

The question is difficult to solve and there are some conflicting points of view as to whether the importance of the quality-wine regime in the various Member States is due to specific national contexts, specific national rules for quality wine psr, specific national traditions (e.g. Germany, France and Greece in using the quality-wine regime) or to other national and regional circumstances.

The EU quality-wine regime gives a legal framework for the production of quality wine, but it does not create a definition of each special quality-wine psr and its production rules. Therefore, the most important impact on the production cost of quality wines psr does not come from the EU, but from the regional authorities, which define quality wines psr and their production rules. The regional rules may vary across Member States and even across regions within a Member States, thus leading to different production costs, e.g. A.O.C. in France have quite diverse production rules.

However, permission to use quality-wine psr indications involves greater reporting requirements and that is indeed an expense of the EU quality-wine regime. However, it would be difficult to find another solution that would guarantee the proper use of indications.

[123] See annex to this chapter, table 155.

Quality-wine psr production is more expensive than table-wine production not because of the EU quality regime but owing to the requirements for the production of wines of higher quality.

In general, the legal framework of the EU quality-wine regime gives enough space for classical quality-wine psr to develop regional rules that are well adapted to international competition. Many quality-wine psr have worked very successfully in the past like a common brand for producers of that quality-wine psr. If those wines are insufficiently competitive it is most often due not to the EU legal framework, but to national or regional restrictions. However, the legal framework of the EU quality-wine regime does not allow new developments in European cooperation: it is not permitted to make a blend as a European quality, e.g. the blend of two quality wines made in two neighbouring Member States to make a common European high quality wine has to be marketed as table wine made of wine from different Member States and without permission to indicate the vintage on the label. Hence, higher communication expenses are involved in informing consumers about the quality of the wine and create a market for it.

Rather than the European legal framework, it is the market information systems that seem to be a more important key determinant of market success for European wines. It is well known that most of "new world" wines are marketed by big companies, which are able to finance and carry out market research about consumer preferences and demand. Several interviewees stated that in order to enhance the actual decrease in competitiveness of European quality wine psr, the current information lacks must be overcome. However, the structure of quality wine psr producers, mostly small firms, does not allow financing sufficient market research.

According to the different natural conditions in various wine-growing regions and types of wine, yield limitations vary between different quality-wines psr, but all quality-wine psr are produced in limited quantities. The EU framework structures the qualitative composition of supply. It also allows regional specialities to be protected and thus preserves the magnificently broad range of individual European wine types and styles.

Some quality-wine psr rules are very conservative and rigid towards new developments. Especially in regions with such rigid rules there is no category provided for new innovative wine types of good quality. A way out for innovative producers in those regions is to use the indication table wine.

For a long time European quality-wines psr were in the lead in product design concepts for wines of medium and high quality and dominated the supply and demand of this wine segment. Apart from a small group of wine connoisseurs, consumers do not know much about the quality covered by the different quality-wine psr indications. Strong quality-wine psr indications work like brands and are therefore successful. But the quality-wine psr concept itself is not understood as a quality guarantee.

First, up-and-coming wine-growing in the "new world" has made wines easy to understand for consumers[124] and this is one of the reasons why they have become very successful in competition with European wines.

[124] New world wine style communication is grape-variety based. One example is the use of grape-variety indications as the names of wine styles in the literature for consumers (e.g. Clarke 1995, p.25);, others are increasing imports of table wine with grape-variety indication from "new world countries" in the UK and Germany or increasing sales of regional wine with grape-variety indication from Languedoc-Roussillon.

Second, innovative producers in regions with conservative and rigid quality-wine psr rules have to use table-wine indication for wines of good, even high quality.

Therefore the traditional quality-rating system does not work unambiguously and is less trusted by consumers. For them quality in taste is important, not quality rules[125].

7.5.3. Labelling rules

Rules for the labelling of products are very important because the label gives information about the product. The rules are an important system for providing universal information to the consumer and trade partners and structuring wine supply on the market.

Concerning the function of labels, the front label and the back label have different purposes. For the consumer the front label is very important as it gives the first impression of the wine. There are some compulsory and optional wordings on the label, but except for wine connoisseurs, wine consumers have little knowledge about wine and it is difficult for most of them to understand and use the information given on the labels.

The labelling system mainly supports small firms, which do not have the capacity to build up strong brand concepts. Where there are no restrictions concerning the minimum size of the indications, the actual size gives information about the market importance of certain aspects of a product[126]. Strong individual engagement for products of higher quality is communicated by highlighting the individual name (i.e. brand).

The cost effects of labelling rules are difficult to judge. The use of indications regulates the possibility of making blends; therefore enormous cost may be incurred in connection with the required composition of the wine. However, regional or national authorities often determine the composition necessary for regional indications.

Labels are part of the product design and good product design is an important factor of success itself, but its cost is very difficult to judge. Extraordinary costs may occur if labelling rules are changed without sufficient long transition and labels that were already printed cannot be used.

The German interviewees stated that changes in labelling rules from the principle that “every indication which is not mentioned in the rules is not allowed” to the principle that “every indication which could mislead consumers is not allowed” is very positive, as the old principle was incomprehensible to consumers. With the new rules, European wine should be more competitive with wine from third countries .

Besides their important function in structuring supply, labelling rules have an important impact in differentiating supply and hence in influencing its qualitative composition. If it is not possible to differentiate a sub-market by labelling indications, no special price for the wines on that sub-market may be developed. Labelling indications can differentiate between different qualities without the need for strong trademarks.

Labelling rules have a strong impact on demand, as packaging represents the first contact between the product and the consumer at the sales point. Design, but also

[125] See the discussion on the differences of quality perception for wine e.g. in Blankenhorn (2000) and more general for food in Böcker et al. (2004).
[126] For some examples see annex to this chapter, section 7.3.

information on the package is an important factor for consumers' decision to buy a wine. The possibility to give additional information on the package is becoming more important because more and more wines are bought in shops without personal consultation. Comprehensiveness of labels – based on language and information– is an important key point for trade within the Member States and with third countries.

7.6. Conclusions and recommendations

7.6.1. Judgement of Effectiveness

There is a broad consensus among the experts interviewed that the oenological practices allowed by the CMO do restrict the production of good wines.

However, there are some concerns that the CMO rules for oenological practices worsen price competitiveness, especially with "new world" wine production and limit technological innovation.

Expert judgements vary widely concerning the importance of the quality-wine regime for good wine production and market success. On one hand, the EU quality-wine regime offers quality advantages and transparency ; on the other hand, there are instances in nearly all the Member States of successful high quality wines being developed outside the framework of the quality-wine rules. The quality-wine regime in the EU is very difficult to interpret and the majority of the consumers often do not understand it. Some table wine prices are therefore higher than quality wine prices and it remains doubtful whether this is desirable. The interested consumer (i.e. a person with some knowledge of wine) takes into account not only the different quality indications (table wine, quality-wine psr) but also all the other aspects influencing his ideas of the price-quality ratio (mainly taste and additionally packaging, origin, price). Trademarks are becoming more successful on the EU market and are used by EU countries as well as by "new world countries".

The recent introduction of a regional wine category in the Bordeaux region is a strong indication that the existence of a quality-wine psr system alone is not enough in a critical market situation.

The third countries - especially the so-called ""new world" countries - are very successful on the EU market with table wines of high quality. The quality-wine regime seems to be too restrictive. This is why more and more wines are produced as table wines, although they could be quality wines, because they have fewer restrictions in comparison with quality wines. This development has also taken place in Europe: a famous example is the "Super Tuscans" which are only indicated as table wine or IGT, as they are produced using grape varieties which are not traditional for the region and cannot be called Chianti or other. For this reason, Italian producers in Tuscany have relinquished the quality wine indication so as to be able to realise their innovative ideas. This example shows that few restrictions for table wine, initially designed to facilitate the production of cheap wines for daily consumption, is an important factor in providing a framework for innovative developments in the wine sector.

The adaptation of the quality-wine psr regimes to technological progress is a very difficult question, and it is a source of controversy among producers.

Only a few professionals have translated the recent liberalisation of labelling rules for the wine sector into a more liberal principle into practice. It is still too early to judge

the consequences of this change, apart from observing that the players in the wine sector are very carefully initiating changes connected with the possibilities offered by the new rules. But it is obvious that concepts which function like brands or brands themselves have increasing importance and this reduces the impact of official labelling rules for consumers as the obligatory indications are more and more frequently placed on the back label.

7.6.2. Judgement of Efficiency

Regulatory measures discussed in this section have no direct impact on the budget of the EU, only on the budget for the management and control of their application. It is impossible to make a precise calculation for the different rules, most of which are organised and paid for by the Member States. Hence, the financial investment of the EU for this type of measure is very small. The EU budget efficiency of obligatory rules is very high, as the rules have to be observed without remuneration.

Efficiency should not be judged only in relation to the cost to the EU budget; many other aspects have to be taken into account, but it would go beyond the scope of this study to discuss them in detail as longer, in-depth research is needed.
The EU quality-wine regime was very efficient during 1970s and 1980s in developing sub-markets for wines of better quality within the European wine sector. Since the 1990s and the entry of new marketing and oenological practices for wine it has reached its limits. It is evident from this that in times when conditions are undergoing changes static regulatory measures cannot be consistently efficient.

Regulatory measures may lead to increasing overhead costs due to the legal obligation to keep records and increasing production costs caused by the obligation to use more expensive production methods, and, last not least, they may hinder innovation. Cost estimates change quickly and are different for each individual measure, although no overall judgement of efficiency is attempted here. It is (or should be) part of every discussion regarding changes in regulatory measures.

7.6.3. Recommendations

As general advice, in the interests of competitiveness, all the methods used in third countries should be allowed in the EU, if they are, first, completely harmless to health and second, if they are accepted by consumers. The work in international organisations like the O.I.V. should be used to achieve worldwide consensus about the innovative development of the wine sector.

However, consumers may have different points of view, which have to be respected. If consumer were interested to know, for example, if a barrique wine was produced in a barrique or by the use of chips, this should be mentioned on the label. Apart from this, traditional techniques may be important key points for the definition of quality wines psr, so the general possibility of new technologies has to be discussed in every region individually by the institutions responsible.

More globally, the whole question of regulatory measures leads to a dilemma: rules that set certain standards to protect consumers and ensure a certain quality level or style are always in danger of hindering innovative development for better quality. A perfect solution, one that would be valid forever and in every case, is not possible. However, the rules system should include a procedure which makes it easy to adapt the legal rules quickly to changing market developments and technical progress.

8. Trade with third countries

Do the measures concerning trade with third countries (import duties, export refunds, bilateral agreements) have a significant impact on:
- prices of the type of wines concerned, and in general
- the competitive position of Community wine production
- the volume of supply (including imports) and its composition in qualitative terms
- the volume and composition in qualitative terms of the demand in the Member States (producers and non-producers) and in third countries?
If impacts can be identified, they should be specified and if possible quantified

8.1. Introduction

This chapter outlines the measures that restricted imports into the EU and encouraged EU exports; describes the trends in the volume and value of imports and exports and the main sources of imports and destinations of exports; and then analyses the trade performance in relation to relevant changes in the CMO and in Community preference measures. Finally it evaluates, as far as is possible, the impact of the trade measures on Community competitiveness, wine market prices and Community consumers and producers.

The evaluation of the effect of the trade measures has to be carried out considering first the specific objective of the measures and then the contribution those measures make to the fulfilment of the general objectives of the wine CMO and of the Common Agricultural Policy in general.

In common with most agricultural products, the EU's wine sector has been protected from imports from outside the EU through a variety of import restrictions (tariffs, the reference price system with its variable levies which operated during the earlier years under study, relevant oenological measures and other non-tariff barriers). Restrictions have applied to imports of wine, grape juice and grape must. Additionally the sector has been aided through certain EU wine exports being subsidised (export restitutions). As with other agricultural products, the measures concerning trade with third countries are focused on the creation of a single Community market for wine with preference for Community producers through a common external trading system.

The main elements of this single trading system are:

A. Control of the access inside of the Community market:

a) Import duties;

b) Regulatory measures;

c) Countervailing charges (up to 1995) and additional import duties, or other particular intervention designed to protect the Community market (after the Uruguay Round decisions).

B. Export refunds

C. Bilateral agreements, resulting in:

a) tariffs quotas;

b) special conditions in the application of the regulatory measures.

All the measures concerning the trade with third countries have as their direct objective to contribute to the stabilisation of the Community market and as their general objective to support the Community wine sector's competitive position, ensuring a fair standard of living for producers and assuring supplies for consumers.
Evaluating the trade measures therefore requires a judgement of whether the measures have played a role in: the stabilisation of the wine market; ensuring a fair level of income for producers; encouraging the competitive performance of EU wine in the internal and external markets; and ensuring adequate supplies for EU consumers in terms of volume and quality that has responded to the evolution of wine demand.

The next section of this chapter contains a description of the trends in the volume and value of EU imports and exports in total and the main sources of imports and destinations of exports This is followed by an outline of the main trade measures in force during the period under review and a theoretical analysis of the possible relations between the different aspects of the measures regarding trade with third countries inside the CMO which have led to the identification of some positive and negative impacts of the single measures on the objects of the sub-questions. Table 19 outlines the results of the above-mentioned preliminary theoretical analysis. In section 8.3 (results of the analysis) the functioning of the different trade measures is summarised, and it is verified if and how the theoretically defined effects have an impact on the issues that are the object of the sub-questions.
In section 8.4 (conclusions and recommendations) a *judgement of effectiveness* is offered, in which the direct and indirect effect of all the measures is summed up for each of the issues covered in the sub-questions. Since the are many factors that influence the various trade measures, it is almost impossible to quantify the identified impacts. Section 8.4 also reports comments on the efficiency in the administrative, legal and, financial terms.

The analysis, as demonstrated in the annex, is based on:

a) a detailed analysis of the official documentation concerning the application of the relevant trade measures over time;

b) a detailed analysis of the general evolution of the wine market and of the relevant market drivers;

c) a theoretical analysis of the possible effects of the different measures concerning trade with third countries;

d) a detailed analysis of statistical sources concerning the domestic market and trade flows and, within the complex system of classification of wine-related products, the identification of the most interesting categories with respect to the objectives of the analysis.

Table 19 Theoretical effects of the CMO measures related to trade with third countries

CMO/T3C*		Elements potentially affected by CMO/T3C*						
		EU wine price effects	EU competitive position		Supply in EU market		Demand	
			internal	external	Volume	Composition	EU	Third C.
Control of the access to the Community market		Yes, (+)	Yes, (+)		Yes, (-)			
Export refunds		Yes, (+)		Yes, (+)	Yes, (-)			Yes, (+)
Bilateral agreements	preferential rates	Yes, (-)	Yes, (-)		Yes, (+)	Yes, (+)	Yes, (+)	
	Agreements on regulatory. measures	Yes, (-)	Yes, (-)		Yes, (+)	Yes, (+)	Yes, (+)	

*CMO/T3C: CMO measures on trade with third countries (import duties, export refunds, bilateral agreements)
Yes: presence of the effect; (+): positive effect; (-): negative effect.
Note: in the case of price effects (+) means that the measures tend to stabilise the EU market price.

8.2. Description of main features of External Trade in wine 1988 to date

During the 1980s as in earlier years, the countries of the EU-12 collectively comprised the world's largest exporter of wine. However, the 1990s have seen the development of several new world producers as major exporters onto the world market and the share of external trade taken by the EU has somewhat diminished. In consequence, as table 20 below shows, the external trade balance between the EU and the rest of the world shifted significantly between the beginning and end of the period with the main changes coming in the years following the URAA trade liberalisation measures.

Table 20 EU External Trade in Wine 1988 to 2003 (Selected Years) (Mn Ecu)

	1988	1994	2000	2003
Exports	1883	2380	4732	4844
Imports	154	420	1855	2053
Balance	1729	1959	2877	2791
Import/export Ratio (%)	8.2	17.7	39.2	42.4

Source: based on data from European Commission.
Note: figures may not sum due to rounding.

It can be seen that in monetary terms the value of both exports and imports rose, with the trade balance also increasing – though after allowing for inflation it is doubtful whether there was an improvement in real terms.

Looking at the trade in terms of the physical quantities, as shown in table 21 below, a different picture emerges. Taking 3-year average data, the volume of EU exports rose by some 35% from the beginning to end of the survey period. However, by the end of the survey period the volume of imports was more than five times that at the beginning. In consequence, the trade balance in volume terms had halved. In part this

reflects the two-way trade increase as incomes of world consumers have risen and as wine drinkers have gained access to a wider variety of types and sources of wine. An increased proportion of EU wine production is now exported outside the Community, but there has been a substantial rise in the significance of imports as a proportion of EU wine consumption.

Table 21EU External Trade in Wine 1988 to 2003 (Selected 3-year Averages) (Mn Hectolitres)

	Average 1988-1990	Average 1994-1996	Average 2001-2003
EU Production	172.76	158.47	154.31
Exports	10.36	11.68	14.02
Imports	1.72	4.39	9.09
Trade Balance	8.64	7.29	4.94
EU Consumption	135.82	128.80	123.98
Export/Production	6.0%	7.4%	9.1%
Imports/Consumption	1.3%	3.4%	7.3%

Source: based on data from European Commission.
Note: figures may not sum due to rounding.

The change in Germany and the UK – the EU's two main importers of non-EU wine – has been even more spectacular with UK consumers now buying more a quarter of their wine from the new world. Indeed Australia has recently overtaken France as the largest single source of wine consumed in the UK.

Moreover, it has to be borne in mind that the DOHA round of trade negotiations are now getting under way and EU wine producers, who had a cut of only 20% in their protective tariffs under the URAA (compared with a 36% reduction for agricultural products in general) may well face further reductions in tariffs which could stimulate imports even more.

8.3. Results of the analysis

8.3.1. Impact of the measures concerning access to the EU market

This section describes and analyses the application and evolution of import duties, (rates of duty within the Common Custom Tariff (CCT), countervailing charges, duties on grape juice and grape must) and identification of their possible impact on evaluation sub-questions.

Throughout the period under study, (1988-2001) there have been conventional specific import duties, defined in terms of volume and in the case of wine varied by alcoholic strength. Prior to the URAA, wine imports were subject to the reference price system under which variable levies were added to the import duties in order to ensure that wine did not enter the EU at less than a minimum import price. In addition, the oenological regulations, aimed at ensuring minimum quality standards, were criticised by foreign exporters as acting as a non-tariff barrier to trade. After the URAA reforms, the reference price system was abolished and along with other non-tariff barriers to trade the protection afforded by these restrictions was commuted into a tariff equivalent. The combined conventional and equivalent tariffs were then reduced by 20% over a six-year period commencing in 1995. (The tariffs on wine were thus reduced by less that those on the general run of agricultural imports which fell by 36% over the six years under the URAA). For a number of extra-EU wine producing countries, there were bilateral agreements which ensured that, both before and after the URAA, at least a proportion of their wines (the tariff-quota) entered the EU at zero or

favourable tariff rates. In the main the beneficiary countries were either associate countries (such as the MAGREB group) or were Accession candidate countries.

Rates of duty on CCT and countervailing charges

Description of the measures

Rates of duty for alcoholic beverages are defined in terms of volume in Euro/HL or in Euro/%vol/HL and not an *ad valorem* percentage of wine prices. This means that two wines of the same volume are influenced in different manner, with low-priced wines being subject to the most significant impact. The absolute figures on the specific rates of duties for the whole time period concerned are shown in table 22.

Rates of duties were constant between 1988-1995 and from 2000 –to date. During these two periods, prices of traded wines varied due to factors other than the rates of duty on CCT. From 1995 to 1996 there was initially an increase and then from 1996 to 2000[127] conventional rates of duty on CCT were reduced by 20% in total. In absolute, the reduction of rates of duties (as shown in detail in table 22) was between 1.2-1.5 euros/hl for most still wine (not liqueur) rising to 8 euros/hl for sparkling wines; for liqueur wines of v>20%. The reduction was of 4 Euro/%vol/hl (minimum 8,8 euros/hl) and for the others between 1.5 and 2.1 euros/hl.
Rates of duty were applicable in all EU Member States, hence the different geographical distribution of imported wines among Member States is related to factors other than the rates of duty on CCT.

[127] The analysis does not take into consideration the autonomous rates of duties during this period (they increase slightly from 1995 to 1996 and remain constant from 1996 to 2000 when they were abolished) as they refer to non-WTO members and were generally not applicable to the majority of wine imports.

Table 22 Conventional and autonomous rates of duty of Common Customs Tariff, 1988 2004

Description	Type of duty	Unit	1988 – 1995	95/96	96/97	97/98	98/99	99/00	2000 – today
Sparkling wine	Auton.	Eur/Hl	40.00	40.00	40.00	40.00	40.00	40.00	
	Conven.	Eur/Hl		38.70	37.30	36.00	34.70	33.30	32.00
Bottled or bulk, 22% < v, Liqueur wines *	Auton.	Eur/%vol/Hl	42.46	51.26	51.26	51.26	51.26	51.26	
	Conven.	Eur/%vol/Hl		46.64	44.88	43.34	41.80	40.04	38.50
Bottled, v <=13%	Auton.	Eur/Hl	14.50	17.51	17.51	17.51	17.51	17.51	
	Conven.	Eur/Hl		15.90	15.30	14.80	14.20	13.70	13.10
Bottled, 13% < v <=15%	Auton.	Eur/Hl	16.90	20.41	20.41	20.41	20.41	20.41	
	Conven.	Eur/Hl		18.60	17.90	17.30	16.70	16.00	15.40
Bulk, v <=13%	Auton.	Eur/Hl	10.90	13.60	13.60	13.60	13.60	13.60	
	Conven.	Eur/Hl	10.90	12.00	11.60	11.20	10.70	10.30	9.90
Bulk, 13% < v <=15%	Auton.	Eur/Hl	13.30	16.06	16.06	16.06	16.06	16.06	
	Conven.	Eur/Hl	13.30	14.60	14.10	13.60	13.10	12.60	12.10
Bottled, Liqueur wines, Port - Madeira - Sherry - Tokay – Setubal, 15% < v <=18%	Auton.	Eur/Hl	18.10	21.86	21.86	21.86	21.86	21.86	
	Conven.	Eur/Hl	16.30	17.90	17.30	16.70	16.00	15.40	14.80
Bottled, Liqueur wines, Other, 15% < v <=18%	Auton.	Eur/Hl	20.60	24.87	24.87	24.87	24.87	24.87	
	Conven.	Eur/Hl		22.50	21.80	21.00	20.20	19.40	18.60
Bottled, Liqueur wines, Port, Madeira, sherry, Tokay and Setubal, 18% < v <=22%	Auton.	Eur/Hl	19.30	23.30	23.30	23.30	23.30	23.30	
	Conven.	Eur/Hl	17.50	19.10	18.50	17.80	17.10	16.50	15.80
Bottled, Liqueur wines, Other 18% < v <=22%	Auton.	Eur/Hl	23.00	27.77	27.77	27.77	27.77	27.77	
	Conven.	Eur/Hl	23.00	25.20	24.40	23.50	22.60	21.80	20.90
Bulk, Liqueur wines, 15% < v <=18%, Port, Madeira, Sherry, Setubal, Tokay	Auton.	Eur/Hl	14.50	17.51	17.51	17.51	17.51	17.51	
Bulk, Liqueur wines, 15% < v <=18%, Port, Madeira, Sherry, Setubal	Conven.	Eur/Hl	13.30	14.60	14.10	13.60	13.10	12.60	12.10
Bulk, Liqueur wines, 15% < v <=18%, Tokay	Conven.	Eur/Hl		14.60	15.30	14.80	14.20	13.70	13.10
Bulk, Liqueur wines, 15% < v <=18%, Other liqueurs	Auton.	Eur/Hl	16.90	20.41	20.41	20.41	20.41	20.41	
	Conven.	Eur/Hl		18.60	17.90	17.30	16.70	16.00	15.40
Bulk, Liqueur wines, 18% < v <=22%, Port, Madeira, Sherry, Setubal, Tokay	Auton.	Eur/Hl	15.70	18.96	18.96	18.96	18.96	18.96	
Bulk, Liqueur wines, , 18% < v <=22%, Port, Madeira, Sherry, Setubal	Conven.	Eur/Hl	14.50	15.90	15.30	14.80	14.20	13.70	13.10
Bulk, Liqueur wines, 18% < v <=22%, Tokay	Conven.	Eur/Hl		17.20	16.60	16.00	15.40	14.80	14.20
Bulk, Liqueur wines, 18% < v <=22%, Other liqueurs	Auton.	Eur/Hl	23.00	27.77	27.77	27.77	27.77	27.77	
	Conven.	Eur/Hl	23.00	25.20	24.40	23.50	22.60	21.80	20.90

* Rates of duty for liqueur wines of 22% < v, are calculated with a unit of measurement in €/%vol/hl . In this case value in €/hl has been calculated in a minimum basis by taking the least value of actual alcoholic strength % by volume: e.g. duty of 1.75€/%vol/hl for liqueur wines (bottled or bulk) of 22% < v, corresponds to a 1.75*22=38.5€/hl duty

Notes: 'v' is an abbreviation for actual alcoholic strength by volume. Type of duty: Auton.: autonomous, Conven.: conventional

Source: based on R.2658/1987 and its amendments.

The most significant effect of the countervailing charges was the imposition of an artificial barrier in the form of minimum import prices for all imported grape must and wines in containers holding 20 litres or less. The actual minimum prices and the consequent variable levies were fixed by means of a very complex system based on reference prices differing according to the variety of wine as well as its alcoholic content.

Although a quota of imports from some countries arrived tariff free or at lower duty rates and bottled wines were excluded from the variable levy (but not the conventional, or standard, duty) after 1984, this long standing and complex system inevitably created a direct increase on the price level of imported wines. It could also create indirect costs to wine importers (through higher brokerage charges and other charges from Custom authorities).

Regulation 822/87 provided that lower reference prices were to be fixed subject to annual quotas and at a specific rate for certain wines originating from Cyprus, Algeria, Tunisia, and Yugoslavia and presented in containers holding 2lt or less.

A major change in the application of the measure was the 'exclusion' of bottled wines from a countervailing charge from 1984 to 1995, as wine importers offered prices for bottled wines that were consistently higher than the relative free-at-frontier reference prices. This meant that price competition between community and imported bottled wines has not been affected by the reference price system since 1984. All other wine types continued to be subject to a countervailing charge fixed constantly from 1984 to 1995: (i): 0.23 and 0.25 euros/%v/hl for white and red grape must, (ii) 0.25 and 0.27 euros/%v/hl for white and red bulk wine (in containers up to 20 l), (iii) 10 euros/hl for liqueur wines (see annex section 8.4.1 *Import duties*).
Regulation 0333/88 waived countervailing charges for all wine products, except grape juice and must, originating from third countries which were in a position to guarantee that the price of their products was not lower than the free-at-frontier reference price: Algeria, Argentina, Cyprus, Israel, Morocco, Romania, South Africa, Australia, Austria, Bulgaria, Chile, Hungary, Switzerland, Czechoslovakia, Tunisia, Turkey, and Yugoslavia.

Impact of the measures

Calculations based on the wide range of prices for the various types of imported wine show that the standard rates of duty on wine under the CCT were equivalent to an *ad valorem* duty of 20% on the average low-priced imported products. This has given considerable protection to EU producers in the low-price, low-quality segment of the market. For wines with an alcoholic strength of 12° the reference prices was 70,85 ecu/hl and the countervailing charges was equal to 28 ecu/hl, about 40% of the reference price.

Whilst this has helped to raise prices and prevent the price collapse that could occur if low-priced imports combined with excess internal production, led to supplies exceeding sales, it has to be recognised that the benefits to EU producers were gained at the expense of EU consumers.

Data observation shows that price fluctuations are independent of changes in the standard rates of duty. More specifically, from 1995 to 2000, wine prices increased while rates of duty on CCT decreased and from 2000 to 2004 wine prices in many cases decreased, while at the same time rates of duty on CCT remained constant.

Nonetheless, the restrictive effect of the measure is demonstrated by the increase in imports (admittedly from very low initial levels) from third countries benefiting from specific concessions related to countervailing charges application (Australia, Chile, Cyprus etc.) during the years 1988 to 1994.

Moreover, the rapid increase in imports after 1995 demonstrates the benefits which EU producers had previously enjoyed from the EU's tariffs. However, this protection may well have been to the longer-term disadvantage of EU wine producers because it delayed their response to changing tastes among EU consumers.

Duties on grape juice and grape must

Description of the measure

Rates of duty for grape juice and grape must are defined: (i) from 1988 to 1994 by a levy on added sugar in addition to autonomous rates of duty and countervailing charges (when applicable); (ii) from 1995 onwards by an *ad valorem* % rate of duty increased by an additional duty based on entry prices. From 1995 to 2000 these rates

were reduced, under the URAA by 20%, thus from 50% and 28% to 40% and 22.8% respectively for not concentrated and concentrated grape juice and grape must.

Impact of the measure

Import duties on grape must (levy on added sugar, entry prices and additional duties) constituted a substantial barrier resulting in a virtual absence of imports into the EU. However, it has to be acknowledged that the EU is not alone in severly restricting grap must imports. The USA, Canada and Japan also have complicated and restrictive rates of duty for grape juice and grape must.

8.3.2. Impact of export refunds

This section presents (i) specific issues regarding the application and evolution of export refunds; (ii) specific reference to the budgetary expenditure absorbed by EAGGF for the implementation of the measure.

Description of the measure

Export refunds are by definition fixed by the difference between EU table-wine prices (for wines to be exported in large quantities) and the prices of these wines in the world market. Following the URAA, both the quantity of wine allowed to be exported with the aid of subsidies and the EU's total expenditure on subsidies was progressively reduced over the period 1995 to 2000 as is shown in table 23.

Rates increase slightly by actual alcoholic strength, by volume, and by colour, with more favourable rates for red wines. There is no longer any difference in rates for wine packaging (bottled and bulk wines), but any differences in the past were not significant.

According to GATT commitments a reduction of 18% (from 2,9 mio hl in 1995 to 4,4 mio hl in 2000) was needed for exported quantities.

The most recent data on the total volume of subsided table wines exports from 1999 to 2003 indicate that: (i) annual quantity commitments of WTO were met, (ii) EU wine-makers are continuing to make use of the measure at volumes reaching about 20% of the total annual volume of all EU table wine exports to third countries.

Nowadays only Spain takes a large share of export refunds (60 %) with Italy, France, Austria and Portugal each taking 5% to 15%.

Budget expenditure (Outlays on subsidising exported wines)

According to GATT commitments expenditure on export refunds had to be reduced by 33% (from 60.6 million euros in 1995 to 41.5 million euros in 2000). These commitments were generally met except in 1997. Annual outlays were significantly reduced from 2000 to a annual level of 25 – 30 million euros, falling from 7% of the total outlays of European Agricultural Guidance and Guarantee Fund (EAGGF) for the wine sector in 1995-1997 to less than 2% in 2003.

Table 23 Fixing of export refunds: summary results of the analysis

Wine categories by type, colour, packaging, alcoholic strength	Rates (euros/hl)		Change	
	1995	2003	euros/hl	%
White, 9% < v <= 11%, African countries, bottled or bulk	21,217	5,358	15,859	74.75%
White, 9% < v <= 11%, non-African countries	19,854	5,358	14,496	73.01%
White, 11% < v <= 13%, African countries, bottled	24,840	6,271	18,569	74.75%
White, 11% < v <= 13%, African countries, bulk	24,480	6,271	18,209	74.38%
White, 11% < v <= 13%, non-African countries, bottled or bulk	23,244	6,271	16,973	73.02%
White, 9% < v <= 13% , All countries, bottled or bulk	4,782	3,771	1,011	21.14%
Red, 9,5% <= v <=11%, African countries, bottled or bulk	21,217	6,473	14,744	69.49%
Red, 9,5% <= v <=11%, non-African countries, bottled or bulk	19,854	6,473	13,381	67.40%
Red, 11% <= v <=13%, African countries, bottled	24,840	7,578	17,262	69.49%
Red, 11% <= v <=13%, African countries, bulk	24,480	7,578	16,902	69.04%
Red, 11% <= v <=15%, non-African countries, bottled or bulk	23,244	7,578	15,666	67.40%
White wine, 13% < v <= 15%, All countries, bottled	28,980	7,317	21,663	74.75%
White wine, 13% < v <= 15%, All countries, bulk	27,118	7,317	19,801	73.02%
Red wine, 13% < v <= 15%, All countries, bottled	28,980	8,842	20,138	69.49%
Red wine, 13% < v <= 15%, All countries, bulk	27,118	8,842	18,276	67.39%
Liqueur wines other than quality wines, all destinations, bottled or bulk	15,000	14,250	0,750	5.00%
Concentrated grape juice and must unfermented or in fermentation arrested without alcohol addition, All countries	82,612	39,023	43,589	52.76%
Not concentrated grape juice and must unfermented or in fermentation arrested without alcohol addition, All countries	21,888	10,339	11,549	52.76%

Source: based on R.2805/1995 and its amendments

Impact of the measure

Wine exporters have been flexible in choosing destinations according to market opportunities. Over the period from 1999 to 2002 there was a significant decrease in the volume of subsidised wines exported to Eastern Europe (from 1 million hl to 550 thousand hl) and a significant increase in subsidised wines exported to Africa from 850 thousand hl to 1.4 million hl. Subsidised exports have been directed to areas where imports at normal prices would be considerably restricted In the past Italy and Spain were the major beneficiaries from export refunds but nowadays Spain receives 60 % of the total subsidy expenditure with Italy, France, Austria and Portugal each receiving between 5% and 15%.

8.3.3. Impact of bilateral agreements

This section presents specific issues relating to the application and evolution of (i) preferential rates of duty; (ii) regulatory measures included in bilateral agreements.

Preferential rates of duty (tariff preferences and quotas)

Description of the measure

During the period examined there have been several bilateral agreements between the EU and third countries providing for tariff preferences through the use of quotas. Tariff quotas were fixed for specific countries and wine types and were expressed in total volumes of wine or further specified by volumes of wines per wine type.

Among the 14 main countries exporting wines to the EU[128], eight (Bulgaria, Hungary, Romania, FYROM, Switzerland, Morocco, Cyprus and Turkey) have benefited from tariff preferences on quotas fixed on a regular (usually annual) basis.

Impact of the measure

The total market share of imports from countries benefiting from preferential rates of duty is considerable. In 2003, from a total of 9.3 million hl imported into the EU, 12.85% was imported from third countries benefiting from tariff preferences. In particular, imports from Bulgaria in 1995 were 602,405 hl (13% of total imports by the EU from third countries). Of this total, 1,200 hl of quality sparkling wine, 280,400 hl of quality bottled wine and 118,000 of quality wine in bulk were subject to tariff preferences, paying only 40% of the standard import duties. Thus two-thirds of the imports from Bulgaria were at highly preferential rates.

The FYROM also benefited greatly from being able to export to the EU without any standard duty and in 1995 exported some 333.529 Hl (7,2% of total imports to EU from third countries). Having increased their exports in the years following their bilateral agreements, both Bulgaria and FYROM reduced their spending by the end of the 1990s. In more recent years, Chile has also benefited from tariff preferences and has built up its share of the market accordingly – whilst this will be a source of concern to the less competitive EU producers, no doubt EU consumers welcome this additional competition.

Regulatory measures

Description of the measures

The legal documentation that specifies the application of the CMO's regulatory measures is very extensive, covering the protection of geographical indications of names, quality standards including oenological practices and processes, product specifications and rules on import certification and marketing.
Beyond the basic CMO regulations, regulatory measures have been specified in bilateral agreements with most major third country competitors.
A number of the EU's regulatory measures were amended as a result of the general GATT Agreement in 1994 where the use of technical barriers to trade, such as sanitary and phyto-sanitary measures, were limited as part of the general trade liberalisation.

Impact of the measures

It is not easy to identify the impact of bilateral agreements other than to say that through simplifying and reducing the trade regulations they have allowed both imports and exports to grow faster than they otherwise would have done. The countries involved in these agreements are those with the largest shares of EU exports and the major sources of EU imports (Australia, USA, Chile, South Africa, and New Zealand). Although the bilateral agreements have simplified import procedures, the main explanation for the increased imports from these suppliers is the effectiveness of their marketing activities[129]. Nonetheless greater ease of access for imports will clearly

[128] For the purpose of the statistical analysis the wine market of "third countries" was divided into15 parts in order to include the 14 'main third countries' of origin (for imports to the EU) or destination (for exports from the EU) leaving one part of the market to be defined as 'other third countries'.
[129] A comprehensive analysis of the world wine market scenario in: Rabobank International- Food & Agribusiness Research, Utrecht and *The World's Wine Markets: Globalisation at Work,* Anderson K. (ed), Elgar, Cheltenham, 2004.

increase competitiveness in the EU wine market to the benefit of EU consumers whilst increased EU exports will benefit EU producers.

8.4. Conclusions and recommendations

8.4.1. Judgement of Effectiveness

This section considers the impacts of the three main instruments analysed (import duties, export refunds and bilateral agreements) on the EU market price, the competitive position of EU wines on the internal and external markets, the volume and composition of supply and the responsiveness of the EU wine industry to changing market demand.

Impact on the EU market

A combination of the EU's oenological regulations, geographical indicators and labelling regulations has meant that throughout most of the period, imported quality wines have had to be described as table wines rather than quality wines. This distorts price comparisons with EU table wines. Thus in the UK (the most open wine market in the EU) the average pre-duty imported price of most new world "table" wines is recorded as being higher than the price of table wines from Italy and Spain which would suggest that EU producers are price-competitive even in the absence of import duties. In truth, however, many of the new world wines are comparable to EU quality wines psr or TGI wines and their price differential reflects this. In practice, the total volume of imports into the EU remains low, partly due to the success of the import duties and other trade restrictions in raising import prices and partly due to the EU's own continuing structural surplus which, despite the support measures analysed in other chapters, has a dampening effect on prices particularly at the lower end of the market. However, the trade measures have certainly prevented imports from causing or worsening price collapses in years of bumper harvests.

Prior to the URAA, the volume of subsidised exports can be said to have had a helpful effect for EU producers, both in gaining market share within the selected export markets and in selling abroad wine which otherwise would have had to be sold within the EU thus depressing the general level of prices within the market. In more recent years, subsidised exports have accounted for around 20% of EU exports even though the maximum permitted volume of subsidised exports and the maximum permitted expenditure on subsidies have not been achieved.

However, a measure of the effectiveness of the import restrictions prior to 1994 can be gauged from the rapid increase (admittedly form a low base) in imports since the URAA reductions in the tariff and non-tariff barriers. Although factors such as sustained and highly successful marketing campaigns by the exporters have also had a substantial impact, tariff reductions and trade liberalisation have also had a marked effect. It is of significance that in recent years Australian wines have moved from below France, Spain and Italy to the top place in UK wine market share, with New Zealand, South Africa, Argentina and Chile all also increasing the volume and value of their exports to the UK.

Impact on the competitive position of Community wine production

Though less than in the early 1990s, the trade measures continue to protect the competitive position of domestic wine producers in the EU market. The URAA

required that the EU permitted foreign imports market access of more than 3% in 1995 and 5% by 2000 of domestic wine consumption and this has opened the market to greater competition. Export refunds have helped to sustain the competitive position of EU exports.

Impact on the volume of supply and its composition

Before 1995 the trade measures were very effective in keeping the volume of imports from third countries at a low level and thus protecting EU wine producers from greater external competition. Since the completion of the URAA tariff reductions in 2000, there has been a substantial increase in the volume and value of third country wines, though in the EU as a whole they still only supply around 5% of the market. However, as indicated earlier in the German and UK markets, third country imports are capturing an ever-increasing market share. In both these markets the success of extra-EU wines has been more closely associated with non-price factors such as taste, labelling and marketing than with price factors.

Impact on the capacity of EU wine supply to meet in quantitative and qualitative terms the demand in the Member States (producers and non-producers) and in third countries

The analysis of trade statistics has supported the views of wine market experts as recorded in previous chapters that third country suppliers and particularly those from the "new world" have been more adept than EU suppliers in adopting their products to the changing tastes of EU consumers. Indeed in the UK and German markets they have influenced, if not led, the changes in consumer wine drinking behaviour. In this regard, regulatory measures included in bilateral agreements seem to have had a positive effect on wine demand and increased market transparency. The trade liberalisation effects of the URAA have expanded third country imports into the EU thereby allowing consumers access to an increasingly diverse supply.

Meanwhile, export subsidies continue to allow EU exporters a foothold in non-wine producing third countries where there may be potential for market expansion in the future.

8.4.2. Judgement of Efficiency

The CMO trade measures together make up a rather complex system that requires relevant administrative efforts. Moreover, especially since the URAA, the system is constrained by the EU's obligations to its international trading partners. .

Import duties

Legal efficiency: The application of product nomenclature, tariff preferences and rates of duty on CCT under international trade agreements were established by Regulation 2658/1987, and its amendments. Furthermore, a huge catalogue of accompanying regulations was necessary and properly issued for the application of import duties by the competent EU authorities. A huge effort in publishing and amending these regulations was inevitable and contributed efficiently to the proper implementation of the measure. Significant simplification of relevant legislation occurred from the abolition of the reference price system and autonomous rates of duty.

Administrative efficiency: the measure seems efficiently managed by the competent EU authorities in compliance with the URAA commitments.

Export refunds

Financial efficiency: annual outlays were reduced, resulting in reduced expenditure.

Economic efficiency: the measure may not be efficient in terms of establishing a basis for future commercial exports to the countries concerned, but it can be seen as one if the instruments for helping to deal with the EU's structural surplus of table wines.

Legal efficiency: export refunds were defined in basic CMO regulations and further specified and fixed by accompanying legislation, which has been efficiently simplified the last years.

Administrative efficiency: Within the framework of the CMO an ad hoc organisation for the administration of export refunds was effectively implemented at national and Community level to apply the measure.

Bilateral agreements

Legal efficiency: specification and codification of legislative documents related to trade with third countries was issued in an effective way by new CMO legislative documents. Many bilateral agreements with third countries were signed especially after 1995, proving the ability of the EU authorities to negotiate in terms of new WTO agreements. All these results constitute an overall efficient definition of the measure in legal terms. Of course, the very extended diversified nature of regulatory measures in the CMO for wine have resulted in a huge amount of rules that must continuously be classified and amended.
Administrative efficiency: bilateral agreements are not implemented strictly within the framework of the CMO but in collaboration with other competent EU authorities. Thus, a huge effort is needed to take all interrelating aspects into consideration during the implementation of legislation to ensure effective knowledge and application of the measure. The efficiency in the management of the bilateral agreements related with regulatory measures would be higher with a solution of the open problem of the international acceptance of geographical indications making effective the TRIPS (Trade-Related Aspects of Intellectual Property Rights) agreement in the framework of Uruguay Round decisions.

Economic Efficiency: bilateral agreements to reduce trade restrictions have the effect of improving market transparency and bringing trading prices closer to relative costs of production, thus improving market efficiency.

8.4.3. Recommendations

As already mentioned, the global judgment about the CMO trade measures is that they have had a positive role in the application of the Wine CMO over the time. Within this positive framework it is nevertheless possible to formulate some recommendations:

The pattern of distribution of export refunds concentrated on Spain may simply be the result of different export strategies in the different Member States but could also be due to an application scheme that is unable to preclude discrimination between the operators concerned. Therefore, the exploration of different opportunities to allocate the resources destined for export refunds is recommended.

Since the URAA, the measures available to protect the EU market from serious disruption (additional import duty, prohibition on the use of inward-processing arrangements, appropriate measures to apply safeguard clauses) have never been

applied. Considering that competition in the world wine market is increasing and the main new world competitors are experiencing problems of over-production, the risk of severe imbalances in the market is becoming serious. Therefore, a rigorous analysis of the effectiveness of procedures for the prompt application of the measures is recommended.

9. Restructuring and conversion

Do the national and regional plans for the restructuring and conversion of vineyards have a significant impact on:
- the adapting of supply to market requirements (in quantitative and qualitative terms)
- the level of market prices in the long term.
If impacts can be identified, what is their possible dimension (with regard to other determining external factors) and can they be achieved at a reasonable cost?

The answer to this question will be assessed in two stages. First, the impact of the measure on the adaptation of supply (grape and wine supply) to market requirements (both in qualitative and in quantitative terms) will b e examined. In the second stage we will analyse the impact on the level of market prices, and the main conclusions regarding the impact of the measure will be drawn in the last section.

The question is divided in three sub-questions:
- Impact of the restructuring and conversion measure on the vineyard area in the EU.
- Impact of the restructuring and conversion measure on market requirements.
- Impact of the restructuring and conversion measure on prices.

9.1. Introduction

The 1999 CMO reform introduced the system of restructuring and conversion of vineyards to encourage EU producers to adapt production to market demand. This not only involved the quantitative adjustment of supply to demand, a faster rate of renewal of the vineyards, and the rationalisation of production structures, but also called for modernisation at all stages of wine production.
Whereas the measure had a direct effect on the improvement of the vineyard area in the EU, its influence on market requirements and prices is less clear. This is partly due to the need to wait around two-three years before the first production (the measure came into force in 2000) and partly to the influence of other wine-growing regions, prices, consumer tastes, etc.

Table 24 Restructuring and conversion; characteristics, expected impact and cost.

Instruments	**Characteristics**	**Expected impact**	**Cost**
Restructuring and conversion	Subsidy to compensate for loss of revenue and contribute to restructuring and conversion costs (50% or 75%) Plan to be drawn up by regions and approved by Member States Type of cost covered: Change in vine variety Re-implantation of vineyards Improvements in vineyard management	Closer adaptation of production to market demand (restructure production potential in terms of quality and quantity)	Variable (In first three years, around 30% of the total budget)

9.1.1. Impact of the restructuring and conversion measure on the vineyard area in the EU

The restructuring and conversion measure should help producers to move towards quality varieties in two ways: by switching to quality wine grape varieties and by introducing new cultivation systems. New planting using the vertical trellis system are being encouraged. This system is relatively new in some countries and involves changing the density of planting. The cost of the restructuring and conversion of vineyards is shared between the vine-growers and the EU.

To judge the effectiveness of the measure in quantitative terms, we have examined the area under vine that has been restructured and converted in recent years, as well as the percentage of planted varieties and the proportion of quality wine psr produced.

Regarding the impact in qualitative terms, the assessment is based on the views of experts. The measure can be considered positive if it encourages vine-growers to convert their vineyards, increasing the percentage of so-called "good varieties" and hence the production of quality wine psr, and if the improvement in European vineyards is achieved at an acceptable cost.

9.1.2. Impact of the restructuring and conversion measure on market requirements

Changing wine consumption habits means that producers have to adapt wine supply to the new demand by decreasing their total wine production but increasing the output of quality wine.

To judge whether the measure is effective, we have assessed whether the market is capable of absorbing the changes in the quality and quantities of EU wine supplies.

The aim of the analysis is to assess whether the CMO measure has influenced wine production and whether the measure has altered the proportion of quality wine psr produced. The measure can be considered positive if it has increased the proportion of quality wine psr produced without entailing a large increase in the total volume of wine produced.

9.1.3. Impact of the restructuring and conversion measure on the price level

At this early stage in the production cycle it is difficult to assess the ultimate impact on prices and expert opinion is divided.

As a rule, prices increase when wine quality improves. As the measure aims to enhance the quality of wine, we would expect the measure to lead to an increase in the prices received by those wine producers who benefit from the aid. If the measure contributes efficiently and substantially to raising the quality of EU wine production, it can be expected to contribute to increased revenues for the wine sector.

It might be argued that increasing the volume of quality wine psr produced would tend to lower average quality wine prices, to the benefit of the consumer but to the detriment of other quality wine psr producers. However, we would expect the increased volume of quality wine psr production resulting from the measure to be fairly modest – at least initially – and the impact on market prices to be rather small as a consequence. Nonetheless, the consumer would benefit from the response of producers to consumer demand for better quality wines, whilst producers would

benefit from shifting production out of table wine for which there is decreasing demand.

If the measure is shown to encourage vine-growers who benefit from aid to improve the average quality of their wine production, it can be concluded that it is likely to improve producers' returns.

9.2. Results of the analysis

9.2.1. Impact of the restructuring and conversion measure on the EU vineyard area

Although the restructuring and conversion measure was introduced only four years ago, we have tried to assess its influence on the EU vineyard area. There are two different ways to do this: i) on the basis of the reduction in the vineyard area destined for table wine and its conversion into vineyard area for quality wine psr and ii) by estimating the renewal of the EU vineyard area.

Regarding the first aspect, the measure tries to bring European viticulture into line with market demand, by means of a reduction in the planting of varieties used for table wine and an increase in the use of high quality varieties. The second method of evaluation looks at the renovation of cultivation systems, varieties, etc.

Table 25 shows that in the first three years after its introduction, the restructuring and conversion measure has already produced some effects, with a large area of vineyards restructured and renovated under the scheme. Although all the countries have made use of the measure to adapt their vineyard area, Spain Italy and France are the countries that have benefited most in terms of the number of hectares subjected to restructuring and conversion.

Table 25 Vineyard area restructured and converted under CMO measures (Ha)

		Total area under vine (Ha)	Area restructured (Ha)	%
Italy	00/01	835,895	18,113	2.17
	01/02	817,583	15,910	1.95
	02/03	797,977		
Germany	00/01	104,210	2,482	2.37
	01/02	103,527	1,875	1.81
	02/03		1,966	
Greece	00/01			
	01/02	51,957	1,273	2.45
	02/03		1,122	
Spain	00/01	1,124,433	31,932	2.84
	01/02	1,115,322	28,550	2.56
	02/03	1,120,568	23,935	2.14
France	00/01	917,000	13,762	1.50
	01/02	902,908	12,381	1.37
	02/03		11,400	
Portugal	00/01	213,638	2,402	1.12
	01/02	214,253	2,411	1.13
	02/03			

Sources:

- Data for Italy on total area under vine are taken from ISTAT. Data for Italy on area restructured are taken from ISMEA.
- Data for Germany, Portugal and Greece on total area under vine are taken from EC viann 50.
- Data for Germany, Portugal and Greece on area restructured are taken from EC.
- Data for Spain on total area under vine for 2000/01 and 2001/02 are taken from EC. For 2002/03 data are taken from the Spanish Ministry of Agriculture, Fisheries and Food.
- Data for Spain on area restructured are taken from the Spanish Ministry of Agriculture, Fisheries and Food.
- Data for France on total area under vine are taken from EC histvino file (data translated into Ha).
- Data for France on area restructured are taken from ONIVINS.

Italy, Austria, Portugal and Spain benefited from a supplementary assignment of additional hectares reassigned from other countries which did not use the hectares initially granted to them.

The average proportion of the vineyards restructured and converted in the first two years after the measure came into force were 2% and 1.76% respectively of all the countries evaluated, with the exception of Greece, where no information is available. In Italy, Germany and Spain the area restructured is larger than the EU average, whereas in Portugal and France it is smaller.

Another feature of the measure is that in all the major producing countries (except Germany, where all the vineyard area is designated as quality vineyard) the proportion of quality vineyard area increased (table 26).

Table 26 Vineyard area (by quality and table wine) (Ha)

Country		Total area under vine	Area under vineyards for quality wine psr	% area under vineyards for quality wine psr
Italy	1990	971,062	160,314	16.51
	00/01	835,895	264,245	31.61
	01/02	817,583		
Germany	1990	102,357	102,357	100
	00/01	104,210	104,210	100
	01/02	103,527	103,527	100
Greece	1990	70,819	13,410	18.94
	00/01		14,683	
	01/02	51,957	15,507	29.85
Spain	1990	1,390,437	667,301	47.99
	00/01	1,124,433	624,314	55.52
	01/02	1,115,322	634,631	56.90
France	1990	939,000		
	00/01	917,000	475,122	51.81
	01/02	902,908	487,895	54.04
Portugal	1990	254,829	100,058	39.26
	00/01	213,638	122,934	57.54
	01/02	241,118	123,603	51.26

Sources:
Data for Italy on total area under vine are taken from ISTAT. Data for Italy on area under quality psr vine for 1990 are taken from EC histvino file (data translated into Ha) and for 2001/02 from EC.
Data for Germany on total area under vine for 1990 EC histvino file (data translated into Ha) and for 2000/01-2001/02 from EC viann 50. Data for Germany on area under quality psr vine are taken from EC viann 50.
Data for Greece on total area under vine for 1990 are taken from EC histvino file (data translated into Ha) and for 2001/02 from EC viann 50. Data for Greece on area under quality psr vine for 1990 are taken from EC viann50 and for 2000/01-2001/02 from EC.
Data for Spain on total area under vine for 1990 are taken from EC viann 50 and for 2000/01 and 2001/02 from EC.
Data for Spain on area under quality psr vine for 1990 are taken from EC Viann 50 and for 2000/01 and 2001/02 from the Spanish Ministry of Agriculture, Fisheries and Food.
Data for France on total area under vine are taken from EC histvino file (data translated into Ha).
Data for France on area under quality psr vine are taken from ONIVINS
Data for Portugal on total area under vine and on area under quality psr vine are taken form EC viann 50.

In table 25 it can also be observed that all the countries reduced the number of hectares restructured during the second year, suggesting that there could be a further decrease in the future, thus cutting EU expenditure on the measure.

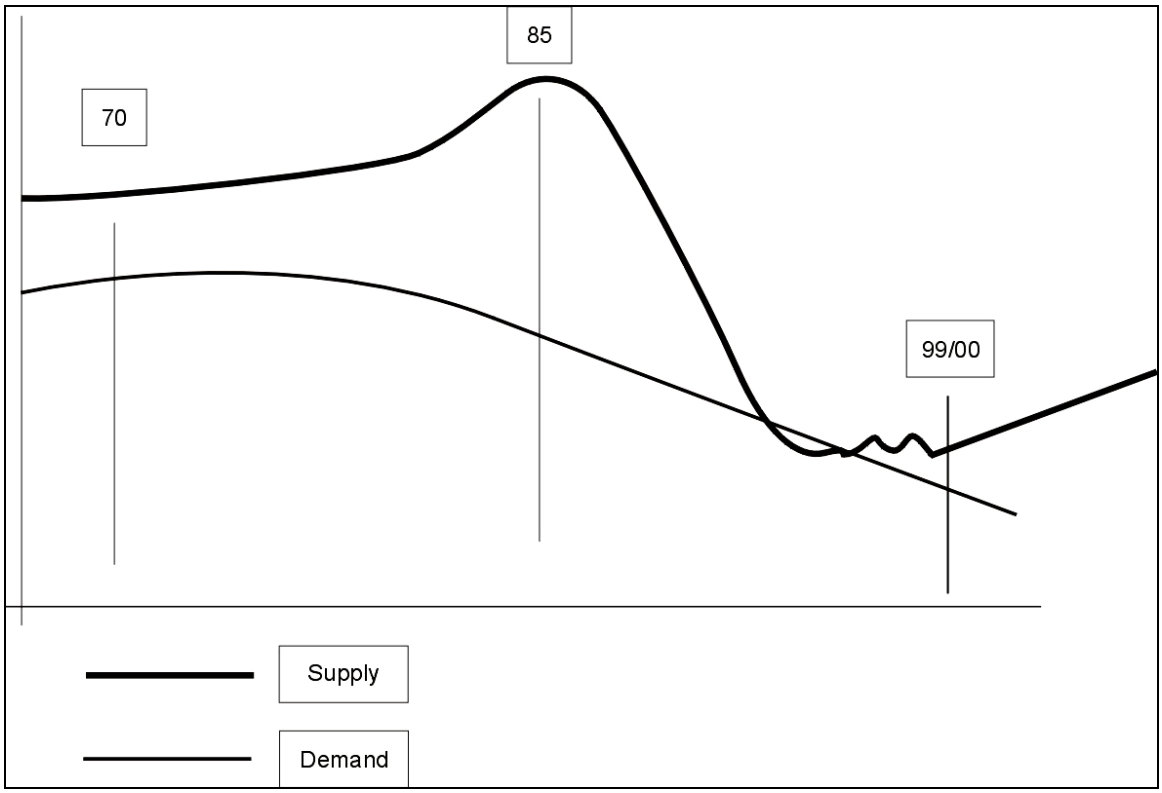
It must be emphasised that the the measure has encouraged considerable varietal change in some countries. In Spain it has reduced the area of the varieties “Airen” and “Pardina”, which are generally used to produce table wine, and increased the area of the quality wine variety “Tempranillo” (tables 205 and 206 in the annex). In Germany the measure has been used to reduce the area of “Riesling” and “Muller-Thurgau, quality white wine varieties, and replace them with the red variety “Dornfelder”, thus responding to the new trend for red wine consumption (table 213 in the annex).

The situation in France is substantially different. Much of the change in the vineyards had already occurred before the EU measures were implemented, but restructuring has continued under the CMO measure.

The measures adopted in France before the CMO reform and shown in graph 34 below and in table 211 and graph 197 in the annex, can be taken as an example to help assess the future of the European vineyard area. The graph shows that the vineyard area

initially increased slightly (although this was mainly due to the fact that the distillation price was high). Later, from 1985/86 to the end of the 1990s, the total vineyard areas fell sharply, but since then the CMO reforms have led to a slight increase.

Graph 34 Evolution of demand and supply in vineyards in France (1970-2003)



Source: ESNAM (France)

All the experts consulted confirmed that the CMO measures have improved the quality of the EU vineyard area by encouraging a reduction in vineyards producing mainly for table wine and replacing them with varieties that the market demands. The measure has also improved cultivation management by bringing about a change from the traditional head system to the vertical trellis system. This impact appears to be greatest in the least modernised regions and countries. However, improved cultivation management increases yields and leads to a growth in total wine production mainly in the countries with lower yields (Spain and Portugal).

The greater mechanisation of vineyards resulting in a reduction in the hours worked by the vine-growers requires a substantial investment in machinery and increased professionalism on the part of vine-growers, another characteristic of the the measure.

Some of the wine experts' comments were less positive. They feel that the regulation creates many administrative problems and that the constraints it imposes impede its success. Furthermore, the Portuguese and Spanish experts stated that in order to benefit from the measure growers have to incur higher production costs yet still face an uncertain future.

9.2.2. Impact of the restructuring and conversion measure on market requirements

The measure has influenced the proportion of quality wine psr production, but the extent to which it has done so is very difficult to assess because such aspects as consumer and market trends, etc. play a very important role. Table 27 shows that although total wine production in Italy, Spain and France has fallen in the past three years, the percentage of quality wine psr produced by these countries has increased. On the other hand, both total wine production and the proportion of quality wine psr diminished in Greece in those years.

Table 27 Evolution of the share of quality-wine production

Country	Wine year	Total production (1000 Hl)	Production of quality wine psr (1000 Hl)	% of production of quality wine psr.
Italy	1990	54,266	9,652	17.79
	1999	58,074	12,580	21.66
	2000	54,088	13,000	24.03
	2001	51,912	13,178	25.39
	2002	44,500	13,600	30.56
Germany	1990	9,505	9,313	97.98
	1999	12,244	10,843	88.56
	2000	9,950	10,070	101.21
	2001	8,980	8,592	95.68
	2002	10,800	10,700	99.07
Greece	1990	3,525	328	9.30
	1999	3,680	337	9.16
	2000	3,558	292	8.21
	2001	3,477	251	7.22
	2002	3,098	251	8.10
Spain	1990	38,658	10,891	28.17
	1999	33,723	12,667	37.56
	2000	41,692	14,649	35.14
	2001	30,460	11,435	37.54
	2002	32,700	13,000	39.76
France	1990	63,940	23,615	36.93
	1999	60,535	28,064	46.36
	2000	57,540	26,868	46.69
	2001	53,389	26,449	49.54
	2002	50,796	24,800	48.82
Portugal	1990	11,351	2,850	25.11
	1999	7,859	3,746	47.67
	2000	6,694	3,253	48.60
	2001	7,691	4,135	53.76
	2002	6,210	1,710	27.54

Source: EC histvino file

As the measure has only been in operation for three years, wine produced from restructured vineyards has not yet come onto the market and it is therefore too early to observe its impact. As a result we have had to rely on expert opinion rather than quantitative data. The experts´ comments cover two aspects: first, the balance between red and white wine and, second, total wine production (quality and table wine).

Regarding the first aspect, there is some disagreement among the experts. Many commented that, in general, the production of red wines and white wines is balanced. The increased red wine supply resulting from recent plantings could be absorbed if EU

producers adopted a number of complementary measures. Other experts doubt that the market can absorb more EU red wine and believe, as a result, that red wine surpluses might appear.

Yields from the restructured vineyards are expected to rise, increasing total production in the future. When assessing future yields it should be taken into account that the new varieties planted, mainly high quality varieties, have lower yields than the previous ones destined for table wine.

Regarding the share of quality vineyards, Table 26 shows that it has increased in almost all the countries , and especially in Italy.

Because more operations are required in the vineyards and differences exist between the wine-making processes for white and red wine (destemming, oak barrels, etc.), both vine-growers and wine producers need to make investments. This is another point raised by the wine experts.

It should be underlined that some experts suggest that organisations should band together to create strong brands that are competitive in the new wine market. This situation could be compared with the experience in France, where the number of co-operatives has decreased by more than 36%.

9.2.3. Impact of the restructuring and conversion measure on the price level

Most of the experts consulted stated that in general they do not expect producers' receipts to cover the cost of the necessary investment. For some high quality wines with high prices, producers' returns will exceed their costs, but this is expected to be an exception to the rule. The problem stems from the large investment required by the wineries in order to adapt to the new wine-grape supply.

Table 216 in the annex shows that in Italy, in 2003, red wine prices (in Bari) were close to the level recorded in 1997 and that white wine prices were the same as in 1998 in Trapani. Although a larger data series is needed, this comparison illustrates the comment made by the experts regarding the financing of the investments made.

Moreover, whereas in Spain the price of table wine for household consumption has increased slightly, that of quality wine psr has experienced a relatively higher rise. A similar increase has been observed in the restaurant industry.

As mentioned earlier, the impact of the measure on prices is very small due to the different elements that influence the increase or decrease of wine prices. Competition, the entry of "new world countries", the weather during the wine year, etc., mean that this analysis can only serve as an illustration.

9.3. Conclusions and recommendations

Several conclusions and recommendations can be drawn from this analysis. Some are deduced from the data and others from the opinions of the experts interviewed. It is too early to make a complete assessment of the measure. Some conclusions can be drawn already, although they need to be confirmed in the coming years.

9.3.1. Judgement of Effectiveness

To judge the effectiveness of the measure, the initial guidelines of the measure will be taken into account. The main conclusions are the following:

Concerning the effectiveness of the restructuring and conversion measure on European vineyards, it has encouraged vine-growers to adapt their vineyard areas to market requirements. A considerable percentage of European vineyards has been restructured and converted as vine-growers introduced high quality varieties in heavy demand on the market: at the same time, the number of hectares destined for table wine has been reduced. For this reason, we can conclude that in general, the measure has improved the quality of the vineyard area in the EU. Moreover, concerning the number of hectares restructured and converted and the changes in varieties, the comments of the wine experts support this conclusion.

It can also be observed that the number of hectares allocated for restructuring and conversion has decreased, although there are countries which still need the measure in order to adapt their vineyards.

Regarding the change in varieties, the measure has led to the adoption of a new cultivation system, introducing the vertical trellis system, and consequently the mechanization of vineyards.

Since the quality of wine is determined by the quality of the grapes, the measure should improve the general quality of wine in the EU, although a large number of factors influence wine production. This conclusion is also borne out by wine experts consulted.

The improvement of the vineyards will entail an increase in the total volume of wine. The experts think that, although sufficient data are not available yet mainly due to the specific wine cycle and a large number of hectares are out of production, the volume of wine in the EU will increase in the coming years as a result of the new cultivation systems. These systems not only allow a large number of vines per hectare but also give higher yields per vine, and hence higher yields per hectare. The proportion of wine produced has also changed, with an increase in the volume of quality wine psr and a decrease in that of table wine.

Finally, some of the experts have expressed serious concerns about the market's ability to absorb future red wine production. It is very difficult to confirm this fact, because in a sector as competitive as the wine sector, numerous factors influence the market in addition to the quality of wine. It seems very difficult to isolate the impact on prices of these measures from the other elements of the CMO support regime.

9.3.2. Judgement of Efficiency

This section analyses the efficiency (cost-effectiveness) of the restructuring and conversion measure. Effectiveness, which is discussed in the previous section, is considered separately from the cost of the measure. Finally, we assess whether the objectives have been achieved at a reasonable cost.

Regarding the cost of the measure, the total budget spent in the period amounts to 32.62% of the total budget granted for all measures within the period of application of the restructuring and conversion measure.

Table 28 Budget spent on the restructuring and conversion measure (million €)

	2001	2002	2003	Total
EU	360,433	424,277	440,207	1.224,917

Source: EC Commission

Italy, Austria, Portugal and Spain were granted an extra budget and extra hectares for restructuring and conversion whereas France spent less budget than the initial granted in vintage 2000/2001. Spain was the country with the highest budget in 2000/01, with 171.72 million euros for 31,932 Ha. Dividing the total budget spent only for the restructuring and conversion measure and the number of hectares restructured, the following table is obtained (table 29).

Table 29 Ratio between budget spent and hectares restructured in some countries of the EU

	Italy[1]	Spain[2]	France[3]
2000/2001	6382.16 €/Ha	5377.68* €/Ha	4941.14 €/Ha
2001/2002	7328.72 €/Ha	6646.23 €/Ha	6057.67 €/Ha
2002/2003	n.a.	6686.02 €/Ha	8333.33 €/Ha

[1] Data for Italy are taken from ISMEA.
[2] Data for Spain are taken from Spanish Ministry of Agriculture, Fisheries and Food.
[3] Data for France are taken from ONNIVIS.
* These data are somewhat different from the ones used in the section *results of the analysis*.

With respect to the public budget allocated by the EU, the private investment made by the vine-growers, e.g. to adapt the new plantation to the new cultivation system, and by the producers to adapt the wineries to the new wine process, must also be taken into account. Thus, the total cost for the restructuring and conversion measure is higher than the share of the budget contributed by the EU (50-75% depending on the region) and the remainder contributed by the vine-growers, and is very difficult to assess. The experts also commented on the possibility that wine-growers might not be able to recover their investments.

Regarding the efficiency of the results, many of the objectives have not yet been achieved due to the specific wine cycle. This cycle means that some of the restructured and converted areas are not in production yet. Moreover, the improvement in the wine derived from these areas needs more time to be assessed. Thus it is too early to make a quantitative assessment of the efficiency of the restructuring and conversion measure.

The evaluation of efficiency in terms of quality is based to a large extent on the opinion of the experts consulted. One of the most interesting comments regarding quality related to the concern about the market's ability to absorb future red wine production. This is one of the reasons why it is too early to make a judgement regarding efficiency. Moreover, it is impossible to know if the market will absorb the future red wine, because this depends not only on the volume, but also on the efficiency of selling methods.

Recommendations:

- Since the measure came into force, some countries have used it more than others. In spite of the yearly decrease in the areas of vineyard, it appears that some countries still need the measure in order to modernize both the wine-grape planted and their cultivation system.
- The possibility to use vineyards restructured and converted for table wine exists and it would be interesting to introduce measures to guarantee that the vineyards

which have received aid from the EU are used only for producing quality wine psr by prohibiting the production of table wine.

10. Producer income and production structures

Do the measures of the CMO for wine have a significant joint impact on the level and development of winegrowers' incomes?
If impacts can be identified can they be specified (impacts on volume of production, prices and costs) and if possible quantified?
B) Do the measures of the CMO for wine have a joint impact on:
- developments in the size of holdings or enterprises (or for non-specialized holdings in the size of the winegrowing area?)
- the regional distribution of production?
- intensity of grape production (output and inputs per hectare)?
- development of the processing and marketing system in typical wine growing regions (based on a typology, see point "description of the CMO")?
If impacts can be identified can they be specified, and if possible quantified?

10.1. Introduction

The Council Regulation (EC) 1493/1999 of 17 May 1999 on the CMO in wine set out the aim of the common agricultural policy as to attain the objectives of stabilising markets and ensuring a fair standard of living for the agricultural community.

The key indicator used in this chapter to measure income and assess the effect of CMO on the standard of living for the agricultural community is the Farm Net Value Added (FNVA) per Annual Work Unit (AWU).

The FNVA represents the payment for factors of production (work, land and capital) - whether they are external or family factors. The AWU measures the total labour input of holding expressed in annual work units (equal to full-time person equivalents). The majority of the data for the quantitative analysis of farm incomes is derived from the Farm Accounts Data Network (FADN).

It is not possible to analyse the effects of all CMO measures on wine producer incomes using solely quantitative methods. This is due to a number of reasons, including:

- There are a number of variables influencing income through their effect on cost, production and prices. All can be influenced by the CMO, but can, at the same time, be influenced by a great number of other conditions, for instance weather conditions;
- The wine market is very fragmented (with substantial price diversity and often incomparable products) with diverse national and regional characteristics. Hence it is difficult to match the impact of each measure with the development of wine producer income at the EU level.

Hence, the information on income developments presented in this chapter first focuses on identifying trends in the development of farm incomes at the EU and country level and on the analysis of the make-up of farm incomes, including cost and output variables. In addition, quantitative analysis is used to determine trends in the development of farm size, regional distribution of production and intensity of grape production. Then, qualitative evidence, through interviews with industry experts are provided, along with extensive questionnaires to investigate views on the relationships between the identified market trends and CMO measures (individually or as a whole), including views on causation links.

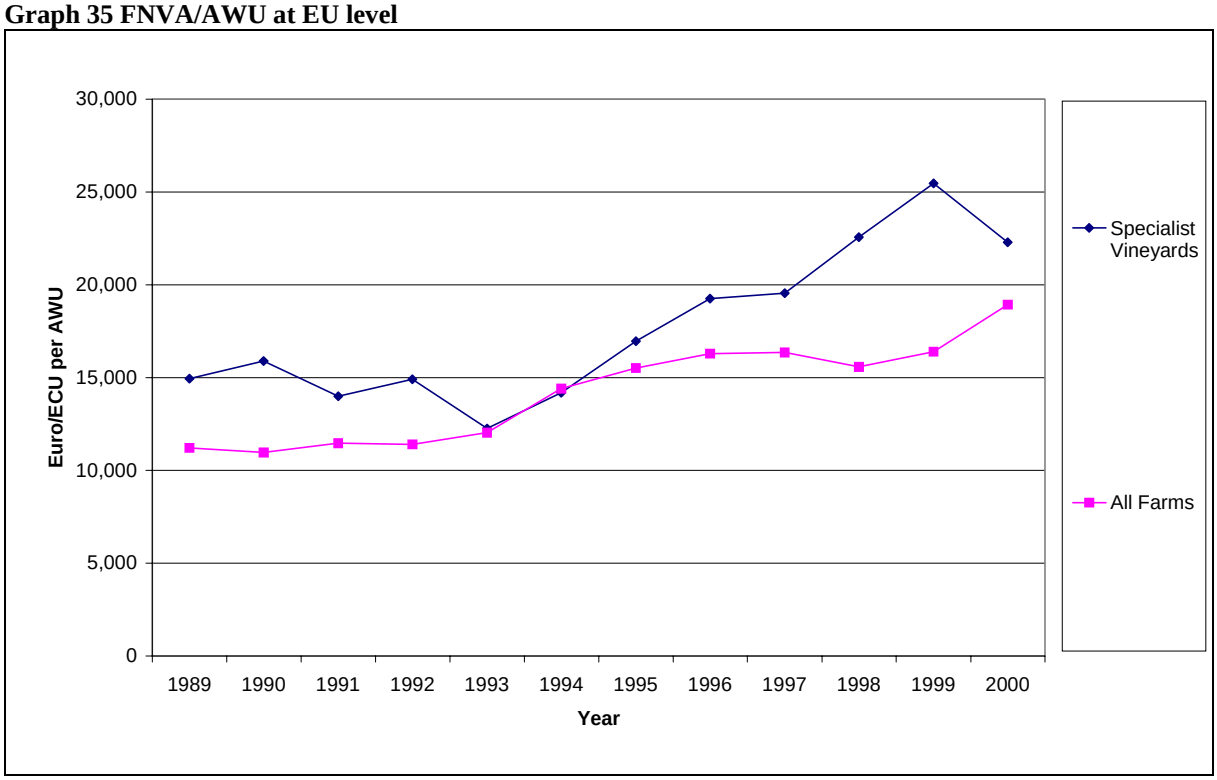
10.2. Results of the analysis

10.2.1. Level and development of wine-growers' incomes

Graph 35 shows that the nominal FNVA/AWU of specialist vineyards has increased over the period between 1989 and 2000.[130],[131] The average FNVA/AWU of specialist vineyards in the period 1997-2000 was 50% higher than the average for 1989-1992, and the average annual growth of the FNVA/AWU of specialist vineyards was 3.7%. There was significant annual variation. The FNVA/AWU of specialist vineyards fell between 1989 and 1993, before rapidly increasing until 1999. Between 1999 and 2000, the FNVA/AWU of specialist vineyards fell by 13%.

In addition, graph 35 shows that the FNVA/AWU of specialist vineyards has been generally higher than the FNVA/AWU for all farm producers between 1989 and 2000.

Graph 35 FNVA/AWU at EU level



Source: FADN

In real terms, the FNVA/AWU for specialist vineyards has also increased. The average FNVA/AWU of specialist vineyards in the period 1997-2000 was 23% higher than the average for 1989-1992, and the average annual growth of the FNVA/AWU of specialist vineyards was 1.1%.

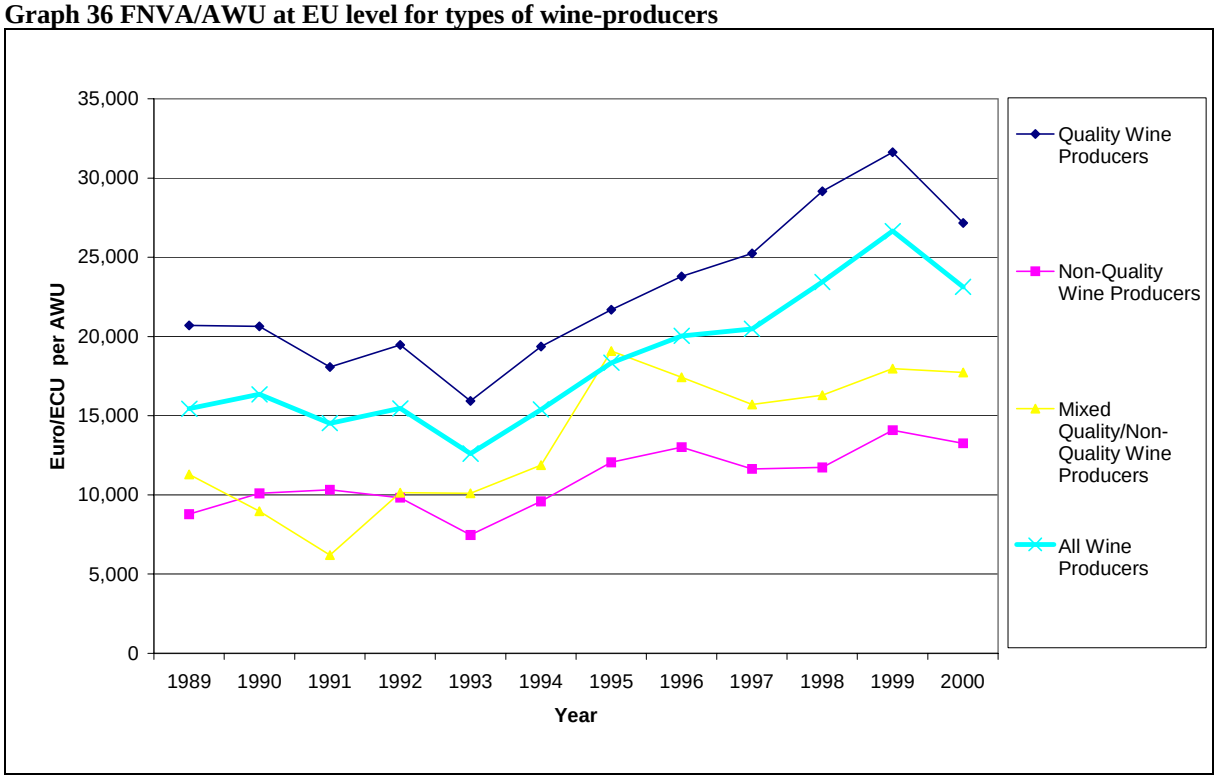
The values for FNVA/AWU for quality-wine producers, non-quality-wine producers and mixed wine-producers are different. Graph 36 below shows the FNVA/AWU for

[130] The analysis in this chapter is provided in nominal terms, unless otherwise specified in the text. The elements of the analysis in this chapter which are provided in real terms are based upon 1989 Euro/ECU values.

[131] The unit responsible for FADN within the Commission has established a set of standard groupings for which the standard results are computed. The "specialist vineyard" is a "principal type of farming" included in Group 3 – "specialist permanent crops" and includes the following particulars types of farming: quality wine; wine other than quality; quality & other wine combined; and vineyards for various types of production.

quality-wine producers[132], non-quality-wine producers[133], mixed wine-producers[134] and all wine-producers[135] in the EU.

Graph 36 FNVA/AWU at EU level for types of wine-producers



Source: FADN

The FNVA/AWU for quality-wine producers is substantially higher than for non-quality and mixed wine-producers. In particular, on average over the time period, the annual figure for the FNVA/AWU for a quality-wine producer is 50% higher than for non-quality-wine producers. This gap between the FNVA/AWU between these two types of wine-producers is relatively stable, varying between 43% and 60% in the period 1989-2000.

Analysis at country level shows substantial variations between countries. Table 30 below shows the average FNVA/AWU for quality-wine producers for selected countries and the EU for the periods 1989-1992, 1993-1996 and 1997-2000.

Table 30 FNVA/AWU for quality-wine producers at EU and country level

	EU	France	Italy	Germany	Portugal	Spain
1989-1992	19,718	31,404	10,243	13,348	5,191	7,139
1993-1996	20,201	31,456	12,667	14,994	4,787	11,054
1997-2000	28,301	43,378	19,397	18,773	5,877	17,457
Difference from 1989-1992 to 1997-2000	**44%**	**38%**	**89%**	**41%**	**13%**	**145%**

Source: FADN

[132] Defined as wine specialists with more than 2/3 of their total standard gross margin obtained from quality wine.
[133] Defined as wine specialists with more than 2/3 of their total standard gross margin obtained from wine other than quality wine.
[134] Defined as wine specialists with more than 2/3 of their total standard gross margin obtained from vineyards normally producing wine but excluding those wine-producers defined as «Quality wine-producers» and «Table wine-producers».
[135] Defined as all producers with some wine production.

The FNVA/AWU for quality-wine producers in France is substantially higher than the average for the EU – in some years the FNVA/AWU for quality-wine producers in France is over 60% higher as the EU average. However, the proportional growth in the FNVA/AWU for quality-wine producers between 1989-1992 and 1997-2000 is highest in Spain and Italy.

Table 31 shows the average FNVA/AWU for non-quality-wine producers for selected countries and the EU for the periods 1989-1992, 1993-1996 and 1997-2000.

Table 31 FNVA/AWU for non-quality-wine producers at EU and country level

	EU	France	Italy	Portugal	Spain
1989-1992	9,753	22,522	8,782	1,959	6,380
1993-1996	10,535	22,124	9,201	3,051	10,372
1997-2000	12,677	21,389	13,483	3,936	11,319
Difference from 1989-1992 to 1997-2000	**30%**	**-5%**	**54%**	**101%**	**77%**

Source: FADN

The FNVA/AWU for non-quality-wine producers in France is higher than the average for the EU and the other selected countries. The proportional growth in the FNVA/AWU for non-quality-wine producers between 1989-1992 and 1997-2000 is highest in Portugal and Spain. Indeed, the FNVA/AWU for non-quality-wine producers in France decreases between 1989-1992 and 1997-2000.

Table 32 shows the average FNVA/AWU for mixed quality/non-quality-wine producers for selected countries and the EU for the periods 1989-1992, 1993-1996 and 1997-2000.

Table 32 FNVA/AWU for mixed quality/non-quality-wine producers at EU and country level

	EU	France	Italy
1989-1992	9,150	15,923	9,189
1993-1996	14,622	20,343	11,602
1997-2000	16,935	23,539	12,236
Difference from 1989-1992 to 1997-2000	**85%**	**48%**	**33%**

Source: FADN

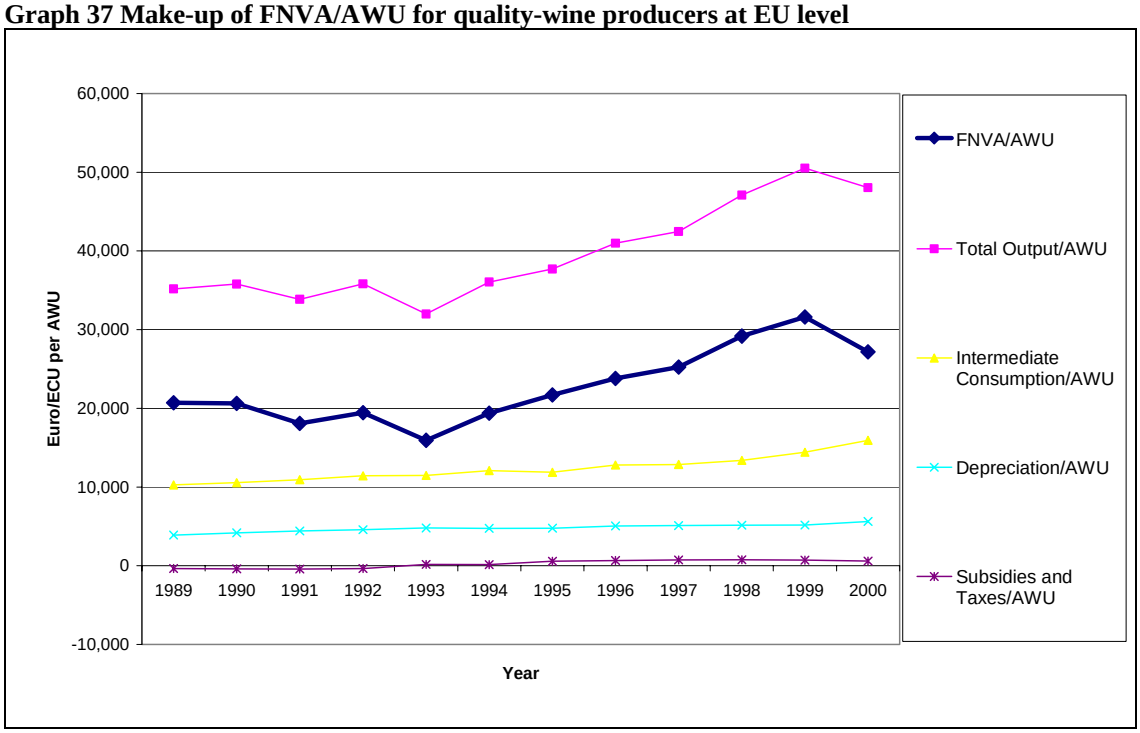
There are only two countries for which there are sufficient sample farms to provide data for FNVA/AWU for mixed quality/non-quality-wine producers. The FNVA/AWU for these wine producers in France is highest in France.

The make-up of farm incomes

FNVA is calculated using the following output and cost variables:
FNVA = Total Output – Total Intermediate Consumption + Balance of Current Subsidies and Taxation – Depreciation

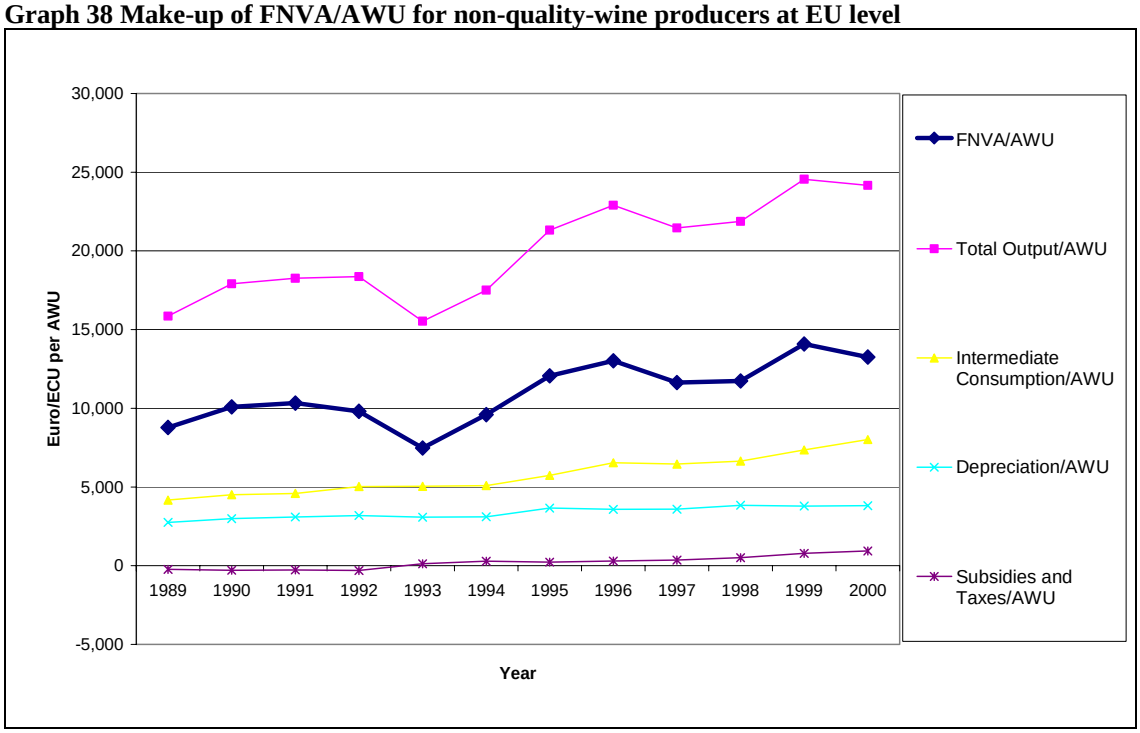
Graphs 37 and 38 illustrate this calculation of FNVA/AWU for quality-wine and non-quality-wine producers in the EU.

Graph 37 Make-up of FNVA/AWU for quality-wine producers at EU level



Source: FADN

Graph 38 Make-up of FNVA/AWU for non-quality-wine producers at EU level



Source: FADN

The main results from the analysis of the make-up of farm incomes include:

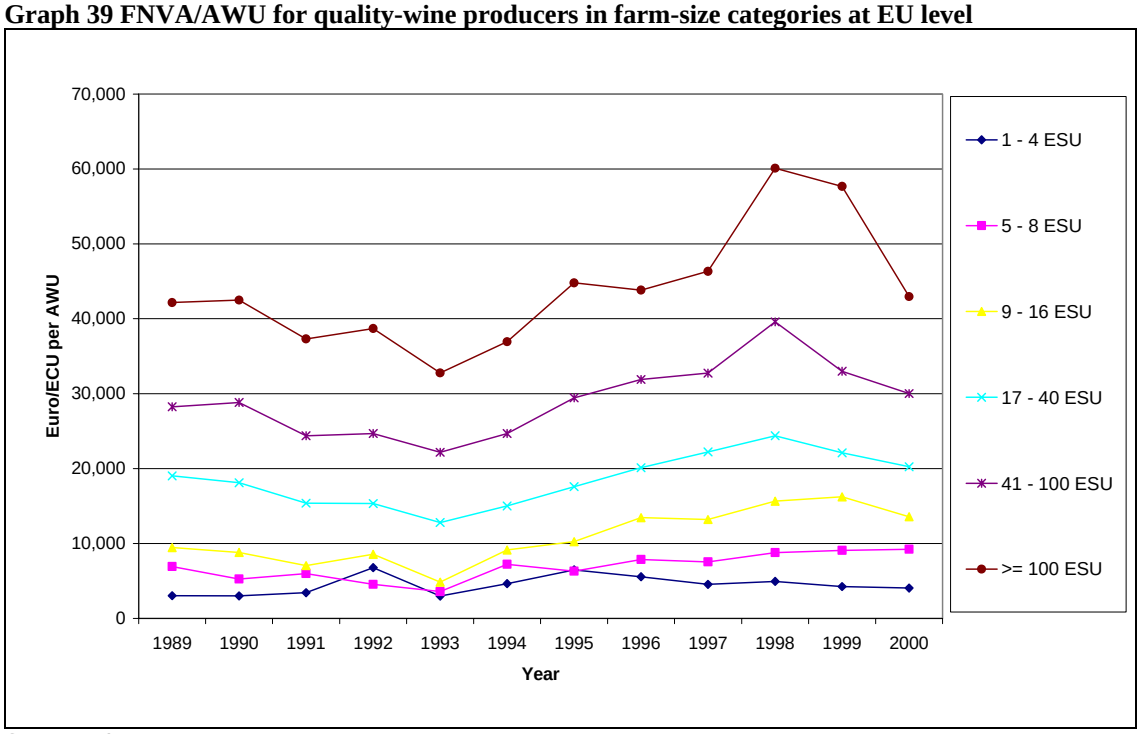
- Total output/AWU and intermediate consumption/AWU are the most significant elements of FNVA/AWU for both quality and non-quality-wine producers;
- Intermediate consumption/AWU is relatively constant at 71-74% of the total of Intermediate consumption/AWU plus depreciation/AWU for quality-wine

producers and 60-68% of the total of intermediate consumption/AWU plus depreciation/AWU for non-quality-wine producers.

Farm income development by farm size

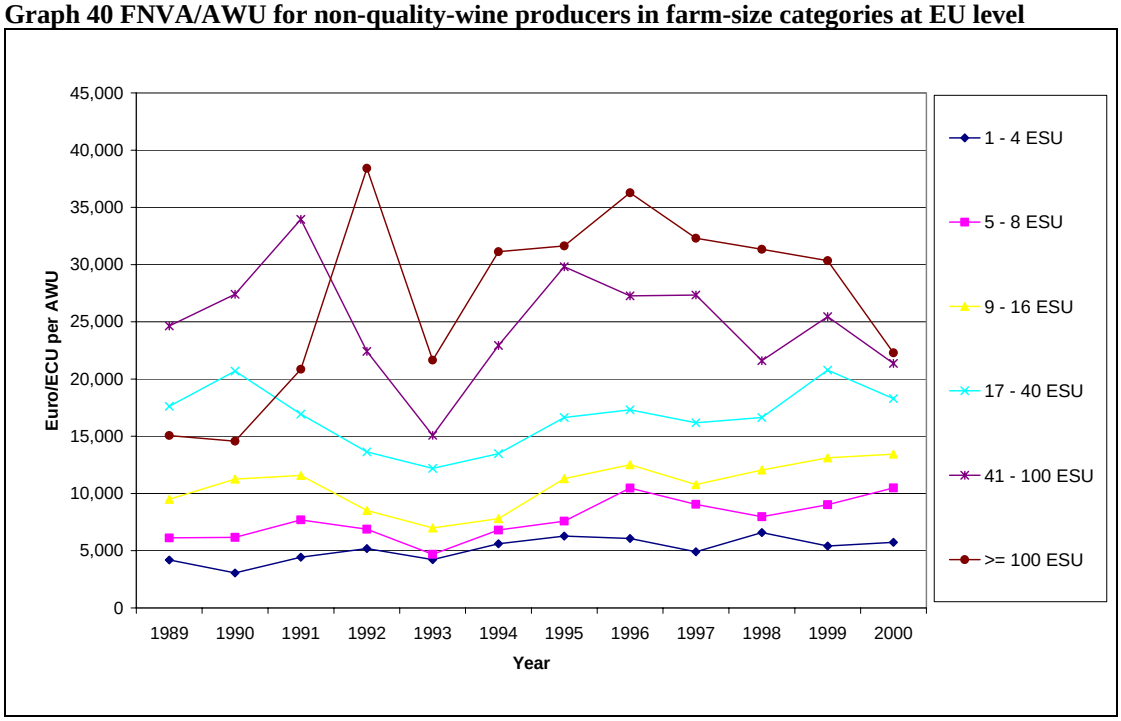
The FNVA/AWU for larger farms tends to be higher than for smaller farms, both for quality-wine and non-quality-wine producers. This is illustrated in graphs 39 and 40.

Graph 39 FNVA/AWU for quality-wine producers in farm-size categories at EU level



Source: FADN

Graph 40 FNVA/AWU for non-quality-wine producers in farm-size categories at EU level



Source: FADN

The FNVA/AWU for quality-wine producers and non-quality-wine producers (with the exception of non-quality-wine producers between 41-100 ESU) has increased between 1989 and 2000. However, there is no clear result in terms of the relationship between the size of farms and proportional change in FNVA/AWU development over the period.

In addition, the number of wine specialist holdings has decreased in the period 1989-2000, from an average of nearly 248,000 in 1989-1992 to an average of 216,000 in 1997-2000. This reduction in the number of wine specialist holdings is also seen at a country level, with Italy showing the largest absolute reduction in number of holdings.

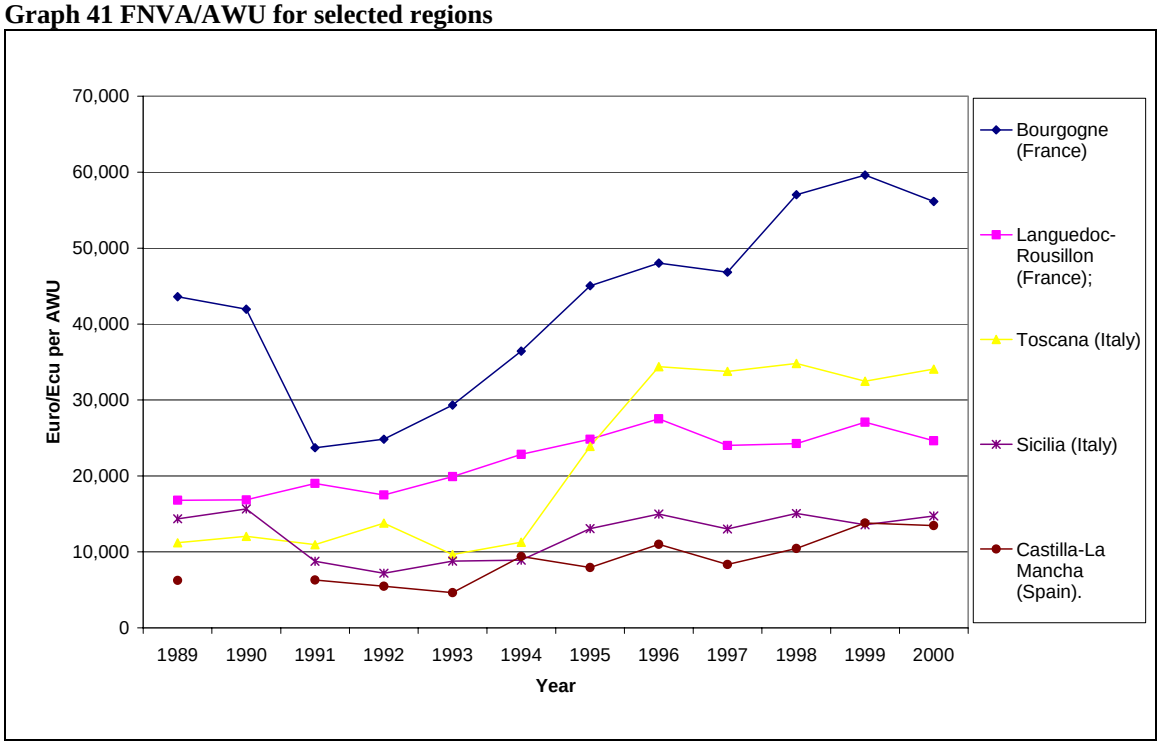
Farm incomes at regional level

Five regions were selected for further analysis:

- Bourgogne (France);
- Languedoc-Rousillon (France);
- Toscana (Italy);
- Sicilia (Italy);
- Castilla-La Mancha (Spain).

Graph 41 shows the FNVA/AWU for specialist vineyards in these regions.

Graph 41 FNVA/AWU for selected regions



Source: FADN

The FNVA/AWU for Bourgogne is substantially higher than the other selected regions. This regional trend is similar to the country analysis, in which the FNVA/AWU for France was substantially higher than in other countries.

Bourgogne produces almost exclusively quality wine and Sicilia almost exclusively non-quality-wine. The other selected regions produce both quality and non-quality-wine. Graph 41 indicates that in France, the selected quality-wine region (Bourgogne) has a higher FNVA/AWU for specialist vineyards than the selected region (Languedoc-Rousillon) with a mix of quality and non-quality-wine. In addition, the selected Italian non-quality-wine region (Sicilia) has a lower FNVA/AWU for specialist vineyards than the selected region (Toscana) with a mix of quality and non-quality-wine. This relationship between the FNVA/AWU for quality and non-quality-wine specialist vineyards is similar to that viewed at the country and EU levels.

Comparison with similar agricultural sectors

The FNVA/AWU for wine producers was compared with that in specialist fruit and citrus fruit sector and the specialist olive sector. The FNVA/AWU for quality-wine producers is substantially higher than for these two comparative sectors, and the FNVA/AWU for non-quality-wine producers is higher than the two comparative sectors in all years except for 1993 and 1998. Table 33 shows the indexed FNVA/AWU values (with the FNVA/AWU for quality-wine producers set at 100 for each year).

Table 33 Indexed FNVA/AWU for comparable sectors

	Quality-wine producers	Non-quality-wine producers	Mixed quality/non-quality-wine - producers	Specialist fruit and citrus fruit	Specialist olive
1989	100	42	55	35	23
1990	100	49	43	42	22
1991	100	57	34	55	37
1992	100	50	52	42	30
1993	100	47	63	49	36
1994	100	50	61	48	41
1995	100	56	88	42	38
1996	100	55	73	45	39
1997	100	46	62	44	41
1998	100	40	56	41	32
1999	100	45	57	35	28
2000	100	49	65	47	45

Source: FADN

Effect of CMO measures on development of farm incomes at EU and country level

The above analysis shows that, despite variation between countries and different types of farms, overall farm income for wine producers has increased in the period 1989 to 2000. Quantitative analysis supports this trend – evidenced through the general views of the wine sector experts interviewed as part of this project. The majority of them stated that, in general, wine producer incomes have increased in recent years.

Thus, the analysis of CMO effect on wine producer income is performed through the addition of qualitative analysis of the effect of the individual CMO measures on wine producer income. The results of this qualitative approach are below:

Distillation - Most wine sector experts believe that distillation has had an impact on wine producer income in some specific (table) wine regions in the EU. However it had no significantly impact in quality-wine regions before the 1999 reform, as there were no such measures which applied to quality wine (only the by-products of quality-wine production had to be distilled in parts of the EU). This opinion is supported by the analysis concluding that distillation measures are effective in the sense of guaranteeing certain minimum returns, providing an income stabilising effect. The regional variation in the effect of distillation on wine producer income can be seen through the expected situation if the distillation measures were to be abandoned. In this case, many of the wine sector experts believe that wine producer income would fall in some regions in Italy, France, Portugal, Greece and Spain – and would significantly change the equilibrium in the market towards lower prices in the short-term, and lower surplus wine production volume in the medium and long terms.

Planting Rights - Many wine sector experts state that the CMO measures on planting rights are not related to market demand and are too inflexible. These experts believe that the perceived inflexibility of planting rights have led to wine producer income being lower than it would have been in their absence, especially in relation to efficient producers as they have been limited in their ability to expand their businesses and market share. It is thus likely that the competitive position of the EU wine sector in general, and with specific relation to imported wines, would be improved if the CMO measures on planting rights were abandoned. It should also be noted, however, that planting rights have provided a real value to smaller and more traditional wine producers, allowing them to operate within the market that could otherwise have significantly moved towards large-scale producers.

Restructuring and Conversion – The effects of restructuring and conversion are long-term and there is not agreement on their effect on the producers' income. Some consulted experts believe the winegrowers' investments in restructuring and conversion to the wine varieties now most in demand cannot be recovered. Other experts assume the CMO measures for restructuring and conversion are likely to result in a positive income impact in the EU quality-wine sector (because with some high quality wines, producer returns will exceed the large investments required by wineries in order to adapt to new wine-grape supplies).

Regulatory Measures - There is a broad consensus among the interviewed experts that there are few direct links between the CMO regulatory measures and wine producer incomes. For instance, it is likely that the oenological practices allowed by the CMO have not resulted in restrictions to the production of quality wines. An exception is aid for use of RCM and CM that has a positive income effect for producers of grape must as raw material for RCM and CM production.

Private Storage - The general analysis on private storage in this report concluded that, overall, it is reasonable to state that the CMO private storage measures work in the direction of keeping prices stable or at least preventing them from falling. Private storage gives producers the opportunity to plan more effectively when to channel the wine in the market, considering the possibility to rationalise their supply over time and, in this way, limiting the risks of income losses due to possible market imbalances. However, some wine sector experts state that the measures have not had a strong impact on wine producer incomes in general EU terms, although there may have had a positive impact on income in specific regions and farms.

10.2.2. CMO impact on the production structures

Developments in the size of holdings

The average size of holdings for all farms and for non-quality-wine -producers grew fairly steadily between 1989 and 1998. In the same period, the average size of holdings for quality-wine -producers showed some annual variation but overall did not significantly increase or decrease between 1989 and 1998.

In 1998 there was a significant growth in the average size of holdings for quality-wine producers. However, it is likely that this is partly as a result of a change in the units through which farm sizes are measured.[136]

Quality and non-quality-wine producers are largest in France.[137] In addition, France and Germany (since 1996) are the only countries in which the size of quality-wine producers is consistently above the EU average. For non-quality-wine production, the average size of wine producers is above the EU average in France, Portugal and Spain.

Experts believe that the CMO measures have had little influence on the average size of specialist vineyards. However, some stated that the CMO limits market adaptation by limiting the ability to increase the size of holdings.

[136] Standard Gross Margin, European Size Units and Annual Work Units.
[137] In terms of Annual Work Units.

Regional distribution of production

The relative levels of production of total wine from individual countries remained fairly constant in the 1990s. However, this result hides a significant redistribution between table and quality wine, and, to a lesser extent, between countries.

Italy and France are the largest producers when considering all wine, producing approximately 65% of all wine in the selected countries in 1989/1991 and 67% in 1999/2001. Quality-wine production is highest in France, whilst table-wine production is highest in Italy.

However, most wine sector experts concluded that the CMO measures in general had little impact on these developments in terms of regional production.

Intensity of grape production

Comparison of output and input per hectare[138] (both in terms of real Euro value with 1989 as the base year) shows that, as expected, output per hectare is higher than input per hectare for all years in the period (1989-2000). Indeed, on average throughout the period, annual output per hectare is 57% higher than input per hectare in real terms.

However, during the course of this project, 62% of wine experts surveyed stated that the CMO measures have had little or very little effect on the intensity of production on a EU level, in terms of efficiency and intensity of production. This belief is not consistent across countries, and in some countries, experts believe that the CMO has had a positive effect on the efficiency of production. For instance, it is often argued that restructuring in the Castilla La Mancha region of Spain has led to a substantial improvement in the intensity of production and a corresponding increase in efficiency of production – this is in accordance with the increase in the ratio of output to input in Spain.

Development of the processing and marketing system in typical wine growing regions

According to experts, many EU wine producers are traditional, family-type companies, not used to marketing their products while most of "new world" wines are marketed by large groups, with aggressive campaigns and able to finance and carry out substantial market research to ensure they meet market needs.

In France, Italy and Spain, the majority of the respondents thought that the CMO measures had either an important or very important effect on the development of the processing system. In Germany and Portugal this effect was considered limited. Respondents' opinions on the importance of CMO measures on the development of the marketing system were also varied, ranging from important to very limited, being more important in France.

[138] Total output is the total of output (in 1989 Euros) of crops and crop products, and of other output in the accounting year; Total Input is costs (in 1989 Euros) linked to the agricultural activity and relating to the output of the accounting year. Costs include specific costs, overheads, depreciation and external factors (including wages).

10.3. Conclusions and recommendations

10.3.1. Judgment of Effectiveness

Despite the difficulties in quantifying the joint impact of the CMO on wine producers' incomes and the production structures and considering the different individual impact of each measure, a number of quantitative results as regards the income situation of wine producers are clear:

- Between 1989 and 2000 there has been a general increase in FNVA/AWU for wine producers;
- FNVA/AWU for quality-wine producers is higher than that of non-quality-wine producers at the EU level;
- FNVA/AWU for quality-wine producers is higher than for all farms and FNVA/AWU for non-quality-wine producers is lower than for all farms at EU level;
- There is substantial variation between countries, for instance the FNVA/AWU in France (quality and non-quality-wines) is the highest of the wine producing countries, and is substantially higher than the FNVA/AWU in some countries such as Portugal;
- There is also substantial annual variation in FNVA/AWU for quality and non-quality-wine producers within the individual countries;
- The value (in Euro terms) of total output from vineyards is very variable between years, and is main driver of the variability in annual FNVA/AWU;
- The FNVA/AWU for quality-wine producers is substantially higher than for these two comparative sectors (specialist fruit and citrus fruit sector and the specialist olive sector), and the FNVA/AWU for non-quality-wine producers is higher than the two comparative sectors in all years except for 1993 and 1998.

These results suggest that the CMO measures have been effective in achieving their objective of helping to ensure adequate levels of income for wine producers (see Chapter 11 – Overall Market Impact).

Qualitative analysis, based on a range of interviews and questionnaires with sector experts, does not show clear links between CMO policy and income effects for all CMO measures and regions. However, it was found that CMO effects on income include the following:

- Distillation has had an effect on certain (table) wine regions by enhancing income stabilisation;
- It is likely that planting rights have led to inflexibility in market, resulting in average wine producer incomes being lower than they could have been. However, it should be noted that planting rights have allowed smaller and traditional wine producers to continue to operate in market;
- Restructuring and conversion effects are long-term and there is not a broad consensus on the return on this investment;
- There are few direct links between regulatory measures and producer income;
- Private storage works in the direction of enhancing income stability, although this effect appears to be regional in nature.

11. Overall market impact

Can a joint impact of the different measures of the CMO for wine on market equilibrium (in volume terms) and on price development be identified? If this is the case, what is the interaction between the individual measures and their relative importance?
The answer to this question should provide an overview of the overall impacts of the CMO with particular consideration of market equilibrium (in volume terms) and development of prices. The aspect of satisfaction of consumer demand and internal and external competitiveness of Community wine production should also be taken into account. In particular the effectiveness and efficiency of the different measures aimed at reducing surplus supply should be compared (measures for control of production potential, measures for withdrawing surplus wine from the market, measures for securing other outlets such as for grape juice) It should also be discussed whether the scope and the coverage of the instruments are adequate to achieve the objectives of the CMO and to which extent the CMO is adapted to current market developments, caused e.g. by changes in consumer preferences.

11.1. Introduction

Previous sections of the report present a separate analysis of the impact of each CMO instrument on market equilibrium and on market prices, primarily using the assumption that the other elements of the wine CMO remained in place. In practice, examining each measure in turn, as was required by the evaluation's terms of reference has its limitations because several of the measures are mutually supporting.

In this chapter we consider the interrelationship between the different measures and the effects of the measures taken as a whole. The first section of the chapter presents the impact of the CMO on market equilibrium. The second section addresses the issue of CMO impact on prices. The third section covers other aspects of CMO impact (impact on production cost and competitive position, on producers' income, adaptation to current market development, contradiction between measures, scope and coverage of the CMO). The last section presents an analysis of the overall efficacy of the CMO.

The answers to the evaluation questions have to take into account changes in the supply side of the market (production, imports/exports) as well as changes on the demand side. As CMO instruments mainly act on the supply-side of the market, the chapter provides more details on the evolution of the supply. Major features of the evolution of the European wine demand are thus recalled in preamble to this chapter.

Recall of market context

European wine demand showed important changes in both quantitative and qualitative terms over the period covered by the study. The major features have been a shift from frequent consumption of low quality wine to a more occasional consumption of higher quality wine with overall reduced per capita consumption in traditional wine producing countries and increasing consumption, again mainly of quality wine in a few, traditionally non-wine producing countries.

There has also been a rapid change in tastes from white to red wine in many EU countries since 1990. This indicates that the industry has needed to restructure to adapt to the changing market situation.

"Globalisation" has been another major feature of the development of wine demand over the period covered by the study (1988 to 2003). In the mid 1980s, following the accession of Greece, Portugal and Spain, third country imports formed only about 2.5% of total EU wine consumption (and around 7% and 15% respectively of German and UK consumption). In 1995/96, following the URAA tariff reductions, third country imports were 7.5%, 30% and 5.5% respectively of German, UK and EU total wine consumption. In 2001/02, these figures had risen to 10%, 40% and 7.5% respectively. In 2003/04 third country imports represented about 7;7% of total EU wine consumption.

Whilst imports from outside the EU still supply a small share of EU consumption, the rapid growth of imports from the "new world" shows that their producers have responded to changing EU consumer demand.

It is important to recall that in a market without intervention measures, there would be no long-term surpluses, because the occasional bumper harvest would result in low market prices and/or increased stocks and marginal producers would be forced out of production.

11.2. Results of the analysis

11.2.1. Impact of the CMO on market equilibrium

We judge the effectiveness of the CMO by assessing its influence on the wine surplus. The CMO can be considered effective if it helped to reduce the EU wine surplus. We have distinguished between the annual surpluses (and deficits) which inevitably occur with an agricultural crop subjected to climatic variations and structural surpluses which mean that even in below-average yield years a production surplus remains.

As stated in chapter 3.5 there is no single agreed measure of the size of the annual surpluses. Thus we decided to use two indicators to judge the impact of the CMO on market equilibrium. Surplus 1 including and surplus 2 excluding the wine distilled into potable alcohol with the aid of subsidies. Detailed calculations according to type of wine (quality wine psr, table wine, other wine), for the EU and for the main producing countries (France, Italy and Spain) for the period 1980 to 2003 are given in the annex, section 3.4).

Judgement of the CMO's effects on market equilibrium is divided into the short-run and long-run impacts. The answer also differentiates between the impact of regulation 822/1987 (from 1988 to 1999) and that of regulation 1493/1999 (2000 and after).

Recall of CMO instruments influencing market equilibrium

The wine CMO acts mainly on the supply side of the market. Some CMO instruments can have an impact on the market equilibrium by reducing the volume of supply (limitation of planting rights, premiums for permanent abandonment and - in the short run - private storage aids), by creating an additional, artificial, demand[139] (production

[139] Because of the long term effect of short term measures, for explanation see e.g. Wöhlken (1984, p.149f).

of RCM and CM, distillation into industrial alcohol), or by increasing demand for other purposes (distillation into potable alcohol, subsidies for grape juice production) to match the overall reduction in wine consumption. Other measures (the restructuring and conversion scheme, regulatory measures, e.g. concerning the quality wine regime) can improve market equilibrium by influencing the supply-side response to the demand for higher quality wine.

Regulation 822/1987

Following the Dublin agreement in 1984, there was a consensus that the European wine sector faced structural surplus and that policy incentives were needed to reduce this surplus. The preamble to the regulation 822/87 acknowledges this: "Whereas the situation of the wine market with its large surpluses is deteriorating very rapidly.", "Whereas the structural surpluses which are currently a feature of the wine sector".

The CMO instruments used to reduce the structural surplus were the restrictions on vineyard plantings and the premium for permanent abandonment, which was aimed at helping uncompetitive producers to leave the market. Compulsory distillation of table wine also discouraged the less competitive high-yield, low-quality wine producers by requiring them to distil a large proportion of their output, especially in France where producers of high yields were required to put a significant proportion of their harvest into obligatory distillation[140]. Thus compulsory distillation, initiated mainly as an intervention instrument for dealing with occasional surpluses, could also be considered as a structural instrument[141].

The different specification of compulsory distillation in France on the one hand and Italy and Spain on the other hand resulted in their wine sectors developing differently. Whilst in Italy and Spain a certain amount of marginal production was kept, in France a large part of the marginal production was rapidly eliminated – though at the expense of reducing producers' incomes (see graphs describing the development of distillation in the Member States in the annex section 5.2.1).

In the short-run, distillation measures and aid for private storage can minimise market disturbances by removing occasional surplus supplies from the market. These objectives are recalled in the preamble to the regulation[142]. However, preventive distillation had to be implemented every year and therefore became an indicator of structural surplus, but was interpreted as necessary support for the market of potable alcohol as well.

Regulation 1493/1999

Changes to the CMO's orientation actually began in 1995 with the decision to limit the use of the premium for permanent abandonment to certain areas.

[140] See annex, section 3.3.2, "*Example of implementation of distillation measures"*.

[141] It helped persuade wine producers to use the premium for permanent abandonment

[142] Whereas it is important to have effective instruments available for intervention which should ensure balance on the market in table wine (…); whereas aid for the private storage (…) and the various forms of distillation of such wine must meet this requirement". , "In order to preserve market balance, provision should be made for long-term private storage contracts to be concluded where, for a wine year, the quantities of table wine available at the beginning of that wine year exceed, by more than four months' supply, the normal utilisation for that year" ; Whereas, in order to allow, in years where a significant harvest is foreseen, sound conditions to be speedily restored on the market by means (…) preventive distillation should be made possible from the beginning of the wine year" ; "Whereas compulsory distillation appears to be the most effective measure to absorb surpluses of table wine on the market; whereas provision must consequently be made for such distillation to be introduced once it is clear that the market is in a state of serious imbalance";

The 1999 reforms were decided against a rather different background as shown in the preamble to the regulation: "while structural surpluses are less frequent[143], surpluses on a multi-annual basis are still possible, however, in particular owing to the sector's inherent potential for dramatic fluctuations in production from one harvest to the next", "to capitalise on and consolidate the improved market balance", "market balance has improved, albeit in a relatively slow and difficult manner" and "in the light of the improved market balance and the expanding world market".

The main instrument used to improve market balance over the long term remains the general prohibition of vineyard plantings.
In the short-run, crisis distillation measures and aid for private storage are the main instruments to correct occasional surpluses. Distillation into potable alcohol was implemented to replace preventive distillation as an annual measure to support the market for potable alcohol made out of wine.

Impact of the CMO on surplus development

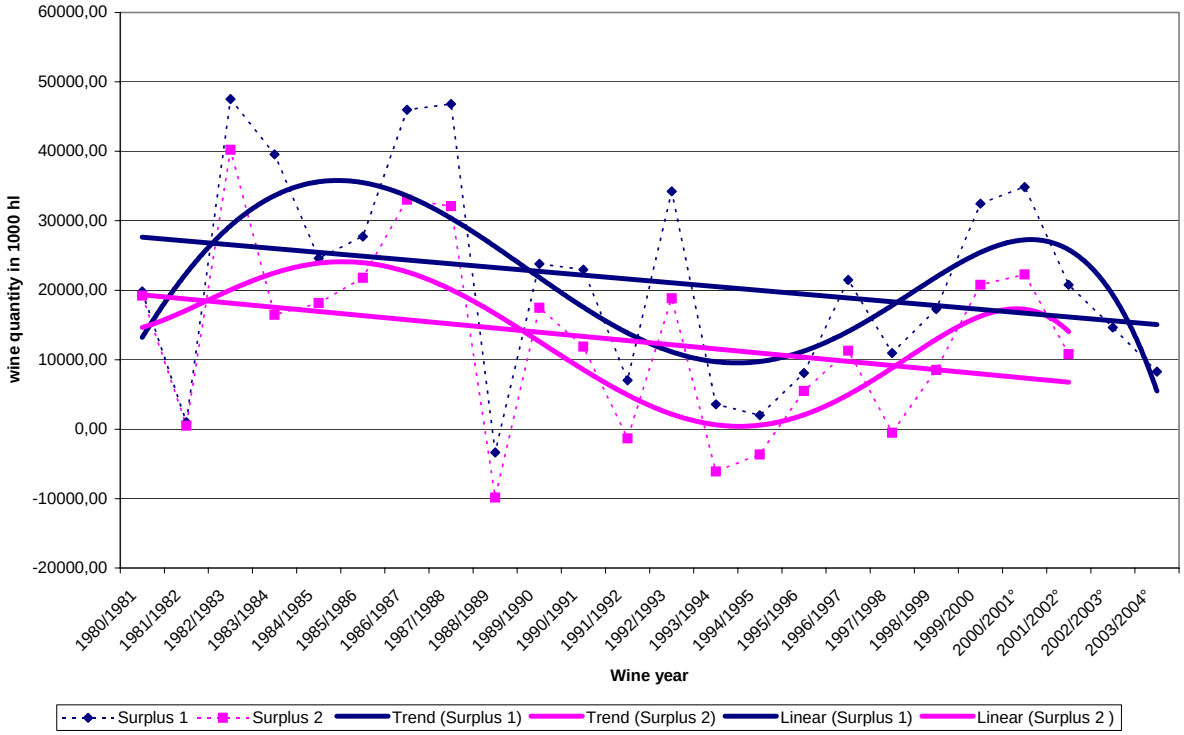
We analyse here the two surplus measures calculated in accordance with the description given in chapter 3.5 (surplus 1 including, surplus 2 excluding subsidised distillation into potable alcohol). As indicated earlier in the Report, the data available in the wine balance sheets for recent years is somewhat unreliable hence only broad trends are analysed.

In order to identify the impact of the CMO on the long term market equilibrium, the evolution of the surplus has been observed over a long period (from 1980 to 2003). Changes of the trend in the evolution of the surplus have been investigated. The assumption is that a change of trend in the surplus that would coincide with a change in CMO orientation would indicate that the CMO had influenced the evolution of the surplus over the long term.

Graph 42 presents our estimation of the evolution of the annual surpluses 1 & 2 with linear and polynomial regression.

[143] It is questionable if structural surplus can be "more" or "less" frequent –a structural surplus could be higher or lower and occasional surplus "more" or "less" frequent.

Graph 42 Annual surplus of EU wine market - estimation based on simplified wine balance sheet



The long term trend is a reduction in the surplus with four distinct periods that can be distinguished[144]:

- Increase of the surplus during the early 1980s
- Decrease in the surplus between 1984/1985 and the mid 90's
- Increase between 1995/1996 and 2000/2001
- Decrease since 2001/2002 (though as indicated above in the period since 2000/01 there are less reliable figures)

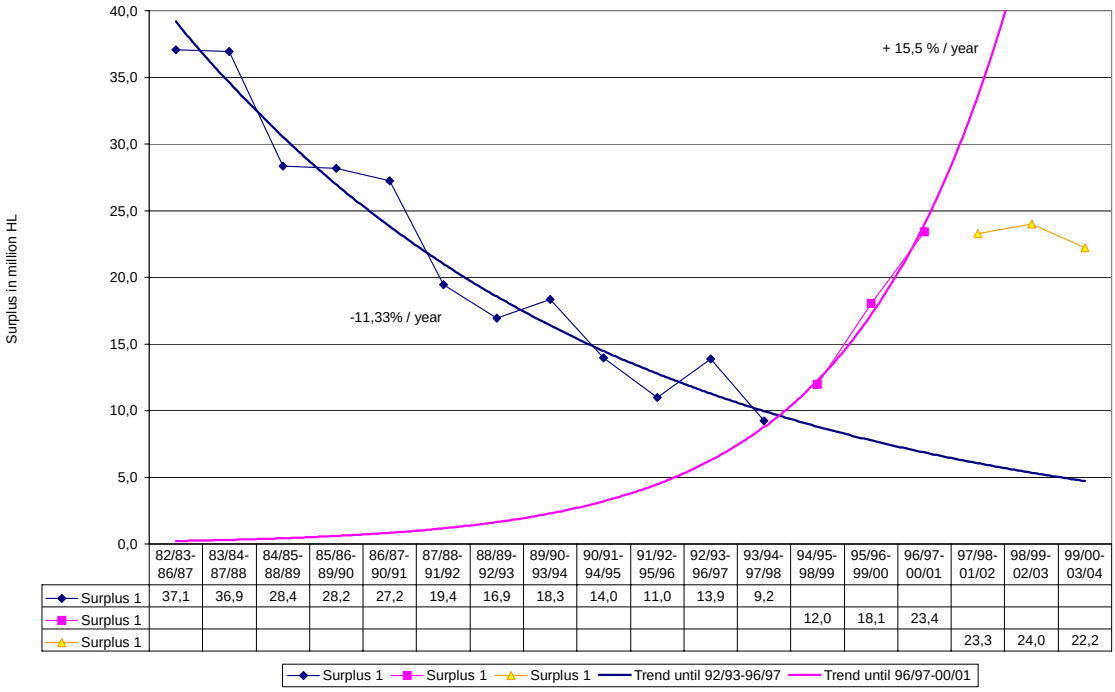
These trends correspond to major changes in CMO orientation

- 1984 : Dublin agreement with introduction of Compulsory distillation and aid for permanent abandonment
- 1995 : Reduced use of the premium for permanent abandonment, allocation of new planting rights
- 2000: new CMO in force

Graph 43 shows the 5-year moving average level of the surplus between 1984 and 2003. A 5-year moving average is used to even out the impact of annual variations. Trends have been calculated for the three periods identified previously.

[144] Trends have been identified by using polynomial regression with 5 degrees

Graph 43 Trends in the EU Wine Surplus -5 years moving average (in million HL)



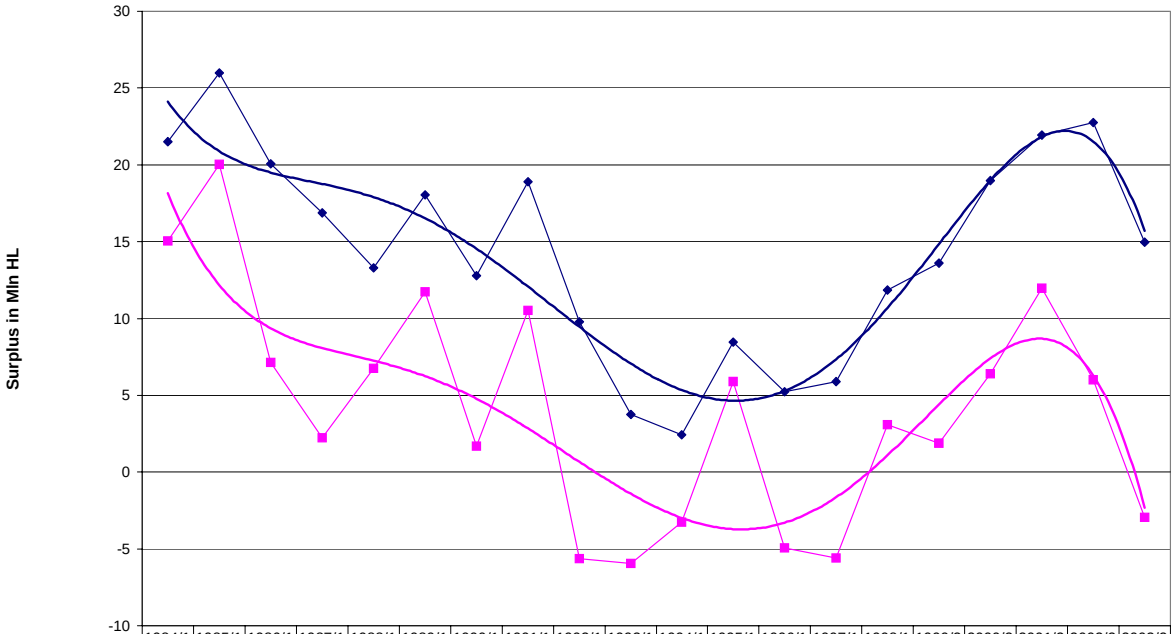
	82/83-86/87	83/84-87/88	84/85-88/89	85/86-89/90	86/87-90/91	87/88-91/92	88/89-92/93	89/90-93/94	90/91-94/95	91/92-95/96	92/93-96/97	93/94-97/98	94/95-98/99	95/96-99/00	96/97-00/01	97/98-01/02	98/99-02/03	99/00-03/04
Surplus 1	37,1	36,9	28,4	28,2	27,2	19,4	16,9	18,3	14,0	11,0	13,9	9,2						
Surplus 1													12,0	18,1	23,4			
Surplus 1																23,3	24,0	22,2

Source: based on data from EC DG AGRI.

As the graph shows there was a steady downward trend in the surplus from the mid 1980s to the mid 1990s, but thereafter the trend rises sharply before stabilising in more recent years.

In order to confirm the trends previously identified and to isolate structural surplus from occasional surplus caused by climatic conditions, we have estimated what the annual surplus would have been with a constant yield. Surplus 1 and 2 have been calculated with a production equal to the actual wine area multiplied by a yield of 45 HL per hectare. The actual average yield between 1984 and 2003 was 47 HL/ha, but as the Commission seems to dispute whether a structural surplus exists we show here the calculations using a below annual average yield of only 45 HL/ha.

Graph 44 Annual surplus 1 and 2 of EU wine market with a constant yield of 45 HL/ha



	1984/1985	1985/1986	1986/1987	1987/1988	1988/1989	1989/1990	1990/1991	1991/1992	1992/1993	1993/1994	1994/1995	1995/1996	1996/1997	1997/1998	1998/1999	1999/2000	2000/2001°	2001/2002°	2002/2003	2003/2004
Surplus 1	22	26	20	17	13	18	13	19	10	4	2	8	5	6	12	14	19	22	23	15
Surplus 2	15	20	7	2	7	12	2	11	-6	-6	-3	6	-5	-6	3	2	6	12	6	-3

Source: based on data from EC DG AGRI

The calculations confirm the presence of a structural surplus as the surplus 1 (surplus that includes the wine distilled into potable alcohol with the aid of subsidies) remains positive even when using a yield 4% lower that the actual long-term average yield. The graph also confirms the trends identified previously with a change of trend in 1995. We can thus conclude that the mid 1990s showed a the key turning point reversing the downward trend in the surpluses seen in the previous ten years. The year 2000/2001 appears to be another turning point for stabilisation or even a fall in the surplus but trend is not yet a clear one.

Treating distillation into potable alcohol as if it meets a genuine market demand (the surplus 2 measure) demonstrates a continuing surplus save for a few years in the early 1990s. As graph 44 shows, in only 5 out of the past 24 years was there an actual "deficit" according to the surplus 2 measure. It would be absurd to maintain a costly support regime purely in order to ensure that the annual market for potable alcohol can be supplied by wine alcohol. In an unsupported table wine market, the annual yield fluctuations would be dealt with through a combination of stock changes and price changes – just as occurs in the higher quality wine market.

It has to be recalled that for the EU as a whole, the estimated level of wine consumption is deduced from the output, trade and distillation data rather than being precisely calculated or collected independently. Moreover the consumption figures for recent years are not consistent (consumption is estimated at around 128 mln HL in 1999/2000, 125 mln HL in 2000/01, 121 mln HL in 2001/02 and 2002/03 and 129 mln HL in 2003/04). Wine trade experts do not believe that the level of consumption has been that volatile – though some year to year fluctuation around the general trends identified earlier is to be expected. If the consumption has been underestimated between 2000 and 2002, then we would observe a stabilisation of the surplus since the

year 2000. If the consumption of 2003/04 (129 mln HL) has been over-estimated, then we would observe a recent increase of the surplus.

The change in the trend in the EU wine surplus from the mid 1990s follows changes in the management of the CMO instruments aiming at controlling the production potential (a limited use of the premium for permanent abandonment and the granting of new plantings rights). In 1994, the level of Community preference began to be progressively reduced following the URAA. From 1995 there has been an increase of the imports of "new world" wine, although their share of the total EU market remains small. The emergence "new world" wine production also reduced the share of EU wines on the world export markets. The following section describes in details the impact of the CMO for the two periods.

The mid 1980's to 1990's (Regulation 822/1987)

In this period, a major objective of the CMO was to reduce structural surpluses. Long-run market equilibrium was affected by several CMO measures – planting rights regulations, the premium for permanent abandonment, the enrichment measures and distillation measures.

The main instruments of the regulation were implemented between 1984 (the Dublin agreement) and1995 (reduced use of the premium for permanent abandonment and no further use of compulsory distillation). The steady decline in the EU wine surplus until 1995 was due to the reduction in the vineyard area, though the final years of this period had low-yielding harvests. Obligatory distillation of table wine and distillation of dual purpose grapes were linked to production quotas and hence limited the quantities of wine on the market for human consumption, especially in France.

Our analysis has shown that the premium for permanent abandonment was highly successful up to 1996 in reducing the area under production by some half a million hectares. It was also cost-effective in that had the area grubbed-up remained in production, the volume and therefore annual cost of distillation would have added considerably to CMO costs over time. However, the measure was less cost-effective than it should have been due to the fact that up to 15% of the funds for premium for permanent abandonment were improperly used to compensate table-grape growers. On the other hand, these payments to table grape growers have reduced expenditure on subsidising the distillations of these grapes under the dual purpose grape distillation measure.

Wine distillation measures have been shown to be effective short-term instruments in that occasional excess wine supplies are removed from the market (see chapter 5 on distillation) and could be cost- effective if it were not for the underlying problem of the structural surpluses, whose continuation is encouraged by the relatively high buying-in-prices for some distillation measures. The surpluses from the wine market are transferred to the alcohol market or storage. The EU market price for alcohol is below the EU cost of production. As chapter 5 on distillation shows, in the past substantial subsidies have been used first to store and then to sell the distilled alcohol.

The increased success from "new world" wine producers led the EU authorities from the mid 1990s to try to encourage quality-wine production in the EU by allocating new planting rights and adopting the conversion and restructuring measure. Although the quantity of new planting rights is small, allocating free planting rights conflicts with the concept of a market in transferable planting rights.

However, since many third country competitors do not face similar planting rights constraints, nor do they have distillation support measures, it is worth considering whether the EU wine producers should be freed from both market constraints and market support guarantees.

We have concluded that in the earlier years covered by our study the ban on new planting probably prevented over–enthusiastic reactions to improvements in market prospects. Thereby the planting rights regulations, coupled with the premium for permanent abandonment reduced the structural surplus below what it otherwise could have been, but did not eliminate the surplus. One reason for that effect is that limitation of planting rights forms not only a long term market entry barrier, but also a medium term market exit barrier. To avoid long term losses of their individual planting rights, many producers keep vineyards in production, even though there is no profitable market outlet for the resulting wine.

The regulations concerning enrichment have a volume effect as well as a quality aspect. The results of our analysis show, that there is no evidence in the relevant wine growing regions that enrichment leads to increasing yields per hectare (see annex to this chapter, section 7.1) and hence higher production volume. Enrichment is a necessary tool for producing wines to meet the demand for higher alcohol content[145], while focussing grape production on taste and aromatic factors which attain their best quality in those regions in some years before sufficient natural alcohol content can be assured.

The aids for the use of CM and RCM to replace sucrose for enrichment create an outlet for grape based products, which are not competitive against sucrose without subsidy. The reduction in the quantity of wine resulting from processing grape must into CM and RCM exceeds the increased quantity of wine produced through using CM and RCM.

Our analysis shows that the Private Storage Aid is an efficient and cost-effective instrument for removing occasional surpluses from the market and transferring the wine to the next marketing year. However, in some regions private storage aid is claimed every year; this might be evidence either of a continuing rather than occasional surplus problem, or that some producers are using the aid to subsidise their marketing activities.

Regulation 1493/99

Since the regulation has been implemented for only four wine years, it is not possible to determine the exact impact of the CMO on long-term market equilibrium. However some conclusions can be drawn.

The new CMO contained two main changes which influenced the volume of the wine supplies. First the new voluntary distillation rules which enable every producer to market his total production quantity if he wants to. Second the aid for restructuring and conversion.

Crisis distillation is the main instrument to be used to restore short-run wine market balance in cases of occasional substantial surplus. It was used for the 1999/2000 and 2000/01 wine years (though some of the wine distilled in 2000 under the crisis distillation measure was in fact wine produced in 1998-1999 under the old CMO). Member States added national aids to make the crisis distillation more attractive for

[145] Over the past decade a minimum of 12% Vol. alcohol content has become the standard in the mainstream market.

their producers, though some of this national aid may well have been unnecessary (a deadweight loss) since many producers would have also participated in the distillation without the addition. Moreover, the national aid may well have resulted in too much distillation in some regions. The effectiveness of the crisis distillation on short term equilibrium is thus considered limited.

The aid for restructuring and conversion has encouraged vineyard renewal. This leads in the short term to reduced production as in the early years following planting there is little production, but in the medium and long term an overall increase in production can be expected, due to better husbandry and production techniques

Several factors indicate that the new CMO might not lead to a reduction in the EU long-term surplus.
Distillation for potable alcohol is an important income support in some wine growing regions and hence helps to maintain structural surpluses too. As compulsory distillation was abandoned in 1999, there is no longer an incentive for table wine producers to reduce yields.

Our analysis reveals that since 1995 there has been a trend towards yield increases especially in Member States with traditionally very low yields. This is particularly so in Spain, which has the largest vineyard area in the EU, where average yields had been under 30 hl/ha for many years. Most of the experts consulted consider that the yield increase in Spain to be a much needed structural improvement for the competitiveness of wine producers and the result of restructuring to more competitive grape varieties and production methods[146].

New planting rights are being awarded and regularisation of illegal planting is in progress. Although we suspect that the wine from most of the illegal plantings was already finding its way onto the market, the new plantings, along with the restructuring changes are likely to result in some further increase in the total EU wine production over the coming years.

Whether this increase in production leads to increasing structural surpluses depends in part on the competitiveness of the EU wine sector and the effectiveness of the EU industry in marketing its product in competition with wine producers outside Europe. The CMO is aimed at "enabling the sector to become more competitive in the long term"[147]. Sectoral organisations are encouraged to "provide the information and carry out the research necessary to adjust production towards products more suited to market requirements and consumer tastes and expectations" (Art.41 of regulation 1493/1999). However, the expenditure on the wine CMO remains overwhelmingly focused on production and not on increasing the effectiveness of marketing of EU wines.

Quantification of impact of CMO measures on surplus

In order to quantify the impact of the CMO, estimates are given in table below of changes in the volume of surplus that would have occurred without the CMO instruments. Table 34 shows that without the effects of the CMO measures, the surpluses would have been even larger. The calculation shows the importance of the premium for permanent abandonment in market intervention as that accounted for half

[146] Great efforts have been made in Spain to enhance the quality of vineyards, which also results in increasing yields/hectare in comparison to the former often very low yields/hectare.
[147] Foreword of regulation 1493/1999, (7).

of the total quantities removed from the market by the CMO measures[148]. The table also underlines several contradictions between some of the instruments as regards market equilibrium:

Table 34 Estimate of the volume of wine virtually "removed" or "added" to the EU wine supply during 1988/1989 – 2001/2002 (in Mln HL)

Instrument	Quantity of wine "removed" from the market"	Quantity of wine "added" to the market"	Total
Prohibition of planting right	Estimation not possible	Not applicable	
Allocation of new planting rights -estimation of really new vineyards	Not applicable	51000 ha * 50 Hl/ha = 2.55 Mln Hl	+ 2.55 Mln HL/year
Allocation of new planting rights -estimation of legalisation of former illegal planting		8 261 ha (2000) 103 300 ha (2001) 34932 ha (2002) = 146493 ha	Little or none, because the illegally produced wine probably found its way onto the market.
Transfer of planting rights	Estimation not possible, depends on the production potential difference between the vineyard areas and eventually differences between the related regional yield limitations		
Premium for permanent abandonment (PDA)	(500.000 ha) 25 mln HL	Not applicable	- 25 Mln HL / year
Distillation (total wine intervention distillation)	- 231 Mln HL total, - 16 Mln HL / year	Does not add production in the short term, but maintains structural surplus production and capacity in the long term	- 16 Mln HL / year
Private storage aid	Estimation not possible, probably no long-term effect	Estimation not possible, probably no long-term effect	None in the long-term
Support for enrichment by CM and RCM	- 69 Mln HL total, - 5 Mln HL / year (volume of grape must processed to CM and RCM)	+ 16 Mln HL , + 1 Mln HL / year (volume increase due to use of CM and RCM)	- 4 Mln HL / year
Restructuring and conversion	Estimation not possible	Estimation not possible, eventually slightly increase in productivity due to use of vines of better phytosanitary standard	

Source: based on data given EC DG AGRI.

- The new planting rights have led to an increase in the vineyard area in recent years (+51.000 hectares since 1996). This will add around 2.55 Mln HL to annual production.

[148] If one third of estimated PDA effect is discounted, to integrate eventually deadweight effects or lower yields/ha of the removed vineyards, there remains still an impact of 16,5 Mln HL removed per year respective 45% of 36,5 Mln HL per year in total.

- Regularisation of illegal plantings since the year 2000 has increased the measured vineyard area by some 145.000 ha. This implies a substantial additional volume of production but, in reality, it may be assumed that most of the output from the illegal plantings was already finding its way onto the market.

The effectiveness of the CMO on global market equilibrium through lowering the surpluses in the late 1980s and early 1990s has been weakened subsequently by the introduction of new planting rights.

11.2.2. Impact of the CMO on market prices

As set out in chapter 2, there is no single wine market, nor any single representative price for wine. The market prices for the high quality wines psr, are very different from those of low-quality table wine, but in between these two extremes there is a wide range of overlapping sub-markets, with various but not always obvious substitution relationships. This is the case in the EU and other markets as well as on the world wine market as a whole.

The CMO instruments' influence on wine prices is focused on producer prices and is aimed at assuring wine producers of "fair" incomes. Naturally, consumer prices are related with these prices, but they include additionally trade margins and national taxes.

Structural CMO instruments

Structural instruments such as the planting rights measures and the restructuring and conversion subsidies aim at stabilising the market and encouraging growers to respond to the changing demands of consumers over the longer term. Any impact of the planting rights restrictions of the wine prices only emerge over the long run and cannot be quantified with any degree of certainty. Subsidies for restructuring and conversion are aimed at helping producers to adapt to the changing demands of consumers. Increased competitiveness resulting from the measure should reduce or eliminate the gap between regions that have modernised their wine sector already and those that have not. This could intensify price competition within the medium quality segment of the wine market in the future.

CMO impact on wine prices through stabilisation of the market

The CMO mainly supports the bottom end of the market, providing intervention for wine of the lowest quality and prices. In effect the CMO, in particular the subsidised distillation into potable and industrial use alcohol, puts a price floor into the wine market and thereby may prevent the collapse of market prices that the surpluses can create, especially in years of high production. The interrelated nature of the market means that the floor price in turn has the effect of firming prices throughout the market. However, often the wine quantities distilled do not cover the whole surplus quantity and then market prices may not be fully stabilised. Hence, the attempt to fulfil the aim of income stabilisation through this indirect support of producer prices has not been very effective.

Aid for private storage is also explicitly aimed at stabilising the bottom end of the market and thus having an impact on the price level in the short-run. Private storage aids are seen as operating to smooth out marketing from one year to another and thereby reduce price volatility.

CMO impact on wine prices through an increase of the wine quality

CMO instruments that favour the production of quality wine have an indirect impact on prices as higher quality is usually reflected in higher wine prices. The classification of European wine into quality wine psr and table wine contributes to product differentiation and hence can have an impact on wine prices. One of the major changes on the supply side of the market has been the shift from table-wine production to quality wine psr on which the premium for permanent abandonment has had some noticeable impact. However, parts of the quality wine psr market seem to be reaching the limits of demand and the country wine regimes offer an alternative way of satisfying consumer demand for quality wines.

It has not been possible to discern quantitatively the price effects of many of the CMO measures. Nevertheless, we can conclude that the CMO by removing some of the excess production from the market, through the distillation regulations have tended to firm up the price level in high-yielding years. On the other hand, the failure to remove the structural surpluses may have had the effect of weakening the market prices over the long run.

11.2.3. Other aspects of CMO impact

Impact of the CMO on satisfaction of consumer demand

EU wine production has reacted somewhat slowly to the changes in consumers' demand. Higher incomes and changing life styles have led consumers to change their wine drinking habits by reducing the quantity but raising the quality of the wine they drink. The wine market has become globalized and, in contrast to many EU producers, "new world" producers have been more adept at marketing their wines and responding to consumer requirements. The EU's complex variety of oenological processes, practices and regulations have the effect of preserving traditional wine production in many EU regions, but they do not always coincide with what the modern consumer sees as the distinction between quality and table wines. They contrast with wine-making practices from European grape varieties in the "new world".

A major aim of the CMO regulations has been to assure consumers that EU wines are produced to certain minimum quality standards. Most of CMO regulations referring directly to quality aspects have no impact on the EU budget - for example the rules for oenological practices require no direct EU expenditure but impose costs on Member States that have to ensure their producers' compliance. The measures appear to be efficient in that ensuring appropriate quality standards protects both the consumer and the honest producer from rogue producers. However, subsidising the distillation of by-products is a very expensive means of assuring minimum standards of wine quality.

Given that the EU wine sector had been subject to over regulation in the past which may have hindered the industry's response to changing consumer demands, the restructuring and conversion measure looks to be an effective instrument for encouraging producers to adapt to market requirements. Thus far, all the major wine-growing Member States have shown a switch to higher quality varieties being planted under the scheme.

Impact of the CMO on internal and external competitiveness of EU wine production

We think that the planting rights system not only adds rigidity to the system but also increases the costs of efficient producers who seek to expand by obliging them to buy planting rights from out-goers. The EU's ban on new plantings – though very understandable in the context of the need to avoid an open-ended commitment to expenditure on the distillation of unwanted wine – may have slowed down the adaptation of the wine sector to market changes. On the other hand by helping to get rid of vineyards no longer able to meet market requirements, the premium for permanent abandonment can be said to have helped secure adjustment in the sector.

The oenological regulations coupled with labelling rules, whilst effective in protecting traditional wine-making in many EU regions, do prevent "modernising" producers from adopting lower cost production practices open to "new world" producers who themselves are using European grape varieties. By adding to production costs and restricting label information, these CMO measures adversely affect the competitive position of some EU producers. The EU labelling regulations have recently been liberalised though they are yet to be fully introduced into practice, hence judgement cannot yet be made on their impact.

Due to irrigation, which is permitted nearly everywhere in "new world" viticulture, good quality wines, popular in the EU, are produced in those competitor countries at higher yield levels than in the EU. During the period 1988 to –1998, the average yield per hectare was 7 tons in EU and 12 tons in "new world" viticulture[149]. Hence the competitiveness of most Member States' wine producers is being hindered by the yield limitations imposed by their quality wine regimes.

Impact of the CMO on producers' incomes

The analysis of the impact of the CMO on producers' incomes in chapter 10 using FADN data shows that throughout the period under study, specialist winegrowers' average incomes have been sustained at a higher level than incomes in comparable sized businesses in the agricultural sector as a whole and than other specialists such as olive growers and fruit growers. The FADN shows that wine growers incomes have risen in both nominal and real terms over the period, though the improvement in wine producers' incomes has been less, proportionally, than those of olive and fruit growers. This suggests that the CMO measures have been effective in achieving their primary objective of supporting producer income in the sector.

However, the judgement of the experts consulted in the course of the study is that for those growers whose vineyards are in need of restructuring and conversion to the wine varieties now most in demand, the capital investment required cannot be found from within the present business and the future prospects are such that they may not gain an adequate return on that investment. This suggests that past prices whilst covering variable costs have not been sufficient to provide for renewal and new investment. The prognosis is that future prices are also likely to be too low to fully cover investment costs.

[149] ANDERSON & NERNE (2003, p.31)

Contradictions between measures

Several contradictions between CMO measures have already been highlighted in the section on market equilibrium. The main contradictions are related to the management of the production potential. The EU financed the grubbing up of around 500.000 ha between 1988 and 1996. Some 4.4 billion euros were spent on premium for permanent abandonment in order to reduce the wine sector's production potential as replanting rights were bought out. However, since 1996, more than 60.000 ha of new planting rights have been awarded thus adding to the industry's production potential.

The justification given for the Council's decisions was that the premium for permanent abandonment expenditure had been used to rid the industry of unwanted table-wine production and the granting of new planting rights was limited to quality wines for which market demand had been demonstrated. In 1999, provisions were introduced to improve the management of production potential through the use of national or regional reserves. A danger from this move is that it allows Member States to avoid any loss of national replanting rights, thereby maintaining their production potential. In our view there is a clear contradiction between these measures.

Moreover, the fundamental philosophy that the EU should seek to manage the production potential of the wine sector is one that would be challenged by free market economists both because it implies that the EU authorities can judge the market better than market participants can and because it leads to distortions between the protected sector and other sectors of the EU economy. Managing a market in which there is a clear structural surplus of supply, and in which price signals are not allowed to operate efficiently due to an artificial floor price, is inherently difficult unless structural measures are applied consistently.

The Commission's attempts to make the wine sector more responsive to the market are contradicted by the retention of distillation measures which guarantee a certain minimum return for marginal production. The contradiction between the two philosophies is compounded by the willingness to subsidise distillation of potable alcohol on the grounds that supplies a traditional commercial outlet. If the outlet is a commercial one, then the producers who use the distillates as an input for their fortified wines and spirits do not need to be subsidised.

Some unanticipated side effects of the instruments may have also weakened the effectiveness of the CMO. Two major unexpected effects can be seen. First, as indicated in the chapter on planting rights, the rigidity of the management of the planting rights system may have hindered the adaptation of supply to the changes in the market's requirement. This rigidity has weakened the effectiveness of the planting rights measures. Second, we estimate that as much as 15% of the premium for permanent abandonment was used for grubbing-up table-grape or dry-grape vineyards that do not affect wine production. The EU financed the grubbing-up of around 50.000 ha that did not affect the equilibrium of wine production. However, in the longer run, distillation of table-grapes and dry-grapes (under article 36 of regulation 877/1987 and article 28 of regulation 1493/1999) may have been reduced as a consequence of the premium for permanent abandonment incorrectly paid for such vineyards.

Scope and coverage of the CMO

The aim of the CMO is focussed on income stabilisation through influencing market equilibrium by market intervention measures on the one hand and regulation and

support for the development of a competitive European wine sector through regulatory measures and aids for restructuring and conversion on the other hand.

Since ending compulsory distillation, EU administrative control on table wine yields have been abandoned – though crisis distillation can be used to deal with the surpluses arising in years of above-average yields. In interviews, some experts mentioned concerns that this might lead to increasing production hence an increased use of crisis distillation with high buying-in-prices and thus rising expenditures. However, the high volume of table-wine production in 1999 and 2000 was mainly due to extraordinary natural conditions, comparable with 1991 and 1992. In contrast the years 2001 to 2003 saw much lower volumes of production. Over recent years, table wine consumption continued to decrease, exports of table wine remained stable and imports of wines from third countries have increased. Thus the two bumper harvest years of 1999 and 2000 led to extraordinarily high stocks and to the political decision to enhance the buying-in prices of crisis distillation by additional national aids.

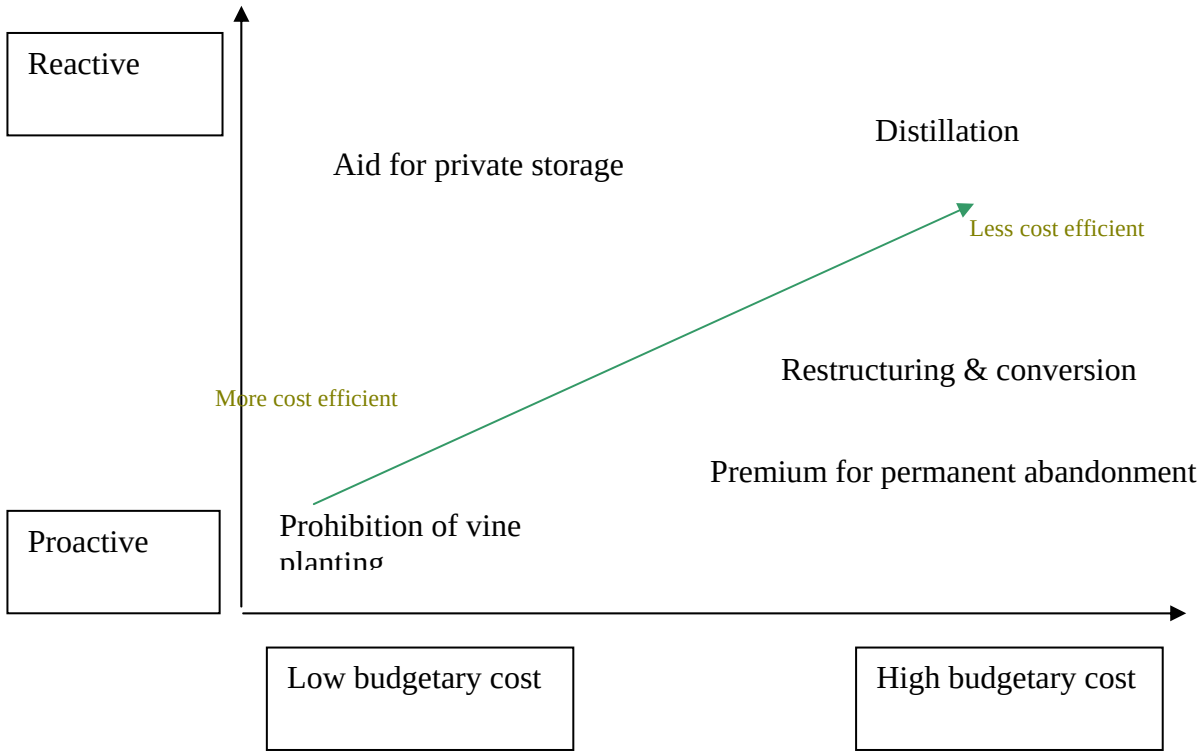
Finally, we would point out that if the Commission wants to manage the EU wine market to improve the competitiveness of the EU wine industry and thus improve wine producers' incomes, the Commission needs up-to-date information on the state of demand as well as supply. In fact, the CMO has neither the instruments, nor the budget required to monitor shifting patterns of demand.

11.2.4. EU expenditures for the CMO measures

This section focuses on the efficiency or cost-effectiveness of the CMO (i.e. the value of the benefits from the CMO measures in relation to their costs).

Between 1988 and 2000 the three most important instruments affecting market equilibrium (distillation, premium for permanent abandonment, private storage) together accounted for more than 80% [150]of the total CMO expenditure which, over that period, amounted to more than 10 billion euros.

Our analysis reveals that the CMO has not eliminated the structural surpluses, but over the years up to 1996 did reduce their size. This was mainly due to the premium for permanent abandonment scheme on which we judge the expenditure of some 4.4 billion euros to have been cost-effective in reducing the structural surplus and thereby reducing the future cost of crisis distillation and/or aid to private storage.



As is indicated in the figure above, some instruments (planting rights, abandonment and restructuring payments) can act as proactive instruments by trying to prevent the formation or continuation of surpluses through influencing producers' behaviour. Other, reactive instruments (distillation and private storage aids) influence equilibrium by trying to stabilise the market once the surplus has arisen. Some instruments have no or low budgetary cost, some instruments have high budgetary cost.

In terms of cost-effectiveness for the elimination of structural surpluses, those measures that reduce the EU's potential production are more efficient in the long run

[150] In average over this period distillations amounted to 54%, premium for definitive abandonment to 22% and aid for private storage to 5% of the total EU budget.

than instruments such as distillation that simply get rid of the surpluses once they have arisen. Comparison of the cost of different CMO measures to tackle structural surpluses (see table 35 below) shows that continuous application of distillation measures is much more expensive than premium for permanent abandonment in the long run.

Table 35 Comparison of cost of different CMO measures for EU to eliminate the wine production in case of structural surplus

CMO measure	Cost per litre	Budget expenditure per hectare and per year of application	Budget expenditure per hectare over a 20 year period
Premium for permanent abandonment (average)		8700 €	8700 €
Distillation of potable alcohol	0,18 €	900 €	18000 €
Distillation of dual purpose grapes	0,16 €	800 €	16000 €
Crisis distillation* of table wine in Spain	0,19 €	970 €	19400 €
Crisis distillation of table wine in other Member States	0,21 €	1050 €	21000 €
Crisis distillation of quality wine psr	0,25 €	1250 €	25000 €
Production of CM	0,14 €	700 €	14000 €
Production of RCM	0,24 €	1200 €	24000 €

*expenditures for crisis distillation are based on examples of implementations during the last three wine years.
Source: Own estimation, based on estimation made in chapter planting rights and estimations of cost per litre based on yields of 50 hl/ha, made in the chapters on distillation and increasing the natural alcoholic strength.

Given the inevitable fluctuations in production beyond the producers' control there may be a case for measures such as crisis distillation and aid for private storage to stabilise the market in years of exceptionally high yields. However, in the case of structural surplus, private storage aid cannot be efficient, as the wine is only removed from the market temporarily and crisis distillation would be extraordinary expensive. Distillation for potable alcohol is also much more expensive than premium for permanent abandonment.

On the other hand, it should be acknowledged that the high expenditures for keeping marginal producers in the industry via the distillation measures for potable alcohol (before the 1999 reform: mainly preventive distillation) support producer incomes. It is a political decision whether the aim of surplus reduction or income support for marginal producers is judged as the more important. However, supporting wine producers' incomes should be achieved through encouraging the development of competitive production structures rather than artificially keeping inefficient and uncompetitive producers in the industry.

The restructuring and conversion measures introduced in 1999 go in this positive direction. It is too early to say whether and to what extend the new measure has been cost-effective as its impact can not be quantified yet. It can only be stated that the measure is in theory more cost-effective than any market intervention measure such as distillation. The cost-effectiveness of the measure should be assessed by reference to the types of vineyard that benefit from the aid. The measure will be cost-effective if it mainly focuses on areas producing wine for which there is no longer demand (lowest price and lowest quality). The cost effectiveness of the measure will be weaker if aid is paid for the conversion of vineyards that would have occurred anyway since this gives rise to a deadweight loss.

11.3. Conclusion and recommendations

11.3.1. Judgement on effectiveness

Overall, we conclude that the wine CMO as implemented between 1988 and 1995 was effective in attaining its objective of reducing structural surpluses, especially in France. However, the CMO could not eliminate structural surpluses completely, as distillation and other price and income stabilising instruments supported continuation of certain marginal production. Therefore the effectiveness of CMO as regards its objective of short-term market equilibrium and price stabilisation was achieved but resulted in a loss of effectiveness in eliminating long-term structural surpluses.

Results of this chapter reveal that several factors indicate that the new CMO might not lead to a reduction in the EU long-term surplus either.
Discussion of the above results should not lead to the conclusion that re-introduction of the most effective measures of the past might be an effective solution for the future. The world wine market has changed and the changes have implications for the EU market. Increasing competition from viticulture outside EU on the EU market and on the EU producers' traditional export markets coupled with the URAA reductions in tariffs and export subsidies means that Community preference can no longer be as effective in supporting producers' income.

11.3.2. Judgement of efficiency

Expenditure on the wine CMO remains overwhelmingly focused on production, seeking to limit supply and artificially increase demand for wine spirits or EU grape based products.. There are no instruments aimed at improving the marketing of EU wines.

Comparison of EU expenditures for CMO measures revealed that measures reducing production potential were more efficient than market intervention measures like distillation to reduce structural surplus. Without market intervention measures the structural surpluses would either have resulted in permanently lower market prices for consumers or forced the less efficient producers to leave the market leading to a more market-orientated industry in the longer run.

However, the CMO could be judged as politically efficient given the aim of supporting producer incomes. The higher wine prices resulting from the CMO cost individual wine consumers relatively little whilst transferring income to marginal producers and perhaps preventing social conflict in table-wine producing regions.

11.3.3. Recommendations

The wine CMO's aims and instruments should be reconsidered critically and partly reformed.

Grape juice, spirits and ethanol for industrial uses are possible other outlets based on grape must production. The analysis in chapter 2.3 demonstrates that grape juice is only a small part of total juice consumption and no great increase can be expected because of the high sweetness and prices of grape juice. A promotion to enhance demand for spirits would conflict with concerns about the health risks of beverages with high alcohol contents. Bio-ethanol for industrial uses (see chapter 2.3) may be produced more cheaply using other agricultural plants. Therefore the surplus wine

production should be eliminated by means of adapting European wine supply itself towards the changing world wine demand rather than by subsidising wine products as inputs for other products.

We conclude that the CMO should try to avoid expensive intervention measures (distillation) for structural surplus quantities, rather the CMO should seek new instruments to help bring wine supply into line with wine demand (both in qualitative and in quantitative terms)[151].
It is questionable whether the Commission (or any other body) should attempt to manage the wine market – it certainly lacks effective instruments to aid rapid adjustment to changes within and outside the EU market.

The use of what are in effect guaranteed minimum buying-in prices for wine leads to wrong market signals, which support the continuation of structural surpluses and thus the continuing need for EU expenditure to deal with those surpluses. Aids for income support should be decoupled from output prices and should be made degressive in order to avoid sending misleading signals to actual and potential producers.

It has been pointed out that "new world" viticulture, which applies different national rules of production from those in the EU, has had an important impact on the development of the EU wine market as well as affecting EU wine exports. The dynamic "new world" wine exporters will probably continue to take advantage of the restrictions imposed on EU wine producers. Our interviews with wine experts revealed that many within the wine sector are aware that the EU wine sector's (and the CMO's) supply-oriented approach does not give enough attention to the changes in consumers' preferences that have been apparent in recent years.

The need to adopt a more consumer-oriented approach to production and marketing of EU wines is acknowledged and many within the industry want changes, but they have need in order to adapt to the changing market they need more detailed, more reliable and more timely market information. Hence, a new task for the CMO will be to assist the wine sector by part-funding the development of better market intelligence through the collection and rapid dissemination of information on developments on both the demand and supply sides of the wine market. This should help market transparency for both large and small producers and their customers.

In the absence of a widely accepted economic model of the wine market, no estimate could be made in this study of the precise level of the costs imposed upon EU consumers by either the individual CMO instruments or the overall regime.

[151] Examples for possible alternative measures are given in the single measures chapters, e.g. green harvest instead of crisis distillation (see chapter 5.3)

12. Conclusions and recommendations

According to the terms of reference, an answer to eight evaluation questions has been provided. The evaluation considered the individual impact of six CMO measures (limitation of planting rights, distillation, aid for private storage, regulatory measures, measures concerning trade and restructuring and conversion measures) plus their overall impact and the influence of the CMO on producers' incomes and the production structure. For each question, we have tried to isolate the impact of the measure on several factors (market equilibrium, prices, production cost, adaptation to market requirement etc.). In total, the study requested the examination of more than 25 evaluation questions. Main findings are summarised below:

- Planting rights measures helped to curb the growth of surpluses but were not sufficient to eliminate the structural surpluses. No direct impact on market prices could be identified.
- Wine distillation measures were effective in reducing wine quantity in the short-term and had a significant effect in reducing table wine stock levels. The buying-in prices for distillation measures work partly like floor prices in the markets and the measures can be considered effective in supporting market prices and producers' income in some regions in the medium-term. The by-product distillation measure has little, if any, impact on the quantity of wine and no impact on wine prices can be shown.
- Aid for private storage has a positive short-term impact on market equilibrium as the instrument encourages increased storage in years of abundant production. Moreover, at regional level, the instrument also can help to temporarily stabilise market prices.
- The possibility of increasing the natural alcoholic strength by enrichment does not influence production quantity, but it helps to adapt the wine quality to the alcoholic strength demanded by consumers. Aid for the use of CM or RCM instead of sucrose for enrichment opens an additional outlet for grape must and hence reduce wine quantity.
- Quality wine psr regime initiated in the past an important quality differentiation of the wine market and well recognised quality-wine psr labelling worked like trade marks. Nowadays producer trademarks are established besides the quality-wine psr regime more and more and the traditional quality ranking system is no longer universally recognised and trusted by consumers.
- The measure of restructuring and conversion encouraged vine-growers to adapt their vineyard areas to market requirements. No direct impact on market prices could be identified.

Overall, the CMO as operated between 1988 and 1995, with compulsory distillation and the premium for permanent abandonment was effective in attaining its objectives of reducing structural surplus. The instruments aimed at achieving short-term market equilibrium and price stabilisation, helped in the short-term but at the cost of some loss in the CMO's effectiveness in eliminating long-term structural surpluses. The new CMO might not lead to a reduction of the EU long-term structural surplus.

The main limits of the results are linked to the lack of data availability. The available data are describing the supply side, mainly with more or less global figures. These data are not available per market segment not even according to the EU classification of wine (table wine and quality wine psr). For example, figures on vine area (planted or

under production), average wine prices or wine consumption differentiating between table wine and quality wine psr are not available. This hindered the possibility to make a separated analysis for table wine and quality wine psr. As most of CMO instruments have an impact on the bottom end of the table wine market this separated analysis would have been very helpful.

In addition, major data reliability constraints implied that significant time was spent on screening, double-checking, correcting and searching for data. Moreover, the unreliability of available data hindered the possibility to carry out quantitative analysis.

From the data that has been provided, it appears that the European Commission does not have a complete record of the developments within EU-15 since 1998. A significant problem is that, whilst Member States are obliged to collect and submit to the European Commission a wide range of information relevant to policy issues, a number of Member States have been rather dilatory and inconsistent in supplying this data.

The data collection process was further burdened by the lack of an appropriately organised reporting process at the national level. In fact, some national statistical agencies do not seem to have a complete overview of data available in their country. Some Member States still use monitoring and calculation methods that are not EU harmonised and create problems for comparability.

The data problems are significant and what is needed is renewed co-operation on CMO data monitoring and reporting between existing Member States and the Commission. The expansion of the EU requires the new Member States to participate in the CMO. Effective participation will depend upon building national data collection capabilities and will require the provision of technical assistance to the relevant institutions in data handling and monitoring. It is clear that greater efforts should be made by some Member States to adopt a common database, founded on the EU criteria and terminology.

Other constraints identified in the evaluation exercise are:

- The high number of evaluation questions (more than 25 in total) to be carried out 9 months. A selection and assessment of a limited number of the major topics/questions would have allowed more up-to-dated and focused outcomes of the study.
- The period covered by the study implied to study the impact of two different CMOs (822/1987 and 1493/1999) while the major change of the CMO took place in 1995.
- The request was to evaluate the impact of individual instruments before to provide a judgement of the overall impact of the CMO. In the absence of a model of the EU wine market, it is almost impossible to isolate policy effects of a single instrument from those of other instruments or drivers such as demand development, structural changes or technical progress. It would have been useful to provide a judgement on the overall impact of the CMO before to carry out a more detailed analysis for the individual instruments.

12.1. Final remarks

THE EUROPEAN WINE INDUSTRY SHOULD BE ENCOURAGED TO REDUCE THE PRODUCTION SURPLUS AND ADAPT MORE RAPIDLY TO CHANGING WINE DEMAND PATTERNS

In the EU market there is a surplus of wine which is transferred to distillation. The wine production surplus cannot be easily disposed of in alternative outlets and enhancing demand for spirits would conflict with concerns associated with the increased risks of damage to health. On the other hand, bio-ethanol for industrial uses may be produced more cheaply using other agricultural plants. Production must adjust to the changing wine demand but, given the past evolution of the support measures, wine producers may need the market adaptation process to be eased.

CMO INTRODUCED ELEMENTS OF RIGIDITY THAT INDIRECTLY JEOPARDISE THE SCOPE FOR INCREASING THE COMPETITIVENESS OF THE EUROPEAN WINE INDUSTRY AND DID NOT FULLY MEET THE OBJECTIVE OF REDUCING WINE PRODUCTION SURPLUSES.

The effectiveness of the CMO, both before and since the 1999 reforms, in influencing market equilibrium has been weakened by the rigidity of the planting rights system and by distortions created by subsidising distillation that generates an additional, artificial demand. In addition, the impact of the CMO has been weakened by an inappropriate implementation of the measures related to planting rights due to unreliability of data on production potential that was needed to monitor market changes and correct imbalances.

RIGIDITY IN RULES RELATED TO PLANTING RIGHTS HINDERED THE COMPETITIVENESS OF EUROPEAN INDUSTRY WINE PRODUCTION, WHILE THE IMPACT OF THE PREMIUM FOR PERMANENT ABANDONMENT - THOUGH EFFECTIVE- IS CONTRADICTORY…

Given the continuing shift in consumer demand from low quality table wine to quality wines, the measures related to planting rights introduced an element of market rigidity since they: (i) hindered a more rapid adaptation of the European wine sector; (ii) indirectly contributed to maintaining the EU surplus. Agenda 2000 trade liberalisation reforms and the increased pressures from non-EU countries imply that EU producers who could expand their quality wine psr production to meet consumer demand should not be hindered by new planting restrictions. Nor should the market be undermined by the continued presence of excess volumes of low quality table wines that depress the general level of producers' returns. Transfer of planting rights should be encouraged and an efficient management of the production potential should be ensured through the collection of reliable data on the EU's vineyard area. The premium for permanent abandonment proved to be more effective since it reduced the surplus area. Had those vineyards that have been permanently abandoned remained in production, the EU surplus would have been even larger than it is. The disposal of additional surpluses

through distillation would have had a significant effect on the budgetary expenditure on the CMO.

…AND THE ANALYSIS HAS SHOWN THAT DISTILLATION INDIRECTLY ENCOURAGES THE PERPETUATION OF STRUCTURAL SURPLUSES

EU wine distillation measures are an effective means of influencing the volume of wine put onto the market; they act like an additional (artificial) demand and therefore imports are not harmed, but indirectly supported. The impact of CMO distillation measures on prices could be seen at the lower end of the price range, particularly in Spain, France and Italy. In low price markets the revenues from distillation generate a significant income for some producers. This income stabilising effect fulfils some aims of EU agricultural policy, but at the same time encourages the perpetuation of structural surpluses. Moreover, there is an apparent policy conflict between the aim of regional income stabilisation and development and market orientation of the production. The continuous average use of distillation for dual-purpose grapes since 1999/2000 could be an indicator of structural rigidity as it suggests that producers are not responding to changes in consumer demand.

THE CMO SHOULD AVOID EXPENSIVE INTERVENTION FOR STRUCTURAL SURPLUSES AND LAUNCH MORE LIBERAL POLICY INSTRUMENTS TO ENHANCE QUALITY WINE PRODUCTION

Crisis distillation is an effective but expensive method of dealing with periodic surpluses as it then involves the storage/disposal of the resulting alcohol. Distillation is not a cost-effective method of dealing with continuing structural surpluses. Aid for distillation into potable alcohol is particularly controversial since it subsidises part of the EU alcohol market by supplying cheap inputs on the rather dubious grounds that this maintains a traditional outlet for EU wine. There seems to be no good reason for preventing a more market-oriented approach to the supply of inputs to the spirits industry. As the reform of the CMO for wine in 1999 is so recent, only provisional judgement about the effects of the reform is possible but evidence shows that the new crisis distillation is more expensive than former obligatory distillation, although in some cases (e.g. France) it is not effective without additional national aid being provided.

THE RESTRUCTURING AND CONVERSION MEASURE IS ORIENTED TO ENCOURAGE VINE-GROWERS TO ADAPT THEIR VINEYARD AREAS TO MARKET REQUIREMENTS

The measure is improving the quality of the European vineyard area. This should lead to increased quality wine psr production in all Member States (included Germany Austria and Luxembourg despite their different rules). The total wine production could increase in the coming years due to the new yields, but serious doubts exist regarding the market's ability to absorb the future red wine production. Restructuring and conversion effects have a long-term impact but it is likely that these CMO measures will eventually have an important income effect in improving producer returns in the quality wine sector.

CMO'S QUALITY WINE PRODUCTION RULES GENERATE MARKETING CONSTRAINTS RATHER THAN TECHNICAL PROTECTION

The quality wine psr regime in Europe seems to be too restrictive. Large volumes of table wine are produced although they could be considered quality wines psr, because as table wines enjoy fewer restrictions than needed to qualify as quality wines psr. The consumer takes into account when judging quality not only the differentiation by quality (table wine, quality wine) but also other factors that influence his perception of the price-quality ratio, e.g. packaging, origin and price. Trademarks are becoming more successful on the EU market, and are used by EU countries as well as by "new world countries". Various examples (see "Super Tuscans" which are only indicated as table wine or IGT) show that a lower level of restrictions for table wine, initially implemented to ease the production of cheap wines for daily consumption, is nowadays an important factor in providing a framework for innovative developments in the wine sector. Price competition is not the only explanation for the rapid increase of foreign table wine imports. Liberalisation of the EU market enabled imports of table wines (in particular) and sparkling wines from third countries, which were competitive. As a general concluding advice, wine production methods used in third countries should be allowed in the EC provided they are both safe and accepted by consumers. Hence, a new task for the CMO will be to improve the competitiveness of the EU wine sector; investment in marketing, reliable market information, and product development is needed to enable producers to find market outlets for their wines and thereby avoid future structural surpluses.
The FADN results show that between 1989 and 2000 there was a general increase in wine producers' incomes (as measured by FNVA/AWU). This increase was more for quality wine producers than for table wine producers at the EU level, though there is substantial variation between countries. These results suggest that the CMO measures have been effective in achieving their objective of helping to ensure adequate levels of income for wine producers.
CMO measures as a whole had a positive but limited effect on producer income and production structure, with significant regional/geographical/temporal variations in impact. In total, between 1988 and 2000, CMO expenditure was more than 10 billion euros.

TASTE, PACKAGING, IMAGE, STYLE ARE MAJOR FACTORS THAT NEED TO BE ENHANCED TO INCREASE THE COMPETITIVENESS OF EU WINE PRODUCTION

Taste, packaging, image, style are major factors that allowed foreign importers from Chile and Australia to acquire market shares in the EU market. Therefore, more effort should be spent on enhancing the wine product marketing mix other than price: product revitalisation (branding, labelling, quality perception), channel control and communication.

CMO TRADE MEASURES HAD A POSITIVE ROLE IN THE APPLICATION OF THE WINE CMO OVER TIME

Within this positive framework it is recommended the exploration of different opportunities to allocate the resources destined for export refunds. In fact, the pattern

of distribution among Member States of export refunds may simply be the result of different export strategies but could also be due to an application scheme that is unable to preclude discrimination between the operators concerned. In addition, since the URAA (Uruguay Round Agricultural Agreement), the measures available to protect the EU market from serious disruption (additional import duty, prohibition on the use of inward-processing arrangements, appropriate measures to apply safeguard clauses) have never been applied. Considering that: (i) competition in the world wine market is increasing; (ii) the main new world competitors are experiencing problems of over-production and (iii) the risk of severe imbalances in the market is becoming serious, it is recommended a rigorous analysis of the effectiveness of procedures for the prompt application of the measures.

DATA RELIABILITY IS A KEY FACTOR OF SUCCESS FOR POLICY IMPLEMENTATION

Data problems are significant and what is needed is renewed cooperation in CMO data monitoring and reporting between Member States and the Commission. The enlargement of the EU requires the new Member States to participate in the CMO. Effective participation will depend upon building national data collection capabilities and will require the provision of technical assistance to the relevant institutions. It is clear that greater efforts should be made by some Member States to adopt a common database, founded on the same criteria and terminology. If successful policy interventions are to be made, more reliable information on wine supply and demand is needed. Many wine sector participants recognise the need to adopt a more consumer-oriented approach to production and marketing of EU wines, but to adapt to the changing market they need more detailed, more reliable and more timely market information. Hence, a new task for the CMO should be to assist the wine sector by part-funding the development of better market intelligence through the collection and rapid dissemination of information on developments on both the demand and supply sides of the wine market. This should help market transparency for both large and small producers and their customers. It is therefore necessary to:

a) Ensure an appropriate level of investment in basic monitoring infrastructure: a higher level of investment will be required at the national level in data collection, market evolution monitoring and processing capacities.

b) Establish mechanisms for the provision of CMO information by Member States.

Coherent monitoring, collection, assessment and dissemination systems for providing data and information are required. Substantial efforts are needed to develop a proper network and to improve the capacity of the various national institutes in their task of providing information.

A CMO POLICY FORMULATION EXPERT GROUP SHOULD BE ESTABLISHED

An Expert Group should be established to assist the process of change by:

- exploring improvements in the production and marketing of EU wines to ensure better market balance over the long term;
- examining improvements in the intervention mechanisms;
- formulating a long-term strategy (comparable to Strategy 2025 in Australia, "Vision 2020 in South Africa" and "Wine Vision" in the USA);

- re-classifying wine categories whose differentiation is no longer adapted to market demand.

References

ABTEILUNG IX/E-5, 1988: Der Wein in der Europäischen Gemeinschaft. Zweite Ausgabe. Amt für amtliche Veröffentlichungen der Europäischen Gemeinschaften, Luxemburg. English version: *Wine in the European Community*, ISBN 92-825-7666-3.

AMANN, R. (2001): Einfluss der Mostkonzentrierung auf die Aromastoffe von Most und Wein. Deutsches Weinbaujahrbuch 2001, p.209-218. Waldkircher Verlag, Waldkirch.

ANDERSON, K. (ed) (2004) The World's Wine Markets: Globalization at Work, Elgar, Cheltenham.

ANDERSON, K. & NERNE, D. (2003): Global wine production, consumption and trade. Center for international economic studies, Adelaide.

BLANKENHORN, D. (2001): Entwicklung einer Methode zur sensorischen Qualitätsbeschreibung von Wein durch Verbraucher – zur Marktsegmentierung auf Basis gemessener Geschmackspräferenzen. Geisenheimer Berichte, Band 47, Geisenheim.

BÖCKER, A., HERRMANN, R., GAST, M. & SEIDEMANN, J. (2004): Qualität von Nahrungsmitteln. Grundkonzepte, Kriterien, Handlungsmöglichkeiten. Peter Lang, Europäischer Verlag der Wissenschaften, Frankfurt.

CLARKE, O. (1995): Knaurs grosser Weinatlas. Droemer Knaur, München.

DALRUMPLE, H. (2004): The wholesaler example. 1.World Wine and Spirit Plenum, in: Wein+Markt extra, Verlag FRAUND, Mainz, p.16-18.

DEHOOGH, J., KLEIN ESSINK, G. & DUPUY, P. (1991): The enrichment of wine in the European Community. Commission of the European Community, Office for Official Publications of the European Community, Luxembourg.

DIEL, B. (1996): Alternative Verfahren der Mostanreicherung. Deutsches Weinbaujahrbuch 1996, p.169-176. Waldkircher Verlag, Waldkirch.

DWV (1998): Zahlen, Daten, Fakten 98. Beilage von Der Deutsche Weinbau 10/98. Meininger Verlag, Neustadt.

EUROPEAN COMMISSION, 17.6.1998: Proposition de REGLEMENT (CE) DU CONSEIL portant l'organisation du marché vitivinicole. COM (1998) 370 final 98/0126 (CNS).

EUROSTAT (1999): Agriculture: Statistical Yearbook .

GATTI, S., GIRAUD-HERAUD, E., MILI, S. (eds) (2003): Wine in the old world, new risks and opportunities. Franco Angeli, Milano (Italy)

GFK: Haushaltspanel 2003 und vorangegangene Jahrgänge.

GATTI, S., GIRAUD-HERAUD, E, MILI, S. (Eds) (2003): Wine in the old world, new risks and opportunities. Franco Angeli, Milano (Italy), p.143-156.

HEIJBROEK, A. (2004): The key drivers that determine the outlook for the industry. 1.World Wine and Spirit Plenum, in: Wein+Markt extra, Verlag FRAUND, Mainz, p.6-7.

ISMEA: Filiera vino, September 2002, Roma (Italy)

KREBS, H. (2000): Versuche zur Qualitätssteigerung durch teilweise Konzentrierung von Traubenmost. Deutsches Weinbaujahrbuch 2000, p.197-204. Waldkircher Verlag, Waldkirch.

MONTAIGNE, E. (2000): L'OCM vin: l'autopsie d'une réforme. In BYÈ, Pascal (eds.)(2000): Domestiquer le vegetal, p.173-201. INRA Montpellier / CTESI.

NOP (2000): Der Weinmarkt in England – eine Situations- und Konsumentenanalyse. Studie für das Deutsche Weininstitut, Mainz.

OIV (2002): The state of vitiviniculture in the world and statistical information in 1999. Supplement of "Bulletin de l'OIV", Paris.

OIV (2004): The state of vitiviniculture in the world and statistical information in 2001. Supplement of "Bulletin de l'OIV", Paris.

ONIVINS (2003): onivins stats 2003, www.onivins.fr.

RABOBANK (1999):

- The world wine business. Rabobank International, Utrecht.

- Wine is business - shifting demand and distribution: major drivers reshaping the wine industry - Rabobank International- Food & Agribusiness Research, Utrecht.

SCOPPOLA M., ZEZZA, A. (1997): La riforma dell'Organizzazione Comune di Mercato e la vitivinicoultura Italiana. Studi e Ricerche INEA.

SCHOBINGER, U. (Edt.)(2001): Frucht- und Gemüsesäfte, 3.release. Verlag Eugen Ulmer, Stuttgart.

SEIDEMANN, J. (2000): Marktanalyse zum Einfluß der Qualität auf Preise und Absatzmengen im Flaschenweinmarkt in Deutschland. Geisenheimer Berichte, Bd.43, Geisenheim.

TROOST, G. (1988): Technologie des Weines. 6. revised release, Ulmer, Stuttgart.

WORLD DRINK TRENDS (2003): containing data to 2001. Commission for distilled Spirits, Oxfordshire, UK.

WÖHLKEN, E. (1984): Einführung in die landwirtschaftliche Marktlehre. Verlag Eugen Ulmer, Stuttgart.

ZIEGLER, B. (2004): Humusdünger gehören auf den Prüfstand. Der Deutsche Weinbau, Nr.1/09.01.2004, p.32-37.

Other sources used:

"*The WTO Agreements' Series: 3. Agriculture*", © World Trade Organization, 2000, ISBN 92-870-1171-0

Study on the Competition between alcoholic drinks, February 2001, DG Taxation & Customs Union/C/5. (2)

"Foreign Trade and Seafood Prices: Implications for the CFP DG XIV, FAIR project contract n° CT 95-0892, July 1998

Glossary

AWU: Annual Work Unit
CAP: Common Agricultural Policy
CM: Concentrated grape must
CMO: common market organisation
CMO/T3C: CMO measures on trade with third countries (import duties, export refunds, bilateral agreements)
CCT: Common Customs Tariff
CN: Combined Nomenclature
D.: Decision (when referring to EU legislation)
DO: Denomination of Origin
EAGGF: European Agricultural Guidance and Guarantee Fund
EC: European Commission
EU: European Union
FADN: Farm Accountancy Data Network
FNVA: Farm Net Value Added
GATT: General Agreement on Tariffs and Trade
GI: Geographical Indication
GSP: Generalised System of Preferences
IA: Intervention Agency
IGT: *Indicazione Geografica Tipica*
mio: million
NWWG: New World Wine Group (Argentina, Australia, Chile, New Zealand, South Africa, USA)
OIV: *Office International de la Vigne et du Vin*
ONIVINS: *Office National Interprofessionnel des Vins*
PDA: Premium for Definitive Abandonment
QWPSR: quality wine produced in specified regions
R.: Regulation (when referring to EU legislation)
RCM: Rectified Concentrated grape Must
SSP: Special Safeguard Provisions
TARIC: *Tarif Intégré de la Communauté"*
TRIPS : Trade-Related Aspects of Intellectual Property Rights
URAA: Uruguay Round Agricultural Agreement
WTO: World Trade Organisation
WWE: World Wine Exporters (Italy, France, Spain, Portugal)

Innova SpA
Via della Scrofa, 117
00186 Roma – Italy
Tel: +39 06 68803253
Fax: +39 06 68806997
www.innova-eu.net