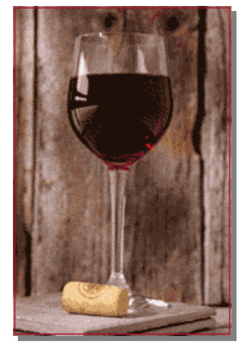
The Macedonian Wine Cluster

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1.1. Political situation

Macedonia was proclaimed a sovereign and independent state on September 17, 1991 after a national referendum. Its history has been characterised by a centuries-long struggle of the Macedonian people for a free and independent state, symbolized by the state's motto "liberty or death". After having been part of the Roman and Byzantine Empires Macedonia was conquered by the Ottoman Empire in the 14th century. Following the two Balkan Wars and the dissolution of the Ottoman Empire Macedonia was partitioned in 1912 into three parts ruled by Bulgaria, Serbia and Greece respectively. The establishment of the Republic of Macedonia was proclaimed on August 2, 1944 when representatives from the different parts of Macedonia agreed on a constitution.

After the Second World War the government of the People's Republic of Yugoslavia established the People's Republic of Macedonia (renamed as Socialist Republic of Macedonia in 1963) as one of the six republics of the Yugoslav federation. In 1991 Macedonia peacefully seceded from Yugoslavia and named itself Republic of Macedonia. The name is still disputed by Greece because it also refers to the Greek region of Macedonia. The ongoing dispute between the governments of Macedonia and Greece over the country's name led to a Greek trade embargo on Macedonia in 1994 and 1995 and the agreement on a provisional name – Former Yugoslav Republic of Macedonia – by the United Nations (UN) when Macedonia became a member in 1993.

Macedonia has a population of about 2 million people of which the majority (64%) are Macedonians. Albanians represent the largest minority (25%), followed by Turks (4%), Roma (3%) and others (4%). Macedonia is a parliamentary democracy with a Prime Minister heading the executive branch and 120 members of parliament who are elected for 4 year terms. The Macedonian President exerts only limited powers and is elected in a popular vote for 5 years. The Macedonian constitution grants broad and equal democratic rights to all its citizens. In addition, members of national or ethnic minorities have been granted special rights.

Although Macedonia remained at peace during the wars in the former Yugoslavia in the 1990s, it was indirectly affected by the instability in the region and the imposition of sanctions on Serbia and Montenegro. The Kosovo war in 1999 and the armed conflict between the Macedonian government and ethnic Albanian insurgents in 2001 led to tensions between the two major ethnic groups in the country increasing the risk of instability. In addition, the still unresolved status of Kosovo is an enduring source of potential conflict.

In December 2005 the EU Council of Ministers formally granted Macedonia candidate status for membership to the EU. No timetable for the start of the negotiations has been adopted, but nevertheless this decision gave a boost to Macedonia's coalition government. In a recent poll 96% of the Macedonian population supported the EU accession (USAID/Macedonia, 2006). The prospect of joining the EU not only gives Macedonia access to financial resources and external advice needed for modernizing the country but also works as a credible commitment for the government to pursue internal reforms.

1.2. Economic analysis

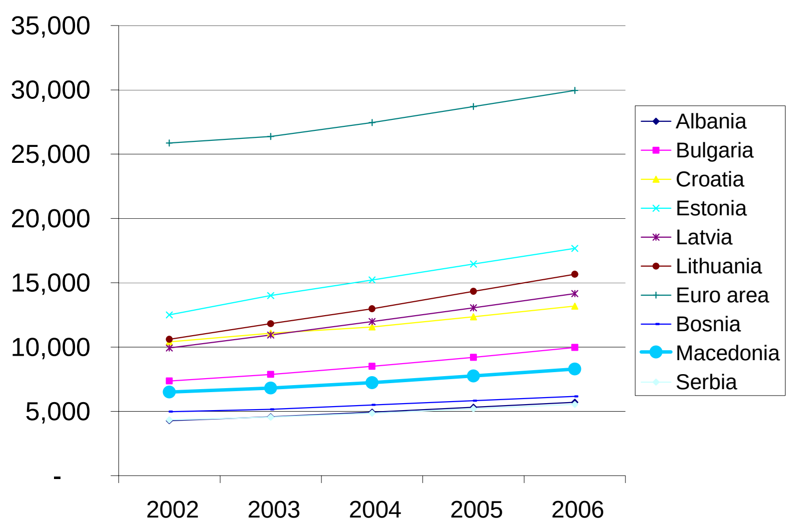
The Macedonian transition process to a market-economy has been very long and slow. GDP has dropped by 30% from 1990 levels and it took until 1996 for Macedonia to record positive real annual GDP growth. During the last ten years, the average GDP-growth rate has been only 1.5%[1]. The unemployment rate of 39.3% in 2004 is one of the highest in Europe (EU-Commission, DG Enlargement). The percentage of the population living below the poverty line ($75/month) has dropped from 30.2% in 2003 to 29.6% in 2004 (US Embassy Skopje, 2006).

The economy is largely service-oriented with the service sector accounting for around 60% of GDP, industry and construction for almost 30% and agriculture for 10% (EIU, 2005; EU-Commission, DG Enlargement).

[1] It should be noted that the official GDP data give only a rough picture of the Macedonian economy because large parts (estimations range from 15% to 42%) of GDP are produced in the grey economy.

Macedonia's overall macroeconomic performance today is stable due to tight fiscal and monetary policies during the 1990s. The consolidated government account was balanced in 2004 and public debt is less than 50% of GDP (EUI, 2005). In 1995 the Macedonian central bank anchored the domestic exchange rate to the Deutschmark. This shift in monetary policy led to a fall of the inflation rate from 121.8% in 1994 to 3% in 1996. In 2005 inflation rate was 1.5% (EIU, 2005; National Bank of the Republic of Macedonia). After the economy had gained momentum in the late 1990s, the 2001 conflict led to a real GDP decline of 4.5% in that year. Since then, GDP growth is back on track with 3.6% in 2005 and an estimated 4% in 2006. GDP per capita was around $7,000 at PPP in 2004 which was more than in Serbia and Montenegro but less than in Bulgaria (EIU, 2005; EIU, 2005a, IMF).

GDP per capita at PPP, 2002-2006



Source: IMF, World Economic Outlook Database

In spite of the stable macroeconomic performance there are still some areas of concern:

- The large and growing balance of trade deficit amounted to 21% of GDP in 2004. The trade deficit is financed to a large extent by remittances (12% of GDP) whereas FDI only accounted for around 2% of GDP in recent years (EU-Commission, DG Enlargement; EIU, 2005).

- The relatively high current real interest rate of 10.5% is an impediment to investment. (National Bank of the Republic of Macedonia)
- Although net wages have been growing only slowly, the wedge between gross and net wages due to taxes as well as pension, health and safety contributions has increased recently. Moreover there are some concerns that wages are already too high given Macedonian productivity levels. Wage growth is thought to threaten Macedonian competitiveness (EIU, 2005).

Economic Indicators, 2004*

	Macedonia	Serbia and Montenegro	Bulgaria	Croatia	Greece	EU-25
GDP (current prices, bn US $)	4.7	24.0	23.8	34.3	205.5	12,865.6
GDP/capita (PPP), US $	7,237	4,857	8,500	11,568	20,362	27,459[+]
GDP (annual % change, constant prices)	2.4	7.2	5.6	3.8	4.2	2.5
Current account balance (% of GDP)	-8.2	-13.1	-7.5	-4.8	-3.9	0.1
Net FDI inflows (BoP, current bn US $)**	0.0946	n/a	1.42	2.0	716.9	n/a

* IMF, World Economic Outlook Database
** 2003 data, World Bank, World Development Indicators
[+] Euro-area

Macedonia joined the WTO in 2003 and is largely open to trade with the sum of exports and imports of goods and services equalling 94% of GDP in 2003 (EU-Commission, DG Enlargement). The country has negotiated free trade agreements with Croatia, Serbia and Montenegro, Bulgaria, Turkey, Ukraine, Albania, Bosnia and Herzegovina, Romania and EFTA. Serbia and Montenegro and Germany are Macedonia's most important trading partners with export shares of around 20% each in 2003. Because of its trade-dependent economy, the country was heavily affected by the imposition of trade sanctions on Serbia and Montenegro and the Greek trade embargo. Macedonia's top five clusters in terms of export value are Apparel, Metal Mining and Manufacturing, Agricultural Products, Transportation and Logistics, and Tobacco. These five clusters, which account for $980 million, form 60% of Macedonia's total exports. (International Cluster Competitiveness Project).

Since independence, Macedonia's economic policy has been focused on the transition from a centrally planned to a market economy. The transition process has been financed in large part by international debt. In 2004 the total external debt amounted to 37.9% of GDP (National Bank of the Republic of Macedonia, 2006). Macedonia has almost completed the privatization of small and medium-sized enterprises. The privatization of larger state-owned companies has been slow and is still under way. 1,688 state-owned enterprises have been privatized to date (EIU, 2005). The banking sector has been transformed as part of a wider financial sector reform and is fully privatized now, but is still relatively underdeveloped and inefficient. Although the Macedonian central bank set a low capital requirement for the creation of private banks in order to boost competition in the sector, the market is relatively concentrated with the largest three banks controlling about 65% of all individual savings deposits (EIU, 2005).

Unlike many other transition countries, Macedonia has failed to attract significant levels of FDI to modernize its economy and increase its growth potential (see table above). Given the political instability in the region and its small market size, Macedonia was and still is relatively unattractive as a location for foreign direct investment. In addition, investment opportunities in formerly collectively-owned enterprises have almost been absent as many of them have been sold to management and/or employees.

In order to complete the transition process, the focus of economic policy has shifted to structural reforms more recently. A new €59 million IMF-stand-by agreement as well as a new World Bank loan have been approved, both requiring Macedonian authorities to implement structural reforms of the labor market, the health care sector and the judiciary as well as to improve the functioning of the public administration. In June 2005, the Macedonian parliament approved a new law introducing more labor market flexibility, easing conditions for hiring and firing employees. It also curtails relatively generous severance pays, holidays and paid sick leave. Further steps to increase labor market flexibility are planned by the government. In order to address problems in the systems of social security the government made second-pillar pension insurance funds mandatory for all workers who entered employment after January 1, 2003 and enacted a new pension law in September 2005.

The greatest challenge for the Macedonian economy is to end the vicious cycle of low growth, productivity and investment. With the introduction of structural reforms the Macedonian government has begun to work on one of the key factors in this process. Another major field where sustained government activity will be needed in the short and medium term is the improvement of the general business environment.

2. National Diamond Analysis

Since the country's inclusion in the Global Competitiveness Report in 2003, its rank in the Business Competitiveness Index (BCI) has gone from 82nd to 83rd[2]. Despite the last decade of a stable macroeconomic environment, Macedonia has failed to improve the business environment. This can predominantly be attributed to the fact that Macedonia was not successful in carrying out the necessary microeconomic reforms which had a direct impact on the overall business environment and thus on the country's competitiveness. Consequently, the country still has an inefficient judiciary, underdeveloped financial and capital markets, an inflexible labor regime, a growing trade deficit, high levels of corruption, and thus faces low levels of foreign investment.

Most of the country's industries produce low value primary production. Some of the clusters exporting higher value-added products add only marginal value in the process. For example, the metal industry is the major exporter of Macedonia's economy however even these exports are dependent on high value imports. .

Another major problem in the economy is the overall inefficiency of firms resulting from a lack of restructuring, failure to improve corporate governance following privatization and low intensity of competition. The problem is compounded by the Government which is interventionist and not conducive to competition.

[2] Between 2004 and 2005 the number of countries ranked in the GCR increased from 98 to 116.

2.1. Factor Conditions

Macedonia's BCI rankings concerning the quality of public schools (50th) and management schools (69th) are higher than its overall BCI ranking. This shows that Macedonia has good potential for improving its growth performance as human capital is a key factor for the development of the country. Macedonia's rank in overall infrastructure (80th) is mediocre, but the quality of the country's highways, for example, is better and is comparable to the other countries in the region. (EBRD, 2005). This is important as Macedonia is a landlocked country and therefore depends on land transportation. Macedonia's climate and the rich history of agriculture represent a strong foundation for development of a modern agricultural cluster.

Macedonia's financial markets remain an important challenge. The financial market sophistication, however, (89th) is another key impediment to business development. The government pension funds have massive unfunded liabilities and are thus not a source of investment capital. On the positive side, venture capital availability (47th) ranks relatively high. Recent reforms in the pension laws have also opened the door for private pension funds which are now beginning to be operational. In the near future they will start to become an increasingly important source of investment capital.

Macedonia's legal framework is a key disadvantage. The country's "Efficiency of legal framework" and "Judicial independence" were both ranked 99th in 2005. Furthermore, Macedonia is ranked as one of the most corrupt countries in Europe by Transparency International. Reform efforts taken by the Government do not seem to have paid dividends up to now and these two areas must be tackled with more vigor.

2.2. Context for Firm Strategy and Rivalry

The context for firm strategy and rivalry is probably the weakest link in the chain of Macedonia's national diamond. Intensity of local competition (fell from 89th to 101st) combined with favoritism in decisions of government officials (73rd) and effectiveness of anti-trust policy (92nd) expose major structural flaws in the business environment. Domestic rivalry is one of the most important pressure sources that lead companies to innovate and improve their value chains (Porter, 1998). This helps to explain why the country has not been successful in attracting greater amounts of foreign investment. Recent amendments to the labor law that eases hiring and firing employees and the new agency for FDI promotion are steps in the right direction toward accelerating competition. In this context, additional measures will need to be introduced to increase intellectual property protection (94th). In recent years, the country has also suffered a net outflow of highly skilled people who have moved to work abroad, thus robbing firms of some of their best talent.

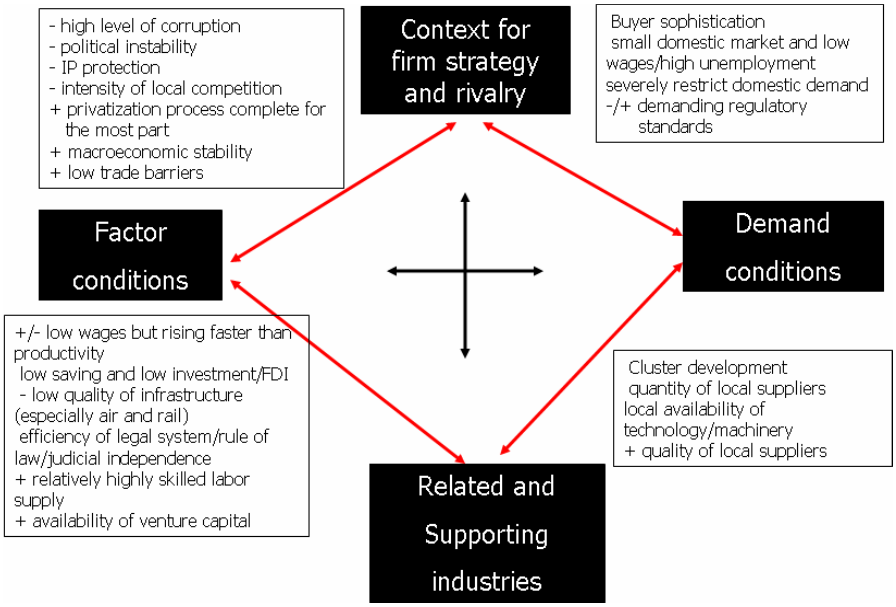
2.3. Demand Conditions

The small size of the domestic market, the high unemployment and poverty rates, as well as low wage levels restrict the depth of domestic demand and hinder formation of sophisticated niche markets. The low sophistication of buyers (88th) represents another major disadvantage. Regulatory standards (87th) have not been very effective, but the process of adoption of the EU regulatory framework will bring improvements in this regard.

2.4. Related and Supporting Industries

The state of related and supporting industries is mixed. On the positive side, the quality of local suppliers (76th) is ranked better than the country's overall ranking. However, the market size limits the quantity of local suppliers (83rd). In addition, given the size of the country, the local availability of technology and machinery is another factor hindering the country's competitiveness. Since few Macedonian industries compete on the international market, the potential for innovation is limited. However the small geographical size of the country combined with the good road infrastructure provide the conditions for expedient supply chain activities, which is a competitive advantage for the country.

Macedonia's National Diamond



3.0 Country Strategy and Recommendations

Macedonia needs strong economic growth to reduce unemployment and poverty. The inability and failure to implement microeconomic reforms across many sectors of the economy is one of the primary causes for the lack of progress in this regard. A concerted effort to implement microeconomic reforms is now imperative and should form the core of the country's economic strategy. Macedonia faces multiple challenges to upgrade its national diamond and to improve its competitiveness and thus its productivity. These include the need to improve infrastructure, fight and reduce corruption, upgrade the legal framework in line with EU standards, reform the judiciary, implement WTO commitments, and eliminate other impediments to a business friendly environment. Corporate governance needs to be improved and measures to significantly improve the context for firm strategy and rivalry need to be at the forefront of the reform process. Continuing labor market reforms will increase the flexibility of domestic firms, ultimately increasing their competitiveness.

The country strategy needs to build on existing strengths and improve Macedonia's competitiveness. Macedonia has a very young and well-educated labor force (45% of the population is under 30 years of age). Also, 18% of all graduates have degrees in science or engineering fields.

Wages and land prices are relatively low (Investing in Macedonia). Furthermore, the country has a good strategic location with proximity to many large markets with which it has free-trade agreements (Turkey, Bulgaria, Serbia and Montenegro, Albania and Croatia), and a prospect to improved access to the EU market. Given these strengths combined with the good climatic conditions and the attractiveness of the Macedonian landscape the country should primarily focus its development efforts on agriculture (including wine and tobacco), tourism, logistics, and construction services.

Reaching political consensus across government, opposition and ethnic lines regarding a coordinated and agreed upon set of policies to achieve Macedonia’s competitiveness would send strong signals to potential foreign investors and would reduce the perceived country political risk. In that context, the recently formed Macedonia National Entrepreneurship and Competitiveness Council (NECC), formed to facilitate discussions among public, private and government leaders from all sectors to transfer Macedonia's entrepreneurship and competitiveness agenda into reality, is a positive step and has the potential to become the overall coordinating structure for economic competitiveness. However if the NECC is to be such an institution, true political consensus will need to be reached, so that it is not seen as just an extended arm of government.

II. The Macedonian Wine Cluster

4.0 Overview of the Macedonian Wine Cluster

4.1 History

Macedonia has a very long tradition of wine making. The ruins near the settlement of Stobi, in the Tikves region, suggest the existence of grape growing and wine production in the country even before the Roman times. Local wine was carried by caravans not only throughout the Balkans, but as far as Vienna and Budapest (Luxner, 1995). The Slavs who arrived to the Balkans region in the sixth and seventh century embraced these wine-making traditions and practices. During the Ottoman period, the tradition was continued in the monasteries.

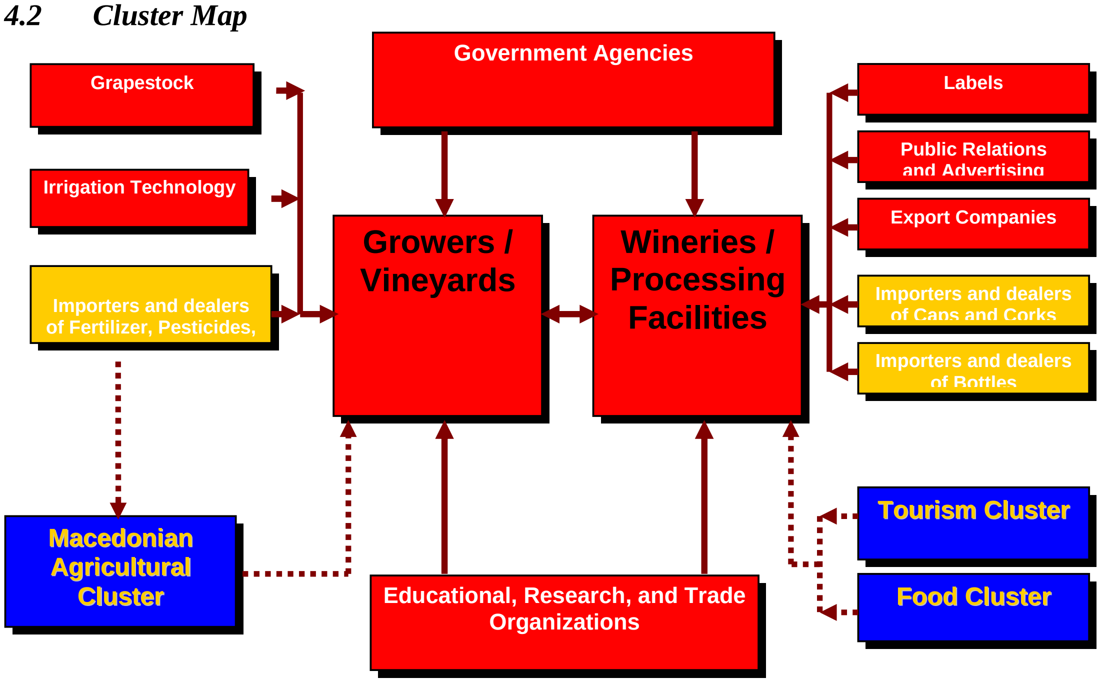
The 20th century witnessed a large increase in grape growing: the areas under vineyards grew from 8,450 ha at the beginning of the century to almost 38,760 ha in 1982 (The History of Viticulture). In the 1950s, in line with the Communist collectivization policies, the wine industry was consolidated into several large vertically integrated agro-conglomerates. In the following decades, these conglomerates predominantly produced bulk wines which were shipped to Slovenia. Slovenia bottled the wine and distributed it throughout the Yugoslav market. Slovenia also exported Macedonian wine, both bulk and bottled, under various Yugoslav brands. Relatively small quantities were bottled in Macedonia, predominantly for the local market. Macedonia was the leading wine producer in the former Yugoslavia and accounted for almost two thirds of the total wine production.

The legacy of communism left the wine cluster in a precarious position as the former Yugoslavia plunged into a decade of conflict, leading to a loss of traditional markets for Macedonian wine. The large state owned wine making agro-conglomerates soon began to struggle. Some were liquidated, while the rest were eventually privatized by the State. Small boutique wineries began to slowly appear and produce higher quality wines in the mid 1990s.

As the EU accession became one of the key strategic goals of the country, Macedonian wine makers increasingly focused their attention to the EU member states. Thus, regulations for exporting to the EU markets became important for the success of the cluster. Given the sensitivity of agriculture for the EU, the wine export quotas were left out of the original Stabilization and Association Agreement (SAA) between Macedonia and the EU. In December 2001, the EU Council approved an agreement establishing mutual preferential access to wine markets between the EU and Macedonia. According to this agreement, Macedonia was able to annually export 300,000 hectoliters (hl) of wine duty-free to the EU. However, at first, all but 15,000 hl of this amount is reserved for larger quantities of still wine for the wholesale market ("Ministers Approve Wine Deals," 2001).

In 2003, recognizing the promise of the wine sector, the Macedonian Competitiveness Council selected it as one of the industrial sectors to be supported under a US-funded project for enhancing exports and competitiveness of the private sector. The U.S. Agency for International Development (USAID) administers this project. In March 2005, the Macedonian government renegotiated the duty free quota for wine exports to the EU raising it to 395,000 hl ("Macedonia Eyes 100 Mln L of 2004 Wine Output"). Despite this quota increase, local experts still believe that current arrangements are not adequate to the country's production capacities ("Macedonia Gets Higher Wine Exports Quota to EU"). The Macedonian government is currently working on establishing a public register of the acreage, grape varieties and ownership of vineyards in order to secure a designated geographical origin status – a requirement for exporting to the EU.

4.2 Cluster Map



4.3. *Key Features of the Macedonian Wine Cluster*

The cluster is comprised of thousands of non-integrated small grape growers, vertically integrated large vineyards and a current total of 33 wineries. Seventy percent of the area under grapes is owned and maintained by individual farmers, while the rest is controlled by larger agricultural conglomerates.

The wineries are comprised of vertically integrated large producers of low quality bulk wine and bottled jug wines (priced less than $3 per bottle) and recent start ups aiming at the popular premium bottled wines (priced at $3 to $7) with a smaller number still producing wines in the super premium segment of the bottled wine market ($7 to $14).[3] The cluster is dominated by large producers, former state owned enterprises, which were privatized in the 1990s. Despite 15 years of transition, the cluster continues to be characterized by the production of bulk wine with little improvements in the quality of the product. Only the recent start ups have had some degree of success in producing and selling higher quality wine in the domestic market and some small successes in the export markets.

The total revenues generated by the wineries in 2004 amounted to $72 million dollars, or 0.15% of GDP. Of this, $33 million was exported. Wine exports accounted for 3% of Macedonia's total exports. (State Statistical Office, Yearbook 2005)

Close to 1,200 people are employed by the wineries and an estimated 20,000 farmers derive their primary income from grape plantations. In addition, an estimated 15,000 seasonal workers attend to the annual harvesting of the grapes. (Gorgi Petrusev, 2006)

By and large, there was little investment in new technology across the cluster during the 1990s. Also, the regional armed conflicts, which reduced the overall level of economic activity in the former Yugoslavia, led to a gradual reduction in the land utilized for grape plantations. The lack of innovation and growth in the cluster over the last 15 years was to a large part due to the lack of world class oenologists and agronomists employed at the firms, lack of marketing and distribution

[3] The market segmentation was adopted from Michael Roberto's Robert Mondavi & The Wine Industry HBS Case #9-302-102.

skills, and failure to successfully create brands. This is now slowly beginning to change. The small firms are leading the way in bringing international expertise to assist in the development of their products and processes. Key challenges need to be overcome however if the cluster is to begin the move up market and grow.

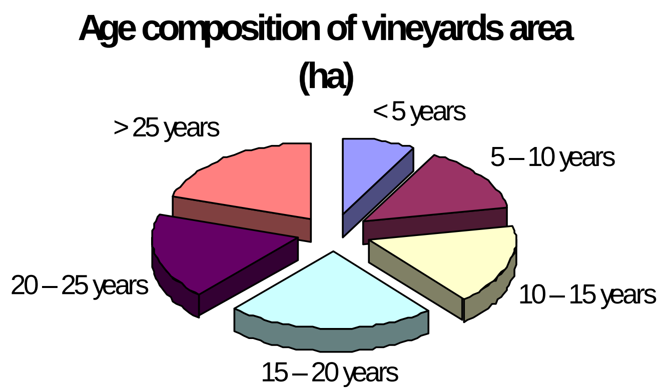
4.4 Winemaking in Macedonia

4.4.1 Grape Growing/Procurement

In 2004, Macedonia's vineyards produced a total of 254,613 tons of various varieties of grapes on 61,224 acres. (State Statistical Office, Yearbook 2005) The overall average vineyard size is 2.3 ha. However, the average vineyard size of the 20,000 individual farmers who have grape plantations is only 0.7 hectares which, according to local industry experts, is significantly below the optimum plot required to enable such plantations to develop profitably and to produce higher quality grapes. (Gorgi Petrusev, 2006)

Close to 80% of the total output is wine grape production, of which 60% is red grape and 40% is white grape. (VMMS Project, 2006) The resultant yield of 4.15 tons per acre is high by global standards. A total of 89 million vines were planted in the country's vineyards resulting in an average density of 1,450 vines per acre and an average yield per vine of 3 kilograms. (State Statistical Office, Yearbook 2005) Typically, most of the vines are planted in rows between 2.3 to 2.9 meters apart and 0.9 to 1.1 meters in between. (Gorgi Petrusev, 2006) According to most industry experts, the high vine density and high yield per acre result in considerable reduction in the quality of the harvested grapes. The major reason for the surplus in grape production is poor farming practices. Excess and inappropriate watering close to harvest by growers increases the quantity of grapes produced, but at the same time causes the swelling of the grapes which in turn increases the creation of moulds and acidity.

As illustrated below, over 60% of the vines are at least 15 years or older. According to the local industry experts, the lack of care taken in attending to the vines during the communist era is likely to require a massive replanting effort in the next 10 to 15 years just to ensure the current level of supply. (Koco Mocan, 2006)



* Source: VMMS Project, 2006

Grape harvesting is done exclusively by hand in all vineyards. On average, pickers are paid $10 to $15 per day. The wineries purchased the red wine grapes at an average price of $200 per tonne whilst the white wine grapes cost an average price of $130 per tonne. (Gorgi Petrusev, 2006)

4.4.2 Crushing, Fermentation and Aging

The cluster is plagued by the lack of standards which results in supply chain problems pertaining to the crushing, fermentation and aging process. Wine grapes are grown on diverse soils throughout the country with different cultivation conditions that result in variations in the quality of the same sort of grapes. Farming practices throughout the cluster are geared at quantity rather than quality. Poor picking and handling of the grapes in the delivery to the wineries further aggravate the problem. Often grapes are delivered to the cellars the day after harvesting which damages the quality of the grapes and leads to uncontrolled fermentation by just sitting in trucks. All these factors affect the quality and consistency of the final product. (Gorgi Petrusev, 2006)

For the most part, wine production equipment is supplied by Italian manufacturers such as Gimar, Enoventa, Cavalzani, Siprem, and Spadoni. Whilst the small wineries have generally invested in modern equipment, in recent years the large wineries have also started a gradual process of investing in new equipment and technology. (Dimce Petrusevski, 2006)

The bulk wine production is generally aged in stainless steel tanks. The smaller wineries and some of the larger wineries use oak barrels for the production of bottled wines. Oak barrels with 225 liter capacity ranging in the price vicinity of $260 to $650 per barrel are generally supplied by companies from Serbia, Bulgaria or France. (Dimce Petrusevski, 2006)

According to local industry experts, the overall prices that Macedonian wineries pay for importing the required technology and equipment for this phase of the production process are slightly above the global industry average (due to high transportation costs), giving the Macedonian wine cluster a slight competitive disadvantage. (Dimce Petrusevski, 2006)

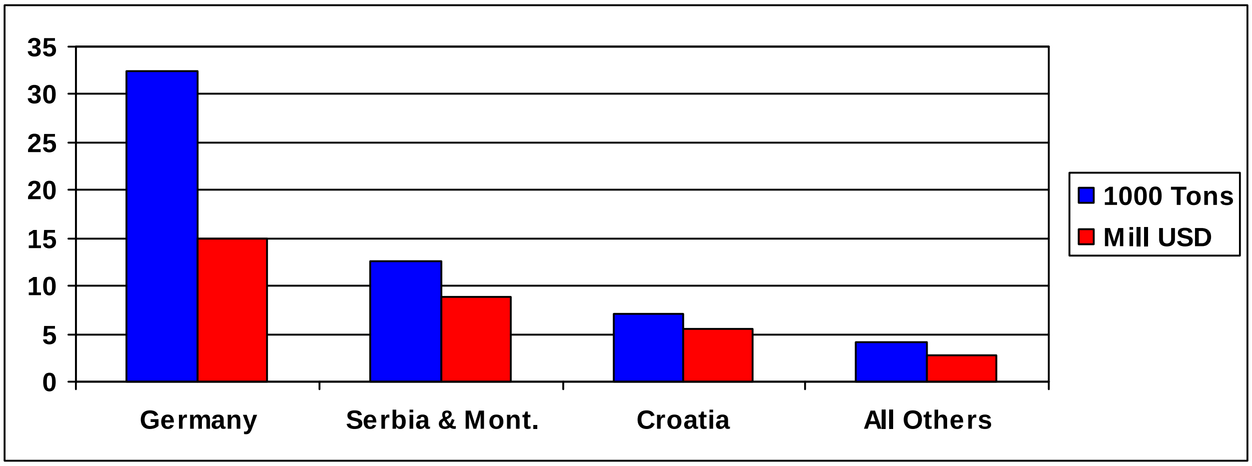
4.4.3 Bottling and Packaging

The wineries import the bulk of their required bottles from manufacturers in Croatia and to a lesser extent from Bulgaria, because there are no bottle manufacturers in Macedonia. The average price for a 750 ml bottle is between 20 and 30 cents. Corks are purchased from Portugal via distributors from Austria, Italy and Greece and the price varies between 0.05 to 0.3 cents per piece depending on the quality. Labels and packaging are supplied by domestic companies at competitive prices. (Dimce Petrusevksi, 2006)

4.4.4 Production, Sales, Marketing and Distribution

The total wine production in 2004 amounted to 98.3 million liters. Of this, 71.1 million liters was bulk wine production and 27.2 million liters was bottled wine. Of the 71.1 million liters bulk wine produced, 50.7 million liters were exported and 20.4 million liters consumed domestically. Of the 27.2 million liters bottled wine production, 5.4 million liters were exported whilst 21.8 million liters domestically consumed. Bulk wine exports amounted to close to $24 million while bottled wine exports totalled $8 million. (State Statistical Office, Yearbook 2005)

Destination of exports by country



***** Source: Macedonian Chamber of Commerce, 2005

Exports to Germany were exclusively bulk red wine which Macedonian wineries sold for an average net price ranging between 30 and 35 cents per liter. The majority of the white wine which Macedonia produces (from the Smederevka grape) is too sweet for EU consumer tastes and thus is only sold in the region.

In 1993, the local company "Tehnometal Vardar", the sole international exporter of Macedonia's products in Yugoslavia, took over the role of exporting the bulk of Macedonia's wine to Germany, using its established commercial networks. This company has managed to retain this role to the present day, handling the majority of the clusters exports to Germany through its own networks. Of the exports to Germany, Tehnometal Vardar exports 20 million liters, whilst the Tikves and Agro Pin wineries directly export 8 million and 5 million liters respectively. (Koco Mocan, 2006)

Seven German firms (from Munich, Augsburg, Cochem, Nuremberg and Hamburg) import the bulk wine from Macedonia. Once it arrives in Germany, the wine goes through a process of blending, filtering and filling in tetra packs. The wines are then distributed through the distribution channels of each of these importers to various supermarkets, where they sell at prices ranging from $1.10 to $1.50 per liter. (Koco Mocan, 2006)

The exports to Serbia and Montenegro and Croatia comprise red and white wine, both in bulk and bottled. The average price received for sales in these two countries combined was 0.75 cents per liter. Exports to other countries include small quantities of bottled popular premium wines with specific geographic origin sold to Norway, Japan and the United Kingdom among others, by the small high quality wineries. The lack of quality and consistency, combined with the lack of brand recognition will need to be addressed to allow the cluster to move up market.

The sales and distribution on the domestic market is generally handled by each winery's sales department dealing directly with the retailers. There are very few wholesalers of wine and alcoholic beverages leaving each winery to deal with both "on-premise" and "off-premise" domestic retail accounts.

5.0 Cluster Diamond Analysis

The Macedonian wine cluster is currently at a level of development significantly below its full potential. There are many technological, operating and marketing areas where local wineries need to improve. In addition, inter-cluster cooperation is currently in its infancy, thus making the business environment more challenging for the individual producers.

Historically, the cluster has developed in an ad-hoc fashion. The wine products from the cluster still found their markets, mostly with a low degree of demand sophistication. However, if the cluster is to be competitive in demanding markets of the European Union and beyond, it will need to overcome many challenges and strategic issues. The good news is that there is no lack of awareness of the hard work which lies ahead. Macedonians place a lot of importance on tradition and few things are more traditional than wine, which is demonstrated each year on 14 February when most Macedonians reject St Valentine in favor of St Trifun (the protector of grape vines and wine). On this day, the wine trade takes part in a ritualistic blessing of the grapes and a symbolic pruning of the vines.

5.1. Factor Conditions

Similarly to clusters in many developing economies, factor (input) conditions are the critical source of competitive advantage for the Macedonian wine cluster. To a large extent, these favorable factor conditions explain why wine became one of the country's important export products and can provide an essential building bloc of a successful cluster.

Macedonia possesses excellent terroir, a combination of soil, climate, sunlight, water and topography for grape growing. The country enjoys 220 days of sunshine a year, is located 1,000 meters above sea level and has a relatively dry climate (Luxner, 1995). The summers are long, hot and dry, which allows for a lengthy ripening period. At the same time, the cold winters offer a good recovery time for the vines. The hot summer temperatures contribute to a characteristic richness of color, flavor and alcohol – an aroma with a fruity character that distinguishes Macedonian wines. The soil composition rich in minerals is also very conducive for grape growing.

In addition, Macedonia is a mountainous country with opportunities for high-altitude planting. The wine makers also benefit from the presence of different winds that protect the vines from diseases. Thus, the Macedonian wine makers have to use chemical sprays to protect the vines only three times per year, much rarer than those in some wetter climates.

Macedonia has three main grape growing regions - Pelagonia-Polog (13% of the production), Vardar Valley (83%) and Pchinja-Osogovo (4%) - each one characterized by somewhat different climatic conditions. These three regions are divided into 16 sub-regions, out of which the Tikves region produces the most wine grapes and wine. Along the Vardar River, a Mediterranean climate brings a higher level of humidity to the vineyards around Gevgelija, Valandovo, Demir Kapija, and slightly lower humidity to Negotino. At the same time, the mountain ranges of Kozhuf and Nidzhe prevent penetration of warm air masses from the south and Shara Mountain cold air mass from the north, creating a continental climate for most vineyards in this region (The History of Viticulture in Macedonia). Despite these almost ideal climatic conditions, grape growing is still exposed to vicissitudes of weather.

In Macedonia there are almost 20 different wine varieties grown, but the local Smederevka and Vranec comprise 80% of the total grape production. Local winemakers are especially hopeful that Vranec, an indigenous red grape can become a symbol for Macedonian wines. One of the key executives at Bovin winery argues that “Vranec is our power because there is nothing to compare it to” (Macedonia Massive). Young Vranec is characterized by a powerful black/purple color which evolves into a deep ruby red with a bit of age. Other indigenous grape varieties such as the white Zilavka, are mostly restricted to use in blends.

Macedonia offers an ample supply of relatively cheap labor, but the wineries have problems finding adequate numbers of skilled labor, especially managers, oenologists, marketing personnel and people with international commercial expertise. The average monthly gross wage in the wineries is approximately $450. The price of land, around $4,500 per hectare, is another comparative advantage of the wine cluster with the prices lower than in the neighboring countries such as Croatia, Bulgaria and Greece. (Gorgi Petrusev, 2006)

Macedonia has relatively underdeveloped educational and research institutions for grape growing and wine making. The Department of Viticulture and Oenology at the Faculty of Agricultural Sciences and Food at Skopje University consists of four tenured professors but there is still no specific curriculum devoted solely to the wine industry. There is a limited level of cooperation between the Faculty and the Institute for Grape Growing and Winemaking, which is the main research institution in the country. These two public institutions also do not work closely with the private sector including the main wineries. Thus, training programs and research projects do not always correspond to the cluster needs and strategies (Jansson, 2005).

5.2. Context for Firm Strategy and Rivalry

The number of wineries in the cluster has progressively increased over the last ten years and currently totals 33. The level of domestic competition within the cluster is significantly higher that that of other Macedonian clusters. The small upstarts have recently brought greater innovation and quality to the cluster. The top 12 wineries ranked by annual production capacity are:

Rank	Company	Capacity-liters	Rank		Capacity-liters
1	Tikves	55,000,000	7	Rigo Impex	7,000,000
2	Povardarie	30,000,000	8	Lozar Bitola	2,000,000
3	Skovin	17,000,000	9	Bovin	800,000
4	Imako Stip	10,000,000	10	Fonko	300,000
5	Zik Kumanovo	8,000,000	11	Pivka	50,000
6	Agro Pin	7,000,000	12	Vinarija Popov	40,000

* Source: Gorgi Petrusev, 2006

The top 8 producers are the former state owned enterprises privatized in the 1990s and they produce bulk and jug wines, and some also produce other types of liquor. Tikves, with an annual wine capacity of 55 million liters is also the biggest winery in South East Europe. All the other wineries are privately owned start-ups producing bottled wine in the jug, popular premium and super premium segments of the market, selling in the domestic, and to a lesser extent, the export market.

Profitability varies across the cluster, depending on company structure, management, production and operations. However, in general the net profit margin is as low as 5% for some of the larger wineries whose major revenue is generated from bulk wines, to as high as 40% for some of the small boutique wineries which produce high quality bottled wines. (Gorgi Petrusev, 2006)

All wineries in the cluster are domestically owned. The cluster has failed to attract foreign investment and ownership by foreign wineries. Whilst there are no formal barriers to foreign investment, its lack thereof has robbed the cluster of much needed transfer of know-how, management and technical expertise.

5.3. Demand Conditions

Between 1997 and 2000, Macedonia's per capita annual wine consumption was 23.69 liters, which was higher than that of some major wine producing countries such as the US (8l), Chile (15.92l) and Australia (19.04l) and some neighboring countries such as Serbia-Montenegro (18.94l) and Bulgaria (11.18l). At the same time, Macedonian consumption trails that of Croatia (47.21l) and Slovenia (39.27l) (Per Capita Consumption). Despite this relatively high wine consumption, the local demand is unsophisticated as the customers put overwhelming focus on price, drink lower quality wines, and do not have a good knowledge of international wines and global trends in the industry. This is evidenced by the fact that only $320,000 of bottled wine was imported into the country in 2004 (VMMS Project, 2006). In addition, the overall size of the market is a limiting factor for the cluster, as well as the entrenched tradition of home wine-making.

5.4. Related and Supporting Industries

Tourism

Macedonia is a country with abundance of natural beauty such as Lake Ohrid and Sar Mountain and with a seasonal climate favorable for the development of the tourist industry. Furthermore, the country boasts a number of important historic and religious sites, such as remains from the Roman, medieval and Ottoman eras, that have attracted many visitors in the past.

Due to its communist past, most of the aging legacy infrastructure was built by formerly state-owned enterprises. Consequently, the facilities are of modest quality and appeal. They are in strong need of additional investment, but the privatization of the industry has been relatively slow.

There are 90 hotels, 10 campgrounds, 2 tourist settlements and an additional 27,000 private beds in Macedonia. The total number of beds in all facilities amounts to roughly 80,000, most of which date back to the 1970s. The most popular destinations for visitors include Lake Ohrid, Lake Prespa, Bistra Mountain and Pelister Mountain, where more than 80 percent of tourism revenues are generated (EIU, 2003). Visitors overwhelmingly come from the countries of the former Yugoslavia, while Bulgaria, Greece, Germany, Italy, and the Netherlands account for the remainder.

Macedonia’s tourist industry has never become a major economic factor. At its peak, in 1987, it attracted four million overnight stays by tourists (compared to 68 million in Croatia). Since the late 1990s, the number of nights spent by tourists collapsed to 1.8 million. Foreigner visits dried up most dramatically to only 346,000 overnight stays in 2003 (State Statistical Office).

Agriculture

For many countries in the region agriculture represents a relatively large and important industry. Macedonia is not an exception. The industry, including food processing, represents roughly 20% of the country's GDP, and also 20% of the total exports. The proportion of food processing is relatively low, and as much as 98% of agricultural production exports are in the form of raw products, a very low-value added stage.

The climate conditions are excellent for grapes, early market garden vegetables, fruits, and livestock breeding. The private sector cultivates more than 80% of the total land. The proportion of large, more sophisticated private producers is still relatively small. As a result, the productivity in the sector is low.

Transport

For much of the twentieth century, Macedonia was a part of the former Yugoslavia, and the infrastructure was developed accordingly: the main transport routes connected the country with the other Yugoslav states that were the biggest markets for Macedonia's goods and services. The recent local political and armed conflicts led to the temporary loss of the main transport routes to the largest markets. Consequently, exporters had to truck their merchandise by road through "torturous roads" in Bulgaria to the Black Sea coast, or to the "dilapidated" port of Durres in Albania, "braving bandits" (Beiser, 1994). Over the last several years the transport situation improved markedly as the regional tensions subsided. Another hindrance to transportation of goods between countries in the region is the inefficient and costly border crossing procedure.

Macedonia's transport infrastructure consists of two major corridors, running from south to north and east to west, and crossing at Skopje, the capital. The east-west corridor (304 kilometers in length) is not fully developed, with only 84 kilometers completed. In response, the government recently allocated the largest portion of its two-year investment program, €208 million, on developing transport infrastructure.

Financing

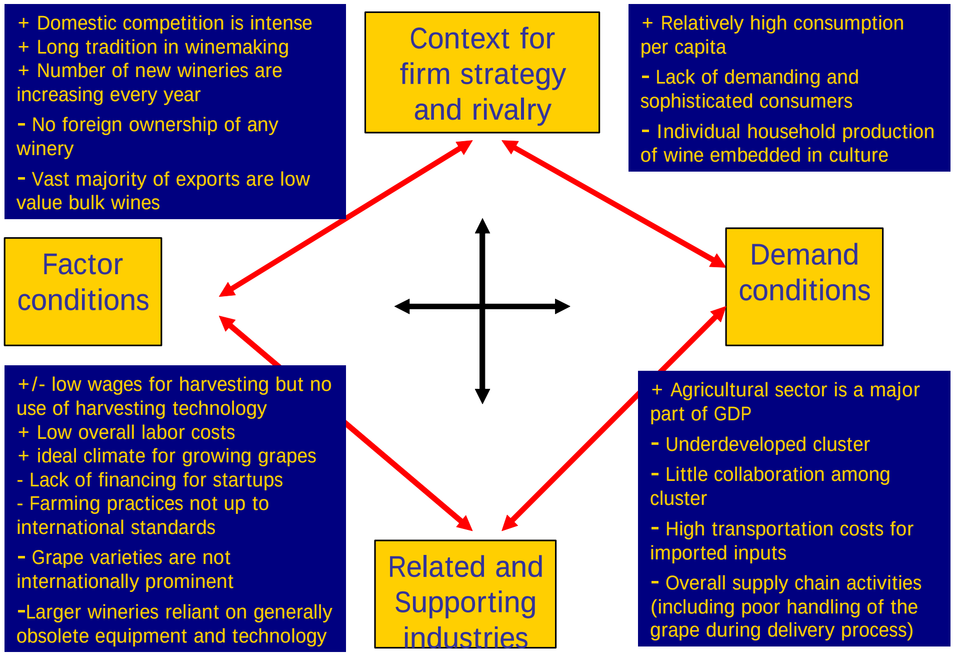
The financial industry in Macedonia is not very well developed, and does not offer specialized products for the wine industry. Bank loans are offered only at rates as high as 9%-13%, roughly double the levels acceptable for wine-makers. Furthermore, the wine sector is not well-suited for private equity backing because of high risks and relatively low perceived profitability. Consequently, only large wineries manage to access external capital, often abroad, while small wine-makers find it virtually impossible to find external financing. They have to resort to creative ways to find funds, often relying on own capital. For example, Fonko functions entirely without credit - a huge challenge for a fast-growing business (Janssen, 2005).

Institutions for Collaboration (IFCs)

Inter-cluster cooperation is currently in its infancy. Historically, the cluster has developed in an ad-hoc fashion. However, for the cluster to develop further, IFCs need to play a greater role. In order to change the low-quality image associated with the country wine products, six of Macedonia's small and medium-sized wine producers founded Macedonia Fine Wines Export Group. The group's goal is to promote their wines both domestically and abroad among wine trade and consumers (Macedonia Fine Wines). The organization is introducing a uniquely designed sticker as an indication and proof of quality. The effort is also expected to stimulate local appreciation of wine quality and increase competitive pressures within the cluster.

Macedonian grape growers have formed a number of grower associations. Notable examples are Vitis and Valandovski Drenok. These associations, however, are yet to materially impact the grape quality. A number of other IFCs exist, but have not had an important impact.

Wine Cluster Diamond



6.0 Cluster Recommendations

The Macedonian wine cluster is a relatively underdeveloped cluster, but the one that could be a great marketing vehicle for the country, and boost the tourism and the agriculture clusters. Development of the cluster, however, depends on active involvement of the government, wine-makers, grape growers, IFCs, and other relevant entities. Wine-makers alone cannot be effective. First, the cluster coordinating organization ("The Coordinator") needs to be formed (perhaps by extending activities of Macedonia Fine Wines Export Group) that would assume the leadership for the cluster development. The cluster participants should initiate a broad dialogue and develop a consensus on the long-term strategic vision for the cluster, which could be titled as "Vision 2030" for example. Subsequently, tactical decisions (such as the selection of grape varieties grown, the grape growing practices used, maintenance of vineyard quality, improvement in supply chain activities and in particular the delivery process of the grapes to the vineyards, the creation of a prestigious image for Macedonian wines, etc.) should be guided by this wider strategic framework.

It will take decades of hard work by all cluster participants before the country's wines will be able to compete head-on with the dominant producer countries. This should be the long-term goal for the cluster. In the medium and short-term, however, the cluster participants should focus their energies on markets where they have some sources of advantage. The first group of markets should be the former Yugoslav states and other regional countries (Bulgaria, Czech Republic, Romania) where Macedonian wines have some brand equity, and command highest absolute prices. Currently, there is a significant opportunity to increase sales in these markets, with high-traffic tourist zones (Croatian coast, Belgrade, Sofia) being especially attractive. The secondary focus should be on regions with significant presence of immigrants from the former Yugoslavia, who are mostly clustered in the major urban areas of Canada, the U.S., Australia, Switzerland, and Germany. Finally, the remaining markets should be approached only through niche strategies. The Macedonian wine cluster is small (total production equals one fifth of Chile's wine output), and a few well developed markets can prove much more valuable and sustainable than shallow presence in many markets.

As outlined before, the local grape varieties are dominated by Vranec, which is unique to the region. Some diversification of grape growing to include the international favorites (merlot, chardonnay) would be wise. However, Vranec provides a strong point of differentiation for the cluster, and the future product offerings should feature it heavily.

The cluster diamond also needs to be developed to support this strategy. Below are the recommendations grouped by the location in the diamond.

Context for Firm Strategy and Rivalry

There are two distinct market segments: bulk and bottled wine. There is plenty of competition in the bottom of the market, but not enough at the top. The competition could be intensified through the following measures.

- Government: The government should undertake a concerted effort to attract foreign investors in the cluster. Tax incentives should be considered for investors willing to invest in the country's aging vineyards. Also, the government should continue opening up export opportunities for its premium wine through trade negotiations, primarily by further increasing the EU duty free quotas.

- Private sector: The major strategic challenge for the cluster is to begin a process of substitution of exports of bulk wines with exports of bottled wines to the EU. The newly formed premium firms need to implement aggressive sales and marketing programs. Their distribution reach is not very extensive at the moment, preventing expansion. Also, they should invest in product innovation, utilizing different grape varieties and operating methods. The large bulk-wine competitors have left plenty of room for these upstarts to steal market share even domestically.

<u>Factor Conditions</u>

- Government: The government should promptly reform the educational and research programs taking into account the real needs of cluster participants. In addition, the Coordinator and the government need to work on issues (land regulation, legal framework) preventing the private sector from providing appropriate financing to the cluster. Also, the financial aid programs aimed at grape substitution should be continued. Furthermore, full compliance of all wine-makers with the newly initiated grape and wine registry efforts should be ensured promptly.
- Private sector: The participant companies need to deepen cooperation on improving and shaping the quality of the common inputs. The factor environment is organized in an ad-hoc fashion (from grape growing to labor training to energy buying), and taking a more proactive approach through the Coordinator will assist the cluster. For example, wine-makers should provide financing and education to selected growers in order to improve the quality and consistency of their grapes. In addition, the companies need to encourage best practices sharing, especially as it relates to quality control. In this regard, the cluster should contract the expertise of foreign oenologists and sharing such costs on a cluster wide basis..

Related and Supporting Industries

- Government: All tariffs on imported supplies (corks, bottles), equipment and barrels should be eliminated or reduced. Complete privatization of tourism should be pursued, and its development facilitated through tactical steps such as accepting the euro as method of payment and easing visa regimes for visitors. Finally, the government should step up its investment in transport infrastructure, seeking external financing if needed.
- Private sector: The wine and tourism clusters should form closer cooperation and work on joint initiatives such as developing wine-tasting vacation packages and promoting Macedonia as a wine making country.

Demand Conditions

- Government: The government should progressively but within a reasonable time frame eliminate all customs duties and tariffs on imported wine. This measure will be met with resistance from the cluster, but will increase the demand for imported wine thus increasing sophistication of local demand and forcing local producers to be more competitive.
- Private sector: The coordinator should design grass-roots marketing campaigns that would strengthen common knowledge and appreciation for fine wines. The wine making companies should view all the primary focus markets as ‘local’ demand, and extend their marketing efforts accordingly.

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DISCLOSURES

Dan Doncev is a citizen of the Republic of Macedonia. In the course of the semester, he made two trips to Macedonia. In March 2006 he conducted face to face interviews with executives from the Macedonian wineries “Tikves” and “Skovin” and from the import-export company “Tehnometal Vardar”. Where information obtained from these interviews is used in the report it is duly disclosed.