

# Environmental analysis in the winegrowing industry

## *Analýza prostředí v odvětví vinohradnictví a vinařství*

P. TOMŠÍK

*Mendel University of Agriculture and Forestry in Brno, Czech Republic*

**Abstract:** Environmental analysis in the winegrowing industry is necessary for strategic management of businesses in this industry. The paper is focused on PEST analysis and pays attention to individual factors. It emphasizes the necessity of adjustment of the Czech legislation to the EU conditions, fulfilment of its conditions, e.g. compulsory registration of vineyards. In the field of economics, it is necessary to pay attention to renovation of vineyards with the help of subsidies from the state budget because the industry contributes to keeping the cultural level of the region and the human resources on the territory. It can be also a source of the environmental pollution. The technology of vine processing follows the changes in viticulture, changes of growing-technology and of the structure of white and red varieties. In conditions of the Czech Republic, it means to gradually transfer to production of quality varieties of vines by gradual renovation, which has to be a priority. The winegrowing sector is the industry with the highest value added also in the Czech Republic, and its share in the total agricultural production in a region can reach a significant level.

**Key words:** PEST analysis, industry, vine growing, wine producing, EU, CR

**Abstrakt:** Analýza prostředí v odvětví vinohradnicko vinařském je nezbytná pro strategické řízení podniků tohoto odvětví. Příspěvek je zaměřen na analýzu PEST a věnuje jednotlivým faktorům určitou pozornost. Uvádí nezbytnost adaptace legislativy ČR na podmínky EU, splnění jejich podmínek jako je např. povinná registrace vinic. V oblasti ekonomické je nutné věnovat pozornost obnově vinic pomocí dotací z rozpočtu státu, protože odvětví přispívá k udržení kulturnosti území a lidských zdrojů na teritoriu. Může být také zdrojem znečištění životního prostředí. Technologie zpracování hroznů vinné révy navazuje na změny ve vinohradnictví. Změny pěstební technologie a změny struktury bílých a modrých odrůd. V podmínkách ČR přejít postupně obnovou vinic na produkci kvalitních odrůd vinné révy, které musí být prioritou v českých podmínkách. Sektor vinohradnicko vinařský je i v České republice odvětvím s největší přidanou hodnotou a jeho podíl na celkové zemědělské produkci v regionu může dosáhnout významného podílu. Příspěvek je zpracován v rámci řešení výzkumného záměru MSM 431100007.

**Klíčová slova:** analýza PEST, odvětví, vinohradnictví, vinařství, EU, ČR

Czech Republic and its agricultural subjects are in the period when it is necessary to prepare intensively for the relatively near integration into the European Union, which is currently expected to happen in 2003–2004. Agricultural firms, entrepreneurs of this sector, expect this date with a certain strategic hope, that thanks to the Common Agricultural Policy of the EU, their economic position will improve. Today, they also know, that for this integration, it is necessary to be prepared so that after such a “big bang” there will not occur an attenuation of agricultural activities, or production, especially in those fields, where there is European or world overproduction and overhang of supply over demand. This will concern not only the whole agricultural sector, but also its individual industries, also those seemingly attractive. Based on this sudden change of macro-environment conditions, companies will be forced to accelerate their activ-

ities focused on changing business visions and consequent goals of business strategies. Now, in 2001, there came the period, which can be called strategic, because business strategies are formulated with the minimum horizon of 2 years. Especially strong is the projection of the factor of time in certain fields of agriculture, where it is necessary to consider generation or growth interval. The winegrowing industry is undoubtedly one of these fields, in the Czech Republic furthermore striving for revitalisation during the past 10 years. Owing to the fact, that the strain for a structural change does not show the requested results, it is necessary for the businesses in this sector to focus on strategic management of their activities, which will lead to the desired profits. It is already clear and predictable, that such a strategy will not be easy nor cheap, especially in this industry, characterised by a high added value.

---

The results have been obtained by the research project of Mendel University of Agriculture and Forestry Brno, Faculty of Business and Economics granted by the Ministry of Education, no 431100007 “The agriculture and food industry structure formation and trends of behaviour of economic subjects in the process of integration the Czech Republic into the European Union“.

## GOALS AND METHODOLOGY

The process of strategy creation and its implementation is the acme of business managers' activities. The basic element for strategy formulation is finding consequences between a business and its environment. The aim of this paper is environmental analysis of winegrowing industry and identification and evaluation of some relevant factors, which have or will have an influence on the final selection of goals and strategies of businesses in the winegrowing industry in the European or global context. Methodologically, to achieve these goals, there will be used situation analysis focused on the external environment. Collection of information will be done in an indirect way, by processing demographic, socio-cultural, economic, trade, technological, political-legal information published in professional publications, handbooks, textbooks from conferences, seminars and on web pages. To analyse the influence of macro-environment, there will be used the PEST analysis and "4C" method, which is focused on analysis of the globalisation factors. Owing to the fact, that the nearest competitive environment of a business is usually its industry, it is possible to use also the traditional Porter's model of five forces. The base for strategy formulation is the consequent synthesis of environmental analysis results. Methodology also comes from the needs of the research plan No. MSM 431100007, which is solved at FBE MUAUF in Brno and under which this research was financed and the paper written.

## REVIEW OF LITERATURE

The necessity to elaborate a business strategy is a research subject of many – not only foreign – authors. If a business has got a good strategy, it differs from the other businesses and creates a unique position in the industry or in the market. Porter (1994) adduces, that strategy is not an accident, nor luck, nor intuition, but a result of goal-oriented process. Creation of competitive advantage is a subject of research of Tichá (2001), Hron

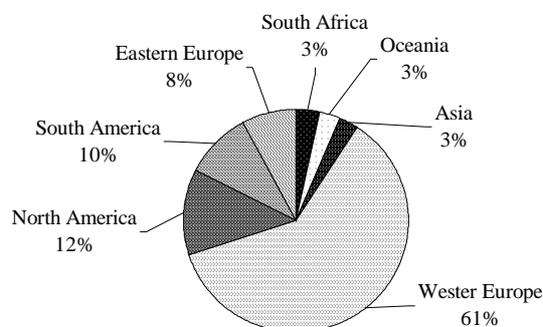


Figure 1. Estimation of the world vine-production in 2005 (mil. hl)

Source: Vertumne International et Associés (2000)

(2001), Žufan, Erbes (2001), Sedláčková (2000). These authors state, that a successful development of a business is conditioned by creating a balance with external environment. At the same time, it is necessary to analyse a business from two points of view – position and resource. Business strategy should be based on selection of a suitable industry (Porter 1994) and creation of entry barriers to this industry. The above-mentioned authors also realise, that not only product and business, but also industry undergoes its own development, or life cycle. The winegrowing industry is also a subject of research of Sedlo, Ševčík (1999), who adduce that this industry seems to be in the stage of decline.

## RESULTS AND DISCUSSION

The winegrowing sector in Europe is a sector of worldwide dimension. The European Union countries pay it a capital attention because of the following reasons (see Figures 1 and 2):

- Production of the European vineyards represents 60% of the world wine production on the area covering 45% of the world vineyards,
- Wine consumption in the EU represents 60% of the world consumption,
- the EU is the main exporter of wine in the world and also the main market for wine imports.

### Political and legislative factors (PEST)

The European Union is aware of the strategic importance of the described sector and therefore it pays the appropriate attention to it in the *political and legislative field*. It means that from the origins of the Common Agricultural Policy, the sector is a part of it and is actualised e.g. in the Agenda 2000. In connection with approximation of the integration of the Czech Republic into the EU, it is necessary to react legislatively on the conditions in the EU. The legislature concerning the analysed sec-

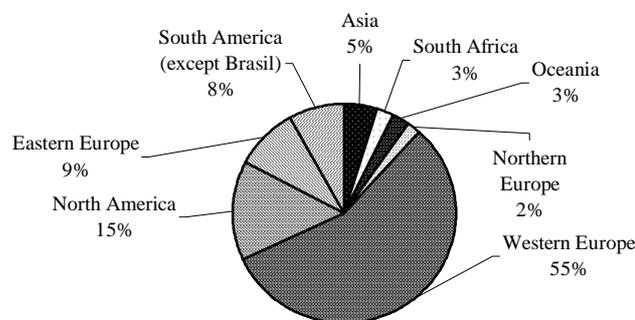


Figure 2 Estimation of the world vine-consumption in 2005 (mil. hl)

Source: Vertumne International et Associés (2000)

tor represents more than one third of the EU directions focused on the whole food sector. Therefore, the Czech Republic already twice issued the law of winegrowing – by the Act No. 115/1995 Coll., and amendment of the Act No. 216/200 Coll. This is not the final state, though, because only 40% are harmonised and it is necessary to issue one more amendment of the winegrowing law before 2003, in order to be fully corresponding with the EU directions. The new law brought new opportunities for Czech and Moravian producers, because it enabled introduction of new technologies and enriched the basic assortment of wine brands including the possibility to produce wine in the top quality class premium. For strategic decisions, it is necessary to pay attention not just to legislation, but also to the conception of agrarian policy before the integration of the CR into the EU, where among the goals of adaptation, there is the support of vineyards renovation. (Pillar C – Modernisation and transformation of businesses.) The legal condition of the compulsory registration of the vineyard area incorporated in the law proposal is of strategic importance. It is also a condition of integration into the EU. The registered area is considered to be final, and after the integration, further increase will not be possible. Only renovation of the current, i.e. registered vineyard will be allowed. The grower, who will not have the vineyard registered, will then have no opportunity to renovate the vineyards he will be forced to stump. The adaptation stage starts with the year 2002 and ends with the integration of the CR into the EU. This concept means complex adjustment of the Czech agrarian sector to the conditions of the Common Agricultural Policy in all its fields (structural, regional, environmental, and rural policy of the EU). In this part of the PEST analysis, it is necessary to look for linkages of the global and the European scope of the analysed industry.

### **Economic factors (PEST)**

When analysing economic factors of the European Union countries in the sector, it is necessary to realise, that wine represents an important part of the total agricultural production in majority of producing countries. (Spain 5.4%, Austria 6.1%, Luxembourg 7.5%, Italy 9.8%, France 13.4%, Portugal 16.8%, CR 2%) When analysing smaller regions, the importance of winegrowing even grows and reaches 20 to 30% of the total agricultural production culminating to exceeds 50% in French region Languedoc-Roussillon. If we go own to even smaller areas, the shares are even higher. Concerning taxation of winegrowing sector, situation in the EU is very variable and there occurs a gradual unification of taxes. Taxation varies from 0 to 320 EURO per hectolitre of still wines, and even to 550 EURO for sparkling wines. Value added tax varies from 5 to 25 %.

Organisation of common wine-market in the EU belongs to the better conducted ones. It focuses on classical questions of the market (price, subsidies, barter), but also on the specifics of winegrowing sector (production

conditions, transportation, product introduction, and enological techniques). The EU exported in the average of 1995–96 more than 10 million hectolitres in the value of 2.4 billion EURO and it is the largest wine-exporter in the world. The main destinations are the USA, Switzerland, Canada and Japan. The EU is also the main importer of wine (5.3 million hectolitres – data for 1995–97). Imports are realised from Australia, Chile, the USA, Hungary, Bulgaria, South Africa, ex-Yugoslavia and there especially grows the import from Argentina. A significant role is played the price decrease depending on limiting the recommended prices and tariffs within the gradual introduction of agreements of the Uruguay Round. There occurred 20% reduction of tariffs from 1995. Thus the European market becomes more accessible and it is still harder to keep prices. Nevertheless, the budgetary expenses of the EU into organisation of the Common Market concern just the table wine. Quality wines do not receive any financial aid – not intervention nor export. Budgetary expenses for the organisation of the Common Market are variable, according to the EU, and represent 2.5–5.5% of the FEOGA fund. In absolute value it was 826 million ECU in 1998 and 970 million ECU in 1997. Among the main expenses, there belong expenses for different forms of distillation (264 million ECU), support of ciders (148 mil ECU), decreasing expenses for premiums supporting stubbing of vineyards (65 mil ECU in 1998, 400 mil ECU in 1993). These premiums significantly decreased the vineyard area. Till the year 1996, it was even by 56 thousand hectares per year. After this year, the measure was reassessed and the average yearly decrease of the vineyard area represented 5 000 hectares. Decrease of the vineyard area and stagnating yields contributed to the fact, that the wine production in 2002/03 will be around 158 mil hectolitres for average year. The total decrease of the vineyard area in the EU from 1988/89 represents 490 thousand hectares.

Decrease of areas is obvious also in the Czech Republic from 1990. The value of vineyards has fallen from 12.7 milliard CZK to 9.9 milliard CZK. The debt in vineyards renovation represents 3 100 hectares yearly. In the period of 1990 to 1998, 2 060 hectares of vineyards were planted, of which 1 136 hectares were planted with state subsidy from 1994.

Consumer prices have a growth trend and in 1998 they reached 54.95 CZK per litre of white wine and 59.97 CZK per litre of red wine. Prices of agricultural producers of cider grapes were on the level of 12 670 CZK per ton in 1998, but in 1997 they reached the level of 14 900 CZK per ton, i.e. decrease by 15% in 1998. Producer prices are thus fairly variable. Wine has to be imported into the CR because the consumption in the domestic market is covered roughly by 50% by domestic production. Imports in 1998, including sparkling wine, were 486.3 thousand hectolitres, of which 54% were imports from the EU countries. Wine exports were on the level of 12.2 thousand hectolitres, 43% of which were directed into the EU countries.

Except for the above-mentioned economic factors, it is necessary to pay strategic attention to macroeconomic

factors, especially interest rate, taxation policies, exchange rate, and level of economic growth.

### **Social and cultural factors (PEST)**

Winegrowing plays a significant role in socio-economic development of regions, where it is spread. Therefore, there is a strain to keep this activity in these regions and to expand it. Keeping winegrowing in a region is important not only because of tradition, landscape maintenance, but also for preventing erosion. It is necessary to realise, that winegrowing can be also a source of environmental pollution caused by using phyto-sanitary products and fertilizers. Strategic necessity will be or is for an entrepreneur to integrate the vineyard into an agro-environmental program, which leads to support of introduction and keeping production procedures, which are in accordance with environmental protection and sustainability of the natural processes. We included also consumption of wine under the socio-cultural factors, because we realise, that in the CR, it is possible to support wine consumption (which reaches the average of 34 litres per capita and year in the EU countries) by a suitable education of consumers. Czech consumer has an average yearly consumption of 16 litres (1998) and thus does not reach the EU average. In the EU countries, wine consumption decreases (France 100 l in 1960, 80 l in 1980, 55 l in 2000). Consumers, however, switch to quality wine, which is a trend connected with the change of life style and consumer behaviour, and the role wine plays in alimentation. Today, it is necessary to consider also two strategic directions or ambiguities in wine consumption, which can influence the "world village". These are the following missions:

1. "3 glasses of wine daily = health". Mission of the century, which is widely known under the term "French Paradox" and helped to stem the decrease in wine consumption by 6.5 million hectolitres yearly. If this influence will be still appreciated and confirmed, it will give better opportunities for keeping and expanding markets and returning wine the position of daily drink.
2. "Wine = alcohol = drug". This mixed appeal also impacts several years. In case of strong promotion of this appeal, there could happen a catastrophic decrease of consumption caused by fear not to be considered a drug-addict. Such a tendency could be even supported fiscally, by advertisement, availability or unavailability of the product classified as drug, which can be consumed only exceptionally.

Impact of these two discussions on consumption has not yet been a subject of research of a European winegrowing institution, which would verify scientific value of these approaches or ambiguities with an especial strategic impact.

### **Technical, technological and production factors (PEST)**

Owing to the fact, that the CR will not become self-sufficient in wine production in a foreseeable future (so far

50%) and is located on the edge of production areas, it is necessary to focus on production of quality brands and thus on production of quality wine and to reduce production of table wine, which will always be cheaper to import. It is necessary to pay attention to the whole technological process, starting with selection of land, its preparation (2 years before planting), preparation of suitable understocks for certain varieties, planting vineyards with the most suitable width of between-lines (2.20 and 2.50 m), distance in a line around 1.2 m, in order to achieve the minimum of 4 000 bushes per hectare. At the same time, it will be necessary to change the ratio of white and blue varieties in vineyards promoting the blue varieties. This will bring also the necessity to learn new technologies of wine tutelage. Traditional technology of wines was reasonably easy before the issue of winegrowing law in 1995, companies focused on the average quality of wine. Therefore in the CR, contrary to the EU countries, there were not produced characteristic and for certain area typical varietal wines or wine mixtures. The new law enabled use of new technologies, enrichment of the storage assortment of types of wine and rapid formation of the market with attributive wines.

The current period is a concurrence of two tendencies in wine production. One is the regulated system of "appellation contrôlée" in France with modifications in Spain, Germany and Italy, and the other is the tendency from the "New World" (new winegrowing countries), which relies on technology, innovation and market research. The first system protects consumers, regions, brands and behaviour of wine producer in Europe. The second system (tendency) is an open system, which focuses on producing good wines for reasonable prices according to customers' wishes.

### **CONCLUSION**

To implicate the most important factors of the external environment in winegrowing industry within the extent of a paper is not entirely possible. Issues of this environment in the European, world or Czech context are so variable and differentiated, that it enables focusing on the particular factors of the selected PEST analysis independently. The aim of any PEST analysis is not to elaborate an exhaustive list of factors, because for any firm, executing analysis, it is necessary to select such factors, which correspond to its specific conditions. From the elaborated short analysis of external environment in the winegrowing sector, it ensues for strategic management of a business the need to pay attention to conditions in the CR, to evaluate the concept of agrarian policy before the integration of the CR into the EU, the 2000, the Common Agricultural Policy of the EU and the Act No. 115/1995 Coll. About Winegrowing or the amendment of the Act No. 216/2000 Coll. Regarding the economic factors, it is necessary to use subsidies for vineyard renovation, to learn about the protection of producers, which is provided by the EU by intervention purchases of wine, sub-

sidies for distillation of wine to drain the surpluses of wine in order to keep market prices and to focus on production of red wines, quality wines, where we can expect higher prices for producers, also in the Czech Republic.

The socio-cultural factors in winegrowing contribute to sustaining the landscape, employment in a region. It is necessary to influence a change in consumption habits of consumers, so that the consumption does not decline, but to support a transfer of consumer from non-quality wines to quality wines. This has to be supported by measures in the field of production, technology of winegrowing to the consequent processing, including a change in the structure of planting in vineyards. To pay attention to winegrowing is really a strategic issue, because entrepreneurial decision will mean a long-term basic investment, which returns slowly, but at the same time it can be a source of pleasant profits, as an award for a good service to the public.

## REFERENCES

- Hron J. (2001): Změny v projektování modelů podnikatelských subjektů. In: Zborník vedeckých prác, MVB 2001, Nitra, I. sväzok, s. 48–53; ISBN 80-7137-866-6.
- Porter M.E. (1994): Konkurenční strategie. Praha, Victoria Publishing, 403 s.; ISBN 80-85605-11-2.
- Sedláčková H. (2000): Strategická analýza. C.H.Beck, Praha, 101 s.; ISBN 80-7179-422-8.
- Sedlo J., Ševčík J. (1999): Odrůdy a klony révy vinné v České republice. ČMVVU Velké Bílovice, 48 s.
- Tichá I. (2001): Přístupy k tvorbě konkurenční výhody ve strategickém řízení. In: Zborník vedeckých prác, MVD 2001, Nitra, I. sväzok, s. 237–242; ISBN 80-7137-866-6.
- Žufan P., Erbes J. (2001): Bariéry vstupu v odvětví pivovarnictví v České republice. In: Zborník vedeckých prác, MVD 2001, Nitra, I. sväzok, s. 127–132; ISBN 80-7137-866-6.
- Zákon č. 115/1995 Sb. o vinohradnictví a vinařství a o změně některých souvisejících právních předpisů, jak vyplývá ze změn provedených zákonem č. 216/2000 Sb.

Arrived on 23<sup>rd</sup> May 2002

---

### Contact address:

Doc. Ing. Pavel Tomšík, CSc., Mendelova zemědělská a lesnická univerzita, PEF, Ústav managementu, Zemědělská 5,  
613 00 Brno, Česká republika  
tel.: +420 5 4513 2033, e-mail: tomsik@mendelu.cz

---