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SCIENTIFIC PAPER

PROBLEM ANALYSIS OF THE HUNGARIAN TOBACCO SECTOR

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Abstract: *The Hungarian tobacco sector went through significant changes in the last decades. The reason of the changes were our accession to the EU, then the changes in subsidiary system, the effect of the world and within the EU's strict tobacco policy. The number of tobacco farms declined and the future became uncertain for the farmers.*
Size of the farms increased and there were a concentration in the sector, so the smaller scale farmers' activity ceased. It causes several problems in rural areas, because one of the main strengths of the sector was its significant role in rural development, as the tobacco in small scales was able to produce an acceptable income in such areas where due to the poor soil quality economically successfully growing for other plants are not suitable.
The main goal of this paper is to present the Hungarian tobacco sector and its main strengths, weaknesses, possibilities and threats compared to the European Union's situation.

Keywords: *Hungarian tobacco sector, tobacco production, tobacco market, complex analysis*

BACKGROUND

The world tobacco production shows a continuous rising trend in the last decades. The reasons of the rise are the rising population of the world and the rising living standards. Despite of the rising demand, in the European Union and in Hungary as well, the tobacco production decreases rapidly in last decade. Production is being transferred from developed areas to developing countries. The main reasons for this are the following:

The growth of consumption, which mainly results from the fast increase of the population.

Tobacco can be produced at lower cost, due to better climate and cheaper labour force.

The agricultural policy support for tobacco growing is less and less in the developed countries.

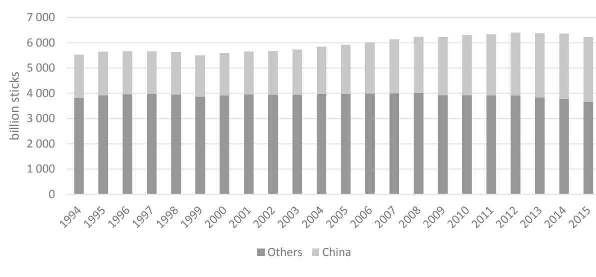
Strict policy in cigarette market and consumption.

LITERATURE REVIEW

International outlook –world tobacco sector

As the raw tobacco is the basic elements of cigarettes, first of all it is worth reviewing the global cigarettes consumption.

Figure 1: World cigarette production 1994-2015.



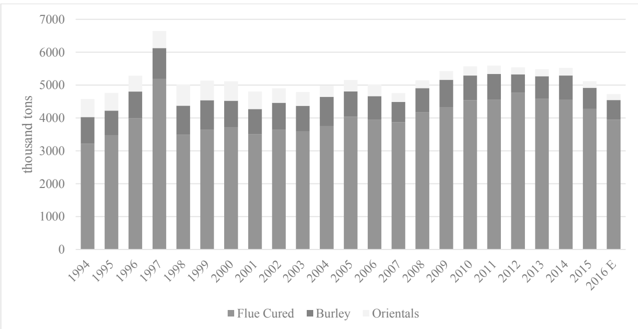
Source: Universal Corp., 2016

As we can see on *Figure 1.* the world cigarette production is increasing. The world leading cigarette producer country is China which produces more than 40% of total production increasing more than 50% of its production, and with 10% of its ratio on total production in the last two decades. The other countries‘ production is decreasing slowly, in 2015 was the production level of 93% of the year 2005. A significant decline was observed in Western Europe, but still Europe was the second largest cigarette producer area, it produced 21% of total amount, followed by the rest of Asian area, which produced 20% of the cigarettes. Americas has a 10% part.

World tobacco production

In *Figure 2.* we can see the world tobacco production as well. The main three produced tobacco types are the flus-cured tobacco, which is about 80-85% of total production, followed by the air-cured Burley with 10%, and the Oriental type with 3-4%.

Figure 2:World tobacco production 1994-2016.



Source: Universal Corp., 2016

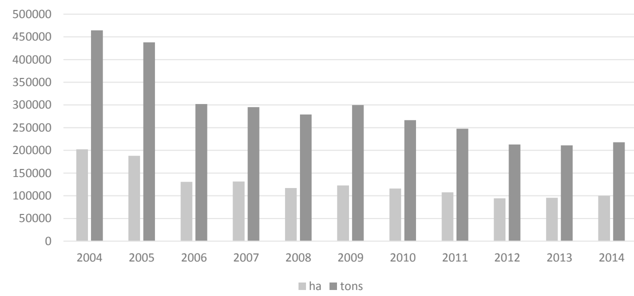
The production is increasing slowly, the last 3 decades it increased with 10%. The estimate for 2017 is a low increase as well. The top producer countries are China (42%), Brazil (12%), India (10%) and US (6%). (FAOSTAT, 2016)

TOBACCO PRODUCTION IN THE EU

In 2015 in the EU, tobacco cultivation represents on 81 000 ha 182 000 tons produced by almost 60,000 tobacco producers (Vedel, 2016). These values are declining strongly in last decades (*Figure 3.*). From 2004 both harvested area and production fell back by 50%. The reason was the change of subsidiary system. In April 2004, the Council of EU Agricultural Ministers decided to reform the raw-tobacco sector along the same principles as the CAP reform of June 2003. The system of production quotas was abolished and financial support decoupled from production. EU Member States covered by the tobacco regime were given a transition period to adjust, between 2006 and 2009. During this period, these Member States could either completely break the link between production and the financial aid provided to the tobacco sector (known as "decoupling") or continue to link part of the provided aid to production. Decoupling aid from production allows producers to grow other crops – if they wish – while maintaining stable incomes.

Since 2010, EU aid has been completely decoupled from production. 50% of the previous tobacco aid was incorporated into the direct payment system. The other 50% went into the EU's rural development programmes, particularly in tobacco-growing regions.

Figure 3.: Tobacco production in EU-28 2004-2014

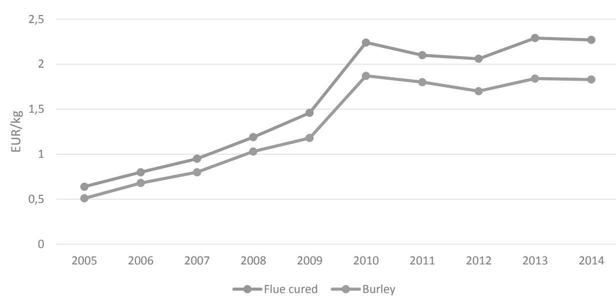


Source: FAOSTAT, 2016.

Tobacco is grown in 12 EU countries. The main producers are Greece, Italy, Poland, Bulgaria and Spain, which account for around 75% of the EU tobacco growing area. There is a trend towards smaller growing areas, mainly due to falling consumption of tobacco products (European Commission, 2016)

To compensate the reduction in support the manufacturers had to raise prices, so in this period the prices tripled (Figured 4.).

Figure 4: Raw tobacco prices in EU 2005-2014

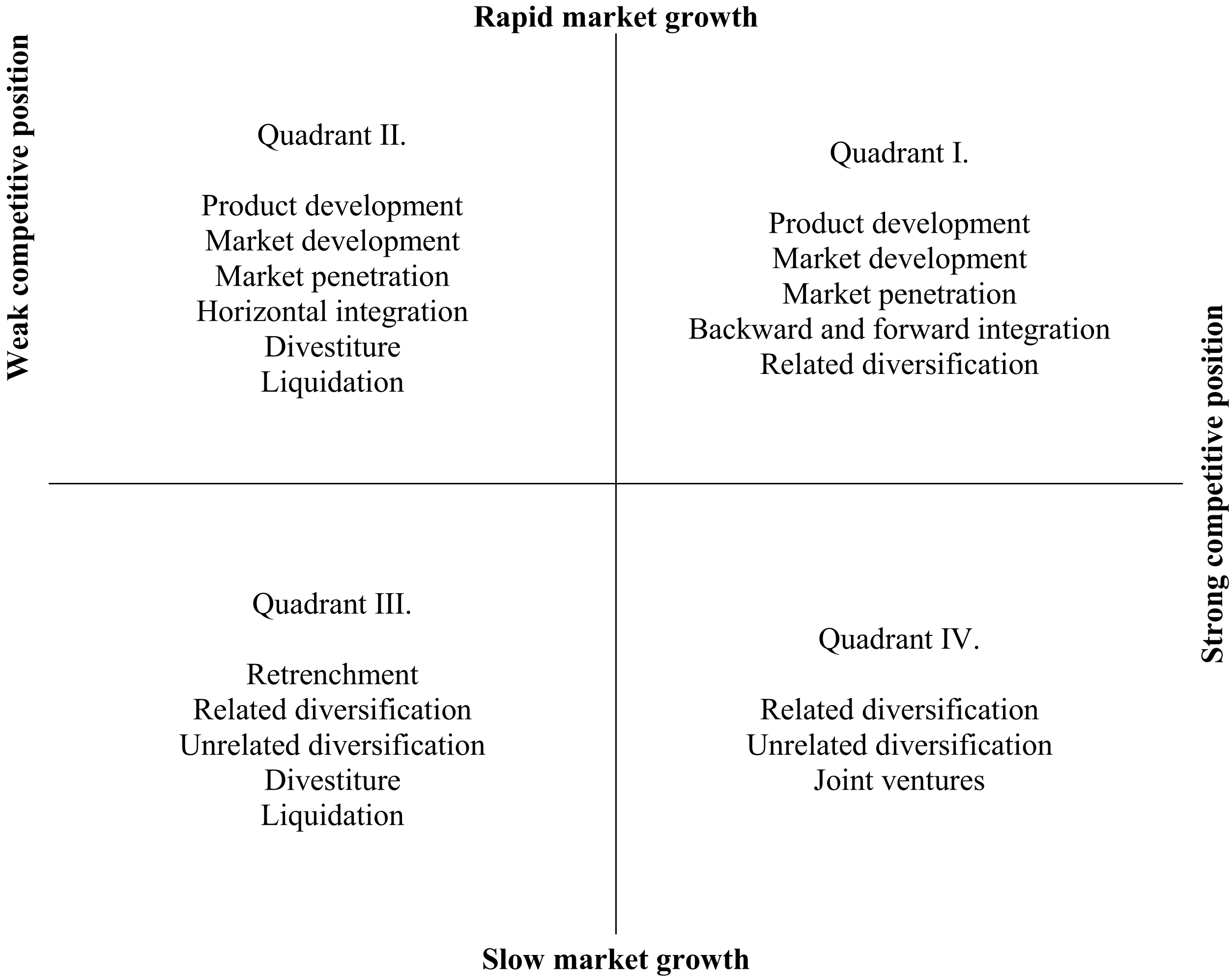


Source: European Commission, 2015

MATERIALS AND METHODS

To analyze the Hungarian tobacco sector it is necessary to analyze the world and within it the European Union situation and trends. For this goal this paper used the most well-known database such as FAOSTAT, EUROSTAT database and the latest reports of European association of tobacco growers and European Commission. The presentation of Hungarian situation based on Hungarian Central Statistical Office' data (KSH) and Hungarian Tobacco Grower's Association's data. After the background analysis the main strengths, weaknesses, opportunities and threats will be highlighted with the help of SWOT analysis. Based on the results of the SWOT we can create different strategic ways which can point at some break points of the sector. Quantified SWOT in this study not only improves the above methods, but also develops them on the basis of the Grand Strategy Matrix (GSM). Matching external and internal critical success factors is the key to effectively generating feasible alternative strategies. In the GSM, the enterprises or in our case the sector is parked in the four quadrants of the coordinate according to their categories (as shown in **Figure 5.**). Quadrant I firms can afford to take

Figure 5: Grand Strategy Matrix



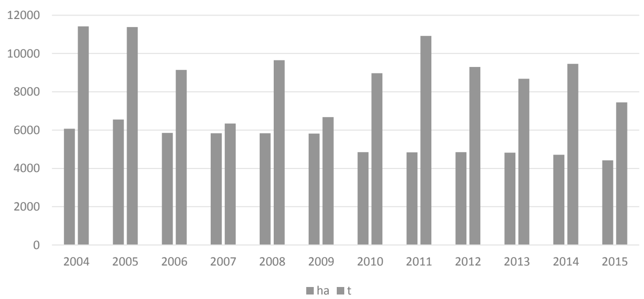
Source: David, 2011

advantage of external opportunities in several areas. They can take risks aggressively when necessary. In Quadrant II need to evaluate their present approach to the marketplace seriously. Although their industry is growing, they are unable to compete effectively, and they need to determine why the firm's current approach is ineffective and how the company can best change to improve its competitiveness. Because Quadrant II firms are in a rapid-market-growth industry, an intensive strategy (as opposed to integrative or diversification) is usually the first option that should be considered. However, if the firm is lacking a distinctive competence or competitive advantage, then horizontal integration is often a desirable alternative. As a last resort, divestiture or liquidation should be considered. Divestiture can provide funds needed to acquire other businesses or buy back shares of stock. Quadrant III organizations compete in slow-growth industries and have weak competitive positions. These firms must make some drastic changes quickly to avoid further decline and possible liquidation. Extensive cost and asset reduction (retrenchment) should be pursued first. An alternative strategy is to shift resources away from the current business into different areas (diversify). If all else fails, the final options for Quadrant III businesses are divestiture or liquidation. Finally, Quadrant IV businesses have a strong competitive position but are in a slow growth industry. These firms have the strength to launch diversified programs into more promising growth areas: Quadrant IV firms have characteristically high cash-flow levels and limited internal growth needs and often can pursue related or unrelated diversification successfully. Quadrant IV firms also may pursue joint ventures (Davis, 2011).

RESULTS

Tobacco growing can be considered as a special small branch of Hungarian agriculture. It has a past of several hundreds of years. As a result of the economic and social changes in recent decades, the tobacco growing regions have moved to the north-east of the country by today, mainly to Szabolcs-Szatmár-Bereg county. The changes in the size of planted areas and in the total crop quantity are shown in *Figure 5*. In the last ten years the size of the planted areas have decreased by 30%. In Hungary there are two types of tobacco, the flue-cured (Virginia) and air-cured (Burley)- The Virgina is the dominant, the ratio of it is about 70% from total production.

Figure 6: size of planted areas and in the total crop quantity in Hungary 2004-2015



Source: MADOSZ, 2016

The average price in case of both Virginia and Burley have tripled in last 10 years, but they are lower than the EU average, about 70% of EU's price level.

STRENGTHS OF THE SECTOR

Among the strengths the strong historical background, well organized production and producer groups can be highlighted even as the favorable subsidiary system in Hungary, as well. Due to the high yield, rising price and subsidies the farmers can realize high income. Other important strengths are the good genetic background, competitive domestic tobacco types, pre-financing possibilities for growers, consultants help and control, and the strict traceability system in the whole sector.

WEAKNESSES OF THE SECTOR

The main weakness is the high production cost which is the consequence of the high labor cost and high energy cost. Significant rate of the growers use old, energy wasting technologies. The other very important weak point is the grey and black market's presence of the sector. Irrigation is not solved in majority of producers.

OPPORTUNITIES OF SECTOR

Among the opportunities the most important is the favorable subsidiary system for tobacco growers. The available subsidies are farm restructuring support (paid on per hectare basis with a minimum of 1.000 work hours and 1.000 commercial revenues). per Hectare payment in case of Virginia and Burley is 2 000 EUR/ha. Beside this the producers are entitled to De minimis aid, which is 1 000 EUR/ha.

Other favorable point that the rural development's role is increasing within the EU, and the tobacco sector fits its goals.

THREATS OF THE SECTOR

Due to the strict regulation in tobacco market (selling, consumption and taxes) the demand in Europe decreased. The Hungarian tobacco is not competitive in developing areas. It is a well-known fact that the European tobacco industry differs from that of the major exporting countries of the developing world in that it produces smaller quantities, but of higher quality, which are more stable and more easily traceable. One of the most topical news was the reorganization of the oldest and biggest producers' work when in this summer the company announced terminating process in Hungary. The previous year they cut down the size of contracted area.

Very important fact, that the EU' subsidiary system changes and the future of it (after 2020) is uncertain, so for the growers planning is difficult. The extreme weather conditions are more and more frequent. And we have to mention the increasing presence of substitute products (e-cigarettes). For the growers one of the main threats is the difficulties of finding workers to the field. The tobacco production's works require unskilled workers but the majority of the works are heavy works and as well as the other agricultural sectors they are periodic.

Form the main strengths, weaknesses, opportunities and threats the sector SWOT analysis can be made **(Figure 7.).** From these factors we can create different strategic ways which can point at some break points to the sector.

In base of GSM the tobacco sector position in Hungary due to its weak competitive position and slow market growth currently belong to Quadrant III. In this part the suggested strategies are:

- Retrenchment
- Related diversification
- Unrelated diversification
- Divestiture
- Liquidation

Worth analyzing some of these strategies.

Some tools that could help achieve these strategies could be:

Cost reduction

For this the analysis of cost structure of tobacco production is necessary.

Table 1: Production cost of tobacco production in Hungary, 2016

	Virginia	Burley
	EUR/ha	
Operating costs	2028	448
Fixed costs	342	290
Labour cost	1384	1777
Indirect cost	3754	2515
Direct costs	**190**	**342**
Production cost	**3944**	**2857**

Source: own calculation, 2016 based on producers and ULT data

Figure 7: SWOT analysis of Hungarian tobacco sector

	STRENGTHS - Suitable genetic background - High yield per hectare - Increasing prices - High income can be realized - Domestically improved tobacco types adapting to local conditions - Tobacco growing farms of several decades' experience - Strong role in rural employment is significant, due to its great requirement of manual work - Production pre-financing by processing companies, good organized integration connections - Well working consultants system - Traceability in all chains from field to consumption	WEAKNESSES - Old, energy wasting technology (drying equipment) - Huge decrease of area in the last few years - Low standard of mechanization - Lack of irrigation - Low exploitation of process capacity - Lack of comprehensive sector strategy - Conflict of interests between representatives of the producers - There is no example of geographical origin protection in the sector - Presence of grey economics in the sector
OPPORTUNITIES - Favorable subsidiary system in Hungary - Role of rural development is increasing within EU - Stabile tobacco consuming standard - Constantly increasing demand for checked products - Communal and national encouragement of growers' cooperation - Demand for high quality products grows - Consumers of medium and top category products are relatively price-insensitive	***S/O Strategies*** • ***Introducing and emphasizing a controllable, traceable, excellent quality certificate*** • ***Involving the sector in the rural developing support system*** • ***Dynamic, united reaction in the EU against the EU Committee***	***W/O Strategies*** • ***Support of irrigation and renewal energy use in sector*** • ***Collaboration with the competent authorities against the grey and black market***
THREATS - The EU support system is changing - The general quality parameter of tobacco products declines by using cheap tobacco available in the world market (e.g. China) - The European tobacco is not competitive in developing area - More and more frequent weather extremes (global climate change) - Defencelessness of processors - High consumer's price due to constantly growing taxes - Legalized tobacco consumption per person decreases - Continuous increase of energy prices - The protest of WTO and health supporters lead to further decline of the sector - Substitute products (e-cigarettes) - Less available workforce in tobacco producer areas	***S/T Strategies*** • ***Urging the creation of an independent and self-propelled support system***	***W/T Strategies*** • ***Reduce production cost through the mechanization of tobacco production or other ways.*** • ***Reorganization in sector (establish new, producers' owned processor companies)*** • ***Liquidation of tobacco production and replace with other plant production***

Source: own construction, 2016

As we can see in *Table 1.* the production cost of tobacco production is very high, in case of Virginia it is almost 4 000 Euro per hectare, in case of Burley 3 000 Euro per hectare. In case of Virginia the operating costs are the highest ratio which comes mainly from the high drying cost (it's 75% of operating costs). As it was noted before one of the reasons of this high cost level is that the majority of dryers are old, often 30-40 years old, and they waste lots of energy.

In case of Burley production the high living labour requirement and the high labour cost is the most important problem. Not just the cost, but the availability of workers means very serious problem for the growers.

For these problems the mechanization and use of the latest technologies could be a solution. The problem that investment cost for a new dryer or a tobacco harvester is very high and because of the uncertain future of subsidiary system and the whole sector the growers can not afford these cost. The other problem in case of harvester, that the utilization requires large scales, but in Hungary the average tobacco farm size is not more than 4 hectares, in case of Burley it is often 2 hectares. So individual farmers can not afford these machines. The efficient use requires integration or producers' group help.

Diversification

Another strategic way could be the diversification of production. In this case the growers have to find alternative crops that they can produce economically. A study made in 2012 in Hungary reflects that in general there is no alternative crop for tobacco production. Because the poor quality soil of tobacco growers the potential sectors are highly limited. In case of grains the required farm size for an acceptable income is very low and the low income per hectare is another problem. For fruit and vegetables production the growers have not any knowledge, equipment and connection, and the investment cost of plantations are high. (Bittner, 2012)

To find other crops it is necessary to know the results of tobacco production. *Table 2.* shows the most significant economic indicator of tobacco production in Hungary.

Table 2: Outcomes of tobacco production in Hungary, 2016.

	Virginia	**Burley**
Yield (kg/ha)	1800	1800
Market Price (EUR/kg)	1,6	1,3
Return (EUR/ha)	2880	2340
Subsidies (EUR/ha)	3000	3000
Production Value (EUR/ha)	**5880**	**5340**
Net income (EUR/ha)	**1936**	**2483**

Source: own calculation, 2016 based on producers and ULT data

As Table 2 shows with the current subsidiary system the growers can realize 2000-2500 euro income per hectare, which is much higher than the traditional crops and grains. It has to be highlighted that without the subsidy the income of the sector is negative. So to maintain this income level the rise of the yield, price and the reduce of the costs are necessary. In case of price the Hungarian prices are lower than the average price in EU by 30%, and there are potential improving possibility in case of yield as well.

Divestiture or liquidation

One of the main strengths of tobacco production, that directly and indirectly it ensures living close to 20.000 people in Hungary in that area, where alternative work and income possibility is strongly limited. The divestiture or liquidation of the sector is contrary to the rural development's goal of European Union.

CONCLUSIONS

The Hungarian tobacco sector is a well-organized sector which ensures acceptable income for growers in tobacco production areas. The situation of the sector in developed country, in EU and in Hungary as well is unfavorable due to the high production cost against the developing country, the changing of EU subsidiary system and the growing taxes and price and strict regulation in the sector. For the Hungarian tobacco growers the future is uncertain as the Hungarian tobacco production is a very small part of the European tobacco sector. For the growers have to prepare the next period in CAP, after 2020, when the subsidiary system will be changed significantly. Due to producing excellent quality, high yield tobacco, reducing costs and rising prices the production can be maintained for the next decades, as well.

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