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## BALANCE OF TOBACCO IN THE REPUBLIC OF MACEDONIA

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#### **ABSTRACT**

In this paper, the authors use mainly statistical data on the quantity of produced, consumed, exported and imported tobacco in the period 2001-2010. According to these data, the authors make the balance of supply and demand of tobacco. By definition, the balance is the difference between the demand and supply of tobacco and tobacco products. The balance is shown in material and financial terms.

Generally, tobacco supply on Macedonian market is greater than the demand. However, the authors also reported that in certain periods, the demand is greater than the available amount of tobacco on the market. The analysis shows negative values for the balance in the research period, i.e. the value of tobacco demand was 158,2% higher compared to the value of tobacco and tobacco products offered on Macedonian market.

Key words: demand, supply, balance

# БИЛАНС НА ТУТУНОТ ВО РЕПУБЛИКА МАКЕДОНИЈА

Во трудот се користени главно статистички податоци за количеството на произведен, потрошен, извезен и увезен тутун во периодот од 2001 до 2010 година. Врз база на овие податоци авторите прават биланси на понудата и побарувачката на тутун. По дефиниција, билансот е разликата помеѓу понудата и побарувачката на тутун и производи од тутун. Билансот го прикажуваат во материјален и финансиски израз.

Авторите утврдиле дека, главно, на пазарот на тутун во Република Македонија се нуди поголемо количество отколку што се бара, но и дека во одредени периоди има поголема побарувачка од расположливото количество.

Анализата на билансот во вредносен израз покажала дека во целиот истражуван период билансот е негативен, т.е. вредноста на побарувачката на тутун е за 158,2% повисока од вредноста на тутунот и производите од тутун што се нудат на македонскиот пазар.

Клучни зборови: побарувачка, понудувачка, била

#### INTRODUCTION

The conventional use of tobacco is a specific business for many stakeholders, households for primary production of tobacco, purchase companies, enterprises for export/import of tobacco as well as enterprises for cigarette production. Considering these facts, it means that tobacco is a culture and a source of existence for a great number of inhabitants in Macedonia. The activities related to tobacco do not have consistent intensity during one year or in the course of many

consecutive years. They depend on the demand, supply of tobacco and tobacco products.

In practice, it is very rare case or almost impossible for equality between the supply and the demand i.e. to maintain balance. When the supply is greater than the demand, there is a positive balance of tobacco and vice versa.

The purpose of this paper is to determine the dynamics of supply and demand of tobacco and tobacco products during a ten year period.

#### MATERIAL AND METHOD

The supply of tobacco and tobacco products consist of the amount of produced tobacco and the amount of imported tobacco while the demand itself is a sum of domestic consumption and the amount of exported tobacco and tobacco products. For all balance elements of tobacco, it was used statistical data published by the State Statistical Office of the Republic of Macedonia for the period 2001-2010. It was also used Statistical Yearbook and Statistical Review: Foreign trade.

The balance of supply and demand of tobacco, as well as of tobacco products was calculated by the following formula:

$$Eq = (Pr + Im) - (CD + Ex)$$

Pr – production of tobacco (purchased tobacco),

Im – tobacco import and tobacco products,

CD – domestic consumption of tobacco and tobacco products,

Ex – tobacco export and tobacco products.

Original data were used from the State Statistical Office for the quantity and value of tobacco, as well as for tobacco export/import. The domestic consumption was calculated according to the following statistical data; annual expenditure for personal consumption of tobacco per household, number of households, average price of cigarettes with filter of I quality group, and technological normative for number of 1 kg cigarettes of oriental tobacco.

## RESULTS AND DISCUSSION

# 1. Quantitative expression of tobacco balance

It is noteworthy to be mentioned that tobacco balance is relatively difficult. The difficulties appear in consequence of the purchasing companies which do not sell (or they cannot at all) the wholly quantity in the same year, but rather they leave some reserves. The state keeps a certain amount of it as commodity stocks, and after several years, it is available on the market.

Furthermore, a certain amount of the import is exported as a finished product, while some amount of raw tobacco cannot be found on the market, i.e. it is not statistically registered, but consumed in the households. Presumably, a small part of tobacco is illegally exported outside the country. All of these facts create problems for the balance of tobacco.

Table 1 - Dy	vnamics o	of tobacco	balance	according to	quantities
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Year		Tobacco quantity, tons	
	Supply	Demand	Balance
2001	25,886	18,014	7,872
2002	25,705	19,880	5,825
2003	26,761	25,398	1,363
2004	26,088	19,249	6,839
2005	28,185	25,357	2,828
2006	28,714	33,414	-4,700
2007	25,605	27,551	-1,946
2008	21,941	24,645	-2,704
2009	27,774	20,007	7,767
2010	35,628	21,804	13,824
Average	27,229	23,532	3,697

Source: Statistical Yearbook of R. Macedonia 2001-2010

It is our hope that in the future, all of the subjects involved in tobacco sector will behave more rationally and that the variations on tobacco market will not be as great as in the past (Figure 1).

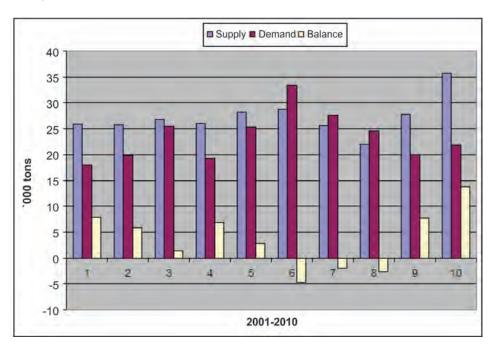


Figure 1- Quantitative balance of supply and demand

However, mostly during the analyzed period, Macedonia offers greater quantity than needed. The data show that the quantity was in highest surplus in 2010 (Table 1). This is due to the fact that in 2010, the supply was the highest (above 35, 6 thousand of tons), with the largest production of (above 30 thousand of tons) and with the largest import of (above 5, 3 thousand of tons). The largest deficit or rather the highest negative balance was recorded in 2006. In that

year, the demand was 16, 4% higher than the supply, due to the impact of the export. That year, Macedonia recorded an export of 32 thousand of tons.

The downward trend in domestic consumption continues to decrease (Filiposki B., 2010). If the export and production continue to decrease, while supply increases, in 2011 and even after, the problems will become tough on the Macedonian market of tobacco.

# 2. Financial expression of tobacco balance

The analysis of data (Table 2) for the financial expression of tobacco balance reveals that during the period of research, the value of demand was higher than the value of supply. This

is due to tobacco higher use and thus, economic value in the process of fabrication. The tobacco prepared for export has also higher quality and economic value.

Table 2 - Dynamics of tobacco balance based on value

	Tobacco value, 000 denars					
Year	Supply	Demand	Balance			
2001	3,550,603	9,005,803	- 5,455,200			
2002	3,602,602	10,029,740	- 6,427,138			
2003	2,753,079	9,335,392	- 6,582,313			
2004	3,403,461	8,008,989	- 4,605,528			
2005	3,984,102	9,488,516	- 5,504,414			
2006	3,858,160	11,767,648	- 7,909,488			
2007	3,134,024	10,782,429	- 7,648,405			
2008	3,321,548	11,937,082	- 8,615,533			
2009	5,304,069	10,830,448	-5,526,379			
2010	6,578,435	10,781,443	-4,203,008			
Average	3,949,008	10,196,749	-6,247,741			

Source: Statistical Yearbook of R. Macedonia 2001-2010

The culmination of difference was reached in 2008, but after, it started to decrease (Figure 2). On the one hand, it was primarily due to decreased export prices, and on the other hand, because of the decline by 17% in annual

expenditure for personal consumption of tobacco per household.

The fact that Macedonia is a good producer of tobacco is a base for further expansion of exports to the old and new markets.

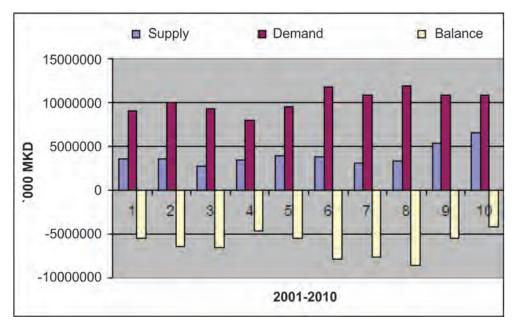


Figure 2 – Financial balance of supply and demand

### **CONCLUSIONS**

According to the results of the research on the supply and demand of tobacco and tobacco products, we can draw the following conclusions:

- R. Macedonia has an extra quantity of tobacco in the domestic market
- R. Macedonia is continuously present on the international market of oriental tobacco in terms of the export. However, while the quantity is decreasing, the price is relatively increasing.
  - Apart from exporting, R. Macedonia

imports mainly Virginia tobacco types, and the quantities are in slight increase.

- During the ten year period (2001-2010), a downward trend was recorded in the domestic consumption.
- Due to the fact that the elements of demand (domestic consumption and export) in the process of processing are with added quality value, they are more economically valued on the market. For this reason, the pecuniary value has been always higher than the supply.

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