



tobaccotaxation

Economic Research Informing Tobacco Tax Policy

Accelerating Progress on Effective Tobacco Tax Policies in Low- and Middle-Income Countries

National Study - MONTENEGRO

Economics of Tobacco and Tobacco Taxation

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Executive Summary

Montenegro is a small, Central Mediterranean country in Southeast Europe, on the Balkan Peninsula, with a coastline at the Adriatic Sea. It covers an area of 13,812 km², with 295 km long coast and 72 km of beaches. The population counts 620,029 people (Survey of 2011). The largest city and capital of Montenegro is Podgorica, home to approximately 185,937 people or 1/3 of country's entire population.

Supply of tobacco products

The tobacco market and industry consist of: importers and exporters of tobacco, wholesalers, retailers, tobacco producers and tobacco manufacturers. Production of tobacco products (raw and final goods) has a marginal share in the structure of agricultural production in Montenegro. Until 2000, the production of tobacco had a high share on the market. But since then, the level of tobacco growing as well as cigarette production has reduced. The reduction has occurred mainly due to the dominance of new cigarette brands that are based on a mixture of different sorts of tobacco and the 2016 liquidation of Montenegro's main domestic producer Duvanski kombinat Podgorica (DKP) after 113 years of existence. Additionally, because of the market size, it was unprofitable for foreign investors to enter the market. Consequently, the number of households that grow raw tobacco, as well as the number of employees in the tobacco manufacturing sector, has dropped significantly.

The tobacco manufacturing industry experienced changes when DKP was acquired by BMJ Industries FZ, from UAE. In May 2018 BMJ Industries started processing or raw tobacco and production for export. Additionally, according to the National Registry of Tobacco Manufacturers (Tobacco Agency), there is only one other registered domestic company, Montenegro Tabaco Company, LLC, whose main focus is on exports. There are seven wholesalers and approximately 2,000 retailers of tobacco products in Montenegro, mainly concentrated in Podgorica. Even though there has been a reduction in tobacco production, the sales of cigarettes and other tobacco products (retail and wholesale) have experienced growth starting from the year 2000. Finally, it is important to notice that the tobacco market in Montenegro largely depends on imports and exports of cigarettes, due to a negligible production. Except for 2006-2010 raw tobacco trend variations, imports of tobacco products (cigarettes and raw tobacco) accounted for a large share of the industry.

Demand for tobacco products

The prevalence of smoking in Montenegro is high, with a trend that is increasing. Results from 2017 show an increase in smoking prevalence in the adult population to 35.4%, compared to 31% in 2012. – increase of 5% points. The share of male prevalence has remained stable from 2000 onwards. Female smoking rates have increased to 34.5% in 2017, an increase of 7.5% over the 2012 rate of 27%. The average number of cigarettes smoked per day in 2012 was 20 or more (67% of active smokers). The average number of cigarettes smoked per day in 2017 decreased slightly but it was still high: almost half of active smokers smoked 10 to 20 cigarettes per day, and more than one third (33.4%) smoked more than 20 cigarettes per day. The increase in smoking rates is alarming, especially because of its potential drastic impact on population health. Results from

ESPAD, GYTS and Institute of Public Health also showed an increasing trend of smokers, especially among the youth. Results of the recent research by the Institute of Public Health in 2017 showed total smoking prevalence of 18.7%, with higher share of female (19.1%) over male (18.3%).

Even if prevalence was increasing, consumption showed a decreasing trend (78% decrease in period 2000-2017). The contradictions in consumption data could be a result of illicit trade in tobacco. Still, it could be explained by the significant increase of retail prices in the last two decades.

Tobacco taxation and pricing policies

Montenegro has begun the creation of an institutional and legal framework for tobacco policies by adopting four key laws: the Law on Tobacco, the Law on Limiting Use of Tobacco Products, Law on Excises Taxes and Law on Ratification of the the World Health Organization Framework Convention on Tobacco Control (WHO FCTC). The Law on Excise Duties was adopted in 2001, but it was amended several times as a consequence of the need to increase tax revenues in compliance with EU Directives. Mixed systems of tobacco and specific and ad valorem taxes on cigarettes were introduced in 2005. These laws, with annexes, represent the legislative basis for the development of the National tobacco control policy. Additionally, the adoption of the Strategy for Health Care Development and National Strategy for Tobacco Control was the main step in Montenegro's efforts to adopt tobacco measures and strategic approaches to increase awareness of Montenegrin society about the harmful effects of tobacco consumption. The Government of Montenegro, as a signatory to the WHO FCTC, encourages the reduction of tobacco use through a set of smoking control measures. In accordance with the adopted cross-sectoral approach, smoking control measures are implemented through activities of Ministries, Governmental Agencies and Institutions, as well as NGOs (having different levels of participation in tobacco control activities). Four crucial strategies were adopted: National Strategy for Health Care Development, National Strategy for Tobacco Control, Strategy for Prevention and Control of Chronic Non-communicable Diseases and National Strategy for Elimination of Illicit Trade of Tobacco Products.

The tobacco tax structure includes a specific tax currently amounts of EUR 30 on 1000 cigarettes and an ad valorem tax of 32% of the weighted average price of cigarettes (WAPC). Excise taxes were increasing until 2018, when the excise timetable was changed due to a drastic decrease in public revenues in the first half of the year. Nevertheless, Montenegro is aiming to fulfill the EU Directives. Excise tax requirements are partially in line with the *Council Directive 2011/64/EU*. In 2018 the value added tax (VAT) increased from 19% to 21%. Consequently, the WAPC increased over the observed period. Public revenues from tobacco share in GDP vary from 0.7% to 1.70% which is significant. Moreover, share of tobacco consumption in GDP is also important, as the share varies between 1.47% and 2.52%. Finally, the share of excise in public revenues generated by tobacco is, as expected, much higher than that of VAT.

Elasticity of tobacco products

In this study we analyzed tobacco taxation policies and their impact on tobacco consumption or demand in Montenegro. To estimate the sensitivity of cigarette demand to price and income changes, we applied Macro and Micro (HBS) analysis.

Macro analysis used annual time series aggregate data on income and public policies from 2001 to 2017. We estimated cigarette demand function using conventional static demand models, presented in linear functional form, by applying time series methodology. Results of the estimation indicate a negative price elasticity of cigarettes which amounts to -0.68. Price elasticity in the short-run is estimated in a range from - 0.46 to -0.52.

Micro analysis was based on data from the Household Budget Survey (HBS) related to cigarette consumption. Results of the estimation (Deaton's model) indicate a negative price elasticity of cigarettes which amounts to -0.619. On the other side, the estimated value of total expenditure elasticity is positive, which was expected, and amounts 0.232

Accordingly:

- *Assuming no changes in excise taxes (specific and ad valorem) but taking into account only the effect of increase in income, we would have not significant changes: the increase in consumption, total excise, VAT and total tax revenues of only 0.81%.(Scenario 1)*
- *If excise taxes increase, specific from EUR 30 per 1000 pieces to EUR 40 per 1000 pieces, ad valorem by 2%, the price increases by 12.3%, consumption decreases by 7%, and revenues increase by 8%.(Scenario 2)*
- *If excise taxes increase, specific from EUR 40 per 1000 pieces to EUR 50 per 1000 pieces, ad valorem by 2%, the price increases by 23.8%, consumption decreases by 14%, and revenues increase by 12.35%.(Scenario 3)*

These changes were used to simulate the effects of the scheduled increases in excise taxes that were supposed to be implemented. But from September 1st 2018, the specific excise was decreased from EUR 40 to EUR 30, and will now increase gradually leading to a specific excise of EUR 47.5 in 2024.

Analysis of the tobacco market and regulatory environment suggests that the increase of excise and other taxes on tobacco have important direct impact on the reduction of cigarettes and other tobacco product consumption. The same results were obtained using macro (annual time series aggregate data in period 2001-2017) and micro analysis (Household Budget Survey in period 2005-2017). Our first estimates of long and short run price elasticity show that this direct impact is strong and very much in accordance with results obtained so far for other low- and middle-income countries.

Recommendations

Following the analysis of the tobacco market, this study proposes the following key recommendations:

- Aiming toward the *increase in excise taxes* (especially specific excise since it has a relatively greater impact on consumption) which will cause the price increase and consequently the *decrease in tobacco consumption* and *increase of public revenues*;
- Tobacco tax systems should be structured to minimize the costs of compliance and administration in process of tax compliance and collection of tax revenues, while reducing tax evasion and the risk of illicit trade;
- Using revenues from excise tax increase to invest in health programs;
- Developing regional tax harmonization - harmonize taxation policy process and limit incentives for cross-border transactions;
- Creating positive effects of fiscal measures applied through comprehensive approach - tackling other policy changes and tobacco control systems (more efficient law enforcement, anti-tobacco campaigns, stricter controls of points of sales etc.);
- Aiming towards full compliance with excise tax requirements of the *Council Directive 2011/64/EU*;
- Creating more intensive interaction between key stakeholders in order to more effectively implement tobacco taxation and control policy;
- Decreasing direct health care costs and number of diseases through excise taxes increase.
- Decreasing the prevalence of youth smoking through increases in excise taxes and creation of strategies and effective programs which will target youth who have limited funds and are sensitive to tobacco price increases.

The structure of this study is as follows: the first chapter gives an insight into Montenegrin economy and the second chapter is focused on tobacco production. The third chapter gives a detailed analysis of tobacco demand and consumption on the market. The fourth chapter is dedicated to tobacco taxation strategies and policy. The applied macroeconomic analysis of the effect of tobacco taxes on tobacco demand is explained in fifth chapter. The aim of the sixth chapter is to develop the opportunities for effective Policy Dialogue. Concluding remarks are given in the final chapter.

1. Introduction

1.1 Country general info

Montenegro is a small, Central Mediterranean country in Southeast Europe, on the Balkan Peninsula, with a coastline at the Adriatic Sea. It covers an area of 13,812 km², with 295 km long coast and 72 km of beaches. The population counts 620,029 people (per Census 2011). The largest city and the capital of Montenegro is Podgorica, with a population of 185,937 or about 1/3 of the country's entire population.

The economy is open, yet vulnerable to external shocks, as it depends heavily on external capital inflows and tourism. The transition to a market economy is still an ongoing process – apart from successful privatizations in various sectors, there is still a need for restructuring state-owned enterprises (SOEs), cutting costs in public sector and forcing industrial development. Montenegro started negotiations with the EU in June 2012 and strives to join by 2020. In order to achieve that goal, Montenegro must maintain macroeconomic stability, decrease rapidly rising public debt, high fiscal deficits, and unemployment rate.

2017 was characterized by strong economic growth, even along with fiscal consolidation measures implemented [26]. The **GDP** in current price amounted to EUR 4,236.5 million (preliminary Monstat data), with a real growth rate of 4.3%. The main drivers of the economy were projects in infrastructure, tourism, energetics, as well as growth in household consumption due to the increase of inflows from tourism. Even though exports rose by 2.2%, the import of goods is still higher for 5.3%. The positive economic growth trend continued in 2018, with a real GDP growth of 4.5%.

The average **inflation rate** was 2.4% according to the projections. It is important to mention that at the beginning of 2018, the VAT increased from 19% to 21%, as well as excise taxes on tobacco, which led to short-run increase of prices. This is the reason for the annual inflation rate increase to 3.1% in May 2018, mainly due to the increase of tobacco prices and alcohol beverages.

Labor market – According to the Labor Force Survey, the unemployment rate in 2017 was 16.1% or 43,900. On the other hand, 229,300 or 83.9% of the people were employed. The number of employed persons in comparison with the previous year has increased by 2.3%, and the number of unemployed persons has decreased by 9.1%.

The average gross **wage** amounted EUR 760, 1.9% higher than in 2016, while the average net wage increased by 2.2% and amounted EUR 510 in comparison to the year 2016.

The country profile and main real sector indicators in period of 2012-2017 are given in the following tables:

Table 1.1. Country profile

General info	Data	Note
Region	Central Mediterranean, South East Europe	
Income Category (2017)	Upper middle-income country	WB
Population (Survey, 2011)	620 029	Monstat
Surface area (sq km) (2017)	13,812 km ²	
Capital city	Podgorica	

Table 1.2. Macroeconomic indicators

Real sector						
Indicators	2012	2013	2014	2015	2016	2017
GDP in current price (mil EUR)	3,181	3,362	3,458	3,655	3,954	4,237
GDP real growth in %	-2,7	3,5	1,8	3,4	2,9	4,3
GDP per capita	5.126	5.412	5.561	5.826	6.354	6.833
GDP per capita PPP (international dollar)	13,990	14,666	15,353	16,123	17,022	18,765
CPI annual growth at the end of the period in %	5,1	0,3	-0,3	1,4	0,9	1,9
Number of employees	201,000	201,900	216,300	221,700	224,200	229,300
Unemployment rate	19.7	19.5	18	17.6	17.7	16.1
Average monthly gross wage	727	726	723	725	751	765
Average monthly net wage	487	479	477	480	499	510
FDI mil EUR	461,6	323,9	353,9	619,3	371,6	474,3
FDI (% GDP)	14.5	9.6	10.2	16.9	9.4	11.2

Source: Statistical office of Montenegro - Monstat and World Development Indicators

1.2. Basic Insight into Montenegrin Tobacco Industry

The tobacco industry – Tobacco has had a long history in Montenegro. Between the end of the 19th century and the beginning of the 20th century, Duvanski kombinat Podgorica was organized as a state monopoly. After World War II, the enterprise was restructured and it entered the tobacco industry. Until 2000, the production of tobacco by the domestic company had a high share in the market. But during the last two decades, the level of tobacco growing was reduced significantly – from 130 tons in 2000 to 30 tons in 2017 [24]. The number of households engaged in tobacco leaf growing was also significantly reduced – from approximately 200 in 2000 to 39 in 2017. Tobacco leaf plants are now concentrated only in Tuzi, a municipality of Podgorica. The number of employees in tobacco manufacturing from 2002-2017 was reduced more than six-fold.

Reduction occurred mainly due to the dominance of new cigarette brands that are based on mixture of different sorts of tobacco and liquidation in 2016 of the main domestic producer Duvanski kombinat Podgorica (DKP) after 113 years of existence. Additionally, because of the market size, it was unprofitable for foreign investors to enter the market.

DKP was acquired by BMJ Industries FZ, from UAE. BMJ Industries FZ has invested EUR 18 million so far in their factory, and plans additional investments in equipment. Their goal is not only to produce final goods, but also to process raw tobacco. Currently, they have 21 employees, and plan to increase that number up to 53 employees in three shifts. The production will be prepared only for export, based on prearranged sales. The domestic market is not interesting for this investor because of its size and small demand. A new cigarette factory, Novi Duvanski kombinat Podgorica (NDKP), started production in May 2018.

According to National Registry of Tobacco Manufacturers, there is only one registered company, MONTENEGRO TABACO COMPANY, LLC, that is mainly focused on exports.

National Registry of Tobacco products Wholesalers consists of 7 companies [37]:

- *Bar – Kod*, LLC, Podgorica;
- *Neregelia*, LLC, Podgorica;
- *NTC*, LLC, Nikšić;
- *DMD DELTA*, LLC, Podgorica;
- *S Press +*, LLC, Tuzi, Podgorica;
- *Montenegro duvan comerc*, LLC, Mojkovac, and
- *Ataco – Trgovina i Zastupanja*, LLC, Danilovgrad.

A company from Niksic, NTC, imports and sells cigars and accessories for cigars. Because of the high price, the percentage of sales from these products in total retail sales is negligible.

There are approximately 2000 retailers of tobacco products in Montenegro, mainly concentrated in Podgorica [36].

2. SUPPLY OF TOBACCO IN MONTENEGRO

Market or industrial organization analysis of the tobacco market includes an analysis of the structure and behaviour of all sectors involved in producing, processing, and consuming tobacco products. There are several sectors involved in this market:

- The first sector is a part of agriculture and refers to the production of tobacco dried leaves by **farmers**, which is being sold as raw material either to domestic or foreign manufacturers. In fact, this sector generates part of its supply of primary tobacco. Needless to say, foreign producers are also a part of total supply of raw tobacco.
- The second sector is tobacco based **manufacture**, which produces cigarettes and other products from tobacco dried leaves, which is the main production input. In the case of Montenegro, cigarettes account for almost all the production and consumption of tobacco. Other products do not play any significant role either due to their high price or lack of consumption habits. Domestic and foreign manufacturers generate demand for tobacco leaves, and supply of cigarettes and other products.
- **Export-Import sector** agents and retailers contribute significantly to both demand and supply of both raw tobacco and final products.

The two most important components of Montenegro's tobacco industry are **raw tobacco and cigarettes and other final products**. The supply of raw tobacco is determined by the behaviour of domestic producers and raw tobacco importers. The second market refers to **cigarettes and other final products, which** is determined by the behaviour of producers and importers of tobacco manufacture final products.

Apart from behaviour of the aforementioned stakeholders, it is important to recognize the crucial role played by the Ministry of Finance as a policymaker and as a regulator of the tobacco market through excise policies.

2.1. Farming Sector & Tobacco Growing

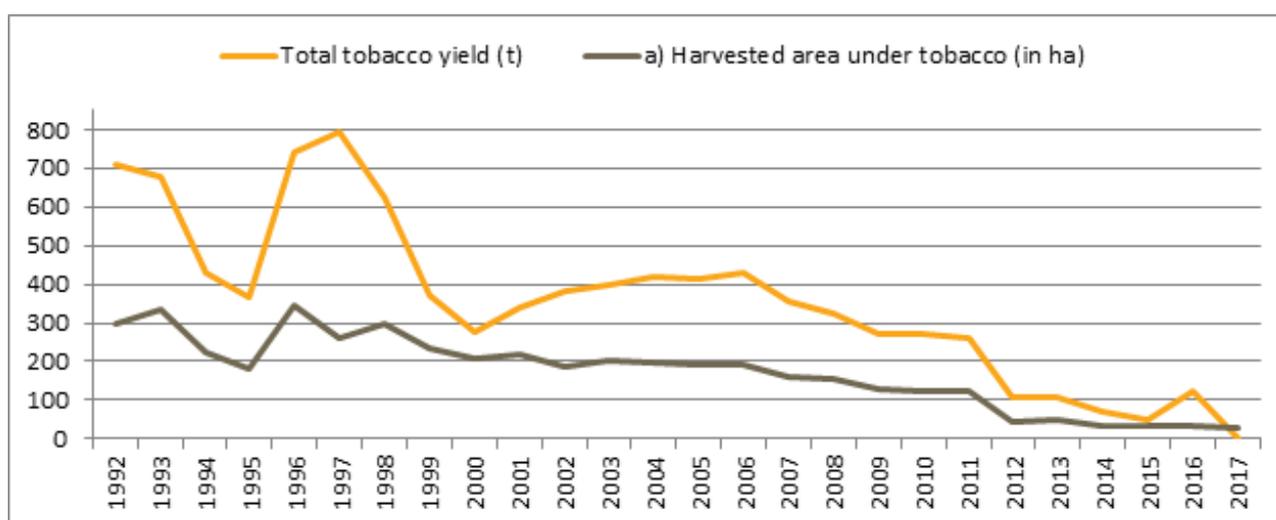
The primary reason for farmers' activity in growing tobacco is to sell dried leaves to tobacco manufacturers and to those who either like to smoke roll your own cigarettes or cannot afford to buy more expensive ones. Historically, this kind of tobacco activity used to be very important. However, in the last two to three decades, the level of tobacco growing was reduced significantly due to the dominance of new cigarette brands that are based on a mixture of different types of tobacco. *Duvanski kombinat Podgorica*, now renamed *Novi Duvanski Kombinatski Podgorica* (NDKP), is a leaf buying company, which in 2017 bought 31.550 kg of tobacco leaf with value of EUR 53.961,08, which was produced on 25,81 hectares. This represents a decrease of 37,08% comparing to the previous year 2016¹.

¹ Ministry of Agriculture and Rural Development

It is well known that to produce dried tobacco leaves, which is the raw material for tobacco products, Montenegro has above average natural and economic conditions. There is an optimal combination of soil and climate factors, as well as irrigation options. On the top of that, the tradition of farming tobacco is century long, implying the existence of necessary knowledge for farming raw tobacco. Unfortunately, there are also a number of factors with negative effects resulting in insufficient and inadequate utilization of existing natural capacities, with existing production indicating a huge unused potential.

Graph 2.1 illustrates the level of activity of tobacco farming from 1992-2017 [35, 24]. Note that both indicators, harvested land under tobacco measured in hectares and tobacco yield, have strong and long run declining trend. This declining trend indicates two things. First, variability of both figures indicates lack of adequate policy toward this culture. The peak of the observed period is reached in 1996 for harvested land under tobacco and after that we have permanent decline. Variability in the same period can be noticed in the case of tobacco yield. Second, as already told, both figures show, apart from volatility, permanent decline of this part of agriculture.

Graph 2.1: Level and Dynamic of Tobacco Growing

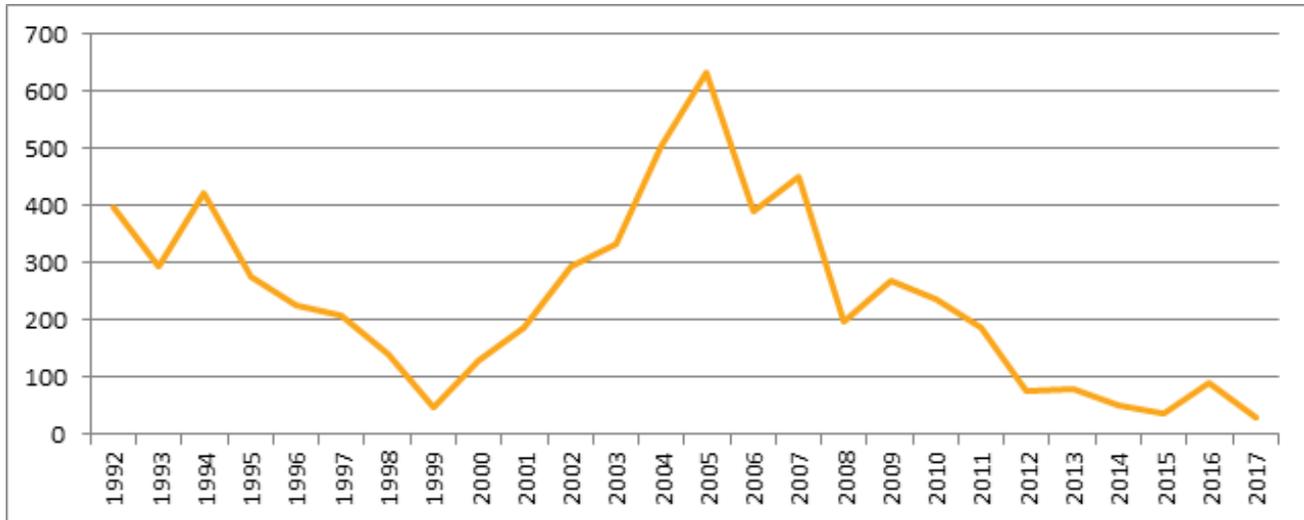


Source: Statistical office of Montenegro and Ministry of Agriculture

Additionally, the number of tobacco farmers also experienced strong decline in observed period (from approximately 1,000 households in 1992, to 39 households in 2017).

Graph 2.2. [35, 24] presents level and dynamics of dry tobacco leaf yearly purchase and brings additional insight into the tobacco market. Apart from already noticed, notorious volatility, we can notice steadily and strong decline in period from 1992 to 2017. Decreasing trend of tobacco manufacture in Montenegro must be followed with decrease of raw tobacco production, purchase of that tobacco, number of farms dealing with tobacco production, land under the tobacco culture etc.

Graph 2.2 Raw Tobacco Purchase (in tons)



Source: Statistical office of Montenegro and Ministry of Agriculture

2.2. Tobacco Based Manufacture – Production of Cigarettes

Tobacco based manufacture, just like tobacco farming, experienced a strong decline from the beginning of 1990s to the present day, due to the privatization processes of state owned companies in the region. The number of employees in tobacco manufacture, for example, reduced more than six times. According to National Registry of Tobacco Manufacturers, there is only one registered company, Montenegro Tabaco Company, LLC. One more cigarette factory, NTP (NDKP) - Novi Duvanski kombinat Podgorica, started with production in May 2018².

Regarding the production of finished products, made dominantly of cigarettes, it can be said that processing capacities enabled continuous supply of consumers for a long period of time before restructuring of DKP, which was the only domestic producer at that time. Domestic production at that time used to depend to a large extent on domestic consumption (Serbian and Montenegrin market until 2004), inventories level and quantity of cigarettes from import-export balance. Graph 2.3 presents dynamics of domestic production, made at that time when DKP was sole producer [35].

² <http://www.aduvan.co.me/vijest.php?id=43>

Graph 2.3. Dynamics of cigarettes production 2000-2016 (in millions of pieces)



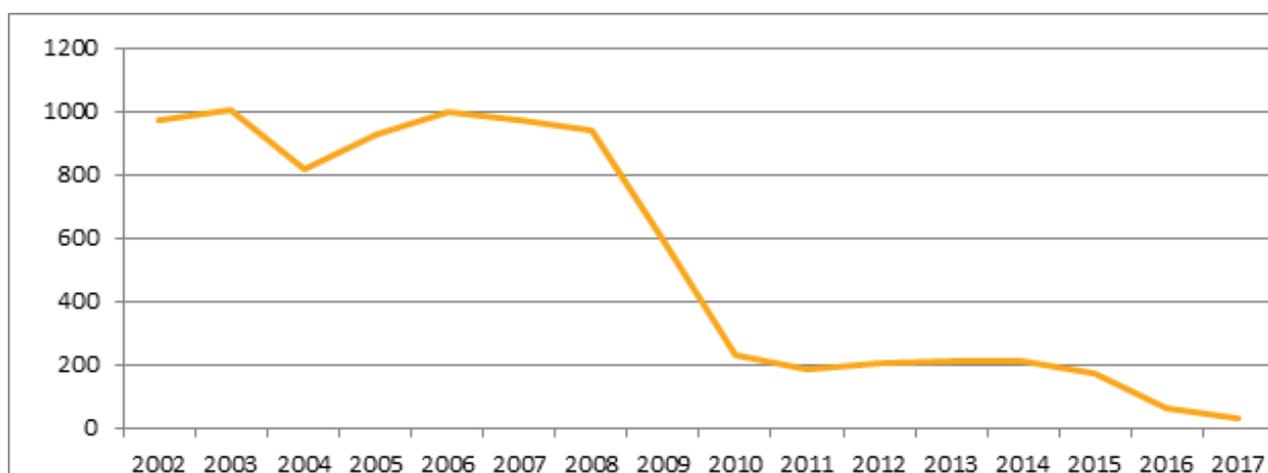
Source: Statistical office of Montenegro

As we can notice (from Graph 2.3.) domestic production of cigarettes, apart from significant volatility, shows substantial and permanent decline in the entire period from the beginning of nineties. DKP, the sole producer of cigarettes in Montenegro during that period, developed a relatively diversified product mix and assortment in order to expand its market share.

First, to a great extent the decline in production is the result of the process of privatization within the region. Strong foreign brands started to penetrate the domestic markets and started to gain domination over time. This was also due to the privatization of Serbian Niš and Vranje cigarette factories.

Second, when Montenegro gained its independency, the import from Serbia became the most reasonable way to satisfy the domestic tobacco market demand. Graph 2.4 presents visualization of employment movement in tobacco manufacture [35].

Graph 2.4. Dynamics of employment in tobacco production, 2001-2016 (number of employees)

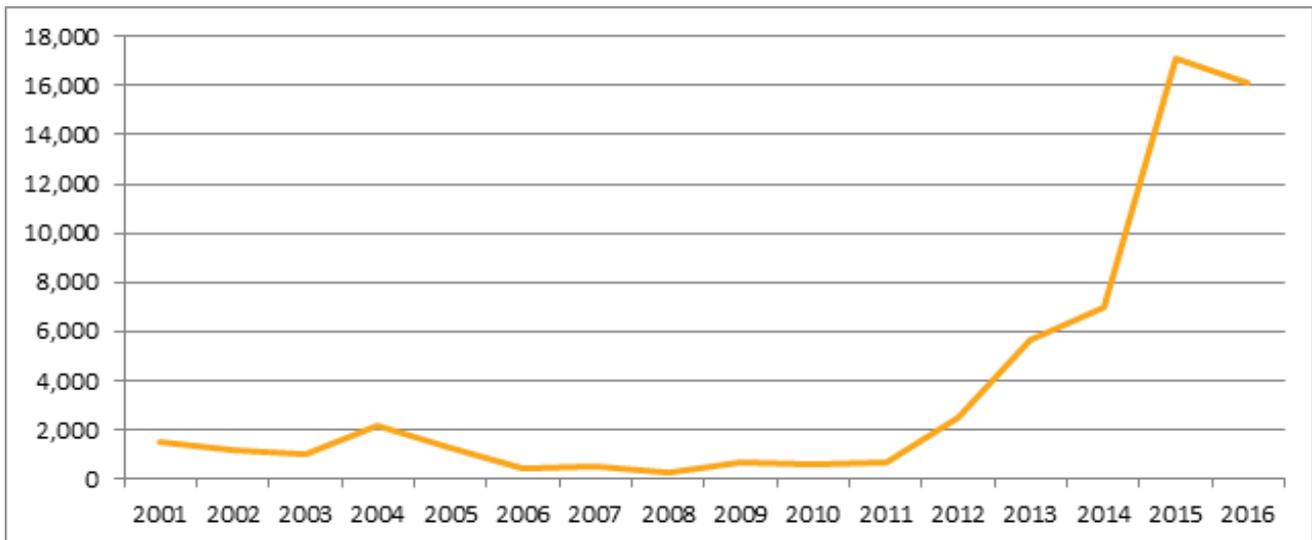


Source: Statistical office of Montenegro

Movement of employment shows the same sharply declining trend. Compared to graph referring to production movement, this one is less volatile which is natural given that employment cannot be as volatile as production even in countries with the most flexible labour markets.

Consequences for movement of labour productivity are obvious, following the increase in production as can be seen from Graph 2.5.

Graph 2.5. Labour productivity dynamics in tobacco manufacture, 2001-2016



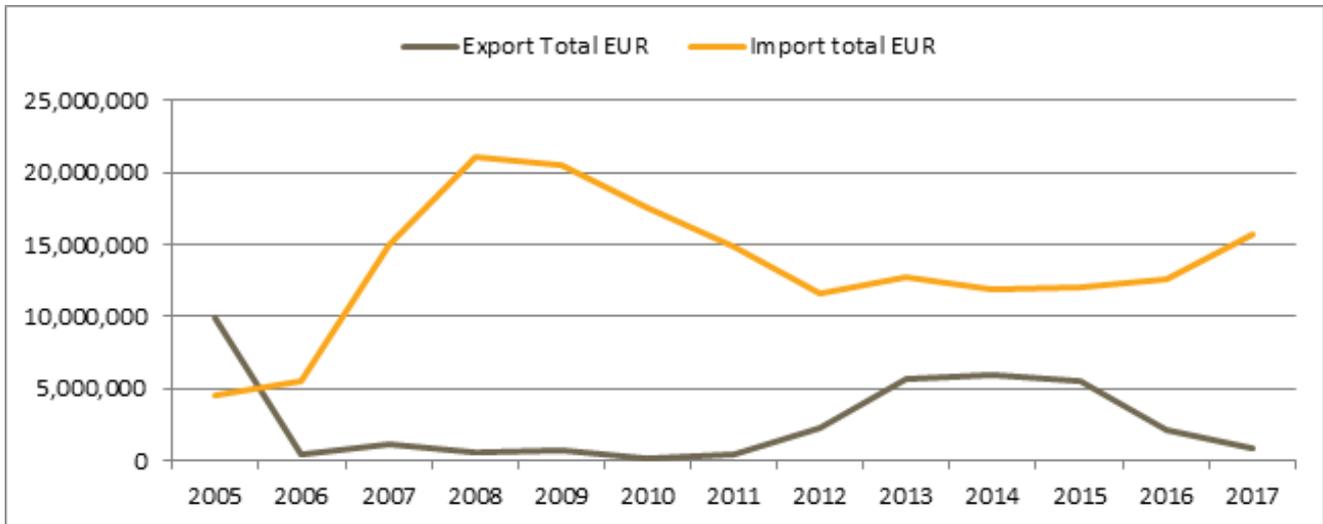
Source: own calculation

2.3. Import & Export of Cigarettes

Imports and exports of cigarettes recorded variations in trends from 2005-2017.

Graph 2.6 shows the movement of total export and import (export and import include raw tobacco, cigarettes, and other products). The value of imports became larger comparing to exports in the very beginning of the same period. Over the whole period observed, imports of tobacco products had a growing share. Considering yearly changes, imports are increasing, while export are decreasing until 2008, when tobacco trade deficits started to increase. Afterwards the movement went to the opposite direction until 2014 implying reduction of tobacco trade deficit. After 2014 trade deficit related to tobacco again shows an increasing trend.

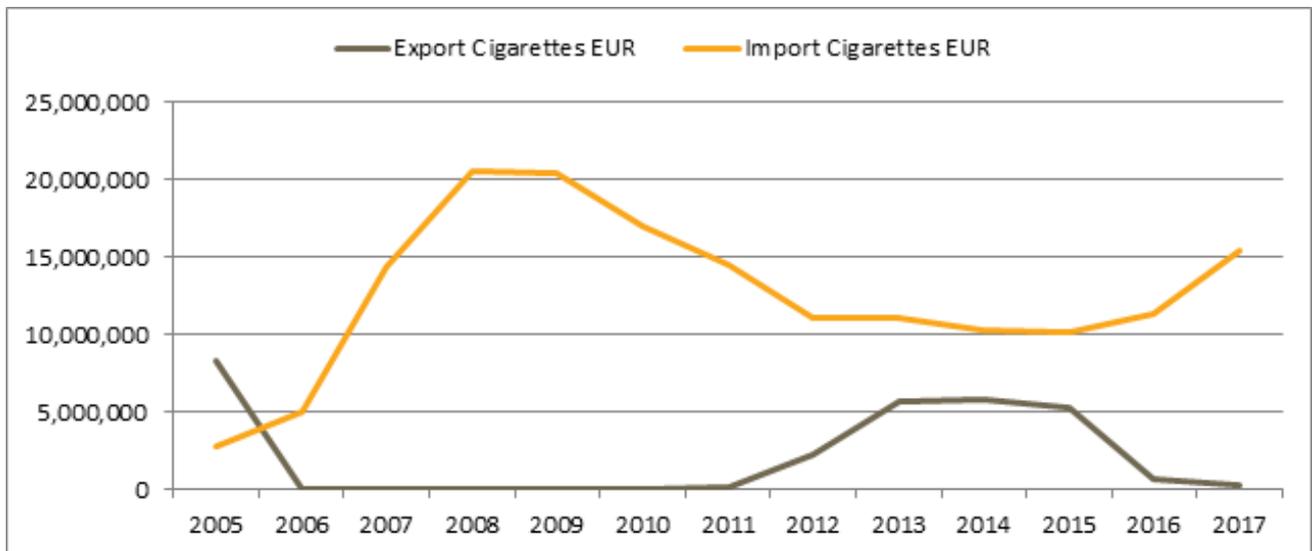
Graph 2.6. Movement of Export and Import of Tobacco



Source: Statistical office of Montenegro

As cigarettes are the product which is mainly imported and exported, we can see practically the same trend in Graph 2.7, comparing total import and export of tobacco products.

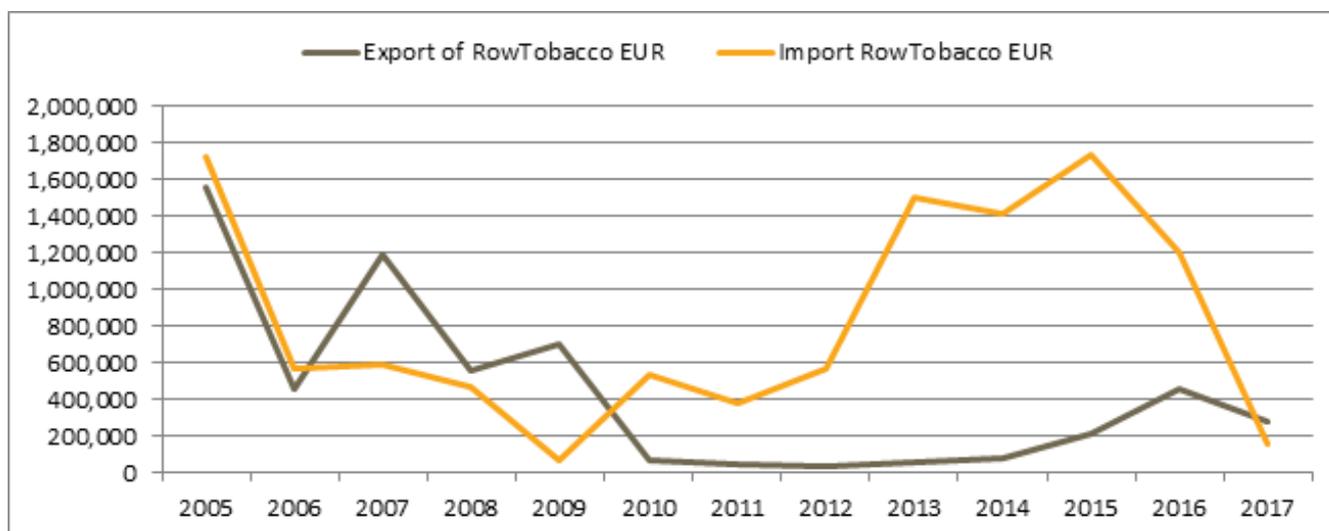
Graph 2.7. Export and Import of Cigarettes



Source: Statistical office of Montenegro

Movement of raw tobacco export and import value is presented in Graph 2.8. Even though the trend is different, compared to tobacco products and cigarettes, still the share of import is much higher in the observed period (especially starting from 2010).

Graph 2.8. Export and Import of Raw Tobacco



Source: Statistical office of Montenegro

Table 2.1 shows the main exporters and importers of tobacco products.

Table 2.1. Main Exporter and Importers in Montenegro

Major Tobacco Exporters	A.D."Novi Duvanski kombinat"
	D.O.O."Partner Company"
	D.O.O." National Trade Of Montenegro - 1"
	D.O.O."Slavka"
	D.O.O." Influence & Co.me"
	D.O.O." Montenegro Tobacco Company "
	D.O.O. "LIBERTY FZE"
Major Tobacco Importers	A.D."Novi Duvanski kombinat"
	D.O.O." Montenegro Tobacco Company "
	D.O.O."Bar - Kod".
	D.O.O."Partner company"
	D.O.O."NTC"
	D.O.O."DMD DELTA"
	D.O.O."PLUS"
	D.O.O."Ataco – Trgovina i Zastupanja"
	D.O.O."Neregelia"
	D.O.O."SENSO"
	D.O.O."LIBERTY FZE"

Source: Tobacco Agency

3. DEMAND FOR TOBACCO PRODUCTS

3.1. Smoking prevalence in the country

Most recent relevant research *Study of quality of life, life styles and health risks* done by the Institute of Public Health in 2017 (Centre for health promotion) in cooperation with European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) shows that Montenegro has a problem with addiction to tobacco [10]. Estimates show that 2017 smoking prevalence in the adult population is above prevalence rates found for 2008 and 2012 (Table 3.1.).

Table 3.1. Smoking prevalence of adult population – by gender and total

Data description	2000	2008	2012	2017	Source
Number of Tobacco Smokers (number)				155089	Institute of Public Health, WHO
Smoking Prevalence by Gender (male %)	52.4	35.9	35	36.2	Institute of Public Health, WHO
Smoking Prevalence by Gender (female %)	36	29	27	34.5	Institute of Public Health, WHO
Smokers as a Percentage of Adult Population (%)	43.8	32.7	31	35.4	Institute of Public Health, WHO

Source: Institute of Public Health (Survey 2000, 2008, 2012, 2017)

According to data, we can draw several conclusions regarding *adults* smoking habits in Montenegro:

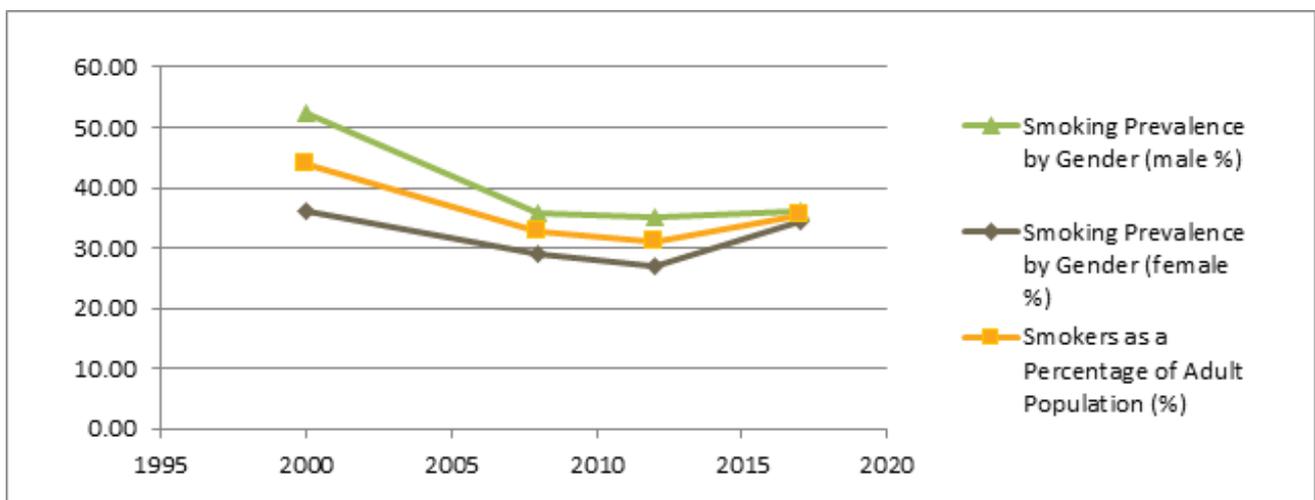
- There was a significant decrease in prevalence of adult population from 43.8% to 31% in period the 2000-2012.³
- Results of the last research 2017 show an increase in smoking prevalence of adult population to 35.4%, comparing 31% in 2012 – increase of 5% points.
- The share of adult male and female smoking population decreased comparing 2008, 2012 and 2017 with the year 2000. Still we must notice significant change of female share smoking in 2017, which increased for 7.5% comparing 2012. Adult male share has increased for just one percentage points (from 35% in 2012 year to 36.2% in last year).
- The average number of cigarettes smoked per day in 2012 was 20 or more (67% of active smokers). The average number of cigarettes smoked per day in 2017

³ These Surveys are based on the same methodology

was slightly decreased, but still high: almost half of active smokers smoke 10 to 20 cigarettes per day, and more than one third (33.4%) smokes more than 20 cigarettes per day.

As the decreasing trend of adult smoking prevalence during past 17 years changed its path toward an increasing one in last year, we can conclude that the survey results are alarming, especially because of the significant change and potentially drastic impact on population health (Graph 3.1.).

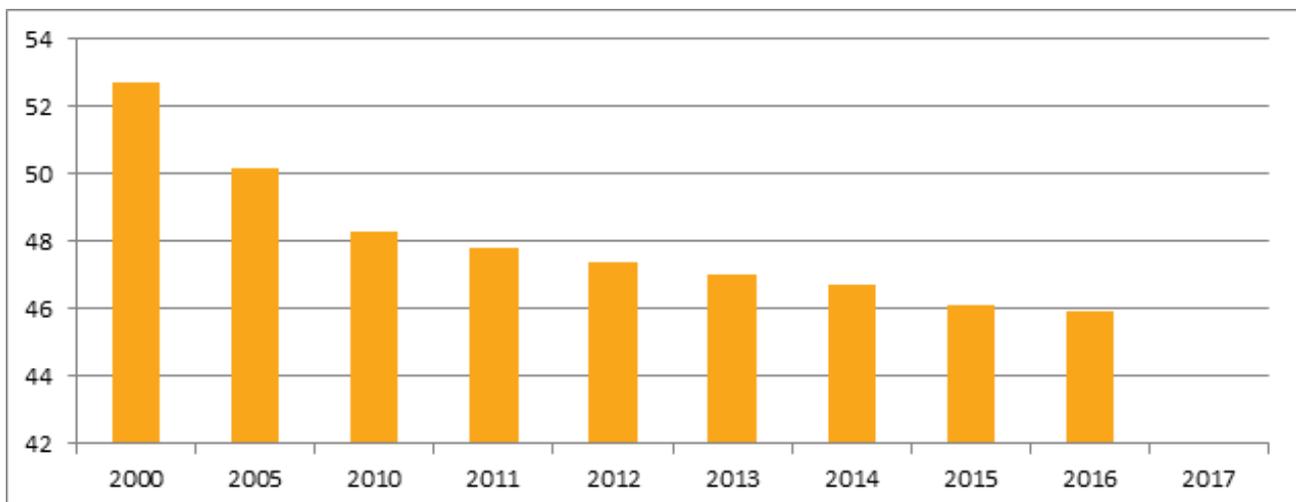
Graph 3.1. Smoking prevalence by gender (adults)



Source: own calculation based on Institute of Public Health data (Survey 2000, 2008, 2012, 2017)

The prevalence estimations from the World Bank [40] also show declining trend, but without evidence for 2017, when prevalence increased, according to the data from the national Survey (Graph 3.2.).

Graph 3.2. Smoking prevalence (adults 15+)



Source: World bank

3.2. Smoking prevalence – youth

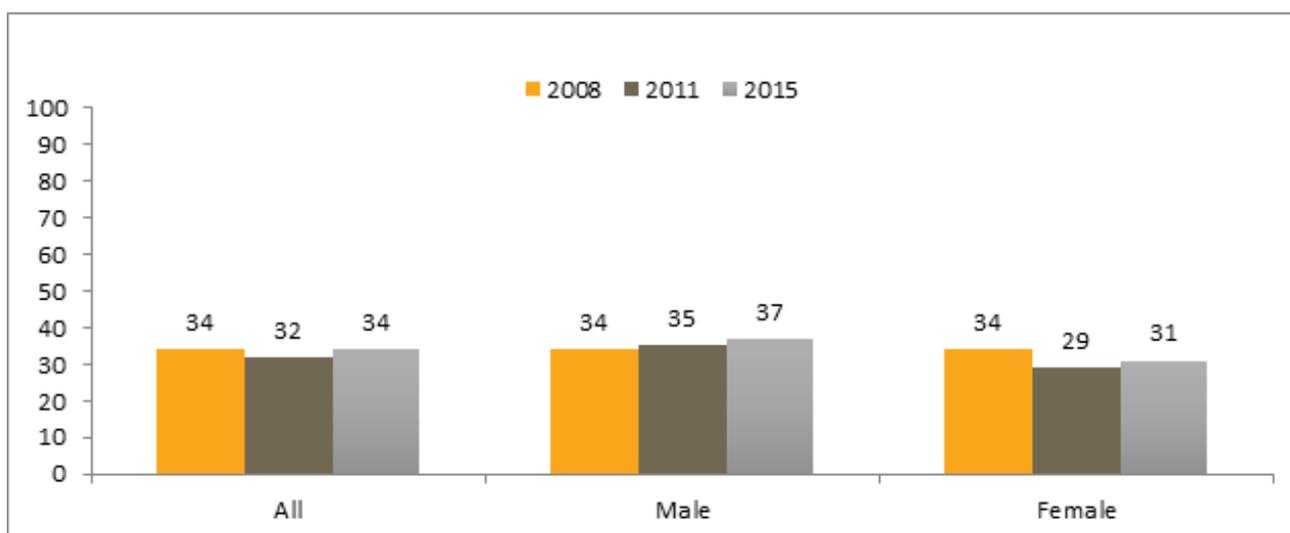
The *youth* segment was first analysed in 2008 by the unique methodology of ESPAD, which continued in 2011 and 2015 [2, 3, 33]. In 2008 the sample consisted of first grade high school students, in 2011 it was broadened to include second grade high school students and in 2015 the target group were only the students born in 1999 (77.9% first grade, 16.5% second grade). Results showed that:

- In 2008 34% of students smoked cigarettes.
- In 2011 32% of students smoked cigarettes.
- In 2015 34% of students smoked cigarettes (63% of students stated that they can very easily obtain cigarettes, which is 2% over the ESPAD states average; every third student smokes (34%) and prevalence is higher among male; prevalence at early age, 13 and under, increased from 1% in 2008, over 2% in 2011 to 3% in 2015).

Graph 3.3. shows a slight increase of prevalence among males from 2008 to 2015, and a significant decrease among females from 2008 to 2011. Prevalence among females reverses its decreasing trend and increases by 2% in 2015.

In the research done by the Institute of Public Health in 2017, youth was defined as population aged between 15-24, and results showed total smoking prevalence of 18.7%, with higher share of female (19.1%) over male (18.3%). Prevalence in younger adults, aged between 15-34, was estimated at the level of 25.5%, where again female share was higher (26.8% over 24.4% in male group).

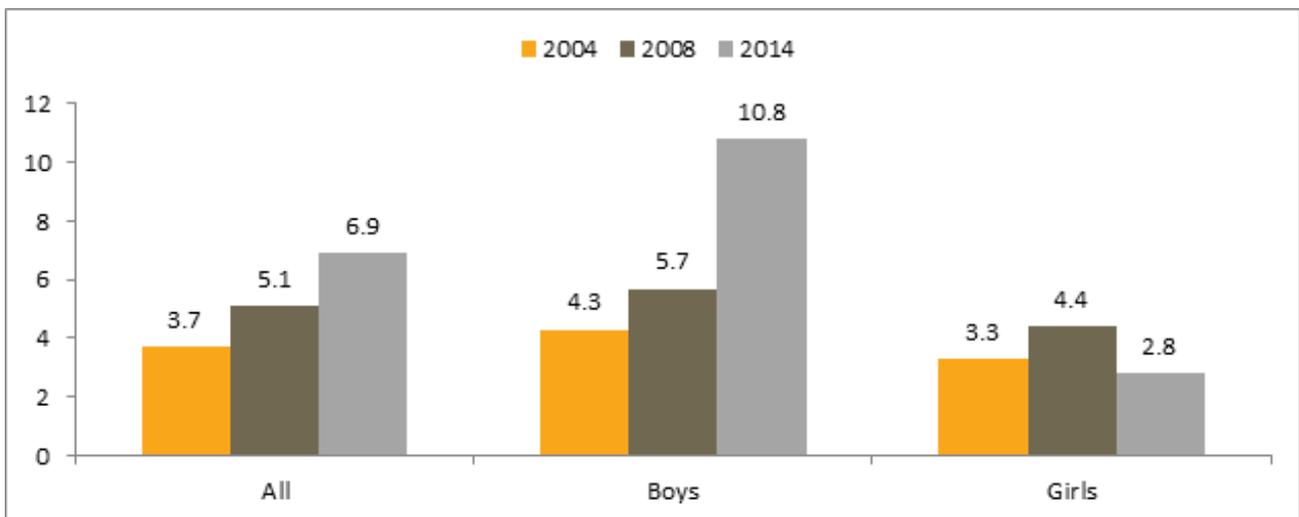
Graph 3.3. Smoking prevalence among youth
(all students and students by gender, 16 year old)



Source: ESPAD, 2015

Tobacco use among youth has been analysed through Global Youth Tobacco Survey (GYTS), a school-based survey targeted towards youth aged 13-15. World Health Organisation (WHO), the US Centres for Disease Control and Prevention (CDC) and the Canadian Public Health Association (CPHA) developed the Global Tobacco Surveillance System (GTSS) in 1998. GYTS was conducted in Montenegro in 2004, 2008 and 2014 [9]. The main findings of smoking prevalence of the research are given in Graph 3.4.

Graph 3.4. Smoking prevalence among youth
(all students and students by gender, 13-15 year old)



Source: GYTS, 2004, 2008, 2014

Compared to these two previous GYTS researches, the 2014 study also showed:

- A significant increase in cigarette (tobacco) use by students, especially considering boys in relation to 2008 (increase of 5.1%). Among girls, there is a notable reduction in relation to 2008;
- An increase of juveniles who wanted to quit smoking;
- A decrease in number of children who can buy tobacco products in store without age control: from 48.6% in 2004, to over 96.5% in 2008 and down to 87.8% in 2014. In spite of the decrease in percentage, the availability of tobacco products is still very high and alarming.

According to all the results of smoking prevalence among adults and youth, we can conclude that after 2012, the prevalence in all groups is increasing, especially in the female group. This was one of the reasons for WHO to conduct the study on *long term health and economics effects caused by fiscal measures implementation* with goals to decrease smoking and obesity prevalence in Montenegro. The reserach results of WHO [8] showed that:

- Without any changes in regulation, which could be one of the major problems in smoking prevalence, Montenegro would have approximately 52% active smokers by 2035 (adults, majority women);

- An increase in excise taxes would decrease the number of diseases (3,397) caused by tobacco use until 2035;
- Regarding direct health-care costs, EUR 443,100 will be saved until 2025, and EUR 6,62 million saved until 2035;
- Compliance of tax and excise policies in the region is necessary in order to achieve the goals of decreasing smoking prevalence and direct health-care costs.

3.3. Tobacco product consumption

In order to obtain more precise and objective results, macro dynamics of consumption in Montenegro was analysed based on number of ordered and used cigarettes excise stamps⁴. The number of ordered excise stamps by excise taxpayers for accounting period comprises of:

- Ordered excise stamps for imported cigarettes;
- Ordered excise stamps for domestic cigarettes;
- Ordered excise stamps for Customs-free zones (shops).

The data was obtained from the Ministry of Finance for the period 2006-2017. The rest of time series data was geometrically extrapolated backwards to 2000. Number of cigarettes sold was calculated by multiplication of ordered excise stamps number by 20 cigarettes, which is the amount of one pack. Consumption per adult smoker was generated using the adult smokers' prevalence (15+) in period 2000-2017 [40].

The consumption is significantly decreasing during the whole period. The declining trend of consumption (ordered excise stamps) and consumption per adult smoker is clearly demonstrated in Graphs 3.5 and 3.6.

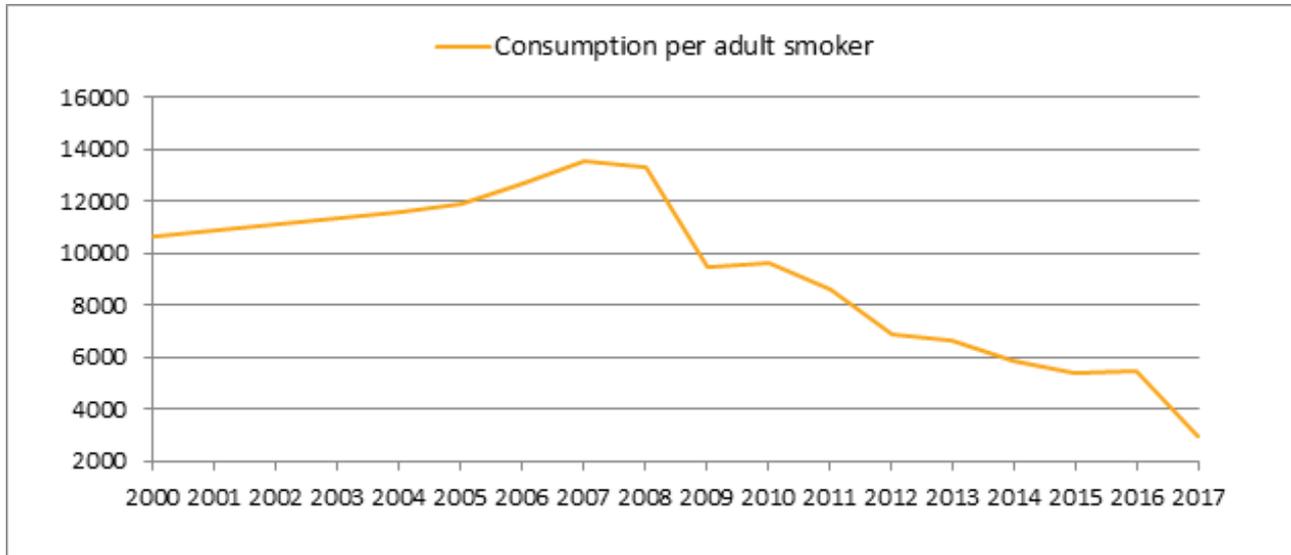
Graph 3.5. Number of ordered excise stamps



Source: Ministry of Finance

⁴ The HBS data could not be used due to short length of time series.

Graph 3.6. Consumption in sticks per adult smoker

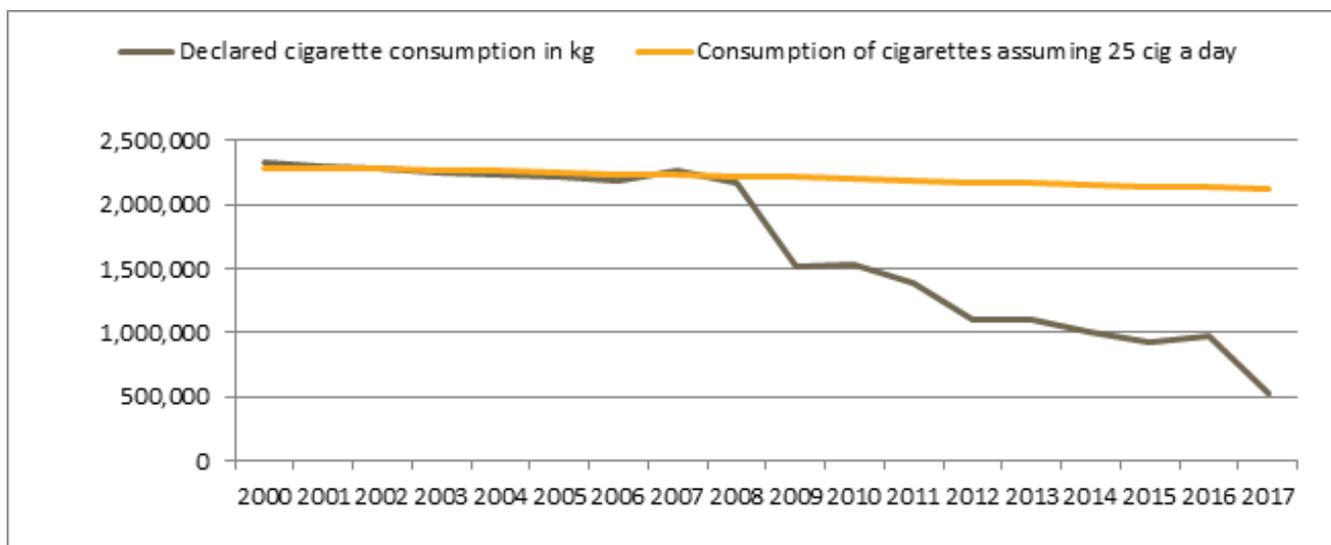


Source: Ministry of Finance

The trend of these two variables is following approximately the same downward path. The peak of the lines is related to the years 2007 and 2008. It is important to notice that in 2006, 62% of excise stamps were taken by Customs-free zones (shops), whilst in 2007 this share decreased to 32%. Due to potential problems with the illicit trade during that period, the changes in regulations [15] limited the import and export only through territorial waters, bays and airspace. Afterwards, the free zones share was negligible. The decreasing trend can be potentially explained by the increasing trend of excise taxes, starting from 2009.

The results of decreasing consumption are positive and enforcing, but they still contradict survey data on smoking prevalence, which increased in 2017, comparing to 2012. According to the survey (2012, 2017), more cigarettes are smoked per day, compared to consumption based on data generated from used excise stamps (consumption per adult smoker). For example, if we assume that an average smoker smokes 25 cigarettes a day, the trend of consumption will remain unchanged through all the period of the analysis. (Graph 3.7)

Graph 3.7. Survey vs. Excise stamps Consumption

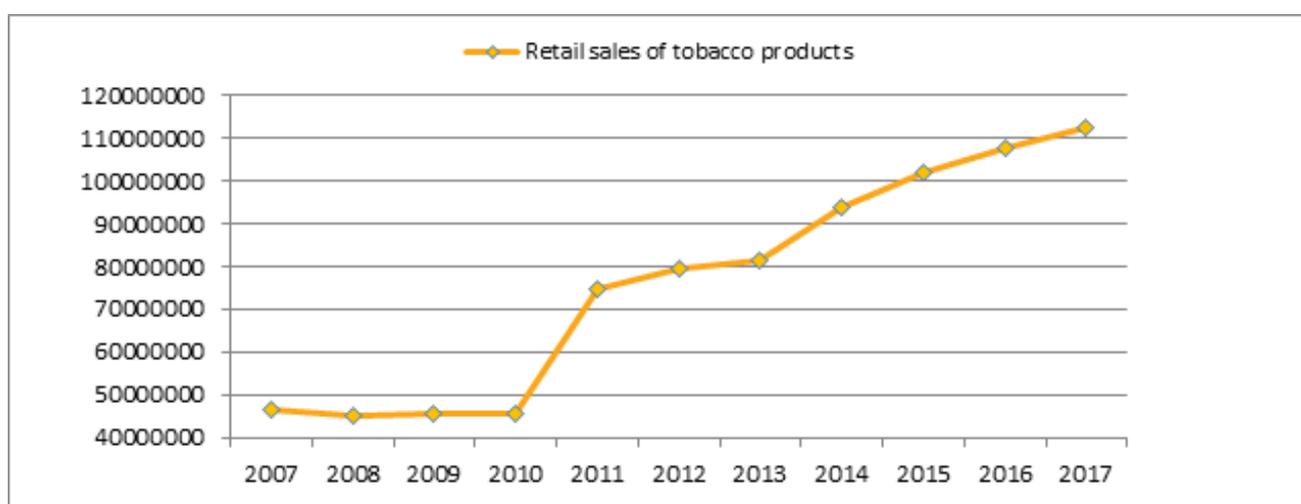


Source: Ministry of Finance, Institute of Public Health

The difference between two lines is visible from 2008, which may lead us to the conclusion that the illicit market increased from that year.

Finally, the last Graph (Graph 3.8) shows extremely strong increasing trend in retail revenue, from about EUR 46 million in 2007 to EUR 112 million ten years later (growth rate of 9.21%). As previously mentioned, the effect of excise tax and price increase is potentially stronger than above mentioned effect of consumption reduction. Significant increase started in 2010, which is the period when by excise timetable taxes started to increase rapidly (this part will be explained in detail in fourth chapter).

Graph 3.8. Yearly value of retail sales in EUR



Source: Own calculation based on Tobacco Agency data



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4. Tobacco taxation and pricing policies

4.1. Institutional, policy and legal framework

Montenegro began the creation of an institutional and legal framework for tobacco policies by adopting four key laws [12, 19, 20, 21, 22]: the Law on Tobacco, the Law on Limiting Use of Tobacco Products, Law on Excises Taxes and Law on Ratification of the the World Health Organization Framework Convention on Tobacco Control (WHO FCTC). These laws, with annexes, represented a legislative basis for the development of the National tobacco control policy. Still, the adoption of the Strategy for Health Care Development and Strategy for Tobacco Control [28, 29] was the main step in Montenegro's efforts to adopt homogeneous global tobacco measures and strategic approaches to increase awareness of Montenegrin society about the harmful effects of tobacco consumption.⁵ The Government of Montenegro, as a signatory of WHO FCTC [42], encourages the reduction of tobacco products use through a set of smoking control measures. In accordance with the adopted cross-sectoral approach, smoking control measures are implemented through activities of competent Ministries, Governmental agencies and institutions, as well as NGOs (having different levels of participation in tobacco control activities).

4.1.1. Institutional framework for tobacco control

Ministry of Finance, Ministry of Health and Ministry of Agriculture and Rural development are the main entities responsible for the development and implementation of regulation and legislation related to tobacco tax policies and tobacco control. Ministry of Sport and Education have no direct jurisdiction, but through intensive cooperation with Ministry of Health, conduct educational activities to familiarize the public with all medical, economic and cultural aspects of the problem of using tobacco. Special responsibility is also given to health care professionals who, through numerous youth counseling centers, are engaged in prevention and smoking cessation programs.

The Ministry of Finance⁶ is in charge of taxation policies and therefore directly impacts the tobacco market - tobacco products prices. Consequently, these decisions are influencing tobacco consumption levels. They develop and implement tax and customs policies by the special department, Directorate for Tax and Customs System. The focus of this department is on the enforcement of laws, as well as supervision in the part of lawful, efficient and effective work of the Customs Administration and Department of Public Revenues (Tax Administration). Since 2015, the obligation of excise duties and customs duties on imports of tobacco products collection was transferred from Tax administration to Customs Administration [12, No. 45/14]. Being a part of the Ministry of Finance, customs are focused on suppressing illegal trade of tobacco products and other excise goods. The Department of Public Revenues monitors and contributes to the collection

⁵ Montenegro became member of the Stability Pact Project: Capacity Building in Public Health on Tobacco Control since 2004

⁶ <http://www.mif.gov.me>

and increase of total budget revenues, as well as to the implementation of strong fiscal policy measures of the government of Montenegro.

Additionally, the Commission for the Elimination of Illicit Trade is formed as a part of the Ministry of Finance. This Commission coordinates the elimination of illicit trade through the implementation of set measures and strengthened coordination of all state institutions in charge for the fiscal discipline (monitoring the market, defining the obligation of the competent authorities to adopt joint action plans as needed, or to undertake certain measures, determining the procedures by which the competent authorities are obliged to report to the Commission and the Government etc.).

The Ministry of Agriculture and Rural Development⁷ is responsible for creating and implementing government policy and legal regulation in agriculture and related industries, which among others include the production, sales and distribution of tobacco products, as well as making regulations for the technological classification of tobacco. By signing the Protocol to Eliminate Illicit Trade in Tobacco Products (2013), Montenegro committed itself to establishing rules for eliminating illegal trade in tobacco products through the control of supply chain and international cooperation.⁸ The protocol was ratified in June 2017 [11] on an initiative by the Ministry.

Tobacco Agency is a special organization, which represents an important part of the Ministry of Agriculture and Rural Development. It is an administrative authority responsible for issuing permits to all participants in the tobacco value chain (production and trade); keeping registers of market participants; monitoring the tobacco market for the purposes of controlling illegal trade and ensuring fair market competition. Tobacco Agency directly participates in the creation of legislation related to the tobacco industry. Tobacco Agency was established under the Law on Tobacco.

The Ministry of Health⁹ is responsible for determining measures to combat the harmful effects of the use of tobacco products, continuous implementation of tobacco control activities, and its efforts to harmonize national legislation with EU directives related to tobacco and tobacco products. In that context, the Ministry is closely cooperating with the WHO and other international bodies that monitor the issue of smoking reduction, such as the United Nations, the Council of Europe, and the European Commission. In cooperation with the Institute of Public Health, nongovernmental organizations, municipal governments and counseling centers, as well as through cooperation with primary and secondary schools, it initiates numerous educational activities in the domain of smoking prevention.

Government established the National Council for Coordination and Prevention of Chronic Non-communicable Diseases, governed by Prime Minister in order to [30]: ensure the coherence of sectoral policies in order to reduce mortality from the underlying categories of chronic non-communicable diseases [16, 17]; design and implement effective

⁷ www.minpolj.gov.me

⁸The Protocol obliges countries to establish global monitoring of the movement and origin of tobacco products as key measures in order to reduce illicit trade in tobacco products, available at: www.aduvan.co.me

⁹ www.mzdravlja.gov.me



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responses to the epidemic of chronic non-communicable diseases in Montenegro; and monitor the progress made in this segment.

4.1.2. Policy framework for tobacco control

Global and EU Conventions and Reports

In 2006, the World Health Organization Framework Convention on Tobacco Control (WHO FCTC) was ratified in Montenegro [42] in order to reaffirm the right of all people to the highest standard of health. Accordingly, Montenegro is committed to satisfy the core demands of the WHO FCTC, which are contained in articles 6-14:

- Price and tax measures to reduce the demand for tobacco, and
- Non-price measures to reduce the demand for tobacco (advertising, health warnings, smoke-free area etc.)

According to the EU Progress Report for Montenegro 2018 [5] (section 28 Consumer and health protection): “Montenegro is moderately prepared on consumer and health protection... Regarding tobacco control, national legislation is partly aligned to *EU acquis* in this area and the smoking ban in public places is not implemented.” Still, progress on health protection has been limited, and it is of utmost importance to ensure further alignment with EU health protection *acquis* considering tobacco control and implementation of Action Plans on communicable diseases. By signing the Protocol to Eliminate Illicit Trade in Tobacco Products in 2013 and ratifying it in 2017 [11], Montenegro committed itself to establish rules to eliminate illegal trade in tobacco through the control of supply chains and international cooperation. The objective of this Protocol is to eliminate all forms of illicit trade in tobacco products, in accordance with the terms of Article 15 of the WHO FCTC [42]. But, as stated in EU Progress Report [5], there is a concern relating to the fight against illicit tobacco trade and the prevention capacity of customs must be strengthened.

National strategies and plans

1. *Health Policy in the Republic of Montenegro until 2020* [27](2001) defines strategic directions for creating a sustainable health of the population in the 21st century, and has been defined according to goals and recommendations from the WHO documents (*Health for All in the 21st Century* and *21 objectives for the 21st Century*). By adopting this document, the Government of Montenegro defined the health of the population as the most important resource for the development of Montenegro society.

2. *Strategy for Health Care Development in Montenegro* [28] (2003-2020) defines the overall goals of development of the health care system that are focused on the realization of the goals of health policy until 2020. The general objectives are: building a health policy that should guide citizens to the awareness of health consequences of their own decisions and their responsibility for health, improving health care in the most acceptable and equitable way, developing a health system harmonized with trends in European health care development, increasing the efficiency of the health system through rational and available resources, improving service quality, applying modern health technologies

and financial system stability. *Master Plan for the Development of Health Care of Montenegro for the period 2015-2020* [32] gave the framework to development policies of the health system, in line with the goals and recommendations from the strategic documents of the WHO and the EU [4, 44] (Europe 2020, Health 2020).

3. *National Strategy for Tobacco Control* (2005) [29] is based on the main settings of the Warsaw Declaration [41], in accordance with the principles of the *European Strategy for Tobacco Control*¹⁰. The main focus is on: information campaigning; limiting tobacco advertising and promotion; limiting smoking in public and working places; limiting tobacco availability for youth; and actions related to cessation programs. The basic strategy goals were directed towards prevalence and diseases reduction and creation of smoke-free environment in Montenegro.

4. *Strategy for Prevention and Control of Chronic Non-communicable Diseases* (2008-2020) provides basic guidelines for a comprehensive and coordinated response to the burden of non-communicable diseases [30]. The emphasis was placed on promoting multisector cooperation to reduce exposure to harmful risk factors. The strategy combines the principles of prevention and control of chronic non-communicable diseases with the intent to ensure a balance between activities aimed at avoiding the causes of illness, disability and premature death. Additionally, the strategy lists activities to improve the outcome of a disease and the quality of life of those who have already become ill. These strategic goals are also recognized by the new Master Plan for Health Care Development in Montenegro in the period 2015-2020[32]. In the Plan for Implementation of the Strategy for the period 2016-2017 [32], Montenegro defined the framework for the realization of obligations arising from the Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases [38] and the Global Action Plan for Chronic Non-communicable Diseases for the period 2013-2020 [43].

5. *National Strategy for Elimination of Illicit Trade of Tobacco Products* (2015) defined the key strategic goals in the elimination and reduction of the illegal trade of tobacco products [25]: fight against criminal activities involving organized crime, protection of the health of the population who consume counterfeit tobacco products of reduced quality, suppression of illegal traffic of tobacco products to the greatest extent possible in order to protect the budget of Montenegro, and protection of companies dealing with the legal import of cigarettes.

¹⁰ http://www.euro.who.int/__data/assets/pdf_file/0016/68101/E77976.pdf

Table 4.1. Strategies related to the Tobacco control in Montenegro

Document	Stakeholder	Status
<i>Strategy for Health Care Development</i>	Ministry of Health	2003-2020
<i>Strategy for Tobacco Control</i>	Ministry of Health	2005 -
<i>Strategy for Prevention and Control of Chronic Non-communicable Diseases</i>	Ministry of Health	2008-2020
<i>Strategy for Elimination of Illicit Trade of Tobacco Products</i>	Ministry of Finance	2015 -

4.1.3. Relevant legislation for tobacco control

Law on Tobacco [19, 20] governs the production, processing and trade in tobacco, as well as other issues relevant for the production and trade in tobacco and tobacco products. These issues are related to the definition of companies that can do business in the tobacco sector, processing and marketing of tobacco products, company's registration, issuing licenses, regulation of wholesale and retail tobacco trade and penal provisions. Additionally, the Law defines the tobacco tender procedure (preparation of the tender documentation, public call, submission and receipt, opening and evaluation of the bids, establishing the list of the bidders, and forming the final tender list). Tobacco tender is announced only after the approval of the Government.

The Law on Limiting Use of Tobacco Products [21] is the primary law related to the tobacco control legislation in Montenegro. The Law on Limiting Use of Tobacco Products governs the limitation of tobacco products use, in order to prevent harmful consequences of tobacco use, the exposure to secondhand smoke, and to provide smoke-free air. These measures are in line with the WHO recommendations. Within the framework of banning and limiting the use of tobacco products, this Law defines:

- The maximum amount of harmful ingredients of cigarettes and the mandatory label on the tobacco products;
- Measures to reduce and limit the use of tobacco products by limiting sales and advertising;
- Bans considering smoking in the public and work space, except in the areas/rooms that the owner or user specifies for smoking only, and on which he indicates that smoking is permitted; bans in the media;
- Obligation to educate children and youth about the harmfulness of the tobacco products use, through the education program established by the Ministry of Education, in cooperation with the Ministry of Health;
- Control and inspection activities performed by the Administration for Inspection Affairs different inspectorates (sanitary, tourist, market).

The application of the Law on Limiting Use of Tobacco Products was partially limited by adopting the Law on Fees for Access to Services of General Interest and for the Use of Tobacco Products, Electric –Acoustic and Acoustic Devices [13] and Law on Fees for the Use of Tobacco Products, Electric- Acoustic and Acoustic Devices [14]. This Law prescribes the obligation of fee payment by entities performing catering activities (EUR 1 per m²). It is important to point out that by this Law, stated several times, the ban of smoking in public spaces, prescribed by the Law on Limiting Use of Tobacco Products (article 4, paragraph 2), has been declared null and void until defined period of time. The new Law on Fees for the Use of Tobacco Products, Electric- Acoustic and Acoustic Devices [14] does not set a time frame for implementation of the ban on smoking in public places, which is certainly discouraging.

In order to harmonize legislation with the EU directive 2014/40 [6], the Ministry of Health has submitted a proposal for a new Law on Limiting Use of Tobacco Products. According to the proposal, there will be significant progress regarding the limits of tobacco use and smoke-free spaces policies. The adoption of this Law is in progress.

Despite restrictions and prohibitions on the use of tobacco products, the conclusion is that legislation is well designed, but poorly implemented in practice.

Law on Excise Tax [12] introduced the obligation to pay excise tax on three groups of products: alcohol and alcoholic beverages, tobacco and tobacco products and mineral oils, their derivatives and substitutes. Excise tax is paid on excise products produced in Montenegro and excise products imported in Montenegro. The excise taxpayer is the producer and importer of excise products, while the Law foresees the possibility for the excise obligation to be transferred from the importer or the manufacturer to the holder of the excise license or exempt excise taxpayer. More details regarding Law on Excise Tax are given in the subchapter, "Tobacco tax structure."

4.1.4. Tobacco control measures

Montenegro, as a signatory of the WHO FCTC [42], has undertaken the adoption of a wide range of tobacco control measures which includes:

1. Normative measures of sanctioning and limiting the use of tobacco products;
2. Health-education-information measures through warnings about the harmfulness of smoking and health risks and through smoking cessation services and education activities;
3. Ban of all forms of advertising and promotion of tobacco products and sponsorship;
4. Fiscal measures by correcting fiscal and tax policies.

1. Normative measures of sanctioning and limiting the use of tobacco products are mainly implemented through reducing the availability of tobacco products and the creation of a smoke-free environment. Tobacco sales are banned to minors at each point of sale in Montenegro [21]. The sale of tobacco products is also prohibited:

- At public space in which educational activities are performed;

- At pharmacies and specialized stores for medical devices;
- At public sports-recreational facilities;
- At automatic devices;
- In actions of providing direct or indirect benefits to customers or to a third party, such as giving gifts, premiums, reduced sales, or the right to participate in a prize game, lottery or competition;
- In a way that allows customers to self-serve from a shop window.

In Montenegro, smoking is completely prohibited in many public places and workplaces such as: government facilities, healthcare facilities (with an exception of psychiatric hospitals and sheltered housing), educational facilities, areas of social protection, areas where cultural activities or sports and recreation is performed, etc. Smoking is also prohibited in areas surrounding public transportation, including buses, trams, trolleybuses, minibuses, taxis, airplanes, trains, boats, catamarans, ferryboats, rafts as well as all other forms of transport. In other public and working spaces, smoking is allowed only in designated smoking rooms. However, smoking is not completely prohibited in catering facilities (cafes and restaurants providing food and drink and hotels).

2. *Warnings* about the dangers of tobacco consumption raise awareness on the health risks for smokers and non-smokers and increase the likelihood of quitting or reducing smoking. Regulations prohibit the trade of tobacco products which do not have a printed combined warnings on the packaging, consisting of a color picture or other illustration [21, article 9] and one of 16 health warnings (2 for front and 14 for back side). Health warnings must legally cover at least 40% of the most visible surface, or 30% of the other side of the individual tobacco product. The Law on Limiting Use of Tobacco Products [21] also mandates font style, font size and color for package warnings. The health warnings, including photos and illustrations, are prescribed by the Ministry of Health and are rotated every 12 months [31]. Misleading labels indicating that certain ingredients are less harmful than others ("low tar", "light", "mild", "ultra-light", "low tar", "light" "mild", "ultra-light" and other similar tags) are prohibited.

The Ministry of Health and the Health Insurance Fund have, in cooperation with the Institute of Public Health, adopted the *Smoking Reduction Program*. The Program was implemented in the Youth Counseling Center in 2008. It lasts five business days a week, every day for two hours and it is realized through individual, voluntary and confidential counseling, as well as through workshops. For this purpose, the Institute of Public Health prepared the Smoking Cessation manual [23]. Additionally, the Institute published various guidelines related to the health consequences of tobacco use.

To increase youth awareness, "Healthy Lifestyles" exists as an elective course in elementary and secondary schools in Montenegro. The subject was also introduced at the Faculty of Sport and Physical Education in 2011, while in 2017 the Faculty introduced Healthy Lifestyles as a department offering bachelor and master studies¹¹.

3. According to the Law on Limiting Use of Tobacco Products [21, article 21], in Montenegro "it is prohibited for manufacturers, importers and sellers of tobacco products to advertise

¹¹<http://www.ucg.ac.me/objava/blog/10/objava/1613-zdravi-stilovi-zivota-na-fakultetu-za-sport>

tobacco products: over the internet; in the media; through cinematic slides, films, panels, boards, stickers and other forms of advertising in public places; on facilities and means of transport; through light commercials; through books, magazines, calendars, clothing, and over stickers, posters and leaflets, if these labels, posters and leaves are separated from the original packaging of tobacco products. Also, products that, by their appearance, name and purpose of use, directly encourage consumption of tobacco products must not be advertised. Producers or importers of tobacco products must not sponsor radio programs, events or activities, as well as events or activities of an international character”.

However, it is not prohibited to publish the information by the manufacturers and importers through mass media about [21, article 22]:

- “Rewards and public acknowledgments of quality of certain products and other successes without specifying the name of the individual product;
- The information within exhibition spaces, during specialized trade fairs, tasting of new products organized in indoor premises, during festivals organized and during the visits by consumers;
- About the quality and other properties of tobacco products published in professional books, magazines and other professional publications intended exclusively for manufacturers or traders of these products”.

According to the Law on Health Care Inspection [18], the health inspector controls if the normative measures are implemented in practice.

4. Taxation is considered to be one of the most effective methods in reducing the level of smoking prevalence. More on tobacco taxes in following chapters.

4.2. Tobacco tax structure

Montenegro has implemented a mixed excise tax system with an ad-valorem excise tax (based on retail prices) and a specific excise tax. The basis for the ad-valorem tax for each brand sold is a retail price defined by companies and published in the Official Gazette after the approval from the Government. The law on excise tax [12], regulates the excise tax system and introduces the obligation of excise taxes on excise goods payment, which are released into free circulation on the territory of the Republic of Montenegro. The law has been applied since April 1, 2002.

A mixed system of specific and ad valorem taxes on tobacco was introduced in 2005. From that period, the price of the most popular brand of cigarettes was used as official data, until 2014 when weighted average price of cigarettes was introduced. These prices are determined according to the retail prices of all cigarettes announced in Official Gazette and submitted by tobacco companies from the previous year.

Tobacco products subject to excise duties are: cigarettes, cigars and cigarillos, fine cut smoking tobacco, and other smoking tobacco. Cigarettes have a specific excise tax, determined as an amount for 1000 pieces, and an ad-valorem excise tax determined as a percentage of the retail price, which is determined by tax administration as weighted

average price of cigarettes [34]. Excise duty is on other tobacco products paid per kilogram. The minimum amount of excise tax on cigarettes is defined as 100% of the total amount of total excise tax (specific and ad valorem) and determined based on the “most popular price category” of cigarettes.

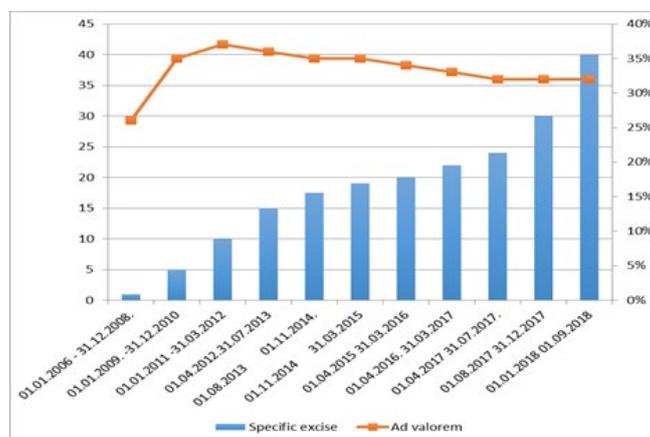
With the amendments to the Law on Excise Tax [12], from 2013, 2014, 2017, 2018, the Montenegrin government made a drastic change in the amount and calculation of excise taxes on tobacco products (Graph 4.1.). Apart of the already mentioned changes regarding the retail price (weighted average price introduced), the amendments from 2013 prescribed the higher value for the specific excise of EUR 17.5 per 1000 cigarettes and lower value for the proportional rate of 35% of the retail price of cigarettes.

Amendments to the Law on Excise Tax [12], which entered in force from October 2014, were mainly related to further harmonization of excise policies with European legislation. In order to create a predictable, gradual and balanced increase in excise duties as a precondition for the prevention of illegal cigarettes trade and the provision of stable public revenues, an “excise calendar” was introduced for a five year period. The prescribed amounts of specific excise taxes on cigarettes were EUR 19 per 1000 pieces in 2014 to EUR 26 per 1000 pieces in 2019. The rate of proportional (ad valorem) excise gradually was planned to decrease from 35% in 2014 to 31% 2019. Meanwhile, various changes and amendments to the Law on Excise were introduced.

As of January 1st, 2015, the procedure for checking and paying excise taxes is performed by the customs authority instead of the tax authority. In this way, through the unification of the control procedure and collection of this tax, the system was improved, and more efficient control was ensured.

The Law on Excise Tax [12] was amended in August 2017 to consolidate public finances and to harmonize the excise policy with the relevant EU policy. Accordingly, by the amendments to the Law adopted in August 2017, the specific excise per 1,000 pieces increased [7]: from EUR 30 to EUR 40 from January 1st 2018 and finally to EUR 50 from January 1st 2019. Ad valorem excise remained unchanged at 32% of the average weighted price of cigarettes. Moreover, the amendments introduced excise duty for heating tobacco and liquid for charging electronic cigarettes. Excise duty for heated tobacco (“heat-not-burn”) is paid per kilogram of tobacco mixture in the amount of EUR 29.44 per kilogram, while excise duty on liquid for refilling electronic cigarettes is EUR 0.9 per milliliter. The above-mentioned changes are presented in the Graph 4.1.

Graph 4.1. Specific and ad valorem statutory excise rates on cigarettes in Montenegro 2006-2018



Source: Ministry of Finance

Excise taxes on cigars and cigarillos varied from EUR 10 until 2011, to EUR 25 in 2018. Considering other tobacco products, these amounts were in range from EUR 10 until 2006, to EUR 25 in 2018. Fine-cut tobacco excise taxes were in range from EUR 20 until 2012, to EUR 40 until 2014, EUR 25 until 2017 and EUR 54 in 2018.

However, in the latest changes in 2018, this calendar has been corrected¹² with the aim of reducing excise taxes on tobacco products and blocking continuous decrease of excise tax revenues, according to the arguments given by Ministry of Finance¹³. According to the last amendments, duties for certain tobacco goods are changed significantly. The new excise calendar is given in Table 4.2.

Table 4.2. Excise calendar 2018-2023 Montenegro

Date	Specific excise tax EUR	Ad valorem excise tax %	Fine-cut tobacco
01.09.2018 – 31.12.2019	30	32	30
1.01.2020-31.12.2020	33.5	30.5	35
1.01.2021-31.12.2021	37	29	40
1.01.2022-31.12.2022	40.5	27.5	45
1.01.2023-31.12.2023	44	26	50
1.01.2024-31.12.2024	47.5	24.5	55

Source: Law on Excise Tax

¹²Official Gazette of the Republic of Montenegro 55/18, available at: <http://www.upravacarina.gov.me/rubrike/akciza/189839/Obavjestenje-o-izmjenam-i-dopunama-Zakona-o-akcizama-SL-list-CG-br-55-18-od-01-08-2018-g.html>

¹³ <http://www.gov.me/pretraga/189037/Intervju-Ministra-Darka-Radunovica-za-Pobjedu-Korekcija-poreza-samo-u-slucaju-poremecaja-trzista.html>

Montenegro is fully committed to its strategic goal of EU accession and as a country candidate is subject to aligning domestic regulation with the EU's legislation. According to the *Council Directive 2011/64/EU* [1], it is required to levy a minimum rate of excise duties on cigarettes. This minimum rate must consist of:

- Specific component which must be in range of 7.5% and 76.5% of the total tax burden (TTB) – *in Montenegro specific component was 39.69% in second half of 2017, and currently amounts 36.67%, starting from 1st September 2018. Specific component is in line with the EU Directive (article 8).*
- An ad valorem component must be expressed as a percentage of the maximum retail selling price - *in line with the EU Directive.*

The overall excise rate must be: _

- At least EUR 90 per 1000 cigarettes – EUR 60.5 *in second half of 2017, and currently amounts EUR 63.5 starting from 1st September 2018- not in line with the EU Directive.*
- At least 60% of the weighted average retail selling price - 63.58% *in second half of 2017, and currently amounts 60.57% starting from 1st September 2018 - in line with the EU Directive.*

Legal alignment is completed regarding health warnings, sales, advertising and recommendation on the prevention of smoking and smoke-free environments. The EU's experience shows that the harmonization of tobacco taxation is a lengthy process, which requires improvements and updates over time.

From the Table 4.3 it can be seen the exact date of excise or particular tax change and their absolute and relative level reached in this way. The table covers the last 10 years when major changes happened. The first column refers to VAT and its changes. The second and third column show day, month and year of taxes and excises changes. The fourth column presents the share of excise and other taxes in price of cigarette, which is presented in the fifth column. The index of cigarette price movement is in the sixth column, while the absolute value of taxes per pack of cigarettes is given in last column. Noticeable is an increased in the share of excise and taxes in the final price of cigarettes. Their share in tobacco product price increased from 43.86% in 2007 year to 87.43% at the beginning of 2018.

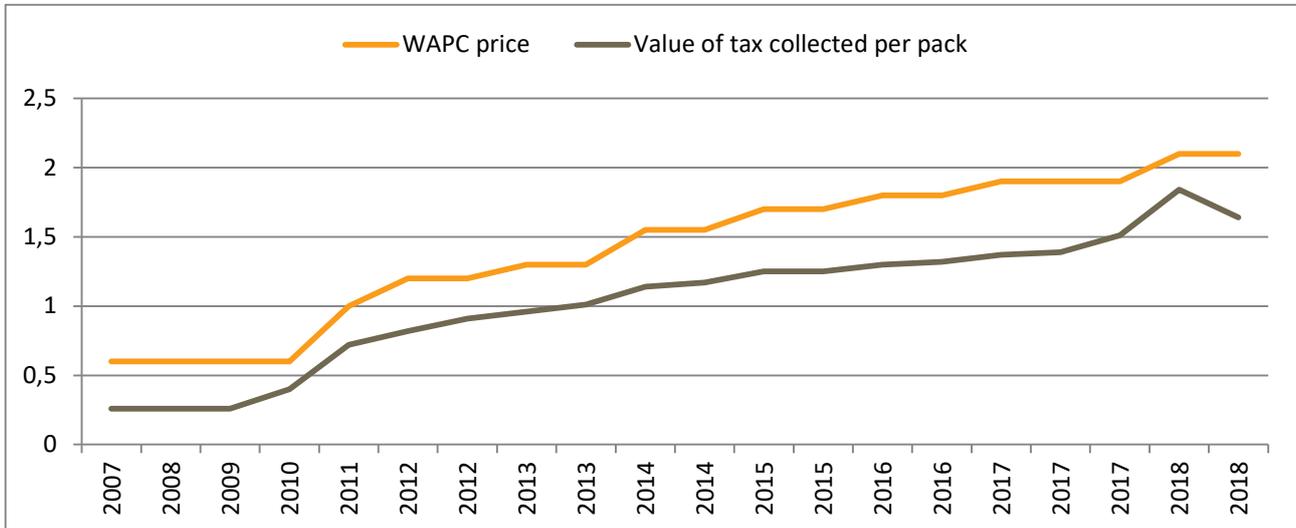
Table 4.3. Excise and other tax burden and prices of cigarettes

V A T as %	Date of excise and tax change	Year	Tax burden on weighted average price of cigarettes	Weighted average price of cigarettes (WACP)	W A P C 2010=100	V a l u e of Tax Collected per pack
17	n/a	2007	43,86%	0,6	100,00%	0,26
17	n/a	2008	43,86%	0,6	100,00%	0,26
17	n/a	2009	43,86%	0,6	100,00%	0,26
17	n/a	2010	66,20%	0,6	100,00%	0,40
17	n/a	2011	71,53%	1	166,67%	0,72
17	1.1-31.3	2012	68,20%	1,2	200,00%	0,82
17	1.4-31.12	2012	75,53%	1,2	200,00%	0,91
17	1.1-31.7	2013	73,61%	1,3	216,67%	0,96
19	1.8-31.12	2013	77,89%	1,3	216,67%	1,01
19	1.1-1.11	2014	73,55%	1,55	258,33%	1,14
19	1.11-31.12	2014	75,49%	1,55	258,33%	1,17
19	1.1-31.3	2015	73,32%	1,7	283,33%	1,25
19	1.4-31.12	2015	73,50%	1,7	283,33%	1,25
19	1.1-31.3	2016	72,19%	1,8	300,00%	1,30
19	1.4-31.12	2016	73,41%	1,8	300,00%	1,32
19	1.1-31.3	2017	72,13%	1,9	316,67%	1,37
19	1.4-31.7	2017	73,23%	1,9	316,67%	1,39
19	1.8.-31.12	2017	79,55%	1,9	316,67%	1,51
21	1.1-31.8	2018	87,43%	2,1	350,00%	1,84
21	1.9-31.12	2018	77,92%	2,1	350,00%	1,64

Source: own calculations based on data from Law on Excise Tax and Official Gazette (WAPC)

Due to the change of excise taxes, the price of tobacco products has been increasing by an annual rate of 18%. The increase of price is particularly dynamic from 2010 year when price per pack was EUR 0.6. After that, in only seven years, the price more than tripled and reached the level of about EUR 1.9. Still, the increase in price has not been as significant, comparing to the increasing trend of tax burdens (which has increased much faster than the price). Graph 4.2 shows the increase of WAPC together with increase of tax collected per pack of cigarettes.

Graph 4.2. Movement of a WAPC tax collected per pack of cigarettes



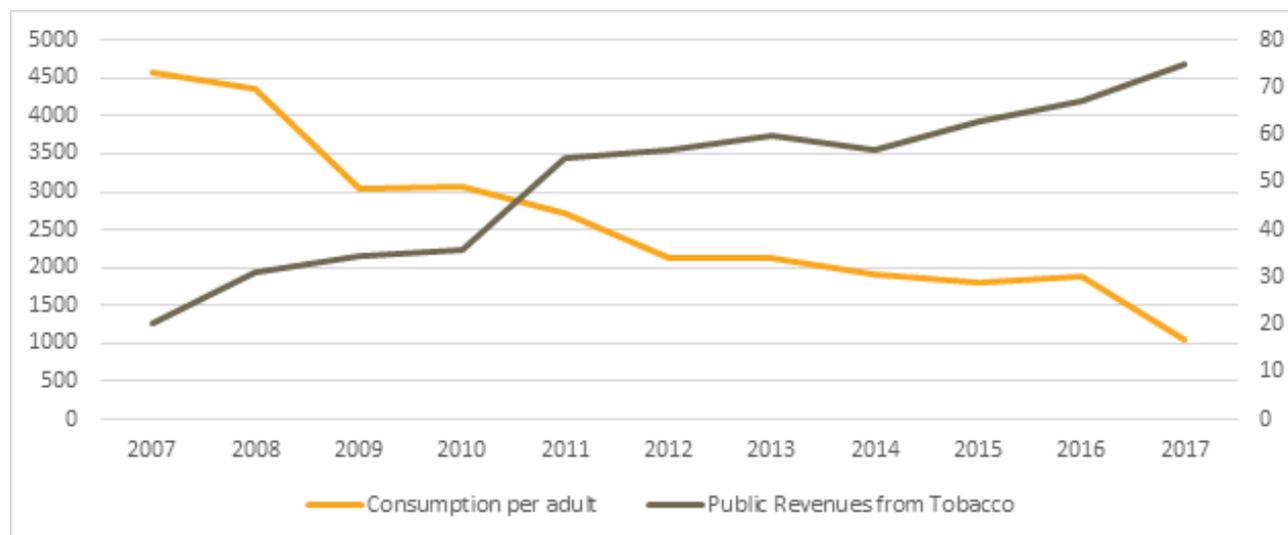
Source: own calculations based on data from Law on Excise Tax and Official Gazette (WAPC)

Similarly, a strong movement of the value of taxes collected per pack of cigarettes is also presented in Graph 4.2. Tax increases have especially been strong in 2017 and at the beginning of 2018. Additionally, VAT rate increased from 19% to 21% at the beginning of 2018. According to the Ministry of Finance, the result was the reduction in cigarette sales, increase of illicit market, and a consequential decrease in total public revenue collected on cigarette sale. This was the reason for excise reduction at the mid of 2018.

4.3. Tobacco tax revenues

Excise tax revenues from tobacco have increased from about EUR 20 million in 2007 to around EUR 75 million in 2017, despite the decrease in volume of excise stamp sold. This trend is in line with the nature of tobacco products – the decline in consumption is smaller than an increase in revenues from the higher tobacco prices, as can be seen from Graph 4.3.

Graph 4.3. Consumption per adult and Excise tax revenues



Source: Own calculation based on data from Ministry of Finance

Tobacco tax revenues (excises and VAT), as share in GDP, recorded a significant increase during this period - from 0.7% in 2007, to 1.70% in 2016. About 2/3 of this revenue comes from the excise, and the remaining 1/3 from the VAT (table 4.4.).

Table 4.4. Tobacco Excise and VAT as a source of public revenue

Tax	Excise		VAT revenue		Total Revenue	
	in EUR	% of GDP	in EUR	% of GDP	in EUR	% of GDP
2007	13.300.000	0,49%	6.751.800	0,25%	20.051.800	0,75%
2008	24.300.000	0,78%	6.534.200	0,21%	30.834.200	0,99%
2009	27.900.000	0,93%	6.646.731	0,22%	34.546.731	1,15%
2010	29.000.000	0,93%	6.587.195	0,21%	35.587.195	1,14%
2011	44.100.000	1,35%	10.876.292	0,33%	54.976.292	1,68%
2012	45.200.000	1,42%	11.539.648	0,36%	56.739.648	1,78%
2013	47.500.000	1,41%	12.382.500	0,37%	59.882.500	1,78%
2014	41.700.000	1,21%	14.980.103	0,43%	56.680.103	1,64%
2015	46.400.000	1,28%	16.279.878	0,45%	62.679.878	1,73%
2016	49.800.000	1,26%	17.187.104	0,43%	66.987.104	1,69%
2017	57.000.000		17.906.391		74.906.391	

Source: own calculations based on data from Statistical Office of Montenegro and Ministry of Finance

The analysis presented in chapter 5 shows a strong positive impact of the tobacco taxes on the revenues, despite the decline in demand.

4.3.1. Share of cigarettes consumption in GDP and in household spending

According to the previous analysis, it is especially important to calculate the share of cigarette consumption in GDP and household spending. The total tobacco consumption can be obtained by multiplying the number of excise stamps ordered, which present number of packs of cigarettes, with weighted average price per pack. Results are presented in the Table 4.5.

Table 4.5. Relative magnitude of tobacco spending

	Tobacco yearly consumption in EUR	% of household consumption	% of GDP	Number of excise stamps
2007	67.885.858	2,87%	2,52%	113.143.097
2008	64.857.423	2,32%	2,09%	108.095.705
2009	45.625.872	1,86%	1,52%	76.043.120
2010	45.938.628	1,80%	1,47%	76.564.380
2011	69.376.039	2,61%	2,12%	69.376.039
2012	65.962.776	2,51%	2,07%	54.968.980
2013	71.095.154	2,61%	2,11%	54.688.580
2014	77.987.762	2,81%	2,26%	50.314.685
2015	78.187.565	2,72%	2,16%	45.992.685
2016	87.038.613	2,87%	2,20%	48.354.785
2017	50.444.673			26.549.828
Growth rate Rate	-2,93%			-13,49%

Source: own calculations based on data from Monstat and Ministry of Finance

Note that the number of excise stamp growth rate was negative in the respected period, -13.49%. Growth rate of tobacco yearly consumption was also negative, but due to the strong increase of consumer price of tobacco products, this rate was much smaller, amounting to -2.93%.

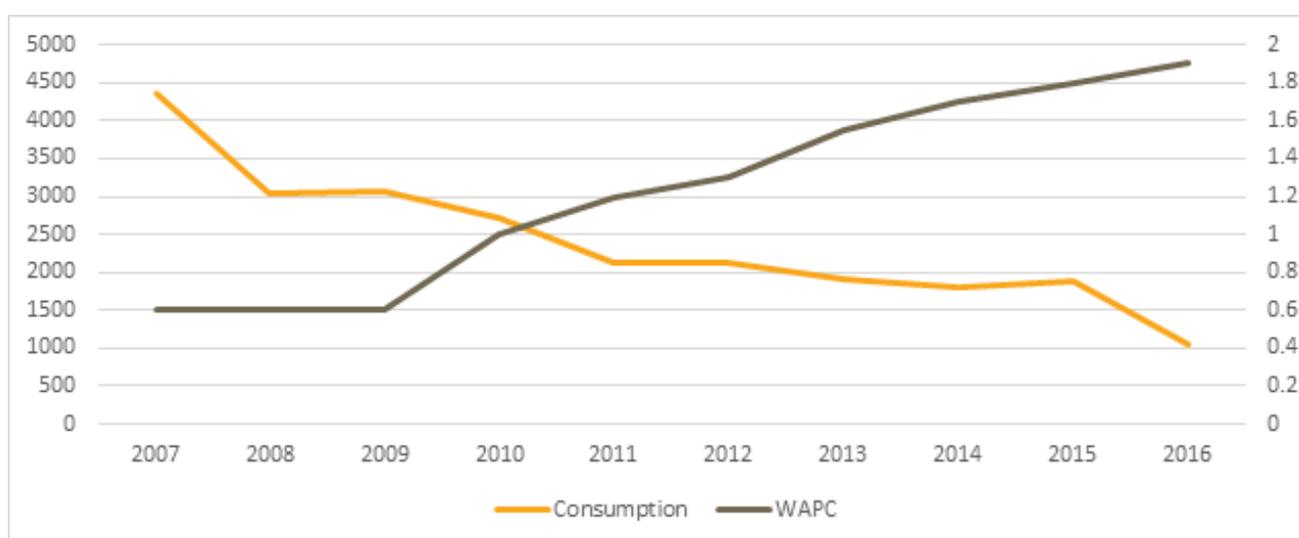
Tobacco consumption ranges between EUR 50 million and almost EUR 90 million in the respected period, with its share in household consumption between 1.80% and 2.87% in a period of ten years. It can also be noted that at the beginning, this share demonstrated a downward shift, which is then followed by upward shift at same level (2.87%).

Due to the dominant role of household consumption in GDP (varies from 75%-87%), the share of tobacco consumption in GDP is slightly smaller compared to the tobacco share in household consumption. This share varies between 1.47% and 2.52%.

4.2. Pricing of tobacco products and relationship of tobacco taxation and the price of the tobacco products

While understating the impact of excise and other taxes on the price of cigarettes requires a statistical analysis, an initial insight in their relationship can be obtained by a graphical presentation of these two variables (Graph 4.4).

Graph 4.4. Consumption per adult and WAPC



Source: Ministry of Finance and Official Gazette (WAPC)

The distribution of available data clearly demonstrates the decrease of consumption per adult along with WAPC increase. This is in accordance with what is expected for the demand function.

5. THE ELASTICITY OF TOBACCO PRODUCTS

5.1. Estimation of the price elasticity using the macro data

Estimating the sensitivity of cigarette demand to price and income changes uses annual time series aggregate data on cigarette consumption, cigarette prices, income and public policies from 2001 to 2017. Cigarette demand functions are estimated using a conventional static demand model, presented in linear functional form by applying time series methodology. Three main models are estimated, with the cigarette consumption per adult population as a dependent variable, and different independent variables included. The first basic model includes two independent variables: cigarette prices approximated by real tobacco consumer price index, and income approximated by GDP per capita in constant prices. The second model includes variables that capture the effect of the adoption and later amendments of Law on Limiting the Use of Tobacco Products, besides two initial variables used in the basic model. The third model represents the basic model augmented with a variable that represents the most influential amendments of the aforementioned Law in period 2011-2016. Other control variables (enrolment in tertiary education, employment and unemployment percentage, male to female ratio, survival to age 65 for male and female) were also tested, but not included in further analyses because of problems such as integration at second order I (2) or higher of some of them, as well as occurrence of multicollinearity and endogeneity.

To avoid the problem of spurious regression stationarity or non-stationarity of variables, this study used a sequential procedure of augmented Dickey-Fuller (ADF) test, Zivot-Andrews Unit Root test allowing for a single break in intercept and/or trend. Both tests indicated the presence of a stochastic trend in levels of all variables used in the three previously mentioned models, while stationarity is observed at the first differences of the variables. Two cointegration tests (Engle-Granger and Johansen) showed that variables in all three models are cointegrated and that there is one vector of cointegration (Values of Z statistics of Dickey-Fuller test for residuals stationarity are $Z(t)=-2.416$ for model I; $Z(t)=-2.403$ for model II, and $Z(t)=-3.018$ for model III statistically significant at 5% and 1% level).

Considering that variables proved to be cointegrated and that one vector of cointegration exists, we applied the Engle-Granger two-step methodology to estimate both the long-run and the short-run price and income elasticities of demand for cigarettes. Table 5.1. shows long-run and short-run price and income elasticities of cigarette demand in Montenegro.

Table 5.1. Price and income elasticity estimates

	Model 1	Model 2	Model 3¹⁴
Price elasticity			
Long-run	-0.81627***	-0.78474**	-0.71783***
Long-run bootstrapped (500 replication)	-0.82326 (±0.022)***	-0.80572 (±0.020)**	-0.68115 (±0.021)***
Short-run	-0.52251**	-0.510728**	-0.46537**
Income elasticity			
Long-run	-1.3676***	-1.28799*	-1.28546***
Long-run bootstrapped (500 replication)	-1.3949 (±0.035)***	-1.35809 (±0.059)*	-1.29661 (0.036)***
Short-run	1.796682***	1.817772***	1.641414**
Coefficient on lagged residual	-0.4877***	-0.4813***	-0.5186**

Note: *** p<0.01, ** p<0.05, * p<0.1; Source: Own calculation

The adjustment parameters are - 0.48 (Model I and II) and -0.51 (Model III), which yields a half-life estimate of 1.43 and 1.35 periods, which means that time needed in order to eliminate 50% of the deviation from the equilibrium is slightly below a year and a half. Also, it can be interpreted that 48% to 51% of deviation from the equilibrium value is eliminated in the following year.

If we consider the bootstrapped values, we can conclude that the lower and higher bounds of price elasticity are -0.68 and -0.82. This means that a 1% increase in price will lead to a 0.68% decline in cigarette demand. After checking this result estimated by the ECM model using an alternative methodology (ARDL) and alternative variable for income approximation, we can conclude that the estimated lower bound of price elasticity (-0.68) can be taken as the most reliable ECM estimate, which is closer to results of the robustness check. Price elasticity in the short-run is estimated in a range from - 0.46 to -0.52.

The income elasticity of cigarette demand is negative ranging from -1.29 to -1.39, if the bootstrapped values are used. If income elasticity has a negative sign, as it is the case in our models, then tobacco is considered an "inferior" good, with poor people consuming more than rich people [39]. (U.S. NCI and WHO, 2016). It is also likely that the negative sign of income elasticity is due to the fact that the income variable, in the long-run, is capturing the impact of other variables omitted from the model that we could not include due to both the length of the time series and the stationarity tests for possible controls. An additional possible reason for a negative sign of income elasticity is that we do not control in our models for cross-border trade and illicit trade in tobacco products. The

¹⁴ The coefficient of the regulatory variable in Model 3, which represents tobacco control regulations in place from 2011 to 2016, is statistically significant at the 10% and negative, suggesting that these regulations had a negative impact on cigarette consumption.

short-run income elasticity is positive and ranges from 1.64 to 1.79, showing that in the short run higher income leads to higher cigarette consumption.

5.2. Estimation of the price elasticity using micro data

In order to estimate the price elasticity of cigarette consumption we use the Household Budget Survey (HBS) data for years from 2006 to 2017, provided by Statistical Office of Montenegro - Monstat and the Deaton (1997) model of price elasticity. The Deaton model uses unit values of cigarettes (calculated as the ratio of cigarette expenditure to number of cigarettes (packs) bought), as a proxy for price and uses a weak separability assumption, which implies that market prices vary only between, but not within the territory unit, and relies on the regression analysis which is performed on the cluster level. Clusters are typically defined as territory units, and Deaton, in his original papers, uses villages.

In Montenegro, households are only surveyed once a year. The unit values are expressed in EUR per cigarette pack. Budget share is calculated as a ratio of monthly household expenditure on cigarettes and the total monthly household expenditure. Both cigarette and total expenditure variables are deflated to their real values from 2006, by using Consumer Price Index¹⁵.

We define clusters based on the information on municipalities and years, i.e. the cluster is defined as a municipality x in the year t . According to this definition, we generate 209 clusters, which on average include about 59 households¹⁶. In total, 12,503 households were covered by the sample for this estimation.

In first stage regressions, we purged the effects of the household characteristics such as household income, household size and structure (by gender, education, age and economic activity) from the unit value and budget shares of cigarettes.

Empirical results related to the unit value have the expected sign. Unit value as approximation of weighted average price of cigarettes per pack is higher for households with higher total expenditure. The lower unit value is associated with larger households, as well as households with more women and elderly people. Conversely, the effect of education on the unit value is positive, indicating that households with higher education spent more money per cigarette pack. Economic activity had significant impact on cigarettes consumption.

When it comes to the estimated coefficients from the budget share equation, the result showed that households with higher levels of total expenditure spent a lower share of their budget on cigarettes. Smaller households and households with higher shares of men and adults spent a larger share of the budget on cigarettes. Education had no significant effect on cigarettes budget share. Economic activity had a significant impact on cigarettes budget share.

¹⁵ Available online from the Statistical Office of Montenegro - Monstat website <http://monstat.org/eng/page.php?id=26&pageid=26>

¹⁶ No cluster has less than 2 households, which is condition to estimate the Deaton's model.

In the second stage regression, the analysis additionally purged the regional effects, due to differences between the regions (North, Center and South) in the level of development, which could influence consumption preferences. Results of the estimation indicate a negative price elasticity of cigarettes, which amounts to -0.578. Standard error of the elasticity calculated via bootstrapping procedure (1,000 replications) indicates that the elasticity is significantly lower than zero ($\xi = -0.619$; $SE_{\xi} = 0.111$, $t = -5.534$). The estimated value of total expenditure elasticity is positive, which was expected, and amounts 0.232.

5.3. Simulation of tobacco taxation impact on public revenue

The following simulation of excise and price impact on consumption of cigarettes and public revenue is based on a realistic assumption that supply function is perfectly elastic and that as a consequence, the whole tax burden is on the consumers. Even if this assumption is not totally realistic, its conclusions regarding impact of excise on public revenue and on cigarette consumption are the same. This study simulates the possible outcome by using the estimate of direct price elasticity of demand for cigarettes in Montenegro obtained with application of HBS Econometric Model. This estimation is due to the richness of data superior to estimation based on a Macro-Econometric model.

The simulation comprising of two scenarios was constructed under following assumptions:

- Tobacco category: 1,000,000 cigarettes;
- Retail price per pack EUR 2.1 (WAPC 2018);
- Specific excise EUR 0.6 per pack, ad valorem 32%, VAT 21%;
- Price elasticity -0.619, income elasticity 0.232;
- Real GDP Growth 3.5%.

The baseline for the scenarios, according given data is presented in Table 5.2.

Table 5.2. Revenue collection – baseline scenario

Baseline											
Tobacco category	Consumption		Retail	Tax per unit				Net-of-tax price	Revenue collection		
	Quantity	Units	price (per unit)	Excise (specific)	Excise (ad valorem)	Total excise	VAT		Total excise	VAT	Total tax
Cigarettes	1,000,000	packs	€2.10	€0.60	€0.67	€1.27	€0.36	€0.46	€1,272,000.0	€364,350.0	€ 1,636,350.0

Scenario 1: No change in excise taxes, only income effect assessed

Under no changes in excise taxes (specific and ad valorem), we would have the increase in consumption, total excise, VAT and total tax revenues by 0.81%. The results are given in the table 5.3.

Table 5.3. Revenue collection – no change in excise taxes

Tobacco category	Elasticities		Revenue collection			
	Price	Income	Consumption (new)	Total excise	VAT	Total tax
Cigarettes	-0.619	0.232	1,008,120	€1,282,328.6	€367,308.522	€1,649,637

Scenario 2: Increase price via tax

If we assume the change in specific excise from EUR 0.6 per pack to EUR 0.8 per pack (which was the specific excise until 1st September 2018), ad valorem from EUR 0.67 to EUR 0.685 (2% increase), the results would be the following:

Table 5.4. Revenue collection – Increase price via tax

Tobacco category	Elasticities		Revenue collection			
	Price	Income	Consumption (new)	Total excise	VAT	Total tax
Cigarettes	-0.62	0.232	930,447.1973	€1,385,845.27	€381,478.9773	€1,767,324

Meaning significant changes in consumption and revenues:

<i>Change in consumption</i>	<i>-6.96</i>
<i>Change in total excise revenues</i>	<i>8.95</i>
<i>Change in VAT revenues</i>	<i>4.70</i>
<i>Change in total tax revenues</i>	<i>8.00</i>

Comparing two scenarios, we can derive the conclusion that the **significant increase in revenues and decrease in cigarettes consumption** is only possible with the **increase of excise taxes**. The consumption decreases by 7%, while revenues increase for 8%.

Scenario 3: The effects would be stronger in the case of increases of specific excise on EUR 1 per pack (EUR 50 per 1000 pieces), which was planned to be implemented from January 1st, 2019, according to the previous excise calendar: **Consumption decreases by 14% (doubled comparing Scenario 2) and total tax revenues increase by 12.35%**. This is a significant decrease in smoking which would have important positive results for the populations' health.

6. SUMMARY AND RECOMMENDATIONS

In this study, we have analyzed the tobacco taxation policies and their impact on tobacco consumption or demand in Montenegro. Analysis of the tobacco market and regulatory environment suggests that the increase of excise and other taxes on tobacco have an important direct impact on the reduction of cigarettes and other tobacco product consumption. The same results were obtained using macro- (annual time series aggregate data in period 2001-2017) and microanalysis (Household Budget Survey in period 2005-2017). Our first estimates of long- and short-run price elasticity show that this direct impact is strong and very much in accordance with results obtained so far for other low- and middle-income countries.

The effects of excise tax increase (specific and ad valorem) will be visible in the reduction of direct health care costs and number of diseases. Moreover, the increase of excise taxes will generate more public revenues.

Accordingly, this study proposes the following key recommendations, which are linked to the necessity of excise tax increase:

- Create the positive effect of fiscal measures applied through a comprehensive approach, by tackling other policy changes and tobacco control systems, as a support to a tobacco tax policy of increasing excise taxes (more efficient law enforcement, anti-tobacco campaigns, stricter controls of points of sales etc.).
- Tobacco tax systems should be structured to minimize the costs of compliance and administration in process of tax compliance and collection of tax revenues, while reducing tax evasion and the risk of illicit trade.
- Improve the system for data collection by creating a national database of indicators related to the tobacco market, control, and tobacco taxation. Additionally, the database could be widened with data related to significant health indicators (prevalence, direct health care costs etc.). Consolidated publicly available databases would be a prerequisite for further high-quality research in this area.
- Create more intensive interaction between key stakeholders (Ministry of Finance, Ministry of Health). It is important to create synergy between Ministries and widen the dialogue and the interaction among other policymakers. This will contribute to more effective implementation of tobacco taxation policy and control.
- Develop compliance of tax and excise policies in the region. Numerous researches around the world have shown that different level of excises in bordering countries can lead to cross-border market arbitrage. This can make excise policies in all of these countries less successful without appropriate regional coordination.
- Revenues from excise tax increase could be used to invest in health programs. This could be a useful resource for policy-makers and tobacco control advocates who are considering establishing sustainable funding for health programs in general, or specifically for tobacco control programs.
- Decrease the prevalence of youth smoking by increasing excise taxes and creating strategies and effective programs that target youth. Policies aimed toward reducing number of smokers among young people have a strong long-run impact on the reduction of smoking prevalence. This is a result of the fact that such policies

reduce the number of recruited smokers and, in that way, the future number of smokers. Having in mind that young people still have not yet developed a strong addiction toward tobacco and that they have a very small budget, excise policy is effective in process of decreasing smoking prevalence among youth.

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ANNEX (POLICY DIALOGUE)

The main purpose of the National Policy Dialogue was to discuss the development of short-term and long-term vision of the economic and health implications caused by tobacco taxation in Montenegro. The necessity to launch a Policy Dialogue was caused by several crucial factors:

1. Gradual increase in excise tax duties on tobacco products according to excise calendar and harmonization of excise policy with EU standards (excise on cigarettes increased three times in 2017), followed by decrease in excise tax revenues in first 4 months of 2018;
2. Insufficient tobacco laws enforcement;
3. Institutional vacuum- lack of operational capacities amongst Policy makers in context of cooperation and communication related to tobacco control system;
4. Lack of interactive approach – positive effect of fiscal measures will be achieved by tackling other policy changes and tobacco control systems;
5. Low level of marketing and campaign against smoking;
6. Increase of smoking prevalence amongst youth in past ten years.

The most important issue is an adequate approach to tobacco control in order to generate positive effects of fiscal measures applied (reduction of smoking prevalence): interactive approach comprising of other policy changes (apart of taxation) such as comprehensive smoke-free laws and stronger enforcement, control of illicit trade, development of cessation programs, implementation of mass-media campaigns targeted at the general population, banning direct and indirect tobacco products advertising, sponsorships etc.

Accordingly, we have derived following Policy Dialogue Goals:

- Short term - positive economic impact of tobacco taxes (new revenues that will be sustained in the short to medium term), increasing awareness of tobacco control issues and developing trust between ISEA and members of Policy Dialogue working group.
- Long term – positive public health impact of tobacco taxes (decrease in tobacco consumption, direct health care costs, smoking prevalence amongst youth).

During our research we have identified various stakeholders in Pro and Anti-Tobacco arena. The main actors in pro tobacco arena are wholesalers, as there is a negligible share of tobacco production two producers of small quantities (Montenegro Tobacco Company and Novi Duvanski kombinat Podgorica).

After the analysis of the tobacco market and stakeholders, we have concluded that the crucial activities should be directed to *Ministry of Finance* (as a link to Government). This Ministry started to implement the measures of fiscal consolidation which will contribute to creating of the budget surplus and reducing the level of the public debt, thus boosting the stable economic growth. According to the fiscal consolidation measures, we can expect surplus amounting 3.5% of the GDP and reduction of public debt at 67% of the GDP in 2020. These goals are implemented by the Government. The aim of measures

is harmonization with excise tax policy with the EU standards (tobacco products and sugary drinks). Additional contribution to budget surplus is VAT rate increase from 19% to 21%, which was introduced in 2018. In line with the strategy of Ministry of finance, Customs administration and Department of public revenues are conducting their activities. Second important stakeholder is *Tobacco Agency* (as part of Ministry of Agriculture). Considering its activities (directly involved and controlling the market) this Agency could give a substantial support to creating efficient tobacco control system. Additionally, the *health system* has to be one of the crucial supporters in Dialogue process in order to increase the awareness of the analysed issue, by presenting a broader picture of tobacco impact on health in various segments (adults, youth, non-communicable diseases). Finally, the great support is given from the WHO, who is continuously raising awareness on tobacco negative effects on health

All mentioned stakeholders form part of Anti-tobacco arena, aim to decrease tobacco consumption. Still, it is important to reinforce their mutual communication, exchange of information and collaboration on covered issue.

Tobacco Industry impact in policy making process

Considering last 15 years, there were no explicit and open impacts of tobacco industry in policy making process. The tobacco market was stable, generating significant income to corporate tobacco sector. Therefore, until 2017 and 2018, Montenegro did not experience any complaints, strikes or thorough research¹, which could have been conducted due to stricter policy making process or decreasing demand and profits on the market. Sudden change and turmoil on the market happened last year, when the Ministry of Finance changed the excise policy and increased excise taxes – two times in 2017, from EUR 22- EUR 24, EUR 24- EUR 30, and EUR 40 from the beginning of 2018 (continuing with increase of EUR 50 from 1st January 2019). This is the period when the industry started actively to complain in the media, because of the high decrease in the demand, which by theirs statement was caused by growing trade on illicit market. The decrease in excise tobacco tax revenues by on average 27% in first six months of 2018 consequently resulted in changes of excise tax calendar, which is implemented from the September 1st 2018. Ministry of Finance stated that the decrease in excise tax was necessary as their analysis generated wrong estimations related to excise tax changes, which finally resulted in significant decrease of excise tax revenues.

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¹ In 2006, Institute of Strategic Studies and Prognoses conducted a study: Economic Costs of Tobacco Use in Montenegro