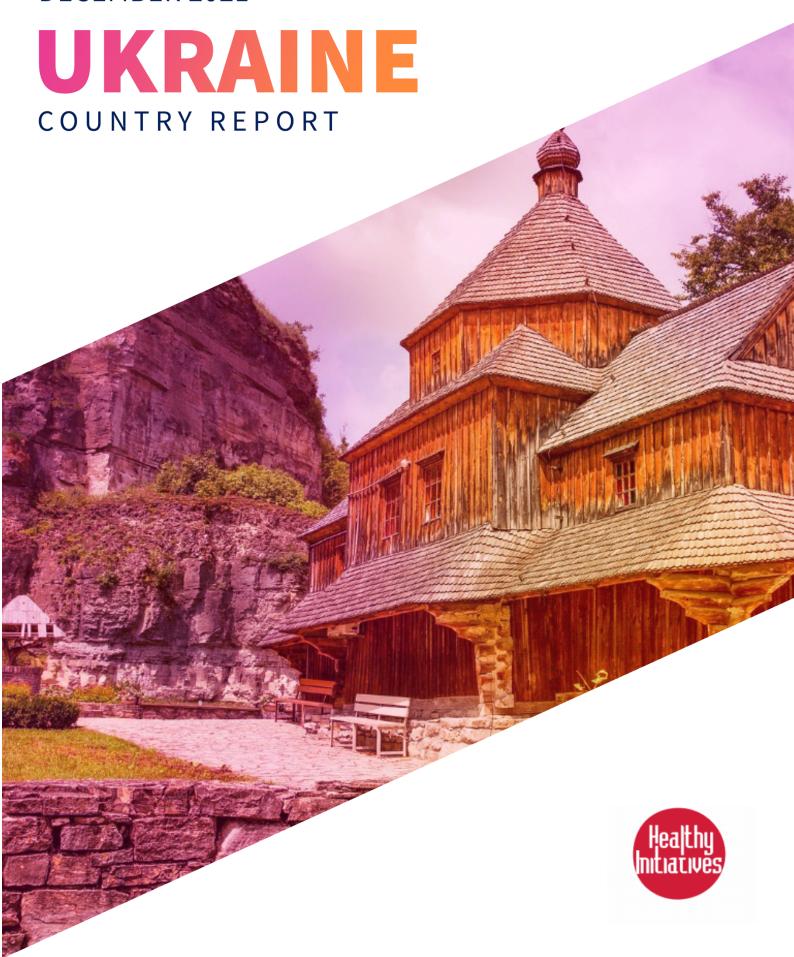
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Introduction

Ukraine is a European country that gained independence in 1991 as a result of the collapse of the USSR. In the north and east, Ukraine borders both Belarus and the Russian Federation, members of the Eurasian Economic Union, which comprises the largest political and economic entity in the former Soviet Union. In the west, Ukraine shares borders with Poland, Slovakia, Hungary and Romania, all members of the European Union, as well as Moldova, whose common border has become the administrative border of Transnistria, an unrecognized "republic" that is not controlled by the Moldovan government.

Ukraine at a glance, 2018-2019

Area	0,6 mln. km2
Population	44,4 mln.
Life expectancy at birth	71.6
Official language	Ukrainian
Capital	Kiev
Currency (Code)	Ukrainian
GDP, current US\$	153,8b1n.
GDP per capita, current US \$	3659
Unemployment, total, % of total labor force (national estimate)	8.2
Ease ofdoing busines rnaking	64
Total tax and contribution rate (% of profit)	45.2
Poverty headcount ratio at \$3.20 a day, % of population (2011 PPP) in 2017	0.4

Source: World Bank

Because of the war that broke out in 2014, the Russian Federation has temporarily occupied part of the Ukrainian territory. The Crimean Peninsula in the south was also annexed and is currently controlled by Russian authorities as a Russian region. Finally, in the occupied part of eastern Ukraine, a pro-Russian regimes of the so-called Donetsk and Lugansk "People's Republics" have been established. These "Republics" have unimpeded communication with the Russian regions through the part of the border that is not under Ukrainian control, and which now belong to the Russian economic area, including common currency and legislation.

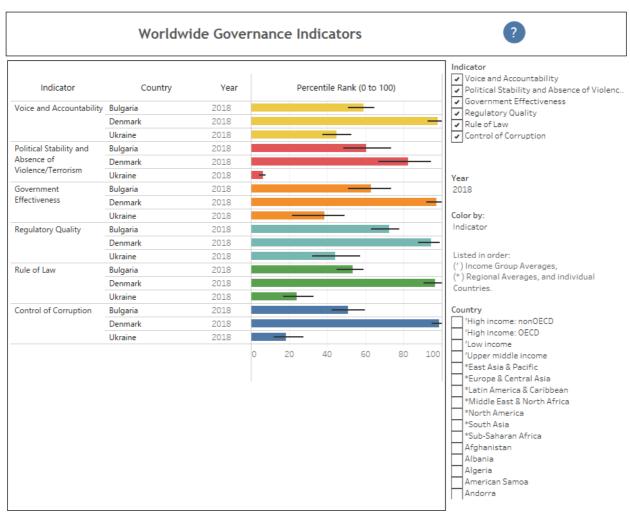
Ukraine has a long-established maritime border in the Black Sea, where, in addition to the countries mentioned above, Ukraine shares borders with Bulgaria, Georgia and Turkey.

Ukraine has an Association Agreement with the EU (signed in 2014), as well as a free trade zone with the EU.

The population of Ukraine is approximately 42 million, not including the territory of Crimea. However, this data may be inaccurate, as the last census was conducted twenty years ago, and over this time, the war and intensive labor migration have had an impact on population outflow. Furthermore, for the purposes of this study, part of the population of the occupied territories should be excluded. The Cabinet of Ministers estimates that approximately 37 million people are currently living in Ukraine, though this number may vary depending on the year and season due to labor migration.

In terms of income, Ukraine belongs to the group of middle-income countries with GDP per capita of USD 3,650 in 2019 (in terms of the purchasing power parity - USD 13,340¹). Over the last five years the country has seen steady growth; however, it is difficult to predict further development of the welfare of the Ukrainian population, as it is very much dependent on developments in domestic policy, as well as on international market conditions. Over the past 15 years, the per capita GDP in constant dollars has varied in purchasing power between USD 11,000 and USD 13,000, which may be a sign of a "middle-income trap".

The state institutions in Ukraine are weak (see graph) compared to those in Europe, including Eastern Europe. Low marks for Ukraine include widespread corruption, ineffective law enforcement, and social instability and violence. Yet, its democratic institutions are at a relatively favorable level for a country with this income level, and in a much better position than those of most post-Soviet countries.



Source: Kaufmann D., A. Kraay, and M. Mastruzzi (2010), The Worldwide Governance Indicators: Methodology and Analytical Issues - https://papers.csm/soi3/papers.cfm?abstract_id=1682130

The Worldwide Governance Indicators are available at: http://info.worldbank.org/qovernance/wqi/index.aspx#home

Note: The Worldwide Governance Indicators (WGI) are a research dataset summarizing the views on the quality of governance provided by a large number of enterprise, citizen and expert survey respondents in industrial and developing countries. These data are gathered from a number of survey institutes, think tanks, non-governmental organizations, international organizations, and private sector firms. The WGI do not reflect the official views of the World Bank, its Executive Directors, or the countries they represent. The WGI are not used by the World Bank Group to allocate resources.

¹ in both cases, in current US dollars

Ukraine ratified the WHO FCTC in 2006, and has since shown one of the highest rates of smoking prevalence decrease in the region. This is primarily due to a high growth rate in excise taxes on cigarettes. The increase in the excise tax is stimulated not only by the WHO FCTC, but primarily by the EU, which is affected by the illegal import of cheap cigarettes produced in Ukraine or delivered in transit through Ukraine from neighboring countries. The uncontrolled territories along the perimeter of the Ukrainian border pose a major smuggling threat. Moreover, the ineffectiveness of law enforcement agencies and their connections to organized crime in post-Soviet countries encourages counterfeit domestic cigarette production and smuggling to Ukraine and European countries.

The climate of Ukraine also makes it possible to produce some varieties of tobacco, although the country remains a net importer of the raw material.

Smoking is one of the major public health issues in Ukraine. According to the age-adjusted WHO methodology, the average tobacco smoking prevalence² in Ukraine was 26.0% in 2017, 43rd highest in the world out of 149 countries, and 28th highest out of 47 European countries. Thus, Ukraine ranks in the middle of the European list, and is one of the leaders compared to its neighbors. Still, prevalence among males is 41.8%, which is worse than in the neighboring EU countries. (WHO, 2019).

Furthermore, smoking prevalence among adolescents is high, with 13.5% of 13 to 15-year olds being current tobacco smokers. The smoking intensity among girls is even a little higher than among women (10.7% vs. 8.9%, according to GATS, 2017), which creates the risk of a further increase of smoking among women over time (GYTS, 2017).

In addition to high prevalence of tobacco smoking, 13.0% of the adult population in Ukraine are exposed to secondhand smoke at home, while 10.5% are affected at the workplace, 24.0% have reported exposure in restaurants, and 43.4% have reported exposure in bars or night clubs (GATS, 2017). In Turkey, a country with a roughly similar level of regulatory restrictions and even higher smoking prevalence, the respective numbers are 12.7% for the restaurants, while 28% were exposed to tobacco smoke when visiting cafes, coffee shops or tea houses. In addition, 20.5% of youth (aged 13-15) are exposed at home, and 51.6% of young people in enclosed public places (GYTS, 2017).

This issue is most likely related to the problems of enforcement of Ukraine's rather stringent regulations. This may also be partly attributed to the vague definition of the "tobacco smoke". While some respondents understand this term to mean only combustible tobacco smoke, others may also include the vapor, heated tobacco products (HTP) and waterpipe nicotine-containing aerosols that are either not regulated in Ukraine or are treated more loosely than cigarettes.

As a result of smoking, over 130,000 Ukrainians die annually from tobacco-related diseases. Tobacco causes about 30% of all male deaths and 7% of female deaths. (GBD, 2017). According to GATS, tobacco use has caused a huge burden on the population's health and finances in Ukraine.

In addition to lost lives, Ukraine suffers an annual loss of USD 12.5 billion (3.2% of annual GDP³) due to the health care expenditures and disability caused by tobacco-related diseases. The annual productivity loss due to smoking-related premature mortality is at least USD 3 billion, or 3.6 percent of Ukraine's GDP in 2005. The costs of treatment of tobacco-related diseases are estimated at USD 2.5 billion.

² Age-standardized prevalence estimates for current tobacco smoking among persons aged 15 and above.

³ Denisova et al (2014). Denisova I, Kuznetsova P. The Effects of Tobacco Taxes on Health: An Analysis of the Effects by Income Quintile and Gender in Kazakhstan, the Russian Federation, and Ukraine. The World Bank, Washington DC.

Altogether, Ukraine has achieved significant success in tobacco control. Over the last decade it has demonstrated one of the highest rates of decline in smoking prevalence. However, the prevalence of smoking conventional cigarettes is still rather high, and at some point, there is a risk of reducing this slowdown in prevalence.

A distinctive trend in recent years has been the emergence and rapid spread of innovative nicotine-containing products, such as e-cigarettes and tobacco heating systems, also known as harm-reduction products. This calls for new approaches (including new challenges associated with these products), but by inertia, control of the smoking epidemic is gradually taking the form of fighting a nicotine habit or "smoking" habit (or, to be more precisely, the inhalation habit) of even nicotine blends.

The regulatory response to the emergence of novel harm-reduction products was first lacking, but then concerns about them became exaggerated in comparison with the actual risks of such products. In fact, they have now been classified as traditional tobacco products, which is not commensurate with their actual social effect and this view (and corresponding new regulations) will have a negative impact on addressing the harmful effects of traditional smoking.

Smoking Prevalence

Despite the efforts of international organizations to address this issue, there are still issues with the data available on smoking prevalence and the use of nicotine-containing products.

Some surveys address all products of this kind, while others focus only on individual products. Different types of products are arbitrarily combined with others or disaggregated, resulting in overlapping data that cannot be easily summed up. In addition, most surveys did not include questions on non-combustible tobacco use until these products were mass-produced, making it difficult to compare the results of different surveys with each other and across several survey years.

There are also issues with data processing. The frequently used WHO data, according to their authors, is not really comparable with other sources or with each other in terms of dynamics, but it is intended solely to be used for correct comparison between different countries, taking into account differences in the age pattern of the population. They are therefore excluded from further analysis. The use of Euromonitor International's data for Ukraine is constrained by the lack of a description of the methodology for obtaining data. However, we will use it for the analysis whenever more reliable data is not available.

Primary information is collected only by the national statistics office (UkrStat, aka DerzhComStat) in annual household surveys, as well as the international GATS and GYTS surveys, which are conducted in an ad hoc manner. However, direct comparison of their results is also not possible, since household surveys collect information on both adolescents from the age of 12 and adults in the same category. In addition, the very design of the household survey of government statistics in Ukraine excludes middle-class participants, not to mention wealthier households. The consumption of nicotine, among other dangerous behaviors, was also studied in the ESPAD survey of adolescents.

Available data (see Table 1) indicate that the prevalence of traditional tobacco use among adults in Ukraine is decreasing by about 3% a year. However, the share of new alternatives is expected to grow rapidly, but the available data do not allow us to examine this issue in detail (e.g. whether the substitution theory applies in this country), which is essential for drawing meaningful conclusions such as those in the case of the UK.

The data situation allows for very preliminary conclusions only, as parts of the data conflict with each other, including within the same source.

UkrStat did not collect information about the use of harm reduction products. The most relevant data on the prevalence of ENDS among adults is the situation in 2016, when GATS (2017) showed a prevalence rate of 1.7%.

In addition to traditional smoking, GATS asked respondents about hookah smoking, but by different methods: according to data from 2010, 2% of all respondents smoked hookah, but without specifying its contents; a comparable figure for 2017 would be 2.1%. The value of 0.7% in 2017 corresponds to hookah smoking with tobacco. Euromonitor International shows a steady increase in the popularity of new products, which, however, can in no way be interpreted as a mere migration from conventional smoking to novel products, even if they were mutually exclusive. For example, while from 2013 to 2018 the prevalence of smoking dropped by 4% points, the use of e-cigarettes grew from 0.2% to 1.6%, and the latter figure fits well with other data. Thus one can conclude that an overall decline in smoking, and not merely a switch to less harmful products, was observed among adults.

According to GYTS and ESPAD, the trend in traditional cigarette smoking among teenagers is generally similar to that observed among adults, even with a slightly higher annual decline rate of 4%. However, according to ESPAD, this downward trend was observed in 2011-2015, but by 2019 the number of smokers slightly increased (probably within the statistical error) solely due to a steep increase in smoking among girls, although it did not reach the previous level.

There is also a clear increase in teenage consumption of novel harm reduction products and electronic cigarettes, as well as hookah smoking and consumption of chewing, sucking and sniffing forms of tobacco. However, unlike in the case of adults, in most cases, this involves experimentation (as discussed later in a separate analysis of teenage behavior) and is not associated with a formed addiction. At the same time, the disparity in the values of different surveys does not allow us to draw definitive conclusions about the real prevalence of e-cigarettes and less harmful products. It can only be argued that, in any case, it greatly exceeds the popularity of such products among adults.

Table 1 provides an overview of the prevalence of consumption of nicotine-containing products from 2010 through 2019, as shown by different available data sources.



Table 1. Prevalence of different types of consumption of nicotine-containing products by consumer categories in Ukraine for 2010-19 according to different sources

source	Category	Gender	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	<u> </u>	both	28.8							23		
	Total smokers	male	50							40.1		
		female	11.2							8.9		
	Cigarettes, cigars,	both	28.6							22.8		
	cigarillos, pipe	male	49.7							39.6		
	tobacco	female	11.1							8.8		
GATS		both								1.7		
	E-cigarettes	male								2.5		
	_	female								1		
	Heated	both	2							0.7		
	tobacco and	male	3.2							1.3		
	hookah	female	1.1							0.3		
-		both				30.7		29.4		26		
	Total smokers	male				50.6		48.2		41.8		
		female				14.3		13.7		10.2		
	Cigarettes, cigars,	both				28.3		27.5		24.8		
WHO	cigarillos, pipe	male				46.9		45.2		39.8		
	tobacco	female				13		12.8		9.8		
		both								1.7		
	E-cigarettes	male								2.5		
	_	female								1		
		both		19.3						14.9		
	Total smokers	male		22.6						17.8		
		female		15.7						12.1		
	C:	both		16.6/						13.5		
	Cigarettes, cigars, cigarillos, pipe	DOUT		16.2						13.5		
	tobacco	male		18.7						16.2		
GYTS		female		14.4						10.7		
		both								18.4		
	E-cigarettes	male								22.6		
		female								14		
	Heated	both		13.5						8.4		
	tobacco and	male										
	hookah	female										
		both										
	Total smokers	male										
		female										
	Cigarettes, cigars,	both		29.3				19.8				21.8
	cigarillos, pipe	male		35.2				25.7				25.8
ESPAD	tobacco	female		24.2				13.2				18.3
20.7.0		both						5.5				11.7
	E-cigarettes	male						7.7				15.4
		female						3.7				8.3
	Heated	both						11.3				13.8
	tobacco and	male						13.3				13.7
	hookah	female						9.5				13.7
		both										
	Total smokers	male										
		female										

Euromo	Cigarettes, cigars,	both		24.4	24.2	24	23.1	20.9	20.4	
nitor	cigarillos, pipe	male		42.6	42.3	42.2	40.6	36.8	36.4	
IIICOI	tobacco	female		9.5	9.3	9.1	8.6	7.8	7.2	
		both		0.2	0.3	0.8	1	1.5	1.6	
	E-cigarettes	male		0.4	0.6	1.3	1.6	1.9	2	
		female		0.1	0.2	0.3	0.5	1.2	1.3	
		both					19.3	18.7		
	Total smokers	male								
UkrStat		female								
OKIStat	Cigarettes, cigars,	both		21.2	20.9	18.4	19.3	18.7	17.9	
	cigarillos, pipe	male								
	tobacco	female								

^{*} hookah only, including tobacco-free hookah

In addition to the number of smokers, which is traditionally measured by use in a 30-day period, and number of addicts, i.e. smokers (or those who use nicotine in other forms) every day is also relevant. It is the latter index that WHO estimates in the WHO Report on the Global Tobacco Epidemic. For adults, these figures do not differ much, but for adolescents the difference between daily and occasional smokers is significant, as shown in Table 2.

Table 2.30-daytobacco products use among 14-17-year-old adolescents, %

	2011	2015	2019
Never use	70.6	80.9	78.2
< 1 cigarette a week	-	4.2	6.1
< 1 cigarette a day	11.4	2.9	2.9
1-5 cigarettes day	8.6	5.5	6.1
6-10 cigarettes a day	5.3	3.5	3.6
11-20 cigarettes a day	2.3	1.8	1.7
>20 cigarettes a day	1.8	1.3	1.4

Source: WHO

This effect is even more evident in the consumption of new nicotine-containing products (Table 3) where the number of regular consumers is several times lower than that of occasional consumers.

Table 3. Regular and irregular consumption of cigarettes and ENDS among the adolescences

	Boys	Girls	Both
	less than once per week		
C:	6.2	6.1	6.1
Cigarettes	Daily		
	16.6	9.3	12.8
	less than once per week		
ENDC	14.8	10.3	12.4
ENDS	Daily		
	3.7	1.3	2.5

Source: ESPAD, 2019

Table 4 shows the use prevalence of smokeless tobacco and e-vapor products in Ukraine among adults and youth. In Ukraine, the number of vapers and smokeless tobacco consumers is increasing, while the number of traditional smokers is declining. Some consumers migrate to new products because they view them as a less harmful alternative to cigarettes and/or an effective way to quit smoking.

Regular surveys of overall "tobacco and or nicotine users" are not yet organized, however it is possible to calculate a fragmented estimate based on available data about the numbers of cigarette smokers and vapers, and of their sum, as shown in the bottom part of Table 4. It shows that while the number of cigarette smokers has declined by 22.7% in five years from 2013 to 2018, the number of vapers has increased by a factor of six, so that the total of smokers and vapers has declined to a lesser extent – by just 17.5%, which is a 5.2% difference. This difference is predicted to grow, so that the actual situation would not be adequately understood and treated without accounting for all of the new and novel products.

In addition, according to Euromonitor International, although the popularity of e-vapor products is low, it is steadily increasing. In 2018, the percent of adult vapers was 8 times higher compared to 2013 and constituted 1.6% of the total population.

As for the use of smokeless tobacco, there is only GYTS data about its prevalence among adolescents aged 13 to 15. In 2017 it was 3.1%, almost the same for both boys and girls. The use of E-vapors was much more prevalent among adolescents and was 18.4%, including 22.6% for boys and 14.0% for girls. The latter is almost twice as high as adult female cigarette smoking (according to Euromonitor), which is alarming.

Table 4. Prevalence of the use of novel tobacco products (in%)

Index/ Data Source	Gender	2013	2014	2015	2016	2017	2018
Current smokeless tobacco use	both						
prevalence among persons aged	male						
18-69 / STEPS	female						
Number of adult vapers, percent /	both	0.2	0.3	0.8	1.0	1.5	1.6
Euromonitor International	male	0.4	0.6	1.3	1.6	1.9	2.0
	female	0.1	0.2	0.3	0.5	1.2	1.3
Current smokeless tobacco use	both					3.1	
prevalence among persons aged	male					3.1	
13-15 / GYTS	female					3.2	
Current e-cigarette use prevelance	both					18.4	
among persons aged 13-15 / GYTS	male					22.6	
	female					14.0	
Number of adult vapers, thous. Prisoned / Eurpmonitor International	both	91	122	264	349	533	547
Number of adult cigarette smokers, thous. Persons / Euromonitor International	both	9 130	8 541	8 442	8 064	7 274	7 059

Source: WHO, Euromonitor International, UkrStat, the author's calculations

WHO trends show that Ukraine is not keeping pace with its benchmarks for smoking reduction. With its current tobacco control policy, which ensures an annual reduction of 3% in the number of smokers, it will take several decades before the smoking epidemic comes to an end.

Tobacco Control Policies

Comprehensive tobacco control and taxation policies are the main tools of policy makers in the process of fighting the tobacco epidemic. The first legislative act in Ukraine related to tobacco control was adopted by the Parliament in September 2005, i.e. the law No 2899-IV "On Measures to Prevent and Reduce the Use of

Tobacco Products and Their Harmful Impact on Public Health". Furthermore, on June 6, 2006 Ukraine ratified the WHO Framework Convention on Tobacco Control, (FCTC), which went into effect on September 4, 2006. Under the aegis of WHO FCTC, Ukraine committed itself to implement a set of measures to reduce its alarmingly high smoking prevalence. Since then Ukraine has adopted several legal acts regarding smoking. First, they implemented a total advertisement and sponsorship ban. Second, since 2012 smoking has been prohibited in closed premises and in public places, including educational, medical, sport, cultural institutions and the like. However, smoking was allowed in some indoor facilities, such as airports, if they have designated smoking areas. Finally, packaging regulations require health warnings to cover 50% of all cigarette packages.

On June 27, 2014 Ukraine and the EU signed an Association Agreement (AA). Among other things, this Agreement obligates Ukraine to gradually harmonize its national legislation on tobacco taxation with respective EU legislation (NCDC 2015).

On September 3, 2009, the Ukrainian Government adopted the National Social Program for the Reduction of the Harmful Impact of Tobacco on Public Health in Ukraine until 2012. This Program aimed to protect the population against the consequences of tobacco use and exposure to tobacco smoke, and to minimize the social, environmental, and economic consequences of tobacco use by implementing tobacco control measures at national and local levels. The Program included a range of tobacco control activities, including the provision of smoking cessation services. However, the funds intended for the implementation of the Program were not allocated in the state budget, and eventually the program was canceled in 2011. Hence, no government-funded program on tobacco control that meets the WHO criteria⁴ has been adopted yet.

To date, the most effective measure in Ukraine has been a tobacco tax increase, which along with the devaluation of 2014-15, caused a sharp increase in cigarette prices. However, they then rose in price in relation to other goods, while their availability (in relation to personal income) remained at about the same level. Thus, the reduction in smoking prevalence seems to be mainly due to the increase in relative prices for tobacco products compared to other products.

There are several conspicuous shortcomings in tobacco control measures currently being implemented by the Government of Ukraine. First, the government is currently offering no support to those willing to quit smoking. Meanwhile, other countries' experience shows that only one in seven people have managed to do so on their own, and according to the WHO, assistance doubles the chances of success. Given that, according to GATS (2017), 63% of smokers in Ukraine would like to get rid of this addiction, of which 27% would like to do so within the next year, therefore, the establishment of an accessible and effective system of support could increase a rate of reduction in the number of smokers by an additional 4% if all those who want to quit smoking apply for assistance.

According to estimates of economic damages from tobacco use presented in the Annex, this would save up to USD220 million (about 6 billion UAH) in each subsequent year cumulatively by reducing the cost of treatment for smoking-related diseases and increasing active life expectancy. At the same time, a smoking cessation service should offer alternatives to those who for some reason cannot or do not want to quit their own nicotine addiction, to satisfy needs for nicotine that are less harmful for their health and minimize the public damage resulting from their addiction.

A draft law #2813, prepared by the Campaign for Tobacco Free Kids (CTFK) and actively advocated by its grantee NGO "Life", stipulates further steps listed below, whereby, along with improving traditional tobacco control policies, equal measures are also to be applied to novel products:

 $^{^4\,}https://www.who.int/tobacco/publications/smoking_cessation/quit_lines_services/en/$

- 1. Increase the legal minimum age for purchasing tobacco and nicotine products to 21 from the current 18:
- 2. Ban the sale of tobacco and nicotine products in the vicinity of schools and other educational establishments;
- 3. Reduce the range of designated smoking areas (for enterprises where there are no smokers; or giving some rights of closing such arears to local authorities);
- 4. Ban packaging that contains either less or more than 20 cigarettes;
- 5. Ban placement of cigarette packs on shelves of retail stores, i.e. product displays at points of sale;
- 6. Extend the area of health warnings on packaging from 50% to 65% to ensure alignment with the European Union (EU) Tobacco Products Directive mandate of health warnings covering 65% of the main surfaces of packages;
- 7. Implement the Australian model of plain tobacco packaging with restricted use of logos, colors and brand images, and with graphic health warnings depicting the consequences of smoking. In addition, pictures and texts should be rotated to avoid the wear-out effect of the warnings when the pictures become less effective;
- 8. Equalize the taxation of nicotine-free components for hookahs and e-cigarettes with nicotine-containing ones;
- 9. Extend the regulation and taxation of traditional tobacco products to cover novel products (it must be noted here that the respective bill proposes a rather close taxation of heat-not-burn tobacco sticks, but very low taxation of e-liquid for e-cigarettes);
- 10. Introduce a ban on flavored tobacco and nicotine products and/or other substances.

Tobacco and Harm Reduction Products (HRP) Market

Market Size

In 2018, approximately 3 billion packs of cigarettes were smoked. This represents 700 million packs, or 20% less cigarettes smoked versus 2013.

In monetary terms, the market size for cigarettes has been steadily growing, as price increases outweighed the decline in the sale of cigarettes. In 2018, the total value of cigarettes sold in Ukraine amounted to more than UAH 90 billion, which is almost twice as much as in 2013. However, it must be noted that the novel products market is quickly growing both in real and monetary terms. In 2013-2018 vapor and other non-cigarette sales have grown by a factor of six. In addition, Table 9 shows that vapor and other novel tobacco products' sales have grown by a factor of 27.

Ukraine is a net exporter of cigarettes and a net importer of raw tobacco, while the overall balance is largely neutral (slightly negative). Notably, the turnover is growing.

International tobacco companies dominate the Ukrainian market by holding 92% of the cigarette market share. In 2017, Philip Morris International led with a 28% market share, followed by British American Tobacco (24%), Japan Tobacco (22%) and Imperial Tobacco (18%). The only significant local producer is the Vinnytsa Tobacco Factory that holds 7.8% of the market (Euromonitor, 2019).

Table 5. Cigarette and other tobacco and nicotine related products sales

	2013	2014	2015	2016	2017	2018
Total sales of tobacco and nicotine related products, UAH mln	48144	56871	57327	64611	80478	94035
Vapor and other Non-cigarette sales, UAH mln	954	1067	2343	2953	3876	5898
Sales of Cigarettes, UAH mln	47190	55804	54984	61658	76602	90137
Sales of Cigarettes, million packs	3773	3676	3480	3597	3331	3044

Source: Euromonitor International

Table 6. Foreign Trade in Tobacco Products, UAH mln

	2013	2014	2015	2016	2017	2018	2019	2020*
Cigars, Cigarillos, Cigarettes (code 2402)								
Exports UAH mln					7813	9280	8597	10809
Imports UAH mln					1454	1382	1308	1253
Balance					6359	7898	7289	9555
Raw tobacco, tobacco waste, homogenized or re	estored to	bacco, o	ther (cod	es 2401, 2	2403)			
Exports UAH mln					1653	1582	2629	3731
Imports UAH mln					9332	10104	11404	12630
Balance					-7668	-8522	-8775	-8899
Tobacco Products (code 24)								
Exports UAH mln					9466	10862	11226	14540
Imports UAH mln					10776	11486	12711	13883
Balance					-1310	-624	-1486	657

Source: State Customs Service of Ukraine, The indicators of foreign trade. https://bi.customs.gov.ua/trade/#/turnoverhs

Table 7. Foreign Trade in Tobacco Products, USD mln

	2013	2014	2015	2016	2017	2018	2019	2020*
Cigars, Cigarillos, Cigarettes (code 2402)								
Exports UAH mln					294	341	335	446
Imports UAH mln					55	51	41	53
Balance					239	290	284	392
Raw tobacco, tobacco waste, homogenized or r	estored to	bacco, o	ther (cod	es 2401, i	2403)			
Exports UAH mln					62	58	103	154
Imports UAH mln					351	370	446	518
Balance					-289	-312	-343	-364
Tobacco Products (code 24)								
Exports UAH mln					356	399	438	600
Imports UAH mln					406	421	497	571
Balance					-50	-22	-59	29

Source: State Customs Service of Ukraine, The indicators of foreign trade. https://bi.customs.gov.ua/trade/#/turnoverhs

HRP Market Size

Electronic cigarettes arrived in Ukraine in 2013, followed by IQOS, GLOs and other heated tobacco products in 2016. These products are less harmful than traditional cigarettes, while smokers are increasingly switching to them in order to give up smoking conventional cigarettes. In 2018, for example, the number of adult vapers in Ukraine increased more than 6 times compared to 2013 according to Euromonitor International, as shown in Table 4.

^{*}Estimation of 2020 is based on January-April data / per annum

^{*}Estimation of 2020 is based on January-April data / per annum

Table 8 presents the sales dynamics of novel tobacco products in Ukraine. The market size of e-vapor products increased from 162.3 UAH million in 2013 to 2424.4 UAH million in 2018, or by 15 times. This is explained by the base effect: the volume of 2018 constitutes only 2.7% of total sales of cigarettes, and only 1.7% of adults used e-vapors in 2017 (however, e-vapors and smokeless tobacco are much more popular among adolescents aged 13-15, GYTS 2017). In 2016-2018 the e-vapor market increased by 1.57 times and, according to the Euromonitor forecasts, in 2018-2023 further increases could amount to growth by another 1.5 times.

The market for heated tobacco products is growing more rapidly, by 28.7 times in 2016-2018, and at a market size of 1994.8 UAH millions in 2018, it has almost caught up with the vapor market. Euromonitor forecasts further growth by almost a factor of three (2.77) in 2018-2023.

Table 8. Sales of new tobacco products (in UAH mln.)

Type of tobacco product	2013	2014	2015	2016	2017	2018
Smokeless Tobacco						
E-Vapor Products	162.3	298.7	1090.1	1543.6	1992.0	2424.4
Closed Vaping Systems	30.3	42.1	102.2	112.6	111.7	121.8
Cig-a-likes	30.3	42.1	102.2	112.6	111.7	121.8
- Single Use Cig-a-likes	5.8	6.8	15.1	16.3	15.5	16.5
- Rechargeable Cig-a-likes (incl. starter kits)	6.0	8.4	20.6	22.6	22.3	24.3
- Cig-a-like Cartridges	18.5	26.9	66.5	73.8	73.9	81.0
Non Cig-a-like Closed System						
- Non Cig-a-like Closed System (incl. starter kits)						
Open Vaping systems	132.0	256.6	987.9	1431.0	1880.3	2302.6
Open Vaping Systems	36.9	70.4	267.4	382.4	505.6	607.7
Charging and Vaporising Devices (E-liquids)	95.1	186.2	720.6	1048.6	1374.7	1694.9
Heated Tobacco Products				69.5	478.1	1994.8
Tobacco Heating Devices				13.1	77.8	285.6
Heated Tobacco				56.4	400.3	1709.3
Total	162.3	298.7	1090.1	1613.1	2470.1	4419.2
Heated Tobacco Products in real terms						
Sales of Tobacco Heating Devices (thous. units)				70.0	41.0	150.0
Sales of Heated Tobacco (mln. sticks)				30.4	205.3	795.0

Source: Euromonitor International

Taxation of Tobacco Products

Tobacco products are taxed by excise duties (including minimum ones) and a 20% VAT. Additionally, on January 1, 2015 the government introduced a Special Excise Tax on Retail Sales of Tobacco Products that amounts to 5% of the maximum price indicated on packs of cigarettes. This special tax is transferred to local budgets. In addition, since January 1, 2016, VAT has been included in the ad valorem excise tax base, thus harmonizing Ukraine's ad valorem taxation with the practice of the European Union and some other countries. Before this date, the ad valorem tax base was equal to the retail price without VAT. Another important milestone is the introduction of equal excise taxation of both non-filtered and filtered cigarettes on January 1, 2015. (Tax Code of Ukraine, 2020):

• Increases of specific and minimum tax rates by 1.4 times in 2014, 2016 and 2017 as part of extraordinary measures connected to the Russian invasion.

• The period from 2019 to 2025 envisages a tax increase; a scheduled annual tax increase by 1.2 times in accordance with the strategy adopted in 2017. The goal of this schedule is to successfully capture the minimum level of a tobacco excise tax of 60% of the average price, according to the European Council Directive 2011/64/EU of 21 June 2011.

Table 9 shows excise taxation from 2013 through 2018. As the table shows, taxation of the traditional noncigarette tobacco products, such as raw tobacco, tobacco waste, cigars and others, has two features: their rates are the same and are calculated per 1 kg, and their dynamics repeat the pattern of specific and minimum taxation of cigarettes. For example, in 2013-2018, both the excise tax on raw tobacco and specific and minimum excise taxes on cigarettes increased by 3.6 times. Given that a cigarette contains about 0.75 g of tobacco, while a stick only 0.3 g⁵, in 2020 the specific excise was about UAH 1.21 per 1 g of cigarette tobacco, and UAH 1.4 per 1 g. of tobacco in heated sticks. However, for cigarettes, a 12% ad valorem component increased from UAH 0.29 for unfiltered to UAH 0.42 for premium class cigarettes, so that the total excise tax per 1 g for cigarettes appears slightly higher than for sticks – from UAH 1.4 to UAH 1.63, with the lowest value for the most harmful product. Even with almost flat taxation per 1 g of tobacco, this is still currently lower for the HTPs as a source of nicotine. But with the legislative amendments that will take effect in 2021, this will tighten, as described below.

The following are some comments about the issues.

The current procedure of collecting the 5% Special Excise Tax on Retail Sales of Tobacco Products is ineffective and requires review (Novyc'ka et al 2019).

The low and unchangeable ad valorem tax of 12% has caused slow growth in pricing for expensive, premium-class cigarettes, and increased their affordability, along with growth in smoking prevalence among the rich strata of the population versus the decrease in overall prevalence. (See UkrStat's household surveys and details in Appendix IV.)

The current goal of full compliance with EC directives is aimed at a relative indicator only, and ignores the problem of a huge gap of nominal prices, which are currently four times lower in Ukraine than in the EU, and two times lower in relation to the cheapest prices in newer members of the EU such as Bulgaria.

⁵ https://center-life.org/novyny/zbil-shennia-aktsyzu-na-stiky-tiutiunovykh-vyrobiv-dlia-elektrychnoho-nahrivannia-u-2021-rotsi-ie-tsilkomwpravdanym-iak-dlia-pidvyshchennia-biudzhetnykh-nadkhodzhen-tak-i-dlia-hromads-koho-zdorov-ia/

Table 9. Tobacco tax rates*

Product	Amount	1/2013	:		1/2014			1/2015			1/2016	**		1/2017	,		1/2018		
		Sp	Ad	Mn	Sp	Ad	Mn	Sp	Ad	Mn	Sp	Ad	Mn	Sp	Ad	Mn	Sp	Ad	Mn
										Rs			Rs			Rs	_		Rs
Raw tobacco, tobacco waste	1 kg	204.26			217.60			295.12			399.84			599.78			726.15		
Cigs and cigarillos	1 kg	204.26			217.60						399.84			599.78			726.15		
Cigarette (filtered)	20 cigs	3.25	12	4.35	3.46	12	4.63	4.55	12	6.08	6.37	12	8.52	8.91	12	8.52	11.56	12	15.46
									Rs>	5			5			5			5
Cigarette (unfiltered)	20 cigs	1.45	12	1.91	1.55	12	2.03	4.55	12	6.08	6.37	12	8.52	8.91	12	8.52	11.56	12	15.46
									Rs>	5			5			5			5
Water-pipe tobacco	1 kg	204.26			217.60						399.84			599.78			726.15		
Other manufactures tobacco and manufactured tobacco substitutes; "homogenized" or "restored" tobacco; tobacco extracts and essences	1 kg	204.26			217.60						399.84			599.78			726.15		
Capsules and similar products	20 pcs																		
Heated tobacco products	1 kg													599.78			726.15		
Liquids with or without nicotine	1 ml																		

^{*} Sp - Specific excise tax rate, UAH

According to the Association Agreement, Ukraine has an obligation to take steps towards narrowing this price gap. But it is estimated that the current tax escalator of a yearly stipulated increase factor of 1.2 will double the excise on cigarettes in about 4 years, meaning that the retail price will increase (all other things being equal) by about UAH 20, or less than half. This is obviously insufficient for closing the price gap with the EU and not enough for making cigarettes the least affordable source of nicotine. However, a faster pace of increase is hindered by a rise in illicit trade, as described below.

Moreover, the 60% goal of excise taxation was proclaimed at the time, when, in fact, it had by then been almost achieved. Namely, the filtered cigarettes of domestic brands had crossed the 60% mark of excise taxation as early as the beginning of 2019. Thus, it is likely that the actual goal was to switch to a much less active tax policy that provides for a relatively low increase and complements the low and stable ad valorem rate

In accordance with the recently adopted Law 466-IX, starting from 2021 the tax on sticks will equal the minimum excise tax on cigarettes, but without ad valorem and specific components. The tobacco industry is concerned that the law will increase the excise tax rate on tobacco products for ENDs by 320% in 2021, with a subsequent increase in excise tax annually by 20%. In the previous 4 years, excise tax rates on cigarettes were raised by 30%-40% annually, and the market saw an annual fall in taxes collected of more than 10%. During this time, the volume of illegal trade also increased by 7 times.

Ad – Ad Valorem excise tax rate, percentage

Mn – Minimum excise tax liability, UAH

Rs - Special Excise Tax of 5% levied on retail sales of tobacco products.

^{**} On January 1, 2016, VAT was included in the ad valorem excise tax base, before this date, the ad valorem tax base was equal to the retail price without VAT.

This law also sets an excise tax on liquids for vaporing at the level of UAH 3 per 1 ml. Tobacco control NGOs consider it to be a half-measure because an "electronic pack" of cigarettes would be taxed six times lower than a traditional one, which is not nearly enough. Moreover, it was determined that 1.6 ml of the liquid contains the same amount of nicotine as a pack of cigarettes.

So, in 2019 the Life Center NGO, in its letter to the Ministry of Finance of Ukraine and supported by the World Bank and WHO's TFI, proposed more radical changes that are still to be discussed.

Due to the relatively high prevalence of smoking and increase of taxation, the tobacco industry is currently an important source of budget revenues in Ukraine, providing more revenues than alcohol and all other excise duties combined. Table 10 shows budget revenues generated by tobacco products, with a breakdown of these revenues in Table 11. In 2018 they accounted for 5.7% of the total tax revenues. Furthermore, the figures presented do not include VAT, profit and income taxes generated by the tobacco and related industries, which makes the role of the industry even more important for public finances. Therefore, when designing its tax policy, the government should consider not only its effect on the public health, but also its potential impact on the budget. Unfortunately, earmarking instruments are not applied in Ukraine, and therefore, this money cannot be directly allocated for health care and healthy lifestyle promotion.

Table 10. Tobacco exose tax revenus (in UAH mln.)

	2013	2014	2015	2016	2017	2018	2019
Total	17 900	18 100	22 200	33 200	39 900	43 600	44100
Share in total tax revenues %				6.6	6.4	5,7	4,7

Source: MOF

Table 11. Dynamics ofbudget revenues from the exose duty on cigarettes in 2007-2019

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Excise taxes, UAH billion	2.44	3.58	9.06	13.1	15.3	16.6	17.91	18.1	22.2	33.23	39.87	43.57	44.14
GDP %	0.34%	0.5%	1.26%	1.81%	2.12%	2.3%	2.49%	2.51%	3.09%	4.61%	5.53%	6.05%	6.12%
GDP % increase		0.16%	0.76%	0.56%	0.31%	0.18%	0.19%	0.03%	0.57%	1.52%	0.92%	0.51%	0.08%
A 5% tax on the retail sale of									2.75*	3.08	3.83	4.51	н/д
tobacco products, UAH billion									2.13	3.06	3.03	4.31	п/д
GDP %									0.38	0.43	0.53	0.63	Н/Д
Increase in real excise duties,		117%	218%	132%	108%	108%	108%	90%	83%	131%	105%	99%	94%
% year on year		11170	21070	13270	10070	10070	100%	30%	0370	13170	103%	9970	3470
Excise tax on 1 cigarette, UAH							0.24	0.25	0.36	0.5	0.66	0.79	Н/Д
Share of excise tax in cigarette							38%	32%	45%	59%	57%	53%	н/д
price							3070	32%	45%	33%0	3170	J3%	п/Д
C C . T . C . D . I													

Source: State Treasury of Ukraine, DerzhComStat, author's calculation

For taxation to generate the correct price signals for consumers and producers, the final price of a product must be proportional to its health hazard. More specifically, the value of the excise tax should be determined based on the Laffer curve for the respective type of goods, accounting for the public price of their consumption. The latter, in turn, can be determined by methods like those used to calculate the public price of smoking, but in relation to individual harmful components. As a result, once new products containing the

^{*}The above values for revenues from retail sales tax on excisable goods are approximate, since government statistics do not differentiate between revenues from alcohol and nicotine-containing products. They are calculated on the basis of Euromonitor data on cigarette retail sales.

same components in a different ratio or different modes of use begin to appear on the market, they would automatically come to the attention of lawmakers and would be subject to regulation and taxation according to the public price of their consumption.

In practice, this approach could be implemented based on principles that successfully govern food safety. For example, 1) in the form of universal, science-based rules that define the approaches to the regulation and taxation of potentially dangerous and addictive substances; 2) in combination with mandatory requirements to producers to specify the content of relevant substances in the product itself and its transformation products in the process of consumption - in particular, the products of combustion, dispersal, evaporation, interaction with saliva, etc. Based on this information, the relevant state sanitary supervision authorities should promptly prepare regulatory proposals, which should then be adopted in accordance with established procedures (and in the case of excise taxes, approved by the Parliament).

This approach would allow for a more rapid and adequate response to the product innovations that will predictably appear with increasing quantities on the market. Simple and unambiguous rules, derived from general rules and legally enacted, should be adopted at the level of production and market surveillance. Moreover, the information provided by producers should be subject to regular controls with adequate penalties in case of significant discrepancies.

This would provide an automatic solution to the issue of excise taxes on liquids for e-cigarettes as well: if they do not contain substances other than nicotine, it is the content that should be subject to taxation (without concentration restrictions). In this case, nicotine fluids should not be subject to additional tax, as they could help those who quit smoking by reducing the concentration of nicotine. At the same time, the possibility of minimizing taxation by manipulating concentrations and subsequent dilution will be eliminated, thus eliminating the need for concentration limits.

However, given all of the potential difficulties of implementation of the above theoretical approach at the legislative level, and of its administration, the first step should be to ensure that harm reduction products are at least more attractive to nicotine addicts than higher risk products.

In particular, as a result of this approach, the most harmful sources of nicotine (in terms of milligrams of nicotine) such as non-filter cigarettes and hookah tobacco should be the most expensive for the consumer, followed by filter cigarettes (somewhere within the same limits - placer tobacco, cigars and cigarillos), followed by heated tobacco products, and even more importantly, liquids for electronic cigarettes. However, today the price ratio is the opposite (see Table 12) and reflects more closely the cost of production. The introduction of an excise tax may significantly exacerbate these imbalances unless producers commit to significantly reducing their profits, which is an unlikely scenario.

Table 12: The cost of obtaining a dose of nicotine corresponding to smoking one "average" cigarette when consuming various nicotine-containing products in Ukraine in 2020 and (forecast) in 2021, following the enforcement of legally established excise tax increases.

Product Type	Nicotine dose price 2020	Nicotine dose price 2021
Cigarettes (average)	2	2.35
HTP (HEET)	3	4.1
Vape liquid with nicotine content of about 30 mg	>3	>4.5

Source: comparison of prices at Rozetka.ua, the text of the Law of Ukraine # 466-IX, and the author's calculations. The calculations assumed that the consumption of one cigarette provides the smoker, on average, with 1.5 mg of nicotine (e.g. one pack contains 30 mg of nicotine); the consumption of one HEET stick with 1 mg of nicotine (the pack = 20 mg); and during vaping, only part of the liquid nicotine (the equivalent of one pack of cigarettes > 30 mg) enters the human body.

The main requirement for creating a system of price incentives in accordance with health risks is to increase excise taxes on cigarettes; the most popular and most harmful source of nicotine. Unfortunately, for any further growth in the excise tax (although stated in its international obligations), Ukraine must first address the fact that legally produced tobacco products are often replaced by illegally imported or produced ones. There is a close connection between the affordability of cigarettes and the illegal market, which will be discussed in the section on illicit trade.

Prices

Table 13 shows price data from UkrStat, which collects monthly data on prices of filtered cigarettes of domestic brands, filtered cigarettes of the medium price band, filtered cigarettes of the premium price band and unfiltered cigarettes, as well as the data from the "Country Profile: Ukraine" of the WHO Report on the Global Tobacco Epidemic, which provides biannual data about the most sold brand, the lowest cost brand (with some indications about the titles of these brands), and Marlboro as one of premium-band brands.

As can be seen in Table 13, changes in excise taxes have influenced the dynamics of prices on the tobacco market. According to UkrStat, in 2018 the prices for filtered cigarettes of domestic brands almost tripled (increased by 2.7 times), in 2019 they grew by 3.3 times, and at the beginning of 2020 they grew by 3.8 times, compared with 2013.

Yet, these undeniable achievements should be viewed in the context of very low absolute prices in Ukraine, which are about 1.5 times lower than in Russia, and much lower than in the EU. Therefore, it is too early to speak of slowing down the growth rate of these prices.

Table 13. Price of a 20-cigarette pack (in UAH)

Table 13. Frice of a 20-cigarette pack (iii OAII)											
Cigarette type	2013	2014	2015	2016	2017	2018	2019	2020 Jan-Fbr			
Filtered domestic cigarettes, average	9.70	10.90	12.69	14.15	20.79	26.40	32.42	36.70			
Filtered cigarettes of medium band, aver.				15.83	23.35	30.32	37.45	41.71			
Filtered cigarettes of premium band, aver.				22.63	29.36	36.31	43.95	48.80			
Unfiltered cigarettes, average				12.17	18.13	22.96	28.24	33.01			
The most sold brand*		9.00		14.70		29.05					
Title of the most sold brand				Pryluky							
The lowest cost brand*		5.00		10.00		28.10					
Title of the lowest cost brand				Kozak non-filter							
Price of Marlboro (premium brand)*		18.00		25.20		39.00					
Price of HEETS (per 20 sticks)	n/a	n/a	n/a			40	45	53			

Source: UkrStat, WHO Report on the Global Tobacco Epidemic. Country Profile: Ukraine, Euromonitor International.

Moreover, price changes do not occur evenly for various price groups, and available data makes it possible to demonstrate this in relation to 2016 (as shown in Figure 1). It shows that the prices of expensive premium class cigarettes remain well below other groups, and one of the causes of this is the steadily low ad valorem rate of 12%.

^{*}As of 31 July of the corresponding year.

It worth noting that the largest price increase, by 2.71 times, was registered in early 2020, as compared to 2016 (as shown in Figure 1). In addition, in 2016-2018 the price of the most sold brand grew by 1.98 times, while the price for the lowest cost brand grew by 2.81 times. These price hikes, compared to other price groups, provide evidence of the ongoing narrowing of the cigarette price gap in the Ukrainian market.

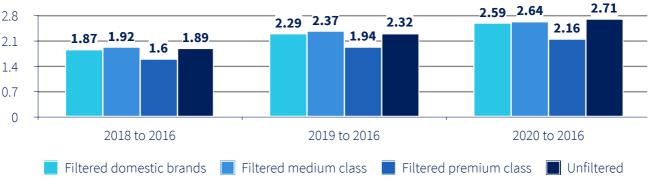


Figure 1. Cigarette price changes to 2016 for various price groups, times

Source: UkrStat

The price for a pack of the most popular HEETS brand is currently UAH 53 for an old series and UAH 60 for a new series. In 2018 and 2019, the price was UAH 40 and UAH 45, respectively, which is comparable to the prices of cigarettes. Information for 2016-2017 could not be found, as these products were not officially present in the market yet.

The prices for electronic cigarette liquids vary greatly, depending on their strength, volume and other characteristics. It is difficult to derive an average price, therefore a 10 ml 4ISTO VAPE E-liquid for POD systems sells for UAH 57 per bottle and was used to of calculate the price of 1 g of nicotine.

Affordability

While cigarette prices are more expensive compared to the past, an individual's ability to purchase cigarettes was not measured. Rapid growth in income levels of the population could make tobacco products more affordable and thus stimulate tobacco use. Therefore, it is vital to monitor and reduce tobacco affordability.

The WHO Report on the Global Tobacco Epidemic does provide some information on affordability, but only for the most sold brand, and using the Relative Income Price (RIP) measurement. It may be helpful to consider also measuring the affordability of various products in order to provide addition insights into the actual situation in Ukraine.

Based on price data (see Table 14), we calculated affordability indices for different types of cigarettes in Ukraine using the RIP that shows the share of GDP per capita needed to purchase 100 cigarette packs (see Table 5a). In addition, affordability is calculated relative to wages (% of average wage required to purchase 100 packs of cigarettes). This is due to the higher reliability of the wage statistics. Realizing that the share of personal income in GDP is changing in Ukraine as a transition economy, the direct measurement of income looks more reliable (see Table 15).

Table 14. Cigarette affordability, RIP (in %)

Cigarette type	2013	2014	2015	2016	2017	2018	2019
Filtered domestic cigarettes	3.03	3.04	2.75	2.53	2.96	3.14	3.43
Filtered cigarettes of medium band,				2.83	3.33	3.6	3.96
Filtered cigarettes of premium band,				4.05	4.18	4.31	4.65
Unfiltered cigarettes				2.18	2.58	2.73	2.99
The most sold brand / calculated		2.51		2.63		3.45	
The most sold brand / tobacco epidemic		2.51		2.63		3.45	
The lowest cost brand		1.4		1.79		3.34	
Price of Marlboro (premium brand)		5.02		4.51		4.63	
HTP HEETS	n/a	n/a	n/a			4.75	4.75
GDP per capita, UAH	31988	35834	46210	55854	70224	84192	94590

Table 15. Cigarette affordability, Relative Wage Price (in %)

Cigarette type	2013	2014	2015	2016	2017	2018	2019
Filtered domestic cigarettes, average	29.6	31.4	30.2	27.3	29.3	29.8	30.9
Filtered cigarettes of medium band, aver.				30.5	32.9	34.2	35.7
Filtered cigarettes of premium band, aver.				43.6	41.3	41.0	41.8
Unfiltered cigarettes, average				23.5	25.5	25.9	26.9
The most sold brand*			25.9		28.3		32.8
The lowest cost brand*		14.4		19.3		31.7	
Price of Marlboro (premium brand)*		51.8		48.6		44	
Average monthly wage per capita, UAH	3274	3475	4207	5 187	7105	8867	10504

Not surprisingly, the estimates relative to wages have shown an increase in the affordability of premium class cigarettes and a very low decrease of other price groups. The exception is the lowest price brand, where affordability decreased between 2014 and 2018 by 1.65 times. The RIP estimates provide a similar overall picture, where the affordability of the expensive group has increased, although to a much lesser extent than that of other groups.

These affordability trends emphasize the need for further increases in excise taxes in the future. Policy makers should consider income growth rates when making decisions about an increased tax rate in order to reduce the affordability of tobacco products.⁶

Ζ

⁶ According to the Association Agreement, Ukraine is obligated to harmonize its tobacco tax policy with that of the EU. The overall tax rate must be at least 60% of the weighted average retail selling price and at least 1.8 Euro equivalent in UAH per pack.

Illegal Market of Tobacco Products

According to GATS, in 2017 almost 3% of all cigarette purchases were made from street vendors of illicit cigarettes, equaling the level in 2010.

Similarly, up to 2.6%, against 1.6% in 2010, of the cigarette packs shown by Ukrainian smokers during interviews were of a non-Ukrainian origin (non-Ukrainian language) and might have been smuggled into Ukraine. Based on these findings, the volume of illicit cigarettes in the Ukrainian market is estimated at around one billion sticks (50 million packs), (see GATS, p. 67).

In addition, the share of non-Ukrainian languages on packs is as follows: Russian - 0.9%, Romanian (Moldovan) - 0.8%, other languages - 0.2%, while 0.7% of the packs had no health warnings. This suggests that the main origin areas of smuggling into Ukraine are neighboring Russia and Moldova, and that the overall rate of this smuggling remains relatively low, significantly lower than smuggling from Ukraine.

Monitoring of the tobacco market shows that the turnover is higher than the estimated consumption. This means that billions of Ukrainian cigarettes are illicitly smoked in other countries because of cheap prices in Ukraine. The net effect is that more Ukrainian cigarettes are smuggled out of Ukraine than non-Ukrainian cigarettes are brought into the country (Ibid).

The control of illicit trade in Ukraine is therefore crucial for ensuring effective tobacco control both in Ukraine and internationally. Moreover, this is in line with the provisions of the 2013 WHO FCTC Protocol to Eliminate Illicit Trade in Tobacco Products. It must be noted that Ukraine intends to join the protocol but has not yet committed to this. In other words, there is a net outflow of smuggled cigarettes from Ukraine.

Apart from cigarettes smuggled into the illicit market of Ukraine, there is also domestic counterfeit production both for internal and external illicit markets, which is believed to be relatively small. Still, in 2017-2019 the tax police shut down 23 illegal production facilities of tobacco products, according to the National Audit Office. For example, in 2017 an illegal complete technology cycle tobacco production facility, from tobacco leaf cultivation to its processing, was uncovered in Kyiv Oblast, whose product was later sold through a retail chain of tobacco products.

Kantar (TNS-Ukraine), which is commissioned by the tobacco companies to conduct regular research of the illegal tobacco market, has reported its sharp growth in recent years, from 1% in 2016 to almost 7% in 2019, with the data for 2017 similar to the above GATS results, although slightly lower (see Figure 1). This occurred despite the fact that, unlike the mid-2000s, cigarettes are currently more expensive in Russia, so incidents of mass smuggling from this country make no economic sense. However, since then, as previously in Moldova, an entity called ORDLO – from the separated districts of Donetsk and Lugansk oblasts – has emerged in Ukraine. This entity is not controlled by the national fiscal authorities and is not bound by any international obligations. Both unrecognized quasi-states have tobacco production facilities.

Figure 1: Share of illegal cigarette sales in Ukraine (according to Kantar (TNS-Ukraine, February 2020) for 2013-2019 and cigarette availability (ratio of GDP per capita to the price of 100 packs of cigarettes - author's calculation) minus fixed constant 2.4.



So now Transnistria, as a source of tobacco smuggling, has been joined by part of the separated Ukrainian territory. In both cases, due to the lack of a secure, equipped border, control over the movement of goods, especially those attractive for smuggling such as cigarettes, remains inadequate. The situation is similar on the border with Belarus.

Finally, some tobacco varieties grow well in the local climate, and although Ukraine remains a net importer of raw tobacco, counterfeit production of both cigarettes and, especially, tobacco chips used for smoking homemade cigarettes and tubes can be developed successfully using domestic raw materials. Notably, illegal imports from Belarus and counterfeit production have been growing most rapidly over the past year – their volume has almost doubled; and around 2/3 of all cigarette packs are sold with "duty free" markings.

In Figure 1, the change in smuggling (highlighted in grey) and counterfeit production volumes are compared to cigarette availability (for clarity, a constant value of 2.4% is deducted from the availability value). It is evident that there is a close correlation between these indicators: in 2016, when the specific component of excise tax sharply depreciated resulting from devaluation and inflation and, as a result, the availability of cigarettes increased (e.g. the share of GDP per capita required to buy 100 packs fell), smuggling dropped accordingly. And when the excise tax again lifted the price for a pack of cigarettes, i.e. reduced its affordability, illegal trade rose accordingly.

Counterfeit goods saw a sharp decline in 2014-2015, apparently due to the flight of Yanukovych and his closest associates, which led to the destruction of the schemes and production facilities they had created. However, as soon as the increase in excise taxes boosted the profitability of such businesses and in connection with the resumption of the operation of criminal syndicates, counterfeit production began to recover.

Characteristically, 77% of all illegal trade falls within 6 regions of Ukraine (mainly southern and eastern), with 54% in three regions: Odessa, Kharkiv and Dnipropetrovsk, each bordering respectively, with Transnistria and ORDLO. This indicates that the illegal market is most likely controlled by organized crime syndicates. Otherwise, distribution flows across the country would be much more even.

This assumption is supported by an analysis of distribution channels, whereby the largest amount of all illegal products is sold through entirely unofficial outlets of street vendors; another one-fifth is also sold illegally in bazaars, and 8% are distributed through other, most likely questionable sources. 39% of all illegal goods are sold through kiosks and shops, apparently using forged documents and issuing false fiscal checks. In Ukraine, excisable goods are sold exclusively through fiscal registrars, with full commodity accounting based on primary source documents.

The operation of many cigarette factories in the country looks equally suspicious: there are eleven cigarette factories in Ukraine, the names of most of which are not known to the general public, and their trademarks are not sold in the legal retail distribution chain. However, it seems that most of their products are intended for sale in the neighboring EU countries.

Ukraine, as an EU-associated country enjoying a visa-free regime and having a long shared border, has become a major source for smuggling cheap cigarettes to EU countries, as well as a transit country for tobacco products from third countries, especially Belarus and Russia (together with the ORDLO). Some of these cigarettes are counterfeit products: in this way, the organizers multiply their profits while addressing the marketing problem. As a result, according to KPMG Project Stella, about 10% of the market for smuggled and counterfeit cigarettes in the EU is of Ukrainian origin, which amounted to a total of 4.2 billion cigarettes in 2018, and another considerable share of domestic products may belong to the "undisclosed" portion, which in 2018 was estimated at 9.5 billion. At the same time, the volume of cigarette smuggling into Ukraine is about 3.2 billion pieces, which means that the country remains a "net exporter" of smuggled cigarettes.

Fiscal authorities reported a 30% shortfall in tobacco excise tax collection for the first 7 months of 2019. This may be due to a number of reasons, including a primary decline in cigarette consumption. The plan is traditionally calculated on the basis of an upward trend, both due to reduced smoking and labor migration of some consumers, as well as switching done by the consumers to other nicotine-containing products. However, the issue requires further research, given its fiscal importance. It should be noted that the reduction of cigarette consumption due to the factors mentioned above (except for the labor migration of consumers) should be considered as a positive trend - the effect of the price incentive created by the excise. This should testify to the fact that the maximum of the Laffer curve has been reached.

In August 2017 the government adopted "The strategy to counter illicit production, smuggling and circulation of tobacco products for the period until 2021 (the Resolution # 570-p). It is a narrowly oriented, very formal, non-specific and declarative document of dubious effect.

A further increase in excise taxes only makes real sense in combination with effective enforcement measures to reduce opportunities for smuggling cigarettes and counterfeit tobacco products into Ukraine. Otherwise, any positive fiscal benefits will be eliminated while also not impacting any real decrease in smoking prevalence. Rather, the impact of illicit production will simply be the displacement of legal goods with smuggled ones. Similarly, decreasing "white smuggling", (i.e. the illegal export of legally produced cigarettes for sale purposes) will be achieved through the growth of transit and counterfeit product smuggling, which only causes damage to Ukrainian budget while having no effect on the countries targeted by smuggling.

It is often believed that the most effective way to combat the shadow tobacco market is to control final sales and, if possible, the entire production and sales chain. However, this method is hardly applicable in Ukraine, since, as described above, most of these products are sold either entirely through unofficial channels within Ukraine (street vendors, internet and bazaars), or are exported illegally. In both cases, fiscal means of controlling final sales, such as cash and excise stamps (including the "electronic excise stamp") are relatively effective for registered dealers and not effective at all for the completely illegal trade.

Cigarettes by weight/price ratio are ideal for street sales, unlike goods such as alcohol. Even "retired grandmothers" can easily pick up packaging with a daily supply of these goods. In addition, unlike alcohol, consumers are not afraid to buy these goods at these unofficial points, because low-quality cigarettes do not pose a much greater danger to human health and life than do legally marketed cigarettes. Moreover, the fiscal authorities have neither the authority nor the ability to control street trade and other informal channels, as this is the task of the police. In addition, illegal exports to other countries must be controlled by customs services, mostly in the smuggling countries.

One of the prerequisites for the success of a more active increase in excise taxes and prices is the introduction of digital cigarette labeling, along with a system of tracking the movements and circulation of each pack of cigarettes (e.g. track and trace systems). Moreover, the Protocol to Eliminate Illicit Trade in Tobacco Products includes an important provision on tracking and tracing (Article 8) that could be used as a guide for criteria to be considered for introducing a good system. This will reduce the risks of illegal production and circulation of cigarettes and their smuggling. Unfortunately, the introduction of such a system has been postponed until after 2021, while there are still opportunities and an urgent need to accelerate this process. Moreover, Ukraine is not rushing to join the Protocol to Eliminate Illicit Trade in Tobacco Products

Thus, in order to effectively confront these illicit sales channels, an effective and transparent police force should be created in the first place. As of now in most cases, the police are responsible for the street traders who sell smuggled goods without official permits and without being registered as entrepreneurs. Some police reform was carried out in Ukraine in 2014-2015, and it was generally believed to have been a failure, except for the patrol police, which have other tasks. Although this reform remains high on the agenda, there is no real hope for its implementation in the near term. Alongside this much needed police reform, fines for illegal street trade in excisable goods should also be significantly increased.

Regarding the Ukrainian customs authorities, they must first manage the task of stopping and preventing smuggling into Ukraine (as well as other violations of customs rules leading to underpayment of customs fees and import VAT), Currently they are not coping with this task well. The customs service is undergoing reforms, but the outcomes of this reform are still difficult to predict. Even if it proves successful, it is unlikely to result in a significant reduction in the illegal export of cigarettes.

Overall, the problem of illegal trade, its impact on the legal market, and the effectiveness of raising excise taxes is insufficiently studied and therefore requires focused research to identify major policy failures.

Launching fiscal lotteries can improve the efficiency of control over retail sales at points of sale where cash registers are already in use. Enlisting consumers to control the issuance of fiscal checks and their arrival at the State Tax Service server will contribute to the removal of sales from the gray economy. For this purpose, chip-based payment transaction recorders and spare thermal printers for printing pseudo-fiscal receipts, along with other technologies, are currently being used. These measures can only be effective, however, for identifying the sale of products disguised as legal.

Under these conditions, the introduction of an electronic excise stamp might hinder the sale of smuggled and counterfeit goods through stores and kiosks, which account for less than 40% of all retail sales in Ukraine. However, it will certainly not be a silver bullet against all the illegal turnover of tobacco products. Most likely, sales of this kind will switch to other sales channels. This issue requires a more detailed and in-depth analysis of the benefits and costs, and, more broadly, those regulatory effects which are mandated in accordance with Ukrainian legislation. The introduction of the tracking system is likely justified to manage the supply chain of duty-free stores, where it will help to significantly reduce the leakage of goods into illegal trade. However, for this to be successful, it should also be implemented in neighboring countries, especially in Belarus.

The prospect of fighting crime syndicates looks much more promising, as the reform of economic crime response agencies has long been on the agenda and has a good chance of being implemented. If Ukraine succeeds in carrying it out according to the existing plans and practices, a single Financial Investigation Bureau consisting of new, non-corrupt employees with market-level wages may become, even at its early stages, a powerful barrier to the expansion of illegal trafficking of excisable goods, including nicotine-containing products. In turn, a radical reform of the State Tax Service, involving the recruitment of employees at open tenders and ensuring their personal responsibility, can help control grey sales at retail outlets.

Policy Mapping

After 2019 Presidential and Parliamentary elections, Mr. Volodymy Zelenskyi became the President of the country, while his political party "Servant of People" formed the majority in the Parliament. This means that most of the President's initiatives are never blocked but are on the contrary supported. The Ukrainian budget depends a great deal on international financial assistance, especially from the EU. This reflects on state tobacco-control policy as well, including tobacco tax increases and equalizing taxes for combustible cigarettes and HRPs.

President Zelenskiy is an active user of IQOS, which is known to everyone. In addition, the core team of "Healthy Initiatives" has been approached several times by the Prime Minister's advisors regarding issues of HRPs.

For more than 10 years, the NGOs created and funded by the Bloomberg Initiatives (BI) have been functioning in Ukraine. Their influence on the public discussion about HRPs in Ukraine is very strong, while the message they send to the public and policymakers about HRPs is very negative. The only opponent of this NGO is tobacco industry, since no other major opinion on HRPs in Ukraine is provided. Despite multi-year support from BI, for the past 5 years the NGO "Life" has had no success in advocating for any new legislative change around tobacco control in the country. The key problem is that just like in any other country, the BI is imposing a universal approach to tobacco control in Ukraine.

From 2019 till spring 2020 the work of the NCDs' Department of the Ministry of Health of Ukraine had been entirely controlled by the Bloomberg Initiatives. In November 2020 – 2021 the NGO "Life" is launching a public awareness campaign to spread negative information about harm reduction products. Besides, the Parliament of Ukraine is getting ready to consider a bill on making HRPs equal to combustible cigarettes not only in terms of taxation but also in terms of other forms of regulation.

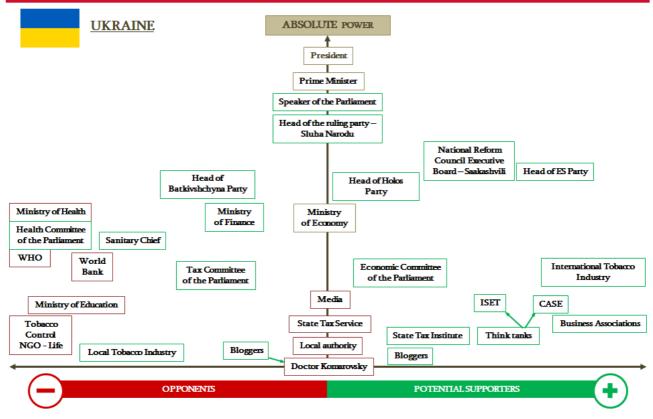
Taxation of tobacco products and HRPs is considered from the point of view of the state budget's needs, even though the State Tax Institute recommends approaching HRPs' taxation in a more loyal way.

In 2021 Ukraine plans to adopt a unified taxation on combustible cigarettes and HRPs though discussions about this that are currently ongoing in the Parliament.

Changing policymakers' attitude to HRPs is possible with the help of strong evidence-based arguments as well as constant interaction and partnerships. Surveys and studies on these issues are required, as well as reaching out to policy makers, healthcare professionals, and the public.

MAP OF STAKEHOLDERS ON THEIR ATTITUDE TO HRP AS A TOOL TO END SMOKING EPIDEMIC





Key Findings and Recommendations

- The current tobacco control strategy has been generally successful, as it has so far achieved a
 good level of reduction in tobacco use. The FCTC has proved effective, although even with all of
 the best practices already implemented, the current rate of tobacco use reduction still means that
 the tobacco epidemic will remain relevant in the next few years. The FCTC does not offer solutions
 for smokers outside of its restrictions on advertising, reduced smoking areas and increased excise
 taxes (and this group of smokers accounts for 70% of all smokers, as shown in the 2007-2017
 statistics).
- 2. A possible increase in smoking among teenagers is causing concern, especially for girls, including but not limited to e-cigarettes and hookahs. This can lead to nicotine addiction, which will later be satisfied by cigarette smoking as the easiest form of smoking. The figures registered for "use in the past 30 days" of consumption of nicotine-containing products are likely less related to the real increase in the number of addicts, but rather to freer experimentation. This issue requires further investigation and possibly the development of new, special measures.
- 3. A smoker support service should be set up for those who wish to quit smoking or switch to less harmful forms of nicotine use, considering the availability of less harmful methods of obtaining nicotine. This kind of service is economically justified, as it will help reduce public costs connected with the various harms caused by traditional smoking.
- 4. Policies aimed at increasing excise taxes on tobacco products should be more flexible with respect to HRPs, which allow smokers to switch to less harmful products. It is advisable to further pursue the policy of gradually increasing excise duties on tobacco products, especially since it complies with Ukraine's international obligations. However, the following measures should be ensured:
 - a. The cost of combustible tobacco, as the most harmful of the modes of delivery of nicotine, should grow much faster than that of less harmful alternatives. The cost of a dose of nicotine in different products should be inversely proportional to the product's overall harmfulness.
 - b. Effective measures to prevent and prosecute the production and smuggling of counterfeit goods, given that the profitability of illegal trade will increase rapidly as excise taxes increases, thus threatening to make these tax policies ineffective if not counterproductive. Measures to combat illegal production must outpace these tax increases.
- 5. The nature of such measures requires further in-depth study. Provisionally, the following are suggested as possible future measures:
 - a. Intensifying efforts to combat crime syndicates. The prospects are linked to the establishment of a new body to combat large-scale financial and economic crimes.
 - b. Improvement of customs control and border protection measures, especially with Transnistria and Belarus, as well as the demarcation line with the temporarily occupied ORDLO territories.
 - c. Examining the feasibility of introducing a product tracking system a digital excise stamp in the duty-free supply chains and, if successful, its possible expansion to other supply chains.
 Cooperation with neighboring countries of origin of tobacco products bearing this marking should also be considered.

The Need for Further Research and Data

On a global scale, the following efforts would be recommended:

- Collect, compile and, where necessary, clarify toxicological information on the effects of different substances contained in both normal tobacco smoke and aerosols of different types of tobacco heating systems, hookahs, e-cigarettes, as well as those that enter the body when using other methods of nicotine consumption, on the human body; or those that may be contained in prospective developments. It is also important to study the cumulative effects of different combinations of these substances.
- Based on this information and the public cost of the relevant diseases, identify scientifically sound methods for assessing the harm caused by the consumption of certain nicotine-containing products.
- If possible, standardize methods for studying the phenomenon of nicotine dependence in different surveys, or launch a unified regular survey covering most of the world. In particular:
 - clearly categorize combustible tobacco products (cigarettes, cigars, cigarillos, tobacco crumbs, etc.), heated products (including hookahs), non-tobacco inhalation products (vapes, possibly some new products), and other products, for instance those used for chewing, sucking, sniffing, etc.
 - Collect information separately on those who occasionally use nicotine, say, in the last 30 days, and on those addicted, who use it daily.
- Explore sensitivity to various ways of limiting and preventing nicotine addiction, not only with respect to traditional smoking but to other nicotine-containing products as well.
- Examine different groups of smokers (in terms of socio-economic indicators, age and duration of smoking experience) in relation to the transition from cigarettes to less harmful products, including barriers to quitting smoking and whether they can be economically addressed.

For Ukraine:

- Explore in more detail, the phenomenon of "experimenting" by adolescents, especially girls, with nicotine-containing products. Specifically, find out what economic measures can be effective to limit such experimentation and, most importantly, to prevent the development of nicotine addiction.
- Examine the details of the illegal tobacco market: supply chains (available studies do not identify the origin of a significant portion of these products), logistics, consumer attitudes, etc.
- Explore in more detail the process taken by smokers switching to harm-reduction products, both as an
 independent choice, or as part of getting rid of a nicotine addiction (based on the UK example), from
 the point of view of their economic motivations (both positive and negatives) typical of such
 transitions.

Further work should also address a triple problem in Ukraine. For the price ratio of nicotine-containing products to create the right incentives for producers and consumers, the excise tax on combustible tobacco should be significantly increased. This requires preventive actions to address the problem of the illegal market (see below), either while maintaining the same level or achieving a lower level than that provided for in the current laws, when it comes to less harmful means of nicotine delivery.

The current legislation already includes an excise tax rise on cigarettes. However, the higher the taxes, the more incentives will be given to evade them. Therefore, it is necessary, based on a thorough study of the illegal market, to develop effective measures of combatting it. The measures proposed so far, such as the product tracking system, can only have a limited effect, as they obviously do not deal with the completely illegal products trade, which is currently the biggest problem. Effective solutions can be found by learning from the positive experiences of other countries and similar institutions, by developing stakeholder interest mechanisms, e.g., the police, and in finding vulnerable supply chain bottlenecks.

The explanation of the need for a balanced approach to the taxation of alternative, less harmful, nicotine-containing products is contrary to the current policies of influential and authoritative sources, such as the WHO. In addition, the fiscal instinct of many legislators and experts is pushing them to use any pretext to introduce and raise taxes, and the argument about the supposedly equal or greater harm from the use of innovative nicotine-containing products provides them with this excuse. Therefore, the task of persuading them to reduce unjustifiably high excise taxes and refrain from raising them, at least until cigarettes become the most expensive way to obtain nicotine, represents a complex scenario that requires additional research and careful development of arguments, along with testing and focus groups and a well-designed advocacy campaign.

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