ECONOMETRIC ANALYSIS OF THE EVOLUTION OF EXCISEMENTS ON FUELS DURING THE HEALTH CRISIS IN ROMANIA

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Abstract
The aim of this study is to make a time analysis of the evolution of the level of excise duties on fuels that influence the pump price of fuel types. Objectives proposed for this purpose are: O1: the need and place of excise duties in this form of taxation, O2: analysis of the influence of excise duty on fuel prices and O3: evolution over time of the level of excise duties on fuels. In order to achieve the proposed goal, analytical and forecasting methods will be used using statistical data on the level of excise duties on fuels for the period 2017-2021. The results of the study consist of the cubic model for the analysis of the evolution over time of the level of excise duties on fuels, focusing on the period of the health crisis.

Key words: excise duty; cubic model; health crisis

JEL Classification: C22, H21, O23

I. INTRODUCTION

In a market economy, which is in a continuous change, taxation is a system of collection of taxes and fees, as well as a coherent set of sources of law that regulate the imposition of taxpayers and legally substantiate taxes and fees (Tulvinschi, 2003). These are financial instruments and have a well-determined economic character, with very clear calculation rules (Roedler, 2014). Direct or indirect taxation has repercussions on the well-being of citizens (Cocean & Dănăilă, 2019).

Excise duties are taxes that have traditionally been the process of indirect taxation which concerned the sale of certain consumer goods, usually considered to be luxury. Even today, excise duties are applied to a limited number of products and services, but some of them are not luxury, but consumer. They are special consumption taxes that are due to the state budget for products manufactured, as a rule, under a monopoly regime, as well as on some of the indigenous or imported goods that are usually consumed by the population. We ask ourselves whether excise duties fall under the tax principle of effectiveness.

In the neoclassical welfare economy, excise duties on certain goods are justified by the fact that, on average, taxes on these products are high enough to be able to correct external costs, which makes excise duties to be regarded as efficient consumption taxes that basically internalize external costs.

Excise duties have the effect of increasing the prices of excise goods, which will lead to a reduction in consumer demand for these products. The impact of excise duties on consumers varies according to the elasticity of their demand

Tax specialists (Brezeanu, 2010) admit that the market is experiencing failures preventing the spontaneous achievement of the optimum. Taxes and fees can remedy this situation by influencing the behavior of economic agents. In that case, excise duty, as consumption taxes, can be regarded as a means of restoring optimum, the objective being to achieve fiscal effectiveness. In these circumstances, an effective tax is a tax that is not neutral. However, we cannot deny the ambiguity of the effectiveness criterion. This statement can be demonstrated by the fact that if the tax principle of equivalence between the tax cost incurred and the benefit rendered is recognized, taxes and fees will influence the decisions of economic operators, generating distortions. In this hypostasis, fiscal theory establishes that effective taxes and fees are neutral ones. Practice shows that, in the case of excise duties, there is no neutrality but a significant influence on consumer prices.

The purpose of this study is to make an analysis in time of the evolution of the excise duty on fuels that influence the pump price of their types of fuels. The objectives proposed to achieve this goal are:

O1: the necessity and place of excise duty in this form of taxation;
O2: analysis of the influence of excise duty on the price of fuels;
O3: the evolution over time of the level of excise duties on fuels.

In order to achieve the proposed goal and implicitly of the three established objectives, works from the specialized literature and statistical data will be used, which will be interpreted and subjected to an econometric analysis.

II. LITERATURE REVIEW

Thanks to globalisation, fiscal policies have become more of a way of ensuring the global competitiveness of economic systems and have diminished their role in solving internal macroeconomic burdens. In this respect, the competitiveness of global tax systems is classified, for example, according to the International Tax Competitiveness Index, represented annually by the Tax Foundation on the corresponding index values calculated by this international organization (Gashenko, Zima & Davidyan A., 2019). The justification for the increase in volume, but also of the variety of taxes and fees or the process of transferring the tax burden to citizens are topics often addressed by foreign economists. For example, Hansen A. believes that "taxes are prices set by coercion, for government services" (Popescu, Mistrean & Rădulescu, 2019). It optimizes the fact that a reduction in the tax burden, taxes and fees, has the effect of increasing national income. Excise duties are taxes on the state and are widespread in market economies and represent taxes included in the selling price of products sold within a country (Nacu, 2015). The detailed feature of the method of taxation of excise duties includes a number of amendments that relate strictly to goods subject to excise duty, the cases of taxation of this tax, under what conditions the excise duties are applied, what are the exemptions from the application of excise duties and what conditions the goods must meet in order not to fall under the imposition of excise duty (Gulca, 2017). In those circumstances, we may regard the excise duty as a selective consumption tax on sales of certain goods and services, which is justified by the need to internalize the negative external effects caused by their consumers, and the selling price reflects the true social cost. Out of the five categories of indirect taxes, value added tax and excise duties are taxes that have an overwhelming impact on the realization of the state's tax revenues (Figure 1), together achieving over 90% of the tax revenues mobilized for 2019.
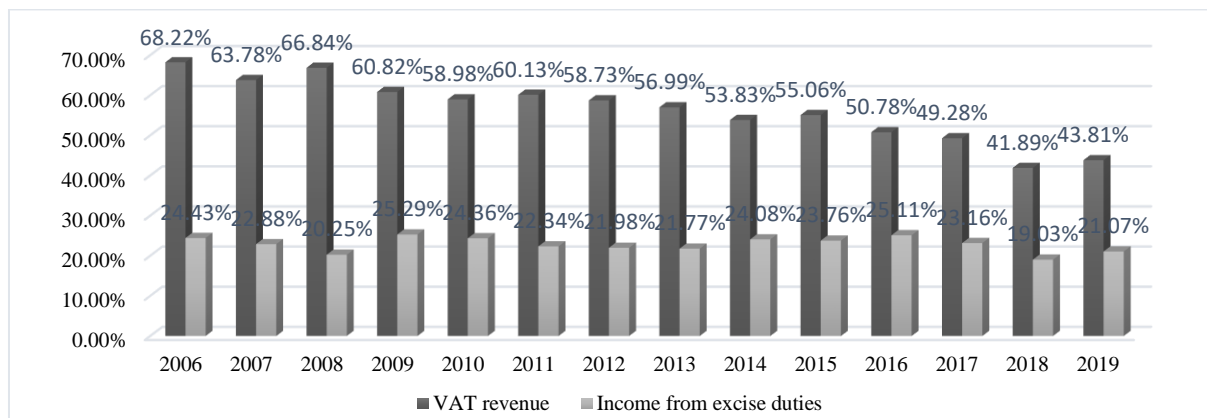

Figure 1 - Share of value added tax and excise duty revenues in total tax revenues
Source: Own processing www.insse.ro

Looking at Figure 1 shows that the level of value added tax varies very slightly over the last five years, similar to that of excise duty revenues. Although, at the level of Romania, excise duties represent a second source of tax revenues from the category of indirect taxes, on average 22.82% in the period 2006 – 2019, their application had a double purpose: obtaining revenues to the state budget, on the one hand, and discouraging the consumption of certain products.

Differences are noted between the countries of the European Union in terms of the share of excise duties in tax revenues. For example, compared to Romania, Bulgaria has very low tax revenues from excise duties, a significant decrease since 2018. In Romania, by 2017, the revenues from excise duties have gradually decreased, so that in 2018 the revenues collected to increase, and in 2019 the value of assets decreased significantly (table 1).

Table 1. Excise duty revenues for the period 2011 – 2020 (million euros)

Revenue from excise duty	2011	2012	2013	2014	2015
European Union	4475152.1	4610792.90	4716565.20	4832374.40	4989087.60
Bulgaria	10568.1	110119.7	11831.3	12218.7	13218.7
Romania	37354.6	37023.8	39339.3	41424.5	44958.1

Revenue from excise duty	2016	2017	2018	2019	2020
European Union	5139243.10	5363495.50	5565618.50	5746468.40	5531007.50
Bulgaria	14228	15667	16682.1	18676.9	18789.1
Romania	45331.5	48471.2	54865.3	59801.3	59306.1

Source: Eurostat, **GOV_10A_TAXAG**

At the level of the European Union, there is a gradual increase in excise duty receipts throughout the period under review, with the exception of 2020, the year of the health crisis, when there is a decrease. This can be seen in figure 2.
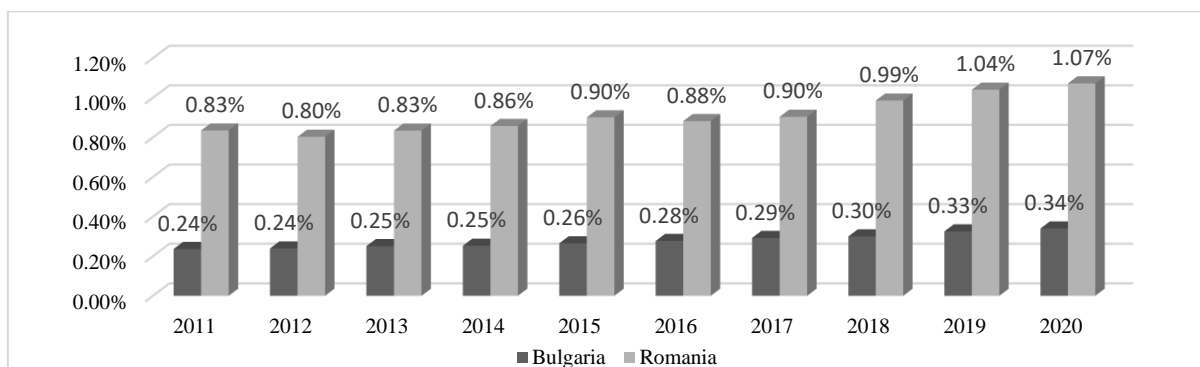

Figure 2. Share of Romania and Bulgaria in the European Union's excise duty revenues
Source: Own processing

At the level of the European Union, there is a gradual increase in excise duty receipts throughout the period under review. It is found that Romania contributes, on average, by 0.91% to the formation of tax revenues from excise duties at the level of the European Union, while Bulgaria's contribution is 0.28%.

Excise duties also have an impact on the economic agents who are the subjects of this tax because an increase in excise duties will reduce the incomes of economic agents due to decreases in consumption, cause unemployment, harm citizens with low incomes, given the regressivity of consumption taxes. All these inconveniences sometimes have the effect of evading the payment of these taxes on consumption and extensive tax evasion.

III. THE INFLUENCE OF EXCISE DUTIES ON THE PRICE OF FUELS

Because the price of petrol differs from the price of diesel, then the level of excise duty is also differentiated. In recent years the excise duty level has undergone many changes (table 2), changes that have influenced the final price at the pump:

Table 1. Excise duty on petrol and diesel during the period 2017 – 2021

Energy product	2017*	2018**	2019	2020	2021
Leaded petrol - ton	2737.96	2945.75	3038.54	2709.05	2791.03
Leaded petrol - 1000 liters	2108.23	2268.23	2339.68	2085.97	2149.09
Unleaded petrol - tonne	2358.92	2566.71	2647.56	2303.21	2372.91
Unleaded petrol - 1000 liters	1816.36	1976.36	2038.62	1773.46	1827.13
Diesel fuel – tonne	1985.89	2175.24	2.243.76	1923.54	1981.75
Diesel fuel - 1000 liters	1678.04	1838.04	1895.94	1625.37	1674.55

* for 2017 the excise duty is valid from 15 September 2017
** for 2018 the excise duty is valid from 1 October 2017

Source: processed according to Annex no. 1 to the Fiscal Code

Analyzing the evolution of the petrol and diesel level in the period 2017 – 2021, we get table 3:

Table 3. Model Descriptive statistic

	N	Minimum	Maximum	Mean	Std. Deviation
NABP	5	2085.97	2339.68	2190.2400	109.20846
NABFP	5	1773.46	2038.62	1886.3860	114.49641
NAM	5	1625.37	1895.94	1742.3880	117.43444
Valid N (listwise)	5				

Source: Authors Computation with the aid of IBM SPSS Statistics, version 26

The price of petrol differs from the price of diesel, so the level of excise duty is differentiated as seen in the previous table. The lowest values for excise duties correspond to 2020, the year of health crisis, so for leaded petrol is 2085.97 (maximum value), for unleaded petrol is 1773.46, and the lowest value of excise duty is found in diesel fuel worth 1625.37. The highest values for excise duties correspond to 2019, the year before the health crisis, so the excise duty on leaded petrol has the value of 2339.68 (maximum value), for unleaded petrol it has the value of 2038.62, and for diesel fuel in the amount of 1895.94.
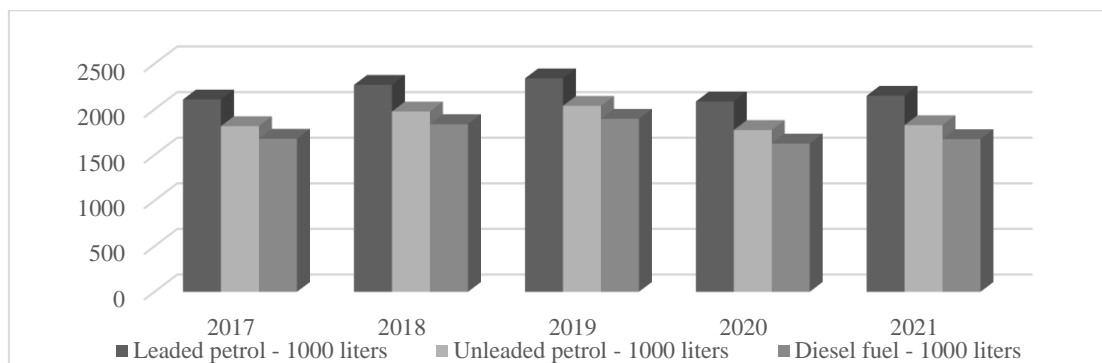

Figure 3 - Dynamics of excise duty on fuel
Source: Own processing

There is a successive increase in the excise duty on fuels for the period 2017 – 2019, and the year 2020 comes with a decreasing excise duty. This diminution arises as a consequence of the fact that the "over-accedation" has been eliminated. The lowest level of excise duty is set for diesel, but regardless of the type of fuels, the trend is the same: increase by 2019, decrease in 2020 and then increase in 2021 according to figure 3.

Table 4. Percentage increases in excise duty on petrol and diesel during the period 2017 – 2021

	Leaded petrol	Unleaded petrol	Diesel
2017-2018	7.053891%	8.095578%	8.704787%
2018-2019	3.053769%	3.053755%	3.053803%
2019-2020	-12.1626%	-14.9509%	-16.6474%
2020-2021	2.937267%	2.937322%	2.937303%

Source: Own processing

Analyzing table 4, we can see percentage increases in the level of excise duties on fuels in 2018, the largest increase being recorded for diesel fuel worth 8.704787%, as well as decreases in 2020, and the largest decrease is also recorded for diesel fuel worth 16.6474%. In 2019 and 2021, almost the same percentage growth value is recorded for all types of fuels.

The level of excise duty applied is lower than that established by European Directive 96/2003 on the 'restructuring of the Community framework for the taxation of energy products and electricity, where the minimum levels of excise duty on fuel are set, namely: EUR 421/1000 l in the case of leaded petrol, EUR 359/1000 l in the case of unleaded petrol and EUR 330/1000 l in the case of diesel fuel. The removal of the "over-excise", which is practically a part of the total excise duty applied on fuel, had the effect of reducing the excise duty below the European minimum level, which implied an increase, in 2021, of the excise duty.

The impact of the change in the level of excise duty is twofold:

1. the budget revenues are influenced by the amount of the excise duty itself, but also by the impact of the value of the value of the goods determined as an amount between the purchase price, the expenses generated with the acquisition of goods and the excise duty. The estimated impact on the budget revenues for 2020 is about 2.5 to 3 billion euros (cumulated influence with value added tax) at an estimated annual consumption of 7-8 billion liters of fuel, of which 2/3 represents diesel consumption.

2. the consumption is influenced, a decrease of the excise duty on fuels will have the effect of reducing the final price and implicitly increasing the consumption. This implies that the decrease in excise duty should not negatively influence the state budget because an increase in consumption implies a compensation for the decrease in the level of excise duties.

IV. MODEL ANALYSIS. EMPIRICAL DATA AND RESULTS

In this study, empirical and analytical research methods are used. The present research aims to analyze the evolution of the excise duty on petrol and diesel in the period 2017 – 2021. The estimated equation of the cubic regression model (Macovei, 2020), adapted for the analyzed variables, has the form:

$$NAB/M = \alpha + \beta \cdot t + \gamma \cdot t^2 + \mu \cdot t^3 + \varepsilon, \tag{1}$$

where NAB/M represents the level of excise duty on petrol and diesel in Romania and t represents the variable time, namely the rank of the period. The variables of the analyzed model are shown in table 5:

Table 5. Model Description

Model Name		MOD_4
Dependent Variable	1	NABP
	2	NABFP
	3	NAM
Equation	1	Cubic
Independent Variable		Case sequence
Constant		Included
Variable Whose Values Label Observations in Plots		Unspecified
Tolerance for Entering Terms in Equations		.0001

Source: Authors Computation with the aid of IBM SPSS Statistics, version 26

Because the price of petrol differs from the price of diesel, then the level of excise duties is also differentiated, so the evolution over time of this differs.

Analyzing Figure 3 it is noticed that the value of the excise duty on leaded petrol has the highest value, and its evolution over time is achieved using a cubic model.

Table 6. Model Summary for the level of excise duty on leaded petrol

R	R Square	Adjusted R Square	Std. Error of the Estimate
.877	.769	.075	105.013

Source: Authors Computation with the aid of IBM SPSS Statistics, version 26

According to table 6 there is a strong link between the variables of the model because the correlation ratio is 0. 877 greater than 0. 750. The level of excise duty on leaded petrol is variable over time, with fluctuating values over the period under consideration. The ratio of determination is worth 0.769, so 76. 9% of the change in the excise duty rate on leaded petrol is explained by the change in the period. The level of excise duty on leaded petrol has undergone changes throughout the period 2017-2021 due to changes in fiscal policies as well as the evolution of the health crisis. The rapid decline in economic activity during the COVID-19 health crisis has put a downward pressure on fuel prices, as due to the pandemic restrictions the demand has decreased and refineries have struggled with overproduction and limited storage capacity. The price drop was exacerbated by a price war between Russia and OPEC in the first quarter of 2020, which facilitated a quarterly drop of -65% in crude oil prices. With the fall in fuel prices, the relative share of the tax burden on refining products has increased considerably. However, since the last quarter of 2020, prices have gradually increased, reaching the "pre-Corona" level in February 2021. With all these negative influences, OMV Petrom managed to maintain itself on the market with the lowest prices, at the Petrom brand, thus fulfilling its proposed objective for these stations, namely attracting a market niche that would include low-income customers, young people or families, attracted by the quality / price ratio. The continued growth of heavy transport in the EU, driven by the internal market and foreign trade, has further contributed to boosting the demand for diesel.

Table 7. Coefficients for the level of excise duty on leaded petrol

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Case Sequence	1009.588	675.267	14.617	1.495	.375
Case Sequence ** 2	-341.101	250.636	-30.202	-1.361	.403
Case Sequence ** 3	33.782	27.673	15.765	1.221	.437
(Constant)	1393.410	516.595		2.697	.226

Source: Authors Computation with the aid of IBM SPSS Statistics, version 26

According to table 7 the equation of the cubic model of evolution of the excise duty on leaded petrol is:

$$NABP = 1393.410 + 1009.588 \cdot t - 341.101 \cdot t^2 + 33.782 \cdot t^3 \qquad (2)$$

The value of the level of excise duty on leaded petrol at time 0 is 1393.410, much lower than the lowest value of the level of excise duty on leaded petrol during the analyzed period. According to the model obtained, the level of excise duty on leaded petrol has two inflection points. Analyzing the data and the equation of the obtained model (figure 4), it can be seen that the level of excise duty on leaded petrol has an increasing trend for the periods 2017-2019 and 2020-2021, after a period of 2019-2020 decrease due to the health crisis and pandemic restrictions. Therefore, an increase in the price of leaded petrol is expected in 2022.
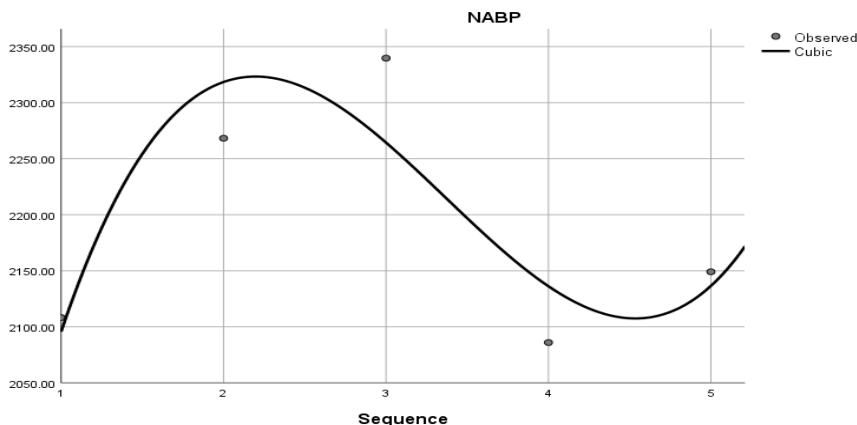

Figure 4. Estimation of the cubic regression model for the level of excise duty on leaded petrol

Source: Authors Computation with the aid of IBM SPSS Statistics, version 26

Analyzing the graph of the evolution of the excise duty on leaded petrol, the two inflection points are observed, the highest value is found in 2018-2019, and the lowest in 2020-2021. There is a forecasted increase in the excise duty rate on leaded petrol and this is due to the financial crisis that is being installed in Romania. So the financial crisis is joining the health crisis.

From figure 3 it is noticed that the value of the excise duty on unleaded petrol has an average value compared to the other analyzed variables, and its evolution over time is achieved using a cubic model.

Table 8. Model Summary for the level of excise duty on unleaded petrol

R	R Square	Adjusted R Square	Std. Error of the Estimate
.889	.791	.164	104.694

Source: Authors Computation with the aid of IBM SPSS Statistics, version 26

According to table 8 the correlation ratio is 0.889, so there is a strong link between the variables of the model, and it is higher than for the connection of the excise duty level to petrol with lead. During 2017-2021, the excise duty on unleaded petrol is variable and has fluctuating values. The determination ratio for the level of excise duty on unleaded petrol is worth 0.791, so the change in the excise duty rate on leaded petrol is explained in a proportion of 79.1% by the variation of the period on this model. As well as the excise duty on leaded petrol and the level of excise duty on unleaded petrol, it has undergone changes throughout the period 2017-2021.

Table 9. Coefficients for the level of excise duty on unleaded petrol

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Case Sequence	1032.581	673.215	14.259	1.534	.368
Case Sequence ** 2	-351.005	249.874	-29.643	-1.405	.394
Case Sequence ** 3	34.714	27.589	15.452	1.258	.428
(Constant)	1087.556	515.025		2.112	.282

Source: Authors Computation with the aid of IBM SPSS Statistics, version 26

According to table 9 the equation of the cubic model of evolution of the excise duty on unleaded petrol is:

$$NABFP = 1087.556 + 1032.581 \cdot t - 351.005 \cdot t^2 + 34.714 \cdot t^3 \tag{3}$$

The value of the excise duty on unleaded petrol at the moment 0 is 1087,556, much lower than the lowest value of 1773.46 of the excise duty on unleaded petrol during the analyzed period. According to the cubic model obtained the excise duty level on unleaded petrol, it has two inflection points, one of maximum and one of minimum. According to the data (table 9) and the equation of the cubic model obtained, one can observe the same evolution of the excise duty on unleaded petrol as in the case of the excise duty on leaded petrol, namely it has an upward trend for the period 2017-2019 and for 2021, as well as a period of decrease 2019-2020. This decrease in the excise duty on unleaded petrol was due to the period of health crisis and the application of pandemic restrictions in which the Romanian population was in lockdown.
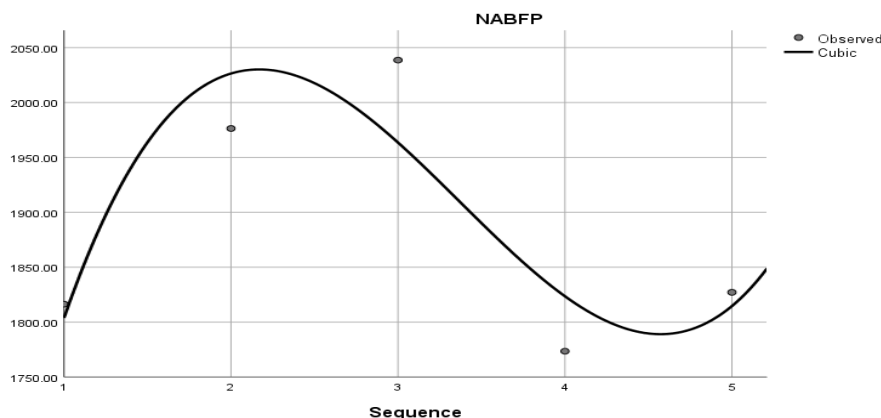

Figure 5. Estimation of the cubic regression model for the level of excise duty on unleaded petrol
Source: Authors Computation with the aid of IBM SPSS Statistics, version 26

According to figure 5, the evolution of the excise duty on unleaded petrol is the same as the evolution of the excise duty on leaded petrol. So, the two inflection points are observed, the highest value is found in 2018-2019, and the lowest in 2020-2021. An increase in the excise duty on unleaded petrol is projected.

As the price of diesel fuel is lower than the price of petrol, the level of excise duty on diesel fuel is the lowest for the period under review. Like the other analyzed indicators, the evolution over time of the level of excise duty on diesel fuel is achieved using a cubic model.

Table 10. Model Summary for the level of excise duty on diesel fuel

R	R Square	Adjusted R Square	Std. Error of the Estimate
.895	.802	.208	104.533

Source: Authors Computation with the aid of IBM SPSS Statistics, version 26

Analyzing table 10 and comparing it with the other summary model tables, one can see the existence of the greatest link between the level of excise duty on diesel fuel and the rank of the period. The correlation ratio is worth 0.895, so the link is strong between the variables of the model on this model. Since the level of excise duty on diesel fuel has fluctuating values over the analyzed period then it is variable over time. The determination ratio is worth 0.802, so on the model obtained 80.2% of the change in the level of excise duty on diesel fuel is explained by the variation of the period.

Table 11. Coefficients for the level of excise duty on diesel fuel

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Case Sequence	1043.435	672.185	14.049	1.552	.364
Case Sequence ** 2	-355.681	249.492	-29.287	-1.426	.389
Case Sequence ** 3	35.154	27.547	15.257	1.276	.423
(Constant)	942.638	514.237		1.833	.318

Source: Authors Computation with the aid of IBM SPSS Statistics, version 26

During the period 2017-2021, the level of excise duty on diesel has undergone changes due to changes in fiscal policies, the excise duty being updated periodically.

According to table 11, the equation of the cubic model of evolution of the level of excise duty on diesel is:

$$NAM = 924.638 + 1043.435 \cdot t - 355.681 \cdot t^2 + 35.154 \cdot t^3 \tag{4}$$

The value of the excise duty on diesel at the moment 0 is 924,638, the lowest of all the factors analyzed, much lower than the value of 1625.37 the lowest of the excise duty on diesel fuel during the analyzed period. The two inflection points, one of maximum (2018-2019) and one of minimum (2020-2021), are specific to this cubic model obtained for the level of excise duty on diesel fuel, as well as the same periods of increase and decrease. It can be seen that the level of excise duty on diesel has an upward trend for the period 2017-2019, a decreasing trend for the period 2019-2020 and will have an upward trend for the period 2020-2021 that will continue for 2022 (figure 6).
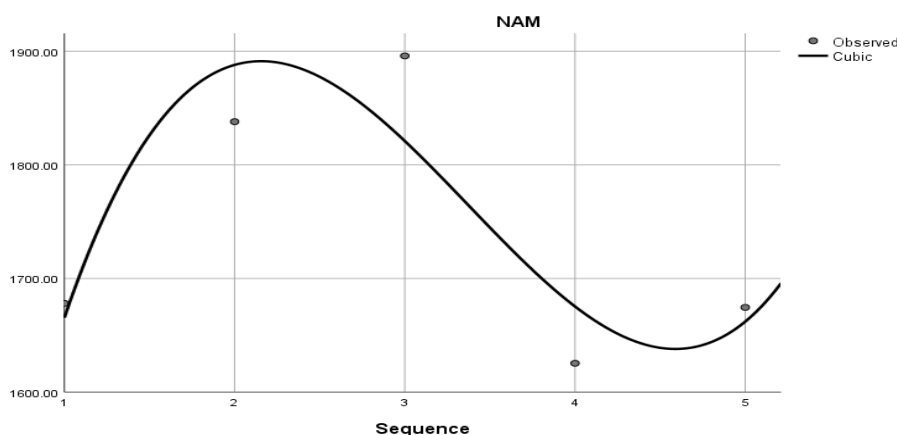

Figure 6. Estimation of the cubic regression model for the level of excise duty on diesel
Source: Authors Computation with the aid of IBM SPSS Statistics, version 26

During the period under review, the level of excise duty is regularly updated. Therefore, due to the changes in fiscal policies, the excise duty on fuels has undergone changes. The following factors must be considered when determining the excise duty: the date of manufacture or purchase in the EU, the date of release for consumption or the date of transport from one country to another. For 2020, the amounts related to excise duties on fuels should have returned to the values before the increase made on 15 September 2017, but the authorities with the right to regulate in this area had to align with the minimum levels of taxation, provided for in the European legislation. The research showed that the health crisis has also negatively affected the value of excise duties on fuels.

V. CONCLUSION

Excise duty are instruments used internationally to tax consumption within a country. From one country to another we can see different approaches to this topic. Excise tax appears as an instrument through which the state corrects the limits of the market mechanism, but also as an instrument of macroeconomic policy, which has the effect of effectively manifesting the function of regularizing the state in stimulating taxpayers in terms of saving or investments, contributing to the formation of an efficient structure of the economy. In this study it was analyzed the evolution of the excise duty on fuels in time using the cubic model.

The assumed objective of the research on the evolution of the excise duty on fuels, proves the application of the fiscal principle of the yield by increasing the price of fuels. In this study, the evolution of excise duties for the period 2017-2021 was analyzed. Using the statistical data of the level of excise duties on fuels, which depends on the type of fuels, the purpose of the research was achieved. A conclusion related to the objective of the research is that the level of excise duty on petrol mainly also leads to imbalances/changes in the demand for fuel in a given market. This is distinguished by the price of the pump.

Analyzing the level of excise duties on leaded petrol, unleaded petrol and diesel we can see an evolution in cubic time highlighting two inflection points, one of maximum (2018-2019) and one of minimum (2020-2021). The evolution of the excise duty on fuels is antisymmetric and there is an increasing trend for the period 2017-2019, a decreasing trend for the period 2019-2020 due to the health crisis and the application of pandemic restrictions in which the Romanian population was in lockdown, and again an increasing trend for the period 2020-2021 when the financial crisis joins the health crisis that will continue for 2022. Therefore, the increase in the excise duty level and hence the increase in fuel prices will lead to the "bankruptcy" of the Romanian state. Due to the two crises, economic and health, government policies need to be changed.

REFERENCES

1. Brezeanu, P. (2010). Fiscalitate: concepte, teorie, politici şi abordari practice (Taxation: concepts, theory, policy and practical approaches), *Wolters Kluwer*, Romania.
2. Cocean, C.I., Dănăilă, M.V. (2019). Analysis of excise duties at European level, *Collection de working paper ABC-ul Financial World*, No 8, 304-322.
3. Gashenko I.V., Zima Y.S., Davidyan, A.V. (2019). The notion and the essence of taxes and taxation. Function of taxes, *Studies in systems, decisionand control*, 1 – 10.
4. Gulca, L. (2017). Excises as a Means of Taxation and Part of the Tax Law, *University of European Studies of Moldova*, 50-56, Retrieved January 4, 2021 from https://ibn.idsi.md/sites/default/files/imag_file/50_56_Accizele%20ca%20modalitate%20de%20impunere%20fiscala%20si%20parte%20a%20dreptului%20fiscal.pdf
5. Macovei, A. G. (2020). Impact of the consumer price index on gross domestic product in Romania, *ECOFORUM*, Vol 9, nr. 2 (22).
6. Nacu, V. (2015). Harmonisation of the legal framework of the Republic of Moldova on excise duty to the international legal provisions and their application in the accounts of the entity, *Studia Universitatis Moldaviae*, no.2 (82), 154-159.
7. Popescu L., Mistrean L., Rădulescu M. (2019). Teorii contemporane privind impozitele şi impunerea formulate în fiscalitatea internaţională şi din România (Contemporary theories on taxes and taxation formulated in international and Romanian taxation), *Revista Economica*, nr. 4(110), 78-96.
8. Roedler, F. (2014). Fairness in Taxation, Retrieved December 10, 2020 from http://www.ifac.org/global-knowledge-gateway/viewpoints/fairness-taxation
9. Tulvinschi, M. (2003). Fiscalitate (Fiscality), *Universităţii "Ştefan cel Mare" Suceava*, Romania.
10. Eurostat. Retrieved December 6, 2020 from https://ec.europa.eu/eurostat/statistics-explained
11. Value added tax and excise duty revenues in total tax revenues. Retrieved January 10, 2021 from www.insse.ro
12. Fiscal Code. Retrieved January 10, 2021 from https://mfinante.gov.ro/