

# **THE LAFFER CURVE IN TERMS OF TAXATION IN ROMANIA AND IMPLICATIONS OF THE CHOICE OF INCOME TAX PERCENTAGE RATES**

**Corneliu DURDUREANU**  
University of "Petre Andrei" Iasi  
Iasi, Romania

## **Acknowledgement**

*This work was supported by the European Social Fund through Sectoral Operational Programme Human Resources Development 2007–2013, project number POSDRU/159/1.5/S/134197, project title "Performance and Excellence in Doctoral and Postdoctoral Research in Economic Sciences Domain in Romania".*

**Abstract:** *Interaction between the way of income taxation and forming the budgetary resources under the impact of the reaction of production factors and implicitly of the evolution of the economy is highlighted and demonstrated by the Laffer Curve, one of the pillars of economic doctrines neoliberal which is based on stimulating the supply effect on economic growth. With this graphical representation that establishes the correlation between the actual fiscal pressure and tax revenue I collected and analyzed for Romania the two areas of the slope, admissible / inadmissible, in which the economy ranged between 1990-2013, especially in the prohibited area. This analysis was right if we consider the fact that large tax practice causes an increasing tax pressure with an emphasized degree of affordability that leads from taxpayers both individuals and companies in evading their tax obligations, generating evasion and tax fraud. Practicing high tax levies determines the state to lose twice: on the one hand to leverage the phenomenon of tax evasion and on the other hand the financial efforts directed to find and catch the tax evaders.*

**Keywords:** *Laffer curve, tax pressure, tax evasion, optimal taxation*

## **INTRODUCTION**

In assessing the level of taxation, including in Romania, in the context of concerns for optimizing the size of the tax levies, the foundations of the Laffer curve can also be raised, according to which these levies may increase to a point, often called "optimal tax rate", after which it evolves conversely meaning, that as the more the percentage of tax revenue grows, the more the receipts decrease.

The relationship between tax rates and tax revenues flow in the market economy was highlighted by this curve by the American economist Arthur Laffer. He promoted the idea that the basic tax rate change may lead to two effects on tax revenues, namely: the arithmetic effect and the economic effect.

The arithmetic effect implies that when the tax rate declines, the tax revenues will decrease, too. In the opposite case when the tax rate increases, the arithmetic effect, it will lead to an increase in tax revenue collected per unit of income submitted to taxation.

The economic effect, however, causes a positive impact of lowering the tax rate on labor and production and consequently on the income tax base. Conversely, increasing the tax rate will have a contrary economic effect, of penalizing the participation in the activities taxed, thus changing the behavior of taxpayers in the sense of discouraging them.

Consequently, the arithmetic effect of the tax rate changes will have a reversed action to the economic effect of the same changes. When combining the two types of effects, the results of tax rate changes on tax revenues are not as pronounced anymore.

The attempt to capture the relationship between tax rate and the amount of tax levies made in Romania is based on data provided by the general consolidated budget of Romania, in the period after 1989.

In this analysis we will try to determine, due to the increase or decrease in the tax rate, in which area of the curve is positioned our economy: in the admissible or inadmissible area.

The variables considered were: the rate of taxation or fiscal level, according to Table 1; total tax revenue collected from the general consolidated budget, as nominal size (expressed in current prices of each year); GDP deflator index with base in chain (in percent from the previous year).

Based on relevant data, it shall be determined: GDP deflator index with a fixed base (in percentages compared to 1990) and the total tax revenues of the general consolidated budget, actual size determined by expressing in constant prices of 1990, being synthetically set out in Table 1, respectively represented in Figure 1.

From the data analysis presented in the table It follows that on the one hand, real tax revenue collected from the general consolidated budget decreased considerably in the first third of the period under review, so that in 1997, when the total tax receipts have reached the minimum, they represented only 65.2% of tax revenues collected in 1990; on the other hand, after 1997, the evolution of tax revenues to the general consolidated budget had an increasing trend, which reached, in 2005, the year of the introduction of the flat tax system, to represent 87.5% of revenues for the year 1990.

Between 2006 and 2007, there has been a significant drop in the tax levy and at the end of 2008; tax revenues collected by the consolidated general government recorded the highest growth in comparison to 1990, representing 98.7%. Later in 2009-2013, real tax revenues collected have remained at a level close and even superior to that recorded in 2005, the reference year regarding the waiver by Romania to the progressive system of taxation.

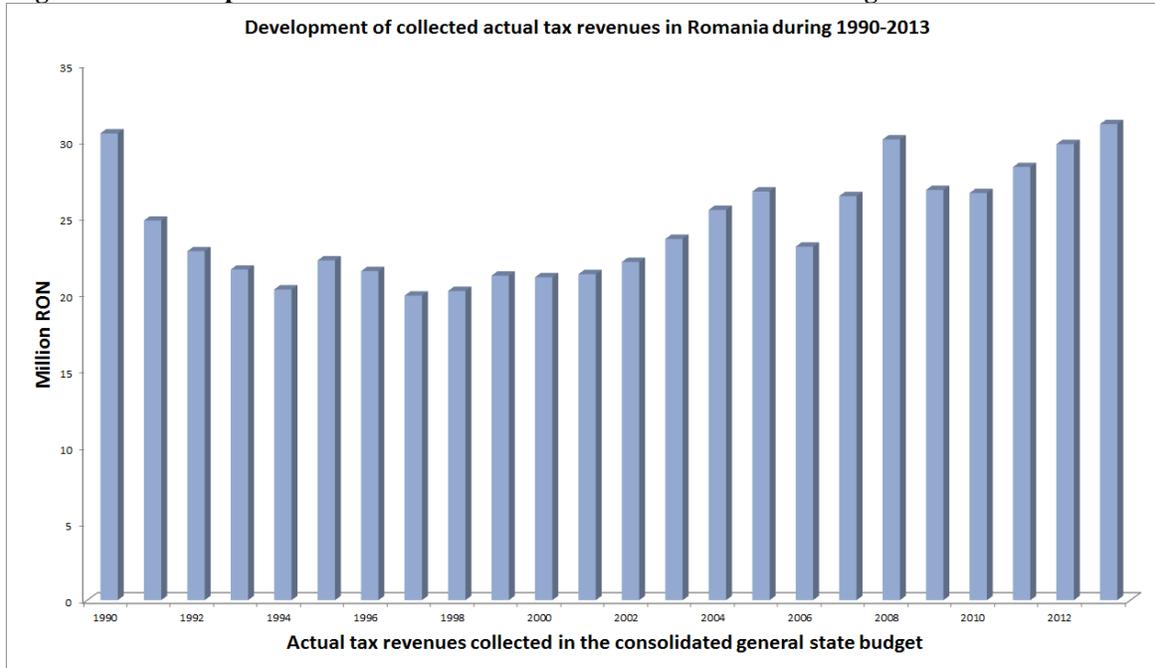
This development of tax revenue, as shown in the conditions from Romania, can be attributed to the evolution of the Romanian economy, but also the phenomenon of fraud and tax evasion manifested fully in this period.

**Table no.1 The Laffer curve parameters for Romania**

Year	Tax rate (%)	Nominal tax revenues collected at the general consolidated budget (million RON)	GDP deflated index with base in chain (%)	GDP deflated index with fixed base (1990, %)	Actual tax revenues, collected at the general consolidated budget (million RON, reference year 1990)
	1	2	3	4	5 [(2/4)*100]
1990	35,5	30,5	100,0	100,0	30,5
1991	33,2	73,2	295,1	295,1	24,8
1992	33,5	201,9	300,0	885,3	22,8
1993	31,3	626,9	327,4	2898,5	21,6
1994	28,2	1404,1	239,1	6930,2	20,3
1995	28,8	2080,3	135,3	9376,6	22,2
1996	26,9	2925,6	145,3	13624,2	21,5
1997	26,5	6700,0	247,3	33692,7	19,9
1998	28,2	10541,1	155,2	52291,1	20,2
1999	30,1	16404,6	147,8	77255,3	21,2
2000	29,3	23504,8	144,3	111524,1	21,1
2001	28,0	32669,9	137,4	153234,1	21,3
2002	27,6	41816,6	123,4	189090,9	22,1
2003	28,0	53248,2	119,4	225774,5	23,6
2004	27,9	66678,3	115,8	261446,9	25,5
2005	27,3	78281,4	112,0	292820,5	26,7
2006	31,8	63792,4	106,6	275900,3	23,1
2007	32,5	76365,8	104,8	289245,4	26,4
2008	32,0	94044,4	107,9	311949,3	30,1
2009	31,0	88324,3	105,6	329380,2	26,8
2010	33,0	93060,1	106,0	349450,2	26,6
2011	31,4	104687,0	105,8	369673,8	28,3
2012	33,0	114044,6	103,3	382001,9	29,8
2013	33,6	122937,8	103,9*	394590,9	31,1

Source: BNR rapports 1998-2013, (\*) consumer price index, www.insse.ro

**Figure no.1 Development of collected actual tax revenues in Romania during 1990-2013**



Comparative evolution of tax rate change (level of taxation) with the variation of actual tax revenue collected (Table 2) allows reference to the two segments of the Laffer curve, respectively the admissible and inadmissible area. Thus, if an increase (decrease) in tax rate from one year to another is accompanied by an increase (decrease) in actual tax revenue collected, the evolution of the situation will be in the allowable Laffer curve, which can be considered a good correlation between the two variables. But if the increase of the tax rate is associated with a decrease in actual tax revenue collected, then we can consider that the relationship between the two variables will be in the area of inadmissibility of the respective curve and thus an optimum level of taxation isn't achieved.

From this perspective, a synthesizing situation is presented in the following table (no 2).

**Table no 2 The annual variation in the tax rate and actual tax revenues, collected at the general consolidated budget of Romania in the period 1990-2013**

Year	Tax pressure variation (%)	Variation in real tax revenues, collected at the general budget consolidated (mil. RON, current prices of 1990)	Area on Laffer curve	
			admissible	inadmissible
1990	-	-	-	-
1991	-2,3	-5,7	X	
1992	0,3	-2		X
1993	-2,2	-1,2	X	

1994	-3,1	-1,3	X	
1995	0,6	1,9	X	
1996	-1,9	-0,7	X	
1997	-0,4	-1,6	X	
1998	1,7	0,3	X	
1999	1,9	1	X	
2000	-0,8	-0,1	X	
2001	-1,3	0,2		X
2002	-0,4	0,3		X
2003	0,4	1,5	X	
2004	-0,1	1,9		X
2005	-0,6	1,2		X
2006	4,5	-3,6		x
2007	0,7	3,3	x	
2008	-0,5	3,7		x
2009	-1,0	-3,3	x	
2010	2,0	-0,2		x
2011	-1,6	1,7		x
2012	1,6	1,5	x	
2013	0,6	1,3	x	

Source: calculated based on data from previous tables

In comparison with data from the last table it is showed that in 1992, 2001, 2002, 2004, 2005, 2006, 2007, 2008, 2010 and 2011 tax rate was in the inadmissible area of the Laffer curve. In 1992, the raise of 0.3 percentage points of the tax rate led to a drop of 2 million EUR (current prices, year 1990) in tax revenue. Likewise, increasing the tax pressure was accompanied by the decrease of tax revenues collected on the basis of wider decrease of the GDP, which reflects a wider negative impact of tax growth. Regarding 2001, 2002, 2004, 2005, 2008 and 2011, although declining tax pressure corresponded to an increase in tax revenues collected, the economy is still in the inadmissible area of the Laffer curve, since this level is superior to optimal tax pressure (ensuring maximum tax receipts). Note that in 2008, a representative year of economic growth, the decrease by 0.5 percentage points of the tax rate resulted in the greatest increase of real tax revenues by 3.7 millions USD and their receipt to the general consolidated state budget. However, the economy was in the same restricted area of the curve. This means that the tax rate can be reduced further more to reach the optimal level to increase the GDP. On the other hand, it appears slightly illogical to assert that if fiscal pressure drop is followed by the decrease of tax revenues collected we are in the admissible area of the curve, and if fiscal pressure decrease is followed by increased tax revenues, we are in the inadmissible area. But the assessment must be made in relation to that optimal level of fiscal pressure that ensures the maximum of revenue and, therefore, becomes the correct assessment that the

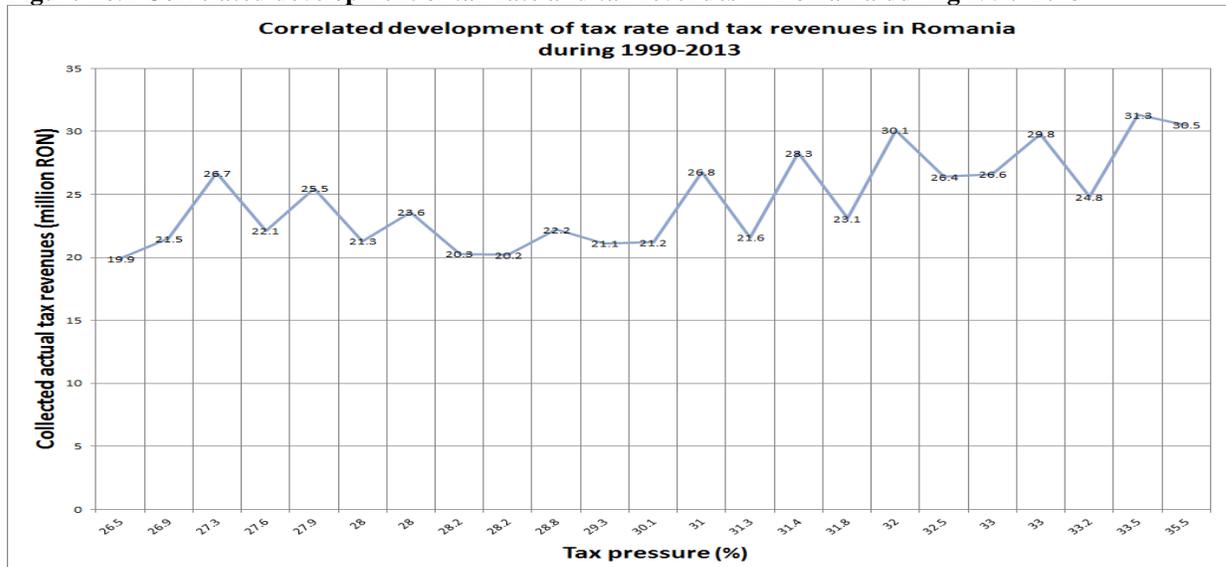
tax pressure is, in the first case, below optimum level, and in the second, over the considered optimal, in terms of addressing the Laffer.

Previous findings do not exclude the idea that longer-term decline in tax determines the increase of the tax base by stimulating work, investment, and by surfacing as many of the activities that were not taxed and are part of underground economy.

At the same time, it can be seen that in 13 years of the period considered, the rate of taxation, namely the degree of tax registered a negative annual variation; the increase in tax revenue was only in 6 years and in 7 years the decrease of tax pressure matches with the reduction of tax revenues. In comparison, the 9 positive annual fiscal pressure variations correspond in 6 cases, with the increase of collected tax revenues.

A graphical representation of the correlated evolution of the two variables corresponding to the Laffer curve, based on data on Romania's consolidated budget, is shown in Figure 2.

**Figure no.2 Correlated development of tax rate and tax revenues in Romania during 1990-2013**



According to the graphical representation from figure 2, we see that except for taxation rate of 35.5% for the first year of commencement of the transition (1990), inconclusive, general taxation degree to which there was the highest level of tax revenue collection is the 33.5% recorded in 2013, when the actual tax revenues were 31.1 million RON. This level of tax rate of 33.5%, which should generate maximum tax revenue collected, did not exclude the existence of the phenomenon of evasion of tax payment, confirmed by controls performed by specialized institutions within NAFA. Tax evasion has reached this year a level of 16.2% of GDP according to data released by the Fiscal Council. It can also be admitted that in terms of determining the tax pressure on tax receipts or paid by taxpayers, the bigger the level of tax evasion is, the lower the “accepted” tax burden is.

On the other hand, the lower level of taxation in Romania, provided that tax rates for the main taxes are close to those of the other countries in Eastern Europe, only

Lithuania has a lower tax burden, indicates a weak collection of levies, the lowest recorded in the VAT and income tax, which is in direct connection with the phenomenon of tax evasion.

But at the same time its sensitive decrease after 2000, took place amid increasing in real terms, gross domestic product, namely the reduction of tax rates. In addition, it is to be noted that the increase in the tax base is not sufficient to compensate the loss of revenue due to the reduction of tax rates, especially in the more drastic drop in the level of tax compliance and of expansion of tax evasion practice.

Compared to detached observations it appears contradictory that taxation in Romania was charged by the taxpayer as being high, perception partly explained especially for employers and individuals employed, if taken into account also the social security contributions which were located at the highest level compared to other countries in Central and Eastern Europe.

With a tax rate of 16%, our country is far below the level of taxation in the EU Member States, being surpassed by a number of 16 countries among which France, Sweden, Denmark, Austria, Italy, Norway.

However, structural analysis of compulsory levies shows a decrease, while the share of direct taxes in total tax revenues, and an increase in indirect taxes, which are usually preferred due to their higher efficiency, including in less prosperous periods economically speaking, but deeply unfair to taxpayers-individuals. We can say, therefore, that in Romania, during 1990-2013, the tax burden pressed on both shoulders mainly of individuals and on companies both by the high level of taxation on labor and through indirect taxation, which was based on taxing consumption.

This phenomenon could explain a significant decline in the level of voluntary compliance of these categories of tax payers regarding payment within the consolidated general government fees and taxes due. According to Eurostat data, Romania has a share of GDP levies by about 10 percentage points lower than the European average of 40%, being the 4th in the EU in this ranking.

Regarding the choice of percentage share of income tax, of the Keynesian theory background that gave rise to the tax multiplier, the idea of flat rate taxation is not a novelty in the theory and practice of tax.

The confrontations among specialists on this issue were stuck, especially in the area of tax reporting this process to one of the basic principles of taxation, namely that of fiscal equity. But this principle has known debatable meanings and interpretations, some economists supporting progressive taxation, while others opted for the proportional one.

Most economists agree that if fiscal pressure exceeds a certain threshold, any additional tax is damaging the economy, risking also the reduction in revenue collected.

In this case, if one accepts that there is a certain limit to fiscal pressure, the crucial issue is to know where it is and if it is respected or not. If this limit was exceeded, the best way to revive the economy is the release of tax "yoke".

Precisely this was the meaning of deep reforms implemented in some countries, like the US, England and others.

Profound tax reform in England during the Thatcher government was in large measure a consequence uprising middle and upper classes, weary of "confiscation" by

taxes, too large a portion of the product of their efforts. Similar situation was presented in the US at the beginning of the presidency of Ronald Reagan, when marginal tax rate reached 60-65%, being further reduced to 40%.

One of the negative consequences of tax progressivity is its stimulating effect of propensity to substitute labor with rest, making it an obstacle of the economic growth. Exactly the personal income tax progression becomes increasingly more critical and therefore subject to tax fairness. Critics of progressive rates show that diligent payers should not be punished by higher taxes, but the tax should be proportionate.

Most countries in South-Eastern Europe and the former socialist that are new members of the EU, introduced flat tax and post assessments results concluded that there were significantly increased tax revenues.

Thus we can mention: Poland with market shares between 19% and 40%, Bulgaria between 10% and 24%, Czech Republic between 12% and 32%, Hungary between 18% and 36% and Slovakia with 19% and 22%. By practicing these tax rates these countries have the lowest fiscal pressure in the European Union.

Compared to the disadvantages that progressive taxation and high levels have, it stands out the benefits of promoting the flat tax for individual incomes and its report to tax principles.

The essential objections that bring progressive taxation focus on the idea that the tax burden is much harder as a proportion, on higher income. To any such objections it might be brought the counterargument that individual tax progressivity could have meant to compensate, somehow, many of indirect taxes tend to press harder in proportional terms, on revenues of the population categories with lower incomes.

It is envisaged that most of the indirect taxes (VAT, excise duties) are set in flat rate. On the other hand, supporting the idea of progressive rates, the main argument which is brought is that progressive taxation is the most important tool of income redistribution. Although the claim is well founded, it should be borne in mind that it can achieve a redistribution of income in the practice of a tax system in proportionate shares. This may do both the at the stage of mobilization of budget revenues and the spending of them by providing services of which it can benefit specific priority population groups (example: home heating subsidies for low income etc.).

Regardless of the technical ways or practiced tax, the taxes themselves are an important way of redistributing a portion of GDP, but its proportions vary considerably. In this regard, we subscribe to the view that proportional taxation (in flat) has the great merit that it provides a viable premise of an acceptable equity, both for those who pay more, and for those who pay less (in absolute value), a rule that, once accepted, no longer creates problems generated by progressive taxation, or by that in fixed amounts per person. It appears to be particularly important also the null impact of taxation in flat, resulted in that the application on each income leaves unchanged the relationships between the net remuneration of different types of work and does not affect the optimum allocation of capacity to work.

There may be different views on changing or preserving the relationship between the two incomes when they are reduced by the same amount or in the same proportion. There is, however, no doubt that the two which were equal income before tax would

remain equal after tax cuts, too. Here, the effects of progressive taxation differ considerably from those of proportional taxation (in flat). In conclusion, the advantages of using the income tax flat rates are achieved through issues, such as:

- largely meet the criteria of fairness in taxation;
- provides greater transparency of the tax system, since the flat provides each taxpayer easily the opportunity to calculate the amount of tax liabilities;
- ensures equal tax treatment of all taxpayers, regardless of the size evolution of revenue upon them will be applied the same tax rate to determine the size of the tax burden;
- encourages increased efforts to work towards a better life and contributes to reducing tax evasion in the decrease of underground economy and thus increase government revenue;
- it increases the efficiency of taxes, due to reduced costs related to its establishment and collection .

We can also appreciate that the practice from many countries of the flat is determined by other advantages which are:

- stimulates business with positive influence in attracting and opening new direct investment from both domestic and foreign companies, especially multinationals;
- establishment of new small and individual enterprises concomitantly with specialized labor absorption in different fields;
- significant decrease in expenditure of tax administration both in terms of how to record, control and collect the tax revenue because it greatly simplifies the procedures and specific reports when it no longer occurs at the end of the financial year, revenues globalization.

Referring to the alternative "progressive rate or flat tax," the American economist Milton Friedman shows that the finding according to which personal income tax progressive rates, which is the most used by governments to change income distribution had had a limited effectiveness in reducing inequalities. This defends a lower income tax, which is good in economic terms for the free market and the private initiative.

Giving up at practicing progressive rates of income tax instalments and the introduction of the flat tax overturns much of the architecture of the tax system in Romania, which - through the personal income tax introduced in 2000 - has increased bureaucratic elements and determined charges extremely high occasioned by settlement and collection of such taxes, between 2000 and 2004.

Applying the flat income tax does not exclude, however, the possibility that the tax system is so constructed that the tax can be used as an important instrument of social protection, establishing the minimum taxable income and deduction personal system for difficult family situations, ensuring in this way, the correlation of the size of taxes paid by the taxpayers contribution capacity.

Approaching taxation at lower percentages respectively the flat applied in Romania is usually associated, fiscal relaxation phenomenon which occurs, but only if it is not accompanied by compensatory measures aimed to the new employment tax by introducing taxes or increase existing ones, suggesting that the flat would be perverse to tax reduction.

Thus, for instance, the introduction of the flat tax of 16% on personal income and profit companies in Romania, in the opinion of the public authorities who proposed it, is the core of tax relief, which took into account the main objectives: supporting private entrepreneurs; attracting foreign investment; reducing the share of the shadow economy; sustainable economic growth; creating more jobs; increasing savings and investment; stimulating free initiative, which should lead to the strengthening and the development of market economy in Romania.

On the other hand, however, after having introduced 16%, which initially left to the holders of income more financial resources, the government has realized that it can meet its commitments to international organizations and institutions, and then took many decisions to institute or increase taxes likely to be questioned initially announced fiscal easing application.

The realities related to the application of the flat tax revenues and profits in Romania have confirmed some opinions of its complainants who felt that it is a hasty measure, not based on an impact analysis, which would jeopardize the balance budget anticipating that this would be accompanied by increases in other taxes or introducing new ones; it will generate increases in utility prices or will require cuts in budgetary spending etc.

In this context, it is significant that in the conditions in Romania, to cover budget gaps created by fiscal relaxation, it turned to solutions with compensatory character, both the in terms of revenue growth, especially through increases in other taxes, as well as the limitation of budget expenses.

Among these we can mention: doubling the tax on the turnover of micro enterprises; reducing wages and eliminating bonuses and pension recalculation steps; doubling the dividend tax from individuals; 10-fold increasing bank interest and the tax gains on the stock market; more drastic taxation of gains from real estate and rents, etc.

Overall, we can say that the results are positive, although there are still specialists who manifest their concern about the timeliness of the introduction of the flat, as well as negative effects on inflation and macroeconomic stability, etc.

On a larger scale, it is acknowledged that the analyses undertaken from the perspective of any tax reform should be determined by multiplying the magnitude of the effect of tax rate reduction percentage. Thus, large-scale reduction of the tax rate may lead to an excessive aggregate demand, thus causing unmanageable inflationary effects.

Moreover, short-term effects of fiscal policy differ considerably from those in the long term. In this regard, some economic schools of thought say that a temporary increase in current income (by lowering the tax rate on short-term) causes a significant change in consumer spending of households. Conversely, an increase in permanent income (by lowering the tax rate on long-term) causes a strong change in consumption and thus of aggregate demand.

In this context, it is considered, moreover, that the measures of fiscal relaxation are the essence of the economic approach in terms of aggregate supply; concluding that tax reduction will lead to an increase in budget revenues on account of economic development.

Without disputing the positive impact of tax cuts on aggregate supply we consider that reducing taxation has effects on both aggregate demand and aggregate supply, but those effects are differentiated in size. Moreover, one can accept that, frequently, the incidence of tax reduction is in the foreground, much stronger on aggregate demand than on aggregate supply.

## **CONCLUSIONS**

Increasing or decreasing the fiscal pressure in a given interval of time is closely linked to the economic and social role of its state of intervention in order to provide financial resources to cover public spending. The interventionist action, often excessive in the economy, has generated over time debates that led to a new economic thinking which is represented by the American economist Arthur Laffer. This one, in his experiment, used as the basis of analysis the US market economy, and highlighted by a curve, the correlation between fiscal pressure and flow rate of tax revenues collected.

In the research carried, I tried after the Laffer curve model to determine for Romania, during 1990-2013, the relationship between the two parameters: fiscal pressure and tax revenue realized and the change influence of these parameters on the economy. I found that as the fiscal pressure increases it takes place a compression of economic activity and hence a decrease in tax revenue receipts to the general consolidated state budget. Conversely amid falling tax burden it is produced an improvement of the indicators of economic growth, the production of goods and services increases, and investment is reinvigorated. It is preferable that when the economy is in the inadmissible area of the curve, political decision makers to promote measures of fiscal law for broadening the tax base that would result in increasing the amount of tax revenue while boosting production and investment activity.

We consider that the practice so far in our country, of single rate of income tax for companies and individuals with all the shortcomings, is still able to be maintained, even if it meant broadening the tax base for activities underrepresented, by creating new taxes and increasing others.

Simultaneously it is required a special attention in terms of improving the state through its activity, administration and collection of all fiscal and budgetary revenues, increase voluntary compliance of taxpayers to pay taxes and owed contributions. In the same direction, it is imperative that the specialized institutions, to take firm action, through modern and perfected means, to prevent and combat all acts of evasion and tax avoidance, especially in high-risk areas, as well as in the control of large fortunes.

## **REFERENCES**

1. Laffer A., "The Laffer Curve: Past, Present and Future", published by The Heritage Foundation, 2004
2. \*\*\* Fiscal pressure in Romania, [www.ase.ro](http://www.ase.ro)
3. \*\*\*The impact of flat tax, [www.insse.ro](http://www.insse.ro)

4. Friedman M., Capitalism and Freedom, The University Press of Chicago, [www.pressuchicago.edu](http://www.pressuchicago.edu)
5. Biriş G., Fiscal reform in Romania, in the Business Digest Magazine
6. Văcărel I., Bistriceanu Gh. ş.a., Public Finance, Didactică şi Pedagogică Publishing House, Bucharest, 2008
7. Brezeanu P., Concepts, theories, politics and practical approaches, Wolkers Kluwer Publishing House, Bucharest, 2009
8. BNR, Annual report, 2008-2013
9. \*\*\*-European Economic Statistics, Eurostat Statistical Books, 2012, Luxembourg
10. National Institute of Statistics, The Annual Statistic of Romania, Romanian Magazine of Statistics, 1990-2013
11. Fiscal Council of Romania, Annual Report, 2011-2013
12. \*\*\*[www.mfinante.ro](http://www.mfinante.ro)
13. \*\*\*[www.taxeimpozite.ro](http://www.taxeimpozite.ro)
14. \*\*\*[www.eurostat.com](http://www.eurostat.com)
15. \*\*\*[www.insse.ro](http://www.insse.ro)
16. \*\*\*[www.gea.org.ro](http://www.gea.org.ro)
17. \*\*\*[www.europe.eu.int](http://www.europe.eu.int)
18. \*\*\* [www.consiliulfiscal.ro](http://www.consiliulfiscal.ro)
19. \*\*\* [www.ase.ro](http://www.ase.ro)