12. ON THE USE OF SOME OPTIMAL STRATEGIES OF FISCAL ADMINISTRATION DURING ECONOMIC CRISIS

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Abstract

Although the provisions of the Fiscal Procedure Code create the image of some norms with a somewhat "rigid" character, a series of options specific to modern finance behind the legal text require consideration of optimal strategies by the institutions of tax administration.
Because of the contribution to the growth of the revenues to the consolidated budget, important especially during an economic crisis, we considered the analysis and modelling of several default options included in the Fiscal Procedure Code, both with respect to debt collection and to tax inspection.
Increased efficiency has been analyzed both in terms of the possibility of application of enforcement measures, but also of appropriate strategies to combat tax evasion by fiscal control and introducing a "flat" tax.
The modelling of decisions included, as instruments, the valuation of the assets in risky conditions, theory of games and ARMA econometric model.
The study concludes that in the early periods of economic crisis it is not the ease of tax administration (rescheduling, delays, exemptions) that leads to an effective policy but rather government policies that reduce the probability of bankruptcy among companies. Regarding the tax inspection, the model used leads to possibilities of profound analysis of the dimensions of the control activity and the design of a flat tax.
Financial modelling of several tax administration decisions resulted in a procedure by Order of the President of the National Agency for Tax Administration (ANAF) no. 1126/2008 and therefore the use of flexible models must consider, even in the budgetary sector, besides increasing profitability on earnings also the risk of insolvency.

Keywords: tax administration, insolvency risk, option theory, theory of games, flat tax
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Modelling the Decision of Opening the Insolvency Procedure

The enforcement of budgetary debts may be defined as the procedure whereby the budgetary creditor compels the debtor who does not voluntarily fulfil its obligations arising from an enforceable title to forcibly implement it.

Due to the lack of liquidity during economic crisis there is a large number of companies registered in tax records with outstanding tax debts.

There are three practical directions where the effort of the institutions involved in tax collection must be directed:

- Promptitude of the tax administration response in the creation of arrears and in the failure to submit tax declarations;
- Development of internal control in the institutions involved in tax administration;
- In case of insolvency, clearly and quickly establish the causes.

With respect to promptitude of response, one of the problems is related to the optimal decision on the option to open insolvency proceedings for companies in a (potential) state of insolvency.

Based on the available data, tax administration assesses and establishes the enforcement measures so as to achieve the claim with the most profitable results, taking into account the immediate interest of the state and the rights and obligations of the debtor.

The immediate interest of the state is to increase budgetary revenue and also to minimize the loss due to non-payment of arrears.

Thus, if the company is solvent it is better for it to continue its activity and thus cash the outstanding amounts and interest on late payments. If the solvency condition is poor then it is more appropriate to initiate the insolvency proceedings, thus limiting losses from tax arrears.

The opportunity of opening the bankruptcy proceedings had contradictory provisions over time, oscillating between a quick start and completion of all procedures of enforcement.

Financial modelling through assimilation of prudent private creditor principle and formalized use of indicators of liquidity and solvency with the company is materialized in a procedure by Order of the ANAF President no. 1126/2008. Even in the budgetary sector, the approach to flexible models has to consider, besides increasing profitability on earnings, also the insolvency risk.

In the analysis of decision making under risk conditions, the optimal alternative is usually selected by calculating and then comparing the expected monetary values of all alternatives.

The use of utility as a measure for the value of an alternative was proposed by von Neumann and Morgenstern in *Theory of Games and Economic Behaviour* (1953).

Addressing the bankruptcy risk had different approaches. In the economic practice various models have been developed based on the score function, of which well known are the Altman model, the Conan and Holder model, the model of Balances of

the Central Bank of France but models based on artificial intelligence. Taking into consideration the sensitivity analysis to be pursued in this paper, the risk of bankruptcy will be treated according to the Merton structural model. However its use in the Romanian economy implies serious difficulties for the estimation of certain parameters such as volatility, but also a number of restrictive assumptions on the evolution of some indicators.

Structural models are based on the premise that there is a fundamental process Vt, interpreted as total value of the company's assets at t moment. Vt value of company's assets is the main force determining the dynamics of prices of securities issued by the company. In the specialized literature two approaches regarding modern methods of measuring risk can be distinguished: a structural approach, through the theory of options developed by Merton (1974) and a narrower approach, using intensity processes for estimating stochastic risk rates, the most prominent specialists being Jarrow, Lando and Turnbull (1997) and Duffle and Singleton (1998, 1999). These two schools of thought offer different methodologies to address the issue of basic model, of estimation of the probability of bankruptcy.

In Merton's model (1974), the equity of companies in debt is assimilated to a call option on company's assets, at the exercise price equal to the debt. If on the option expiry date the market value of company's assets exceeds the debt, then shareholders shall exercise the option to redeem the company's assets by debt repayment. If the market value of company's assets falls below the amount of the debt (A <B), then the option shall not be exercised. The probability of bankruptcy by the expiry date (which is equal to company's debt maturity) is equal to the probability that the option expires OTM (out of the money).

The Model

The model considered for the option of opening the insolvency proceedings will be assimilated to a problem of evaluation of assets in uncertain environment [1].

The approach uses the criterion of "mathematical expectation" that involves risk indifference of the tax administration and a portfolio of identical and independent risks. However, by considering some other criteria such as expectation-dispersion, it can lead to a deeper analysis.

In the chosen model we shall consider that if the tax administration opens bankruptcy proceedings and the company becomes insolvent, it can earn a percentage of the assets value (z X A) from that date (due to asset impairment during the insolvency proceedings).

If the proceedings are not opened on time and the company is unable to recover through reorganization other arrears can result D1.

The probability of occurrence of insolvency (pi) is given by the risk of insolvency [2].

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[1] *Ion Stancu ,* Financial Markets and Portfolio Management *("Piețe financiare şi gestiunea portofoliului"), Second Edition 2004.*

[2] *Altar, Moisa,* Financial Engineering*, part I - version 3, January 2002.*

If the administration initiates the bankruptcy proceedings and the company recovers due to reorganization, the state can recover its claim, but it no longer cashes the amount of taxes and duties that the company would have paid during the insolvency proceedings, because the company no longer operates.

If the administration does not initiate the bankruptcy proceedings and the company recovers due to reorganization, the state can recover its claim and subsequent earnings due to the continuation of the activity.

We shall consider schematically the decision modelling in a uncertain environment based on two lotteries characterized as follows:

	The probability of occurrence of the insolvency P i	1- Pi
	Insolvency	No insolvency
The option of initiation of the proceedings is exercised	z X A	D
The option of initiation of the proceedings is not exercised	z X A – D1	D+ P

- z X A = the amount recovered following the insolvency procedure through assets recovery;
- z = percentage given by the liquidation value of a company (which is determined by the cash flow that can be obtained in case of cessation of activity and sale of all assets, considered individually);
- A = assets value;
- D1 = expected tax claims that would be registered later by the company;
- P = payments expected to be made by the company after this decision is made ;

By calculating the mathematical expectation in the two cases we get the optimal time of opening of insolvency proceedings:

V1= (z X A) X p + D X (1- p); V2= (z X A – D1) X p + (D + P) X (1-p)

(z X A) X p + D X (1- p) = (z X A – D1) X p + (D + P) X (1-p)

p = P / (P + D1) = expected future payments / (expected future payments + expected future claims) (1)

The conclusion is that the right option is to ask for insolvency when the probability of bankruptcy is higher than calculated p above (pf> p[3]) .

Substantiation of the decision of declaring the state of insolvency is based on the value and volatility of assets, on the amount of the debt, interest rate, expected future payments and claims.

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[3] $p_f = 1 - N(d2)$,where $d_1 = \frac{\ln \frac{A_t}{P}}{\sigma_a \sqrt{T-t}} + \frac{(T-t)(r + \sigma * \sigma / 2)}{\sigma_a \sqrt{T-t}}$, $d_2 = d_1 - \sigma_a \sqrt{T-t}$

T-t = debt service , A= asset , r = interest rate , σ = volatility , F = debt value

The significance of this theoretical study should be viewed as an alternative approach to the procedure laid down by ANAF Order number 1126 / 01.08.2008 in which an analysis model relating to a tax administration decision is formalized.

Although the Merton model is difficult to apply to the Romanian market both because of the restrictive assumptions of the model itself and of the characteristics of the Romanian market, this study reveals the sensitivity of the decision of enforcement by two essential elements in tax administration which are not included in the ANAF Order mentioned above, namely the debt service and interest rate.

Another advantage of the model is its flexibility which allows its implementation in computer systems to assist decision.

Since the result obtained reveals that the right option is to open the proceedings when the probability of bankruptcy of the company is higher than an estimation of future behaviour of the company (expected future payments) we will approach a method of analysis of future budgetary revenues using time series.

Studies regarding Earnings Estimate Using an ARMA Model

Given the large number of decisions to be taken in a short time, it is important that the predictions regarding the revenues and arrears to be made operatively for a very large number of taxpayers, which requires effective means of analysis as well as time series analysis.

Since payments made to the State Treasury and claims of a company represent tax secret in order to assess the potential of using time series in the analysis of the sensitivity of tax administration decision in terms of formula (1), we considered the prediction of total budgetary revenue.

The data used in the analysis were requested in accordance with Law no. 544 / 2001 on free access to information of public interest and they reflect the protection and observance by Romania of a constitutional right of the citizens: freedom of information.

To this purpose we requested the total amounts collected to the state budget, state social insurance budget, single national fund for health insurance and unemployment fund from the National Agency for Tax Administration for the period 2007 - 2008.

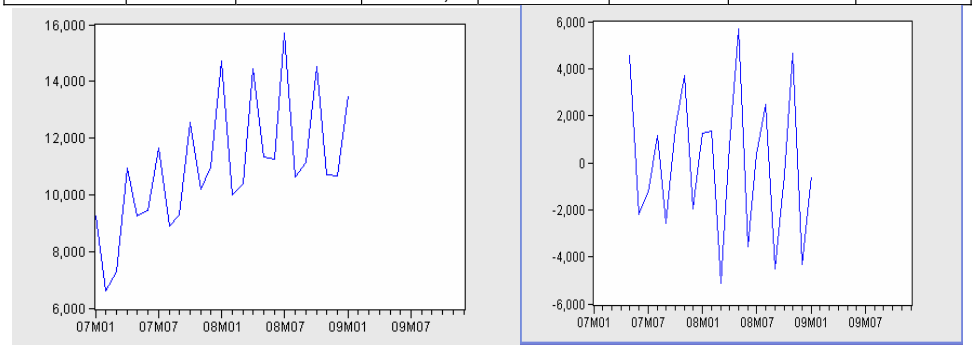
A budget revenue forecast was made using earnings from previous periods based on an ARMA model.

ARMA models (autoregressive moving average) are univariate models with a dependent variable that is modelled by its own observations and combines both autoregressive lags of the dependent variable and the errors of moving average process.

Estimating ARMA models has severe limitations. First the parameters in ARMA models can be very unstable since small changes in the used sample can lead to very different parameters from one estimate to another. Secondly, choosing the most appropriate ARMA model depends more on experience than on statistical indicators. In addition, once a model selected, it may not predict very well.

Analyzed data series (amount of monthly revenue to the state budget in the 2007-2008 period) have a trend and therefore according to the Box Jenkings algorithm, the series stopping was carried out by defining a new series: total_budget = total_budget - total_budget (-3) - total_budget (-2) + total_budget (-4).

INITIAL SERIES		STOPPED SERIES		INITIAL SERIES		STOPPED SERIES	
MONTH /YEAR	REVE-NUES	MONTH /YEAR	REVE-NUES	MONTH /YEAR	REVE-NUES	MONTH /YEAR	REVE-NUES
2007M01	9236.50	2007M01	NA	2007M112	10977,58	2007M112	-1950.55
2007M02	6625.65	2007M02	NA	2008M01	14739.90	2008M01	1255.310
2007M03	7295.79	2007M03	NA	2008M02	9993.300	2008M02	1364.100
2007M04	10956.60	2007M04	NA	2008M03	10398.77	2008M03	-5106.440
2007M05	9257.72	2007M05	4572.78	2008M04	14429.08	2008M04	673.4600
2007M06	9445.65	2007M06	-2181.09	2008M05	11323.80	2008M05	5671.630
2007M07	11660.45	2007M07	-1258.08	2008M06	11256.99	2008M06	-3577.560
2007M08	8889.48	2007M08	1142.71	2008M07	15700.28	2008M07	346.1700
2007M09	9288.33	2007M09	-2560.05	2008M08	10642.86	2008M08	2491.150
2007M10	12560.65	2007M10	1456.37	2008M09	11136.16	2008M09	-4497.310
2007M11	10212.27	2007M11	3694.91	2008M10	14522.81	2008M10	-563.3400
2007M112	10977.58	2007M112	-1950,55	2008M11	10713.86	2008M11	4635.120



From the graphical representation of the initial series the decline in earnings can be seen since the second period of 2008, a feature of the beginning of an economic crisis, but also the periodicity of revenues due to the seasonality of the income tax.

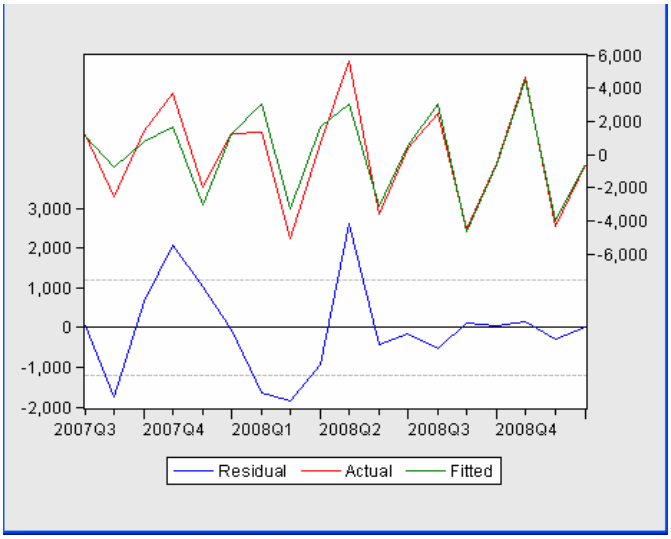
For the stopped series a forecast equation was considered for an AR (3) MA (6) process for which AR and MA coefficients were obtained and forecasts were made.

Dependent Variable: TOTALBUGETBUN
Method: Least Squares
Date: 03/12/09 Time: 10:52
Sample (adjusted): 2007M08 2009M01
Included observations: 18 after adjustments
Convergence achieved after 8 iterations
MA Backcast: 2007M02 2007M07

	Coefficient	Std. Error	t-Statistic	Prob.
AR(3)	0.806079	0.160310	5.028236	0.0001
MA(6)	0.946325	0.073726	12.83573	0.0000

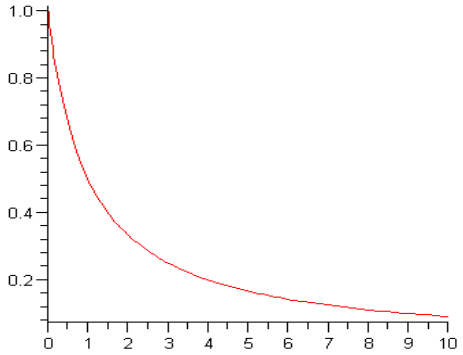
R-squared	0.862689	Mean dependent var	-27.13556
Adjusted R-squared	0.854107	S.D. dependent var	3161.924
S.E. of regression	1207.727	Akaike info criterion	17.13531
Sum squared resid	23337682	Schwarz criterion	17.23424
Log likelihood	-152.2178	Hannan-Quinn criter.	17.14895
Durbin-Watson stat	1.702523		

Inverted AR Roots	.93	-.47-.81i	-.47+.81i	
Inverted MA Roots	.86+.50i	.86-.50i	.00-.99i	-.00+.99i
	-.86+.50i	-.86-.50i		



The conclusion of this economic study is that budgetary revenues have a seasonal component determined by the periodicity of the income tax and that the amount of the revenues can be predicted based on a ARMA process.

Returning to formula (1) if we denote by α the ratio between forecast revenue and forecast arrears, from the graphical representation of the function f (x,y) = x /(x+y) = 1/(1+ α) it can be also noted that with the reduction in the ratio of budgetary revenue to arrears, the bankruptcy proceedings must be opened earlier.



Consequently, the decision to open the bankruptcy procedures and also other decisions such as those relating to suspension of enforcement, payment delaying or staggering of tax debts can maximize budgetary revenues without an increase in the taxation in itself.

The main limit makes, on a very short term, the forecast of future earnings and arrears that the company would record and also the assessment of bankruptcy risk in a short time for a large number of taxpayers.

The selected models (Merton and ARMA) have the advantage of high flexibility that can make them useful in implementing computer systems to assist the decision, complementary to computer systems of tax administration within ANAF, but they have the disadvantage of reduced relevance.

In the chart above, we also note that the efficiency of tax administration policy is obtained through a faster response to enforcement in times of lack of liquidity and a lighter reaction in terms of economic growth.

But this strategy can lead to a pro-cyclical fiscal policy in terms of tax administration, when the role of the state should be more counter-cyclically active.

Therefore it can be concluded that during early periods of economic crisis it is not the ease of tax administration (rescheduling, delays, exemptions) that leads to an effective government policy but rather other policies that reduce the probability of bankruptcy among companies. Easing tax administration as a budgetary engine can be effectively used particularly during economic recovery.

Modelling the Options of Carrying Tax Inspections. Designing a Flat-Rate Tax in Economic Crisis Conditions

Tax inspection is exercised over all persons, irrespective of their organization form, so long as they retain or pay taxes. Among the tax inspection forms the general inspection is the most common which means checking all the tax obligations of a taxpayer and the partial one by which one or more tax obligations are checked, for a period of time.

Choosing taxpayers for control is on referral or on ex officio and the controlled person can not object to the selection procedure used.

Control is carried out following a risk analysis prior to tax inspection. This study does not attempt to answer the question "which taxpayers should be controlled" but rather to "how many of the taxpayers should be controlled" by unannounced control, to maximize the efficiency of tax inspections.

The results of the study will be used mainly to assess the efficiency of unannounced tax inspections with respect to the behaviour of economic agents on this type of inspection but also to designing a flat tax to be introduced in the areas with high tax evasion to replace the lack of control efficiency.

The research started from the fact that the frequency of unannounced inspections aimed at identifying tax evasion by not declaring income (e.g., failure to issue fiscal receipt) can influence the behaviour of companies. The balance was analyzed using the theory of games.

This way of analysis was chosen as the game can be considered as any interaction between various agents governed by a set of specific rules to determine the possible moves of each participant and earnings for each combination of moves [4].

Theory of games is a relatively new branch that has emerged together with the publication of "The Theory of Games and Economic Behaviour" by John von Neumann and Oskar Morgenstern in 1943. In recognition of the importance of the theory of games, in 1994 the Nobel Prize in Economics was awarded for contributions to the development of this sector to the economists John Nash, John C. Harsanyi and Reinhard Selten.

To understand any game it is first necessary to know its rules, as thus one can find out which actions are allowed (possible) at some point. Then it is necessary to know how the players choose an action from the set of possible actions.

This approach can be done in the circumstances in which both tax administration bodies and taxpayers behave rationally, they know that the other agent also behave rationally and everybody knows the rules of the game.

If the rational behaviour of the state is generally influenced by the implementation of management standards in the public sector, with the taxpayers the maximization of profit that the shareholders aim at may lead to consideration of their rational behaviour.

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[4] *John von Neumann , Oskar Morgenstern ,* The Theory Of Games and Economic Behaviour.

The game is a sequence of decisions and events that follow a certain structure of earnings, given by specific operating rules (the rules of the game). The rules of the game will show how decisions are made by the players and their order. We shall call strategy of a player, a feasible (possible) action that a player may choose within the game. We call optimal strategy the strategy that maximizes a player's winnings notwithstanding the strategies chosen by other players. A simplified model in which there is one single tax and costs linearly assigned was chosen.

Model Description

1st Scenario - If the state determines by means of control that the taxpayer makes tax evasion by failure to register income, all the revenues made that day will be confiscated.

Description of the model:

Taxpayers can register the revenues by issuing income tax receipt or not (in such case dealing with tax evasion) and the tax administration may or may not conduct the inspection (which assumes a h cost). The taxpayer wins by evasion w less if the State finds and confiscates the revenues of that day. He will not be contraventionally sanctioned but it can be punished by confiscating all revenues in that day.

For the company, the "costs" associated to registering the revenues in one day are c, and if the taxpayer does not do tax evasion it pays taxes to the state budget in the v amount.

The normal form of the game is defined schematically as follows:

		y	1-y
		Tax administration conducts an inspection	Tax administration does not conduct an inspection
x	Tax evasion	0 , - h	w , - w
1-x	Correct behaviour	w-c , v-w-h	w-c , v-w

The game reaches an equilibrium in pure strategies, so if the tax administration does not conduct an inspection the company will prefer to make evasion and if it decides to inspect and the companies know this, it would be better not to make evasion. Therefore the tax administration needs to choose a mixed strategy.

Be x the probability that the company makes tax evasion and y the probability that the tax administration conducts inspections.

For the company it is the same whether it makes evasion or not when $y * 0 +(1-y) * w =y * (w - c) +(1 – y) * (w-c)$; $y*w=c$ or $y = c / w$. It is the same to choose whether or not to make evasion as long as the amount of gain from evasion (c) is equal to the loss of income (y * w).

For the Tax Administration it is the same if it chooses to inspect whether to inspect or not, as long as $x* (-h) + (1-x)(v -w- h)= x*(- w)+ (l-x)*(v - w)$ namely $x*w=h$; $x= h / w$.

In conclusion, the only equilibrium of the considered game would be an equilibrium in mixed strategies described by the relation ((h/w, (w-h)/w) , (c/w , (w-c) / w)).

2nd Scenario - If the state finds that the taxpayer makes evasion by failure to record the income, it fines the latter.

The model is similar to that described above with the addition that the tax administration will be able to force the taxpayer to pay the fine of m RON that it will actually collect.

		y	1-y
		Inspection	No inspection
x	Tax evasion	w-m , m - h	w , - w
1-x	No tax evasion	w-c , v-w-h	w-c , v-w

The balance of the game will be also mixed and it will be described, this time by the equation:

((h / (w + m), (w + m-h) / (w + m)), (c / m, (m-c) / m))

The significance of this theoretical study is to maximize revenue, the tax administration must choose a mixed strategy of inspection which is very sensitive to tax inspection costs. In fact frequency of tax inspections is determined by the amount of fines (seen in the broad sense of the taxpayer's actual penalty), the cost of tax inspection and field of activity. Since the only variable that can be changed only by the tax administration is the tax inspection cost, this model of optimal strategy can be also used to determine the necessary human resources involved in the unannounced tax inspection. The increase attracted additional amounts and reduction of tax evasion can be thus made (including by implementing electronic control) on account of reducing the costs of a tax inspection.

Another use of this approach is the design of a "flat" type tax which should reduce tax evasion without conducting an unannounced tax inspection and which will be analyzed below.

Tax administration strategies regarding a "flat" tax

The adoption of some measures in the field of tax policy by amending the Law no. 571/2003 regarding the Fiscal Code, published in the Official Gazette of Romania also included provisions for an annual minimum tax.

The amounts corresponding to the minimum tax, established according to the total revenue recorded on December 31st of the previous year, are the following:

Total annual revenues (RON)	Annual minimum tax (RON)
0 –52.000	2.200
52.001 – 215.000	4.300
215.001 – 430.000	6.500
430.001 – 4.300.000	8.600
4.300.001 – 21.500.000	11.000
21.500.001 – 129.000.000	22.000
Over 129.000.001	43.000

This tax is needed to stop the evasion effects due to the inefficiency of inspections and may be seen as an alternative to conducting tax inspections by ANAF, but it increases the risk of insolvency of companies.

We will address this model according to the second hypothesis presented above but by noting that the fine will be weighted in this case also by the risk of bankruptcy.

		x	1-x
		I	NI
y	C	zxw-m , m - h	zxw , - zxw
1-y	M	zxw-c , v-w-h	zxw-c , v-zxw

We will consider additional assumptions and denotations:

- Gain due to evasion is z x w (w = unreported sales volume, z = the percentage of unreported sales volume).
- The m value of the fine is the share of the amount of fine with the bankruptcy risk specific to the company m = x x (1 - rf).
- The costs related to the recording of the c revenues are formed by a flat-rate component determined by the total minimum tax divided by the number of days and a variable component determined by a rate of turnover.

  C = F / No. of days + p x w / No. of days (p = tax rate, F = flat rate).
- A simplified model was considered in which tax is paid in proportion to the turnover (V = n x declared turnover (CA)).
- All income (VN) consists of net income + net income resulting from evasion.
- d = percentage of turnover which represents the company's profit.

The equilibrium of the game is described by the relation ((h/(zw+m), (zw+m-h)/(zw+m)) , (c/m , (m-c) / m))

Behaviour will be further analyzed also in terms of corporate finance taking into account the cost of capital (k) and the condition ROE> ROA> K> Rdob> Rinfl.

For the simplification of the model we shall impose only the condition ROE = PN / CP > cost of capital.

Taking into consideration the above assumptions, it results that VN = y *z* W + (1-y) * d * CA ;

y *z* W + (1-y) * d * CA = cost of capital * CP or y = (cost of capital * CP - d * CA) / (z* W - d * CA) namely

(cost of capital * CP - d * CA) / (z* W - d * CA) = (F/ no. of days + p x w / no of days) / (x x (1- r f2))

When designing a flat tax one has to take into account equity, assets, asset volatility, interest rate, cost of capital, turnover, tax.

The significance of this analysis is that a flat tax should be designed taking into account a more complex grid, not only taking into consideration the turnover. One solution would be sizing the recorded capital according to the cost of capital and the subsequent imposing of a flat tax depending on the capital.

Sizing the flat tax depends in all cases on the cost of capital specific to the field of activity, that is to tax evasion specific to that domain.

The estimation of the cost of capital, especially for the Romanian economy, proves to be quite complex and difficult.

The CAPM model is difficult to follow, so the built-up empirical method seems realistic, the "step by step" method of construction starting from risk-free interest rate (Rf) and

gradually adding estimated risk premiums specific to the business class of the company (of capital market, industry sector, size of the enterprise, etc.).
The flat tax also depends on the amount of the fine imposed on undeclared income and also on assets and their volatility.

Conclusions

This article was aimed at addressing some tax administration flows, in terms of pursuit of optimal decisions using decision analysis techniques in risky conditions.
As compared to the procedure provided under ANAF Order No. 1126 / 01.08.2008 in which an analysis model relating to a static decision of tax administration is formalized, our personal contribution refers to addressing an appropriate exercise approach to enforcement based on the future evolution of the company in risky conditions and through the analysis of the equilibrium that is established between tax inspection and taxpayer and also under the conditions of a flat tax.
In this respect this study presents, besides the theoretical conclusions contained in each chapter, also the creation of computer means to assist the tax administration decisions by creating flexible models.
The efficiency of the tax administration policy is obtained through a faster response to the enforcement in early stages of lack of liquidity and a weaker response in case of a more optimistic prediction.

In other words, in the first part of the economic crisis the measures of tax administration should be more severe and the measures of government support more active so that with more favourable predictions this government policy be reversed.

Therefore it can be concluded that during early periods of economic crisis it is not the ease of tax administration (rescheduling, delays and exemptions) that leads to effective policy but rather other policies that reduce the probability of bankruptcy of the companies.

In combating tax evasion, the significance of tax inspection cost in the balance is noticed, its reduction by optimal sizing of staff or by developing an electronic control is equally important as the amount of the fine (which should be viewed in the wider sense of the actual applied penalty).

If the impact of tax inspections in relation to the amount of sanctions is reduced, then introducing a flat tax is necessary but it must consider a wide range of factors that have, however, a high volatility (which requires frequent change in the amount) and influences the risk of insolvency of companies.

Finally, the forecast of budgetary revenues by using an ARMA econometric model can be used to determine targets for tax administration but also to substantiate decisions on future developments.

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