

The neoclassic nothing

“With the correct manual in their bag, the “market Bolsheviks” will be able to fly to post-socialist countries and use the pacifist version of Lenin’s methods to achieve the reverse transition.”

Joseph E. Stiglitz

Classical Economics bears a hard to solve problem: time. In fact, time is a *caeteris paribus* condition for the conceptual system of what we call classical economy. Meaning the theoretical fundamentals of Political Economics laid by Adam Smith in the context of the Enlightenment’s rational breakthroughs.

In fact, the issue was about an explicative model of the material progress, with wealth as a central variable. As any explicative model, this was based on simplification, too. In the context of the fashion of secularization the model was also based on the rational objectivity of a regulatory force, of a non-subjective nature, which spun away the failures from the randamental norm. The market has replaced the heart of the system. Success was the effect of the inflexible application of directions of the recipe maker – attested in a canonical perimeter of private property, competition and market. The pre-existence of these is a methodological given. There is no order of prevalence, nor of contingency in this triangle of rational magic.

From the perspective of the emerging processes, time, however, cannot be ignored without proclaiming the epistemic inconsistency of classical economy. Especially its conflict with logic. Whether the market validating efficiency only if simultaneously meeting two prior conditions – private property and competition – will or will not remain an assumption, is an illustrative debate.

Within the framework of a functional market economy this relationing has power of law. The market is a consequence of the exercising of the right to own property, by the Procustean rules of competition. Property and competition matter in equal measure for the efficiency. The functioning of the market is dependent of property and competition to the absolute. The absence of a dependency blocks the mechanism. The market has no sense if the conditional dualism holds no content. The twinning of determinism is at the fundament of the vision of classic economy.

The invariable application of this theory legitimizes the orthodoxy of classical economy; as it does its inconsistency of substance in times of change.

The most eloquent episode, out of which classical economy has fashioned itself a conceptual – and almost fatal – crisis, was the post-communist transition. The economical alignment of the greatest transformational process, with a value of a test for the classical economy, was the transition from the planned economy, of a socialist type, to the market economy, of capitalist type. The canonical diptych of the transformation was liberalization – privatization. Through the scope of liberalization – at first that of prices – the competition was targeted, while through the telescope of privatization private property was brought

into focus. Adam and Eve created at once. Tempted by the tree of neoclassical knowledge, they were destined to instantly procreate – naturally and unconsciously – the infant of the primary trinity: the market. In other words, this event is predetermined in order for neoclassical theory to remain infallible.

But what can inevitably happen in theory cannot actually happen in reality, where the transformation process is perceived through the axis of time. In order for the causes of the expected effect to exist, they must be created. In what order, even in what order of priority, as warranted by the limits of simultaneity imposed by the anthropic principle and not by theoretical illusions and abstract visions, atemporal and ahuman, is the great challenge. If private property and competition cannot be created together and instantaneously – after the mandatory impossibility illustrated by the historically proven truth that nature, including the human variety, does not make leaps – will the market still be born? Or, more precisely, in how much time will it be born? Does the “enfant terrible” of classical economy evolve in its placenta for a reasonable time until it can produce the expected cry which certifies for us the fact that the incubator is no longer needed? Can the market be a human expression of performance?

The fact that neoclassical economy – the virtuous daughter of Smithian economy – hasn’t provided answers to these challenges has prejudiced the path and consistency of the post-communist transformational processes. The denial – inspired by neoclassical theory – of accepting the order of priority in the sequences of change, together with the rules of the game and the arbiters of equilibrium have burdened the transition with the problems of managing structural crises, in whose universe of meanings the frictions have lessened the effect.

The immediate liberalization and overnight privatization not being possible, the market was late to appear. And in any case, it did not have the means to make its presence felt as a regulating and testing function of allocating efficiency. The consequence: the distortion of the informational capacity of prices and the loss of economic potential through illegitimate privatization.

The end of neoclassical economy no longer justified the means in this situation. The means, however, have laid the mark of inconsistency over the final end.

Political Economics in general, and neoclassical in particular, suffer from self-consistency. As the philosophical vision of modernism, which strives to found itself exclusively on the new, creating an ontology out of nothing, the classical economy appears as a recipe of self-legitimizing authority explaining a reality which only functions in theory.

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The Basel II Accord on Measuring and Managing a Bank's Risks



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Abstract. *The abundance of risk metrics stems from the effort to measure the difference between the expected and actual returns, under a hypothesis of normality. Under the assumption of risk aversion, investors are likely to quantify risk using metrics which measure returns lower than the expected average. These include the semi-variance of returns smaller than the average, the risk of loss – a return under a chosen level, usually 0%, and value-at-risk, for the greatest losses, with a probability of less than 1-5% in a given period of time.*

The Basel II accord improves on the way risks are measured, by allowing banks greater flexibility. There is an increase in the complexity of measuring credit risks, the market risks measurement methods remain the same, and the measurement of operational risk is introduced for the first time.

The most advanced (and widely-used) risk metrics are based on VaR. However, it must be noted that VaR calculations are statistical, and therefore unlikely to forecast extraordinary events. So the quality of a VaR calculation must be checked using back-testing, and if the VaR value fails in a percentage of 1-5% of the cases, then the premises of the model must be changed.

Key words: Risk; Value-At-Risk; Basel II; Capital Adequacy; Monte-Carlo Simulation.



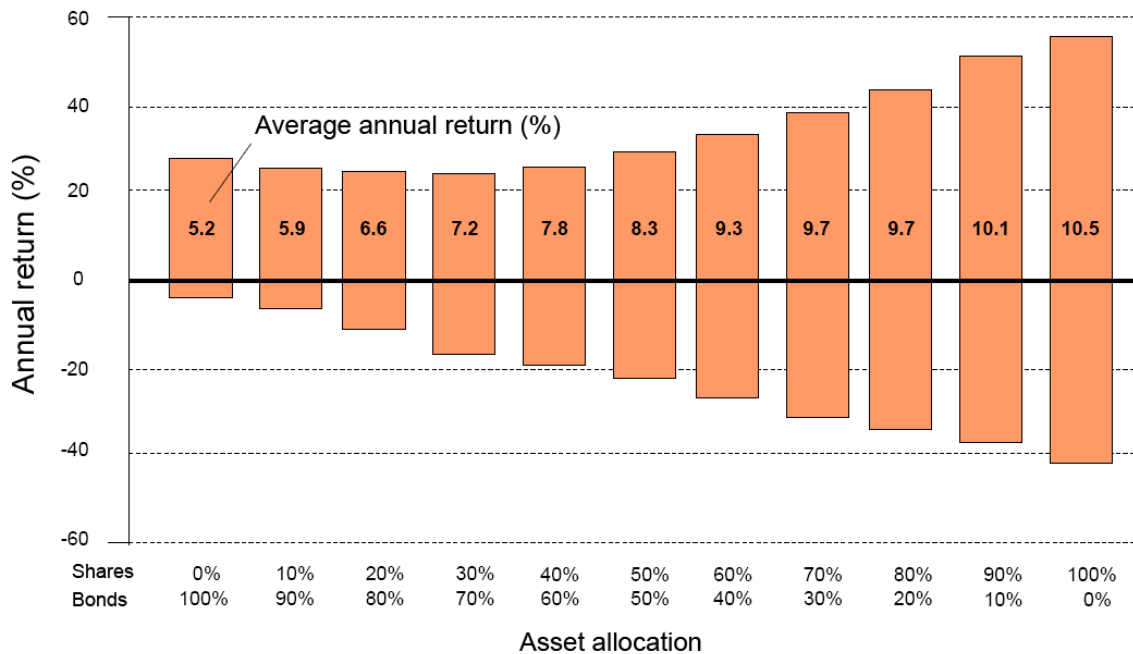
1. Defining Risk

Risk is defined as the uncertainty of an investment's rate of return – the probability that the realized return will vary from the expected return as a result of the influence of market and environmental factors. Some of the factors exerting influence on the investment's return can be forecasted, but most cannot. Risk is determined by the frequency and the size of the differences between expected and realized returns, and their distribution around the average expected return.

Risk metrics quantify the uncertainty of the expected return. These measures are important for portfolio construction and performance assessment, because a principal assumption if investing is that to achieve a given level of return; investments with lower risk are preferred over those with higher risks. Normally, investments with higher risks are expected to have higher returns than investments with lower risks.

Risk estimation is based on the historical data of different asset classes. Starting from the hypothesis that the past is a good predictor for the future, the historical data are the best foundation available for risk measurement. However, the future never quite repeats the past. The proverbial “hundred-year storm” can unsettle even the best predictions, based on the most advanced forecasting techniques.

Even if risk cannot be predicted with certainty, risk metrics provide critical information to help answer the most important questions for any investor: How should a portfolio be invested optimally, to achieve its objectives? Risk metrics have also proven reliable for comparing the relative risks of different asset classes. Figure 1 shows that increasing the percentage of stocks in the portfolio increases volatility (stocks have annual average returns of 10.5%, twice as large as bonds, but stocks also have negative returns of – 40%).



Source: Ambrosio Frank, 2007, *An Evaluation of Risk Metrics*, Vanguard.

Figure 1. Range of returns for different stock and bond allocations, 1926-2006

Risk metrics are classified in two categories: absolute and relative. Successful use of risk metrics depends on selecting measures that are consistent with a portfolio’s objectives. The amount and the quality of available data are of great importance.

2. Risk Metrics

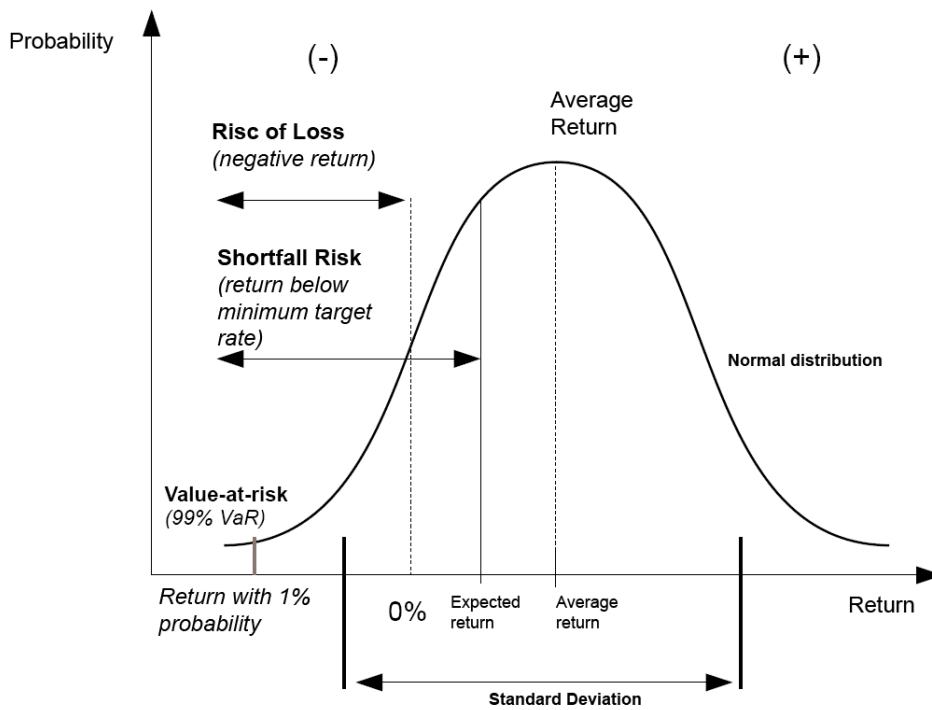
When using and quantifying risk metrics, we are assuming a hypothesis of normality – that is, that the returns are normally distributed around the average return. This hypothesis is usually true.

2.1. Absolute Risk Metrics

The most usual absolute risk metrics are the variance, standard deviation, value-at-risk, risk of loss and shortfall risk. Next we will define these metrics and comment on their limitations.

Variance (σ^2) is the average of the squared differences between the real and expected returns⁽¹⁾:

$$\sigma^2 = \frac{(R_1 - \bar{R})^2 + (R_2 - \bar{R})^2 + \dots + (R_T - \bar{R})^2}{T-1} = \frac{1}{T-1} \sum_{t=1}^T (R_t - \bar{R})^2$$



Source: Ambrosio Frank, 2007, *An Evaluation of Risk Metrics*, Vanguard.

Figure 2. The different risk metrics

The *standard deviation* (σ) is the squared root of the *variance*⁽²⁾:

$$\sigma^2 = \sqrt{\frac{1}{T-1} \sum (R_t - \bar{R})^2}$$

The standard deviation, which is a basic statistical metric, is commonly used to measure the fluctuation of a portfolio's return. A larger standard deviation shows a greater fluctuation in the returns of a portfolio, as compared to the portfolio's average return. For example, consider a portfolio with an average return of 10% and standard deviation of 15%. The portfolio's returns will be between -5% and 25% in 68.3% of the cases, according to the normal distribution.

The standard deviation can be an useful measure for portfolios such as pension funds, which are concerned with the consequences of both positive and negative deviations from the specific target return. The standard deviation is less suited for investors concerned with negative deviations from the average. Also, this metric assumes a normal distribution, which limits its applicability somehow.

The symmetry of deviations from the average means that the number of observations higher than the average will be equal to the number of observations lower than the average and so the standard deviation is a measure of

the total deviation from the average. Thus, some researchers propose semi-variance as the risk of lower than average returns. These negative deviations can be compared to the average (semi-variance), or, more interestingly, with the lowest accepted return ($R \leq 0 \Rightarrow$ zero return), which needs to be realized as a minimum-accepted condition (the safety-first criteria).

The *semi-variance* measures the risks that future returns will be less than the average, and the safety-first metric measures the risk that returns will be less than zero.

Actually, the "safety-first" metric is an expression of the return - risk metric, where risk is measured by the semi-variance of the deviations, or those under break even (BE), and not those both to the left and the right of the average (see Figure 3).

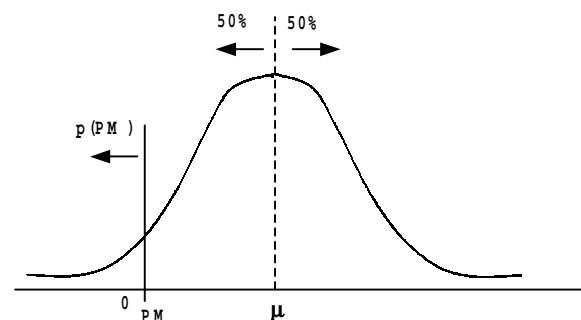


Figure 3. Representation of the safety-first metric

The safety-first metric is most widely used to measure the economic risk of a business, and the elasticity (Le) of the profit related to turnover. The economic risk is defined as the probability that the turnover (T) will be at a level where the profit will be zero (ZPT = zero-profit turnover).

$$Le = \frac{T}{T - ZPT}$$

In the context of financial management, the “uncertainty” is defined as the possibility of obtaining a varying profit, depending on the micro- and macroeconomic environment. Consider two businesses, A and B, with their forecasted profits X_A and X_B , respectively, and three economic environments:

Profit forecasts and historical data for the economic environment

Table 1

Nature states	p_A	X_A	$p_A \times X_A$	$\frac{p_A \times (X_{As} - \mu_{XA})^2}{(X_{As} - \mu_{XA})^2}$	p_B	X_B	$p_B \times X_B$	$\frac{p_B \times (X_{Bs} - \mu_{XB})^2}{(X_{Bs} - \mu_{XB})^2}$
Pessimistic	0,3	16	4,8	580,8	0,2	-5	-1	605
Constant	0,4	60	24	0	0,6	50	30	0
Optimistic	0,3	104	31,2	580,8	0,2	105	21	605
E(X)			60				50	
$\sigma^2(X)$				1161,6				1210

	A	B
$\beta_{neutral} =$	0,206613	$V(X)_{neutral} =$ 300
$\beta_{risk-adverse} =$	0	$V(X)_{risk-adverse} =$ 60
$\beta_{risk-taker} =$	1	$V(X)_{risk-taker} =$ 1221,6

Using a linear evaluation model, we obtain:

$$V(\tilde{X}) = E(\tilde{X}) + \beta \times \sigma^2(\tilde{X}).$$

The two outcomes for the businesses are equal only for $\beta = 0.206613$:

$$60 + 0.206613 \times 1.161,6 = 300 = 50 + 0.206613 \times 1.210$$

For $\beta \neq 0.206613$, the comparison must be done based on the investor’s preference for risk. For $\beta = 0$, meaning a risk-neutral position, business A will be the preferred choice, as $V(\tilde{X}_A) = 60 + 0 > 50 + 0 = V(\tilde{X}_B)$. If the investor is risk-adverse, (anytime $\beta < 0,206613$), then the “uncertainty” offered by A is preferred, as it offers more return and less risk.

If the investor has a risk-taking attitude (any $\beta > 0.206613$), then the uncertainty offered by B is more suitable.

For $\beta = 1$ we have $V(\tilde{X}_B) = 50 + 1 \times 1.210 = 1.260 > 1.221,6 = 60 + 1 \times 1.161,6 = V(\tilde{X}_A)$.

We should note, however, that the risk is used in our calculations by considering the entire variability of the profit, including both negative and positive deviations around the average (μ). Thus the uncertainty $V(\tilde{X}_A)$ is less interesting for risk-takers, who have a greater risk appetite, even though A always has positive returns, regardless of the nature states. But business A will be favored by risk-adverse investors.

The *Safety-First* risk metric is similar to the method used in the evaluation of the return – risk metric, with the single difference that the risk is evaluated on the probability that the profit is less than zero. Under these circumstances, business A would not be considered risky. Its evaluation will be done according to the expected profit [$V(\tilde{X}_A) = 60$]. However, business B, otherwise less risky, has a probability of 0.2 for obtaining profit less than zero (– 5). Its value is determined by the expected profit (50) and this new definition of risk [$0.2 \times (-5 - 0)^2 = 5$]:

$$V(\tilde{X}_B) = 50 + \beta \times 5$$

The two business become equivalent for $\beta = 2$. For any $\beta < 2$ (risk-adverse attitude), business A is more valuable. However, if a risk-taking investor finds that it is acceptable to replace the expected profit with the raised uncertainty of obtaining a higher return, then business B is a better alternative.

Value-at-risk (VaR) is a metric based on an asset’s “worst performance” in a given period. The measure can be based on the worst 1% or 5% observations in a given period, or in a number of observations.

VaR offers an easy to grasp measure of risk. The worst year for the USA stock market was 1931, when the market dropped by 43.1%. This can be understood by investors not familiar with risk.

Because VaR considers the worst results, but ignores their frequency, many risk analysts prefer to use VaR together with other risk metrics. Thus, VaR is frequently used in conjunction with the risk of loss.

In risk management, VaR is expressed as the probability $x\%$ of losing more than VaR in the next t days. The negative deviations are to the left of the average, with the greatest losses being the furthest away from the average (see Figure 4). After we set the probability X and the interval t , VaR quantifies this loss of investing in an asset or a portfolio⁽³⁾.

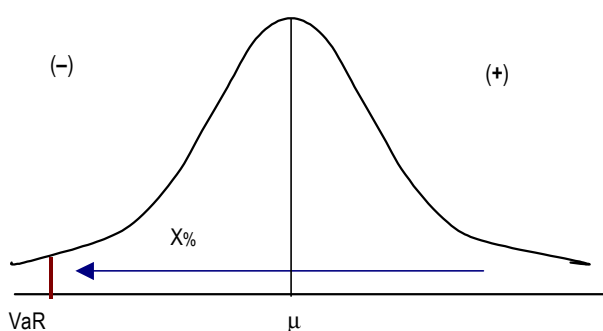


Figure 4. Risk estimation using VaR

VaR calculation methodologies are numerous and can be very complex⁽⁴⁾. The results are tested against historical data (back-testing), and if the periods in which the losses

are greater than VaR are not greater than 1% of the total measurements, then we can trust the computed value of VaR. However, if the numbers of periods where losses are recorded is significantly greater, we must then use other methods, such as GARCH or EWMA. At the end of article we will show how VaR for a loans portfolio is computed using the Monte-Carlo simulation.

Risk of Loss is a metric which is complimentary to VaR, because it shows the frequency of negative returns. Usually, it measures the percentage of returns smaller than a given benchmark, usually 0%. This metric most often describes the probability of the value of an asset falling under a certain index or under a reference asset. VaR and risk of loss can be used by almost any portfolio to measure risk tolerance.

Let's assume that an investor's goal is to maintain the value of a portfolio over a year. The risk of loss, showing that over the last 81 years, 30% of the time the returns on the stock market were negative, is an important information for the investor.

The risk of loss can also be measured in real terms, deducting the inflation. Table 2 shows that the losses in real terms can be quite different from the losses in nominal terms.

The returns of different asset classes on the USA market, 1926-2006

Table 2

Asset Class	(η) Nominal return			(η) Real return		
	Average annual return	% years with negative return	Highest annual loss	Average annual return	% years with negative return	Highest annual loss
Short-term treasury bills	3.8%	0.0%	0.0%	0.8%	35.0%	-15.0%
Long-term treasury bill	5.2%	9.0%	-2.3%	2.1%	38.0%	-14.0%
Stocks	10.5%	30.0%	-43.1%	7.2%	35.0%	-37.3%

Source: Ambrosio Frank, 2007, *An Evaluation of Risk Metrics*, Vanguard.

VaR and risk of loss have greater precision when more historical data is available. If the calculations of the two metrics are based on data which covers a shorter period and is less volatile, then the investor will get a false sense of security. Generally, the longer will be the period, the higher the probability of negative returns.

Shortfall Risk is the probability that an investment's value is less than is required to attain the specific

objectives. This probability can be computed using several methods, including the Monte-Carlo simulation. Shortfall Risk is most frequently used to create an investment plan based on current assets and estimated future liabilities. This metric can show that, for example, the probability that a portfolio might be consumed before all disbursements are made is 25%.

Shortfall Risk can be used by an institution or an individual who is spending, or will spend from portfolio

assets. Examples include foundations, pension funds, and persons investing in pension funds. Although the result is a simple percentage, it can be very complex to calculate and understand. Small changes in the premises might cause large changes in the end results. The quality of the calculation is strongly dependent on the initial data, and most of the time the initial data is not accurate and contains estimation errors.

2.2. Relative measures of risk

The most frequently used relative risk measures are excess return, tracking error, Sharpe ratio, information ratio, beta and Treynor ratio.

Excess return is the return of an asset above or below an index or reference security, for example a sovereign bond⁽⁵⁾. Excess return is calculated by subtracting the benchmark’s return from that of the security, for example, if an asset has a return of 11% and its benchmark has a return of 10%, then the excess return is 1%.

Investment advisors use excess return to compare a portfolio’s performance with its chosen index. The relevance of this calculation rests upon several premises: that the total risk of a portfolio is similar to the benchmark’s risk, and that the returns of both portfolio and benchmark fluctuate in the same direction. If these two conditions are not met, the metric will be of little use. For example, a portfolio can be riskier than an index, but excess return cannot measure this risk.

Tracking error is the standard deviation of excess return. Like the standard deviation of the portfolio, tracking error assumes that the returns are normally distributed. This measure combines both positive and negative results. For example, consider a fund which has no excess return compared to an index, over the long term, but it has a tracking error of 0.1%. If the benchmark has a 10% annual return, then the asset’s return will fall within 9.9% and 10.1% in 68% of the cases (according to the normal distribution law).

Tracking error is used to determine how close a portfolio’s performance matches that of a benchmark. Fund managers which are tied to a benchmark can use tracking error to describe the deviation from the benchmark. The metric can also be used to monitor the performance of funds with controlled risk, which have objectives such as generating returns 0.5% above a certain

benchmark. Like the standard deviation of a portfolio, tracking error is not suitable for those concentrating only on downside risk.

Tracking error is also less relevant for funds which are not tied to a certain benchmark. However, this metric is used for calculating the information ratio, which is used for comparing fund managers.

The *Sharpe ratio* represents the return of a portfolio adjusted for risk. Practically, profit is measured for every “unity” of risk. To calculate the Sharpe ration, an asset’s excess return is divided by the asset’s standard deviation:

$$Sh = (\bar{R}_{port} - \bar{R}_f) / \sigma_{port}$$

The Sharpe ratio can be negative if the asset’s performance is worse than the market. For a long-term evaluation, the metric’s values fall between 0 to +1. A larger value of the metric means a better performing asset. The metric is used to measure similar class of assets or assets with similar liquidity. The metric depends on the time period used for calculation, which is illustrated in Table 3:

Sharpe Ratio for different asset classes from 1970 to 2006

Table 3

	Sharpe Ratio		
	1970-1981	1982-1999	2000-2006
Commodities	0.3984	0.1654	0.3356
Real estate	0.2577	0.4724	1.392
International developed stock markets	0.0841	0.4809	0.0911
U.S. stock market	0.0301	0.7381	-0.0806
U.S. long-term Treasury bonds	-0.2743	0.5647	0.5914

Source: Marrison Chris, 2002, *The Fundamentals of Risk Measurement*, McGraw Hill.

However, the Sharpe ratio can lead to unwanted results if used without good consideration. As Table 3 shows, the metric has higher values during times of peak performance, as was the case with the stock market during 1999. However, the Sharpe ratio was a poor indicator at that point of the following period of market underperformance.

The *Information ratio* represents an asset’s return adjusted for risk, compared to a benchmark. To calculate this metric, the excess return is divided by the tracking error relative to a benchmark. The metric is generally used to compare the performance of different fund managers.

An investment fund with excess return of 10% and a tracking error of 20% relative to an index has an information ratio of 0.5. Another fund with excess return of 10% and tracking error of 40% has an information ratio of 0.25. Everything else being constant, a higher value of the metric indicates better performance.

Like Sharpe ratio, the information ratio is very dependent upon the time period used for calculation. This metric can also show high values in periods of maximum performance, which can be misleading.

Beta is a measure of an asset's volatility in relation to the rest of the market. The market is assumed to have a beta equal to 1. If a portfolio has a beta of 1.20, then the portfolio's value will rise or fall by 12% when the market rises or falls by 10%. Beta is used to measure systemic risk (or market risk) of an investment and can be used to aid in deciding whether an asset should be included in a portfolio.

Portfolio and hedge fund managers regard beta as a measure of risk. For example, managers who does not want to be exposed to market fluctuations will use neutralize the beta values of long positions with the beta of short positions, to reduce the portfolio's beta. However, when calculating beta, the choice of the benchmark is essential. Beta computed for a portfolio with a different risk profile will not be relevant for the total portfolio volatility. Also, the value of beta changes in time and therefore a periodical re-balancing is necessary to maintain a proper value for the metric.

The *Treynor ratio* describes return adjusted to risk, compared to the market. It is calculated by dividing excess return by beta:

$$Tr = (\bar{R}_{port} - \bar{R}_f) / \beta_{port}$$

The Treynor ratio measures return per unit of risk. The metric also assumes that all non-systemic risk has been diversified and that only systemic risk remains. Therefore, the Treynor ratio is used to compare funds which are very well diversified.

An investment fund with excess returns of 1% and a beta of 1.20 will have a Treynor ratio of 0.833. A higher value is better, all other factors being constant.

Because the Treynor ratio is based on beta, it will share the same limitations. Moreover, the Treynor ratio amplifies beta's change over time, and thus changes in the Treynor ratio do not always reflect major changes in risk.

3. The Basel II Accord on Risks and VaR

In June 2004, the Basel Committee has finalized a revision of Basel I. Owing to the development of risk evaluation methods which increased the complexity of banking operations, as well as the lack of operational risk in Basel I, the Basel II accord was issued at the end of 2003. From that point on, the banks had three years to implement the Basel II accord. The deadline for implementation was set for the end of 2006, with credit and operational risk set for 2007. The Basel II accord is based on three pillars, which are mutually re-enforcing:

Pillar I: Capital adequacy. The first pillar establishes the measurement methods for credit, market and operational risk. The Total Cost of Risk (TCR) is obtained by summing Credit Risk Cost (CRC), Market Risk Cost (MRC), and Operational Risk Cost (ORC), respectively, so that:

$$\text{Capital} > \text{TCR} = \text{CRC} + \text{MRC} + \text{ORC}$$

According to Pillar I, banks must calculate their solvency ratio:

$$\begin{aligned} \text{Bank Capital (min .8\%)} &= \\ &= \frac{\text{Total capital}}{\text{Risk weighted assets (r. credit + r. market + r. operational)}} \end{aligned}$$

The changes brought by Basel II affect in most part the risk evaluation methods. Thus, the methods used for measuring credit risk are the most advanced, those for market risk are unchanged, and those for operational risk are introduced for the first time. The Accord contains three methods for measuring credit and operational risk and two for market risk.

Methods for measuring credit risk

1. Standard approach (a modified Basel I version)
2. Foundation internal-rating based (IRB)
3. Advanced fundamental internal-ratings based (A-IRB).

For credit risk, the standard approach is an extension of Basel I, and it uses weights determined by external rating agencies. Internal rating methods are more advanced and use data on losses affecting the bank. However, the most advanced methods are those based on VaR.

Methods for measuring market risk (similar to Basel I)

1. Basic indicator approach (BIA)
2. Internal methods.

Methods for measuring operational risk

1. Basic indicator approach (BIA)
2. Standardized approach
3. Internal based, with
 - 3.1. Foundation IRB, and
 - 3.2. Advanced IRB.

Each method is increasingly complex. It is appreciated that the increasing complexity will lead to more precise calculations and less required capital.

Pillar II: Supervisory review process. This pillar consists in the extended role assumed by the supervisory body, which includes assurance that banks operate with adequate capital, and that they have the functioning internal processes required to evaluate risks and take the necessary measures when required. According to this pillar, the BNR (the Romanian National Bank) requires that every financial institution creates and validates a set of internal processes used to calculate the required funds in accordance with each institution's risk profile.

This pillar is based on four principles:

1. Banks must evaluate capital requirements in accordance with the risks;
2. The supervisor must determine whether the bank's capital adequacy;
3. It is expected that banks will operate above the minimum capital level;
4. The supervisor must identify problems early on and apply the necessary measures.

Pillar III: Market discipline. This pillar defines a series of requirements regarding the transparency and communication of precise information regarding risk exposures, risk profiles and risk management. Banks are required to publish organizational and strategic information relating to risk, financial information (structure and total value of own funds, accounting methods for assets and liabilities), information relating to credit risk (total, structure), and information relating to operational risk (events leading to possible losses).

Banks must publish reports detailing risks and capital requirements. The transparency is expected benefit clients, stakeholders, and the banks themselves.

Requirements for the management of credit, market, and operational risk

Credit risk: even banks with enough capital reserves must analyze in detail their own capital positions. Risk management techniques include collateral, guarantees and derivatives (for banks dealing with derivatives).

The complexity of the required data is significant. Therefore, a robust and auditable database is required. Credit systems will not only have to respond to management queries, but also to external control and regulators. According to Basel II and to its new rating methodology, capital requirements have grown, which can have a negative impact for credit extension, with unwanted macroeconomic effects.

Operational risk must be treated in financial institutions according to the industry best-practices, making use of adequate risk modeling and reduction techniques, including outsourcing. Financial institutions and their internal audit departments must pay attention to defining, calculating, measuring and communicating risk.

Market risk: the reporting and aggregation of all risk factors at a market level should create a transparent environment. The Basel II accord creates the premises for conformity at an institution's level, as well as for the whole market. The Basel II accord aims to significantly increase transparency by requiring banks to issue yearly or quarterly reports which show losses and exposures generated by risk management. These measures are meant to control and stop unwanted events in the credit activity, enhancing market discipline.

In conclusion, we will present some of the new Basel accord's positive and negative aspects:

POSITIVE	NEGATIVE
<ul style="list-style-type: none"> ▪ Encourages banks to build performing portfolios ▪ Recognizes advances in risk management ▪ Offers incentives for improving risk management ▪ Increases the role of the markets 	<ul style="list-style-type: none"> ▪ Mathematical models cannot emulate real-world events ▪ There is a probability of lower external ratings ▪ Economic cycles will cause variations in capital requirement ▪ The complexity of the new accord

Source: Jorion Philippe, 2007, *Value at Risk – The New Benchmark for Managing Financial Risk*, McGraw Hill.

Following are some more industry critics regarding the new Accord:

- The implementation of a risk management system can be very expensive;

- It is possible that “cascade” events take place when multiple institutions, using the same risk metrics (VaR, for example) effectuate similar operations. This behavior has been connected to the 1987 crash, and there is a probability that financial regulation amplifies market trends;
- Regulation can give a false sense of security.

4. Calculating VaR for a loan portfolio using the Monte Carlo simulation

Suppose a bank has a portfolio of 30 loans given out to customers. For each of these loans we know the size, the rating, and the probability of default in basis points. We are required to find out VaR 5%, simulating 1,000 possible values for the portfolio. The correlation factor \tilde{n} between the return factor F and the simulated value \hat{a}_i has the given value of 0.6. If a client defaults, then the whole sum is assumed to be lost.

The credit portfolio

Table 4

Credit	Exposure	Rating	PD in BP
1	10,000.00	BBB	37
2	50,000.00	CCC	3414
3	160,000.00	AA	1
4	10,000.00	AA	1
5	10,000.00	A	5
6	120,000.00	BBB	37
7	300,000.00	BBB	37
8	160,000.00	BBB	37
9	10,000.00	CCC	3414
10	50,000.00	B	659
11	10,000.00	BB	145
12	300,000.00	B	659
13	50,000.00	A	5
14	10,000.00	A	5
15	160,000.00	B	659
16	300,000.00	AA	1
17	50,000.00	BBB	37
18	10,000.00	B	659
19	160,000.00	BBB	37
20	20,000.00	A	5
21	50,000.00	BB	145
22	10,000.00	B	659
23	300,000.00	BB	145
24	10,000.00	B	659
25	70,000.00	A	5
26	10,000.00	B	659
27	50,000.00	CCC	3414
28	140,000.00	A	5
29	300,000.00	CCC	3414
30	20,000.00	BB	145
2,910,000.00			

Our first step is to calculate the loss threshold K for each loan, as the inverse cumulative standard deviation (see figure 5). K represents the number of standard deviations from the average until the default probability, assuming a normal distribution.

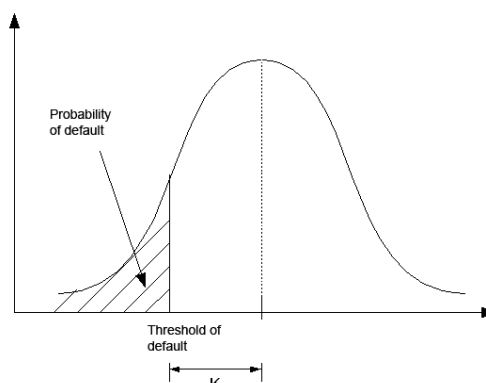


Figure 5. The evolution of K loss threshold

The calculation can be done using Microsoft Excel’s NORMSINV() formula. The results are in the table below:

K loss threshold of a bank portfolio

Table 5

Credit	Exposure	Rating	PD in BP	K
1	10,000.00	BBB	37	-2.678
2	50,000.00	CCC	3414	-0.409
3	160,000.00	AA	1	-3.719
4	10,000.00	AA	1	-3.719
5	10,000.00	A	5	-3.291
6	120,000.00	BBB	37	-2.678
7	300,000.00	BBB	37	-2.678
8	160,000.00	BBB	37	-2.678
9	10,000.00	CCC	3414	-0.409
10	50,000.00	B	659	-1.507
11	10,000.00	BB	145	-2.183
12	300,000.00	B	659	-1.507
13	50,000.00	A	5	-3.291
14	10,000.00	A	5	-3.291
15	160,000.00	B	659	-1.507
16	300,000.00	AA	1	-3.719
17	50,000.00	BBB	37	-2.678
18	10,000.00	B	659	-1.507
19	160,000.00	BBB	37	-2.678
20	20,000.00	A	5	-3.291
21	50,000.00	BB	145	-2.183
22	10,000.00	B	659	-1.507
23	300,000.00	BB	145	-2.183
24	10,000.00	B	659	-1.507
25	70,000.00	A	5	-3.291
26	10,000.00	B	659	-1.507
27	50,000.00	CCC	3414	-0.409
28	140,000.00	A	5	-3.291
29	300,000.00	CCC	3414	-0.409
30	20,000.00	BB	145	-2.183
2,910,000.00				

Next, we simulate 1,000 values for 30+1 random normal variables. One of the variables is for the return factor F, the others correspond to the 30 loans. Then we calculate the values for the loans (V_i) by replacing the simulated values for F and ϵ_i and the correlation factor ρ in the following linear model:

$$V_i = \sqrt{\rho} \times F + \sqrt{1-\rho} \times \epsilon_i$$

Next we are showing a part of the Monte Carlo simulation for 6 of the loans:

Loss simulation for the bank's portfolio

Table 6

Credit	1	2	3	4	5	6 ...
Exposure	10,000.00	50,000.00	160,000.00	10,000.00	10,000.00	120,000.00
Rating	BBB	CCC	AA	AA	A	BBB
PD in bp	37	3414	1	1	5	37
K	-2.678	-0.409	-3.719	-3.719	-3.291	-2.678
Value	-1.041	-0.078	0.575	0.525	0.864	-1.614
	-0.908	-1.401	-1.166	-0.896	-1.161	-1.825
	-0.880	0.055	-0.925	-1.259	-1.247	-0.999
	-0.012	-0.115	-1.163	-0.458	-0.450	-0.996
	0.076	-0.311	0.324	-1.694	-0.575	0.252
	-1.852	-3.099	-2.531	-1.814	-2.282	-2.363
	-0.218	-0.620	0.169	0.864	1.008	0.114
	-2.037	-1.202	-0.381	-0.100	-0.724	-0.714
	-1.977	-2.066	-0.478	-2.194	-1.714	-2.283
	0.454	-0.303	1.432	0.850	1.326	-0.231
	-2.479	-1.752	-0.631	-0.326	-1.850	-0.860

....

If the simulated value $V_i < K_i$ (the calculated loss threshold) then the entire sum is lost. Next, we calculate the total losses for each of the 1,000 simulations, by summing the losses on each row; part of the data follows:

Total losses, simulated, of bank's portfolio

Table 7

Credit	1	2	3	4	5	6 ...
Exposure	10,000.00	50,000.00	160,000.00	10,000.00	10,000.00	120,000.00
Rating	BBB	CCC	AA	AA	A	BBB
PD in BP	37	3414	1	1	5	37
K	-2.678	-0.409	-3.719	-3.719	-3.291	-2.678
Total Loss						
300,000.00	-	-	-	-	-	-
880,000.00	-	50,000.00	-	-	-	-
410,000.00	-	50,000.00	-	-	-	-
400,000.00	-	50,000.00	-	-	-	-
360,000.00	-	50,000.00	-	-	-	-
1,920,000.00	-	50,000.00	-	-	-	120,000.00
...						

Finally, we order the losses according to size. Since we have 1,000 values, we need to look at the 50-th value, corresponding to 95% of the total number of values. This value is 720,000 and it represents the VaR value we are looking for.

Loss Distribution

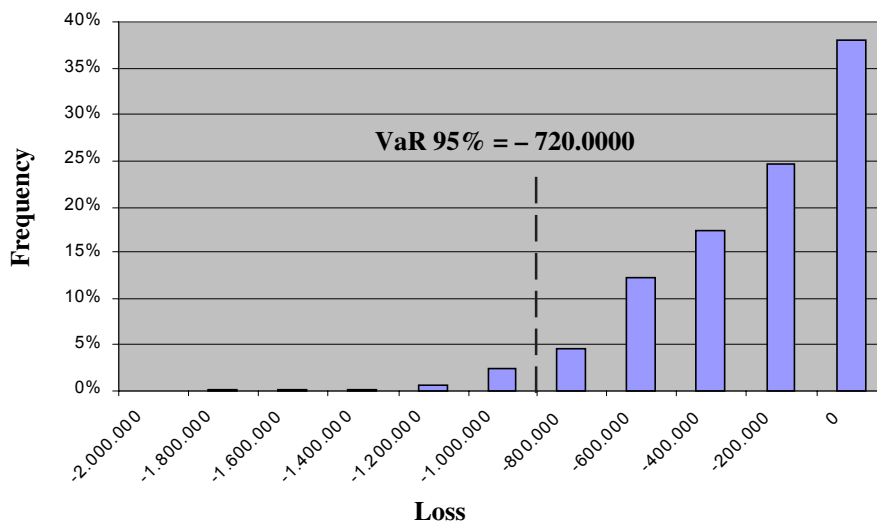


Figure 6. Loss distribution and VaR

This value signifies that the losses incurred by the bank will be greater than 720,000 only in 5% of the cases.

5. Conclusions and critical aspects

1. *The realism of the hypotheses.* Firstly, risk evaluation is undertaken assuming that financial events follow a known distribution (normal, triangular etc.) For example, the daily change in stock prices is assumed to have a normal distribution. In a general climate of risk aversion, multiple risk indicators are used, such as VaR, safety-first, semi-variance etc. Finally it is assumed that the future will repeat the past, and thus historical data is used. These premises, which do not always hold true, affect the precision of the forecasts and risk measurements.

2. *Data integrity.* The data we use in our models can represent an incomplete picture of the environment. In less liquid markets (such as non-EU countries or those of small-cap companies) the transaction costs can substantially affect total returns.

Quantitative risk metrics calculations can require a high level of data precision, which is not always available. Also, the returns of some strategies, such as hedge funds, are not frequently calculated, which makes their volatility appear artificially low.

The most widely-used risk metric is VaR, because it is expressed in terms which are very easy to understand. But VaR is obtained using statistical simulations, which cannot forecast extraordinary market events. Therefore, the quantity and quality of data is essential. Generally, the quality of a VaR calculation is tested using back-testing and stress-testing. Usually, if the model does not fit the data in more than 1% of the cases, then the premises or the modeling methods must be changed.

3. Any simulation is subject to *model risk*. This can be defined as the risk of losses resulting from using

inadequate models, such as assuming that the distribution of events is normal, when instead it is strongly skewed. Moreover, the losses can be compounded by liquidity problems associated with selling a losing position.

4. *Dependency on the time period.* The 1987 stock market crash (as well as other major economical developments) suggests that risk is independent from the time period being analyzed. Risk metrics based on longer-term periods can be less influenced by the short term. Since the whole stock market history can be considered as a single period, the question is how we shield ourselves from the risk of “different” time periods. One solution would be to forecast risk based on both historical and current data; the forecast is affected by the number of the variables used and the length of the forecast. Another is to use the Monte Carlo simulation.

5. *Metric selection and management risk.* Selecting a metric is not an easy decision. Choosing a relative risk metric, such as excess return, tracking error or beta is only appropriate when the benchmark is representative of the portfolio’s performance.

In conclusion, risk measurement is a crucial part in building and managing a portfolio. The investment policy must identify the relevant risk metrics for the portfolio’s specific goals. In addition to choosing quantitative measures, experience in judging the qualitative aspects is paramount.

Given these factors, a top-down approach is recommended. First, the goal of the portfolio should be set. Given the fact that the major asset classes, such as bonds, stocks and cash have a long history, portfolio construction must start from finding the correct balance between the different asset classes. Specific decisions about investments should only be made at the end of the process, together with a risk analysis. This process will lead to a better understanding of the portfolio’s risks and evaluation of its performance.

Notes

- (1) When variance is computed from a sample of realized returns, the sum of the squared differences is divided by T-1 periods, to compensate for the loss of one degree of freedom (Brealey and Myers, *Principles of Corporate Finance*, McGraw-Hill, 2000, p. 161). The differences between the observed returns are random and independent, but the last value can be dependent on the sum of the other T-1, so that their sum equals zero. Thus, a degree of freedom is lost.
- (2) If the variance and standard deviation are computed from a sample of observed returns derived from periods shorter than a year (day, month, quarter), then the yearly variance is calculated as the product between the variance of the shorted period (σ_t^2) and the number of periods (t):
- $$\sigma_{\text{yearly}}^2 = \sigma_t^2 \times t$$
- and the standard deviation is computed as
- (3) For capital adequacy purposes, the supervisory body can require a bank to increase its capital by up to 3 times the value of VaR for 10 days at 99%.
- (4) Among the VaR calculation methods there are:
- The variance-covariance method;
 - The GARCH method;
 - The historical simulation;
 - The Monte-Carlo method.
- (5) The Jensen Method for measuring portfolio performance is an illustration of Excess Return:
- $$MJ = - [R_f + \beta_{\text{port}}(EM - R_f)]$$
- This represents the portfolios excess return compared to its reference according to the CAPM method.

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An Empirical Analysis of the Budget Deficit

■

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Abstract. *Economic policies and, particularly, fiscal policies are not designed and implemented in an “empty space”: the structural characteristics of the economic systems, the institutional architecture of societies, the cultural paradigm and the power relations between different social groups define the borders of these policies.*

This paper tries to deal with these borders, to describe their nature and the implications of their existence to the fiscal policies’ quality and impact at a theoretical level as well as at an empirical one.

The main results of the proposed analysis support the ideas that the mentioned variables matters both for the social mandate entrusted by the society to the state and thus to the role and functions of the state and for the economic growth as a support of the resources collected at distributed by the public authorities.

Key words: budget deficit; structural characteristics; economic freedom; institutions; cultural paradigm; political freedom.

■

REL Classification: 13F, 10B, 8K

1. Introduction

Economic policies and, particularly, fiscal policies are not designed and implemented in an “empty space”: the structural characteristics of the economic systems, the institutional architecture of societies, the cultural paradigm and the *power relations* between different social groups define the borders of these policies.

This paper tries to deal with these borders, to describe their nature and the implications of their existence to the fiscal policies’ quality and impact.

The main hypothesis of the proposed analysis could be summarized as follows:

H₁: The public authorities are acting according to a *social mandate* entrusted by the society inside the “rules of the game”⁽¹⁾;

H₂: There are no differences between different social groups in the formulation of this mandate or, alternatively, the mandate is the result of a “perfect” social compromise;

H₃: The public authorities are acting only in the limits of the *social mandate* so there is no a *hidden agenda* of this authorities and/or modification of their behaviour over an electoral cycle. In other words, the public bureaucracy and the society have the same objectives.

Within this general framework, the structural and institutional variables, the cultural paradigm and the *power relations* influence the level and the structure of the budget deficit as follow:

- In a *direct* manner, *via* the formulation and application of the *social mandate* which is entrusted to the public authorities;
- In an *indirect* manner, *via* the impact on the economic growth and thus on the level, frequencies and structure of public incomes and on the level and nature of public expenditures.

As Ottaviano, Pinelli and Maignan (2003, p. 30) noted: “Classical writers in economics, such as David Hume (1848), Adam Smith (1776), John Stuart Mill (1847), realised and discussed about the importance of institutions, such as firms, families, contracts, markets, rules and regulations, and social norms to economic development. Weber (1905) identified the protestant ethics as one of the roots of the surge of capitalism”.

Important changes in the economic dynamic’s study occurred with Romer’s (1986, pp. 1002-1037) and Lucas’ (1988) contributions and especially with North’s (1990) shift of attention to the institutions that shape the incentive structure, which drives the economic evolutions.

Actually, there is a growing body of both theoretical and empirical works that try to enlighten the connections between development and quality of institutions (in particular, the role of the property rights and the rule of law), political regimes, social infrastructures, cultural values, and others “imponderables”. For instance, Rodrik (2000) discusses the types of institutions that allow the markets to perform adequately; Ali and Crain (2002) investigate the relationship between economic growth and economic freedom; Inglehart (1997) describes the “cultural learning process” and its impact on economic developments; Rauch (1994) emphasizes the role of “bureaucracy” and of the institutional environment in the private economic decision.

Interesting contributions are provided by De Jong and Semenov (2002, p. 16). Their point of view (“There are trade-offs between the various criteria, in particular, between solidarity, on the one hand, and efficiency, autonomy, promoting self-reliance and initiative, on the other. Thus, the society should decide on the relative importance of each of these values. This decision is crucially influenced by deeply rooted cultural values and has a crucial impact on the character of social welfare systems”) is largely similar to our own position exposed here etc.

The aim of this paper is to build a conceptual framework able to describe, in a holistic approach, the connections between the quality of market institutions, economic structures and mechanisms, socio-cultural models (“paradigms”) and political freedom on the one side, and the attributions assumed by the state on the other side. The proposed analysis is based on the thesis that the classical tools of economic policy are inefficient in a market characterized by “empty” institutions, wrong mechanisms of resources allocation, lack of autonomy for the civil society and counter-productive cultural *values*.

Section 2 tries to set up the taxonomy of the “structural” characteristics of the economic systems and to analyze in this theoretical framework the impact of the shocks associated with the “ignition” of economic growth and, correlative, the state involvement in the economy like a “compensatory power”.

Section 3 lists the institutions that can constitute a support for a sustainable economic dynamic and tries to explain why these institutions are important for the quality of the public actions and for their impact.

Section 4 deals with the socio-cultural paradigm and, more exactly, with the *mental infrastructures* of the economic processes. These *infrastructures* are classified in terms of social *openness* (i.e. the social capacity to react to changes induced by a turbulent economic environment).

In Section 5 some empirical results are reported, which could be used like a small proof for the theoretical output.

Finally, we present a set of critical aspects which are able, in our vision, to endanger the consistency and coherence of the proposed analysis.

2. Structural characteristics of the economic systems: how growth could be initiated

The intrinsic structural features of the economic systems represent a critical determinant for the “amalgamation” of the resources and mechanisms (responsible for the economic growth) in the subsequent economic processes.

We propose taxonomy of the economic systems using three-sectorial model in three meta-types (“A”, “B” and “C”) in order to create a real image of the way the structural features influence the *de facto* configuration of the growth process, and especially gives it a durable character. The main elements of the economic systems taken into account in this classification may be synthesized as follows:

I. For the real sector:

- the amount of real existing capital (physic and informational) and also its return;
- the volume, structure and allocation mechanisms of the available resources (material and informational resources);
- the characteristics of the labour (availability and effectiveness of labour offer, mobility, organizational structures, mechanism of nominal wage determination);
- the relations between different component sectors and segments, public and private sector, internal and external economic subjects;
- real assets and markets classification;
- investments opportunities;
- the structure of the economic subjects incomes;
- informational asymmetry;
- the relations between microeconomic decision centres (managerial bureaucracy⁽²⁾ and the capital owners).

II. For the public authority:

- the relations between fiscal authority and monetary authority;
- the status of public bureaucracy (due to its ability in blocking/influencing public decision);
- the fiscal system, its efficiency, the public resources main destinations (dependent on the role the fiscal authority assumes in the economic system) and also the dimension of the fiscal and quasi-fiscal deficit.

III. For the monetary sector:

- the classification of the financial intermediaries;
- the main elements which characterize the banking sector:
 - the number of components;
 - the level of competitive concentration;
 - the proportion of the resources which are held in the banking system from the total available resources in economy or, in other words, the intensity of banking sector participation in the financial intermediation process;

- the ratio between the bank credits offer and the potential demand for them – the degree of the credit availability;
- the mechanisms of interest rate formation;
- the relations between banking system and non-banking economic subjects;
- the banks position opposite to the monetary authority (taking into consideration its ruling and supervising capacity over the commercial banks activities);
- the right to intervene in those activities, and also the importance of re-financing from the monetary authority;
- the relations between the banking sector and the capital market (banks may act just as an intermediary or may also buy and sell financial assets on their own behalf);
- the competition: banks operators versus capital market operators (trying to attract as many temporary available resources as they can);
- the position of the banks with public owners in the banking system;
- the types of banks, classified using the nature and the specialization degree of their activities;
- the system of laws which rules the banking sector activity and its imperfections which can affect the “optimality” of this sector;
- the types of financial monetary assets created by the monetary authority and by the commercial banks together with the non banking economic subjects;
- the main elements which define the capital market:
 - the number of operators;
 - the intensity of the capital market participation in the financial intermediation process;
 - the concentration of the financial resources offer level on this market;
 - the main financial assets traded;
 - the complexity of the intermediation process;
 - the financial assets return and the stability of its dynamics, determined by the fundamental factors of the economic evolution;
 - the investment risk on this market;
 - trading mechanisms characterized by their technical elements and efficiency;
 - the characteristics of the system of laws which rules the capital market;
 - the operators position in the process of intermediation, offering or demanding resources.

The characteristics of the economic systems

Table 1

	"A" Economy	"B" Economy	"C" Economy
I. Real sector			
1. Real capital			
a. Volume	Low	Medium	High
b. The level of technical infrastructure development	Low	Medium	High
c. The dynamics of technical progress	Low	Medium	High
2. Real capital return	Low	Medium	High
3. Resources			
a. Volume	Low	Medium	High
b. Structure	Inadequate	Medium degree of adequacy	High degree of adequacy
c. Allocation mechanisms	Inefficient	Presents some deficiencies	Efficient
4. Labour			
a. Volume	Indeterminate	Indeterminate	Indeterminate
b. Professional skills	Low	Medium	High
c. Mobility			
c.1. Intra-sectorial mobility	Low or medium	Medium or high	High
c.2. Inter-sectorial mobility	Low	Medium or high	High
c.3. Geographic mobility	Low	Medium or high	High
d. Labour offer	Exogenous opposite with the nominal wage level	Partial exogenous opposite with the nominal wage level	Endogen opposite with the nominal wage level
e. Nominal wage determination	Using centralized negotiation mechanisms	Using partial centralized negotiation mechanisms	Using decentralized negotiation mechanisms
f. Organizational labour structures	"Rigid" behaviour and a strict hierarchy; the objective function includes the nominal wage level and job keeping	Some behavioural flexibility and a certain functional decentralization degree; the objective function includes also other variables	Pronounced behavioural flexibility and a strong functional decentralization degree; the objective function valorising the organization ensemble objectives where labour is involved
5. The real sector structure			
a. Dominant sectors	Hard industry and/or agriculture; frequently monopole.	Textile, food industry and services; possible monopole or "cooperative" oligopoly	Services and informational sub-sectors; "perfect" competition or "competitive" oligopoly
b. Inter-sectorial relations	Rigid and with high hierarchies	Some certain flexibility and a medium degree of hierarchies	Extremely flexible
c. "Progress poles" position	Marginal	In affirmation	Dominant
6. Extern opening degree	Low	Medium	High
7. Real assets classification	Simple	Medium level of complexity	Complex
8. Real assets markets nature	Producers markets	Undetermined	Consumers markets
9. The relations between public sub- sector and private sub-sector			
a. The participation in resources allocation	Marginal for the private sector	In equilibrium	Marginal for the public sector
b. The position on different component markets	Dominance of the public sector	In equilibrium	Dominance of the private sector
10. Informational asymmetry	Pronounced	Medium	Absent
11. Investments opportunities	Reduced	Diverse	Highly diversified
12. The main incomes of the economic subjects	Wages	Wages and capital incomes	Wages and capital incomes
13. The decisional relations between managerial bureaucracy and the capital owners	The decisions are taken by the managerial bureaucracy; even in strategic matters the decisional power of the capital owners is dissipated or lower than the other	There is a certain control exercised by the capital owners over the managerial activity; the main decisions adopted by the managerial bureaucracy are tactical and operational decisions	There is a certain control exercised by the capital owners over the managerial activity; the main decisions adopted by the managerial bureaucracy are tactical and operational decisions
II. The public authority			
1. The bureaucratic machinery	Developed	Medium level of development	Low level
2. The fiscal system			
a. The fiscal incomes classification	Primitive	Medium level of complexity	Developed
b. The prevalent destination of public expenditures	Economic	Economic and social	Social
c. Efficient	Low	Medium	High
d. The fiscal budgetary deficit	Pronounced	Medium	Low
e. The quasi-fiscal budgetary deficit	Pronounced	Medium	Low
3. The relations between executive authority and central bank	Subordination of the central bank to the executive authority	Possibilities of executive authorities interference in the central bank's activities	Central bank's independence
III. The monetary sector			
1. The classification of financial intermediaries	Mostly bank financial intermediaries	Bank and no bank financial intermediaries	High role of no bank financial intermediaries
2. Banking sector			
a. Number of components	Undetermined	Undetermined	Undetermined
b. The level of bank activity concentration.	High	Medium	Low
c. The proportion of financial resources attracted	High	Medium	Competitively dependent of the resources attracted by the capital market
d. The ratios between effective credits supply and potential credits demand	The demand is durable higher than the supply	A temporary exceeding demand is possible	An equilibrium situation

	“A” Economy	“B” Economy	“C” Economy
e. Interest rate formation	Mostly administrative	Formation mechanism with important competitive elements	Competitive mechanism
f. The relations with economic no bank subjects	Domination or cooperation (mostly in the relations between banks and non-banking subjects with public owners)	In equilibrium	Orientated to the non-banking subjects needs
g. The position opposite the monetary authority	Dependence (“the banks are in the Bank”)	Increased autonomy of the commercial banks	High degree of commercial banks autonomy
h. The position opposite the capital market	Dominance over the capital market	Competitive	Competitive
i. The position of public owned banks	Dominant	Elements of competition with private banks	Competition with private banks
j. The risk level	High	Medium	Low
k. Bank services classification	Simple	Medium level of complexity	Complex
l. Banks	Universal	Universal and specialized	Universal and specialized
m. Bank regulations	Unstable and inefficient regulations system	Regulations stable on ensemble elements	Stable and efficient regulation system
n. The monetary financial assets types	Simple	Medium level of complexity	Complex
3. Capital market			
a. Number of participants	Low	Medium	High
b. The proportion of attracted financial resources	Low	Medium	Competitively dependent of the resources attracted by the monetary market
c. The level of financial resources supply concentration	High	Medium	Low
d. The traded financial assets	Simple	Medium level of complexity	Complex
e. The complexity of the intermediation process	Low	Medium	High
f. The ratios between effective capital and potential capital demand	The demand is durable higher than the supply	A temporary exceeding demand is possible	An equilibrium situation
g. The financial assets return	Low and fluctuating	Medium with possible fluctuations	High and stabile
h. The liquidity of financial no bank assets	Low	Medium	High
i. Investments	Pronounced	Medium	Low
j. Trading mechanisms	Simple, with numerous imperfections, with low efficiency	Medium level of complexity and efficiency	Complex and efficient
k. Regulations on capital market	Unstable and inefficient regulations system	Regulations stable on ensemble elements	Stable and efficient regulation system
l. The position of public owned operators	Dominant	Elements of competition with private operators	Competition with private operators

The three economic systems do not correspond to an analytical description of some real systems (from this point of view the proposed analysis represents maybe more a “naïve” exercise than a theoretical selfconsistent approach).

But even if we take into consideration this aspect, and presume a direct and strong correlation between the intensity of the structural blockings which affect an economic system functioning and its development level, then we could associate, more or less conventional, three situations of economic systems based on the “unplanned” markets functioning, for each one of the three situations (we must notice that in the economic real systems a rigorous delimitation of the different structural imperfections does not exist and that some of them can be found in all contemporary economies). This taxonomy could allow us to analyze the effects induced by the different types of real and/or nominal shocks, shocks associated with the economic growth process or with the increase in the economic evolution dynamics.

An “A” economy dynamics is confronted with important and persistent inflationist pressures, with an inefficient resources allocation, an unfavourable output evolution and a low level of labour occupation.

The financial resources insufficiency and the inefficient allocation mechanisms represents a cause for a frequently manifestation of moral *hazard and adverse selection situations*. On the other hand, due to the reduced producing performances, even if the resources could be sufficient, their use in production is limited, incomplete and less efficient.

The manifestation of certain real or nominal shocks which act as a determinant for a decrease in economic activities results make different economic subjects to try to substitute different types of assets. Due to the incipient development level of the financial market, low liquidity of the non-monetary financial assets and their high risk, these kinds of assets are not considered a direct substitute for a monetary asset. On the other hand, the assets and liabilities structure is far away from optimum because the level of the effective holds by some certain financial and real assets is lower than the desired one (this means that an exceeding demand not necessary manifested exists).

Concluding, there is any non-monetary asset which could be seen as a “perfect” money substitute, and the liquidity spectrum has numerous discontinuity points (the substitution elasticity is non-homogenous between

different financial and real assets types due to the functional imperfections and to the positional differences of this assets markets). Economic subjects will try, as a result, to compensate the decrease in their financial resources through transforming a part of their real or financial assets (which have an exceeding level and low transformation costs).

The aggregation of individual substitution solutions will cause a modification in the level of the demand and supply for different types of assets⁽³⁾. The critical aspect is represented by the fact that this demand and supply adjustments does not involve all the times adjustments of the relatives assets prices. Because of the imperfection associated with these markets and of the frequency of monopoly situations, numerous prices are rigid (more precisely “down” inelastic) so the supply does not react through price, at the new demand level. Even more a certitude of a supply reaction through quantities does not exist. On the one hand, the exceeding demand was not absorbed for all the complementary and substitutable assets and, on the other hand, the temporary character of the exceeding demand makes the suppliers consider the current demand fluctuation as a transitory one.

Another problem is the inertial character of current consumes goods (the demand for goods which is not considered away to preserve the value), which leads to a reduced elasticity in front of the available current income changes.

As a consequence, a decrease in available nominal and real incomes (current and expected ones) causes a reduction in the real effective realized level of the economy, which drops below the desired level. The main way of creating economies is investing the temporary available resources in the banking system because the financial market is not sufficient developed, the financial assets are not diversified enough, the associated risk is extremely high. Under these circumstances, the reduction in the economy level combined with the modifications generated as a result of transformation processes from real or financial assets in to money, due to the decrease in current income level, will determine a reduction of the financial resources attracted by the banking system.

If this situation is accompanied by some modification in the general credits conditions (other than the one concerning the interest rate) we will perceive a decrease in the credits supply. Concluding, we can say that, at a low economy and credits “abundance” level, the effective realized investments level will be situated below the estimated one (we must notice that here we speak only about the new investments, from the current period of time, so we do not understand through this conclusion the existence of a

disinvestments phenomenon; we are dealing only with the dropping off some new investments projects). As a result, we will be confronted with a decrease in capital goods demand, without a modification of their price, like it could be seen in the final consume goods situation. The final point is represented by a reduction in the real output level, compared with its expected level (not necessary with its level from the last period). Due to the organizational rigidities of the labour market and to the centralized negotiation of the nominal wage, this decrease is not accompanied by a readjustment in the nominal wage level (similar with the other relative prices, the nominal wage is “down” rigid).

We can also notice a stability in capital goods supply characteristics including here the psychological and informational capital real return. This happen because the decrease in capital goods demand which is not accompanied by a qualitative supply modification, on the one hand due to the low level of technical infrastructure development and on the other hand due to the absence of a competitive pressure in capital goods field.

In the same time the mentioned decrease in the resources available for banking system will cause a modification in the interest rates level (both active and passive interest rates). But the formation of the interest rates is not free, so the commercial banks are not allowed to increase as they wish its level which leads to a lower level of the interest rate than the desired one. Under these circumstances the reduction in the credit supply could be a durable one, similar with the investments level decline.

Parallel with the impact exercised on the relative prices, investments and outputs volume, the real and nominal shock affects the financial resources demand:

- through the effects exercised on the current and expected incomes, and also on the real trading volume realized by the economic subjects;
- through the de-correlations between the in and out expenses and incomes flows and through the potential estimation modification concerning the frequency of an exceeding expenses level comparing with the incomes level;
- through the reformulation of the wealth structure optimization problem.

The modification appeared in the relative prices structure as a result of the reformulation of the wealth structure optimization problem, the “perverse” modification of some relative prices due to the transfer of the budgetary “hard” restriction from producers to final consumers, the impact of the contra-cyclic economic politics or “preventive inflation” determined by the economic subjects which benefits of the

informational advantages can transform the diverse shocks which affect the “A” systems functioning in veritable “rocks” against the economic growth. Their absorption implies important social costs.

In a “B” economy the effect of real and nominal shocks is much more diffuse. The typology of real and financial assets and their return are significant higher than in the “A” economy case. Also their risk is lower and some financial asset could be perceived as a direct substitute for money.

If the level of liquid resources is lower than the planned one, the economic subjects will try to compensate it also through a decrease of that type of asset which is perceived having similar characteristic as money has, not only considering undifferentiated the imperfect liquid assets.

But the asset and liabilities structure is not optimal because the effective level of some real and financial assets is not the desired one (the amplitude of the structural disequilibria is lower than in the first case). Reformulating their optimization structure problems, the economic subjects will take into account not only these structural disequilibria but also the necessity of an arbitrage between the return and the risk of different assets.

The re-adjustments appeared in the different assets supply and demand causes modifications of their relative prices (even if on some of the markets, the individual prices continue to remain “down” rigid) and of the supplied quantities (with the same observation about the rigid nature of the supply for some assets).

Because the current consume of goods has in a “B” economy a more pronounced elasticity in front of the modifications in the current available income level, comparing with a “A” economy, a decrease in the available income level (or, more precisely, its positioning at a lower level than the expected one) can cause a reduction of the current consume (without an uniform character of this decrease for all kinds of current consume goods).

As a consequence, the decrease of the available nominal incomes (more exactly, principally of the nominal ones, because the stability of some relative prices can cause a lower reduction of the general prices level than the reduction of the nominal income level; in this way the nominal reduction is accompanied by a real one) causes a compression of the effective economy. Its level is inferior in against with the desired one, taking into account the fact that the decreases in level of consume is lower than the decrease in the income level.

In this case the economies are created not only using the banking system (mostly by the economic subjects with a low or medium level of incomes and a high risk aversion) but also using financial markets. This fact will provoke in

the same time a diminishing of the resources attracted by the banking sector and a decrease of the financial assets demand, which will determine a prices decrease and an interest rate increase.

Because of the presence of a numerous competitive element in the mechanism of interest rate formation, the decrease in the resources attracted by the banking system will be followed by an increase of the active interest rate and/or a decrease of the passive interest rate (even if, due to the persistence of some administrative elements in interest rate formation, some types of interest rates will remain unchanged, which leads to a medium level of the interest rate lower than the desired one; the measure of this difference is much more less significant than in an “A” case economy and anyway higher than the one from the former period).

The interest rates increases combined with a diminution of the available financing resources will provoke a decrease of the credits demand and supply, decrease that could be amplified by the general credit condition modifications. In this context, at a lower economy volume, an inferior credit “abundance” index and a superior interest rate index, the effective investments volume will be situated below the planned one (we speak here about the new investments but also about a disinvesting process). The decrease in the current investments volume will be accompanied by a diminution of the capital goods demand (similar with the final consume goods) without a modification in the same degree of their prices (in fact it is possible that some of this prices to be “down” inelastic). On this causal chain we will also find a real output decrease compared with the planned one (not necessary compared to the former one). Because of the decentralized components present in the wages mechanisms, the labour demand has a higher level of elasticity comparing with the nominal wage level. The intra and inter-sectorial mobility of the labour demand, the more pronounced character of the geographic mobility, make possible the apparition of some re-adjustments of the labour market along with the decrease in output level, even if this re-adjustments will continue to have a partial character. Also, the decrease of the capital goods demand could be accompanied by a qualitative modification of the supply, due to the manifestation of some competitive pressures in the sector.

In this way the capital goods supply characteristics (including the real return of the informational and physic capital) will suffer transformations, but these ones will not have sufficient strength to determine modifications able to compensate the impact which the decrease in investments available resources causes on their volume.

The impact of the real and/or nominal shocks in a “B” economy is similar with the one in an “A” economy

(through the effects exercised on the current and expected incomes, and also on the real trading volume realized by the economic subjects; through the de-correlations between the in and out expenses and incomes flows and through the potential estimation modification concerning the frequency of an exceeding expenses level comparing with the incomes level, through the reformulation of the wealth structure optimization problem). The only things which are different are the intensity of these effects, lower as amplitude but with a less contradictory character, and manifestation of the interest rate level modifications. But globally, the nature of these effects will remain undetermined. More than that, due to the remaining informational asymmetry between different categories of economic subjects and to a positional asymmetry, their reaction opposite to the exogenous decrease of the money supply induced by the economic system is still non-homogenous, but phenomena as the transfer effect or the “preventive inflation” will have a lower amplitude than in an “A” economy.

“C” economies are characterized by a lack of structural rigidity. The different imperfections which affect the market functionality have a minimal intensity; the financial market is “mature” and the competitive pressure, the efficient resources allocation mechanisms, the rapid dynamics of technical progresses make the exceeding demand to be easily eliminated. The supply adaptation is dually realized on all markets, through price but also through quantity.

The liquidity spectrum is uniform (with a single discontinuity point) and the variety of the asset situated at “left” of this point is complex (in other words, there are a numerous types of financial assets which are perceived as a direct money substitute due to their high liquidity level and their low risk). In this conditions, the exogenous decrease of the liquid available resources caused by the compression of generating economic activity will be compensated in the first place through a reduction of the financial assets with similar characteristics with money and just after, if this sort of assets are not sufficient enough, through the reduction of other assets (this substitution process is ruled by an arbitrage between risk and return).

The re-adjustments in the assets supply and demand determine relative prices modifications but also quantity supply modifications (but we must notice that the ratio between the movements dynamics is *ex-ante* undetermined; so, we will assume that the adjusting using quantities is realized before the adjustment through prices, without criticize this)

Because the goods current consume is “perfect” elastic comparing with the changes in current income level, the

compression of this income generates a decrease of the current consume which is uniform for all goods types. It has lower amplitude than the income compression and leads to a decrease in the effective economy. In this way, real economy is inferior to the expected, desired one.

Taking into consideration the fact that in this case the economies are created not only using the banking system but also using financial markets, this will provoke in the same time a diminishing of the resources attracted by the banking sector and a decrease of the financial assets demand, which will determine a prices decrease and an interest rate increase.

Due to the freely and competitively interest rates formation, they will grow (even in the banking system) until they will attain the real level (which reflects the new ratio between the financial resources supply and demand).

The increases of the interest rates, the compression of the available financial resources (parallel with the modification of the general credit condition) could cause a reduction of the credit demand and supply. At a low economy and “abundance” index volume corroborated with a high interest rate level, the effective investments volume will be situated at a lower level than the planned one (we speak here about the new investments but also about a disinvesting process).

The decrease in current investments volume will be accompanied by a decrease of the capital goods demand and by adjustments of their prices and quantities. We will find also a real output decrease comparing with the planed one. Because of the decentralized components present in the wages mechanisms, the labour demand and supply are perfectly elastic opposite to the real wage level, which determine “complete” labour re-adjustments. The decrease of capital goods’ demand (because of the supply competition on the capital goods market) goes along with its qualitative modification. In this way the characteristics of the capital goods supply (including the informational and physic return) will be modified. In this case these changes are able to compensate the impact which the reduction of the available investments resources causes over its volume. Anyway, the investments volume has a relevant elasticity comparing with these parameters dynamics.

The real and nominal shocks cause a decrease of the money demand through the effects induced by the structural modification and through the interest rate (this one has not always the same amplitude with the decrease of money supply, due to the inertial character of the anticipation made by economic subjects). Because the informational and positional asymmetries are almost

absent the level of the transfer effect or “preventive inflation” will be lowest.

Resuming:

S_j : *The budget deficit decrease as the economic systems is closed to the model of “C” economies because:*

S_{01} : *The involvement of the state in the functioning of the economical systems decreases as these systems translate their structures from the characteristics of to “A” economies to the ones specifically to “C” economies.*

S_{02} : *The ability of economic systems in absorbing real and/or nominal shocks induced by the economic growth processes increases as well as these systems pass structural modifications which transforms them from “A” economies to “C” economies.*

3. Institutional characteristics of the economic systems: how the social mandate is exercised and how growth could be sustained

Any structural performances an economic system would have, given the way resources are created, distributed and redistributed using the global social utility function, could not result only from the intrinsic market mechanisms. Due to the specific preferences concerning the incomes volume and structure, their allocation, risk aversion and also because of the different capacities of the economic subjects, which are more or less able to participate at the economic processes, a set of “rules of the game” which allows social mediation is definitely needed. If we accept this need, the institutions could be considered “the rules of the game in a society” (North, 1990, p. 3). They allow the human activities to be structured in social, political and economic mean. In the mean time, the institutional design of a society is a critical parameter for the nature and quality of the governance. As Evans (1995, pp. 10-12) has noticed: “States are not generic. They vary dramatically in their *internal structure* and *relations to society*. Different kinds of state structures create different capacities for action. Structures define the range of roles that the state is capable of playing. Outcomes depend both on whether the role fit the context and on how well they are executed. [...] The trick is to establish a connection between developmental impact and the structural characteristics of states – *their internal organization and relation to society*.”

A critical distinction should be done between the *political institutions* and *civil institutions*. The institutions to the first category are the elements of the political systems and represent the ensemble of public (central and local) and “semi”-public (e.g. political parties) authorities. The institutions to the second category are

generated by the civil society and represent “private” associative forms⁽⁴⁾.

The impact of each type of institutions on the budget deficit could be explained:

- by their influence on the state’s importance in the distributional processes;
- by their influence on the private *distributional coalitions*.

More exactly, if the influence of the *politic institutions* is strong and, correlative, the civil society’s institutions are weak structured (the social life is dominated by the public authorities and/or political organizations), the distributional processes are controlled by the state and the budget deficit are higher than the ones which occurs in situations in which the powers and the autonomy of the *civil institutions* are significant. From this point of view, the budget deficit is the prices of a higher relative importance of the *political life* in respect to the *private one*.

But how important is in fact this cleavage between the “public”/“private” institutions? Isn’t it clearer to say that *all* the institutions that are in fact *distributional coalitions* exercised an impact on budget deficit? In our opinion, these theses are not contradictory: the *distributional coalitions* tend to reduce the capacity of society to promote the structural and functional changes and the “operational speed” of the resources reallocation mechanisms and thus tend to reduce the economic growth. In the same time, this impact is asymmetric for the *political* and *civil* institutions: the importance of the public allocation of resources decreases as the importance of the “private” sphere involvement in the allocation processes increase.

Also, a distinction between the *formal* institutions (rules, norms, procedures) and the *informal* ones (unwritten conduit code which makes the formal rule understandable, supplements and sometimes even replaces them) is very useful. Both institutions are creating a framework in which there are inserted the economic systems, destined to support and to correct the way the systems work.

Using the analysis proposed by Rodrik (2000) we consider that this sort of support-institutions could be classified as follows:

- 1) institutions for property rights;
- 2) regulatory institutions;
- 3) institutions for macroeconomic stabilization;
- 4) institutions for social insurance;
- 5) institutions for conflicts management.

1. *Property rights* – an adequate property rights system represents an essential incentive for the economic innovation processes: the economic subjects are assuming

the risks associated to those processes only if they have the control over the result.

Rodrik (2000, p. 5) said: "Note that the key word is «control» rather than «ownership». Formal property rights do not count for much as they do not confer control rights. By the same token, sufficiently strong control rights may do the trick even in the absence of formal property rights". The *de facto* use of the control right is much more diffuse than the use of the property right and depends not only of the formal regulations but also of the behavioral typology associated with the implementation and realization practices, practices which are considered socially acceptable.

It should be noticed that the property rights can not be considered as "absolute". There is a "frontier" which limits the action sphere of each individual economic subject and the societies are trying to impose different limits in "frontier areas" where this sphere is intersected with the one characteristic for other subjects. The societies limit the property rights by subordinating them to the "public interest": the global social utility maximization is prevalent comparing with the maximization of the individual utilities. The "exact" definition of the "public interest" is different from society to society, from period to period.

2. *Regulatory institutions* - behind the ideal model of the "perfect" market, the real markets are characterized by numerous types of imperfections. In practice the markets "fail" due to the natural, technical or informational monopoly situations, to some trading costs, which stop the innovation and other non-monetary externalities internalization, and not in the last place due to the informational asymmetry, which generates *moral hazard and adverse selection* and to the systemic and non-systemic shocks which affect their normal functionality.

To compensate these market's "failures", a complex ensemble of institutions able to create a frame of rules and prudential supervision for the real and financial assets markets and to preserve the competitive character of these markets is extremely necessary.

A critical aspect could be the interventions amplitude. More precisely a "balance" in their modulation is necessary: "too low" amplitude can induce the intervention inefficiency. *Per a contrario* "too pronounced" amplitude can generate perturbations of the natural market mechanisms. Moreover, the dimension of the interventions must suit with the structural specific characteristics and to maintain a minimal character if the structural configuration is good. If not, and we are in the presence of some profound structural deficiencies and/or in a process of accelerated economic growth, a public coordination of the private sector activity could appear as desirable (the example of some

countries from South-East Asia, in '60 and '70 could be a proof that justify this assumption).

Finally we must also notice the importance of a correct schedule in time of this kind of interventions. The realized connection between public and private sphere, socially efficient at the beginning, could become dysfunctional if initial conditions are changing.

Summarizing, we can affirm that, similar with the institution for property rights, the "optimum" institutional arrangements involved by ruling and prudential supervising of the markets is a variable of time and geographic areas.

3. *Institutions for macroeconomic stabilization* - the auto-stabilization market's mechanisms do not have a "complete" efficiency: the de-correlations between real and financial asset flows can be a result of some external shocks but moreover a result of the way different system's components, and the whole system, is functioning.

The exceeding demand and supply could become persistent; the financial infrastructure could have a limited capacity of absorbing the real and nominal shocks, the incomplete and asymmetrical information could lead to incorrect consume economy or investment decisions. For this reason, a fiscal and monetary authority able to conceive and implement anti-cyclical politics with stabilization purpose is a real necessity.

4. *Institutions for social insurance* - a continuous structural-functional transformation process characterizes the modern economic systems.

The environment where the daily economic processes are realized, the mechanism, the written and unwritten rules become profoundly instable. The labour, the technologies, the financial resources, the organizational structures, the ideas, the values and the inter-personal relationship transgress more and more rapidly the physical and mental borders. The impact of those transformations on the level of economic growth depends of the risk aversion of all the economic subjects involved. These risks cannot be managed in a traditional fashion, characteristic for more stable economic systems, where groups and collectivizes with small dimensions and strong connections between members dominate the social life.

The modern risk management mechanisms have a combined nature. The public authority takes over and socially distributes a part of the risks, which the individuals must to face off. The individuals also develop alternative protection systems, independently or in a partnership with public social insurance systems. These actions have as a result a mix between the individual firm's practices and the practices specific for the public authorities that have a large area of extension.

One could notice that the public sector implication in the social risks management is extended behind the distribution of fiscal resources in the favor of different social categories. This involvement frequently includes a complex system of rules, norms and regulations meant for the high-risk activities. This system covers a variety of aspects starting from the lifetime employment practices and continuing with consumer protection and environment conservation.

The “safety mechanisms” contribute to the social disparity diminishing and, in the same time, stimulate the “economic programs” of the high-risk private subjects which are capable to generate socio-economic innovation and relative social advantages. The “safety mechanisms” can also help diminishing the “resistance in front of the changes”. This opposition is frequently manifested in the economic systems characterized by rapid structural transformations but using these insurance methods the social consensus in favor of this kind of transformations is obtained easier.

5. *Institutions for conflict management* - different cleavages types transgress the modern societies. The “demarcation lines” between the divers social groups and categories does not result just from the primary distribution and redistribution of the economic activities out-put, being also equally determined by the cultural, ethnic and political factors. Or, as Rodrik (2000, p. 12) said: “Social conflict is harmful both because it diverts resources from economically productive activities and because it discourages such activities by the uncertainty it generates”.

A pronounced asymmetry of economic activities results from the social coordination failure in obtaining and using those results. This asymmetry implies social breakings which have a larger associated cost than the one involved by financing an ensemble of institutions able to manage social conflicts.

Some examples of institutions could be: a legal system which respects the social ethics, political institutions which allow the representation of all interest groups, independent professional structures, minority structures. .

One could notice that they have a “leveling” action. On the one hand, they limit the positive result of the “economic game” (through the social redistribution) and, on the other hand, contribute to the loss limitation (through multiple compensation forms). Consequently, the existence of this kind of institutions increases the probability of fairness and cooperation in the “economic game”, which lead to a higher output than a non-cooperative one.

For a more accurate picture, it could be noticed that on should pay a special attention to all the types of institutions,

which are acting like *distributional coalitions*⁽⁵⁾. The critical point is that such institutions are able to influence the allocation and reallocation mechanism; the higher their power is, the lower the efficiency of these mechanisms is and higher the transactional costs are which occur in the current evolution of the economical systems. Also, any increase in the number of the *distributional coalitions* leads to an increase in the power and attributions of the public authorities and, more generally, exercises a substantial impact on the state architecture.

The institutions ensemble represents a markets complement and an “environment” for the public actions. These institutions are, in the last instance, corrections mechanism of the intrinsic dysfunctions, which assures the social coordination of the economic processes, at the minimal level.

As a consequence:

I_0 : *The higher the quality of private institutions is, the lower is the budget deficit because:*

I_{01} : *The higher the quality and importance of the formal and informal social-cultural institutions of the civil society is, the lower profile is the role of the state and thus the budget deficit;*

I_{02} : *The higher the quality of the complementary market institutions is, the more durable the character of the economic growth is and lower the social costs are.*

4. The socio-cultural *paradigm*: how the social mandate is formulated and what values are assigned to the economic growth

By paradigm we understand *the dominant mental collective model which makes the distinction between a society and the other*. This paradigm represents a societal integration factor that supplies commune values and purposes for society members. Also, it represents the subject of some learning and transferring inter-generation processes, modifying itself lent, in “long cycles”. The paradigm is the generator factor of the institutional frame which characterizes the society configuration. The paradigm and the institution generated by it significantly influence the economic activity dynamics. It is sufficient to notice that the economic subjects guide their decisions using a set of characteristic values; that the economic politics are influenced by this values in the interventions realized through the processes of distribution and redistribution of the economic activities resources and results (the predominant position of the equality/inequality couple significantly influences the public authorities involvement in the redistribution process).

In the same time, the economic development influences the institutions and also the paradigm. For example, the significantly bureaucratized institutions that characterize the industrial society has known a large decline in the post-industrial society, characterized by a highly specialized labour market, an important level of mobility and an evolution to the “qualitative” aspect, due to the increase in the per capita income level and its relatively equilibrate distributions.

The dissolution of the “real” socialist system had also happened *inter alia* in a point of maximum bureaucracy inefficiency in the planed economy management.

It is absolutely necessary to notice that the way economic dynamics influence the paradigm and its institution’s dynamics (if we take into account the different level of inertia that characterizes the socio-cultural/economic dynamics) is not clear enough. So, as we already have said before the paradigm presents “by definition” an accentuated inertial character more pronounced than the one that characterizes economic dynamics. Despite all these, due to the assimilation of the cultural values by a “learning process”, the existence of some modifications (most probably, in “normal conditions” initiated first at the institution’s level and after at the paradigms’) in the same generation as a result of economic context changes between the social start of one generation and the social “maturity” of the other is perfectly possible. More precisely, if we admit the *scarcity hypothesis*: the highest subjective utility is attributed to the good with a manifested exceeding demand than *the* satisfying of “A” good demand (“A” good has a deficient supply at the beginning of the cultural” learning process”) and the apparition of a exceeding demand for “B” good during this process could cause a movement from the values associated to the “A” goods to the values associated to the “B” goods (for example from” material goods” to “spare time”) (in the terminology used by Inglehart (1997) this process is equivalent with a transformation from *materialism to post-materialism*).

An important consequence of this approach consist in the fact that it could be postulated the thesis that *any shift in the paradigm will induce a significant and durable change in the “parameters” of the global social utility function. Thus, the changes in paradigm will affect the role and functions of the state not only in an indirect manner, via the economic growth, but also direct, via the (re) formulation of the mandate, which is entrusted to the state by the society.*

In this case, if we take into account the $H_1 - H_3$ hypothesis, we can postulate a direct connexion between the configurations of the mental architecture of a society and the state’s role.

Summarizing:

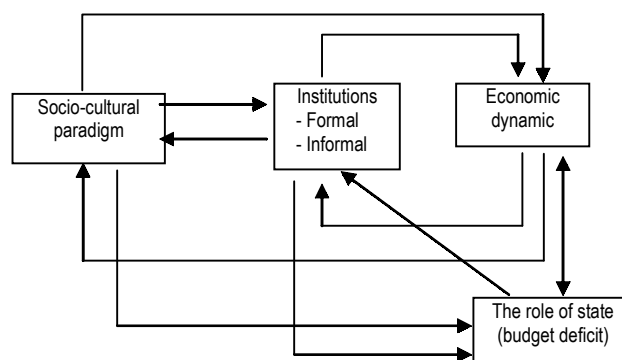


Figure 1. Relations between paradigm, institutions, economic dynamic and the role of state

Figure 1 reflects the relations between paradigm, institutions, economic dynamic and the role of state and is highly similar with the one presented by Jong (2001, p. 41). Despite of this fact, there are two fundamental distinctions: (i) the use of “paradigm” term instead of the “cultural values” term (justified in our opinion by the “stronger” sense of “mental model” incorporated in the first one comparing with the second one that suggest more” shared attitudes”⁽⁶⁾); (ii) the consideration of a feedback relation between institutions and paradigm (if an institutional system is exogenous constitute it *could* influence in the end the receptor- paradigm; the pro and contra-arguments could be synthesized using the approaches specific to one recurrent theme in dominant paradigm in Romania, the one of “forms without fond”: the initial creation of some “forms” maintained functional and “efficient” ends by influencing the “fond” which did not generated them, just receipted them).

It is interesting to remark the possibility of creating equivalence between the paradigm components and the factors used by Hofstede (2003)⁽⁷⁾ to explain the cultural differences (using some limitation in their sphere and content). These factors are⁽⁸⁾:

- *Power Distance (PD)*;
- *Individualism (I)*;
- *Masculinity (M)*;
- *Uncertainty Avoidance (UAI)*.

PD deals with the degree of acceptance of the non-equal power distribution in society. In the societies with a higher level of *PD*, this distribution will have a more pronounced character, with a positive correlation between this factor and the concentration of the political power (Hofstede, 2003, pp. 97-98, 106)⁽⁹⁾.

In societies characterized by a high *UAI* level, the refuse of decisional incertitude will generate an increased recurs

to the public authorities for its dispersion and orientation to a minimum level; as a consequence, the power and competences sphere of these authorities will be larger and more precisely established than in those societies with a low UAI level, which will accentuate the individual competences of the economic subjects and the limitation of the public role to a small set of public utilities supply.

M does not imply the discrimination of the cultural values on sexes, trying to reflect some fundamental values shared by all society members. More precisely, it is considered that the “masculine” societies are those where the dominant values are connected with the social affirmation, the material results and the decisional freedom. In this conditions the performance is measured using the terms of reaching and maintaining a reference social status and the material achievements are considered more important than the spiritual ones. In opposition, the “feminine” societies have as dominant values: the equality, the solidarity and the consensus, the social tension avoidance, the centralization of the social-economic trades and the conservation or the spiritual values, tided to the “quality of life” and to the inter-human relationships.

Finally, we deal with the acceptance/rejections of the individual responsibilities in front of the social reference group (family, social category, nation).

Discussion of the relevance and the limits of these concepts exceed this paper framework. We consider that taking them into consideration and using them to characterize three types of paradigm, characteristic for three types of societies, could be useful:

- “X” society (*closed society*);
- “Y” society (*semi-opened society*);
- “Z” society (*opened society*).

More precisely:

The characteristic of the different paradigms

Table 2

	“X”	“Y”	“Z”
PD	Reduced	Medium	Pronounced
I	Reduced	Medium	Pronounced
M	Reduced	Medium	Pronounced
UAI	Pronounced	Medium	Reduced

Closed societies are characterized by the tendency (at least formal shown) of attenuation at the unequal power distribution level, by a pronounced collectivism, by promoting the “feminine” values (searching for consensus and not for competition) and by a pronounced incertitude and risk aversion.

In *semi-opened societies* all these parameters have medium values; the *opened societies* valorize more the

acceptance of the unequal power distribution, as “natural” status, the individualism and the social affirmation, the performance and the material result, the incertitude acceptance as a status which could generate action opportunities.

It is interesting to remark that, from a dynamic perspective, the different possible combinations between the mentioned economies and paradigm place the socio-economic systems in three relatively distinct zones opposite to a certain “equilibrium” status (we understand by this the absence of any social changes, in other words the tendency of actual configuration perpetuation, in the economic structures area and also in the institutions one; we do not attribute a “positive” value to a status like this which represents just a socio-economic “frozen” dynamics situation and/or the absence of a motivation to realize major change of the economic structures and institutions) (table 3):

- Area I (*near the equilibrium*);
- Area II (*the intermediary area*);
- Area III (*far away from the equilibrium*).

The socio-economic systems positioning under the paradigm-structure couple impact

Table 3

	Society type	“X”	“Y”	“Z”
Economy type	“A”	Area I	Area II	Area III
“B”	Area II	Area II	Area II	Area II
“C”	Area III	Area II	Area II	Area I

Because of its characteristics, an “A” economy can serve as a structural-functional base for a *closed society*. The supports for a performance increase through a superior risks and social inequality acceptance, which is normally generated in the first stages of the economic growth, is situated at a reduced level. As a consequence, the motivation for the institutional modification able to generate a superior economic performance will be insufficient for starting some social innovation processes; the accent is pointed on the *status quo* and social certitude maintaining, sacrificing the economic system efficiency.

In contrast a “C” economy needs some social conditions specific for the *opened societies*; if an institutional gap exists it will cause an intense adjustment process, meant to assure the concordance between the constitutive values of the specific paradigm and the way economic mechanism and structure function.

The crucial implication for our debate consists in the fact that in the each type of the socio-economic systems there is assigned a different *role* of state and thus the type and the magnitude of its activities is different.

Synthetically, it could be formulated the thesis that *more far from equilibrium* is a society, a more larger role is attributed to the state and more important is the implication of the public authorities in the “normal” distribution and also in the redistributive process.

In consequence, it could be presumed that:

C_{1PD} : *The budget deficit is larger in the countries with a higher PD because:*

C_{01PL} : *The budget deficit is more important in the countries where PD is more pronounced due to the fact that the public authorities tend to act more frequently in an authoritarian manner and to involve in a larger spectrum of social and economic issues;*

C_{11PD} : *The economic dynamic is less accelerated and auto-sustained in those countries where PD is more pronounced as a result of an “inefficient” institutional infrastructure;*

C_{2UAI} : *The budget deficit is larger in the countries with a higher UAI because:*

C_{02UAI} : *The budget deficit is more important in the countries where UAI is more pronounced due to the fact that the appeal to the state intervention in the management of the economic and social risks is more frequently;*

C_{12UAI} : *The economic dynamic is less accelerated and insufficient auto-sustained in the countries with pronounced UAI due to the tendency to select economic programs with low associated risk but also with a lower yield;*

C_{3M} : *The budget deficit may be (even if this is not obligatory) larger in the countries with a higher M as a result of two different sets of effects:*

C_{03M} : *The budget deficit is more pronounced in the countries with a higher M due to the fact that the claims for the establishment’s proof of “efficiency” (especially in some particular domains) are more frequently;*

C_{13M} : *By the economic cleavages accentuation, the economic dynamic may be (even if this is not obligatory) less auto-sustained in countries with a less pronounced M;*

C_{4I} : *The budget deficit may be (even if this is not obligatory) lower in the countries with a higher I as a result of two complementary sets of effects:*

C_{04I} : *In the countries with a more important I, the autonomy of the civil society in the respect of the state is more pronounced and thus the state role and, consequently, the budget deficit is more reduce;*

C_{14I} : *In the countries with a high level of I, the economic dynamic may be (even if this is not obligatory) more accelerated.*

5. Benchmarks results

5.1. Data and Descriptive Statistics

The structural and institutional aspects are, at least partially, captured by using the *Economic Freedom of the World (EFW)* index. This index measures the degree of economic freedom present in five major areas:

- Size of Government: expenditures, taxes and enterprises;
- Legal structure and security of property rights;
- Access to sound money;
- Freedom to exchange with foreigners;
- Regulation of credit, labour, and business.

The components of Area 1 indicate the extent of country’s reliance on the freedom of individual economic subjects’ choices and power of deregulated markets, by measuring the intensity of the *substitution effect* between the private resources allocation and the public expenditures, the extent of using private rather than public enterprises to produce goods and services and the level of taxes on economic resources in the redistribution process.

Area 2 deals with the key ingredients of the legal system which is compatible with the economic freedom such as rule of law, “security” of property rights, an independent judiciary, and an impartial court system.

The Area 3 treats the subject of the financial stability. The components of this Area are correlated with the consistency of monetary policy (and of monetary authorities) with long-term price stability. They also measure the easy use degree of other currencies *via* domestic and foreign banks.

The elements of Area 4 are designed to reflect a wide variety of restraints that affect international exchanges. These include tariffs, quotas, hidden administrative restrains, exchange rate and capital controls. In order to get a high rating in this area, a country must have low tariffs, a large external trade sector, efficient customs administration, a freely convertible currency, and few controls on capital.

The Area 5 reflects the conditions of the domestic credit market (the banks ownership, the commercial banks sector competition, the credit extension, the avoidance of interest rate controls and regulations), the characteristics of the labour markets (minimum wages, dismissal regulations, centralized wage setting, extensions of union contracts to non-participating parties, unemployment benefits, and conscription), and the regulation of business activities

(price controls, administrative conditions for new businesses, government bureaucracy, import and export permits, business licenses, tax assessments, etc.).

These areas cover some of the elements listed in Table 1 (especially large parts from I.4, I.6, I.9, II.1, II.2, III.1, III.2) and describe the property rights and the architecture of the regulatory institutions. Thus, the index could be used as an acceptable *proxy* for the structural and institutional design of the considered economies. In table it is shown the descriptive statistics of the index. These statistics suggest that there are not major breakdowns over the time in the sample, and also reflects the important differences in the degree of economic freedom between the countries⁽¹⁰⁾.

The data for the paradigm's components are from Hofstede (2003) and they cover a smaller sub-sample of countries (27) (S.II) for the same period. Table describes the corresponding statistics of the four factors considered⁽¹¹⁾. Despite the limited observations, all the three type of societies are included in this sub-sample.

The role and importance of the civil society institutions is indirectly estimated by using the *Freedom in the World* data, which measures freedom by assessing two broad categories: 1) political rights and 2) civil liberties. As is defined by Freedom House (2003): "Political rights enable people to participate freely in the political process. This includes the right to vote and compete for public office and to elect representatives who have a decisive vote on public policies". Also: "Civil liberties include the freedom to develop opinions, institutions, and personal autonomy without interference from the state".

The *Political Rights (PR)* index consists in a "checklist" of various aspects from areas like⁽¹²⁾:

- Electoral process;
- Political pluralism and participation;
- Functioning of government.

The *Civil Liberties (CL)* index deals with:

- Freedom of expression and belief;
- Associational and organizational rights;
- Rule of law;
- Personal autonomy and individual rights.

We just simply suppose that if the *Political Rights* are less or equally defined and exercised that the *Civil Liberties* then the *civil* institutions are more or equally important than the *political* ones.

5.2. Results

The *first step* of the empirical test represents an attempt to estimate the following equation:

$$bd_{it} = \beta_t + \alpha \times EFW_{it} + \varepsilon_{it} \quad (1)$$

where bd_{it} is the weight of budget deficit in GDP for country i and EFW_{it} is the level of *Economic Freedom of the World* index.

The core equation (1) encapsulates S_0 and I_0 both, and cannot distinguish between the individual contributions of the structural and institutional determinants of the dynamic output. Thus, its relevance is limited by an analytical weakness, so the results can count only for the *global* impact of these determinants.

Before we discuss the results, it is useful to look at a simple bi-variable relationship between budget deficit and economic freedom.

Figure 2 shows the scatter plot for the sample *SI* countries and suggests that there is a consistent positive correlation between economic dynamic and the degree of economic freedom. This positive correlation is confirmed by the simple *OLS* regression of equation (1) reported in Table 9. The sign of *EFW* is as expected and statistically significant: countries with a larger economic freedom (with less structural deficiencies and a better quality of institutions) are likely to benefit from a positive dynamic of output. The descriptive statistics of ordinary residuals are shown in Table 10 and suggest that these residuals are "close" to zero but are not entirely normally distributed.

Of course, for a number of reasons (reverse causality, omitted variables bias etc.) the above relationship cannot be considerate as an accurate one. But it could be seen as a first proof for the thesis of the existence of a connection between the economic freedom and budget deficit.

In order to complete the analysis for the institutional factors, the *second step* consists in a check for the impact of the political freedom on the budget deficit embedded in the next equation:

$$bd_{it} = \beta_t + \alpha \times PR_{it} + \lambda \times CL_{it} + \varepsilon_{it} \quad (2)$$

where *PR* stands for the "political rights" and *CL* for the "civil liberties".

The results are shown in Table 11. There are some peculiar aspects of these results. For instance, the absolute level of the parameters suggests that the "civil liberties" are more important for the budget deficit than the "political rights". In the same time, it is interesting to note the signs of the parameters: an increase of the "political rights" (a decrease of the level of *PR*) leads to an augmentation of the budget deficit. In other words, if the political structures are more diversified and stronger and the different public and "semi"-public authorities have more balanced powers, their capacities to influence the dimensions and structures

of the reallocation processes are much significant. Also, an increase of the civil society autonomy in respect to the public/political sphere (a decrease of the level of CL) will induce a decrease of the budget deficit as a consequence of the complementary reduction of state' involvement in the "current social affairs".

The third step of our empirical approach consists in the estimation for the countries in S.II of the next equation:

$$gdp_{it} = \beta_i + \alpha_1 \times PD_i + \alpha_2 \times I_i + \alpha_3 \times M_i + \alpha_4 \times UAI_i + \varepsilon_{it} \quad (3)$$

where PD_i represents the Hofstede score of country i for *Power Distance*, and I_i , M_i , UAI_i are, respectively, the scores for *Individualism*, *Masculinity*, and *Uncertainty Avoidance*.

The results are reported in Table 13. All the coefficients are statistically significant and their signs are in accord to C_0 hypothesis. The absolute level of the coefficients suggests that all the cultural factors have almost the same importance in explaining the evolution of the budget deficit, with the interesting exception of PD which has a smaller impact.

Due to the dimensions of S.II, these results are only a "flash" for a more extensive analyze. However, it should be mentioned the fact that when EFW is also used like an explanatory variable in Equation (3), it appears a diminished statistical significance for all the coefficients, situation which is probably a reflection of multi-collinearity. This could suggest that the cultural factors act not only direct on budget deficit, influencing the behaviors of public authorities and economic subjects, but also indirect, *via* the quality of institutions.

Looking at the global picture, which occurs from the proposed analysis, we can say that the theoretical framework employed and the empirical results obtained leads to the conclusions that *structural and institutional aspect of the economic systems, as well as the components of the socio-cultural paradigms and the political and civil liberties matters for size and evolution of budget deficit*.

But there are a lot of *caveats* and one can argue that this output is vague and almost a truism.

A) Theoretical limitations

1) Unclear definition of "structural" characteristics of economic systems

The elements listed in Table 1 are a "mix" of some components of the economic architecture and "quasi"-institutional aspects amalgamated in an unclear picture. Dropping -down one or other of this does not improve this picture because there is not a coherent effort to clarify what is "structural" and what is "functional" and, more, what are the outputs derived from the intrinsic configuration of the economies themselves and what are the outputs coming

from "policies". In fact, Table 1 is not a "definition", but rather an intuitive appeal to an ambiguous concept.

2) Too "elastic" borders between the three types of economic systems

Despite the "description" of the three types of economies, it is difficult to distinguish between them, especially because there is not a set of operational criteria able to allow a reasonable identification. Again, there is any set of "definitions" attached to this taxonomy, and so there is not a coherent framework to place the entire analyses of the growth shocks⁽¹³⁾.

3) Ambiguous presumptions about the state involvement in structural modification

The involvement of the state in the structural adjustment of the economical systems is just presumed without any explanation about the nature, the amplitude and the consequences of such involvement. In others words, there is nothing about "how" and "at what price". And, more important, "why": it is not argue that such implication of the state in the re-building process of a "A" or "B" type of economy is necessary and also it is not explained the reasons of the states to initiate and implement the necessary policies. One should note that our position is, more or less, a *positive* approach: we are trying to seek for an impact of the state's involving on markets functioning, without enquires whether the state is able to improve these markets, or whether the outcomes are socially desirables.

4) "Blank" connections supposed between institutions and growth

The proposed analyses of the institutional impact does not much clarify about how this impact is exercised. To illustrate this, it is enough to look at the description of the property rights institutions. The paper indicates that when economic subjects believe their property rights are protected, they adopt a set of decisions (in terms of investments, consumptions, savings etc.), which finally bust up the economy. But nothing is implied about the *content* of this property rights, about their configuration, and, more important, about how there are in practice exercised⁽¹⁴⁾. Also, the paper insists on the importance of *control* but it does not operates any distinctions between different control mechanisms and it does not provides any explanations for how these mechanisms could operate.

5) "Institutions" and "policies": not any words about last ones?

The "policies" are the expression of the "institutional" actions. This means that the "policies" represents the "dynamic" aspect of the "institutional" behaviors and also that the actual configuration of the "institutions" is an output of the past "policies". If this thesis stands up, the current observed impact of "institutions" on economic

growth incorporate in fact the results of current and past “policies” and could be not distinguish from them. So, is not clearly how much the emphasized importance of “institutions” for the economic dynamic could be assigned to the quality of these and how much this is in fact an outcome of “policies” quality.

6) *Asymmetric impact of political and civil institutions: why and how?*

The asymmetric impact of the *political* and *civil* institutions in the redistribution processes is just simply statue but there is no explanation attached to this presumption and also there is not any description of its precise nature: if both act as *distributional coalitions*, why there should be differences between them, others that are generated by the unequal dimensions and powers?

7) *The “long”-run of the paradigm?*

We insist in several places that, on “short”-term, the paradigm is exogenous in respect of social and economic variables (which means that the “bottom” arrow in Figure 1 could occur only on “long” run).

But the “culture” is not a genetic product; it is a social one. The human person do not inheriting the culture like genes. There is an assimilation of *values* process in a social environment and we do not provide any arguments for the fact that this process should *ex ante* treated as a “long”-term one⁽¹⁵⁾. Much more, there is no argumentation for these supposed long-run relationships between economic growth and paradigm. In fact, does economic development end up by changing the paradigm? And, if this is happened, how could be the influences exercised explained?

Supplementary, if we are viewing the culture only like a *learning process*, we should respond to a most complex approach like the one formulate by the Black, Gregersen, Mendenhal and Stroh (1999): they treat the culture as a “tree” with its *visible* parts “above” the surface (tangible aspects of a culture or artifacts) and with its *invisible* parts “below” the surface (the values and assumptions). Thus, culture is the set of artifacts, values and assumptions shared by people (explicit aspects) as well as the set of assumptions and values that influence and guide people’s behavior and that is passed on from older to younger generations (implicit aspects). We honestly recognize that we are not prepared here to respond to such a position. We only mention that the definition of culture, which is used, is simply a “working” one, utile for the purposes of the present analysis.

8) *The insufficient number of cultural dimensions and their relevance*

The concept of “paradigm” is a complex one and obviously it could not contain only some aspects like

“individualism”, “power distance”, “masculinity” or “uncertainty avoidance”. Even if we are picking up only these, we do not supply any reasons to consider them the most relevant for the topic of economic growth or, at least, we do not presents any discrimination mechanism in respect of other *values*.

9) *Culture and institutions: what kind of distinction?*

We mention that we are taking into account in this paper the *formal* and the *informal* institutions. But, first of all, we list only the *formal ones* without any references to the second category (which could not be treaty as simple as “unwritten set of social rules”). Second, it could be noticed that the institutional *values* cover a large part of the paradigm (or, in other words, a large part of the paradigm is constituted *via* the institutional interactions between the individual members of a society). Institutions act as “pool” of cultural models concentration. Par consequence, there is not a clearly distinction between “paradigm” and institutions and also there is not a clearly description of the reciprocals relationships⁽¹⁶⁾.

10) *Structures, institutions and economic freedom: are these the same thing?*

The use of *EFW* is designed to capture, “at least partially”, the structural and institutional aspects of economic development. We do not discuss a definition of “economic freedom”⁽¹⁷⁾ and also the quality of *EFW* like a *proxy* for it. But we should point out the conceptual ambiguity which distort this part of analyze: by simply observing the fact that in a measure of economic freedom are elements from the areas of “structure” and “institutions” we do not legitimate the employment of this measure like a way to describe these. The appeal to *EFW* should be seen as a simple “shortcut”, without a strong theoretical foundation.

11) *The core hypothesis: how critical is their restrictive nature?*

The $H_1 - H_3$ hypotheses are the “foundation” of the entire proposed analysis; it could easily be observed the fact that they have a restrictive, almost “heroic”, nature. One could rise the question if the limitations induce by this nature does not completely distortion our results. We do not want to defend these postulates because we are conscious about their weakness. We just want to specify the fact that these are necessary to be taking into account in order to place the analysis in the context of the *mandate approach*, in an as simple as possible manner: the state is acting on the base of a *social mandate* and respond, in a way or other, for its actions to the society. And this general framework is, in our opinion, consistent: only the “details” proposed by the $H_1 - H_3$ hypotheses could be, from our point of view, the object of critical enquires.

B) Empirical analysis weakness

There are a lot of limitations for the proposed empirical analysis. Some of them are linked with:

- The stability of the models and the quality of the results (for instance, in terms of properties of the residuals variables);
- The possible existence of non-linear interactions between the variables and the effects of such interactions;
- The insufficient number of observation and the absence of an explanation for the composition of the samples etc.

C) The difficulties to operate with these results

Our results do not provide an efficient guidance in the implementation of the specifically policies for the sustaining of fiscal stability. The major reason for this

consists in the absence of any suggestion about how the structural changes could be initiated, institutional designs projected and “right” *values* and *mental models* promoted. So, based on these results, it is not possible to draw a map of desirable policies and to control the effects of the current public choices.

Despite all these *caveats*, we argue that the paper could be seen as a small breakdown into an usual yet manner to deal with the fiscal stability problems like they are isolated for their structural, institutional and cultural aspects.

The relation between the State and the Mother Society is almost always a “love and hate” story. But it should be remembered that the State is a reflection of the “qualities” and “deficiencies” of the Society. Not always an accurate one, this reflection accompanies all the public actions and designs their frontiers.

Notes

(1) This means that the present theoretical framework is based on the mandat theory . But one should notice that there is nothing special supposed about the mandatory powers of the society so that a “standard” model of a democratic society could be, for the sake of the convenience, applied.

(2) We preferred the use of this term instead of the term “techno-structure”, but without associate it with some connotation of value; the simple term of “management” does not reflect strong enough the existence of a managerial hierarchy and the decisional consequences which are derived from it, in a firm.

(3) Real or financial assets which already exist.

(4) These institutions covers a large spectrum of private interests but only a limited numbers of them, like syndicates, professional associations, lobby groups of producers and consumers etc., really matters for the present topics.

(5) It is almost useless to mention that, in this point, we have to pay a heavy tribute to Olson’s masterpiece *The Rise and Decline of Nations*. In fact, the entire debate about the role of the institutions in the economic development process was “triggered out” for use after the lecture of this book.

(6) An interesting definition for the culture as “shared values” is, for instance, the definition given in Kroeber and Kluckhohn (1952) (cited by Adler, 1986). According to this definition, culture consists of patterns, explicit and implicit of and for behaviours acquired and transmitted by symbols, constituting

the distinctive achievement of human groups, including their embodiment in artifacts; the essential core of culture consists of traditional (i.e., historically derived and selected) ideas and especially their attached values; culture systems may, on the one hand, be considered as products of action, on the other as conditioning elements of future action.

Culture is:

- Something that is shared by all or almost all members of some social group;
- Something that the older members of the group try to pass on to the younger members; and
- Something (as in the case of morals, laws and customs) that shapes behavior, or structures one’s perception of the world.

Our vision is much closer to Hofstede (1991) who defines culture as “the collective programming of the mind which distinguishes the members of one group or category of people from another”. Like him, we emphasizes that that culture is learned, not inherited.

(7) Realized in 1968-1973 starting from approximately 66 non-socialist countries, this study collected information from more than 117.000 forms, completed by the IBM employees in this countries.

(8) For this analyzes purposes, the main advantage in using these factors is the quantification of the relevant elements which could be used in an empirical approach of the mentioned thesis. The

factors interpretation realized here is larger than the one strictly derived from this study.

- ⁽⁹⁾ DIP is formally defined as follows: “the distance between a superior B and a subordinate S in a hierarchy represents the difference between the measure B can determine S behavior and the measure S can determine B behavior (Hofstede, 1980, p. 22).
- ⁽¹⁰⁾ It should be noticed that the countries are ranked by the EFW as follows: free (score: 1-1.99), mostly free (score: 2-2.99), mostly unfree (score: 3-3.99) and repressed (score: 4-5).
- ⁽¹¹⁾ The implicit hypothesis is: there are no paradigm changes from the period of Hofstede analysis to the reference period for this paper. In our opinion, this could be considered as a reasonable hypothesis, taking into account the “long term” inertia of the socio-cultural evolutions.

- ⁽¹²⁾ Each pair of political rights and civil liberties ratings is averaged to determine an overall status of “Free,” “Partly Free,” or “Not Free.” Those whose ratings average 1-2.5 are considered Free, 3-5.5 Partly Free, and 5.5-7 Not Free.
- ⁽¹³⁾ There is nothing about the nature or causes of these shocks.
- ⁽¹⁴⁾ See, for instance, an excellent discussion in Rodrik et al (2002)
- ⁽¹⁵⁾ There are some mentions about the changing of the paradigm in a “generation life” but it is obviously that this is still a “long”-term.
- ⁽¹⁶⁾ For instance, there is no argumentation for the thesis that an exogenous established institutional system could end up by influencing the paradigm.
- ⁽¹⁷⁾ But we tend to see it like the capacity of the individuals to take decisions relevant into an economic perspective without any inferences from the public authorities.

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The S.I Sample

Algeria	Mauritius
Argentina	Moldova
Bahrain	Mongolia
Belarus	Nepal
Bolivia	New Zealand
Bulgaria	Nicaragua
Canada	Oman
Chile	Pakistan
Congo, Dem. Rep.	Paraguay
Congo, Rep.	Perú
Costa Rica	Philippines
Cote d'Ivoire	Poland
Croatia	Romania
Czech Republic	Russian Federation
El Salvador	Senegal
Estonia	Singapore
Georgia	Slovak Republic
Hungary	Slovenia
India	South Africa
Indonesia	Sri Lanka
Israel	Tajikistan
Jamaica	Thailand
Jordan	Turkey
Kazakhstan	Uganda
Kyrgyz Republic	Ukraine
Latvia	United States
Lithuania	Uruguay
Maldives	Venezuela

The S.II Sample

Argentina	Perú
Bahrain	Philippines
Canada	Senegal
Chile	Singapore
Costa Rica	Slovenia
Cote d'Ivoire	South Africa
Croatia	Thailand
El Salvador	Turkey
India	Uganda
Indonesia	United States
Israel	Uruguay
Jamaica	Venezuela
Jordan	New Zealand
Pakistan	

Descriptive Statistics for budget deficit

Table 4

Year	Mean	Median	Standard Deviation	Minimum	Maximum
2003	2.80	1.91	3.75	-3.44	19.65
2004	2.80	2.19	3.24	-7.25	13.02
2005	1.68	1.64	3.55	-10.16	11.45
2006	1.87	1.39	3.78	-5.75	19.60

Descriptive Statistics for EFW

Table 5

Year	Mean	Median	Standard Deviation	Minimum	Maximum
2003	3.10	3.00	0.69	1.54	4.71
2004	3.08	2.99	0.69	1.54	4.59
2005	3.07	3.01	0.69	1.59	4.60
2006	3.03	3.01	0.71	1.66	4.61

Descriptive Statistics for CL

Table 7

Year	Mean	Median	Standard Deviation	Minimum	Maximum
2003	3.41	3.00	1.42	1.00	6.00
2004	3.38	3.00	1.45	1.00	6.00
2005	3.38	3.00	1.46	1.00	6.00
2006	3.38	3.00	1.42	1.00	6.00

Descriptive Statistics for PR

Table 6

Year	Mean	Median	Standard Deviation	Minimum	Maximum
2003	3.09	2.50	1.99	1.00	7.00
2004	3.11	2.50	2.02	1.00	7.00
2005	3.04	2.00	2.04	1.00	7.00
2006	2.96	2.00	1.96	1.00	6.00

Descriptive Statistics of the Cultural Factors

Table 8

Factors	Mean	Median	Standard Deviation	Minimum	Maximum
Power	62.14	64.00	19.12	13.00	94.00
Distance					
Individualism	37.15	32.00	21.94	12.00	91.00
Masculinity	47.96	48.00	13.96	21.00	73.00
Uncertainty Avoidance	62.48	64.00	22.78	8.00	100.00

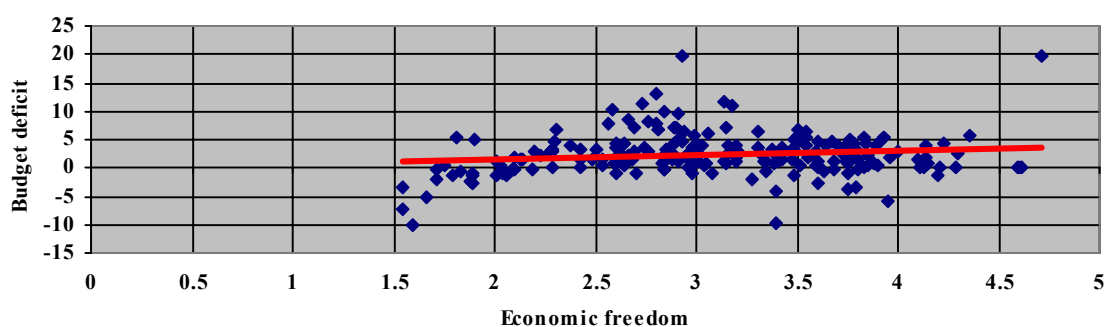


Figure 2. Economic freedom versus budget deficit

The impact of economic freedom on budget deficit

Table 9

Dependent variable bd_{it}				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.296105	0.644037	0.459764	0.6461
EFW _{it}	0.569155	0.206431	2.757120	0.0063
Fixed Effects (Period)				
2003-C	0.742608			
2004-C	0.753321			
2005-C	-0.360202			
2006-C	-0.146389			
Effects Specification				
Period fixed (dummy variables)				
Weighted Statistics				
R-squared	0.175356	Mean dependent variable	3.726304	
Adjusted R-squared	0.160294	S.D. dependent variable	3.872390	
S.E. of regression	3.548482	Sum squared residuals	2757.588	
F-statistic	11.64230	Durbin-Watson stat	0.989880	
Prob.(F-statistic)	0.000000			
Un-weighted Statistics				
R-squared	0.040161	Mean dependent variable	2.290491	
Sum squared residuals	2770.114	Durbin-Watson stat	0.562456	
Method: Pooled EGLS (Cross-section weights)				
Sample: 2003 2006				
Included observations: 4				
Cross-sections included: 56				
Total pool (balanced) observations: 224				
Linear estimation after one-step weighting matrix				
White diagonal standard errors & covariance (degree of freedom corrected)				

Descriptive Statistics of Residuals

Table 10

Year	Mean	Median	Standard Deviation	Minimum	Maximum
2003	0.00	-0.88	3.65	-5.76	15.93
2004	0.00	-0.73	3.19	-9.18	10.38
2005	0.00	-0.15	3.52	-11.78	9.96
2006	0.00	-0.18	3.80	-8.15	17.78

Method	Statistic	Prob.**	Cross-sections	Observation
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-25.5658	0.0000	55	165
Breitung t-stat	0.66697	0.7476	55	110
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-5.E+155	0.0000	55	165
ADF - Fisher Chi-square	179.791	0.0000	55	165
PP - Fisher Chi-square	213.736	0.0000	55	165
Null: No unit root (assumes common unit root process)				
Hadi Z-stat	10.6060	0.0000	55	220
** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution.				
All other tests assume asymptotic normality.				
Exogenous variables: Individual effects				
Automatic selection of maximum lags				
Automatic selection of lags based on MAIC: 0				
Newey-West bandwidth selection using Quadratic Spectral kernel				
Balanced observations for each test				

The impact of political freedom on budget deficit

Table 11

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.081434	0.359533	0.226500	0.8210
PR	-0.745873	0.143151	-5.210405	0.0000
CL	1.245818	0.213828	5.826270	0.0000
Fixed Effects (Period)				
2003--C	0.778474			
2004--C	0.767046			
2005--C	-0.340026			
2006--C	-0.202053			
Effects Specification				
Period fixed (dummy variables)				
Weighted Statistics				
R-squared	0.268247	Mean dependent variable	3.776289	
Adjusted R-squared	0.251463	S.D. dependent variable	4.061437	
S.E. of regression	3.513874	Sum squared residuals	2691.714	
F-statistic	15.98293	Durbin-Watson stat	1.056315	
Prob.(F-statistic)	0.000000			
Un-weighted Statistics				
R-squared	0.064867	Mean dependent variable	2.290491	
Sum squared residuals	2698.813	Durbin-Watson stat	0.610524	
Dependent variable: bd_{it}				
Method: Pooled EGLS (Cross-section weights)				
Sample: 2003 2006				
Included observations: 4				
Cross-sections included: 56				
Total pool (balanced) observations: 224				
Linear estimation after one-step weighting matrix				
White diagonal standard errors & covariance (degree of freedom corrected)				

Descriptive Statistics of Residuals

Table 12

Year	Mean	Median	Standard Deviation	Minimum	Maximum
2003	0.00	-1.07	3.57	-6.80	16.54
2004	0.00	-0.72	3.14	-10.60	8.93
2005	0.00	0.18	3.57	-12.40	8.46
2006	0.00	-0.47	3.71	-8.63	16.48

Method	Statistic	Prob.**	Cross-sections	Observation
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-482.131	0.0000	55	165
Breitung t-stat	0.14050	0.5559	55	110
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-2.E+156	0.0000	55	165
ADF - Fisher Chi-square	190.409	0.0000	55	165
PP - Fisher Chi-square	214.013	0.0000	55	165
Null: No unit root (assumes common unit root process)				
Hadri Z-stat	10.7891	0.0000	55	220
** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution.				
All other tests assume asymptotic normality.				
Exogenous variables: Individual effects				
Automatic selection of maximum lags				
Automatic selection of lags based on MAIC: 0				
Newey-West bandwidth selection using Quadratic Spectral kernel				
Balanced observations for each test				

The impact of cultural factors on budget deficit

Table 13

Dependent variable bd_{it}				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5.701896	1.027125	-5.551319	0.0000
Power Distance	0.012196	0.006224	1.959431	0.0528
Individualism	-0.035444	0.007381	-4.801806	0.0000
Masculinity	0.092432	0.013339	6.929515	0.0000
Uncertainty Avoidance	0.058056	0.010716	5.417802	0.0000
Fixed Effects (Period)				
2003--C	0.483584			
2004--C	0.698770			
2005--C	-0.092712			
2006--C	0.540251			
Effects Specification				
Period fixed (dummy variables)				
Weighted Statistics				
R-squared	0.345051	Mean dependent variable	3.380368	
Adjusted R-squared	0.299204	S.D. dependent variable	3.947786	
S.E. of regression	3.304832	Sum squared residuals	1092.192	
F-statistic	7.526219	Durbin-Watson stat	1.156920	
Prob.(F-statistic)	0.000000			
Un-weighted Statistics				
R-squared	0.173974	Mean dependent variable	2.207593	
Sum squared residuals	1177.750	Durbin-Watson stat	0.512474	
Method: Pooled EGLS (Cross-section weights)				
Sample: 2003 2006				
Included observations: 4				
Cross-sections included: 27				
Total pool (balanced) observations: 108				
Linear estimation after one-step weighting matrix				
White cross-section standard errors & covariance (degree of freedom corrected)				

Descriptive Statistics of Residuals

Table 14

Year	Mean	Median	Standard Deviation	Minimum	Maximum
2003	0.00	-0.93	2.81	-3.74	6.23
2004	0.00	-0.68	3.44	-7.34	9.44
2005	0.00	-0.03	3.49	-9.46	8.66
2006	0.00	-0.80	3.66	-5.12	16.17

Null: No unit root (assumes common unit root process)				
Hadri Z-stat	5.23347	0.0000	26	78
** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution.				
All other tests assume asymptotic normality.				
Exogenous variables: Individual effects				
Automatic selection of maximum lags				
Automatic selection of lags based on MAIC: -1				
Newey-West bandwidth selection using Quadratic Spectral kernel				
Balanced observations for each test				

New Perspectives on Corporate Reporting: Social-Economic and Environmental Information

■

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***Abstract.** In recent times the demand for disclosure of listed companies has dramatically increased and the failures of large companies listed on the most important stock exchanges have placed extra pressure on listed companies and standard setters for the increase in the quality of corporate reporting (Beretta, Bozzolan, 2004, pp. 303-305).*

Our research aims the participation to the professional judgment construction through conducting a survey of existing studies on corporate socio-economic and environmental disclosure. We focus on fundamental research which is related to inductive accounting theory and uses scientific methods for identification of corporate reporting theoretical and practical difficulties in European and international economic entities.

To accomplish our objective, we take into consideration the studies on socio-economic and environmental reporting, already conducted at European and international level, the financial reporting experience and the Romanian experience on this area. We analyze the status of development in corporate reporting and environmental reporting standards and focus on the issues requested and their implications. Also, the paper allows new approaches regarding quality information reporting and its implementation into entities financial statements, ensuring premises for future research.

Key words: socio-economic and environmental reporting; relevance; reliability; information for stakeholders.

■

1. Supporting the change in corporate reporting

The conflict between relevance and reliability in accounting (Altenburger, Schaffhauser-Linzatti, 2007) can never be solved due to the uncertainty of the future. Future-oriented data can be rarely determined unequivocally, and consequently are not regarded as

reliable in principle. Current tendencies especially in the International Accounting Standards and International Financial Reporting Standards emphasize the increasing inclusion of present and future-oriented information, which means that data reliability is reduced continuously.

In the knowledge society we are now living in, the importance of information on corporate aspects is steadily growing; knowledge management is already beginning to supersede management of material, production, or staff. Adequate steering indicators and internal reports for social-economic and environmental aspects introduced by the management of an entity concerned have stimulated external reports to present those to the broad public.

Corporate Social Reporting communicates actions regarding Corporate Social Responsibility to different stakeholders (Gray, Kouhy, Lavers, 1995, pp. 47-77). Consumers, investors and other stakeholders are interested in knowing the impact that company has in the social environment where it develops its activity (Harrison, McKinnon, 1986, pp. 233-252).

The emergence various forms of corporate social responsibility reporting reflect a recognition that the span of corporate accountability is changing to reflect more obviously a range of new stakeholder groups including employees, local communities, consumers, suppliers and customers. A recent report on The World Bank's performance in developing countries argue that the conventional accounting framework is not an appropriate tool to guide organized effort in balancing the competing-interdependent needs of multiple stakeholders (Rahaman, Lawrence, Roper, 2004, pp. 35-56).

Many entities are just beginning to understand how stakeholders want them to measure, manage and account for the full range of their activity impacts on society and environment. The best way to ensure the financial success going forward is to expand the overlap between the business interests and the interests of society and environment. Transparency and accountability, along with a close working relationship with the stakeholders, will grow the business, serve the shareholders' interests and create a better world. This type of report therefore must reflect the growing commitment to work with labour, business partners, government agencies and environmental and community stakeholders.

The business-integrity issues raised by recent corporate scandals have, in turn, heightened the focus on transparent and relevant reporting. With regulators, non-governmental organizations and other constituency groups increasing the pressure to respond, many companies have chosen to set the pace themselves rather than wait for regulation to set the agenda for them.

These shifts pose challenges and opportunities for all organizations. For any company, the ingredients of growth lie in the interplay between business goals and the dynamics of the wider environment and society.

2. Current tendencies in extending reporting area

More and more companies are using sustainability reporting, encompassing the social, environmental and economic impact of the company's operations, not just as an accountability tool but to drive strategy, unlocking new sources of revenue and growth. Companies are not turning to sustainability for altruistic reasons. Profitability and growth are at the heart of their reasons for building sustainability tools into their business strategy.

Current trends suggest that we are entering a new phase of reporting that places more emphasis on social responsibility, and yet there remains a significant group of companies that has still not got to grips with environmental reporting. While some companies produce fully electronic comprehensive reports of all their global social and environmental impacts, others are struggling to implement localised environmental management systems (Line, Hawley, Krut, 2002, pp. 69-78).

Codes of conduct, governance principles and disclosure rules are moving companies to higher standards of non-financial reporting, including expanded coverage in their financial statements. Economic, environmental and social indicators are appearing with increasing frequency, providing insights into the vision and effectiveness of management in anticipating new risks and opportunities in the marketplace.

Reporting of corporate social-economic and environmental information has matured over the past decades, but there still remained a lack of adequate standardization. Equally significant is the growing movement by the major accounting organizations to become involved in the development of standards for corporate social reporting, auditing and verification. Accounting societies around the world have weighed in on the issue, including the CMA (1998), FEE (2000), ACCA-UK (2001), CICA (1994) and IFAC (2005). Their members see this area as a potential new business development area. Accounting consulting companies have been extensively involved in the Global Reporting

Initiative (GRI) effort and wrote substantial comments on the GRI paper *Assurance about the Credibility of Sustainable Reporting*. ACCA and CICA are both active GRI players as well – in fact, they are both on the steering committee.

Sustainable businesses and organizations can be powerful drivers for more sustainable production and consumption. In this context, the strategy challenges large private companies to report their performance in a transparent and meaningful way. The impact of business on the environment and the society is likely to become increasingly important for managers over the coming decades. Entities are facing increasing external pressures to decide how, when and if to address the challenges being posed.

Villiers and Staden (2006, pp. 763-781) conduct a content analysis of more than 140 corporate annual reports over a 9-year period in order to identify the trends in environmental disclosure by South African companies over time. They find a reduction in environmental reporting after an initial period of increases for both Mining companies and Top-100 industrial companies.

Some studies conducted in the context of developed countries (Albuquerque, Bronnenberg, Corbett, 2007, pp. 451-468, O' Dwyer, 2002, pp. 406-437, Solomon, Lewis, 2002, pp. 154-169) argue that incentives should be encouraged to force companies to disclose its information. However, only few papers have discussed this issue in the developing world context (Ite, 2004, pp. 1-12, Pedwell, 2004).

Furthermore, the increasing emphasis on the reporting of non-financial information and new measurement tools herald the prospect of clearer and more direct connections between a company's worth and its governance, values and social and environmental strategies. Financial managers, in particular, need to be aware of how this affects the fundamentals of financial reporting, including the nature of value itself. Corporate social-economic and environmental reporting is seen to benefit investors more by reducing risk than by increasing return and the research showed that the annual report is the most favoured channel of disclosure, along with presentation to investors.

This was the main theme in much of the early literature on social-economic and environmental accounting (Bebington, Thompson 1996, Gray et al., 1996) and has been largely responsible for prompting many companies to publish corporate social-economic and environmental

reports (KPMG 1997-2005, Lober et al., 1997, pp. 57-73, Gray et al., 1995, pp. 47-77).

Corporate social-economic and environmental reports today represent several decades of incremental change but the incentives are still different in developed countries and in developing countries. While on the surface they appear improved (there are more factual data), the management processes used to craft these reports have changed very little.

According to Solomon, Lewis (2002, pp. 154-169), in the Britain context, companies consider the recognition of their social commitment as main cause for corporate environmental disclosure. However, in opinion of some users groups, the corporate social responsibility is not considered main cause for reporting, they have the opinion that organizations disclose environmental information only to improve their image. Both in developed and developing countries, issuers consider their reason as much more altruistic than the opinion of the different users group.

The criticism about social and environmental reporting argues about an increment of corporate social responsibility and the limited amount of disclosures (Solomon, Lewis, 2002, pp. 154-169). In other cases some organizations that label themselves as corporate social reporters do not behave in a responsible way concerning sustainability matter (Moneva et al., 2006, pp. 121-137). It is also criticized that organizations often have good intentions in sustainability matters, but they cannot transform those intentions into actions and results.

In Australia, the United States of America, Taiwan, Japan and European Union countries such as France, the Netherlands, UK and Denmark, incentives and requirements to enlarge the scope of conventional corporate financial reporting to include non-financial information are rapidly unfolding. Some actions are motivated by national environmental and social policy goals, others by investor pressures to obtain a clearer picture of corporate performance via the securities regulatory process. All indications point to continuing expansion of governmental reporting initiatives to new countries and regions over the next few years.

Given all this studies we consider that corporate social-economic and environmental reporting is relatively new work field. Entity motives for producing these reports vary: communicating to employees; building community good will; communicating critical messages to key

audiences; overcoming past negative publicity; continuing past reporting activities; maintaining standard or expected practice for the industry sector; and establishing a product marketing vehicle.

Professor Marc Epstein of Rice University (Epstein, Birchard, 1999) investigated both the state of the art and best practices of how corporations are integrating social and environmental impacts into management decisions and stakeholder reporting. An examination of some of the early work, in social and environmental accounting and reporting, found social balance sheets, social-environmental audits, social scorecards, social and financial balance sheets, social and financial income statements and pollution audits. Epstein mentioned “these reports are far more comprehensive in terms of both measurement and reporting than any of the current company reports”. Epstein’s analysis is that the improvements in measurement and reporting for social and environmental impacts were never institutionalized in the organizations. Thus, he claims that the more important and lasting issues for corporations today are those of internal reporting to managers to change the day to day decisions so as to be sensitive to social and environmental issues. It is this integration of internal reporting and improvements with external reporting and accountability that should be the real focus of movements toward increased corporate social-economic and environmental reporting.

3. Accounting bodies implication in social and environmental reporting

Some of the first reports were very successful in achieving their focused public relations objectives. But they also raised the anger of many, and it is these audiences that led to a number of Non Government Organizations (NGOs), government, and industry initiatives to improve reporting. Today there are more than thirty reporting frameworks, including the Global Reporting Initiative (GRI) (2002), United Nations Environmental Programme, (UNEP) (1996), PERI (Public Environmental Reporting Initiative) (1994), and FEE (Federation des Experts Comptables Européens) (2000).

Based on literature review we have identified the main international initiatives on corporate social-economic and environmental reporting as: *Sustainability Reporting Guidelines*, published by Global Reporting Initiative (GRI), or *Towards a Generally Accepted Framework for*

Environmental Reporting, published by Fédération des Expert Comptables Européens (FEE). On this matter, also, the United Nations Environmental Programme (UNEP) has published a statement identifying fifty core features of environmental reports and there is considerable common ground between the UNEP guidance and other similar pieces of guidance. It is important to recognize, however, that the UNEP approach is primarily intended for application in the case of separate (stand alone) environmental reports.

The European requirements on environmental performance reporting, included in the EU Accounts Modernization Directives, define and describe Environmental Key Performance Indicators (KPIs) that provide businesses with a tool for measurement. They are quantifiable metrics that reflect the environmental performance of a business in the context of achieving its wider goals and objectives (Gary, 2005). KPIs help businesses to implement strategies by linking various levels of an organization (business units, departments and individuals) with clearly defined targets and benchmarks.

Surveys of social and environmental reporting practice tend to show that both the quantity and the overall quality of reporting are increasing. In areas such as scope of reporting, consistency of methodological approaches as recognition and measurement policies and timeliness of reporting, we believe that improvements in quality are required. Similarly we see the need for better focused stakeholder related reporting. Preparers of social and environmental reports in particular would like confirmation that their reports are effective, and users of such reports, especially the increasingly environmentally aware financial community, are demanding more consistency in the ways in which social and environmental issues are measured and reported. Thus, we assert once more that a formal set of recognized reporting principles and a standardized reporting framework, not dissimilar in principle to those adopted in the EC 4th Directive on Company law or to IASB framework, should help overcome any perception that reporting of social and environmental information lack credibility.

Conclusion

In the case of certain industry sectors or companies, discussion of sustainability performance would be merited

where environmental or social concerns may affect a company's ability to expand operations or may damage the reputation and brand value. New codes of corporate governance have increasingly begun to highlight the need for discussion of board-level attention to risks associated with sustainability concerns. New methodologies are required to link performance in the economic, environmental and social dimensions to financial performance. Like other business analysis tools, the underlying assumptions and measures will have to be industry-specific to provide meaningful and comparable performance benchmarks.

During the last years the quantity and quality of social and environmental reports published by companies from different countries has improved and increased, but Romanian developments in this area are at an early stage, like in others developing countries. According to Corporate Registration (2007), only four Romanian entities are included in the database and only one (from a total of 2173 companies around the world) published a corporate social report. There is no prior research

undertaken to determine implementation of corporate social-economic and environmental reporting at the firm level in Romania. Thus, it is important for us to investigate the factors that contribute to the adoption of corporate social-economic and environmental reporting as separate and with differentiated contents reports, so that appropriate model for including such a reporting into the financial statement can be developed.

All these issues lead us to the conclusion that a framework for reporting on corporate social-economic and environmental is necessary for European and international entities, but also for Romanian ones. Our research is aimed through its scope to encourage companies to expand their financial reporting on corporate social-economic and environmental information. The findings of this paper will help formulate government policy decisions that promote corporate social-economic and environmental reporting and thereby make entities more responsive to changes in the natural and social environments.

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The Public Finances, the Utility of the Taxpayer and the Public Services – towards a New Connecting Model?

■

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Motto:

“Do not follow beaten paths, make up your own paths and leave a trace.”

Unknown author

Abstract. *Public finances from everywhere have followed along the centuries, as it was natural, some periods when they had to accommodate to the needs resulted from the economic and social life. Their mission was not at all a simple one. To conceive the taxes and rates (dues) system, to ensure a performing and an efficient budgetary process, to finance some categories of public expenses, to ensure a fiscal decentralization which would not lead to severe interferences within the public field are only a few of the problems of major importance that they had to deal with. And also the challenges that have come upon public finances are not to be neglected. We may bring to mind here the opposed interests of the taxpayer, interested in obtaining a higher level of goods and public services and of the public authorities who, trying to satisfy the needs of taxpayers, have obtained almost all the time a quite high level of taxes and rates (dues). The purpose of this paper is, though, the setting up of these apparently opposed interests in an equation. We have also tried to “measure” the dependence degree of the utility felt by the taxpayer, as a consequence of the growth with one unit of the quantity of public services performed by the authorities.*

Key words: public expenditures; taxpayers; ability to pay; public finances; connecting model; financial resources; public services; marginal utility.

■

JEL Classification: H21, H41

1.1. Introduction: short foray in the reform of public finances

The archeology of the transition of public finances is marked in this period of transition by four important reforming elements, placed at the level of local communities⁽¹⁾, such as:

- *the right of local governments to collect own resources* caused the setting up of specialized units (departments) to collect local taxes and dues, at the level of local authorities;
- *the right of local authorities to dispose of own resources*, being widely spread along Continental Europe, is expressed most of the times, through the property tax, as a tax assigned and collected in the limits of the fiscal autonomy, by local communities;
- *the right to collect apportioned taxes*⁽²⁾ has revolutionized the European fiscal strategies, but

has also consolidated the financial capacity of local governments. Their procedure is simple and consists of applying some *deducted quotes* to the taxes collected at the level of central budgets. There are many examples, but the most common one is the income tax, to this being applied several deducted quotes to establish the income of the central budget, of the federal budget (after case) or of the local budget.

- *the right of local governments to raise loans*⁽³⁾, opened the way to the lasting development, most of the local communities using the borrowed resources to accomplish public investments.

The theory of the 4D was “imported” from the Book of Local Autonomy, adopted at Strasbourg in 1985, entering this way in the architecture of public finances, even from the end of the twentieth century.

Not even the mechanism of public finances could be insensitive to the changes that took place. Taxation has reborn as the “*Phoenix*” bird from its own dust, striking the resistance of the taxpayer. Work tax, consumption tax and capital tax were rethought over. The pretty high taxes associated to the lessened legitimacy for collecting generated accentuated tax avoidance in the transitional Europe.

The mechanism of public finances has gone through several changes generated by the reinforcement of the budget at national level, regardless of its nature (central, local budget of the social insurances and of the social health insurances) in the form of the general consolidated budget, by the financial flows carried on between local budgets and central budgets as a consequence of the decentralization of public utilities, but also by the diversity of public utilities carried on under economical performance and drew up on the basis of programs, especially by local governments.

Decentralization took place according to different procedures in case of some public utilities such as high school education, health, social protection and assistance, but also in case of public utility services (supplying cities with thermal energy, with water and sewerage, but also public transport).

The mechanisms of decentralizing public services⁽⁴⁾ were very different, simple procedures being used, but with strong implications, like

- *public utilities associated to high school education* have transferred their material base and the financing of expenditures to local budgets, while the processing of the strategies for human resources has remained the obligation of central authorities;
- *health public utilities* followed a more complicated and more delicate decentralization process, at the same time with the founding of the Social Health Insurance Desks. The material base (land and buildings) was transferred to local governments,

while the financing of the operating expenditures has remained the obligation of the social insurances budget. State budget, together with local budgets, was to finance the programs for modernizing buildings which, most of them, had an advanced technical usage degree.

- *services of social protection and assistance*, although take different forms, from social support (the minimum guaranteed income) to state allowance for children or birth allowance, have been transferred, as a task for local governments. At central level, it was decided that, together with local governments, they had to ensure the financing of social politics (for example, subsidizing the heating of the households is done like this: 55% from the local budget and 45% from the state budget).
- *services of public utility* covered a pretty simple route of decentralization, the service operators being organized in companies, passed from the orders of central governments to the orders of local governments.

The performance of the mechanism of public finances, according to the new transitional conditions, is far from respecting the standardized patterns specific for planned economics. Vulnerability and exposure to risks are somehow more accentuated. And all this because bankruptcies, founding or abolition of companies, the dynamics of companies, ultimately bring about the periodicity of added value brought out in the real economy, on which depends the volume of taxes and dues collected from the budgets.

Empirically, the added value represents the element that ensures “the necessary blood” for the well functioning of any economy.

Taxes and dues follow the same route as the planned economy, supplying, through depersonalization, the ramified structure of chief accountants, secondary, and tertiary accountants (managers of financial resources, from the public sector) asked to supply the best services for civil society. If the route of the financial resources remains invariable, there took place multiple changes such as: the autonomy of local communities, restructured taxation, and institutional reforms, financial resources management applied in performing conditions and based on programs, but also the complexity and diversity of public utilities performed by citizens.

Reform elements brought about a system of public finances whose main actors: taxpayers, (local and central) public authorities, but also the consumers of public utilities, followed rules and procedures generated by specialists inside scientific labs or inside lecture rooms.

Decentralization of public utilities generated serious problems for specialists in public finances, because, due to

the lack of adequate management, a similar transfer of resources in Continental Europe did not always accompany the transfer of public utilities from the central level to the local level.

The immediate consequence was the emergence of budget deficits, especially at the level of local governments, although the principle of budgetary balance required a balance, at least theoretically, between public incomes and public expenditures. Budget deficit, masked by the balance principle, was covered most of the times by loans, the budgetary pressures taking place simultaneously both on central budget, and on local budgets. It was a lesson of “academic class” for local governments, asked to apply a performing management of the fading between financial resources that include own resources, samplings from the state budget and/or borrowed funds.

There has been developed a whole methodology for measuring the lacks of balance⁵ brought about by responsibilities ahead the transfer of resources. Hunter’s coefficient, underlain as an indicator for measuring horizontal lacks of balance (between local communities), estimated

according to the formula $C_H = 1 - \frac{\text{Samplings local budget}}{\text{Total local public expenses}}$

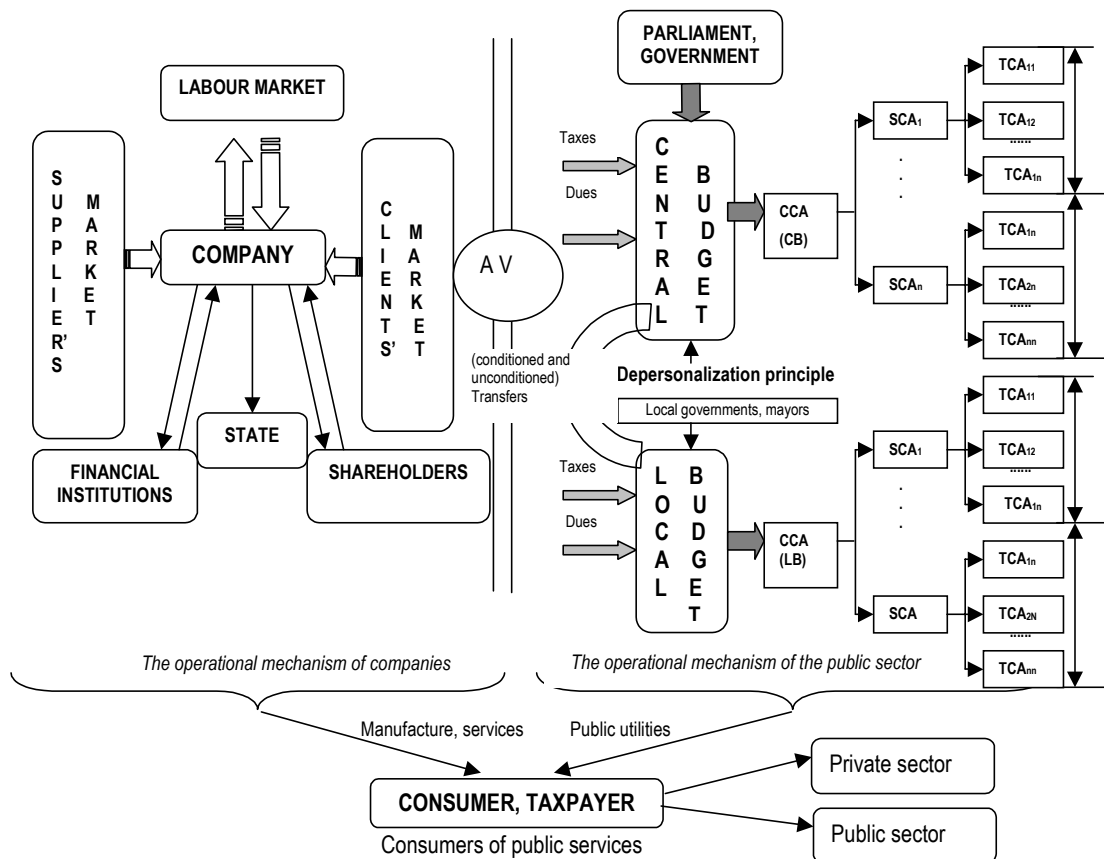
that would reflect a reality, contrary to the principles announced in the European Charter of Local Autonomy: a more and more accentuated dependence of the local governments on central governments.

Also, the indicator global income tax, conceived to measure vertical lacks of balance (between local and central levels of authority), calculated after the formula

$I_{GIT} = \frac{\text{transferred GIT}}{\text{collected GIT}}$, indicates the position of resources

donor governments, but also the position of the ones which receive resources.

The intended goal for measuring vertical lacks of balance was to offer a general view of the redistribution politics for public resources between different local communities. All those who receive resources will be happy most of the times, while those who donate resources will find themselves in a conflict. It is a resource equalizing policy (between local governments) justified by the minimum level of public utilities that have to be carried on for every citizen.



Legend:

CCA – credit chief accountant (CB - central budget, LB – local budget);

SCA – secondary credit accountant;

TCA – tertiary credit accountant;

D_{1c}, \dots, D_{nc} and D_{1l}, \dots, D_{nl} – domains of public services financed from the local and central budget.

Figure 1. The operational mechanism of public and private economies in ex-communist countries

The task of public finances was never and will never be easy. Modernizing meant continuous fitting to the systemic mutations that took place. The resulted lack of balance had to be corrected using different innovative formulas. Hungary, Poland, Czech Republic, but also Romania had daring experiences. The equalizing criteria didn't try to cover budgetary deficits to avoid the loss of resources or the delay of collecting own resources at the level of local communities. These ones were based on real needs which the members of the civil society had for public utilities. There are many examples of equalization criteria, such as: territorial surface, financial capacity per inhabitant, the number of inhabitants from a region, etc.

1.2. The taxpayer utility connection model to the consumption of resources to ensure public services

The opposite interests of the taxpayer (to benefit of a higher public service, in terms of quality and promptness) and of the public authorities (interested in collecting a much higher level of taxes and rates (dues) as an indirect price for the performed public services) is a problem which has to be solved by public finance specialists.

What can be done in this case? Which will be the connection to be generated between the interests of the taxpayers and the ones of the public authorities? These are questions that we will try to answer in the next paragraphs.

The equation that governs the complex and delicate mechanism of public finances, but which also represents the first step towards solving the problem, can be formulated like this⁽⁶⁾:

$$R_f = S_p; S_p = A_p + Sp_c$$

$$R_f = A_p + S_{p_i} \quad (1)$$

where:

R_f – public financial resources (resulted from taxes, dues);

S_p – basic public service which public authority is forced to carry on (according to the settlements);

A_p – public assets (land, buildings, equipments, etc.);

S_{p_i} – interfacing public utilities necessary to carry on the basic public utilities.

In the category of interfacing public utilities are included all those collateral services that have to be carried on so that the basic public utilities can take place (in the favor of the citizen), including here transport, storage, assembling and other such services.

But financial resources also depend on the availability to pay of the taxpayer, whose mathematical formula, at a first stage, looks like a simple one:

$$A_{pt} = I_t - E_{t,c} \quad (2)$$

where:

A_{pt} – availability to pay of the taxpayer;

I_t – total income, regardless of the origin source;

$E_{t,d}$ – taxes and dues expenditures owed to the general budget.

We can see two situations here (resulted from the evolution of I_t and $E_{t,c}$):

1) When total incomes of the taxpayer tend to grow, the availability to pay off the tax and contributions payer records the same trend, the formulated fiscal strategies have to take into account the evolution of the economical cycles, but also the fiscal pressure exercised on the budget of the taxpayer.

2) When total incomes of the taxpayer tend to go down, the vulnerability of achieving planned budgetary budgets is more accentuated and this situation can lead to the risk of incapacity to pay public utilities. In such situations, it is necessary to identify immediate solutions to cover treasury deficits, taking into account loans (as solutions on short term), promoting some fiscal politics on long term that might lead, especially by (public and private) investments, to the growth of the taxable base.

Interpretations are quite simple and refer to the availability to pay of the taxpayer, although public finances dedicate hundreds of pages to the debate of the concept “ability to pay” of the taxpayer.

We may note that, at a first analysis, the equation of the availability to pay generally treats total incomes, with different structures, the same way the taxpayer is either a natural person or a legal person, as well as taxes and contribution expenditures, without being grouped according to the rule of independent budget, in general expenditures of the state (central) budget and of local budgets. Considering the formulated observations above and noting with $E_{t,d,cb}$ the expenditures with taxes and dues owed to the central budget, and with $E_{t,d,lb}$ the

expenditures and contributions which represent an obligation of the taxpayer to the central budget, the availability to pay of the taxpayer A_{pt} can be rewritten:

$$A_{pt} = I_t - (E_{t,d,lb} + E_{t,d,cb}) \quad (3)$$

But the availability to pay depends, in these conditions, on three variables: I_t – total incomes, $E_{t,d,cb}$ – expenditures with the taxes and dues of the central budget and $E_{t,d,lb}$ – expenditures with taxes and dues of the local budget.

Expenditures with taxes and dues are at the same time incomes for central budgets (I_{cb}) or incomes for local budgets (I_{lb}), according to the rule, which assumes that the expenditures with the taxpayers' taxes and dues are also income for the budget that collects them, so:

$$E_{t,d,lb} = I_{lb} \text{ and } E_{t,d,cb} = I_{cb} \quad (4)$$

The equation of the availability to pay becomes:

$$A_{pt} = I_t - (I_{cb} + I_{lb}) \quad (5)$$

The availability to pay according to equation (5) will be reformulated in an aggregated form at the level of the whole mass of taxpayers, as follows:

$$A_{pt} = \sum_{i=1}^n I_{ti} - \sum_{i=1}^n (I_{cb_i} + I_{lb_i}) \quad (6)$$

where:

I_{ti} , I_{cb_i} , I_{lb_i} have the same meaning, only that they are offered at the aggregated level of taxpayers.

At the same time, each taxpayer can also be a potential beneficiary of public utilities who requires that the utility for public utilities which he benefited from to be maximum, so that the public authorities to solve a situation like this:

$$\max(U_{PS_1}, U_{PS_2}, \dots, U_{PS_n})$$

where:

$U_{PS_1} \dots U_{PS_n}$ represent the utility felt by each taxpayer for the performed public utilities PS_1, PS_2, \dots, PS_n .

So, the individual utility of each taxpayer is a function which depends on the quantity of performed public goods and utilities (q_{ij}) and the taxpayer's available resources (R_e) to perform the quantity of planned public utilities (according to the consented budget), as follows:

$$U_i = f(q_{ij}, R_e)$$

or in its aggregated form:

$$U_a = \sum_{i,j=1}^n a_i(q_{ij}, R_e),$$

but $R_e = A_{pt}$, and a_i – the importance rate which every taxpayer gives to the public goods and utilities performed by public authorities according to their needs, and by replacement, we will obtain:

$$U_a = \sum_{j=1}^n a_{ji} [q_{ij}, \sum_{i=1}^n I_{ti} - \sum_{i=1}^n (I_{lb_i} + I_{cb_i})] \quad (7)$$

The constraints for maximizing the aggregate utility expressed in equation (7) are of budgetary nature and are described in the following equations:

- for the local budget: $C_{lb} = I_{lb} - E_{lb}(q_{ij})$
where: C_{lb} – constraints for local budget
- for the central budget: $C_{cb} = I_{cb} - E_{cb}(q_{ij})$
 C_{cb} – constraints for central budget

Taking into account that each budgetary constraint depends on financial resources (I_{cb} and I_{lb}), but also on the expenses generated by the performed quantity (q_{ij}) of public goods (i) and utilities (j) and, in this context, the major goal is optimizing the taxpayer's aggregated utility function, in the Langrangean⁽⁷⁾ of this problem shall be described as follows:

$$L = a_i \left[\sum_{i=1}^n I_{ti} - \sum_{i=1}^n (I_{lb_i} + I_{cb_i}) \right] - \lambda_1 \left[\sum_{i=1}^n I_{lb_i} - E_{lb}(q_{ij}) \right] - \lambda_2 \left[\sum_{i=1}^n I_{cb_i} - \sum_{i,j=1}^n E_{cb}(q_{ij}) \right]$$

The goals followed by each public authority (to optimize) will be to maximize the quantity of the acquired public goods and utilities, but also of the public which that could be attracted to finance them, regardless the type of budget they refer to. The conditions of maximizing the utility felt by the taxpayer can be shaped based upon the following optimal conditions:

$$\frac{\partial L}{\partial q_{ij}} = 0 \quad \frac{\partial L}{\partial I_{lb}} = 0 \quad \frac{\partial L}{\partial I_{cb}} = 0$$

Optimum is obtained in the points in which the first order fluxion is cancelled, depending on q_{ij} , I_{lb} , I_{cb} .

In this context, we shall obtain:

$$\left\{ \begin{array}{l} \frac{\partial L}{\partial q_{ij}} = a_i \times \frac{\partial U_i}{\partial q_{ij}} + \lambda_1 \times \frac{\partial E_{lb}(q_{ij})}{\partial q_{ij}} + \lambda_2 \times \frac{\partial E_{cb}(q_{ij})}{\partial q_{ij}} \\ \text{(equation 1)} \end{array} \right.$$

$$\left\{ \begin{array}{l} \frac{\partial L}{\partial I_{lb}} = -a_i \times \frac{\partial U_i}{\partial I_{lb}} - \lambda_1 \\ \text{(equation 2)} \end{array} \right.$$

$$\left\{ \begin{array}{l} \frac{\partial L}{\partial I_{cb}} = -a_i \times \frac{\partial U_i}{\partial I_{cb}} - \lambda_2 \\ \text{(equation 3)} \end{array} \right.$$

From the above equation system, we shall obtain:

$$\lambda_1 = -a_i \times \frac{\partial U_i}{\partial I_{lb}}$$

and

$$\lambda_2 = -a_i \times \frac{\partial U_i}{\partial I_{cb}}$$

Replacing λ_1 and λ_2 with the values obtained in the first equation of the system, we will obtain:

$$\begin{aligned} a_i \times \frac{\partial U_i}{\partial q_{ij}} - a_i \times \frac{\partial U_i}{\partial I_{lb_i}} \times \frac{\partial E_{lb}(q_{ij})}{\partial q_{ij}} - \\ - a_i \times \frac{\partial U_i}{\partial I_{cb_i}} \times \frac{\partial E_{cb}(q_{ij})}{\partial q_{ij}} = 0 \quad | a_i \end{aligned}$$

and we obtain:

$$\frac{\partial U_i}{\partial q_{ij}} - \frac{\partial U_i}{\partial I_{lb_i}} \times \frac{\partial E_{lb}(q_{ij})}{\partial q_{ij}} - \frac{\partial U_i}{\partial I_{cb_i}} \times \frac{\partial E_{cb}(q_{ij})}{\partial q_{ij}} = 0 \quad (8)$$

It would be interesting for every public authority to study the development of the marginal utility function when we get an additional unit of public goods or utilities (q_{ij}), using at the same time an additional unit of public resources (I_{lb_i} , I_{cb_i}), according to the equation (9):

$$\boxed{U_m(q_{ij}) = U_m(I_{lb_i}) \times C_{m(lb)}(q_{ij}) + U_m(I_{cb_i}) \times C_{m(cb)}(q_{ij})} \quad (9)$$

Relation (9)⁸ is valid when i and j are from the same class, meaning that the performed public goods and utilities are the same (there is no regime of apportioning public services), both for central authorities and local authorities.

We recommend using the equation (9) to assess the case about marginal utility $U_m(q_{ij})$ at the level of the consolidated general budget on the whole, calculated as the budget made up by totting the constituent budgets, regardless of the fact that it is the central budget, local budget or the budget of social insurances, accepting the hypothesis that $i, j \in A_c \cup A_l$ (A_c – central authority, A_l – local authority).

If goods (i) and utilities (j) differ from one another, both as content and quantity, $i_1, j_1 \in A_c$ și $i_2, j_2 \in A_l$, using the same reasoning, the result will be:

$$\boxed{Um_1(q_{ij}) = Um_1(I_{lb_i}) \times Cm_1(q_{ij})} \quad (10)$$

$$\boxed{Um_2(q_{ij}) = Um_2(I_{cb_i}) \times Cm_2(q_{ij})} \quad (11)$$

where:

A_c – central public authority;

A_l – local public authority.

To simplify calculations, we shall define

$$U_m(I_{lb_i}) = \frac{\Delta I_{lb}}{I_{lb_0}} \quad \text{and} \quad C_m(q_{ij}) = \frac{\Delta C_{lb}}{C_{lb_0}},$$

$$\text{and} \quad Um(I_{cb_i}) = \frac{\Delta I_{cb}}{I_{cb_0}} \quad \text{și} \quad C_m(q_{ij}) = \frac{\Delta C_{cb}}{C_{cb_0}}$$

where:

$\left. \begin{array}{l} \Delta I_{lb} = I_{lb_1} - I_{lb_0} \\ \Delta I_{cb} = I_{cb_1} - I_{cb_0} \end{array} \right\}$ represent absolute exceptions of the incomes of the local and central budget, obtained at the level of two consecutive moments t_0 and t_1 .

$\left. \begin{array}{l} \Delta C_{lb} = C_{lb_1} - C_{lb_0} \\ \Delta C_{cb} = C_{cb_1} - C_{cb_0} \end{array} \right\}$ represent absolute exceptions of the expenditures of the local and central budget, performed between two consecutive moments t_0 and t_1 .

$I_{lb_0}, C_{lb_0}, I_{cb_0}$ and C_{cb_0} incomes, expenditures of the central and local budget at moment t_0 ;

$I_{lb_1}, C_{lb_1}, I_{cb_1}$ and C_{cb_1} incomes, expenditures of the central and local budget at moment t_1 .

Taking into consideration the above observations, rewriting relation number (9) becomes necessary to make the $U_m(q_{ij})$ calculus as follows :

$$U_m(q_{ij}) = \frac{\Delta I_{lb}}{I_{lb_0}} \times \frac{\Delta C_{lb}}{C_{lb_0}} + \frac{\Delta I_{cb}}{I_{cb_0}} \times \frac{\Delta E_{cb}}{E_{cb_0}} \quad (12)$$

Both performed researches and the usage of relation (12) for annual or monthly data series allowed characterizing the utility function $U_m(q_{ij})$ like this:

a) regardless of the trend of income fiscal policies or of the redistribution income budgetary policies, the marginal utility function represents an average of the trend of these policy categories which enables us to say that when taxation pressures taxpayers and faces their “opposition reactions”, the effect might be diminished by rising the quantity and quality of the performed public services;

b) the recorded values of the marginal utility function are constantly under the values of $U_m(I_{lb_i})$, $U_m(I_{cb_i})$, $Cm_{(lb)}(q_{ij}, p_{ij})$ and $Cm_{(cb)}(q_{ij})$, so we can say that the taxpayer’s contentedness level will be most of the times inferior to the income, expenditures policies, situation explained by the fact that a taxpayer is not always a direct consumer of public goods and services, too. The most frequent example is that of education where, although the taxpayer backs up the financing of public services by taxes and dues, the direct consumer of the educational public service could be the child of the taxpayer. This enables us to say that the taxpayer does not always directly feel the utility of the service, but through intermediaries, so that the value of the utility function will be under the values recorded for marginal cost or marginal incomes;

c) if the recorded values of marginal incomes or marginal costs tend to grow or tend to go down, the marginal utility has the same trend, but, as we already said, at a lower level. There are different explanations, not always the taxpayer is also the (direct or indirect) consumer of public services, and the phenomenon of opposing to taxpayer’s fiscal policies can be lessened by fair a distribution of resources towards the quantitative and qualitative growth of public services of the civil society.

1.3. Conclusions

The calculus for the value of marginal utility, according to the conditions mentioned above, allows constant adjusting of the two types of resource policies and their destinations. When the values of $U_m(I_{lb_i})$ and $U_m(I_{cb_i})$ are high, the taxpayer’s capacity to pay is put into danger, and an alternative to repressive taxation might be the usage of a fosterage policy for rising the value of the taxable base.

If $Cm_{(lb)}(q_{ij})$ and $Cm_{(cb)}(q_{ij})$ have a high value, the cause might be quantitative growth (q_{ij}) of the ensured public goods and services. In such cases (of quantitative growth of the ensured public goods and services) there will be also necessary to rise the consumption of financial resources $U_m(I_{lb_i})$ and $U_m(I_{cb_i})$.

The correlation between the trends of $U_m(I_{lb_i})$ and $U_m(I_{cb_i})$, and also the ones of $Cm_{(lb)}(q_{ij})$ and $Cm_{(cb)}(q_{ij})$ have based upon research, the following possible reports:

1) When $U_m(I_{lb_i})$ and $U_m(I_{cb_i})$ tend to go up, and $Cm_{(lb)}(q_{ij})$ and $Cm_{(cb)}(q_{ij})$ follow the same trend, we can assert that marginal utility will have the same trend, but at an inferior level. This situation is presented in the next figure:

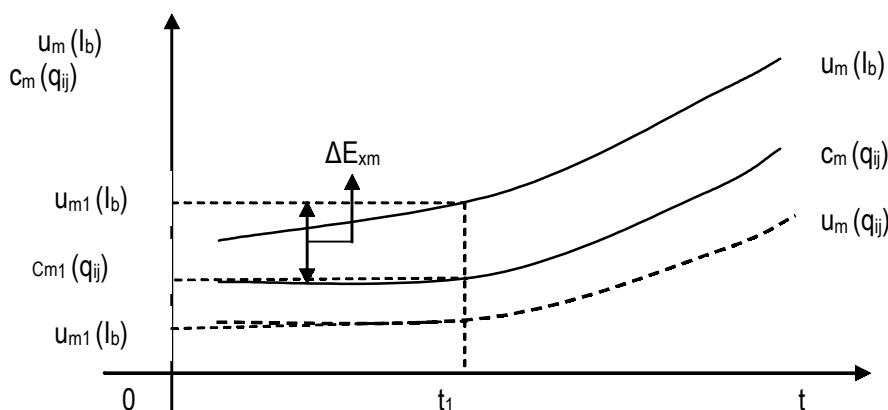


Figure 2. Evolutions of $U_m(I_b)$, $Cm(q_{ij}, p_{ij})$ in period t , according to the trends mentioned in the case study number one

2) When $U_m(I_{lbi})$ and $U_m(I_{cbi})$ tend to go down, and $C_{m(lb)}(q_{ij})$ and $C_{m(cb)}(q_{ij})$ tend to go up, $U_m(q_{ij})$ follows the trend of the marginal cost, then, at a certain moment, begins to go down, because the budgetary deficits that

back up $C_{m(lb)}(q_{ij})$ and $C_{m(cb)}(q_{ij})$ will generate interest costs because, in ex-communist countries, these are mainly backed up by loans. Interest costs will put pressure upon $U_m(I_{lbi})$ and $U_m(I_{cbi})$. This will be shown as follows:

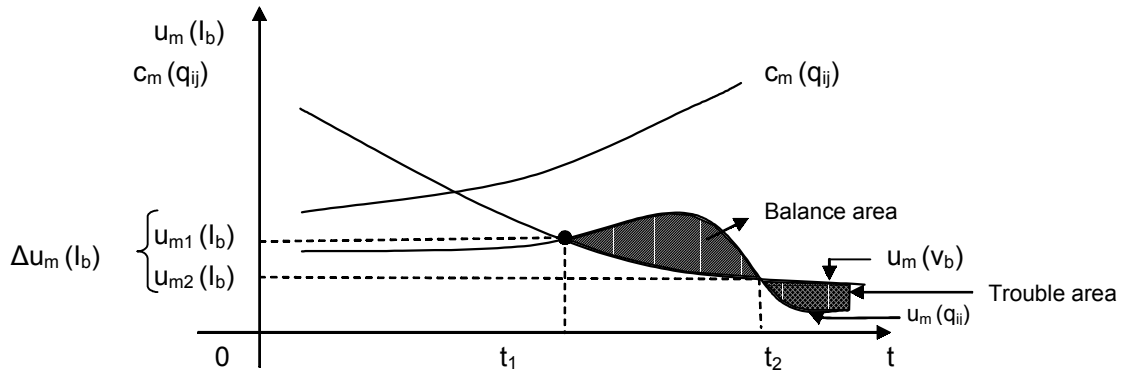


Figure 3. Evolutions of $U_m(I_b)$, $C_m(q_{ij})$ and $U_m(q_{ij})$ in period t , according to the trends mentioned in the study case number 2

The balance areas allow maintaining the trends for the politics applied to the functions $C_m(q_{ij})$ and $U_m(q_{ij})$, but the transition to trouble areas will offer a good chance for public authorities to correct the politics applied for $C_m(q_{ij})$ and $U_m(q_{ij})$. The effects of the corrected politics can be measured only after long periods of time, and budget deficits, maintained from loans, will need own resources, or other loans, to maintain their repayment.

Most of the times, the solution adopted in the ex-communist space was that of refinancing public debts (through loans).

3) When $U_m(I_{lbi})$ and $U_m(I_{cbi})$ tend to grow, and $C_{m(lb)}(q_{ij})$ and $C_{m(cb)}(q_{ij})$ go down, the marginal utility function follows the same route as in case study number 2, the explanation being that treasury surplus or repressive taxation are not satisfactory reasons for the taxpayers. This situation is presented in the following chart:

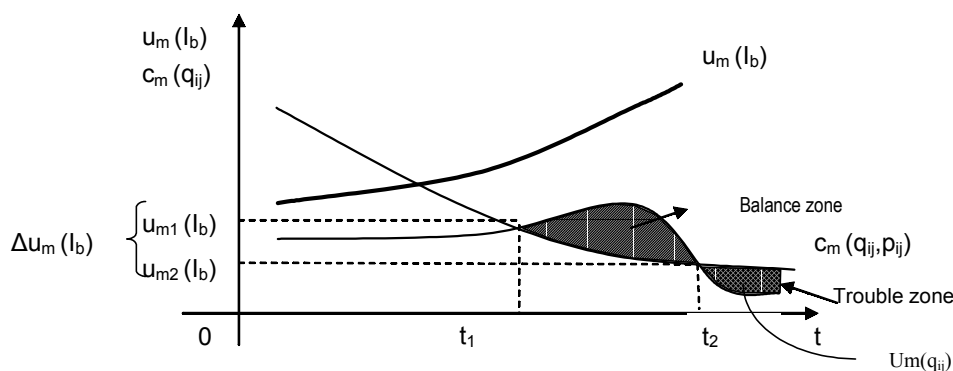


Figure 4. Evolutions of $U_m(I_b)$, $C_m(q_{ij})$ and $U_m(q_{ij})$ in period t , according to the trends mentioned in study case number 3

The system of public finances has from now on a new mission: a challenging, modernizing, but also innovative one, that of being a partner of the public authorities, to ensure a performing management of financial resources.

So, public finances cease to account the collection of resources or payments associated to expenditures, offering information for statistics, which can clearly show budgetary execution. Taxation becomes friendlier, being

also a main component of the developing policies. The budget becomes an authentic instrument of the financial management.

Each petal of this *iris* opens one by one to ensure “services” for the taxpayer, public authorities, general credit accountants, but also for the consumers of public services.

To what point will public finances modernize? Will they be a good partner for the authorities asked to find solutions to the antagonist interests of both the taxpayer and the authorities? How will finances measure the performance of using financial resources in the public sector? All these are questions that have to be answered as soon as possible by specialists in public finances.

Notes

- ⁽¹⁾ Reform elements are taken from European Book of Local Autonomy, which establishes the theory of the 4 D, as a step towards the conceptualization of a new specialization of public finances concerning local public finances.
- ⁽²⁾ In Romania, shared taxes as deducted shares from some the incomes of the state budget are introduced in the Law of local public finances beginning with 1998. The most frequently used form for shared taxes is that of the income tax.
- ⁽³⁾ The contraction of loans by the local public authorities has founded the bases of the local public debt, which regularly is established in the limit of a percentage from the own incomes that local communities collect.
- ⁽⁴⁾ In most of the cases there has been adopted a decentralization law which has established the way of allocation of the public services between the central and local authority levels; but the problem still remains, consisting in the identification of a proper management solution to organize and to make function the public services.
- ⁽⁵⁾ The theory of financial unbalance has developed and has underlined a series of indicators such Hutter’s coefficient, because later on on, their base measures, could be established for a proper balance of the budgets from regions and local communities.
- ⁽⁶⁾ The equality equation between the resources of public finances and those of public services, and although the formula for figuring out the payment modality are underlying on reasoning coming from the behavior of authorities when they have to ensure public services and also of the taxpayer as a tax and dues payer to the budget.
- ⁽⁷⁾ The Langrangian of the problem has been formulated taking count of the budgetary conditionings that have in view the financial resource level, resulted from tax and dues and expenses determined by the quantity of public services performed at the level of the prices for performed services.
- ⁽⁸⁾ Relation number 9 describes the marginal utility of the performed public services felt by the taxpayer when a supplementary unit of performed public services is obtained, expressed in quantitative form.

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The Fiscal Control and the Financial Jurisdiction – Components of the Competitive Management

■

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***Abstract.** From the financial controls can arise (starting from the control objectives and by comparison of the normative provisions with the reality from the public entities or the controlled departments) a series of deviations, shortages or shortcomings that require measures of remedy and prevention of the found deviations. The drawing out of the control papers represents the most important phase of the financial control. In the control paper are written down the conclusions that represent the synthesis of the examination activity carried out as a result of the application of the control techniques and proceedings.*

Key words: financial jurisdiction; fiscal jurisdiction; fiscal control; dispute; tax decision.

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1. Solving the disputes against the measures stipulated by the tax decision as a result of the fiscal control

The disputes represent administrative paths of attack against the measures stipulated by the tax decision that was made on the strength of the report/official report of fiscal inspection by the organs of the Ministry of Public Finance or the local public authorities. These disputes solicit the diminishment or the writing off of the taxes, contributions, custom taxes, interests and delay penalties or other measures stipulated by the Ministry of Public Finance or the local public authorities.

The disputes formulated against the tax decisions are submitted to the organ that issues this decision, within 30 days from the date when the decision was communicated ((the harmful act) (Law no. 554/2004, Art. 7, paragr.1)

and (GO no. 92/2003, Art.177, Paragr.1)). The organ which has the competence to solve the disputes has the obligation to solve it within 45 days starting with its receiving. In case the dispute is submitted to a non-competent fiscal organ or the solving competence does not belong to the organ that issues the tax declaration, the dispute will be submitted by this one, within 5 days, to the organ that has the competence to solve it.

In case the tax decision (which is a fiscal administrative paper) does not include all the elements stipulated by law for an administrative paper (the name of the fiscal organ, the date at which the act was issued and the date at which it produces its effects, the

identification data of the taxpayer or of the person authorized by this one, the object of the administrative document, the *de jure* motives, the *de facto* motives, the name and surname of the person authorized by the fiscal organ, the stamp of the fiscal organ, the possibility to be disputed, the term for submitting the dispute, the organ where the dispute is submitted), the dispute can be submitted within 3 months from the date when the disputed fiscal administrative document was submitted.

The date when the taxpayer is informed about the tax decision is the date when it was handed over to the taxpayer or to his legal representative (proven by signature), the date when the registered letter posted by the control organ was received. The disputes sent by post are considered to be formulated within the term if the letter was delivered to the postal office before the term expired. The 30 days-term is calculated on free days, without taking into consideration the day it began, or the day when it ends. If the term expires in a non-working day, the dispute is considered to be submitted on time if it is submitted by the end of the first day of work.

The dispute must include (Oprean, 1997):

- The name of the taxpayer, his place of residence or his head office;
- The object of the dispute and the disputed sum that needs to be split in categories of taxes, contributions, interests and delay penalties;
- Mentioning the *de facto* and *de jure* reasons that motivate the dispute;
- The signature and the stamp of the disputer or of his legal representative.

To the dispute one can attach papers meant to support the opinion of the disputer that were not taken into consideration by the control organ.

The competence for solving the dispute belongs to several public institutions and authorities (GO no. 92/2003, Art.17, Paragr.1):

- the disputes which have as object taxes, contributions, custom debt, as well as debts accessory to these ones (penalties and delay interests) that are owed to the state budget or to the budget of national social insurances, and which have a value of less than 500,000 lei are solved by the competent organs built at the level of the general offices of the local public finance (the services/offices for solving the disputes, where the taxpayers are registered as payers of taxes);
- the disputes formulated by the big taxpayers, that have as object taxes, contributions, custom taxes

as well as their accessory debts owed to the state budget or to the budget of the national social insurances, and which have a value of less than 500,000 lei are solved by the competent organs (the services/offices for solving the disputes formed within the general office of administration of the big taxpayers);

- the disputes which have as object taxes, contributions, custom debt, as well as accessory debts owed to the national budget or to the budget of the national social insurances, which have a value of 500,000 lei or bigger, as well as the ones formulated against the documents issued by the central organs, are solved by the competent organs built at central level (The General Office for solving disputes from the National Agency of Fiscal Administration). The amount of the owed sums (500,000) which determine the competence will be updated by means of Government Decision;
- the disputes formulated against the tax decision (the fiscal administrative papers) issued by the authorities of the local public administration that have as object taxes, contributions, as well as accessories owed to the local budgets are solved by the authorities of the local public administration.

The dispute can be withdrawn by the disputer until its solving. The competent solving organ will inform the disputer about the decision by which he finds out about the giving up of the dispute. By withdrawing the dispute, that taxpayer does not lose the right to submit a new dispute within the general term for its submitting (GO no. 92/2003, Art.178, paragr. 2): (30 days, namely three months).

The file of the dispute comprises several documents: copies of the attacked act and of the other documents and appendixes that were at the basis of its drawing out; the dispute in original form and other papers submitted by the disputer; the report with the proposal of solving the dispute signed by the organ that closed the attacked document.

The paper contains mentions concerning the fulfillment of the proceeding conditions, as well as concerning the essence of the cause.

In solving the dispute, the competent organs of the National Authority of Fiscal Administration (ANAF) (the services/the offices for solving the disputes from the general offices of the local public finance and of the General Office of Administration of the Big Taxpayers), the General Office of Solving Disputes from ANAF passes a *decision* (GD no. 1050/204, Art. 179.1), and the ones of the local

public administration (the special services of taxes) pass a *disposition*.

The organ for solving the dispute *can suspend the solving, through a motivated decision* when: the organ that carried out the control activity has informed the interested organs about the existence of some signs that indicate a crime and finding this crime could have a decisive influence upon the solution that will be given in the administrative proceeding; solving the cause depends totally or partly on the existence or inexistence of a right that represents the object of another judgment.

The administrative proceeding is resumed when the motives that determined the suspending disappear (GO no. 92/2003, Art. 184, Paragr. 3).

In order to insure the seriousness and the legality of the solutions formulated with these decisions/dispositions, the organs that solve the dispute must have an active role in the process of solving the cause. They will check the *de jure* and *de facto* motives that are at the basis of the issuing of the fiscal administrative paper (the tax decision). The verification is made depending on the argumentation of the parties, the legal dispositions they violated and the papers present in the file of the cause. *The solving of the cause is made within the limits of the intimation.* For explanations, the solving organ can ask for the point of view of the specialty offices from the ministries or from other institutions and authorities. Through the solving of the disputes *it cannot be created a worse situation* to the disputer in his own path of attack (GO no. 92/2003, Art.183, Paragr. 3).

The disputer, the persons that intervene or are empowered/authorized can submit new evidence for supporting the cause. In these situations, the organ that carried out the activity of control will be offered the possibility to pronounce himself about this evidence.

The solving organ will first express an opinion upon the exception of proceeding (*exceptia de procedura*) and then upon the essence. When one finds that the exceptions from the proceedings are motivated, the cause is not analyzed in its essence (GO no. 92/2003, Art. 183, Paragr. 5).

Introducing the dispute on the administrative path of attack does not suspend executing the fiscal administrative document. At the thoroughly justified request of the contestant, the solving organ can suspend the execution of the administrative document until the dispute is solved. The dispute cannot be rejected if it has the wrong name.

By decision/disposition, *the dispute can be approved totally, partly or dismissed.* If the dispute is approved, it can be decided the total or partial cancelling of the attacked

paper (meaning the tax decision), depending on the case. Through the decision/disposition, the attacked administrative paper (the tax decision) can be cancelled totally or partially. In this situation, a new fiscal administrative act will be closed, that will have strictly in view the aspects of the decision/disposition for solving the dispute (GO no. 92/2003, Art. 186, Paragr. 3).

The solving decisions/dispositions are final from the point of view of the administrative paths of attack (GO 92/2003, Art. 180, Paragr. 2). These are transmitted to the disputer by:

- delivering them under signature to the disputer or to his representative, at the head office of the fiscal organ;
- through persons authorized by the fiscal organ;
- by post, at the fiscal residence/office of the taxpayer;
- by publishing an announcement in a national daily newspaper with wide distribution or in a local daily paper or in the Official Journal, when one deals with the absence of any persons entitled to receive the act at the fiscal office/residence or when they refuse to receive the administrative paper.

The decisions/dispositions by which the disputes are solved are also communicated to the fiscal organ that issued the tax decision.

The decisions/dispositions issued in solving the disputes can be attacked in the contentious administrative courts in whose territorial area is located the disputer's head office or the disputer's residence. The decisions passed by these courts can be attacked by means of appeal.

2. Solving the disputes against the contravention sanctions

The common attack path typical for the contraventions is the *complaint*. One can make a complaint against the official report of finding and sanctioning the contravention. The complaint is submitted to the organ where the agent that made the finding belongs. This one is obliged to receive it and hand it out to the one that gives evidence that he received it. In all circumstances, the complaint must be accompanied by a copy of the official report of finding and sanctioning the contravention. The organ that received the complaint has the obligation to send it right away, together with the file of the cause, to the court that has the competence to solve it, meaning to the court in whose territorial area (circumscription) the contravention was made.

The following persons can formulate a complaint: the offender (physical persons or legal entities); the damaged

part (physical person or legal entity), but only concerning the indemnifying; the person to whom the confiscated goods, other than the offender (physical or juridical persons), but only with respect to the confiscation measure.

The Government Ordinance no. 2/2001 does not stipulate what the complaint should comprise. In this situation, if we take into consideration the provisions of the art. 47 of this ordinance, we consider that the complaint should include the information stipulated by art. 112 from the Code of Civil Procedure concerning the *content of the trial request*:

- the name, the surname and the residence of the petitioner, and in case of legal entities: the name, the head office and the Unique Registration Number.;
- mentioning the office report of finding and sanctioning the contravention that is being attacked and the organ which drew it out;
- the place mentioned in the official report where the contravention was committed;
- the *de jure* and *de facto* reasons on which the complaint is based;
- the proofs brought for supporting the complaint;
- the signature of the petitioner.

The complaint must be submitted within 15 days. This term starts to pass from the date when the official report of finding and sanctioning the contravention was handed out or communicated (GO no.2/2001, Art. 31 and 34).

The complaint suspends the execution in accordance with the law (GO no.2/2001, Art. 32, Paragr. 3). The suspension of the execution takes place *de jure*, according to the law, without being necessary to make a request in this direction. The simple registration of the complaint, within the legal term, stops the forced execution of the sanction (fine, confiscation) or if this one was started, it will be suspended through the dispute against execution.

As the execution of the sanction of fine and confiscation is made by the organ which finds the contravention, in case that was chosen the attack path against the official report of finding and sanctioning the contravention, the complaint is submitted to the organ where the agent belongs, so that this one is informed about the attack path and will not proceed with the forced execution of this sanction.

In case of the complaint made by the damaged person, the execution is suspended only for the measure of the compensation.

The complaint made by the person to whom the confiscated goods belong, other than the offender,

suspends the execution only with respect to the measure of confiscation.

The complaint against the official report of finding and sanctioning the contravention is exempted from the legal stamp tax.

The general rule is mentioned in Art. 32, Paragraph 2 and in Art. 33, Paragr. 1 from the Government Ordinance no. 2/2001 that stipulates: *the organ which is competent to solve the complaint against the official report of finding and sanctioning the contravention is the court in whose territorial area (district) was committed the contravention.*

There are also exceptions from this general rule. The attack paths against applying the sanction of obliging the offender to perform activities for the community are exerted according to the dispositions comprised in the Government Ordinance no. 55/2002 concerning the juridical frame of the sanction of performing an activity for the use of the community.

Moreover, in case of the custom contraventions, it was stipulated that the solving of the complaint belongs to the court in whose territorial area (district) is the residence of the physical person or the head office of the legal entity which was sanctioned.

The presented aspects point out that the court is the only organ that has the competence to solve the complaint against any contravention's sanction if the special normative paper (with which the contravention was established and sanctioned) does not stipulate otherwise.

The complaint and the file of the cause are immediately sent to the competent court (GO no. 2/2001, Art. 32, Paragr. 2). The court will then set the term for the judgment. For promptness, this term cannot be longer than 30 days from the day the complaint was received.

In order to observe the principle of contradictoriness, guaranteed by the Constitution of Romania, when solving the complaint, the court will order the citing of the offender or of the person who made the complaint and the organ which applied the sanction. The contradictoriness is mainly between the offender or the person that made the complaint and the organ which applied the sanction.

For finding out the truth and clarifying all the aspects needed in order to correctly apply the law by observing the principle of contradictoriness, the participation of any other person which could contribute to solving the cause is necessary. This is the reason why the court will cite not only the offender or the person that made the complaint, but also the organ which applied the sanction and the witnesses mentioned in the official report of finding and

sanctioning the contravention or in the complaint, as well as any other persons able to contribute to solving the cause.

The court will verify if the complaint was submitted within the term. If it is found that it was not submitted within the legal term, the court will reject the complaint. If it is found that the complaint was submitted within the legal term, the competent court will listen to the one which made the complaint and to the other persons cited and mentioned previously, if they are present. The competent court manages also any other evidence stipulated by law and necessary for verifying the legality and the substantiation of the official report for finding and sanctioning the contravention (GO no. 2/2001, Art. 3, Paragr. 1).

In order to support the content of the official report of finding and sanctioning the contravention and the taken measures, the agent will enclose to the report copies of documents, statements, notes, glosses, declarations etc.

At the same time, the offender or the person who submitted the complaint will enclose copies of documents, statements that support that complaint.

The Government Ordinance no. 2/2001 does not stipulate a specific term within which the judgment court ought to solve the complaint. However, this normative paper stipulates that the term of starting the judgment, set by the court for the complaint, cannot exceed 30 days from the day the court received the complaint and that *“the complaint against the official report of finding and sanctioning the contravention is solved preeminently.”*

The court can give the following solutions:

- *Rejects the complaint*, when it is found that the sanction applied is justified and legal;
- *Totally admits of the complaint* (and cancels the official report of finding and sanctioning the contravention) *or partly admits of the complaint* when this measure is justified by the administrative evidence.

In the case of canceling or finding the nullity of the official report of finding and sanctioning the contravention, the complainer is exonerated from liability, and the confiscated goods are given back to the entitled one, unless the possession or circulation of those goods is forbidden by the law. If the confiscated goods were

realized, the court will order a compensation for the entitled person, which is established depending on the market value of these goods.

The Government Ordinance no. 2/2001 stipulates that if the official report of finding and sanctioning the contravention was canceled and the confiscated goods were realized, the entitled one receives a compensation set according to the market value of the goods that covers the inflation between the realization date and the date when the compensation is paid, considering the fact that in some cases, the solving of the complaint lasts for years and the annual inflation is high. This normative act does not stipulate updating/discounting the paid fines and the confiscated and withdrawn sums of money that are returned to the offender when the official report of finding and sanctioning the contravention was canceled. Only the paid sums will be repaid. In this situation, they are damaged, considering the depreciation of the national currency between the date of the payment and the date of the repayment.

The appeal. The sentence that solved the complaint can be attacked by appeal at the administrative contentious section of the competent court. Any of the parties (the offender, the damaged party, the person to whom the confiscated goods belong, the organ which applied the sanction and the public prosecutor) can appeal. The damaged person can appeal only with respect to the compensation, while the person to whom the confiscated goods belong, other than the offender, can appeal only regarding confiscation. The appeal must be submitted within 15 days from the communication of the sentence that solved the complaint against the official report of finding and sanctioning the contravention. *Motivating the appeal is not compulsory.* The reasons can be orally stated in front of the court. *The appeal suspends de jure the execution of the sentence* that solved the complaint against the official report of finding and sanctioning the contravention and it is not necessary to formulate a request in this direction. The appeal against the decision by which the complaint against the official report of finding and sanctioning the contravention was solved is exempted from the legal stamp tax.

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